

**REGULATING SUSTAINABLE DEVELOPMENT: AN
ENABLING MODEL FOR CONSISTENT
COLLABORATION BETWEEN PLANNING AND
BUILDING CONTROL SERVICES IN ENGLAND**

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Abbreviations

ACAI – Association of Consultant Approved Inspectors

AI – Approved Inspector

APSE – Association for Public Service Excellence

BCA – Building Control Alliance

BCPSAG – Building Control Performance Standards Advisory Group

BIM – Building Information Modelling

BRDO – Better Regulation Delivery Office

BRE – Building Research Establishment

BREEAM – Building Research Establishment Environmental Methodology

CABE – Chartered Association of Building Engineers

CAQDAS – Computer Assisted Qualitative Data Analysis Software

CCT – Compulsory Competitive Tendering

CHP – Combined Heat and Power

CIC – Community Interest Company

CICAIR – Construction Industry Council’s Approved Inspectors Register

CIOB – Chartered Institute of Building

CITR – Community Investment Tax Relief

CSH – Code for Sustainable Homes

DCLG – Department for Communities and Local Government

EIS – Enterprise Investment Scheme

HCA – Homes and Communities Agency

IDBE – Interdisciplinary Design for the Built Environment

LABC – Local Authority Building Control

LBRO – Local Better Regulation Office

LGPS – Local Government Pension Scheme

LSE – London School of Economics

LSVT – Large Scale Voluntary Transfer

NGT – Nominal Group Technique

NHBC – National House Building Council

NHS – National Health Service

NICs – National Insurance Contributions

NPPF – National Planning Policy Framework

ODPM – Office of the Deputy Prime Minister

PPA – Planning Performance Agreement

RIBA – Royal Institute of British Architects

RICS – Royal Institution of Chartered Surveyors

RSLs – Registered Social Landlords

RTPI – Royal Town Planning Institute

SEI – Software Engineering Institute

SEL – Social Enterprise London

SIP – Share Incentive Plan

SMEs – Small to Medium Enterprises

SMP – Strategic Management of Projects

SROI – Social Return on Investment

SUDS – Sustainable Urban Drainage Systems

UCL – University College London

UNCED – United Nations Conference on Environment and Development

UWE – University of the West of England

VCT – Venture Capital Trust

Abstract

Planning (often termed as development control) and building control have existed as public regulatory services on a national basis in England since the expansion of industrialisation in the 19th Century. Since then, the professions have collectively served the interests of local communities but have primarily worked in a mono-disciplinary context. This disciplinary isolation was compounded when the public building control system was opened up to competition from the private sector in the 1980s.

Since the beginning of the 21st Century, building performance standards have become increasingly complex due to the introduction of sustainable development as a major policy objective. As a result, disciplinary boundaries have become blurred, with many stakeholders viewing regulation as a constraint to sustainable development. In light of the modern challenges of regulating the built environment, this thesis aims to develop a model with the capacity to enable consistent collaborative practice between planning and building control services in England. In doing so, it seeks to address problems associated with the disparate array of existing building performance standards, the resulting and widening regulatory skills gap and ultimately, the fragmented nature of the regulatory service delivery framework.

In keeping with the problem solving ethos of the research, the design science research methodology was utilised, with research methods drawing upon a mixture of attributes common to consensus development and grounded theory research strategies. Building upon the author's experiences as a building control manager, the adopted research approach resulted in iterative movements throughout the study between a broad base of existing knowledge and theory, and semi-structured interviews with experts in the field.

The findings of the research indicate that the creation of domestic and commercial codes for sustainable development, interdisciplinary undergraduate educational initiatives and performance driven regulatory social enterprise offer the potential to address existing field based problems. In addition, evidence suggests that the model resulting from the study has the capability to move the often conflicting processes of design and regulation towards being conjoined as part of a dynamic unfolding process with sustainable outcomes.

1 Introduction

1.1 Background to the Research

This thesis is submitted in partial fulfilment of the requirements of the University of Salford for the degree of Doctor of the Built Environment. It aims to solve problems affecting the working relationship between the two disciplines charged with regulating the built environment in England – planning (often termed as development control) and building control. As will be demonstrated, these problems are also serving to complicate the design process and potentially, detrimentally affect the sustainability of the nation's built environment.

Building control has existed as a profession on a regional basis since the Great Fire of London in 1666 (Foulger and Stephenson, 2004). Building control and planning have existed as public regulatory services on a national basis in England since the expansion of industrialisation in the 19th Century resulted in the introduction of public health legislation (Baldwin and Cave, 1999; Cullingworth and Nadin, 2006; Foulger and Stephenson, 2004). Collectively, the professions have served the interests of local communities by controlling the use of land and maintaining a set of minimum building standards for over a century.

Until the turn of the 21st Century, the broad objective of the planning system was the regulation of the development and use of land in the public interest (Cullingworth and Nadin, 2006). Similarly, the broad objective of the building control system was to secure the health, safety and welfare of persons in or around buildings (Foulger and Stephenson, 2004). More recently, in addition to the objectives detailed above, both services have been asked to contribute to the delivery of sustainable development (Cullingworth and Nadin, 2006; Department for Communities and Local Government, 2007).

Having been a practitioner within the built environment for over 30 years, the author has worked as a local government Building Control Manager in Cumbria over the last decade. He leads a team that like many other local authority building control services, has worked in close proximity to its equivalent planning team over many years but nevertheless, primarily within a disciplinary silo.

Due to a developer's need to know whether a development proposal is acceptable within a given location before preparing detailed building specifications to present to building control,

the planning process precedes that of building control within the current regulatory framework. In the past, the silo working approach that the traditional regulatory framework has promoted has had limited detrimental effect upon the proposed developments examined within the author's working environment.

However, in recent years, as regulatory requirements and building projects have become more complex due to the introduction of sustainable development as a major policy objective (Faber Maunsell and Steemers, 2010), a number of challenges have emerged in practice which will be discussed below. This increasing technical complexity has itself taken place against a background of significant transformation in the public sector environment within which the planning and building control functions sit. These two aspects provide the context for the research, each of which will now be considered.

1.2 Author's Experiences: Increasing Technical Complexity

1.2.1 Context

In line with the Government's modern aspirations for more environmentally friendly development in England (Department for Communities and Local Government, 2012b), regulatory requirements appear to have increased in complexity in a number of areas. As a result, regulatory building performance standards, traditionally falling exclusively under the remit of building control, have begun to be introduced into planning legislation. This would appear to be due to the fact that whilst performance standards linked to single buildings continue to be dealt with by the Building Regulations, whole development issues covered by planning have, over time, become interlinked considerations (AECOM, 2012).

What follow are but a few examples of increasing complexity associated with building performance standards that have been observed in practice in recent years by the author.

1.2.2 Sustainable Urban Drainage Systems

The drive to utilise surface water more efficiently has led to commonly occurring planning requirements for sustainable urban drainage systems (SUDS) serving whole developments (for example, volume housing sites). Historically, planning officers have not been educated on drainage design and accordingly, have little knowledge of SUDS, which include a wide range of different components that can be designed to cope with flows from a variety of developments and sites. The components can be designed to infiltrate (soak) into the ground,

convey (flow) into a watercourse or sewer, or can also provide storage on site and attenuate (slow down) the flows of water. SUDS schemes often use a combination of these processes (Dickie *et al.*, 2010).

Due to a lack of knowledge in relation to the technical requirements of surface water drainage systems, planning officers have begun to approach building control surveyors on an increasingly regular basis to request advice. However, in a context where building control is not a statutory consultee as part of the planning process, requests for advice are often refused due to the absence of planned and budgeted resources.

Traditionally, building control surveyors have assessed the design and installation of new surface water drainage for developments up to the point of connection to sewers or SUDS under the requirements of the Building Regulations. Although building control may be viewed as a natural commentator upon the technical requirements of SUDS, such requirements are a relatively new and complex concept. If SUDS form the final connection point for surface water emanating from a new development, their suitability is assessed as a planning requirement and not under the Building Regulations. Accordingly, building control surveyors are unfamiliar with SUDS and the design calculations presented to planning officers to justify their effectiveness.

Problems also occur regularly in relation to more standard drainage installations currently covered by the Building Regulations. Infiltration systems agreed as part of the planning process are often later found by building control surveyors to be unsuitable due to the impermeable nature of the ground, discovered at the point in time when design calculations are required to show compliance with the Building Regulations. Similarly, problems can arise when it is discovered that the distance required by the Building Regulations between buildings and foul water treatment systems given planning permission cannot be achieved.

1.2.3 Energy Efficient and Low Carbon Developments

Both professions have become charged by the Government with helping to deliver energy efficient and consequently low carbon developments at different stages in the development consent process. But whilst planning officers consider energy efficiency at an area level or as part of the requirements for large developments containing multiple buildings, building control surveyors are charged with assessing the issue on a building by building basis.

If designs cannot be shown to be compliant with the Building Regulations, changes may have to be made to buildings that can affect their visual impact. Such changes may include reductions to areas of glazing or changes to external cladding which may, in some instances, not possess the insulation properties required to ensure that a building meets its carbon emissions target. As a result, earlier planning approvals may be affected, with amendments or new applications being required.

Like SUDS issues, without recognition as part of educational programmes, skills are being stretched in the increasingly complex area of energy efficiency/carbon reduction. For example, in 1990, Part L of the Building Regulations (Conservation of Fuel and Power) consisted of one 23-page volume referencing five British Standards. By 2013, Part L had expanded to four separate volumes, covering new and existing domestic and commercial buildings over 130 pages, with dozens of second tier technical reports and standards being referenced. Materials, renewable energy and heating/cooling technologies, which are continually advancing to meet (or go beyond) regulatory requirements, are all thrown into the mix when design calculations are carried out to ascertain whether a building will meet its carbon emissions target.

It is becoming difficult for planning and building control professionals to not only keep up with improvements in technology, but also to understand the changing nature of the calculations presented to them to demonstrate a development's level of energy efficiency.

1.2.4 Glazing Technology

Improvements in glazing technology to meet energy efficiency requirements have led to the utilisation of more glass (particularly in modern office buildings) for visual effect. However, the author's team has been asked for pre-application advice on proposals previously granted planning permission, which met energy efficiency requirements but due to large areas of glazing, have presented a fire risk to adjacent buildings. Any changes to areas of glazing at this juncture are likely to affect the visual impact of the buildings in question and consequently, earlier planning approvals.

Although recent improvements in technology mean that both fire resistance and energy efficiency measures can be incorporated into glazing systems, such components can be extremely expensive if required due to a lack of interaction between the regulatory functions.

1.2.5 Fire Safety

As detailed above, the visual impact of development proposals upon the occupants of neighbouring buildings and their surrounding environment play a big part in the decisions made by planning officers. However, there are times when the internal layout of buildings presented to building control surveyors result in requirements for additional window/door openings or external staircases to allow building occupants to escape safely in the event of a fire.

In some circumstances, it can be difficult for building control surveyors to negotiate the provision of additional window/door openings or external staircases with planning officers following the granting of planning permission. As a result, developers have been required to carry out unforeseen internal layout changes to ensure safe means of escape, the cost of which may exceed that of recommendations made by building control surveyors.

As requirements for insulation have increased as part of legislative energy efficiency targets, lightweight composite wall systems incorporating flammable external cladding have become increasingly popular. Again, the author's team has been in a position of requesting reductions to areas of flammable cladding to buildings granted planning permission in order to reduce the risk of fire spread to neighbouring properties.

Fire and rescue service access to new buildings is assessed by building control surveyors as part of the fire safety requirements of the Building Regulations. The perimeter access required by fire and rescue service vehicles in the event of a fire is determined by the footprint and height of new buildings. A lack of suitable access to developments granted planning permission has resulted in subsequent changes to landscaping to the perimeter of buildings or where this is not possible, the negotiation of special arrangements with the fire and rescue service. Such special arrangements may result in the fitting of external fire mains, or place requirements on the fire and rescue service to put in place one off service arrangements for buildings, such as making specialist vehicles and equipment available in the event of a fire.

1.2.6 Significance of Author's Experiences

Whilst not exhaustive in scope, the above issues observed in practice might, of themselves, suggest a growing need for planning and building control services to develop a generic skill set, a greater understanding of each other's roles, and be enabled/encouraged to collaborate

consistently. Such an approach could result in a more efficient consent process for design professionals seeking development consents, who continue to vent their frustration in relation to the amount of design rework currently being required due to the manner in which the current regulatory process is staged. As a member of regional disciplinary management groups over a number of years, the author has been made aware that the type of issues described above are commonplace in other localities.

In addition, prior to commencing doctoral research in 2009, the author's own experiences were being reflected by published and developing research. The research of Egan (2004) and Academy for Sustainable Communities (2007) was commissioned by the Government and made available to the author through the course of his professional duties. Both reports set out the need for cultural change within higher education initiatives for regulatory professions such as planning and building control in order to ensure that the increasing technical complexity associated with sustainable development could be addressed through skill/knowledge sharing. The author was also in touch with individuals in 2009 who were involved in a research project being developed by the National Planning Forum. As part of this research, leading industry experts and representatives of the Government were being tasked with considering the extent to which better cooperation between planning and building control services might assist in delivering higher environmental standards and more sustainable outcomes. This research was published in September 2010 (Planning and Building Control Working Group, 2010) and would be subsequently be used to inform this study.

However, although the need to improve and share skills and knowledge on a consistent basis seems clear from the author's experiences, these experiences have taken place during a time of unprecedented transformation within the public sector. This transformation has significantly altered the regulatory landscape over the last 30 years and is likely to continue to do so. Accordingly, there is a risk that the relationship between the two professions and the public interest centred ethos of regulation itself may be detrimentally affected rather than improved.

1.3 Transformation of the Public Sector

In light of the ongoing transformation of the public sector, the building control and planning professions face different challenges resulting from continually evolving Government policies.

Planning is a monopolised public service with Government recognition for shaping spaces and communities (Department for Communities and Local Government, 2012b). It has strong ties with local politicians (or elected members). Although a majority of planning decisions are delegated to local authority planning officers, some decisions are made by elected members sitting on planning panels (Cullingworth and Nadin, 2006). In contrast, since the 1980s, local authority building control services have operated in an increasingly competitive marketplace, competing for regulatory work against approved inspectors (AIs). Approved inspectors are private sector consultancies who unlike public sector services, are allowed to profit from regulatory work and have the capacity to choose work they wish to bid for on a national basis (Foulger and Stephenson, 2004).

The author has known organisations requiring Building Regulations consents to choose services offered by approved inspectors to regulate projects in Cumbria that are far from the approved inspector's offices – in some cases hundreds of miles from the projects in question. Some local builders, accustomed to working regularly with the author's building control team, have informed surveyors that when they have been involved in projects covered by remote approved inspectors, no Building Regulations related inspections of building works have taken place. In such instances, local authority planning services and remote approved inspectors would inevitably find it difficult to collaborate consistently to overcome technical complexity if enabled to do so through a more joined up and design friendly regulatory process.

Recent Government policy has been shaped by dire economic circumstances, adding to the problems described above. Regulation would appear to have become monopolised by economists, with deregulation leading to individual choice and the extension of business markets becoming the political priorities of regulatory outcomes (House of Commons Environmental Audit Committee, 2013).

Following the banking crisis and ensuing worldwide recession starting in 2008, unprecedented reductions have been made to public sector budgets. Income from applications for development consents only covers a proportion of the activities carried out by public planning and building control services. Service benchmarking exercises carried out by the author as part of annual performance measurement suggest that on average, income related activities account for 60% of public building control workloads. With less money available from local authority budgets, planning and building control service managers have been under

increasing pressure to cover discretionary services to the local communities they serve (i.e. general advice, enforcing illegal development activity, dealing with dangerous/dilapidated buildings, etc.) with fee income from applications for development consents.

As part of a policy drive to increase service efficiency and choice for local communities, public planning and building control services have recently been earmarked for competition from private sector organisations as part of the Government's Localism agenda (HM Government, 2011a). However, rather than being on a national and project-by-project basis like the current building control system, the type of competition being advocated by the Government is in the shape of procurement exercises offering long term contracts/commissions to deliver services for local authorities.

The above policy changes have led many local authorities (including the author's employers) to consider alternative ways in which services such as planning and building control might be delivered in a more commercially aware manner. The consideration of a more joined up approach to delivering the services in the interests of achieving sustainable development does not appear to be the main priority of some local authorities. It is the way in which planning and building control services can collectively contribute to their employers' worsening financial position that would seem to be of greatest interest.

1.4 Summary

Despite political aspirations for sustainable development in England, economic considerations appear to have driven recent policy change in extremely challenging times. As a practitioner attempting to operate a regulatory service in an increasingly complex technical environment, a number of issues arose from initial field based observations. These issues were being reinforced at the outset of this study by existing/emerging research (Academy for Sustainable Communities, 2007; Egan, 1998; Planning and Building Control Working Group, 2010), strengthening the author's belief that doctoral research as a means of helping to address the field based problems in question was required.

The regulatory framework within which planning and building control practitioners operate would seem to have become increasingly disjointed and complex as a result of the technological advances required of modern sustainable developments. As such, regulation of the built environment has increasingly moved beyond the scope of setting problems that can be successfully resolved in isolation by any one discipline. However, the current regulatory

framework does not enable collaboration between the regulatory professions at appropriate junctures within the development consent process.

Although the technical guidance associated with building performance issues has expanded considerably in recent years and continues to do so, higher education initiatives do not appear to be evolving to enable new practitioners to cope with the modern challenges of sustainable development (Academy for Sustainable Communities, 2007; Egan, 2004). In fact, having been responsible for the training of a number of building control practitioners in recent years, and having searched for related degree programmes as a result, the author is aware that there is no dedicated higher education framework for the building control profession in England.

When considering the scope of required change to the current regulatory system, assessing the disjointed and increasingly complex performance standards framework within which practitioners operate and the resultant gap between existing and required skill levels is only part of the wider problem. In addition, it would appear that the disparity caused by the competitive building control system and continuing transformation within the public sector have the capacity to make the current mode of regulatory service delivery even more disjointed and inefficient.

Having observed the range problems outlined above in practice over a number of years, it appeared to the author that without change, the ability of planning and building control services to deal with building performance issues in disciplinary isolation could quickly reach a tipping point. It was therefore decided to aim to develop an operational framework with the capacity to enable consistent collaborative practice between planning and building control services in England through doctoral research. As such, it was envisaged that such an overriding framework could encapsulate a range of interlinked solutions to problems being experienced in the field, resulting in improvements that might benefit the regulatory services in question and other stakeholders in the development consent process.

With initial research problems emerging from the thoughts of practitioners at a regional level as the basis of the research, it was clear that further explication of these issues would be required at a national level. Accordingly, it was necessary to first set out a framework for the study by establishing a research methodology with attributes conducive to further explicating the research problems and ultimately, resolving them. The objectives of the study will emerge

naturally from the chosen research approach, the rationale for and scope of which are now discussed.

2 Research Approach

2.1 Introduction

As an area of research, the built environment covers a wide range of topics, through which a strong management paradigm is interwoven (Chynoweth, 2006). A paradigm can be described as a body of theory subscribed to by all members of a particular field, which change over time (known as ‘paradigm shifts’) as ideas that underpin a subject or theory are successfully challenged (Kuhn, 1962).

The overriding issue in the quest for new academic knowledge is how it is produced and how the validity of methodologies and research methods generating the knowledge is perceived by the scientific community (Easterby-Smith *et al.*, 2008; Grix, 2004; Robson, 2002; Saunders *et al.*, 2009). However, as well as meeting the requirements of academic rigour, knowledge produced by research aimed at improving problems in professional practice is also required to serve ‘human purposes’ (Peffer *et al.*, 2007; Van Aken, 2005).

This chapter details the selection of the research methodology employed to help to address problems being experienced within the regulatory framework by developing an enabling model for consistent collaboration between planning and building control services in England. By utilising the research tools most appropriate to the analysis of available empirical data, the output of the research will be better placed to address the type of problems outlined in Chapter 1 and in doing so, contribute useful knowledge to both academia and the regulatory field.

The chapter begins by considering alternative worldviews (or philosophical schools of thought) as a basis for the stance that has been taken by the author to shape and execute the research.

2.2 Worldviews

The nature and creation of knowledge has generated complex and often fierce philosophical debate for many hundreds of years (Tarnas, 1991), this debate being crucial to the progress of philosophy itself and subsequently, how best to conduct research. In designing a research methodology, researchers need to take account of alternative worldviews in order to articulate the stance they have decided to take to guide their work (Crotty, 1998). A research philosophy is derived from ontological and epistemological positions, which will ultimately guide an

inquiry. Ontology explains what knowledge is and assumptions about reality. Epistemology describes how the researcher knows about the reality and assumptions about how knowledge should be acquired and accepted (Gill and Johnson, 2002; Pathirage *et al.*, 2008).

Grix (2004) sets out a simplified route through the minefield of advanced knowledge production, using ontology and epistemology as the foundation stones of his 'building blocks of research' (see Figure 2.1).

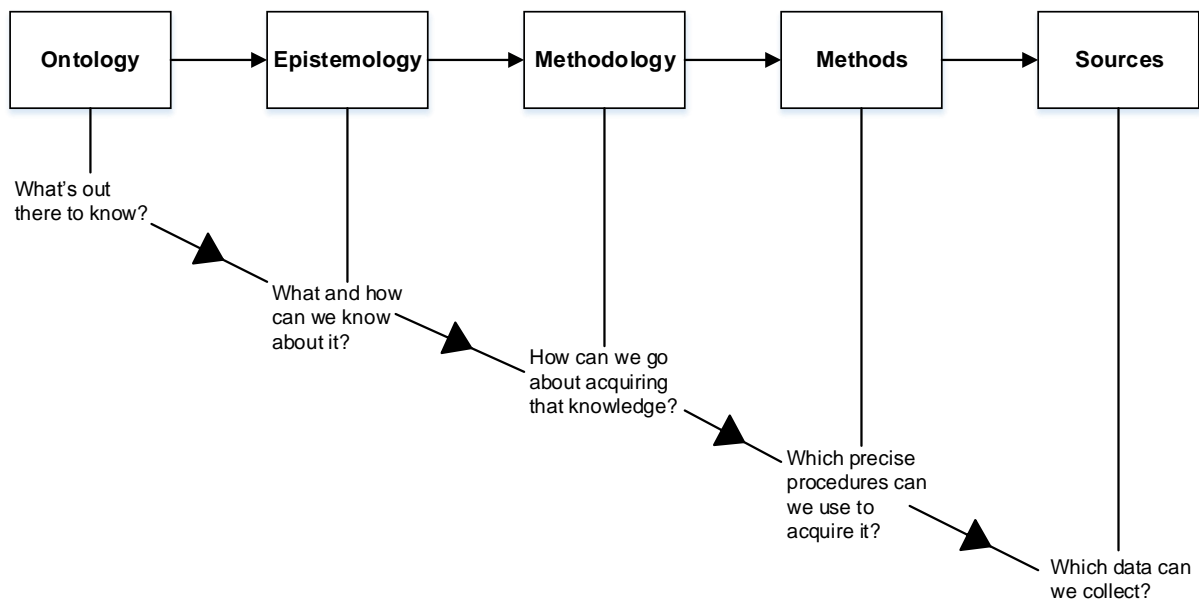


Figure 2.1 - Grix's interrelationship between the building blocks of research

Whether they are aware of them or not, all researchers hold philosophical assumptions and as Easterby-Smith *et al* (2008) point out, there are at least 3 reasons why an understanding of philosophical issues is important:

1. it can help to clarify research designs;
2. it can help the researcher to recognise which designs will work and which will not;
and
3. it can help the researcher identify and even create designs that may be outside his or her past experience.

The academic research paradigms that result from differing philosophical assumptions and help to clarify and shape differing research designs are now considered.

2.3 Established Academic Paradigms

Since the early part of the 20th Century, philosophical debate has increased in intensity and until recently, had broadly centred on two competing paradigms (Crotty, 1998). *Positivism* (also often termed as *naturalism, empiricism and objectivism*, among others) carries the philosophical assumption that there is a neutral point from which an observer can stand back and view the world objectively. *Interpretivism* (also often known as *idealism, constructionism and relativism*, among others) holds the position that the world does not exist independently of our knowledge of it (Easterby-Smith *et al.*, 2008; Grix, 2004; Gill and Johnson, 2002).

The idea of positivism was first captured by the French philosopher Auguste Comte in the mid-19th Century and has since been enmeshed in natural science research (Easterby-Smith *et al.*, 2008). The roots of interpretivism are often associated with the thoughts of Max Weber in the early part of the 20th Century, who identified that a need for 'verstehen' (understanding) was required in the advancing social sciences, this being in contrast to the 'erklären' (explaining) approach associated with the natural sciences (Crotty, 1998).

The way that theory has been viewed historically from each of the two most recognised philosophical standpoints differs markedly. Theory can be viewed as abstract notions which assert specific relationships between concepts and can be used as the basis for an argument (Grix, 2004; Cottrell, 2005). From the positivist philosophical standpoint, a researcher will take a 'top down' approach, starting with a theory or hypothesis, which may be amended or contradicted. An interpretivist approach starts from the 'bottom up', using social views to build broader themes and generate theory (Creswell and Plano Clark, 2007).

Although efforts were made by positivists in the middle of the 20th Century to halt the developing paradigm split between the natural and social sciences (Neurath, 1959), this divide has continued to widen, including within the sphere of the built environment. Some advocate that to be taken seriously in the built environment research community, knowledge must be underpinned with the type of strong statistical analysis that has served the natural sciences for many years (Runeson, 1997). However, other commentators argue that the socially constructed built environment requires knowledge that takes into account the opinions of those engaged in its activities (Seymour *et al.*, 1997).

On the back of decades of valuable philosophical debate, recent years have seen the discussion and development of additional paradigms, whose origins lie in increasing needs within modern society to both understand *and* solve complex problems.

2.4 Developing Academic Paradigms

2.4.1 Pragmatism

Rescher (1977) suggests that pragmatism can be traced back to the ancient Greeks, being derived from the Greek word ‘pragma’, which means ‘deed’ or ‘action’. According to Johnson and Duberley (2000) and Tarnas (1991), modern pragmatism is North American in origin and character, largely resulting from the posthumously published collection of works of Charles Saunders Peirce (1931 - 58), with the first articles outlining his thoughts being published in 1877. Peirce's work remained largely unknown and unacknowledged until pragmatism was popularised by the work of William James and John Dewey in the early part of the 20th Century (Creswell and Plano Clark, 2007; Crotty, 1998; Tarnas, 1991).

Johnson and Duberley (2000) suggest that pragmatism articulates an overt recognition of the active and proactive role of the epistemic subject, whose engagements are bounded by the tolerance of reality. Any knowledge is evaluated in the context of how it may guide action towards the realisation of particular objectives which express particular interests – or in other words, what it does for and to various groups of human actors. Accordingly, taking into account the socially constructed nature of the built environment, a number of commentators within the research community have begun to argue that pragmatic approaches are valid to management research (Amaratunga *et al.*, 2002; Dainty *et al.*, 2000; Green *et al.*, 2008; Love *et al.*, 2002; Pathirage *et al.*, 2008; Toor and Ofori, 2008).

As has been highlighted by Rooke and Kagioglou (2007), there is a danger that by applying what may be perceived by some in the built environment research community as an ‘anything goes’ route to the production of new knowledge, weak research results may ensue. To counter this possibility, Rooke and Kagioglou set out a Unique Adequacy requirement (UA) for guiding research methods, which essentially demands that the researcher is competent in the research setting and that the research methodology itself only uses concepts originating within that setting.

2.4.2 Design Science

Often closely associated with the paradigm of pragmatism (Holmström *et al.*, 2009; Kasanen *et al.*, 1993; Van Aken, 2005), design science is viewed as both a paradigm in its own right and a methodological research framework (Hevner *et al.*, 2004; Vaishnavi and Kuechler, 2013; Van Aken, 2004).

Like pragmatism, the paradigm of design science advocates the use of research methods that best match the problem being studied. But what sets it apart from the more traditional paradigms of positivism and interpretivism is its aim to develop knowledge to solve problems, or to be used in the improvement of the performance of existing entities. As such, design science is fundamentally different from other research approaches (Van Aken, 2004). It is argued that the aim of ‘behavioral’ or ‘explanatory’ sciences (different terms used to encompass both natural and social science paradigms) is to describe, explain and possibly predict observable phenomena within their field. The research output of a behavioral/explanatory science is a causal model, preferably expressed in quantitative terms (Hevner *et al.*, 2004; Van Aken, 2004).

The ideas used to distinguish between behavioral/explanatory and design sciences are inspired by Simon’s *The Sciences of the Artificial* (1969). Much research within the design sciences is based on the behavioral/explanatory paradigms, with research being aimed at describing and predicting in order to understand research problems. However, understanding the research problem is not enough, the ultimate aim being to develop knowledge that can be used to design solutions to problems in the field in question (Van Aken, 2004). As such, by definition, design science research aims to change the state of the world through the introduction of novel innovations, commonly known as ‘artefacts’, which make both great practical and theoretical contributions (Vaishnavi and Kuechler, 2013; Lukka, 2003).

2.5 Research Perspective

Table 2.1, adapted from the work of Creswell and Plano Clark (2007) and Vaishnavi and Kuechler (2007), sets out the basic ontological, epistemological and methodological beliefs associated with the four research perspectives described above.

Basic Belief	Research Perspective			
	Positivism	Interpretivism	Pragmatism	Design Science
<i>Ontology (what is the nature of reality?)</i>	Singular reality (e.g. researchers reject or fail to reject hypotheses).	Multiple realities (e.g. researchers provide quotes to illustrate different perspectives).	Singular and multiple realities (e.g. researchers test hypotheses and provide multiple perspectives).	Multiple, contextually situated alternative world-states. Socio-technologically enabled.
<i>Epistemology (what is the relationship between the researcher and that being researched?)</i>	Distance and impartiality (e.g. researchers objectively).	Closeness (e.g. researchers visit participants at their sites to collect data).	Practicality (e.g. researchers collect data by "what works" to address research question).	Knowing through making: objectively constrained construction within a context. Iterative circumscription reveals meaning.
<i>Methodology (what is the process of research?)</i>	Deductive (e.g. researchers test an a priori theory using quantitative research methods).	Inductive (e.g. researchers start with participants' views and build up to patterns, theories and generalisations using qualitative research methods).	Researchers collect both quantitative and qualitative data.	Developmental. Measure potential artefact impacts on the composite system.

Table 2.1 - Philosophical assumptions associated with the four research perspectives

The environment within which this study is set is complex, with political, social, environmental and economic contexts. A research approach was required that offered the capacity to develop *and* measure the potential of a framework for change. Design science projects carefully investigate problem situations in complex field based environments and divide them into sub-problems requiring solutions (Johannesson and Perjons, 2012). When considering the problem situations and linked sub-problems outlined in Chapter 1 that required further explication on a national level prior to the development of potential solutions, this study was viewed as an ideal locus for the design science research approach.

The origins and development of the design science research approach will now be discussed, before moving on to illustrate how its application will be used to devise and evaluate solutions to the problems being addressed by this study.

2.6 Design Sciences and Design Science Research

2.6.1 Origins and Development

The design of artefacts is an activity that has been linked with professional fields (or design sciences) such as architecture, business, engineering, education, law, and medicine for centuries – it is not a new concept (Simon, 1969; Vaishnavi and Kuechler, 2013). In medicine

for example, design science may be used to create new pharmaceuticals or treatments (Kasanen *et al.*, 1993).

Simon (1969) asserts that design sciences, which he terms as '*sciences of the artificial*', were sidetracked in many universities during the 20th Century in pursuit of more academically respectable topics. However, students of the design sciences continue to be trained to this day at professional schools to enable them to use the general knowledge of their discipline to design specific solutions for specific problems (Van Aken, 2005).

What distinguishes the design sciences from other professional fields is that their goal is not to describe and explain the world, but to use their knowledge and understanding to solve practical problems (Voordijk, 2009). Otherwise, as Van Aken (2004) suggests, simply understanding the sources of resistance to organisational change still leaves undone the task of developing sound change programmes.

Recent debate in relation to the gap between academic and field based knowledge production was inspired by the seminal work of Gibbons *et al.* (1994) by drawing distinctions between Mode 1 and Mode 2 knowledge production. Mode 1 knowledge production is purely academic and mono-disciplinary, while Mode 2 is multidisciplinary and aims at solving complex and relevant problems in the field (Van Aken, 2005).

In the last 20 years, the uptake of design science research has been rapid and enthusiastic (Koskela, 2008). It has begun to be applied to research in fields such as information systems (Hevner *et al.*, 2004; March and Smith, 1995; Osterle *et al.*, 2011; Peffers *et al.*, 2007), general management (Van Aken, 2005) and operations management (Holmström *et al.*, 2009). Although the description of 'the constructive approach' is given to some research within the field of management accounting (Kasanen *et al.*, 1993; Lukka, 2003), this essentially follows design science principles.

Voordijk (2009) draws parallels between the design sciences and construction management by referencing Simon (1969), who claims that design sciences are relevant to organisations because everyone designs who devises courses of action aimed at changing existing situations into preferred ones. In the same vein, Koskela (2008) argues that areas such as the design, construction and maintenance of the built environment are suffering from the underdevelopment of design science research. Accordingly, both Voordijk (2009) and

Koskela (2008) recommend that management within the built environment should be redefined as a design science, with innovative artefacts being developed to solve complex problems in the field.

2.6.2 The Anatomy of Artefacts

Ratcliff (2008) asserts that however good research methodologies become, it will not be possible to escape the ultimate dilemma, this being that all our knowledge is about the past while all our decisions are about the future. Accordingly, he suggests that traditional methods of research are not capable of determining the future shape and performance of the intricate and socially constructed built environment and to be capable of creating a future, one has first to be able to imagine it

Whilst artefacts offer function to their intended practice, undesirable side effects may result in situations where the researcher designing an alternative future does not have a complete understanding of the environment in which the artefact will operate (March and Smith, 1995). Accordingly, a critical challenge in constructing the desired artefact will be anticipating the potential side effects of its use and ensuring that they are avoided. As demanded by the Unique Adequacy requirement (UA) set out by Rooke and Kagioglou (2007) to guide construction management research, as an experienced regulatory practitioner attempting to design an alternative future within his field, the author is competent in the research setting.

Although artefacts may be designed through design science research to offer potential future solutions to problems in the field, they will result from a search process that draws from existing theories and knowledge (Peffer *et al.*, 2007). Typically, requirements are gathered from and validated by people within the intended practice (Johannesson and Perjons, 2012).

Artefacts have an inner environment and an outer environment. The inner environment is the set of smaller components that are assembled in such a manner as to ensure that holistically, they can interact with each other to make up the artefact. The outer environment is the total set of external forces that will act upon the artefact, including the elements of its intended practice and other practices that may be affected by its use (Johannesson and Perjons, 2012; Simon, 1969; Vaishnavi and Kuechler, 2013). In relation to the research being undertaken by the author, the inner environment will result from the work carried out to meet its separate objectives and ultimately, it's overriding aim (the artefact itself). The external environment

that will act upon the artefact will continue to be the issues that have led to the research being carried out, such as legislative and stakeholder demands.

Based upon the knowledge types and forms introduced, it is possible to distinguish between four artefact types: *constructs*, *methods*, *instantiations* and *models* (Johannesson and Perjons, 2012; March and Smith, 1995). In keeping with the natural sciences, there is a need for a basic language such as terms, notations, definitions and concepts needed to formulate problems and their possible solutions – this basic language is termed as *constructs*. Design scientists also develop *methods*, which express prescriptive knowledge by defining guidelines to create artefacts. *Instantiations* are specific products intended to perform certain tasks in practice, such as a database.

Models are used to describe potential solutions to practical problems, work as descriptions of possible future solutions, and help to build artefacts that prescribe solutions to practical problems. Accordingly, in design science research, the focus is on producing the type of prescriptive framework for potential change that was aspired to during the early stages of this research.

2.6.3 Prescriptive Knowledge Production through Models

Knowledge produced by academic research can be of a descriptive or a prescriptive nature, with the development of descriptive knowledge being theory-driven and focusing on existing situations and the development of prescriptive knowledge being field-problem driven and solution-oriented (Van Aken, 2005).

According to March and Smith (1995), a model is a set of propositions or statements expressing relationships among constructs whose primary concern is utility. The knowledge created by prescriptive models can be viewed as comprising two parts with the first being the model itself, and the second being statements about the desirable outcomes of using the model (Johannesson and Perjons, 2012). A predictive statement implies that if a model is used in a practice, it will contribute to effects desired by stakeholders. Johannesson and Perjons suggest that a model can be seen as representing all or part of a system and a *special case of prediction*. In this sense, when considering the desire to see a range of potential solutions to the type of problems outlined in Chapter 1 encapsulated as a representation of prescribed improvements to the development consent system, a *model* emerged as the overriding aim of this research. Although the a term model could be viewed as being similar in context to the

previously used aspirational aim of ‘framework’ (defined by Oxford Dictionaries (2015) as *a basic structure underlying a system, concept, or text*), its use was viewed as being more in keeping with the chosen design science research approach.

Ratcliff (2008) postulates that increasingly complexity in the 21st Century has created the need for a fundamental rethink within the built environment and that theory can best be formulated by recourse to futures, foresight and imagination. A design science does not develop prescriptive knowledge for the layman, but does so for professionals and stakeholders in its field, with the knowledge being applied by individuals who have received a formal education in that field (Van Aken, 2004). The research methodology required to produce such knowledge is now discussed.

2.6.4 Design Science Methodology

Design science projects are often large undertakings, involving the review of a broad range of existing information and stakeholder views related to the problems being explored over an extended period of time. Accordingly, researchers adopting the design science research methodology can gain much from the manner in which it supports them in structuring their work logically, ensuring the quality of their results (Johannesson and Perjons, 2012).

There are a number of activities involved in what Simon (1969) describes as the ‘*means-ends analysis*’ led framework of design science research. Means-ends analysis is based on representations of present states, desired states, the differences between the two states, and the actions that could change the present situation. The goal of the means-ends analysis is to move towards the desired state, which in this case is the development of an artefact (or model) with the capability to solve the research problems.

Although the activities recommended by some advocates of the design science methodology may differ, ultimately all recommendations result in the same means-ends analysis, starting with identification of problems and ending with a means of solving them. In this sense, process models found by the author in the work of Takeda *et al.* (1990), Vaishnavi and Kuechler (2007), Peffers *et al.* (2007), and Johannesson and Perjons (2012) contain very similar process steps, knowledge/theory flows and outputs. Figure 2.2, a simple adaptation of the process models contained within this body of work, demonstrates the methodology that has been adopted by this study.

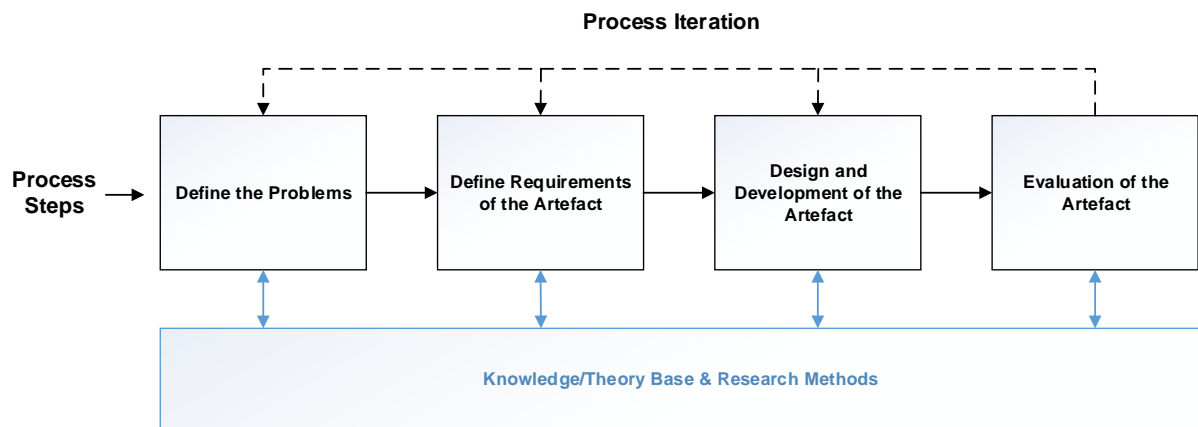


Figure 2.2 - Design science research methodology

The methodology set out in Figure 2.2 demonstrates the iterative way in which this design science project was executed, moving back and forth between all the activities of problem definition, requirements definition, artefact development and artefact evaluation. Unlike the process models set out by Vaishnavi and Kuechler (2007) and Peffers *et al.* (2007), the models offered by Takeda *et al.* (1990) and Johannesson and Perjons (2012) do not clearly demonstrate iterative movements between process steps. When considering that the research was to be carried out within an environment of continuing political and policy change, process iteration was considered to be essential, as recommended for similar situations by other commentators (Holmström *et al.*, 2009; Osterle *et al.*, 2011).

Of the 4 process models that were considered, only the most recent offered by Johannesson and Perjons (2012) suggests the inclusion of details of the knowledge/theory base and research methods to be employed as part of each process step. The inclusion of this element of the process model was deemed as being valuable in offering an easily accessible reference to the structure of the research following establishment of the required resources. Accordingly, Figure 2.2 will be updated later in the thesis to demonstrate how its chapters fit within the flow of process steps, along with the knowledge/theory base and research methods utilised as part of each step.

In setting out the activities that may be utilised to achieve a means-ends analysis of problems in the field, commentators advise against the mandatory use of all process steps. They instead recommend the use of creative skills and judgment to determine when, where and how to apply each of the activities to a specific research project (Hevner *et al.*, 2004). In taking into account the required output of this research, four activities from the process models considered were deemed to be required as part of a detailed means-ends analysis with the

capacity to produce the required artefact. The process models offered by advocates of the methodology detail the option of a fifth process step prior to evaluation of the artefact – a *demonstration of the artefact* to interested stakeholders. This activity is particularly suited to instances where information or accounting systems are being developed (Lukka, 2003; Peffers *et al.*, 2007). However, taking into account the broad policy driven scope of this research, it would obviously not be possible to employ the desired artefact to test or demonstrate it in use.

The requirements of each of the four activities that will form the methodology adopted by the research are now considered separately.

2.6.5 *Define the Problems*

As suggested by its description, the process step *define the problems* is concerned with defining the issues to be addressed and justifying the value of solutions (Peffers *et al.*, 2007). In keeping with the issues associated with this research, the problems should be of general interest and not restricted to local practice (Johannesson and Perjons, 2012).

A description of the type of problems being addressed by this research have been drawn out in Chapter 1 through a description of the author's localised experiences as a practitioner. Chapter 3 will seek to reinforce these experiences on a far wider basis through a review of literature, including the results of a number of research projects commissioned by the Government that have considered a substantial body of stakeholder feedback. Where necessary (i.e. where literature on a particular issue is scarce), the author's experiences in the field will be expanded upon. However, as detailed in Figure 2.2, the iterative nature of the methodology may also result in the research problems being expanded upon later as part of the design and development activity (i.e. barriers to particular solutions to problems that may emerge from the research).

2.6.6 *Define Requirements of the Artefact*

The aim of the *define requirements of the artefact* process step is to outline a tentative design solution to the research problems by setting out the issues that are important to stakeholders (Johannesson and Perjons, 2012; Vaishnavi and Kuechler, 2007). Requirements are outlined using generally accepted research methods and are contrasted with solutions already known to exist in science and business (Osterle *et al.*, 2011). The main objectives of the define requirements of the artefact process step are to (Johannesson and Perjons, 2012):

- Describe each requirement in a precise, concise and easily understandable way.
- For each requirement, explain why it is needed and relate it to the problem.
- Ensure that it is realistic to develop an artefact fulfilling the requirements but also try to be original.
- Describe the literature and the stakeholders that have contributed to defining the requirements.
- Explain what has been done to define the requirements, in particular how the research literature and views of stakeholders have been reviewed.

In meeting the above requirements, it is the researcher's task to make sure that they are aware of prior knowledge/theory of the topic area, not only in order to base further development work on that prior knowledge/theory, but also to be able to later identify and analyse the theoretical contribution of the research (Lukka, 2003).

2.6.7 Design and Development of the Artefact

The *design and development of the artefact* process step is inherently creative by nature (Lukka, 2003) involving a process of synthesis. The outputs of the *define requirements of the artefact* process step are refined through a process of reusing and adapting components from existing solutions, inventing new components, and combining them in an innovative way (Johannesson and Perjons, 2012). The desired output of this process step is an objective centred solution to meet the overall aim of the research (Peffers *et al.*, 2007).

Simon (1969) compares the design and development of an artefact to the design and development of a building, during which an architect will draw together sketches, floor plans, elevation drawings and service information to create a final design product. Similarly, it is the researcher's task during this stage of the study to draw together the potential solutions to the sub-problems and wider issues addressed by the previous outline and define activity through a process of synthesis to design and develop the desired artefact.

2.6.8 Evaluation of the Artefact

The *evaluation of the artefact* process step aims to determine how well the artefact is able to solve the research problems. There are two main strategies – ex ante and ex post evaluation, with ex ante evaluation resulting in an artefact that is evaluated without being used and ex post evaluation requiring the artefact to be employed (Johannesson and Perjons, 2012).

To date, research offering advice on evaluation strategies for design science research is limited and primarily concentrates on the development of information systems, the performance of which can often be tested in situ following design and development (Venable *et al.*, 2014). However, taking into account the broad policy driven scope of this research, it would obviously not be possible to employ the desired artefact to test or demonstrate it in use. In situations where innovative artefacts cannot be employed and tested in complex work environments, Johannesson and Perjons (2012) and Hevner *et al.* (2004) recommend the use of an ex-ante form of evaluation called *informed argument*. In such instances, evaluation is tightly coupled with artefact requirements definition and design (Venable *et al.*, 2014). Accordingly, the informed argument form of evaluation has been utilised by this research, as reflected by the process iteration outlined in Figure 2.2.

2.7 Summary

Having worked through the ‘building blocks of research’ identified by Grix (2004), it has been determined that the design science research methodology best matches the problem solving ethos of this research. In this sense, it has been ascertained that design sciences can be distinguished from other professions as their goal is not to describe and explain the world, but to use their knowledge and understanding to solve practical problems (Voordijk, 2009). Otherwise, simply understanding the barriers to change still leaves undone the task of developing the type of model for potential change being sought by this research and in this sense, the design science methodology is fundamentally different from other research approaches (Van Aken, 2004).

As a large undertaking involving the review of a broad range of existing information and stakeholder views over an extended period of time, the design science research methodology also offers a means of structuring the study logically, ensuring the quality of its results (Johannesson and Perjons, 2012).

The type of problems that will be addressed by the research have been outlined through the author’s experiences in the field at a localised level in Chapter 1. In keeping with the adopted design science research methodology, Chapter 3 will now broaden and reinforce definition of the problems through an analysis of literature examining the research problems on a national basis and consequently, will set out the aim and objectives of the research. Where appropriate, the author’s experiences of the wider issues drawn out by the literature are also incorporated.

3 Define the Problems

3.1 Introduction

As detailed in Chapter 1, increasingly complex building performance standards and continuous transformation of the public sector appear to be having a detrimental effect upon the effectiveness and efficiency of the developments overseen in practice by the author and his peers. In this respect, Chapter 1 also discussed existing (Academy for Sustainable Communities, 2007; Egan, 2004) and developing (Planning and Building Control Working Group, 2010) research considered prior to the commencement of this study, which reinforced the problems being observed by the author. This chapter will seek to reinforce the problems discussed in Chapter 1 on a wider basis through a review of literature. Where necessary (i.e. where literature on a particular issue is scarce), the author's experiences in the field that were outlined in Chapter 1 will be expanded upon.

Following the introduction of sustainable development as a regulatory aim, technical requirements have begun to cross the disciplinary boundaries between the planning and building control professions, resulting in a need for knowledge and skill sharing. However, ongoing transformation of the public sector seems to be serving to further fragment the relationship between the two professions rather than acting to bring them closer together.

An indication of the scale of the current problem in this respect is highlighted in the stakeholder feedback to the research of Faber Maunsell and Steemers (2010, p. 15), which suggests that: "...they [planning and building control practitioners] *come from different backgrounds and speak a different language*". The following quotation from research carried out by AECOM (2012, p. 26) offers similar stakeholder perspectives:

"We have been informed that despite development control and building control operating from the same department, the two bodies and their assessing officers may hardly interact or communicate."

Such views would seem to suggest that not only is there a problem with regards to sharing knowledge and skills, but that the regulatory framework does not promote interaction between planning and building control practitioners. The increasingly complex nature of current regulatory performance standards as a result of the emergence of sustainable development as a

regulatory aim is now considered, setting out the scale of the problems that would appear to be both demanding and preventing collaborative regulatory practice.

The chapter begins by examining the emergence of sustainable development as a regulatory aim, assessing the resultant effects upon technical complexity and skill levels. It then goes on to investigate the consequences of recent transformation of the public sector before concluding by setting out the aim and objectives of the research.

3.2 The Emergence of Sustainable Development as a Regulatory Aim

3.2.1 Context

Towards the end of the 20th Century, growing global concerns on the effects of climate change led to political aspirations for sustainable development.

The United Nations Conference on Environment and Development (UNCED), held in Rio de Janeiro in 1992, is widely recognised as resulting in the first political endorsement of sustainable development as an international objective (Ross, 2012). The UNCED resulted in *Agenda 21* (United Nations, 1993), a 470 page blueprint for sustainable development. As well as adopting the principles of Agenda 21, the UK Government also committed to a 12.5% reduction in six greenhouse gases below 1990 levels over the period 2008–2012 under the *Kyoto Protocol*, an international agreement linked to the United Nations Framework Convention on Climate Change (Hickman and Banister, 2007).

Due to the growing concentration upon sustainability issues, the early years of the 21st Century have seen definitions of the purpose of building control and planning change. The introduction of the Planning and Compulsory Purchase Act 2004 shifted the focus of planning from the control of development to a more spatial system. It also changed the broad objective of the planning system from regulation of the development and use of land in the public interest, to also contributing to the achievement of sustainable development (Department for Communities and Local Government Committee, 2008; Cullingworth and Nadin, 2006).

The introduction of Sustainable and Secure Buildings Act 2004 strengthened the focus on sustainability issues for the building control profession. In 2007, in beginning to set out the scope of their review of the building control system in England and Wales, the then Labour Government made clear their desire for a step change from delivering buildings that are safe,

healthy and accessible, to ensuring that they are also sustainable and make a direct contribution to tackling climate change (Department for Communities and Local Government, 2007).

Having become a central regulatory aim of the planning and building control professions in England, it is necessary to consider the true meaning of sustainable development.

3.2.2 Defining Sustainable Development

Although many have tried, it is extremely difficult to place an absolute definition on the term sustainable development, so numerous are the ingredients associated with it. An often cited definition of sustainable development is taken from the *Our Common Future* report by the World Commission on Environment and Development (1987, p. 24), which is more commonly known as *The Brundtland Report*:

“Humanity has the ability to make development sustainable to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs.”

Since the above definition was offered in 1987, the UK Government’s views on sustainability have been influenced by international policy and to this day, remain unclear and lacking an indicative scope. Jenkins (2002) suggests that between the publication of the *Our Common Future* report and the end of their term in office in 1997, the then Conservative Government set out a number of environmental strategies (Department of the Environment, 1994; Department of the Environment, 1990), but offered no clear view of its own or targets relating to sustainability. Little attention was being paid by the Conservative Government to the achievement of social equity (Jenkins, 2002).

Agenda 21 (United Nations, 1993) set out the United Nations’ economic, environmental and *social* aspirations. In 1999, the Labour Government’s commitment to the social issues included in Agenda 21 and by now also reflected in the strategies of many other countries in Europe (Ross, 2012) was set out in its own strategy for sustainable development (Department for the Environment, 1999). The strategy had four main objectives, which collectively formed the Government’s definition of sustainable development:

1. social progress which recognises the needs of everyone;
2. effective protection of the environment;

3. prudent use of natural resources; and
4. maintenance of high and stable levels of economic growth and employment.

In essence, this document introduced the three-pronged approach (i.e. economic, social and environmental wellbeing) that is a golden thread that still runs through the aspirations set for local government through legislation such as the Local Government Act 2000 and Localism Act 2011.

Ross (2010) postulates that by 2004, it was clear to policy makers in the UK that the ‘weak’ version of sustainability popular among governments and business was not working and that ultimately, this led to the publication of a new strategy for sustainable development in the UK. This new strategy, *Securing the future: delivering UK sustainable development strategy* (HM Government, 2005), set out five ‘guiding principles’ for sustainable development:

1. *Living Within Environmental Limits* – Respecting the limits of the planet’s environment, resources and biodiversity.
2. *Ensuring a Strong, Healthy and Just Society* – Meeting the diverse needs of all people in existing and future communities, promoting personal wellbeing, social cohesion and inclusion, and creating equal opportunity for all.
3. *Achieving a Sustainable Economy* – Building a strong, stable and sustainable economy which provides prosperity and opportunities for all, and in which environmental and social costs fall on those who impose them (polluter pays), and efficient resource use is incentivised.
4. *Promoting Good Governance* – Actively promoting effective, participative systems of governance in all levels of society, engaging people’s creativity, energy, and diversity.
5. *Using Sound Science Responsibly* – Ensuring policy is developed and implemented on the basis of strong scientific evidence, whilst taking into account scientific uncertainty as well as public attitudes and values.

3.2.3 Recent Political Attitudes towards Sustainable Development

In January 2007, two years after the publication of the Labour Government’s revised strategy for sustainable development, Sir Nicholas Stern published his book *The Economics of Climate Change: The Stern Review* (Stern, 2007). The book gained worldwide attention upon release, primarily because of the projected detrimental effect that climate change might have on the world’s economy. Stern predicted that if no action were to be taken to reduce greenhouse gas

emissions, a global average temperature rise of over 2°C would result by the year 2035, with a 50% chance that the temperature rise would exceed 5°C in the longer term. In March 2007, the Government set out plans to reduce CO₂ emissions in the UK by 60% by the year 2050 in its Climate Change Bill, heralding this as the driver of the world's first legal framework for transition to a low carbon economy (BBC News, 2007).

Upon coming to power in May 2010, the Conservative/Liberal Democrat Coalition Government was charged with reducing a massive public spending deficit and in recent years, there have been U-turns on a number of green policies (Pitt, 2013). Such U-turns have included the dilution of the definition of 'zero carbon' for new homes by removing the requirement to cover energy used to power appliances (HM Treasury, 2011). Subsequently, the Conservative Government elected in May 2015 postponed up and coming zero carbon targets for new dwellings and commercial buildings in July 2015 as part of an 'economic productivity drive' (HM Treasury, 2015). In an open letter to the Chancellor of the Exchequer, senior leaders from 246 organisations warned that this policy U-turn had undermined industry confidence in Government and would curtail investment in British innovation and manufacturing (UK Green Building Council, 2015).

A report published by the House of Commons Environmental Audit Committee (2013) concludes that the Coalition Government failed to back green growth and innovation by setting clear standards on sustainable construction materials, also noting the '*significant dilution*' of energy and carbon reduction standards. The Coalition Government also ceased funding for the Sustainable Development Commission, who had made significant contributions towards attempts to create a sustainable economy (Ross, 2012). Most recently, a report to Parliament by the Committee on Climate Change (2015) claimed that the Government has failed to adequately tackle the threat of climate change, suggesting that green policies on buildings, energy use, land use and water management should be strengthened.

The recent events outlined above add weight to suggestions of a continuing cycle where short term political pressures result in the dilution or side-lining of sustainable development issues (Davoudi, 2000; Ross, 2012; Greenwood, 2010).

3.2.4 Lack of Strategic Oversight of Regulation in Government

In taking a detailed look at the future of regulation across all sectors in the UK, Baldwin (2010) postulates that there is no strategic oversight within Government, resulting in policies

that undermine each other. Evidence suggests that this assertion holds true within the field of the built environment, with disjointed policy decisions continuing to add confusion to an already complex set of regulatory performance standards.

Responsibility for developing and implementing policy for energy and environmental performance in housing is split between different Government departments, with short term ministerial appointments working against the establishment of clear long term objectives (Greenwood, 2010). Even in situations where teams responsible for similar policy instruments operate within the same Government department, they tend to work in isolation (Lowe and Oreszczyn, 2008). In this sense, during their inquiry into the level of sustainable construction in England, stakeholder feedback to the All Party Group for Excellence in the Built Environment (2013, p. 12) suggested that:

“Progress on sustainable construction is slipping behind on all fronts, largely because there is lack of drive and focus in the Government, with clear tensions and differing priorities between The Department of Energy and Climate Change, Department for Communities and Local Government, Department for Business, Innovation and Skills and Treasury – the departments where responsibility for green issues in the built environment primarily lie.”

In 2006, the introduction of the Code for Sustainable Homes (CSH) was heralded by the Labour Government as a driver for collaboration between planning and building control services on sustainability issues attached to new housing (Department for Communities and Local Government, 2006b). Seven years later, a report produced by the Coalition Government appointed Housing Standards Review Challenge Panel (2013) set out a number of criticisms of the Government’s latest attempt to rationalise regulatory standards relevant to new housing, including abolition of the CSH. The Housing Standards Review Challenge Panel also identified a worrying lack of collaborative practice between planning and building control professionals. This is perhaps due to the fact that since the introduction of the CSH in 2006, major reviews of the planning and building control systems have been carried out separately and with little reference to each other (Department for Communities and Local Government, 2009a; Killian and Pretty, 2008b).

In examining the merits of a Code for Sustainable Buildings applicable to the commercial development sector, the UK Green Building Council (2009) found regulatory responsibilities within Government to be fragmented, with differing departments continuing to *‘reinvent the*

same wheel'. They identify such disparity as a cause of continuing stakeholder confusion, hindering progress in the delivery of sustainable commercial buildings.

Having been requested by the Government to explore non-planning consents (including building control) and identify areas where regulatory processes for development might be rationalised, Penfold (2010) concluded that:

1. non-planning consents are numerous and complex, with no standard 'way in' to them for developers and responsibility for them being fragmented with no-one in Government looking at the landscape as a whole;
2. overlaps and duplication between planning and non-planning consents are a source of inefficiency and blur the boundary between the decision of principle about whether development should go ahead (the 'if' decision) and detailed decisions about how a development should be built and operated ('how' decisions);
3. non-planning consents can be critical to some investment decisions and any unforeseen or unnecessary delays they cause increase development costs and can have an adverse economic impact; and
4. inconsistency and frustration often characterise developers' experience of consenting bodies.

It has been argued that if they are to be meaningful and effective, aspirations for sustainable development should be a long term and largely protected objective (Mawhinney, 2002; Parkin, 2010; Ross, 2012; United Nations, 1993; World Commission on Environment and Development, 1987). As will now be discussed, although in many instances admirable in their intent, the broad array of existing statutory and voluntary building performance standards would appear to be resulting in confusion for stakeholders and ultimately, inefficient outcomes.

3.2.5 Sustainable Development & Statutory Building Performance Standards

Each part of the Building Regulations is supported by a guidance document, known as an Approved Document (often also referred to as a 'Part', i.e. Part A, Part B, etc.), which describes ways of meeting the requirements of the Regulations. Similarly, the requirements of sustainable development relative to the planning system are set out within planning policy documents.

The report *Building Regulations System and the Planning System: a better regulation approach for sustainability* (Faber Maunsell and Steemers, 2010) highlights the overlaps in responsibility for performance standards between the planning and building control systems on sustainability issues. Taken from the work of Faber Maunsell and Steemers, Table 3.1 offers an overview of the guidance documents used to regulate the built environment in England at the time of both publication of the report, and the commencement of the author's research.

Sustainability Category	Building Regulations Approved Documents	Planning Policy Documents
1. Structure, fire safety, hygiene, combustion appliances & fuel storage, electrical safety, glazing, etc.	A (Structural Safety), B (Fire Safety), G (Hygiene), J (Heat Producing Appliances), K (Protection from Falling), N (Glazing Safety), P (Electrical Safety)	
2. Site preparation & contaminated land	C (Resistance to Contaminants and Moisture)	PPS (Planning Policy Statement) 23 (Pollution Control)
3. Toxic substances	D (Toxic Substances)	Local policy
4. Drainage & waste disposal	H (Drainage and Waste Disposal)	Local policy
5. Access to and use of land/buildings	M (Access to and Use of Buildings)	Local policy
6. Energy – standards	L (Conservation of Fuel and Power)	Local Policy (CHP [Combined Heat & Power], renewables)
7. Materials and workmanship	Regulation 7 (Workmanship and Materials)	Local policy
8. Noise	E (Resistance to Sound)	PPG (Planning Policy Guidance) 24 (Noise)
9. Indoor comfort & health, overheating control	F (Ventilation)	Local policy
10. Group heating, Combined Heat & Power (CHP), energy networks	L (Conservation of Fuel and Power)	Local policy
11. Renewable energy	L (Conservation of Fuel and Power)	PPS 22 (Renewable Energy)
12. Water use	Water Regulations	Local policy
13. Waste, solid		PPS 10 (Waste Management)
14. Flood risk	H (Drainage and Waste Disposal)	PPG 25 (Flood Risk)
15. Reuse of land and buildings		PPS 03 (Housing) and others
16. Air pollution		PPS 23 (Pollution Control)
17. Microclimate		Local policy
18. E-enabled buildings		Local policy
19. Security		Local policy
20. Private and public open space		PPS 01 (Delivering Sustainable Development)
21. Biodiversity and natural environment		PPS 09 (Biodiversity & Geological Conservation)
22. Construction site practices	Implementation of Building Regulations	Local policy
23. Transport		PPS 03 (Housing), PPG 13 (Transport)
24. Heritage buildings		PPG 15 (Historic Environment)

Table 3.1 - Coverage of sustainability categories

In addition to the Approved Documents detailed in Table 3.1, building control bodies are also required to reference and apply the guidance contained within a series of Healthcare Technical Memorandums (known as HTMs) for hospitals (Department of Health, 2013) and Building Bulletins for educational buildings (Department for Education and Skills, 2004). Table 3.1 would appear to be confusing and inconclusive in some respects. It lists the broad term '*Water Regulations*' under Category 12, which without more detailed reference, cannot easily be attributed/linked to any Approved Document. It also links the term '*implementation of Building Regulations*' to construction site practices under Category 22. However, the table does offer an idea of the wide ranging issues that can be linked to sustainable development and the blurring of the lines in the guidance documents and policy produced by the Government for the two disciplines. It is worth mentioning that since the table was produced, a number of changes have been made to guidance documents and policy.

Notable recent amendments to the Building Regulations have included the introduction of water efficiency standards for new dwellings through Approved Document G (Sanitation, hot water safety and water efficiency), which could now populate Category 12 in Table 3.1 in place of '*Water Regulations*'. A new Part Q has been introduced to cover security issues for dwellings, which could now populate Category 19. The contents of Approved Document N (Glazing) have been incorporated into Approved Document K (Protection from falling, collision and impact), making Part N obsolete. In addition, there have been sweeping changes to planning policy through the National Planning Policy Framework or NPPF (Department for Communities and Local Government, 2012b), which replaces the vast majority of policy documents referenced by Table 3.1. The only exception is Planning Policy Statement 10 (Planning for Sustainable Waste Management), which remains in force.

Faber Maunsell and Steemers (2010) suggest that the development consent system is confusing, unsatisfactory, and may be holding back both sustainability and the level of house building in England, recommending that:

- sustainability issues be divided up between the two regimes in a logical way, with different aspects of areas covered by both allocated clearly to each system;
- the Government should take a lead on setting clear national targets on sustainability rather than leaving it to individual planning authorities with high sustainability priorities to set their own standards; and

- the two regulatory frameworks should support each other to efficiently deliver sustainable development, with the ultimate aim of working towards a single permit approach.

Penfold (2010) and the Planning and Building Control Working Group (2010) also suggest that there is a lack of clarity over the respective roles of planning and building control professionals in relation to sustainability. But in addition to the broad range of statutory guidance and policy documents detailed above, there are also a number of voluntary standards linked to the achievement of sustainable development, adding to the complexity of the regulatory environment.

3.2.6 Sustainable Development & Voluntary Building Performance Standards

The Government set up the Sustainable Buildings Task Group in December 2003, giving them a remit to advise on the practical and cost effective measures required to improve the sustainability of buildings. Subsequently, in 2004, the Task Group recommended the creation of a Code of Sustainable Building, bringing together best practice in a measurable way (Sustainable Buildings Task Group, 2004). The Government considered the recommendations of the Task Group to be too complex to introduce across the domestic and commercial development markets. Instead, they introduced the Code for Sustainable Homes (CSH) in April 2007 with a view to examining the merits of a commercial code at a later date (Department for Communities and Local Government, 2008a).

The aim of the CSH was to offer a voluntary standard to house builders to enable them to demonstrate the sustainability performance of their homes and in doing so, set themselves apart from their competitors (Department for Communities and Local Government, 2006c). On announcing the CSH in 2006, the Government set out their vision for a “*complementary relationship between the planning system, the Building Regulations and the CSH*” in delivering sustainable development (Department for Communities and Local Government, 2006b, p. 11). When set in 2006, CSH ratings ranged from Code Level 1 (equivalent to current Building Regulations) to Code Level 6 (net zero CO₂ emissions), with incremental upgrades of standards within the Building Regulations leading to a mandatory Code Level 6 requirement by 2016.

First established in 1990, the BREEAM (Building Research Establishment Environmental Assessment Methodology) UK New Construction scheme is used to rate and certify the

environmental sustainability of different types of commercial development. In parallel with the CSH, the aim of BREEAM is to encourage developers to build to standards that exceed regulatory requirements and use their ratings to distinguish their projects from those achieving minimum statutory standards (BRE Global Ltd, 2014a). BREEAM rating level benchmarks range from ‘Pass’ (standard good practice – top 75% of UK new non-domestic buildings) to ‘Outstanding’ (innovative – less than top 1% of UK new non-domestic buildings). Table 3.2 sets out the 9 categories assessed in their chronological order under the CSH and BREEAM schemes, with the separate technical issues attached to each category listed in italics (BRE Global Ltd, 2014a; Department for Communities and Local Government, 2010a).

9 Categories Covered by CSH (<i>Technical issues covered by main category in italics</i>)	9 Categories Covered by BREEAM UK New Construction (<i>Technical issues covered by main category in italics</i>)
1. Energy and CO₂ Emissions. <i>Dwelling emission rate; fabric energy efficiency; energy display devices; drying space; energy labelled white goods; external lighting; low and zero carbon technologies; cycle storage; home office.</i>	1. Management. <i>Project brief and design; life cycle cost and service life planning; responsible construction practices; commissioning and handover; aftercare.</i>
2. Water. <i>Indoor water use; external water use.</i>	2. Health and Wellbeing. <i>Visual comfort; indoor air quality; safe containment in laboratories; thermal comfort; acoustic performance; safety and security.</i>
3. Materials. <i>Environmental impact of materials; responsible sourcing of materials – basic building elements; responsible sourcing of materials – finishing elements.</i>	3. Energy. <i>Reduction of energy use and carbon emissions; energy monitoring; external lighting; low carbon design; energy efficient cold storage; energy efficient transportation systems; energy efficient laboratory systems; energy efficient equipment; drying space.</i>
4. Surface Water Run-Off. <i>Management of surface water run-off from developments; flood risk.</i>	4. Transport. <i>Public transport accessibility; proximity to amenities; cyclist facilities; maximum car parking capacity; travel plan.</i>
5. Waste. <i>Storage of non-recyclable waste and recyclable household waste; construction site waste management; composting.</i>	5. Water. <i>Water consumption; water monitoring; water leak detection; water efficient equipment.</i>
6. Pollution. <i>Global warming potential (GWP) of insulants; NO_x emissions.</i>	6. Materials. <i>Life cycle impacts; hard landscaping and boundary protection; responsible sourcing of materials; insulation; designing for durability and resilience; material efficiency.</i>
7. Health and Wellbeing. <i>Daylighting; sound insulation; private space; lifetime homes.</i>	7. Waste. <i>Construction waste management; recycled aggregates; operational waste; speculative floor & ceiling finishes; adaption to climate change; functional adaptability.</i>
8. Management. <i>Home user guide; considerate constructors scheme; construction site impacts; security.</i>	8. Land Use and Ecology. <i>Site selection; ecological value and protection of ecological features; minimising impact on existing site ecology; enhancing site ecology; long term impact on biodiversity.</i>
9. Ecology. <i>Ecological value of site; ecological enhancement; protection of ecological features; change in ecological value of site; building footprint.</i>	9. Pollution. <i>Impact of refrigerants; NO_x emissions; surface water run-off; reduction of night time light pollution; reduction of noise pollution.</i>
	Innovation (additional). <i>Innovation.</i>

Table 3.2 - CSH and BREEAM assessment categories for new sustainable development

The categories applicable to each scheme are sub divided into a total of 34 separate technical issues under the CSH (Department for Communities and Local Government, 2010a) and 51 issues under BREEAM (BRE Global Ltd, 2014a). These issues set out technical requirements for sustainable development which holistically, broadly mirror but exceed in scope their statutory counterparts.

Despite the fact that the CSH is a voluntary standard, all new housing funded by the Homes and Communities Agency (HCA) is required to meet CSH level 3 (HM Government, 2014b). Similarly, as of 1st July 2008, all health authorities in England require that new healthcare buildings seeking Outline of Business Case (OBC) approval commit to achieving a BREEAM rating of 'Excellent'. A BREEAM requirement also currently sits in the procurement frameworks managed by the Education Funding Agency (the Department for Education's delivery agency for funding and compliance), with new secondary schools valued at over £2 million being required to achieve a BREEAM (or equivalent) 'Very Good' rating (BRE Global Ltd, 2014c).

Although the CSH and BREEAM are the default voluntary standards in England, other schemes such as Passivhaus are beginning to gain in popularity. Developed in the 1990s by Dr Wolfgang Feist in Germany, Passivhaus is a standard that delivers very high levels of energy efficiency (BRE, 2011). In contrast, the CSH and BREEAM are overarching sustainability assessment ratings which address an array of environmental issues. A number of local authorities have chosen to embed the requirements of voluntary codes within their planning policy frameworks to assist in delivering higher aspirations for sustainable development within their localities (AECOM, 2012; Prior and Williams, 2008b).

The use of voluntary codes/standards can result in the duplication of information provided by a design team in meeting both these requirements, and separate statutory requirements such as the Building Regulations (AECOM, 2012). Their use can also serve to add to the confusion experienced by stakeholders in the development consent process, designers and regulators alike (Faber Maunsell and Steemers, 2010; Planning and Building Control Working Group, 2010).

3.2.7 Effect of Increasing Technical Complexity upon the Design Process

As noted above, the duplication of information required by the planning and building control systems has been highlighted as a problem by design teams, particularly in cases where

voluntary codes such as CSH and BREEAM are used. However, it is the timing of the different regulatory requirements and their increasing complexity which would appear to have the greatest effect in delaying the momentum of design projects.

The research of Williams and Dair (2007) suggests that the timing of regulatory requirements makes collaboration between all relevant design and regulatory stakeholders difficult, with some parties being introduced to the design process too late to maximise sustainability. A prime example of such a scenario is the increasingly important role of mechanical engineers, who will normally advise on building shape, orientation, ventilation strategies, renewable energy and thermal performance – all vital to meeting a development's regulatory sustainability targets (Fischer, 2010).

In some cases, design teams are consulting with building control services far earlier than is promoted by the current regulatory framework to obtain assurances that the energy strategies developed by mechanical engineers and presented as part of the planning process are acceptable to both regulatory bodies (Fischer, 2010). Unfortunately, there is evidence to suggest that early consultations are far from the norm, with design changes made at planning approval stage often impacting significantly upon later building control requirements, resulting in abortive design work (AECOM, 2012).

Architects, historically viewed as the central hub of the design process, appear to be struggling to cope with the increasing complexity of regulatory requirements attached to the achievement of sustainable development. This would seem to indicate that it is vital that regulators possess the knowledge and skills needed to guide the design process (Fischer and Guy, 2009; Imrie, 2007). Architects responding to the research of Fischer and Guy claim that the energy performance requirements of the Building Regulations have almost become worthy of a degree qualification in themselves. Similarly, architects interviewed by Imrie (2007) state that the popular studio approach to design education does not enable a knowledge of regulatory requirements, reinforcing the divisions between the built environment professions and ignoring the relational nature of the design and construction processes.

However, the author's participation in design workshops throughout the Interdisciplinary Design for the Built Environment (IDBE) Masters programme at the University of Cambridge between 2005 and 2007 suggested a potentially different outcome in studio scenarios. The programme involves a number of week-long design studio sessions, with a broad range of

design, construction management and regulatory disciplines being asked to work together to develop solutions to large scale development problems. Sustainability demands are central to core objectives.

The value of knowing what each discipline can offer and addressing complex issues by sharing knowledge across disciplinary boundaries stood out as part of the author's wider IDBE programme experiences, with architects often acting as intermediaries between design and regulatory issues. Fischer and Guy (2009) claim that in attempting to meet increasingly complex regulatory targets, architects need to become intermediaries between the design team and regulators if they are to retain their status as leaders of design innovation. As will now be discussed, the current lack of collaboration at appropriate junctures in the development consent process is resulting in a number of problems for stakeholders.

3.2.8 Effect of Increasing Technical Complexity upon the Regulatory Process

In examining in detail the problems linked to the increasing technical complexity attached to sustainable development, the research of Faber Maunsell and Steemers (2010) and AECOM (2012) suggests that a holistic approach to regulation is required from the beginning of the design process. The reports set out a number of problems being created nationally by the disparate and increasingly complex nature of the existing regulatory framework, which are in keeping with the experiences of the author detailed in Chapter 1.

At an area level, specialist technologies such as renewable energy sources and centralised heating and cooling systems for large developments are encouraged and considered by planning officers. Conversely, detailed information demonstrating whether or not each building that is part of a large development is capable of meeting the energy efficiency requirements of the Building Regulations is usually presented to building control surveyors when planning permission has been granted. Faber Maunsell and Steemers (2010) postulate that these differing and disjointed requirements are preventing the optimisation of carbon reduction, suggesting that the Building Regulations should be applied to whole development areas rather than individual buildings.

Stakeholder feedback to the research of AECOM (2012) identifies a lack of knowledge sharing between the regulatory professions and consequently, a wide range of problems that are detrimentally affecting individual developments. A number of these issues are outlined below:

- Daylighting design and glazing technology is becoming a challenging area, with guidance for designers poor or non-existent. Surprisingly, although daylighting is included as a Health and Wellbeing issue to be addressed as part of the CSH and BREEAM, neither the Building Regulations nor planning policy address daylighting levels in new buildings. Solar controlled glass may detrimentally affect levels of natural light allowed into commercial buildings but is often required to limit emissions from cooling systems as an energy efficiency measure under Part L of the Building Regulations. The use of solar controlled glazing may impact on the visual aspects of planning requirements.
- In situations where standards dictated by local planning policy exceed those within the Building Regulations, there are no real standards to measure compliance against, negating the need for building control involvement.
- Insufficient provision of early information in relation to fire strategies linked to Part B of the Building Regulations is causing planning issues. Where external dry risers or additional staircases are required by building control surveyors following the planning process, visual impacts that are deemed unacceptable by planning officers often result, requiring further negotiation by developers or design teams.
- Planning requirements to meet Secured by Design criteria often result in the need for windows to be non-openable on the ground and lower floors of buildings, later affecting ventilation strategies linked with Part F of the Building Regulations.
- Many planning approvals linked with conservation areas later become technically invalid as a result of changes made to satisfy the Building Regulations, with applicants or their architects assuming that changes required by the Building Regulations must be acceptable from a planning/historic building point of view.
- Local air quality is a material consideration in assessing a planning application. Where this results in requirements to mitigate emissions from biomass boilers or Combined Heat and Power (CHP) units, it can affect a development's ability to meet the energy efficiency requirements of Part L of the Building Regulations. In addition, Part F of the Building Regulations aims to ensure that sufficient air enters a building rather than achieving air quality – the two differing regulatory requirements are not being considered in conjunction with each other.
- Flood mitigation measures incorporated as part of the planning process such as raised access points and floors cause difficulties in meeting the level access requirements of Part M of the Building Regulations.

Although not exhaustive, the issues detailed above would seem to present reasonable cause for concern in relation to the detrimental impact of the current regulatory framework upon the design and development process. As such, it is highly unlikely that the potential for sustainable development is being optimised.

3.2.9 The Emergence of Sustainable Development: Summary

Due to the recent policy drive for sustainable development in England, an increasingly broad range of technical issues requiring a sharing of disciplinary skills and knowledge is being tackled in isolation by the planning and building control professions. Tables 3.1 and 3.2 have provided an overview of the wide range of technical areas now requiring expertise as a result of the Government's aspirations for sustainable development. These areas include the conservation of fuel and power, SUDS, water efficiency, and materials required to meet a range of demands (i.e. visual impact, environmental impact, insulation, solar control, thermal mass, sound resistance, fire resistance, etc). In this respect, research suggests that the necessary mindset, knowledge and skills need to be developed to collaboratively resolve increasingly complex problems (Academy for Sustainable Communities, 2007; Planning and Building Control Working Group, 2010; Egan, 2004).

There would appear to be no strategic oversight of regulatory requirements within Government (Baldwin, 2010; Greenwood, 2010; Lowe and Oreszczyn, 2008). Evidence would also seem to indicate that election cycles are resulting in short term policies that change to match the evolving political environment rather than long term aspirations for sustainable development (House of Commons Environmental Audit Committee, 2013; Ross, 2012). Recent major reviews of the planning and building control systems have been carried out separately, with little reference to each other (Department for Communities and Local Government, 2009a; Killian and Pretty, 2008b).

The timing and complexity of constantly changing regulatory requirements appears to be making collaboration between stakeholders at appropriate junctures in the development consent process difficult, with some parties being introduced too late to optimise the benefits of sustainable development (Fischer and Guy, 2009; Williams and Dair, 2007). As a result, wasteful and costly changes are often required to designs given planning permission when they are later considered against the requirements of the Building Regulations (AECOM, 2012; Faber Maunsell and Steemers, 2010).

With planning and building control professionals finding it increasingly difficult to cope with complex and disjointed technical guidance in isolation, it is perhaps not surprising that evidence exists of a widening gap between skills required to regulate modern developments and those possessed by practitioners.

3.3 The Regulatory Skills Gap

3.3.1 Context

In light of the increasingly complex regulatory environment resulting from the introduction of sustainable development as a policy objective, a skills gap has emerged since the turn of the 21st Century (Egan, 2004; Academy for Sustainable Communities, 2007). Evidence suggests that this gap has continued to widen without being addressed (AECOM, 2012; Faber Maunsell and Steemers, 2010; Zero Carbon Hub, 2014a). This is perhaps not surprising when considering the building control profession, which does not even possess a dedicated higher educational framework (Fischer and Guy, 2009; Lowe and Oreszczyn, 2008).

The skills gap attributable to the regulatory professions appears to be in keeping with the developing landscape across the built environment. Considerable concerns have recently been expressed by leading construction industry figures and the Government's Business Secretary in relation to a lack of necessary skills and knowledge in what is becoming an increasingly complex environment (Carr, 2014; Withers, 2014).

As building designers struggle to cope with the complexity of regulatory requirements, it has become increasingly important for regulators to possess the knowledge and skills needed to guide the design process towards the achievement of building performance targets (Fischer and Guy, 2009; Imrie, 2007). The following analysis of Government, academic and industry led commentary on the subject offers an insight into the effect that the regulatory skills gap is having on stakeholders in the development consent process and as a consequence, the achievement of building performance standards.

3.3.2 Government Led Reviews on the Regulatory Skills Gap

Having been asked by the Government to carry out a review of the professional built environment skills that would be needed to deliver sustainable communities, Egan (2004) suggests that interdisciplinary skill sets are required among 'core' occupations, including

planning and building control. Egan (2004, p.7) offers the following definition of sustainable communities:

“Sustainable communities meet the diverse needs of existing and future residents, their children and other users, contribute to a high quality of life and provide opportunity and choice. They achieve this in ways that make effective use of natural resources, enhance the environment, promote social cohesion and inclusion and strengthen economic prosperity.”

The interdisciplinary skills that Egan advocates include ability to create a vision, leadership to achieve buy-in to the vision, communication, team working, project management, process re-engineering, understanding sustainable development, effective financial management, and understanding the economics of development and processes of local democracy. He states that educating disciplines in isolation will not achieve required outcomes. In relation to the development consent process, he makes the case for relevant professions within local authorities to be trained from the outset to work as interdisciplinary teams towards the delivery of a common goal.

A later report published by the Academy for Sustainable Communities (2007) draws very similar conclusions to those reached by Egan (2004), again advocating the need for interdisciplinary skill sets. By the time skills deficiencies in the planning profession were examined by the Department for Communities and Local Government Committee (2008), a ‘review-itis’ of skills deficiencies was being frustratingly recorded. Calcutt’s review of house building delivery (Callcut, 2007) was highlighted as a prime example of such literature, having advocated ‘cross cutting teams’ within local authorities as a means of sharing the burden of regulating increasingly complex sustainable development.

Since the recommendations of Egan (2004) and the Academy for Sustainable Communities (2007) were put forward, no educational initiatives have been developed that might begin a process of knowledge and skills integration across the planning and building control professions. As a result, subsequent studies have emerged which set out problems being experienced in practice.

Faber Maunsell and Steemers (2010, p. 15) claim that the lack of integrated skills/knowledge and limited understanding of sustainability issues on the part of planning officers and building control surveyors means that *“there is a huge training issue in both cases”*. Subsequently, having considered substantial evidence in relation to failing attempts to achieve sustainable

development, a Government study concludes that *“it is essential that in incorporating sustainable development principles into the curriculum, an interdisciplinary approach is used”* (HM Government, 2011b, p. 28). These views were later repeated by *The Farrell Review of Architecture and the Built Environment* (Farrell Review Team, 2014), which was commissioned by the Department for Culture, Media and Sport.

But Government led reviews that have recorded the emergence and widening of the regulatory skills gap are not alone in highlighting such issues. As will now be discussed, for over a decade, academic and industry led studies have continued to set out stakeholder concerns in relation to the detrimental effects of poor regulatory skill levels.

3.3.3 Academic and Industry Led Commentary on the Regulatory Skills Gap

Whilst academic and industry led commentaries on planning and building control skills connected with sustainable development appear unanimous in identifying deficiencies, there are differences in opinion as to where the skills gap lies – i.e. within either profession or both.

The research of Greenwood (2010) suggests that stakeholders involved in the design and construction of low carbon housing believe that the planning profession does not possess the necessary skills to deal with increasingly complex sustainability issues. Likewise, Prior and Williams (2008a) postulate that a general lack of knowledge and expertise among planners is a barrier to sustainable development. As part of a practice led examination of the relationship between the planning and building control professions in relation to the burgeoning technical complexity associated with sustainable development, the Planning and Building Control Working Group (2010, p.6) state that:

“It is not always clear that planners have the skills required or that planning is the best mechanism to deliver sustainability outcomes dependent on specialist technologies. Planning is becoming overloaded in areas such as the requirement of reducing carbon consumption in construction and building performance, delivering renewable energy and designing sustainable urban drainage.”

They suggest that more responsibilities should be passed to building control bodies, who they claim are better placed to develop expertise in sustainability and low carbon technologies. Like the results of the preceding Government review of building control (Department for Communities and Local Government, 2009a), the Planning and Building Control Working Group (2010) recommend more emphasis on the building control system to deliver complex

sustainable development. More recently, the Housing Standards Review Challenge Panel (2013) welcomed a Government proposal to deposit as many standards linked to sustainability as practicable within the Building Regulations. However, what such research seems to ignore is the fact that the building control profession is fragmented due to competition and does not possess a dedicated higher educational framework through which to develop specialist skills and knowledge (Fischer and Guy, 2009; Lowe and Oreszczyn, 2008; Pan and Garmston, 2012).

Through a review of the 33 planning authorities in London, and in keeping with the studies detailed above, Rydin *et al.* (2007) highlight the fact that skills and knowledge levels of planning officers in relation to sustainability issues were found to be poor. They suggest that rather than offloading technical responsibility onto building control, an interdisciplinary '*community of practice*' should be developed over time. Likewise, Davoudi (2000) argues that if the planning profession is to meet its regulatory objectives in relation to sustainable development, higher education should follow an approach which revolves around collaboration with other disciplines.

In parallel with the thoughts of Egan (2004) at a time when sustainable development was developing rapidly as a regulatory requirement, the Sustainable Buildings Task Group (2004) questioned whether building control bodies would be adequately skilled to carry out duties being brought about by new technical demands. Subsequently, the research of Fischer and Guy (2009), including interviews with 21 architects involved in the design of low carbon buildings, also identifies the building control profession as lacking the necessary skills to assess regulatory energy efficiency requirements. Lowe and Oreszczyn (2008) state that they find it difficult to envisage improvements to the poor energy performance of new housing without suitable education on sustainability issues for building control surveyors.

The work of Williams and Dair (2007) and Prior and Williams (2008b) claims that both planning and building control professionals need to be better educated collectively on increasingly complex sustainability issues, which need to be tackled collaboratively by both disciplines. Likewise, responses from a wide cross-section of stakeholders in the built environment to research carried out by the UK Green Building Council (2009) suggest that unless suitable educational initiatives are put in place, the regulatory skills gap will continue to be a barrier to sustainable development.

3.3.4 *Significance of the Regulatory Skills Gap*

If practitioners are not educated to equip them with the interdisciplinary skill sets necessary to tackle the increasing complexity attached to sustainable development, it is likely that the skills gap that exists will continue to widen (Royal Academy of Engineering, 2012). Having taken into account the views of stakeholders in the development consent process as part of their research into the achievement of a better approach to regulation in order to achieve sustainable development, Faber and Maunsell and Steemers (2010, p. 15) state that:

“Planners do not always understand Building Regulations and they may approve developments which would struggle to meet the new Building Regulations. Conversely, building control may not appreciate the sustainability implications of certain planning conditions, which might thus not be enforced.”

In recommending the development of a Code for Sustainable Buildings to help overcome increasing technical complexity in the commercial building sector, the UK Green Building Council (2009) state that appropriate education would be integral to such a development, particularly with regard to planning and building control. Similarly, Prior and Williams (2008a) claim that a lack of knowledge on sustainability issues among planning officers continues to be a barrier to the success of initiatives such as the CSH and BREEAM within local planning frameworks. Skills deficiencies would appear to be continually compounded by the rapid pace of change in relation to the requirements of sustainable development (Planning and Building Control Working Group, 2010).

Feedback to the research of AECOM (2012) from stakeholders in the development consent process suggests that the lack of skills/knowledge interaction between the professions is resulting in inefficiency, waste and frustration. Commissioned by the Government, the results of a review of the as built energy performance of new housing by Zero Carbon Hub (2014a) found widespread evidence of a gap between designed and as built performance. Accordingly, the review suggests that a pan-industry shift in focus is required to create necessary cultural change, with recommendations that education initiatives with the capacity to develop collaborative capabilities be put in place for planning and building control students. Similarly, as part of a major review of built environment professional institutions, Morrell (2015) identifies the need for greater collaboration between disciplines in order to tackle the divide between building design and performance across the domestic and commercial sectors.

3.3.5 The Regulatory Skills Gap: Summary

In the years that have passed since Egan (2004) first suggested that professions such as planning and building control should be educated to equip them with generic skill sets, research has continued to conclude that by not doing so, the goal of sustainable development is being detrimentally affected.

Although the planning profession possesses a well-established higher education framework, it does not appear to be enabling practitioners to deal with sustainability issues (Department for Communities and Local Government Committee, 2008; Planning and Building Control Working Group, 2010). More worrying is the fact outlined by the author in Chapter 1 and reinforced by this review of literature (Fischer and Guy, 2009; Lowe and Oreszczyn, 2008) – that the competitive and fragmented building control sector does not possess a dedicated higher education framework through which practitioners might obtain a grounding in sustainability issues.

Accordingly, it is claimed that the planning and building control professions do not possess the necessary knowledge and skills to enable them to collaborate in order to deal with increasingly complex sustainability issues (Fischer and Guy, 2009; Greenwood, 2010). There is also evidence to suggest that regulatory knowledge and skills deficiencies, along with a resultant lack of interaction between planning and building control professionals, is resulting in inefficiency, waste and frustration for stakeholders in the development consent process (AECOM, 2012). An overload of information in areas such as the reduction of carbon and water consumption appear to be contributing to poor as built performance (Prior and Williams, 2008b; Zero Carbon Hub, 2014a).

Since Egan (2004) called for interdisciplinary higher education initiatives for planning and building control students, a number of commentaries have called for similar change as a result of problems being encountered in the field. Research carried out by Williams and Dair (2007), Prior and Williams (2008b) and the UK Green Building Council (2009) holds out collective education for the regulatory professions on sustainability issues as being a necessity to reduce barriers to sustainable development. More recently, having assessed progress towards sustainable development, a Government study has suggested that an interdisciplinary approach to higher education on sustainable development issues has become essential (HM Government, 2011b). As a result of research highlighting energy performance failure in new

housing, Zero Carbon Hub (2014a) go as far as to conclude that a pan industry shift in focus is required in respect of higher education initiatives.

But if rationalised technical guidance and generic skill sets are to be utilised successfully on a consistent basis by practitioners, planning and building control services in England will need to be enabled to practice collaboratively within a suitable service delivery framework (Planning and Building Control Working Group, 2010). The issues currently preventing collaboration are now discussed.

3.4 Public Sector Transformation: Effects upon Regulatory Service Delivery

3.4.1 Context

As detailed above, a number of research projects commissioned by the Government have recommended drawing together the skills and knowledge bases of the planning and building control professions on a consistent basis. But despite recurring recommendations for improvements to the current regulatory framework in order to meet the demands of sustainable development, the long term and continuing transformation of the public sector appears to be doing little to support such change.

The manner in which Government policy seems to have become shaped by economists has introduced deregulation across all regulatory regimes (Baldwin, 2010). It has also led to a competitive and risk based building control framework (Department for Communities and Local Government, 2012a), which as detailed in Chapter 1, appears to have had the effect of fragmenting relationships between planning and building control services at a local level.

Severe financial pressures have been placed upon local authorities by the Government's 2010 Comprehensive Spending Review (HM Treasury, 2010). This has forced local authorities to consider more commercial ways of delivering regulatory services, which may detract from long term regulatory objectives such as sustainable development. The Government's Localism agenda is also driving the commercialisation of public regulatory services, suggesting that monopolised services such as planning be opened up to competition from alternative providers at a local level (HM Government, 2011a).

Each of the above issues and their effect upon regulatory service delivery is now considered in turn, starting with the changing face of regulation as a result of recent Government policy initiatives in England.

3.4.2 The Changing Face of Regulation

The difficulties associated with determining the optimum scope and quality of all forms of regulation could be said to be demonstrated by the considerable amount of work carried out by or on behalf of previous Labour and Coalition Governments. In addition to the many reports published directly by Government departments, no fewer than nine different bodies (Deregulation Unit, Better Regulation Task Force, Regulatory Impact Unit, National Audit Office, Better Regulation Commission, Better Regulation Executive, Risk and Regulation Advisory Council, Local Better Regulation Office & Better Regulation Delivery Office) have continued to put forward recommendations on improvements to all forms of local and national regulation since 1997 (Gibbons and Parker, 2012; Local Better Regulation Office, 2012; Baldwin *et al.*, 2010b).

The regulatory field as a whole has moved away from the traditionally held theory of regulation *'in the public interest'* towards regulation *'in the interests of public choice'* (Baldwin *et al.*, 2010b). According to Feintuck (2010), in the years leading up to the end of the 20th Century, Philip Selznick's seminal definition of regulation was held to be the most appropriate (Selznick, 1985, p. 363):

"...the sustained and focused control exercised by a public authority over activities valued by the public.

However, regulation would since appear to have become monopolised by economists, with deregulation, increased public choice of regulator and the extension of business markets becoming the political priorities of regulatory outcomes (Baldwin *et al.*, 2010b; Veljanovski, 2010). Ogus (1994) summarises public choice as an assumption that behaviour in the political arena is, in its essence, no different from behaviour in the market, with the individual acting in both contexts rationally to maximise his or her utility. Similarly, Baldwin and Cave (1999) state that public choice emphasis is placed on the propensity of actors to circumvent official regulatory goals and substitute ends that are self-serving, acting in the pursuit of gains such as job retention, personal wealth and re-election.

In keeping with the modern public choice principles of regulation, leading academics have played their part in formulating a ‘risk based’ approach that has been accepted as ‘better regulation’ in 21st Century. The academic theories of ‘smart regulation’ (Gunningham *et al.*, 1999) and ‘problem-centred regulation’ (Sparrow, 2000) are amongst the most recognised research that has helped to shape current regulatory policy. However, Philip Hampton’s Government led research is broadly viewed as the primary catalyst for today’s risk based approach to regulation in England.

3.4.3 *The Hampton Review*

The report *Reducing administrative burdens: effective inspection and enforcement* (Hampton, 2005), better known as *The Hampton Review*, was published by Her Majesty’s Treasury in 2005. The report is viewed as being pivotal in shaping the current public choice centred regulatory approach adopted by the UK Government (Local Better Regulation Office, 2012).

The Hampton Review was commissioned by the then Chancellor of the Exchequer, Gordon Brown, with the aim of reducing administrative burdens on businesses. The Review, which concentrated primarily on the work of local authority services such as licensing, environmental health and trading standards, suggests that risk assessment is an essential means of directing regulatory resources to where they can have maximum impact on outcomes. On this basis, Hampton suggests that regulators can end unnecessary inspections or data requirements on less risky businesses and identify businesses that require higher levels of inspection.

Other notable observations of the Review include:

- Local authority regulatory services are not well understood nationally, with a massive variation experienced in levels of investment in the services.
- Regulatory services produce too many (and often overlapping) forms and require disproportionate amounts of data.
- Too many interfaces exist between businesses and regulators.
- There is a lack of co-ordination between local regulators.
- There is a lack of consistency in the way in which legislation is applied by different local authorities.

However, the views of Hampton are not shared by a number of leading commentators in the field of regulation.

3.4.4 Problems Associated with Risk Based Approaches to Regulation

Black (2010) maintains that risk assessment leads to questionable decision making, in turn leading governments and regulators to seek stability through attempts to rationalise processes and procedures – attempts that are often unsuccessful due to the inherent nature of risk itself. Black also suggests that not all regulation can be characterised or characterises itself in terms of risk, or only does so if risk is so broadly defined as to describe every policy the state pursues, in which case the label is descriptively accurate but analytically useless.

Baldwin *et al* (2010a) hold out the view that since the global financial crisis began in 2008, the behavior of banks has led governments to consider whether a risk assessed approach to regulation is appropriate. They state that risk assessment fails because:

1. it has been widely accused of having failed to identify the risks that were building up within the banking system;
2. where it did identify risks, it was politically too weak to force any form of regulatory response in the face of political and industry resistance; and
3. it signals a failure of an individualist understanding of regulation, in which risk taking and failure are tolerated as long as failure does not threaten the wider system.

A report by the Parliamentary Commission on Banking Standards (2013) contains criticisms of the risk based approach to regulation that was deemed to be partly responsible for the collapse of HBOS plc, information which would seem to substantiate the concerns of commentators in the regulatory field.

According to Baldwin (2010), the difficulty with governments asking regulators to target activities more accurately, while at the same time reducing the power of regulators to seek information from businesses, is that risk based systems are themselves information intensive. The building control sector has recently become a risk based regulatory system but as no literature on experiences to date could be found, the following narrative considers issues that have arisen in the author's locality.

3.4.5 Building Control and the Risk Assessed Inspection Regimes

Consultation documents covering proposed changes to the Building Regulations and building control system in England were published by the Government in January 2012, with a report containing the summary of responses published in December 2012 (Department for Communities and Local Government, 2012a). This resulted in the removal of seven of the nine statutory notification stages contained in Regulation 16 of the Building Regulations 2010 at which builders were required to contact building control during a construction project to afford them the opportunity to inspect building works. Accordingly, local authorities were suddenly required to price regulatory inspection regimes on the basis of the complexity/size of projects and the perceived level of competence of contractors carrying out building work linked to Building Regulations applications.

Particularly in relation to large construction sites, building control bodies are constantly dealing with an environment in which unknown sub-contractors come and go – as such, their identity is often unknown when building control inspection regimes are set at the point of application approval. It is also the case that a main contractor's identity is often not discovered until initial inspections have been carried out. Such situations make the assessment of contractor competence and the level of required site inspection unachievable at the point of assessing a Building Regulations application.

Large contractors often have the remit to appoint a building control service on behalf of a client and may seek to minimise regulatory fees included in their contract sum to maximise their own profit and minimise regulatory intervention for their own convenience. The author has had involvement with nationally prominent contractors who might normally be regarded as being competent and worthy of lighter regulatory inspection regimes. However, having set out robust inspection regimes involving site visits at all critical stages of construction in such instances, unknown sub-contractors have subsequently been found to be carrying out sub-standard building work with the potential to cause substantial problems. Such defects (including the exclusion of structural ties and fire stopping) would not be discovered as part of some risk based inspection regimes, which are often set under considerable pressure to win regulatory work (Imrie, 2007).

Building control would appear to be indicative of a '*better regulation is less regulation*' approach that has developed in the UK since the beginning of the 21st Century, which it is

claimed is at odds with the philosophy of *'better regulation'* (Baldwin, 2010). In this sense, Feintuck (2010) suggests that by following such a public choice/risk based approach to regulation, the UK may as a nation end up exclusively valuing the measurable through their better regulation initiatives rather than measuring and regulating for the valuable.

3.4.6 The Formation and Work of Better Regulation Offices

The Local Better Regulation Office (LBRO) was formed in 2007 following publication of the Hampton Review and was later established under the Regulatory Enforcement Act 2008 as a non-departmental strategic public body accountable to the Department for Business, Innovation & Skills (Local Better Regulation Office, 2012; Local Better Regulation Office, 2010b). In their report *Addressing National Threats through Local Service Delivery* (Local Better Regulation Office, 2009) LBRO offer the following four major benefits of local service delivery:

1. Local delivery allows for effective tailoring of service provision.
2. Regulatory services' contribution to place-shaping demands that they are controlled locally ('place shaping' being defined as the responsibility of local government and local partners from all sectors to create prosperous, vibrant, safe and strong communities).
3. Efficiency can be increased by delivering regulatory services through local partnerships.
4. Local delivery creates in part at least a one-stop-shop for business.

The LBRO was formed with the intention of delivering demonstrable improvements to local regulation, its statutory mission being to secure the effective delivery of local authority services. In its concluding report in June 2012, prior to being replaced by the Coalition Government's re-branded Better Regulation Delivery Office (BRDO), LBRO state that (Local Better Regulation Office, 2012, p. 2):

"Regulatory reform has been a major priority for some years in the UK. Excessive, poorly designed and badly delivered regulation damages economic growth and contributes to a culture which inhibits innovation and enterprise."

The above statement would appear to pay little attention to public interest or the desired performance outputs of legislation. In addition, Baldwin *et al* (2010a) claim that a risk based approach to financial regulation did not achieve the ideals contained in the above statement.

Baldwin's (2010) suggestion that the UK has developed a '*better regulation is less regulation*' approach since the beginning of the 21st Century appears to be reinforced by the content of BRDO's website (Better Regulation Delivery Office, 2013). The website cites regulation as a promoter of economic growth, with statements on its landing page such as "*BRDO is working towards a regulatory environment in which businesses have the confidence to invest and grow*". It could be said that even within a regulatory environment operating in the public interest by requiring building performance that contributes to sustainable development for current and future communities, business confidence and growth are important considerations. However, conversely, the strong public choice features of the competitive building control sector in England would appear to have tipped the scales too far towards the interests of some large businesses.

Baldwin and Cave (1999) and Esty and Geradin (2001) highlight a number of common market failures which as well as being the rationale for regulating private sector markets, can be linked to activities within the competitive building control system in England. These issues are now discussed, starting with the manner in which the building control system acts as a barrier to consistent collaboration with the planning system at a local level.

3.4.7 The Competitive Building Control System – Barrier to Consistent Collaboration

In the 1980s, the Government opened public sector building control up to competition from profit making private sector organisations (approved inspectors) through the *Building Act 1984* and *Building (Approved Inspectors, etc.) Regulations 1985* (Foulger and Stephenson, 2004).

A closer alignment of planning and building control services has been outlined as an aspiration as part of Government reviews of the regulatory system since the beginning of the 21st Century (Department for Communities and Local Government, 2009a; Office of the Deputy Prime Minister, 2004b; Housing Standards Review Challenge Panel, 2013). However, echoing the recommendations of this body of commentary, the Planning and Building Control Working Group (2010, p. 29) summarise the fragmentation being caused by the current competitive building control system and its detrimental effect upon any attempts to localise, integrate and improve decision making as follows:

"There is no doubt that this difference [the competitive building control system in contrast to local authority planning] represents a formidable barrier to improved joint working on a consistent basis."

In this sense, commentary appears to reinforce the observations outlined by the author in Chapter 1 in that it is impractical for approved inspectors to interact consistently with local planning authorities. Public and private sector building control bodies often aren't chosen to carry out their regulatory duties until the planning process is complete due to the fact that developers need to know if a project can move forward before making further financial commitments, making consistent collaboration at appropriate junctures in the design process unachievable. The Planning and Building Control Working Group also suggest that shared local authority building control services, created to compete with larger approved inspectors, have made the notion of collaborative working between public planning and building control services more difficult.

But as well as being identified as a considerable barrier to consistent regulatory collaboration, there is evidence to suggest that flaws within the building control system are having other negative impacts upon the achievement of sustainable development, as will now be discussed.

3.4.8 The Competitive Building Control System – Capture and Regulatory Drift

In looking at the relationship between design and regulation and the achievement of sustainable buildings, Fischer and Guy (2009) suggest that the building control system in England is at risk of crumbling. In doing so, they claim that there are conflicting interests in relation to keeping developers happy in order to retain regulatory work. Due to the involvement of the private sector in building control, they hold out the view that the building control system is *in danger of capture* by the building industry. However, a look at more recent events in the sector would seem to suggest that particularly in relation to volume house building, the system has in fact been *captured*.

Capture is said to occur in situations where political and economic considerations lead to the relationships between regulators and the regulated becoming too close, and the pursuit of the regulated enterprises' interests being more important than those of the public at large (Baldwin and Cave, 1999). The apparent disparity of aims and values within the current building control system in England is discussed by Lowe and Oreszczyn (2008, p. 4480), who offer the following view as part of the conclusions of their review of the barriers to the improved environmental performance of new housing:

“It is impossible to envisage the successful implementation of a CO₂ standard as demanding as that outlined in Building a Greener Future in the absence of enforcement. Ways must be found to breathe new life into Local Authority Building Control Organisations, and to address

the conflicts that arise from competition between public sector and private sector Building Control Bodies (BCBs)."

The research of Fischer and Guy (2009) also pays particular attention to volume house builders, who are seen to favour bare-minimum solutions to environmental performance and then sell on their products to individuals who may be unconcerned or unaware of such issues. In this respect, Raman and Shove (2000) raise concerns in relation to the blurred and conflicting responsibilities of the National House Building Council (NHBC) as both a representative of the house building industry, and an approved inspector charged with the task of ensuring that the industry complies with regulatory standards.

In examining housing standards, the House of Commons Environmental Audit Committee (2005) found that 60% of new houses did not comply with the Building Regulations in relation to air permeability. The Committee suggested that the building control system in England was not sufficiently regulating for environmental performance in new housing, let alone a wider definition of sustainability (Williams and Lindsay, 2007).

Subsequently, private and public building control bodies have, prior to upgrades of Part L of the Building Regulations in 2010 and 2013, invited developers to avoid more stringent energy efficiency standards by pre-registering proposed developments (LABC, 2013b; Lane, 2010). This approach was initiated when the NHBC were privately briefed by the Government about a loophole in the transitional arrangements between the 2006 and 2010 versions of Part L. The NHBC then informed volume house builders of this loophole, inviting them to pre-register their developments in a bid to gain regulatory work. LABC (Local Authority Building Control), the membership organisation representing all local authority building control services in England and Wales, was forced to follow suit, resulting in hundreds of thousands of dwellings being constructed to standards below the incoming minimum performance benchmark (Lane, 2010). As part of the Marketing and Business Development Report presented at LABC's Annual General Meeting of 2014, it was declared that one development alone pre-registered with LABC by a volume house builder to avoid the 2013 requirements of Part L consisted of 20,000 new dwellings (LABC, 2014c).

In summary, in the case of volume house building, the competitive building control system would appear to be giving sustainability standards a low priority in the interests of securing regulatory work. Baldwin and Cave (1999) term such developments as *regulatory drift*, with

regulatory policies drifting due to competitive influences rather than developing a sense of direction. In light of the above, it is perhaps surprising that the NHBC are listed as a key supporter of Zero Carbon Hub, an organisation given the operational responsibility for achieving the Government's target of delivering zero carbon homes in England from 2016 (Zero Carbon Hub, 2014b).

3.4.9 Volume Housing and the 'Anti-competitive' Building Control System

Anti-competitive behaviour and predatory pricing is an issue included in the work of Baldwin and Cave (1999) as a reason to regulate a market. In such scenarios, large companies will behave in a manner not conducive to healthy competition by pricing their products below reasonable levels in the hope of driving competitors out of the market. Ironically and perhaps embarrassingly in the circumstances, the English building control system would appear to be experiencing similar behaviours.

The NHBC has for years used its own new home warranty products to help drive the cost of loss leading building control services for volume housing sites well below historically viable market prices and as a result, have dominated the regulatory market in the volume house building sector (Barnbrook, 2011). Some large developers have informed public sector building control bodies that the NHBC provide building control services for free if their warranty product is purchased (LABC, 2014d).

In 2011, LABC attempted to compete with the NHBC to win work for its members by combining a new LABC branded warranty product sold by a large commercial insurer named MD Insurance with standard national building control fees set as low as £80 per plot for plan assessment and site inspections at critical stages of construction (usually at least five). In doing so, LABC appeared to overlook the fact that they represent hundreds of small to large local authorities with different business models and not a single large organisation whose building control services can be used as a loss leader for its own high value warranty product. As a result of the negotiations, public sector building control charges were driven down considerably on a national basis – well below what could be considered to be a reasonable level of cost recovery (Barnbrook, 2011; Hammond, 2013).

MD Insurance also sell a warranty product for new housing called Premier Guarantee, which is used to complement its own private sector building control service and that of other approved inspectors. Some members of the insurer's staff work across both insurance

products (LABC New Homes Warranty, 2013; Premier Guarantee, 2013). Ultimately, warranty products for new housing would appear to be serving to weaken the position of the building control profession and cloud its role in the volume house building sector. There is also a danger of conflicting interests developing to maximise the sale of warranty products, as will now be considered further as part of an appraisal of issues related to regulatory rigour and accountability.

3.4.10 The Competitive Building Control System – Regulatory Rigour and Accountability

Regulatory rigour and accountability issues occur in competitive regulatory markets when levels of regulation and regulatory policies are set in place by competitive forces rather than political processes, weakening democratic accountability (Baldwin and Cave, 1999).

All local authority building control services in England pay annual subscriptions to LABC to represent their interests to Government and market their value in a competitive regulatory marketplace – these subscriptions form part of annual service costs covered by fee income. In its inaugural year in 2005/06, LABC's then purely subscription related annual income amounted to nearly £346,000, this income supporting a handful of staff members (LABC, 2006). By 2013/14, LABC's income had risen to £2.6 million, with £691,000 resulting from subscriptions.

The rest of LABC's income was linked to separate consultancy services and payments from partner organisations, with over £1.2 million being derived from payments from MD Insurance, the company responsible for LABC New Homes Warranty (LABC, 2014b). As part of the re-negotiation of their commission payments from MD Insurance in 2016, LABC brokered a deal through which local authority surveyors (in lieu of MD Insurance's own surveyors) would be offered the opportunity to carry out some warranty inspections at a rate of £100 per inspection (LABC, 2016). This is in stark contrast to the agreement struck by LABC with house builders in 2011, through which local authorities were asked to carry out statutory regulatory work (plan assessment *and* all necessary inspections per plot) for as little as £80 (Barnbrook, 2011). The growing importance of warranties to organisations such as LABC would seem to reinforce concerns in relation to the manner in which warranty products are increasingly being allowed to cloud, diminish and devalue the role of building control, raising questions as to what place such products have within a regulatory framework. Whilst public building control teams in England and Wales have struggled to retain human resources

throughout the financial crisis (Key, 2012), LABC have expanded to a team of 27, with most staff members involved in marketing activities (LABC, 2015).

Unlike local authority building control services, approved inspectors are profit making organisations. Examination of the Annual Report for NHBC Building Control Services for the financial year 2013/14 revealed the existence of a shareholder fund totaling £4.6 million (NHBC Building Control Services Ltd, 2014). Butler and Young, another large approved inspector operating on a national basis, declared a shareholder fund of £2.24 million at the end of the 2013/14 financial year (Butler and Young Ltd, 2014).

In January 2013, a review of the Construction Industry Council's Approved Inspectors Register (CICAIR) was published (Ankers, 2013). The Construction Industry Council was designated as approval body for approved inspectors in 1996 and the 2013 review of its activities followed on from an earlier first review in 2004. The review highlighted that on average, the CICAIR had generated an income of nearly £130,000 a year from approved inspector subscriptions and that many stakeholders in the building control system believed that the Construction Industry Council could not be viewed as a truly objective registration body. Perhaps surprisingly in view of the public interest role of approved inspectors, the report states that a framework is required whereby they '*benefit commercially*', suggesting an acceptance of individual gain within the regulatory framework. Criticisms in relation to a perceived lack of professionalism within the Construction Industry Council and the unacceptable manner in which complaints against approved inspectors have been handled are contained within the report.

The above information would appear to raise questions as to why those submitting Building Regulations applications are now in a position of contributing a considerable proportion of fees paid towards activities that do not relate to the actual work or resources required to regulate their projects. Although it may be in the interests of a number of leading players in the current competitive building control system to maintain the status quo, this may not be in the best interests of all stakeholders in the built environment. This issue is now discussed further by drawing parallels between the '*race to the bottom*' traits of competitive regulation in other parts of the world and the building control system in England.

3.4.11 *The Competitive Building Control System – ‘Race to the Bottom’*

The term *race to the bottom* is often used within commentary relating to environmental regulation. The research of Koenig-Archibugi (2010), Revesz (2001) and Esty and Geradin (2001) suggests that where regulation is competitive across federal borders, investment decisions by mobile polluting companies are sensitive to regulatory stringency. Esty and Geradin term such a scenario as a *locational rights* market, where regulators offer inefficient outcomes to mobile organisations to secure their presence and as a result, regulatory work. They state that the locational rights model is imperfect as regulatory competition cannot be relied upon to offer optimal outcomes.

Research by Hawkesworth and Imrie (2009) suggests that public sector building control services are often forced to avoid what they believe to be robust and ethical behaviour in an effort to win regulatory work. Such claims would seem to suggest that capture of the English building control system extends beyond the issues detailed above in relation to the volume housing sector. Hawkesworth and Imrie also appear to reinforce the observations of the author set out in Chapter 1 that large approved inspectors target work nationally by ‘*cherry picking*’ or ‘*cream skimming*’ (Le Grand, 2007) high value projects around the country.

According to Esty and Geradin (2001), inefficiency within a competitive regulatory model is inevitable as independent regulators will engage in time consuming and complex negotiations and marketing to secure work, duplicating each other’s analytical work. In fact, moving a step beyond marketing regulatory services directly, some approved inspectors use fee income to sponsor roadshows discussing up and coming development plans in English cities (Jhai, 2015).

Much of the work of LABC and the Association of Consultant Approved Inspectors (ACAI) is centred upon marketing activities promoting the respective sectors of the building control profession (ACAI, 2013a; LABC, 2013c). On behalf of member approved inspectors, the ACAI’s website makes claims that (ACAI, 2013b):

- Approved Inspectors check the things they know need to be checked, based on a much closer understanding of the project than you’d traditionally get.
- Approved Inspectors understand innovation. As the architect and creator of a new and ingenious off-site manufacturing system told Building magazine recently: “*I had*

ridiculous conversations about whether the buildings would collapse. We don't go to local authority building inspectors any more. We use a specialist Approved Inspector who understands what we're doing."

Despite the conflicting ideals of the public and private sector factions of building control detailed above, the Building Control Alliance (BCA), an industry group set up to represent the interests of all competing sectors of building control claim that (Building Control Alliance, 2013, p. 1):

"The Building Control Alliance is a unique industry group made up of representatives from all the organisations directly involved in building control in England and Wales... The BCA is the only place where all these voices and competing interests come together as one."

In the circumstances, with conflicting ideals and continuing claims and counter claims of wrongdoing between the two sectors, it would seem difficult to envisage how the above statement by the BCA can hold true. But as will now be discussed, in addition to the problems being created by the competitive building control system in England, a number of recent Government policies have served to further complicate the manner in which public planning and building control services are funded and delivered.

3.4.12 Financial Pressures on Local Authorities

The worst global recession since the 1930s, which began in 2008, led the Conservative/Liberal Democrat Coalition Government's 2010 Comprehensive Spending Review to demand that local authorities look for 7% annual savings over a 4 year period as part of attempts to reduce a massive public spending deficit (HM Treasury, 2010).

The document *Managing Public Money* (HM Treasury, 2007) sets out the basis for the Government's philosophy for fee earning public services – that they should be operated on a cost recovery only or non-profit making basis. It is worth noting here that until the 1980s, no charges were made for planning or building control services, which were viewed as being of general community benefit. This view was not shared by the Conservative Government of that time, who introduced a system of regulatory charges for both services (Cullingworth and Nadin, 2006; Foulger and Stephenson, 2004; Davoudi, 2000).

However, in light of the severe financial pressures now being placed upon councils, there is a danger that a need to maximise income from consent applications to improve council finances

in the short term will be prioritised above long term objectives such as the achievement of local sustainable development (Fischer and Guy, 2009). The effects of local government budget cuts upon the setting and use of Building Regulations and planning fees are now considered separately.

3.4.13 Setting and Use of Building Regulations Fees

In 2009, the Department for Communities and Local Government published its consultation paper *Proposed Changes to the Local Authority Building Control Charging Regime* (Department for Communities and Local Government, 2009b). The report suggested that historically, some local authorities had been consistently setting unnecessarily high charges for internal support services and accommodation, leading to building control income being used to cross subsidise other council services and activities.

The consultation led to the introduction of the Building (Local Authority Charges) Regulations 2010 on 1 April 2010, which it was hoped would build upon the principle of devolving charge setting to local authorities. The Government believed that the Regulations would provide more flexibility, fairness and transparency, thereby improving standards in the competitive building control environment in England and Wales (Chartered Institute of Public Finance & Accountancy, 2010). Compliance with the cost recovery only principles of public service delivery under the new Regulations would also apply to organisations entering into a third party agreement with a local authority to provide building control services.

Accountancy guidance published by The Chartered Institute of Public Finance & Accountancy to complement the Regulations suggests that an earmarked reserve account be used to hold year on year surpluses. It also suggests that local authority services should be given up to five years to balance large deficits due to the inevitability of fluctuating levels of income and be able to use any surpluses generated to train staff and modernise/improve services for customers.

In September 2012, heads of building control within all 319 local authority offices in England and Wales (where the Regulations also apply) were approached via email by the author (Key, 2012) in order to ascertain whether they believed that the Regulations had helped them to resource their services appropriately on a non-profit basis. Of 145 replies that were received, 92 (63%) stated that the introduction of the Regulations had not changed anything for their services. In their opinion, their local authority employers, now under immense pressure due to

cuts in Government funding, were still allocating disproportionate support costs against their building control services, resulting in a loss of building control staff in some cases. There were also claims that building control fee income was being used by councils to cover the cost of all non-fee related service activities (i.e. dealing with dangerous structures, demolitions and enforcement cases), which should be funded by local authorities. This straw poll of peers was subsequently used by the Government as the basis for a circular to all local authorities in England and Wales, reminding them of the cost recovery only requirements of the Charges Regulations (Department for Communities and Local Government, 2014a). All detailed responses received from heads of building control are contained in Appendix A.

It is worth noting that VAT (Value Added Tax) is not applied to public sector planning application fees but is applied to public sector Building Regulations applications in order to avoid distortion of competition with approved inspectors (HM Revenue & Customs, 2013). So in addition to contributing to marketing activities, cross subsidising local authority activities and having profit taken from their fees by approved inspectors, applicants also pay 20% VAT due to the existence of public/private sector competition for regulatory work on a national basis.

3.4.14 Setting and Use of Planning Fees

Commissioned by the Government, a report by Arup (2010) outlined ways in which local planning authorities might set their own charges in lieu of existing nationally set fee schedules. Like the consultation report *Proposed Changes to the Local Authority Building Control Charging Regime* (Department for Communities and Local Government, 2009b), Arup's report suggested that internal overhead costs attributed to planning services by local authorities were found to vary considerably.

The report also highlighted the complexities of moving towards a devolved system of fee setting as the absence of time recording systems within planning departments would require a sizable step change. Time keeping systems are used by building control services not only to analyse time spent on fee earning activities, but also non fee earning activities paid for through corporate local authority budgets. Arup (2010) evidence the system of calculating building control charges on an hourly rate basis. In doing so, it states that with no timekeeping systems in place, an accurate analysis of time spent by planning officers on both fee earning and non-fee earning work would have serious implications for the devolution of fee calculation.

Following a Government consultation parallel to Arup's report (Department for Communities and Local Government, 2010b) and the subsequent publication of the summary of consultation responses nearly two years later (Department for Communities and Local Government, 2012d), the proposal to devolve the calculation of planning charges to local authorities was suspended indefinitely. In July 2012, the Decentralisation Minister defended the Government's decision to suspend the proposal and instead impose a national 15% increase in planning application fees (Werran, 2012), stating that:

"The planning application fee is a relatively small component of the costs of any development".

Building control fees could be considered to be an even smaller component of the costs of any development and a contradiction in approaches towards the two regulatory regimes by the Government would seem to exist in this respect. This apparent lack of consistent political approach to the regulatory regimes is highlighted as part of the recommendations made by the Planning and Building Control Working Group (2010, p. 29):

"Improve the position and recognition of building control within local authorities – there is a perception that building control is the 'poor relation'".

In addition to standard planning fees, the increasing use of Planning Performance Agreements (PPAs) has generated debate among stakeholders such as planning officers, elected members and house builders. As a result, concerns have been expressed in relation to the legality of their use and the fact that they may jeopardise impartial decision making (Tribal Group, 2010). A PPA is described by Penfold (2010, p. 19) as:

"...a framework agreed bilaterally between a local planning authority and an applicant for the management of development proposals. It allows both parties to agree a project plan and programme, which includes the allocation of appropriate resources to enable the application to be determined according to an agreed timetable. Agreeing the timetable up front encourages early discussion of the issues and processes to be followed."

PPAs were introduced following a pilot exercise in 2008, the desired outcome essentially being quicker decisions within more predictable timescales. As Penfold makes clear, a further danger in following such an approach is that it might create a two tier system in which some organisations receive an inferior service.

The need for local authorities to maximise fee income from applications for development consents and the Government's Localism agenda are forcing them to re-examine the way in which they provide statutory services such as planning and building control. Again, such pressures are resulting in local authority strategies that would appear to be adding further complications to what is an already fragmented regulatory framework.

3.4.15 Localism and the Introduction of Competition for Public Service Provision

The economic, social and environmental well-being requirements of sustainable development and their link to the benefits of local services for local communities have become a golden thread running through the Localism Act 2011, which is the driving force behind the current and unprecedented round of local government transformation.

As part of the Government's Localism agenda, planning and other monopolised public services have been earmarked for competition through the Open Public Services White Paper (HM Government, 2011a) in the shape of procurement exercises by local authorities offering service commissions. The Government is also encouraging public service teams to start up their own not for profit social enterprises to enable them to reduce the impacts of bureaucracy upon decision making. In keeping with the Government's philosophy for fee earning public services, third party agreements for the delivery of public services contain a not for profit stipulation. Such agreements require that any surplus income be reinvested in the services or in the case of continuing surpluses, a reduction of charges paid by customers (Chartered Institute of Public Finance & Accountancy, 2010; HM Treasury, 2007).

A number of agreements for the running of public planning and building control services between local authorities and large private sector organisations such as Capita and Balfour Beatty have begun to emerge (North East Lincolnshire Council, 2010; North Tyneside Council, 2012). However, little information is available in relation to how contracts for planning and building control services were put together or why large private sector organisations would choose to run public services which operate under legislative requirements to be non-profit making. From a building control perspective, a two pronged competitive environment (competition to run a public service in parallel with competition to win building control work on a project by project basis) has been created, causing further fragmentation of the regulatory system.

A worrying recent development that is likely to cause even greater divides between planning and building control services is that of a number of local authorities making enquiries as to the possibilities of setting up profit making approved inspectors operating on a national basis (Everall, 2013). This resulted in a Government circular to all local authorities in England (Department for Communities and Local Government, 2013c), confirming that ironically, the provisions of general competence contained in Section 4 of the Localism Act 2011 allow local authorities to act as approved inspectors outside their local area. The circular was backed by a statement in Parliament on 4 July 2013 by the Parliamentary Under Secretary of State for Communities and Local Government, who promoted the development of cross border regulation for profit by local authorities as a positive move (Department for Communities and Local Government, 2013d, p. 1):

“This opportunity should improve competition in the building control sector and help drive up standards...we will be providing further guidance to local authorities considering taking up this opportunity.”

Having been encouraged by the Government to do so, a number of local authorities have begun to apply for approved inspector status (LABC, 2013a). Having been convinced by a number of local authority service leaders to do so, even LABC, the membership organisation representing all local authority building control services in England and Wales, committed to investigate setting up their own for profit approved inspector (LABC, 2014a). But in contrast to the above statement by the Under Secretary of State for Communities and Local Government, evidence would seem to suggest that such a move will not help to drive up standards and is instead likely to have the reverse effect.

Framework agreements between approved inspectors and large developers operating nationally have become commonplace within the competitive building control system. There is often a perception that such arrangements are weighted heavily in the favour of the client organisation, with their demands often being a precondition for attaining and maintaining the agreement, leading to a dilution of the control function (Hawkesworth and Imrie, 2009).

Figure 3.1 illustrates the fragmentation and disparity that now exists between planning and building control services in England due to past and present Government policy initiatives. As can be seen, the number of potential service delivery options within the competitive building control system greatly outweigh planning service options, which are limited to local provision.

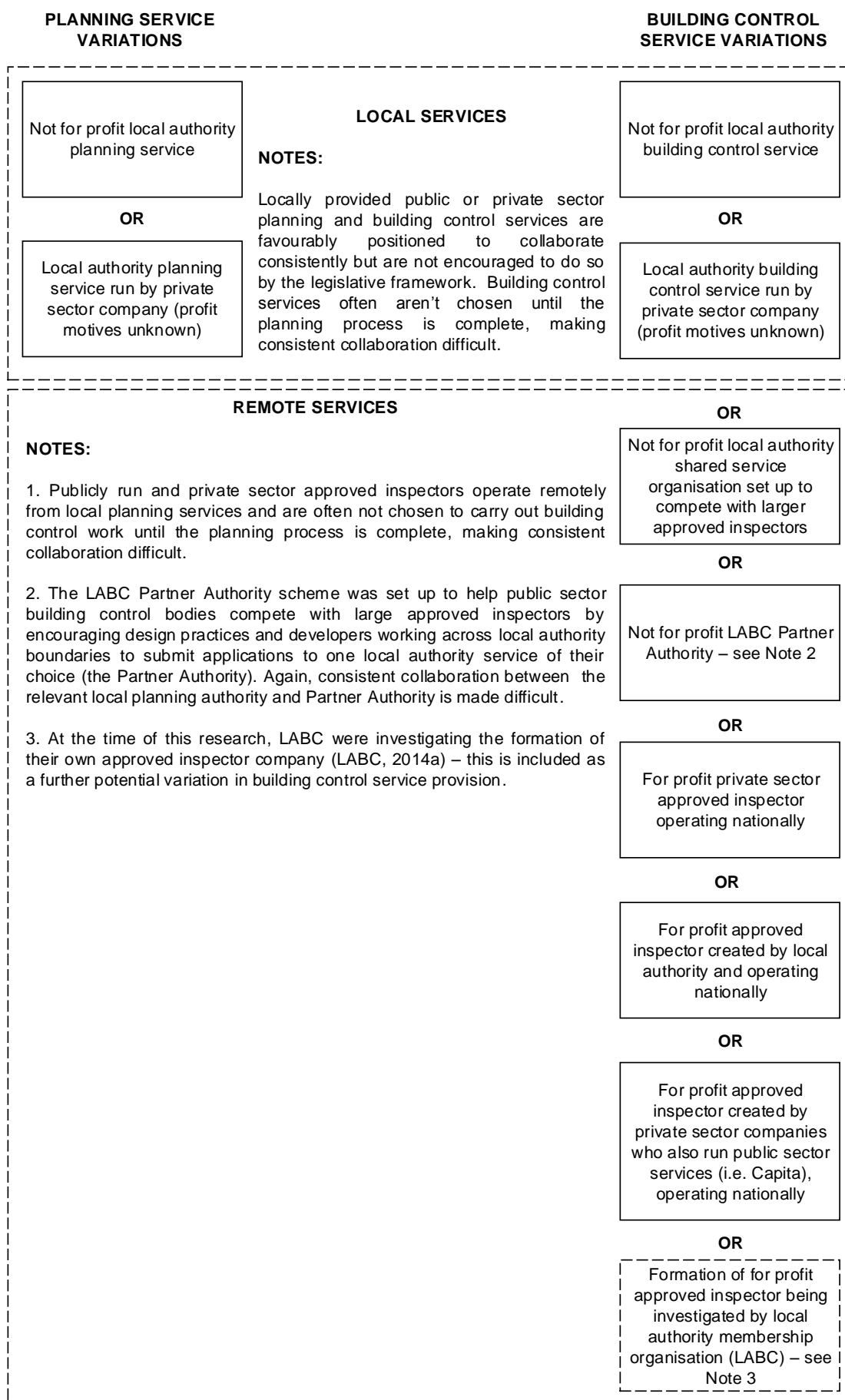


Figure 3.1 - Variations in regulatory service provision

3.4.16 The Effects of Public Sector Transformation: Summary

In essence, the crux of the overriding research problem lies in the pressures being placed upon the knowledge and skills of planning and building control practitioners by the modern demands of sustainable development. However, there are a number of issues stemming from historic and current local government transformation programmes that have prevented and have the potential to continue to prevent the creation of a collaborative regulatory environment – such issues cannot simply be ignored.

A considerable body of research has recommended consistent collaborative working between planning and building control services in the interests of sustainable development (AECOM, 2012; Faber Maunsell and Steemers, 2010; Planning and Building Control Working Group, 2010; Housing Standards Review Challenge Panel, 2013). The Localism agenda continues to promote continually improving local services for local communities through the removal of public sector monopolies (HM Government, 2011a). Regardless of the drivers for collaborative working and local service provision, inconsistencies in constantly evolving Government policy would appear to be in danger of creating further disparity within the regulatory framework.

There are claims that regulation has become monopolised by economists, with risk based approaches, deregulation, individual choice and the extension of business markets becoming the political priorities of regulatory outcomes (Baldwin *et al.*, 2010b; Feintuck, 2010; Veljanovski, 2010). Created in the 1980s, the competitive and increasingly risk based building control system has been identified as a major barrier to meeting a seemingly long held political aspiration for a far closer working relationship between planning and building control services.

The Government's continued support for the competitive building control system, inhabited by approved inspectors operating far from the localities in which they source work, is at odds with calls for joined up not for profit local services for local communities (Local Better Regulation Office, 2009; HM Government, 2011a). Also seemingly in contrast to modern political ideals, local authorities are being encouraged by the Government to form profit making approved inspectors that can operate outside their own localities (Department for Communities and Local Government, 2013d). In addition to having a proportion of their fees taken as profit, or for activities not associated with their applications, Building Regulations

applicants also pay 20% VAT due to the existence of public/private sector competition for regulatory work on a national basis (HM Revenue & Customs, 2013).

The competitive building control system is showing signs of being captured by its regulated market and also appears to be exhibiting a number of other traits which are often associated with failing markets such as anti-competitive behaviour, regulatory drift and race to the bottom (Baldwin and Cave, 1999; Esty and Geradin, 2001). As well as being marked out as a barrier to a more joined up regulatory approach at a local level, such traits are also at odds with attempts to achieve sustainable development (Fischer and Guy, 2009; Lane, 2010; Lowe and Oreszczyn, 2008).

Public building control and planning service managers are finding it increasingly difficult to operate on a true cost recovery basis (Arup, 2010; Key, 2012; Department for Communities and Local Government, 2009b). To address the problems they face in this respect, or to avoid private sector involvement in their services, service managers may themselves need to consider leading the development of social enterprises, as is being encouraged through the Government's Open Public Services agenda (HM Government, 2011a).

Collectively, the problems identified above appear to be resulting in an increasingly confusing and inefficient regulatory framework for the built environment in England, which is straying away from basic principles of local and not for profit statutory service provision in the public interest. What would seem to be required is a model for potential change which for the first time, considers all of the essential ingredients required to enable the regulatory professions to skill up and collaborate consistently in the interests of all stakeholders in the development consent process. Accordingly, the overriding aim and separate objectives of the research are now considered.

3.5 Research Purpose

3.5.1 Context

The technical issues associated with the modern regulatory requirements of sustainable development have become too complex to be tackled in disciplinary silos by planning and building control practitioners. As a result, inefficient and frustrating experiences are being recorded by stakeholders in the development consent system, with outcomes such as design rework and completed developments whose sustainability performance levels are not

optimised (AECOM, 2012; Faber Maunsell and Steemers, 2010; Housing Standards Review Challenge Panel, 2013; Zero Carbon Hub, 2014a).

Technical guidance covering similar wide ranging issues continues to be developed separately for planning officers and building control surveyors and as a result, a skills gap appears to have developed that continues to widen (AECOM, 2012; Egan, 2004; Faber Maunsell and Steemers, 2010). Accordingly, calls have been made for a root and branch review of higher education initiatives at undergraduate level as a means of beginning to develop the type collaborative capabilities required to address complex problems associated with modern sustainable development (Farrell Review Team, 2014; Royal Academy of Engineering, 2012; Zero Carbon Hub, 2014a; HM Government, 2011b).

Elements of evolving Government policy are serving to cause disparity within the regulatory service delivery framework in England. The competitive building control system is viewed as a considerable barrier to consistent collaborative working between planning and building control services (Department for Communities and Local Government, 2009a; Office of the Deputy Prime Minister, 2004b; Planning and Building Control Working Group, 2010). However, the promotion of the creation of publicly run approved inspectors (Department for Communities and Local Government, 2013d) to help local authorities to overcome increasingly difficult financial circumstances following substantial cuts in Government funding (HM Treasury, 2010) has the capacity to make the service delivery framework even more disjointed. This is in conflict with the Government's aspiration for local public services for the benefit of local communities (HM Government, 2011a), which would appear to have become lost as a result of the competing interests of different Government departments (Penfold, 2010).

3.5.2 Aim of Research

Taking the above challenges into account, the aim of this research is to develop a model with the capacity to enable consistent collaborative practice at a local level between planning and building control services in England.

The separate challenges attached to the overriding research aim can be linked to the three main problem areas discussed by this chapter, namely:

1. The disjointed nature and increasing technical complexity of modern performance standards, which are leading to inefficient outcomes;
2. the regulatory skills gap as a result of increasingly complex building performance standards; and
3. fragmentation of regulatory service delivery within a context of continuing public sector transformation.

In seeking to develop the required enabling model for consistent collaboration, it is important that the research objectives linked with each problem area are in line with the steps towards the research aim, as will now be discussed.

3.5.3 *Research Objectives*

The overriding issue that is demanding collaboration between planning and building control services (and the multidisciplinary built environment as a whole) is the disjointed nature and increasing technical complexity of modern performance standards driving sustainable development (Planning and Building Control Working Group, 2010). Performance standards also inform the educational requirements of practitioners (Faber Maunsell and Steemers, 2010), making this the natural starting point for the research.

With any potential improvements in building performance standards informing the nature of changes required to address the regulatory skills gap, it is necessary to consider the scope of solutions being sought to bridge the skills gap. As discussed in Chapter 2, Johannesson and Perjons (2012) suggest that a model (the research aim) can be seen as representing all or part of a system and a special case of prediction. Research studied in relation to the existing regulatory (and wider built environment) skills gap suggests that given the size of the task, cultural change is required which would best be achieved at grass roots level through undergraduate/higher education initiatives (Farrell Review Team, 2014; Royal Academy of Engineering, 2012; Zero Carbon Hub, 2014a; HM Government, 2011b). Accordingly, while appreciating that the skills gap is also a training issue for existing practitioners, in attempting to set out a special case of prediction that might initiate cultural change, this study will follow the course set by previous research, which has set out educational issues without offering detailed potential solutions.

Having considered performance standards and educational issues, any improvements with the potential to rationalise disjointed building performance standards, encourage collaboration as

a means of dealing with increasing complexity and bridge the regulatory skills gap would be pointless unless collaboration was facilitated in the field. Accordingly, a service delivery framework needs to be created that will support technical and educational changes designed to facilitate collaboration, while at the same time meeting existing Government aspirations for non-monopolistic, continuously improving and not for profit regulatory services at a local level (HM Government, 2011a; HM Treasury, 2007).

In line with steps towards achieving the research aim, the objectives of the research are to:

1. Demonstrate how building performance standards for new sustainable development might be rationalised to promote consistent collaborative working between planning and building control practitioners at appropriate junctures in the development consent process.
2. Prescribe the basis for a higher educational framework capable of closing the existing skills gap by producing planning and building control practitioners with the necessary attributes to enable them to resolve increasingly complex technical issues collaboratively.
3. Formulate a service delivery framework that would support consistent collaborative working between planning and building control services and meet Government aspirations for sustainable development through non-monopolistic, continuously improving and not for profit regulatory services at a local level.

3.6 Define the Problems: Summary

The above objectives can be seen as 3 interrelated ingredients that collectively, are essential to meeting the research aim by constructing a model with the potential to help to resolve the complex and long standing problems that have been outlined by this chapter.

With regard to technical guidance and policy, a situation would appear to exist where it is only likely to be geared towards consistent collaborative working in the interests of sustainable development if consistent collaboration in the field is enabled in the first instance (Faber Maunsell and Steemers, 2010).

Subsequently, practitioners are unlikely to be able to operate efficiently and competently under rationalised technical guidance and policy without the necessary generic skill sets and mindsets (Academy for Sustainable Communities, 2007; Egan, 2004). This assertion would

appear to be particularly salient in a situation where despite the increasing complexity associated with sustainable development, the building control profession has no dedicated higher educational framework (Fischer and Guy, 2009; Lowe and Oreszczyn, 2008).

A service delivery framework needs to be developed that supports the development of rationalised technical guidance, generic skill sets and ultimately, consistent collaborative practice (Planning and Building Control Working Group, 2010). The primary driver for such a development is the achievement of sustainable development in the interests of current and future local communities (Ross, 2012). However, to ensure service efficiency, continuous improvement and value for money for applicants seeking development consents, such a delivery framework also needs to meet the requirements of democratically accountable, non-monopolistic and not for profit service provision (HM Government, 2011a; HM Treasury, 2007).

Having set out the rationale for the research along with its aim and objectives, Chapter 4 will now outline the research methods and sources of data utilised by the study to design, develop and evaluate the desired artefact – an enabling model for consistent collaboration between planning and building control services in England.

4 Research Methods

4.1 Introduction

In line with the adopted design sciences methodology discussed in Chapter 2, the aim of this research is not only to describe and explain problems being experienced in the regulatory field, but to use knowledge and understanding obtained to help solve the problems.

When considering the development of an enabling model for consistent collaboration between planning and building control services in England, it seemed clear that the complex policy driven issues outlined in Chapter 3 were set to change continually throughout the course of the research. As such, it was necessary to adopt research methods that would complement the general interest focus and iterative nature of the chosen design science methodology. Having previously considered ontology, epistemology and methodology in Chapter 2, the research methods and sources of data utilised by the study and discussed in this chapter complete the five '*building blocks of research*' set out by Grix (2004), as detailed in Figure 2.1.

In relation to the context of the research, a theory, hypothesis or framework instrument that can be tested by concentrating on causal relationships through 'top down' positivist means does not exist. Accordingly, an interpretivist approach was adopted, starting from the 'bottom up' to use social views to build broader themes and develop potential solutions to the research problems.

This chapter begins by discussing different research methods considered by the author before setting out the reasoning behind the chosen methods and the resulting research sample. It then goes on to discuss the collection, analysis and presentation of collated research data, concluding by discussing the importance of subjectivity and critical reflection as part of the research process.

4.2 Considered Research Methods

A number of qualitative research strategies and their associated methods whose potential offered appropriate research tools in what is a broad policy driven and socially constructed research environment were examined.

The *mixed methods exploratory research design* advocated by Creswell and Plano Clark (2007) is similar in approach to the way in which previous Government studies such as the

recent reviews of the planning and building control systems (Department for Communities and Local Government, 2009a; Killian and Pretty, 2008b) were carried out. As part of such studies, qualitative data gathered from expert forums and interviews informs and guides questionnaires to the field in question. In closely examining this familiar research method, the author was not confident that the necessary level of data gathering within the time and resource constraints of the project would be achievable. Calls for responses to questionnaires from building control bodies has, in previous years, proved unsuccessful (Building Control Performance Standards Advisory Group, 2011). In addition, there was a belief that pulling together the type of expertise gathered to form expert forums as part of Government reviews would prove difficult within the resource constraints of the research.

Case study research methods are useful in investigating and obtaining an in depth understanding of the types of contemporary phenomenon or sets of decisions associated with the research problems being evaluated by this thesis (Yin, 2009). However, the purpose of this research is to move beyond an understanding of the problems being experienced in practice and develop theoretical constructs that might offer potential solutions. It is also the case that in conflict with the general interest nature of design science research projects, case studies are normally carried out in a single local practice (Johannesson and Perjons, 2012).

In a similar fashion to design science research, *action research* aims to contribute to the practical concerns of people in an immediate problematic situation (Rapoport, 1970). But in a similar vein to case study research and in contrast to the general interest scope of this thesis, action research is primarily concerned with exploring problems in local practice. Having reviewed an extensive amount of literature relating to action research, Hult & Lennung (1980) emphasise the achievement of local understanding as its main objective. Subsequently, building upon previous commentary, Goldkuhl (2012) reinforces the main target groups of action research as being people in local practice, with the researcher developing a close relationship with research participants, effectively becoming part of the local practice within which a change process is taking place.

Literature pertaining to the design science methodology suggests that means-ends analysis can be closely allied with *grounded theory* in that empirical development and evaluation of artefacts in multiple contexts turns the solution design into mid-range theory of practice (Holmström *et al.*, 2009; Jones and Gregor, 2008; Van Aken, 2004). Accordingly, it was felt that the methods associated with this research strategy were worthy of further consideration.

4.3 Grounded Theory

4.3.1 Background

Grounded theory studies are particularly suited to the analysis of processes, identifying linkages between broader issues around the phenomenon being investigated, and to areas where little previous research has been done (Easterby-Smith *et al.*, 2008; Grix, 2004; Hunter and Kelly, 2008; Saunders *et al.*, 2009; Strauss and Corbin, 1990).

Grounded theory continues to evolve and there are many variations and contradictions on the approach originally set out by Glaser and Strauss (1967). This approach was purely reliant upon the generation of novel theories in the field without the type of guiding theoretical framework that might be gained through a review of existing literature (Jennings *et al.*, 2010).

Dey (2010) postulates that the original approach advocated by Glaser and Strauss was targeted at researchers inclined to plough an established theoretical furrow, regardless of the diversity and richness of available data, thereby diminishing its potential for stimulating theoretical innovation. Dey suggests that an open mind should not be confused with an empty head and that the issue is not to avoid preconceptions but to ensure that they are well grounded in arguments and evidence.

Noerager-Stern (2010) states that it is important for the researcher using grounded theory to situate their work within the body of related literature, both because it is academically honest to give credit to other researchers, and because there is a need to demonstrate how this existing theory has been built upon. The use of literature reviews is backed by the later work of Strauss (Strauss and Corbin, 1990; Strauss and Corbin, 2008) as a means of stimulating research questions, directing sampling and providing a secondary source of data. In terms of the problems faced by this research, the avoidance of literature would be to miss out on information valid to the shaping of the desired artefact.

A number of variations on the processes set out by the original work of Glaser and Strauss (1967) have emerged. One such variation to emerge in recent years is that of *iterative grounded theory*. As the name suggests, this involves moving back and forth between research activities in the same manner that is advocated by commentary on design science research (Holmström *et al.*, 2009; Osterle *et al.*, 2011).

4.3.2 *Iterative Grounded Theory*

Iterative grounded theory sets out a combination of inductive and deductive approaches that transcend simplistic dichotomies between quantitative and qualitative research (Orton, 1997; Green *et al.*, 2010). Green *et al.* remain cautious of those who claim to enact grounded theory on the basis of inductive approaches alone, advocating a mixing of research methods where necessary.

Like the literature inclusive approaches alluded to by Strauss and Corbin (1990; 2008), iterative grounded theory advocates the stimulation of new theory through the examination of existing literature. However, in this case, new knowledge is developed from a continuous interplay between existing knowledge/theory, empirical data obtained through semi-structured interviews, informal interactions and archival research (Orton, 1997). One of the defining characteristics of iterative grounded theory is that the literature review is not limited to the beginning of the project.

Green *et al.* (2010) suggest that there is no harsher test for the validity of developing research findings than to subject them to the critical scrutiny of leading practitioners embedded in the context within which the research is conducted. They advocate that this be achieved through *informal interactions* and *archival research*, in addition to the more traditional utilisation of semi-structured interviews and literature reviews. *Informal interactions* are seen as a valid and important means of enhancing data collection, thereby providing access to current thinking and an improved understanding of the research context. Examples of informal interactions include telephone conversations, emails and informal meetings. *Archival research* is the process of collecting and analysing published and unpublished archival sources of direct relevance to the research topic such as company account reports, correspondence, circulars received from Government departments, corporate publicity materials, unpublished in-house reports and press articles.

As detailed in Chapter 1, this study has been shaped by events that have unfolded around the author as a practitioner-researcher. According to Jarvis (1999), practitioner-researchers are a natural outcome of a new learning age, with rapid change resulting in a wide range of practice based information quickly becoming outdated, resulting in the need for continuing learning and the testing of new knowledge. This is certainly true of the regulatory environment within which this research is set.

Although there was a considerable amount of existing literature that was relevant to the study, limited information gleaned from written sources such as correspondence where appropriate was considered likely to prove to be valuable in attempting to solve field based problems. Informal interactions such as occasional telephone conversations or emails between the author and research participants would also prove useful as part of an iterative research process.

4.4 Choice of Research Participants

As suggested in Chapter 2 in relation to the evaluate artefact activity, engaging with experts in the field being studied is commonplace within design science research projects. This can be attributed to the general interest nature of design science research, through which stakeholders within local practice are unlikely to possess the required wide ranging knowledge to enable them to offer effective views. Such instances are particularly relevant where the artefact to be designed is highly innovative or complex (Johannesson and Perjons, 2012; Osterle *et al.*, 2011). Haigh (2008) suggests that if the interviewee is an expert on some particular topic, or possesses some special skill or experience, his or her responses may be regarded as ‘facts’ or ‘opinions’. However, it should be noted that the use of expert interviewees is by no means a new concept and is certainly not unique to design science research.

Consensus development research strategies were developed as far back as the 1960s, with the Rand Corporation designing the *Delphi* survey technique for the purposes of technological forecasting. Similarly, Van de Ven and Delbecq formulated the *Nominal Group Technique* (NGT) following research funded by the Institute for Research on Poverty and NASA (Gallagher *et al.*, 1993; Hasson *et al.*, 2000). Delphi and NGT demand that the researcher selects a sample of people who have experience, expertise and insight into the problems being explored and are structured procedures for gathering insights from such groups (Gallagher *et al.*, 1993). Both approaches consist of rounds of questioning through which experts rate, discuss and then re-rate a series of items or questions (Jones and Hunter, 1995). Delphi and NGT have been widely adopted by medical research but are gradually becoming more commonplace within other professional fields (Hasson *et al.*, 2000).

By utilising expertise as part of a series of semi-structured interviews, there may be a greater probability of the output being widely accepted if the group is seen to be credible by the target audience (Murphy *et al.*, 1998). Additionally, if the sample has a good understanding of the study’s overriding aim and objectives, this helps to build a research relationship (Hasson *et al.*, 2000). Haigh (2008) suggests that interviewees who are experts on a particular topic

should be identified by name, profession, where they work, the details of their expertise, and any other information about them that is relevant to the research to provide the reader with insight into the reasoning for their selection.

Having discussed the reasoning behind the choice of research methods and knowledge/theory base employed by the study, the manner in which each will be utilised as part of each design science process step will now be considered.

4.5 Chosen Research Methods

In choosing research methods that complement the general interest focus and iterative nature of the chosen design science methodology, a number of viable options were explored. For the reasons discussed above, it was ascertained that a mixture of research methods common to grounded theory and consensus development research strategies offer the most appropriate means of designing, developing and evaluating the desired artefact.

Figure 4.1, an updated version of Figure 2.2, offers a simple overview of the research methods and knowledge/theory base to be utilised by this study and also details how chapters of the thesis are mapped within the chosen design science research framework.

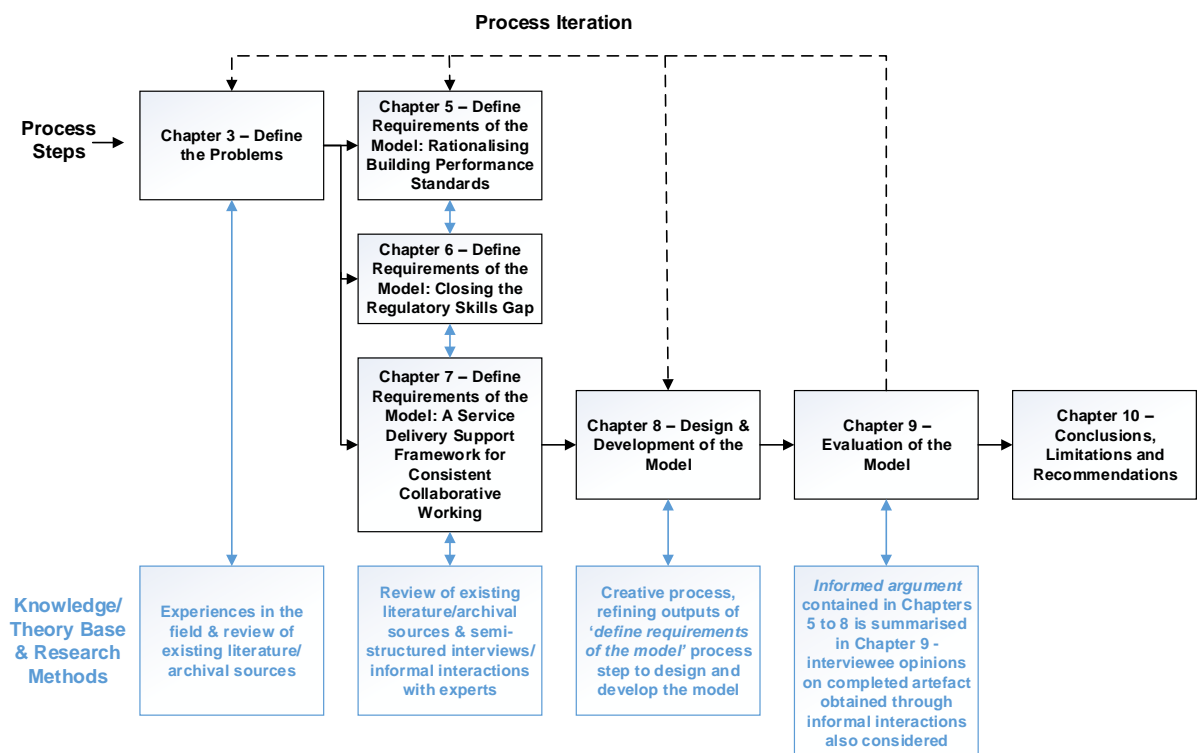


Figure 4.1 - Research methods and thesis chapters within design science research framework

Chapter 3 (Define the Problems) obviously precedes Figure 4.1 but is shown for the purposes of updating all four of the design science process steps previously outlined in Figure 2.2. Chapters 5, 6 and 7 will each seek in turn to address the problem areas associated with one of the three research objectives outlined in Chapter 3. In doing so, they will utilise the knowledge/theory base and research methods discussed above to set out requirements of the artefact, which in the context of this research is a model. Accordingly, ‘model’ will from this point forward replace the term ‘artefact’ as part of discussions relating to the overriding aim of the research. As well as being in keeping with the ultimate aim of the research, model was viewed as being more instantly accessible than the term artefact to those who might be interested in the research, particularly practitioners not familiar with design science research.

As discussed in Chapter 2, the design and development stage of the design science methodology (Chapter 8 in Figure 4.1) is a creative process of drawing together requirements (or potential solutions to the research problems) to formulate the model. In relation to Chapter 9, although the *informed argument* form of evaluation outlined in Chapter 2 normally involves evaluation being tightly coupled with the requirements definition and design processes, it was decided to also seek opinions from interviewees on the completed model. It has been claimed that presenting arguments through the use of existing knowledge/theory and semi-structured interviews is an appropriate evaluation strategy for the type of complex problems being addressed by this research (Hevner *et al.*, 2004; Johannesson and Perjons, 2012). However, whilst their feedback would be central to shaping differing elements of the model, giving interviewees the opportunity to comment on the completed model as a whole was viewed as an activity which could only serve to enhance any informed argument on the model’s potential utility.

In keeping with the data collection and analysis aspects of the chosen research methods, the generation and treatment of data emerging from semi-structured interviews with experts is now discussed.

4.6 Sample Size and Data Saturation

Qualitative study samples are usually far smaller than those used in quantitative studies due to the fact that there is a point of diminishing return within rich data – as a study progresses, additional data does not, on many occasions, result in additional information (Mason, 2010). Glazer and Strauss (1967) introduced the idea of *data saturation*, or the point in qualitative data collection where no new data are found that might help to develop a conceptual category.

Much consideration was given to ensuring that the size of the proposed research sample would be sufficient to ensure data saturation, but not go beyond this to a point where further data might be counter-productive. As Dainty *et al* (2000) point out, data overload is a common problem associated with qualitative studies.

Creswell (1998) suggests that a sample size of between 20 and 30 is usually sufficient for doctoral research of a qualitative nature and of 174 doctoral theses utilising interviews studied by Mason (2010), 34% fell within Creswell's suggested range. However, there is much in the work of Mason, Guest *et al* (2006) and Francis *et al* (2010) to suggest that when carrying out semi-structured interviews, data saturation can often be achieved with a sample of between 6 and 12. In detailing the problems associated with ensuring data saturation, Francis *et al* (2010) specify the principles of *initial analysis sample*, where up to 10 interviews are conducted, and *stopping criterion*, where upon analysis of data, it can be shown that there are 3 consecutive interviews within which no new themes have emerged. If this cannot be demonstrated after 10 interviews, further interviews are carried out until the criterion is achieved.

Ultimately, although the above sources of information offer a useful indication of the range of interview numbers that have been associated with previous doctoral research, data saturation was the dictating factor in ascertaining the sample size utilised by this research.

4.7 Research Sample: The Chosen Experts

An evolving interview schedule was clearly and carefully designed prior to engaging in fieldwork and was explicitly informed by the ongoing review of research literature. As literature relevant to the problem areas being studied was reviewed, themes were developed which were worthy of further investigation via the collection and analysis of expert views. Interviewees were selected on the basis of being leading authorities within a specific problem area, as suggested by the literature being studied.

In instances where themes emerging from the review of literature were expanded upon by interviewees, resulting in additional themes, at least one further interview with an individual with expertise in the same field was carried out. Data saturation was achieved through transcripts emerging from a research sample of 25. In keeping with recommendations made by Haigh (2008), Table 4.1 details the name, profession, workplace and details of the expertise possessed by each of 25 carefully selected interviewees, with the aim of offering the reader an insight into the rationale behind their selection.

Name, profession and workplace	Areas of expertise
<i>Professor Julia Black</i> is currently Pro Director for Research at the London School of Economics (LSE). She has written extensively on regulatory issues in a number of areas and advises policy makers, consumer bodies and regulators.	Regulatory theory and policy.
<i>Tracey Bush</i> is Managing Director of Spiral Health in Lancashire, which on 1st April 2012, became one of the first staff led not for profit social enterprises to be formed from an existing NHS Foundation Trust.	Public sector service innovation.
<i>David Clements</i> is City of London Corporation District Surveyor and was one of four members of the Housing Standards Review Challenge Panel. He is Honorary Secretary of the London District Surveyors Association and is actively involved in its policy making and coordination.	Building control practice, sustainable building standards.
<i>Martin Conlon</i> is Director at Assent Building Control Ltd, an approved inspector. He established one of the first Building Control degree programmes, setting the benchmark for other courses. He continues to lecture regularly through the RICS Building Control Professional Group where he is an APC Assessor and Doctor.	Building control education and practice.
<i>Alison Crompton</i> is Regional Director for Sustainability and Building Engineering with AECOM. An expert in sustainable building standards, she authored the report <i>Mapping the interfaces between building control and other regulatory regimes which impact on a building</i> for the DCLG.	Sustainable building standards, building engineering, building control.
<i>Dr Andrew Edkins</i> is a project manager by profession and is the Course Director of the MSc Strategic Management of Projects programme (formerly titled Interdisciplinary Management of Projects) at University College London.	Interdisciplinary education and management of construction projects.
<i>Bill Gething</i> is a practicing architect, sustainability consultant and is Professor of Architecture at the University of the West of England (UWE). His consultancy work includes the development of the <i>Green Overlay to the RIBA Plan of Work</i> .	Design of sustainable buildings.
<i>Professor Mike Feintuck</i> is a public lawyer whose research is focused on applying a socio-legal approach to issues relating to regulation. He is Director of the Law School at the University of Hull and has served as a Specialist Adviser to the House of Lords Select Committee.	Regulatory theory and policy.
<i>Chris Findley</i> is Assistant Director of Planning and Transport at Salford City Council. He was instrumental in setting up Urban Vision, a joint venture launched in 2005 between Salford City Council and outsourcing specialist Capita.	Private sector involvement in public regulatory services, planning practice.
<i>Dave Jolley</i> has been a planning professional for over 30 years and is Planning and Building Control Director at Urban Vision. Prior to joining Urban Vision, he was Assistant Director of Building and Development Control at Salford City Council.	Outsourced regulatory services, planning and building control practice.
<i>Paul Kirby</i> has worked as a mechanical engineer for Max Fordham & Partners and Whitby and Bird. He was responsible for setting up the IDBE Masters programme at the University of Cambridge in the 1990s and is currently Programme Leader for the BEng (Hons) Architecture and Environmental Engineering course at the UWE.	Interdisciplinary education, building services design.
<i>Julie Thompson Klein</i> is Professor of Humanities at Wayne State University in the USA, consulting internationally, serving on national task forces, and advising public and private agencies.	Interdisciplinary theory, collaborative problem solving on a large scale.
<i>Julian Le Grand</i> is the Richard Titmuss Professor of Social Policy at the LSE. He served as Senior Policy Adviser to Tony Blair between 2003 and 2005 and continues to advise the Government on social policy.	Public service transformation.
<i>Dr Sebastian Macmillan</i> is an architect and is Course Director of the IDBE Masters programme at the University of Cambridge. He has undertaken a wide range of research and technical writing commissions for leading research organisations in the built environment.	Interdisciplinary education, design of sustainable buildings.
<i>Vincent Nadin</i> is Professor of Spatial Planning and Strategy at Delft University of Technology in Holland. He is co-author of the renowned textbook <i>Town and Country Planning in the UK</i> .	Planning education and practice.
<i>William H. Newell</i> is Emeritus Professor of Interdisciplinary Studies at Miami University in the USA. He has written books, chapters and articles on interdisciplinarity and has served as a consultant on overcoming complex systems within public administration.	Interdisciplinary theory, collaborative problem solving on a large scale.

Table 4.1 - Research participants

Name, profession and workplace	Areas of expertise
<i>Paul O'Brien</i> is the Chief Executive of the Association for Public Service Excellence (APSE). Based in Manchester, APSE has 250 local authorities in its membership.	Public service transformation.
<i>Adrian Penfold</i> is Head of Planning & Environment at British Land and has wide experience of working with the Government on a wide range of policy matters, including his well publicised and referenced <i>Penfold Review of Non-Planning Consents</i> . He is a member of the DCLG Planning Sounding Board.	Regulatory policy within the built environment, planning practice.
<i>Fiona Rooney</i> is Interim Director of Resources and Strategic Commissioning for Copeland Borough Council. She has previously led a substantial commissioning exercise at North Tyneside Council, where she was Strategic Director of Finance and Resources.	Public sector transformation, private sector involvement in public regulatory services
<i>Professor Yvonne Rydin</i> is Chair of Planning, Environment and Public Policy at University College London's Bartlett School of Planning, where she specialises in planning practice, environmental policy, urban governance and sustainability.	Planning education and practice, sustainability.
<i>Stuart Smith</i> is Head of Built Environment Admissions at Sheffield Hallam University. Having previously worked as a building control surveyor for 14 years, he has taught on building control related degree programmes since 1999.	Building control education and practice.
<i>Sir Andrew Stunell</i> trained and worked as an architect for 20 years before becoming MP for Hazel Grove in 1997, a seat he has held ever since. In 2004 he steered his Sustainable & Secure Buildings Act onto the Statute Book and has since served as Chairman of the Building Regulations Advisory Committee (BRAC) and Minister responsible for the Building Regulations.	Regulatory policy within the built environment, sustainability, building control practice.
<i>Jonathan Williams</i> is Chief Executive of East Coast Community Healthcare in Suffolk, a staff led social enterprise. He is an experienced NHS Clinical Director with a diverse range of expertise gained from more than 30 years' of service.	Public sector service innovation.
<i>Ant Wilson</i> is Director for Sustainability and Building Engineering in Europe with AECOM. He is responsible for leading sustainable development, advanced design and applied research and advises the Government on changes to Part L of the Building Regulations.	Sustainable building standards, building services design.
<i>Dr Gerard Wood</i> is a Chartered Surveyor who has worked within both private practice and management contracting organisations. He is currently Associate Head of School (Teaching) in the School of the Built Environment at the University of Salford.	Interdisciplinary education and practice in the built environment.

Table 4.1 - Research participants (continued)

In each instance, the author was able to secure the participation of experts who lead their fields in the UK and in many instances, internationally. In this sense, the consensus development aspect of the research methods employed can be considered as being central to the execution of the study.

In order to give the reader an appreciation of the issues addressed by each of the 25 semi-structured interviews, the lists of questions asked of each of the research participants are provided in Appendix B. In keeping with Table 4.1, these lists of questions are presented in alphabetical order of interviewee surname. However, it must be noted that these documents do not convey the secondary questions that resulted during the interviews, or any follow up questions via telephone or email. The manner in which data was collected through the research interviews is now discussed.

4.8 Data Collection

Prior to the interviews being carried out, ethical approval was obtained from the University of Salford. Research information sheets and participant consent forms were forwarded to participants, with all confirming by return that they were happy to be identified within the thesis.

Each of the semi-structured interviews lasted at least one hour and generated data that was rich and deep in nature. Interviews were recorded using a digital voice recorder and subsequently transcribed, with transcripts containing approximately 10,000 words on average. Accordingly, data saturation was comfortably achieved within the research sample of 25.

Recordings of the interviews and interview transcripts can be made available to those interested in the research, although the express permission of each interviewee would first need to be sought by the author before passing on data to interested parties due the frank and honest opinions expressed by each individual.

4.9 Data Analysis

The data analysis methods utilised by the research adopted an intricate process of reducing raw data into concepts that emerged from the review of research literature. The categories were then integrated into developing solutions to the research problems, achieved by coding emerging qualitative data.

The data was coded and analysed using the three coding methods associated with the grounded theory research strategy advocated by Strauss and Corbin (1990), these being *open coding*, *axial coding* and *selective coding*. Interview transcripts were analysed within NVivo, a computer assisted qualitative data analysis software (CAQDAS) programme, to help with the organisational aspects of managing the qualitative data, and were coded using the 'nodes' facility within the software. It is important to note that as suggested by Bringer *et al* (2006) and Hunter and Kelly (2008), software users are ultimately responsible for analysing data and using it to help develop potential solutions to research problems.

Open coding is the disaggregation of data into conceptual units. Relevant material from each of the transcripts was openly coded within the conceptual areas (or themes in addition to those that emerged from the literature review) until it became clear that although data had emerged

that added further considerations to some conceptual categories, no data was emerging that might lead to the development of a further conceptual category.

Axial coding involves looking for relationships between the categories of data that have emerged from open coding, Straus and Corbin using the term axial because coding occurs around the axis of a category and the analysis is required to link categories at the level of properties and dimensions (Jin, 2010). Through the process of axially coding the data, the author established relationships between sets of interview data, which broadly followed the range of issues that emerged from the literature review. As might be expected when considering the caliber of the interviewees, a substantial quantity of information was obtained of a high level nature, including some of the interviewees' personal experiences, which was not directly relevant to the conceptual categories linked to the study.

Selective coding involves selecting a core category from the principal categories that have emerged through data collection, with the intention of integrating the research and developing grounded theory (Saunders *et al.*, 2009), which would in this case be represented by the model resulting from the research.

4.10 Presentation of Emerging Findings

In order to reflect the iterative nature of the research detailed in Figure 4.1, the review of literature and data analysis are offered collectively and not separately, with the opinions of the chosen experts continually complementing and expanding upon the themes emerging from literature and archival sources.

Wolcott (1994) observes that researchers adopting qualitative methods are storytellers, reflecting continuous iterations between the review of literature and qualitative data analysis, as characterised by design science research (Holmström *et al.*, 2009; Osterle *et al.*, 2011). The chosen method of presenting emerging research findings is intended to aid the reader by constructing a structured and logical picture of the development of potential solutions to research problems. Wolcott (1994) suggests that this method of presentation can be termed as 'progressive focusing', through which problem focused research offers a descriptive account through a step by step disclosure of the results of data analysis.

A strong majority of interviewees made it clear that they were happy for their comments to be attributed to them within the thesis. However, understandably given their relationships with

the Government and other client organisations, a number of experts expressed concerns that some of their comments may be detrimental to their own or their employer's standing. Therefore, in order to protect the interests of research participants, some of the opinions and quotations included in the study have been anonymised at the discretion of the author prior to showing the completed thesis to each participant to seek their approval on content. Rather than anonymise all opinions/quotations for the sake of consistency, the decision was taken to attribute them to the expert concerned wherever possible. This was due to the fact that in many instances, the level of specialisation and consequent nature of comments would make it unviable to anonymise them.

Although the aim of the above description of data collection and analysis methods is to give the reader assurances that robust and reliable processes have been followed by the research, the matter of subjectivity must be addressed by all design science researchers (Lukka, 2003). Accordingly, what follows sets out the approach to be adopted by the author to address this issue.

4.11 Subjectivity and Critical Reflection

According to Peshkin (1988), one's subjectivity is like a garment that cannot be removed. Likewise, Lee (2009) suggests that all research is contaminated and that researchers should be aware of and accept research contamination rather than trying to remove it through false notions of objectivity.

The researcher's ability to be committed to problem-solving and still be able to maintain a neutral/critical overall attitude presents a dilemma to all design science researchers. As such, a sincere critical reflection of the findings revealed by the research process should be regarded as one of the key characteristics of a good design science research project (Lukka, 2003).

There are many well-known commentaries on the subject of critical reflection but Donald Schön's book *The Reflective Practitioner* (1983) is widely held to be the inspiration behind much recent research and debate on reflection in the professional sphere. In *The Reflective Practitioner*, Schön considers that there are two main forms of reflection used by practitioners, these being *reflection-in-action* and *reflection-on-action*. Reflection-in-action is seen as a process demanding intuition and creativity that occurs in association with an action that does not go to plan and requires practitioners to make judgments in unexpected situations. Reflection-on-action is retrospective and relates to the action that a person has taken.

As a practitioner-researcher keen to show that by following the design science research methodology and allied research methods, the issue of subjectivity has been considered in detail, the author will set out critical reflections as part of the research findings. By doing so, it is hoped that such reflections-on-action will demonstrate that by following the design science research approach, one has been able to produce a credible contribution to practice and academia.

4.12 Research Methods: Summary

The chosen research methods, involving iterative movements between a broad base of existing knowledge/theory and semi-structured interviews/informal interactions with experts, draw upon a mixture of attributes that are common to consensus development and grounded theory research strategies. Collectively, the methods adopted offer a flexible but robust set of research tools, with the employment of expert interviewees marrying well with the iterative and general interest nature of the design science methodology (Osterle *et al.*, 2011; Van Aken, 2004). Having secured the participation of experts who lead their fields in the UK and in many instances, internationally, the consensus development aspect of the research methods employed are central to the execution of the study.

Having demonstrated an awareness of the field based problems being addressed by this study and set out the research methods adopted to address them, the next step in the design science methodology is to define requirements of the desired model. Chapter 5 begins this process by exploring how building performance standards might be rationalised to promote collaborative working between planning and building control practitioners at appropriate junctures in the development consent process.

5 Define Requirements of the Model: Rationalising Building Performance Standards

5.1 Introduction

Chapter 3 discussed how, since the beginning of the 21st Century, the definitions of the purpose of building control and planning have changed, resulting in a requirement for the professions to contribute towards the achievement of sustainable development. Tables 3.1 and 3.2 have detailed the broad range of categories and technical issues now being covered in relation to sustainable development by statutory and voluntary standards used by planning and building control professionals.

The problems highlighted in Chapter 3 were reinforced by interviewees who in detailing a number of frustrations, were clear that the current framework for regulatory guidance and policy is not optimised. In this respect, the comments of Martin Conlon and secondly Yvonne Rydin offer a flavour of the wider views expressed by experts in the field in relation to the disparate spread of guidance/policy and subsequently, the effect that this has on solving complex problems:

“It's so confusing and so complicated now to look at green issues and sustainability, whether you're looking at Part L, Code for Sustainable Homes, BREEAM. Whether you're looking at planning policies with ten per cent renewables or whatever, plus this, plus that, plus the other, and there's a whole myriad of things, it's just a quagmire. It's like trying to swim through treacle, whereas, if you were to come up with a simple, straightforward system and approach, if you had a blank sheet of paper, you would come up with something different.”

“Planners at the moment, what they tend to do is to get statutory consultees and others and it's often the developers as well that provide them with all this material, so you may well have a pile of paper this big, because of all these different reports, and there's a slightly tick-box approach to it. It's not actually necessarily critical interrogation about what's in those reports, and what you certainly don't get, and there just isn't time to get everybody round the table. Ideally, what you'd have is, rather than all those bits of paper, is have people round the table discussing that particular planning application or that particular plan.”

In recognising the problems set out in Chapter 3, Objective 1 of this thesis is to: *Demonstrate how building performance standards for new sustainable development might be rationalised to promote consistent collaborative working between planning and building control practitioners at appropriate junctures in the development consent process.*

In setting out to meet this objective, it should be noted that it is not the intention of this chapter to offer a detailed specification of potential improvements to all technical requirements of policy and guidance linked with sustainable development. Each of the guidance, policy and code documents detailed in Tables 3.1 and 3.2 refer readers to a plethora of second tier references such as British Standards and Building Research Establishment (BRE) reports (AECOM, 2012). Being an extremely broad ranging and complex area, with hundreds of documents referenced in multiple tiers as guides to regulatory compliance, such an undertaking could form the basis of a doctoral thesis in its own right.

Utilising the knowledge/theory base and research methods outlined in Chapter 4, the aim of this chapter is to construct and define the requirements of an overarching building standards framework within which the sustainability categories detailed in Tables 3.1 and 3.2 might sit. In addition, regulatory responsibilities for each sustainability category will be allocated between the planning and building control professions in an attempt to rationalise standards and promote consistent collaborative working where appropriate.

The chapter begins by looking at the emerging effects of the Government's Housing Standards Review. Like previous Government studies, the Review recognises the need for a rationalisation of building performance standards but unlike previous studies, finally appears to be resulting in some change in this respect.

5.2 Emerging Policy – The Housing Standards Review

5.2.1 Initial Consultation

Published in August 2013, the Housing Standards Review Consultation (Department for Communities and Local Government, 2013a) acknowledged the large and complex range of standards, rules and codes being applied to the construction of new housing. In doing so, the consultation began a process of examining how to reduce differing standards being set by councils through local planning policies, which was resulting in confusion for developers. Accordingly, one of the Government's proposals was to wind down the CSH, elements of which it was claimed were being applied inconsistently by local planning authorities. Instead, a limited selection of standards from the CSH (under the themes of energy, accessibility, security and water) would be embedded into the Building Regulations.

The themes of space and regulatory process/compliance were also considered as part of the Consultation, which incorporated the views contained in a report prepared by an independent ‘Challenge Panel’. The Challenge Panel’s remit was to act as a ‘*critical friend*’ of the steering and working groups set up as part of the Consultation, their primary aim being to consider how the Building Regulations function with the planning system and consequently, recommend potential improvements.

5.2.2 Challenge Panel Report

The report ‘*Towards More Sustainable Homes*’ (Housing Standards Review Challenge Panel, 2013) was written in conjunction with the Government’s Consultation by four individuals with extensive expertise in the fields of housing, architecture/design, planning and building control. Whilst agreeing with the opinions of the Government in relation to the need to reduce the inclusion of building performance standards in local planning requirements and bed as many standards as possible into the Building Regulations, the Challenge Panel were critical of some of the Government’s proposals.

One of the main criticisms levelled by the Housing Standards Challenge Panel related to the proposal to wind down the CSH and consequently, the neglect of standards relating to daylight, overheating and the responsible sourcing of materials. It was suggested that removal of the CSH would lead to a dilution of sustainability standards, a lack of co-ordination between regulatory and non-regulatory regimes, and increased confusion. Instead, following consultation with a broad range of stakeholders in the development consent process, a desire was expressed by the Challenge Panel to see domestic standards brought into a single code document, with the same principle being considered for the commercial sector. The absence of rigour in comparing the development consent system in England with best practice internationally was also noted, with the Challenge Panel remaining unconvinced that the existing system of separate planning and building control functions in England was optimised. In addition to the criticisms detailed above, the Challenge Panel’s report contains some interesting observations and recommendations, with suggestions that the Government:

- create an online portal containing a single set of regulatory guidance for all stakeholders in the development consent process, with highlighted interconnections between all referenced regulations, guidance and reports;

- ensure that compliance with standards reflects the development process through the RIBA (Royal Institute of British Architects) Plan of Work to avoid unnecessary cost, duplication, repetition and overlap of the development cycle;
- establish a body to act as a manager, gatekeeper and clearing house for revised regulatory standards;
- where additional localised standards are required (i.e. for flooding, water supply or accessibility), set them nationally in the Building Regulations wherever practicable as ‘regulated options’;
- introduce consumer labelling to encourage higher space, environmental performance and accessibility standards;
- support the use of Building Information Modelling (BIM) to aid compliance, improve the efficiency of proposals, and support proven as-built performance requirements;
- test the means of demonstrating compliance through actual as built performance; and
- make the process of reviewing national standards more open and expeditious.

One of the interviewees, David Clements, was one of the four experts engaged by the Government to take part on the independent Challenge Panel. He reinforced the aims of the Housing Standards Review, stating that:

“The approach that was taken all the way through the process was there was a lot of duplication between Building Regulations and planning, and also there was a lot of variability with planning across the country, and the idea was to really rationalise that on both of those counts.”

The variation in local planning requirements was highlighted as a problem requiring resolution by other interviewees, reinforcing the aims of the Housing Standards Review in this respect, with the following anonymised comments being indicative of views expressed:

“I think in some of the boroughs in London, it’s just a money-generator because if you can’t do it [achieve required standards], they’re charging you X pounds a ton of CO₂ and they’re saying, well, if you want to do that big development, you’d better give us £2m please, or give us £3m.”

“Planning authorities are imposing standards and it’s within their own gift to promote their own standards, but it doesn’t help when they don’t understand the standard that they’re imposing or what makes them comply with that standard.”

On the back of responses to its 2013 Consultation and the conclusions and recommendations of the Housing Standards Review Challenge Panel, the Government took a further step towards the rationalisation of regulatory standards for new housing by publishing its Technical Consultation in September 2014.

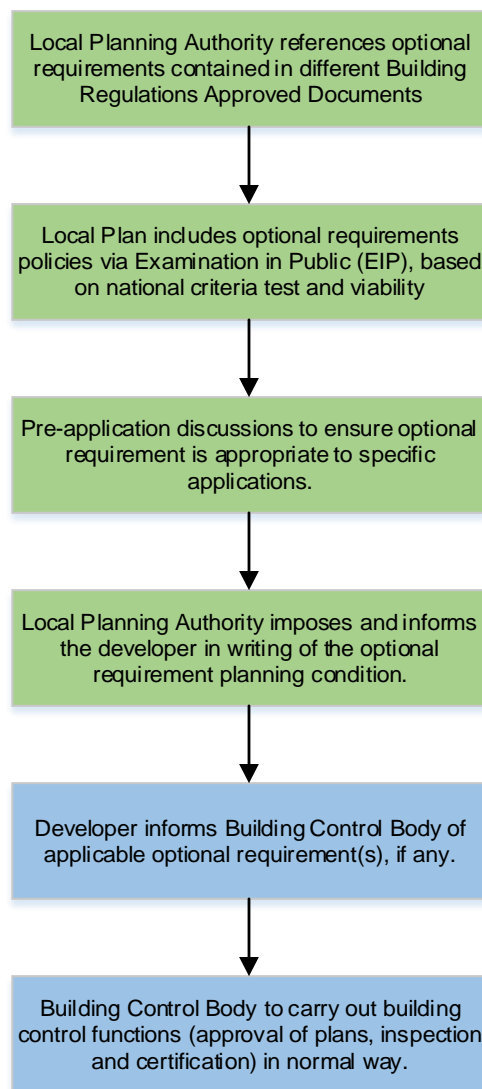
5.2.3 *Technical Consultation*

The Government's Housing Standards Review Technical Consultation (Department for Communities and Local Government, 2014b) took the unprecedented step of committing to include '*optional requirements*' for water efficiency and accessibility in the Building Regulations by the Autumn of 2015.

As suggested by the Housing Standards Review Challenge Panel (2013) as '*regulated options*', the Government set out a route to Parliamentary approval to allow local planning authorities to set optional requirements (standards exceeding the minimum requirements of the Building Regulations) on a '*need to have*' basis. Where applied by the planning authority, the process would see the developer informing the chosen building control body of the applicable optional requirement(s), which the building control body would then enforce through the relevant Approved Document (i.e. Approved Document G for water efficiency and Approved Document M for accessibility).

One new standard taken forward by the Government which would not be embedded within the Building Regulations was that relating to internal space. Instead, a separate national standard was proposed, which could be referenced in local planning policies, again as an optional requirement, with a role for building control bodies to check compliance from drawings being considered. The issue of transferring security from the soon to be withdrawn CSH was addressed through the introduction of a new Part Q (Security) of the Building Regulations.

A set of draft planning principles to determine the circumstances in which optional requirements might be triggered by planning authorities and appropriate needs tests were included in the Technical Consultation. Figure 5.1, adapted from the Technical Consultation (Department for Communities and Local Government, 2014b), details the new process designed to introduce the enforcement of optional planning requirements through the Building Regulations.



Key: ■ Planning functions ■ Building control functions

Figure 5.1 - Introduction of optional planning requirements into the building control system

5.2.4 *Lessons Emerging from the Housing Standards Review*

The process detailed above in Figure 5.1 sets out the Government’s proposals to rationalise future planning policy and Building Regulations guidance, starting with water efficiency and accessibility standards for housing. In this sense, it offered an up to date baseline for the building standards element of this research during its execution. According to Johannesson and Perjons (2012), if the results of emerging research (i.e. the Government’s Housing Standards Review) are capable of meeting an objective of a design science project, it may not be realistic or necessary to seek to develop the associated part of the desired enabling model.

However, when taking into account personal experiences in the field, the views of the Housing Standards Review Challenge Panel, and the outcomes of research preceding the

Housing Standards Review, the author was not satisfied that Objective 1 was capable of being resolved by the Review. Even without taking this body of experience and knowledge into account, consideration of the process set out by Figure 5.1 at its most basic level suggests that consistent collaborative working is not supported, with building control neither involved in early discussions, nor informed by the planning authority of the need for optional requirements. Interviewee and Housing Standards Review Challenge Panel member David Clements suggested that this was at least in large part due to the existence of approved inspectors operating in isolation of local planning authorities.

The cross party House of Commons Environmental Audit Committee (2013, p.20) also remain unconvinced by the proposals set out by the Housing Standards Review, stating that:

“In light of the volume of construction required to meet medium-term demand for housing in England, Wales and Northern Ireland, DCLG [Department for Communities and Local Government] has a once-in-a-generation opportunity to embed sustainability in the national housing stock through appropriate regulation. Unfortunately, the regime proposed in the Housing Standards Review consultation is too weak to ensure that those homes will be constructed to a robust sustainable standard.”

According to the cross party House of Commons Environmental Audit Committee, the CSH held the support of many stakeholders in the development consent process and 50% of local planning authorities in England have referred to it in their local plans. However, a major reason for its demise would seem to be that some stakeholders view the array of separate voluntary and statutory standards as being confusing (Department for Communities and Local Government, 2013a). As recommended by the Housing Standards Challenge Panel (2013), the development of a single standards code for each of the domestic and commercial development sectors may have proven more successful in helping to promote collaboration, drive improvement and measure success.

Perhaps not surprisingly, a number of the recommendations made by the Housing Standards Challenge Panel (2013) are mirrored by similar themes contained within prior research relating to sustainable development and regulatory standards. A further parallel may be drawn in that this earlier body of research has also taken on board the views of many stakeholders in the development consent process, including, designers, contractors, developers and regulators. Therefore, in keeping with the outcomes of previous studies (Faber Maunsell and Steemers, 2010; Penfold, 2010; Sustainable Buildings Task Group, 2004; UK Green Building Council, 2009), the following issues will now be examined:

1. Comparisons of international development consent regimes.
2. The potential of the use of statutory codes for sustainable domestic and commercial development as a means of rationalising performance standards and promoting collaboration.
3. The need for a gatekeeper for revised performance standards with the aim of making the process of reviewing standards more transparent and consistent.

By following the design science methodology set out in Chapter 2, each emerging requirement of rationalised policy and guidance are described and justified by analysing existing literature/archival resources and where themes require reinforcement/expansion, incorporating the views of expert interviewees.

5.3 Comparisons of International Development Consent Regimes

The Housing Standards Review Challenge Panel (2013) suggest that in carrying out a review of regulatory standards in one country, one might naturally assume such a review would start by ascertaining what (if any) lessons might be learned from best practice on an international basis. However, if as suggested by the Challenge Panel, the sustainability performance of housing as an outcome of regulatory standards is at the forefront of such an argument, evidence suggests that an international comparison would be difficult if not impossible to achieve.

Having sought information relating to the energy performance of new and existing housing in England, Lowe and Oreszczyn (2008) claim that the lack of data is symptomatic of a long term lack of research into low energy buildings. Similarly, having sought data on the extent and nature of sustainable building in England from numerous sources, Williams and Lindsay (2007) conclude that the information base available is inadequate. Williams and Lindsay recommend making planning and Building Regulations policies more stringent in this respect and that information should be collated by the Government on the sustainability rating of buildings. The UK Green Building Council (2009) state that the overriding observation of their research is that there is a lack of empirical data available on the property market in relation to sustainability, making it difficult to make comparisons internationally.

In terms of stakeholder perspectives on differing international development consent regimes, the author could find no research covering such issues. Comparative research in relation to how European regimes differ in relation to whether planning and building control services are

separate, combined, etc. in each country does exist (Meijer *et al.*, 2002; Pedro *et al.*, 2011). However, this research does not stretch beyond such issues and demonstrates only that development consent approaches are disparate, with no evidence of their perceived success or failure in terms of user friendliness or sustainable outcomes. What the research of Pedro *et al* does highlight is that in 16 European countries, planning and building control regimes are combined, suggesting that the collaborative outcomes sought by this research are not unusual. These countries include Denmark, whose increasingly innovative approaches to sustainable development have received recent praise from RIBA (Royal Institute of British Architects, 2015).

Previous international comparisons of regulatory regimes made by the Government do not appear to have proven to be successful, a notable instance being the comparison made by the *Unification of Consent Regimes* study (Office of the Deputy Prime Minister, 2004b). In generally seeking deregulation and a unification of regulatory regimes such as planning and building control, the study identified three international exemplars – Norway, New Zealand and Ireland. Subsequently, the building control systems in all three countries suffered well publicised failures.

Having operated a full self-certification system across all building projects since 1997, Norway reverted to a system of independent third party building control in 2010 following major political and public pressure (The Consortium of European Building Control, 2010). Similarly, following the discovery of major defects to 89,000 new homes built between 1992 and 2002 (Bill, 2010; Meacham *et al.*, 2005), previous deregulation in New Zealand was reversed in 2004 (May, 2007; Mumford, 2010). In Ireland, well publicised developments such as Priory Hall (McDonald, 2011) and Belmayne (Kelly, 2012) in Dublin were condemned as not being fit for purpose due to unacceptable fire safety standards. As a result, the Building Regulations in Ireland were revised in 2012.

In relation to the growing role that self-certification is playing in the building control system in England, the following comments of Martin Conlon highlight the potential problems that can be created, as experienced in Norway prior to their policy U-turn in 2010:

“The whole world is starting to waken up to the fact that, from a regulation point of view, you need a third party – independent assessment and accreditation, not self-certification. Now, the problem is that our Government's moving the other way a little bit and the problem will be they may well say we're only going to self-certify little bits, but therein lies a big problem –

who draws the bits together? In the assessment of buildings, you can't now just say, we've checked the fabric. It's the interaction between the fabric and the services that sorts out the energy. It's the interaction between the fabric and the services that might sort out your fire protection measures. But if you've got independent people with little bits of independent assessment without considering its place within the jigsaw, you're going to get problems."

BREEAM, a design and assessment method for commercial sustainable development used to certify buildings in over 50 countries, has been developed since 1990 in England (Schweber and Haroglu, 2014; BRE Global Ltd, 2014a). Accordingly, it is perhaps surprising that the Housing Standards Review Challenge Panel (2013) did not draw upon such readily available knowledge and expertise when seeking to consider international performance standards successes. As will now be discussed, this observation would appear to be particularly relevant when considering that previous Government commissioned research has recommended BREEAM as a template for the rationalisation of performance standards in England.

5.4 The Call for Codes for Sustainable Development

5.4.1 Background

The Housing Standards Review Challenge Panel's recent recommendations for domestic and commercial development standards to be brought into a single code document are not new by any means. Also set up by the Government to advise on sustainable construction in December 2003, the Sustainable Buildings Task Group recommended the creation of a Code of Sustainable Building (Sustainable Buildings Task Group, 2004). The Sustainable Buildings Task Group suggested that this Code of Sustainable Building should be based upon BRE's BREEAM and EcoHomes assessment systems.

The Government instead went on to replace EcoHomes with its own CSH in April 2007, with a view to examining the merits of developing its own code for commercial development at a later date (Department for Communities and Local Government, 2008a). However, no research into the merits of a code for commercial development was carried out, despite repeated calls for the Government to do so (UK Green Building Council, 2009).

Seeing the Government's 2014 proposal to wind down of the CSH as a step backwards, the BRE set out a plan to again develop its own set of all-encompassing voluntary sustainability standards for new housing within its BREEAM family of schemes (BRE Global Ltd, 2014b). This plan ultimately resulted in the launch of the *New Home Quality Mark* voluntary standard at Ecobuild on 3 March 2015 (BRE Global Ltd, 2015). In effect, within less than a decade,

best practice sustainability standards for new housing would appear to have turned full circle, from the BRE, to the Government, and back to the BRE.

Originally introduced in 1990 as the world's first sustainability rating scheme and since used to certify more than 260,000 buildings worldwide, BREEAM continues to be a leading design and assessment method for commercial sustainable development (BRE Global Ltd, 2014a; Schweber and Haroglu, 2014). Interestingly, discussions with interviewee Sir Andrew Stunell revealed that prior to leaving office as Minister responsible for the Building Regulations, he had commissioned research into developing a consolidated BREEAM like code of performance standards. Government departments such as the Cabinet Office had been keen to see the development of such a code but Sir Andrew was of the opinion that the commissioned research may have foundered due to the complexity of bringing technical guidance together.

Having emerged as a theme running through existing literature, the need to consolidate disparate and complex regulatory guidance and policy and the potential to do so by mirroring schemes like BREEAM was also a theme to emerge from interviews, as demonstrated through the following passages.

5.4.2 Technical Guidance & Policy: Calls for Consolidation

Since the recommendations of the Sustainable Buildings Task Group (2004) were put forward to the Government, a number of studies involving stakeholders in the development consent process have repeated the call for a consolidation of technical guidance and policy.

In identifying how un-coordinated regulations, policies and demands create a disjointed, confusing, and inefficient approach to achieving sustainable buildings, the UK Green Building Council (2009) recommended the creation of a Code for Sustainable Buildings. Stakeholders participating in the study suggested that a code should seek to overcome the inefficient approach being experienced by providing a clear and joined-up process at a national level.

Penfold (2010) suggests that overt recognition of the contribution regulators such as planning officers and building control surveyors make to sustainable development is required to draw their attention to the rationale for what they do and to the need for collaborative working. Penfold recommends that a single document covering all consent activity be set at a national level but utilised at local authority level, with regulators committing to publishing information

about their performance against set standards. Such observations again raise the issue of a lack of means within the current regulatory framework through which to measure the extent and nature of sustainable building in England (UK Green Building Council, 2009; Williams and Lindsay, 2007).

Similarly, Faber Maunsell and Steemers (2010) conclude that standards for sustainable development should be nationally agreed and clearly set out as part of a single building permit approach, with sustainability issues brought together, allowing any conflicts to be resolved more efficiently. They suggest that consolidated requirements be set ahead of those being set by local authorities to stop the need for local authorities setting higher standards, with a clear interface between planning and building control that is defensible and transparent.

In setting out stakeholder preferences for a BREEAM type assessment scheme to be operated by the Government, AECOM (2012) draw attention to the cost and duplication of information required of some design teams when submitting a planning application *and* undertaking a BREEAM assessment. Likewise, Williams and Lindsay (2007) and Aspinall *et al.* (2012) call for the mandatory application by the Government of a design and assessment tool such as BREEAM, with the ability to draw regulators *and* designers together to solve complex problems in an interdisciplinary working environment.

Perhaps not surprisingly in light of the fact that the literature detailed above took extensive account of the views of stakeholders in the development consent system, the comments of interviewees echoed the need for consolidation. Interviewees also raised other interesting issues. David Clements, Ant Wilson and Bill Gething stated that the wide array of second tier references to which access is often required to meet regulatory objectives can prove to be very expensive and were of the opinion that such information should be free and accessible in one location.

But conversely, Alison Crompton highlighted the helpful role that some organisations and materials manufacturers play in developing their own free guides to help stakeholders to navigate the minefield of regulatory requirements:

“I think there’s probably a lot of helpful guidance that people don’t necessarily know about. National Energy Foundation or Kingspan or whatever, will say, it needn’t be a nightmare to meet Part L, this is a way you can do it... there might be some really good helpful stuff that doesn’t cost anything.”

Ultimately, it seems clear that the current array of guidance, policy and second tier references require consolidation, not only to aid planning and building control practitioners handling such information on a daily basis, but to also assist design teams seeking development consents. However, Sir Andrew Stunell stated that in his experience, the fact that the ownership of many standards sits with private organisations who have considerable financial interests in them would make such desired change difficult to achieve.

5.4.3 The Needs of the Design Team

Like regulators, design teams are struggling to cope with the increasingly broad and complex set of performance standards linked to the achievement of sustainable development (AECOM, 2012; Fischer and Guy, 2009; Imrie, 2007). Fischer and Guy (2009) detail the increasing importance of knowledgeable regulators to design teams. As such, they hold out the view that the regulatory process is moving away from being conceived and experienced as an external constraint, towards being viewed as a key space of intermediation in which the meanings and methods of carbon-neutrality are being negotiated. In this sense, Imrie (2007) suggests that when taking into account the importance of regulation to design practices, it is curious to find an absence of writings about this relationship, which he views as being conjoined as part of a dynamic unfolding process.

A number of comments emerged from interviews with experts in this respect, the nature of which were mixed. Some interviewees viewed regulation as a frustrating constraint, particularly in relation to planning requirements, which in contrast to standards set nationally by the Building Regulations, were viewed as being too variable across different localities. However, as part of a prevailing group of opinion, Sebastian Macmillan advocated that regulation be viewed as a spur to innovation, also stating that regulation is seen by many designers as a constraint due to a lack of education on such issues:

“It seems to me if that is the regulatory framework the designers have to work in and under, you might as well tell them about it from day one, rather than letting it come as a ghastly surprise when their values have been formed. There's two very different perceptions of what it means to be a building designer in terms of the regulatory framework. On one hand you could regard it as a set of constraints which you use your imagination to deliver, or you regard it as a barrier that you need to somehow kick against. The best argument that you could use is that it's a spur to innovation.”

There is much in the research of Clarke (2013) and Schweber and Haroglu (2014) to suggest that when used, BREEAM acts as a focus for the project team at pre-construction stage and

has a big impact from design to completion in pushing decision makers to stay on track and not cut corners. These researchers found that design teams used BREEAM judiciously to develop and support their work, with the early involvement of a knowledgeable and proactive BREEAM Assessor being central to the success of a project, a sentiment mirrored by interviewees.

In essence, through their Housing Standards Review (Department for Communities and Local Government, 2014b), the Government are asking building control surveyors to take on duties currently performed by voluntary code assessors. By ensuring that optional requirements set by local planning authorities are complied with, it is likely that building control surveyors will eventually be required to assess all statutory performance standards linked with sustainable development. However, the marked difference between the BREEAM assessment process (BRE Global Ltd, 2014a) and that set out by the Housing Standards Review (Department for Communities and Local Government, 2014b) is that BREEAM Assessors are encouraged to liaise with other stakeholders at an early stage in the design process.

Penfold (2010) suggests that it would seem sensible to design out problems traditionally identified by regulatory bodies following the planning process (which he terms as ‘*show stoppers*’) through collaboration at an early stage in the design process. In this sense, the design experts interviewed by the author were unanimous in stating that discussions with both planning *and* building control services at an early stage in the design process would be advantageous in attempting to avoid rework at a later stage.

Yamakawa (1997) postulates that a framework for interdisciplinary building design work could be developed based upon the management procedures outlined by the RIBA Plan of Work. Unlike the current regulatory framework, BREEAM recognises the essential nature of ensuring that standards assessors are involved early in the design process, with the timing of standards requirements marrying with the design process, thereby encouraging collaboration. In doing so, BREEAM (BRE Global Ltd, 2014a) sets out links between its own procedures and the RIBA Plan of Work (Royal Institute of British Architects, 2013).

5.4.4 BREEAM and the RIBA Plan of Work

The RIBA Plan of Work was devised in response to the need to establish and consolidate building procedures after the pressures and ad hoc policies of the 1950s. It continues to be recognised throughout the built environment as the model way to administer a project

(Yamakawa, 1997). The latest version, RIBA Plan of Work 2013, maintains the tradition of explaining the briefing, design, construction maintenance, operation and in-use processes to clients by (Royal Institute of British Architects, 2013):

- acting across the full range of sectors and project sizes;
- providing straightforward mapping for all forms of procurement;
- integrating sustainable design processes;
- mapping BIM processes; and
- providing flexibility in relation to (town) planning procedures.

Detailed in Figure 5.2 (Royal Institute of British Architects, 2013), the RIBA Plan of Work 2013 has eight stages and eight task bars, with the task bars defining groups of related tasks that run across all the stages. Task Bar 4, (Town) Planning, has been amended within the RIBA Plan of Work 2013 to take account of feedback to the effect that clients often express a wish for planning applications to be submitted at Stage 2 (Concept Design) instead of Stage 3 (Developed Design). Accordingly, flexibility is now incorporated to allow applications to be made at either stage.

To obtain BREEAM certification, BREEAM Assessors collate evidence on the sustainability merits attached to the design and construction of developments before preparing a formal submission and forwarding it to the BRE. The BRE then evaluates the file and certifies the building with a rank ranging from ‘*Pass*’ to ‘*Outstanding*’ (Schweber and Haroglu, 2014). Figure 5.3 (BRE Global Ltd, 2014a) highlights the link between the BREEAM UK New Construction assessment and certification stages and the RIBA Plan of Work 2013, with the green boxes showing the 3 points in the process at which the BREEAM Assessor has involvement, as expanded upon below (Barlow, 2011):

1. The *pre-assessment* is the most important stage of the BREEAM process and should ideally be done before undertaking any feasibility work. This is carried out during a meeting in which the Assessor explains the process to the client and the design team.
2. The *design stage assessment* is ideally completed just before construction starts on site or shortly afterwards. The Assessor audits the design intent in the design team’s drawings, specifications and tender documentation and determines whether the evidence provided complies and awards the appropriate number of credits, thus determining the interim BREEAM score.

3. The *construction stage assessment* involves auditing the evidence of the building's as-built condition against the performance standards achieved in the design stage assessment and the requirements for post-construction evidence. The Assessor visits the site and completes a site inspection report to verify that the required standards have been achieved, meeting with the principal contractor, design team and client to review the as-built information.

In comparison to the manner in which BREEAM links the involvement of standards auditing by a BREEAM Assessor to the design process, interviewees were critical of the current regulatory framework. Some design experts stated that they had never attended a planning pre-application meeting in which building control have been involved. David Clements stated that the design process through the RIBA Plan of Work 2013 is not even an issue considered by building control. Martin Conlon expressed similar views, criticising the manner in which current performance standards result in fragmented/inefficient working processes and waste, adding that:

“...if you were to start with a blank sheet of paper and produce a regulatory framework for planning and building control, I don't think you'd get the system we've got now.”

As shown in Figure 5.2 and prescribed by Barlow (2011), the *pre-assessment*, the most important stage of the BREEAM process, should ideally be done between Stages 1 and 2 of the RIBA Plan of Work 2013. But as can be seen in Figure 5.3, RIBA Stage 4 (Technical Design) is currently recommended for Building Regulations submissions, this traditionally being the first point of contact between the design team and building control. Therefore, if one were to imagine building control professionals in the role of BREEAM Assessors working under statutory codes for sustainable development, it is likely that adherence to the RIBA Plan of Work 2013 would result in later than desired involvement.

	0	1	2	3	4	5	6	7
Stages	Strategic Definition	Preparation and Brief	Concept Design	Developed Design	Technical Design	Construction	Handover and Close Out	In Use
Tasks								
Core Objectives	Identify client's Business Case and Strategic Brief and other core project requirements.	Develop Project Objectives , including Quality Objectives and Project Outcomes , Sustainability Aspirations , Project Budget , other parameters or constraints and develop Initial Project Brief . Undertake Feasibility Studies and review of Site Information .	Prepare Concept Design , including outline proposals for structural design, building services systems, outline specifications and preliminary Cost Information along with relevant Project Strategies in accordance with Design Programme . Agree alterations to brief and issue Final Project Brief .	Prepare Developed Design , including coordinated and updated proposals for structural design, building services systems, outline specifications, Cost Information and Project Strategies in accordance with Design Programme .	Prepare Technical Design in accordance with Design Responsibility Matrix and Project Strategies to include all architectural, structural and building services information, specialist subcontractor design and specifications, in accordance with Design Programme .	Offsite manufacturing and onsite Construction in accordance with Construction Programme and resolution of Design Queries from site as they arise.	Handover of building and conclusion of Building Contract .	Undertake In Use services in accordance with Schedule of Services .
Procurement *Variable task bar	Initial considerations for assembling the project team.	Prepare Project Roles Table and Contractual Tree and continue assembling the project team.	<p>←----- The procurement strategy does not fundamentally alter the progression of the design or the level of detail prepared at a given stage. However, Information Exchanges will vary depending on the selected procurement route and Building Contract. A bespoke RIBA Plan of Work 2013 will set out the specific tendering and procurement activities that will occur at each stage in relation to the chosen procurement route. -----→</p>			Administration of Building Contract , including regular site inspections and review of progress.	Conclude administration of Building Contract .	
Programme *Variable task bar	Establish Project Programme .	Review Project Programme .	Review Project Programme .	<p>←----- The procurement route may dictate the Project Programme and may result in certain stages overlapping or being undertaken concurrently. A bespoke RIBA Plan of Work 2013 will clarify the stage overlaps. The Project Programme will set out the specific stage dates and detailed programme durations. -----→</p>				
(Town) Planning *Variable task bar	Pre-application discussions.	Pre-application discussions.	<p>←----- Planning applications are typically made using the Stage 3 output. A bespoke RIBA Plan of Work 2013 will identify when the planning application is to be made. -----→</p>					
Suggested Key Support Tasks	Review Feedback from previous projects.	Prepare Handover Strategy and Risk Assessments . Agree Schedule of Services , Design Responsibility Matrix and Information Exchanges and prepare Project Execution Plan including Technology and Communication Strategies and consideration of Common Standards to be used.	Prepare Sustainability Strategy, Maintenance and Operational Strategy and review Handover Strategy and Risk Assessments . Undertake third party consultations as required and any Research and Development aspects. Review and update Project Execution Plan . Consider Construction Strategy , including offsite fabrication, and develop Health and Safety Strategy .	Review and update Sustainability, Maintenance and Operational and Handover Strategies and Risk Assessments . Undertake third party consultations as required and conclude Research and Development aspects. Review and update Project Execution Plan , including Change Control Procedures . Review and update Construction and Health and Safety Strategies .	Review and update Sustainability, Maintenance and Operational and Handover Strategies and Risk Assessments . Prepare and submit Building Regulations submission and any other third party submissions requiring consent. Review and update Project Execution Plan . Review Construction Strategy , including sequencing, and update Health and Safety Strategy .	Review and update Sustainability Strategy and implement Handover Strategy , including agreement of information required for commissioning, training, handover, asset management, future monitoring and maintenance and ongoing compilation of 'As-constructed' Information . Update Construction and Health and Safety Strategies .	Carry out activities listed in Handover Strategy including Feedback for use during the future life of the building or on future projects. Updating of Project Information as required.	Conclude activities listed in Handover Strategy including Post-occupancy Evaluation , review of Project Performance , Project Outcomes and Research and Development aspects. Updating of Project Information , as required, in response to ongoing client Feedback until the end of the building's life.
Sustainability Checkpoints	Sustainability Checkpoint – 0	Sustainability Checkpoint – 1	Sustainability Checkpoint – 2	Sustainability Checkpoint – 3	Sustainability Checkpoint – 4	Sustainability Checkpoint – 5	Sustainability Checkpoint – 6	Sustainability Checkpoint – 7
Information Exchanges (at stage completion)	Strategic Brief .	Initial Project Brief .	Concept Design including outline structural and building services design, associated Project Strategies , preliminary Cost Information and Final Project Brief .	Developed Design , including the coordinated architectural, structural and building services design and updated Cost Information .	Completed Technical Design of the project.	'As-constructed' Information .	Updated 'As-constructed' Information .	'As-constructed' Information updated in response to ongoing client Feedback and maintenance or operational developments.
UK Government Information Exchanges	Not required.	Required.	Required.	Required.	Not required.	Not required.	Required.	As required.

Figure 5.2 - RIBA Plan of Work 2013

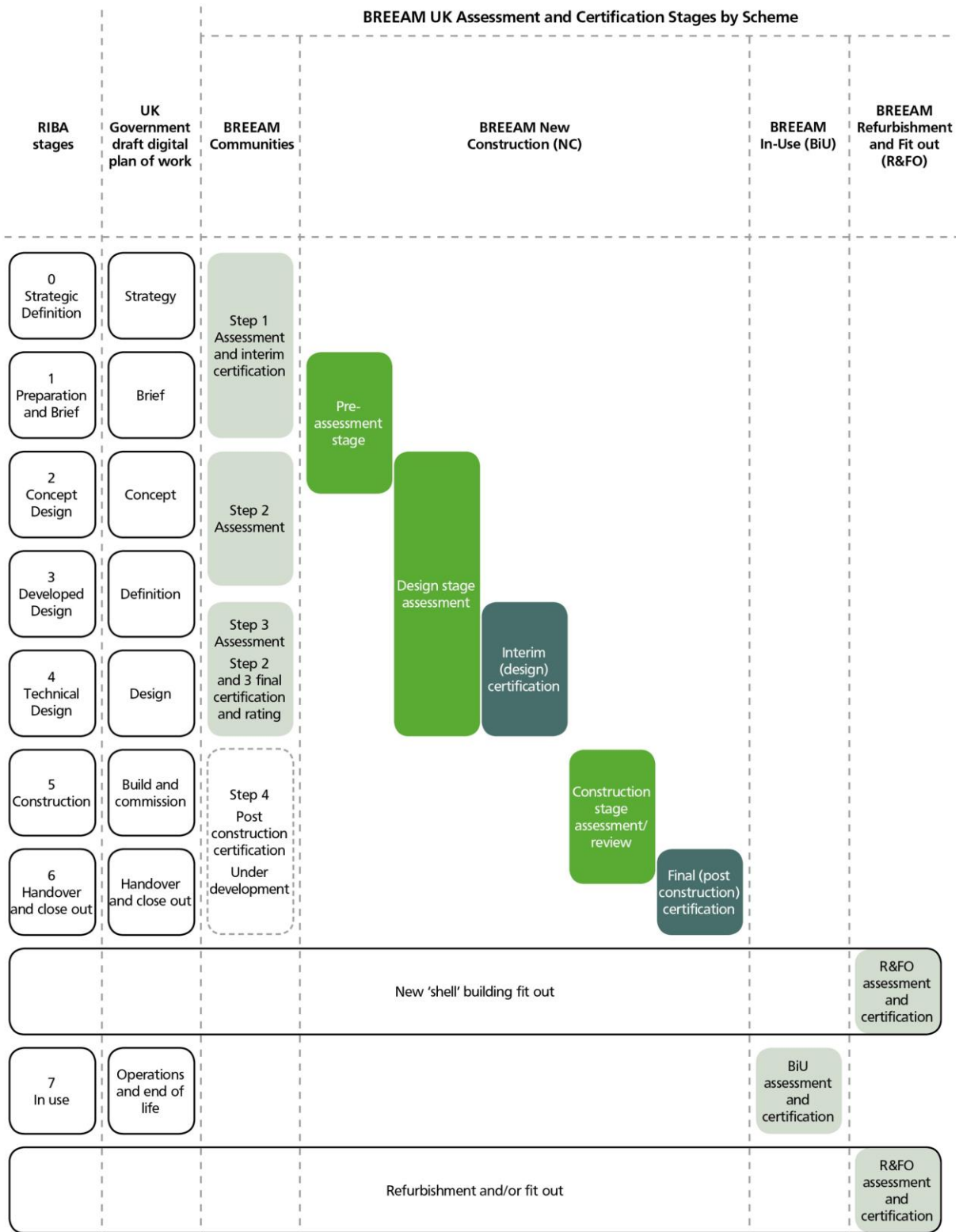


Figure 5.3 - BREEAM assessment & certification stages and the RIBA Plan of Work 2013

5.4.5 The Importance of Early Collaboration

A number of research projects that have examined the existing regulatory framework for the built environment have recommend that both planning *and* building control advice is received early in the design process, particularly for more complex projects (AECOM, 2012; Faber Maunsell and Steemers, 2010; Penfold, 2010; Planning and Building Control Working Group, 2010). The observations of this body of research have been reinforced by the opinions expressed by experts interviewed as part of this study. However, the importance of collaboration between key team members at an early stage of the design process is perhaps best demonstrated by Yamakawa (1997).

The building design process is a time-constrained activity. Figure 5.4 (Yamakawa, 1997) shows the distribution of design decisions throughout each of the design stages, with the percentage of design time spent on each of the design stages being detailed by the height of the columns.

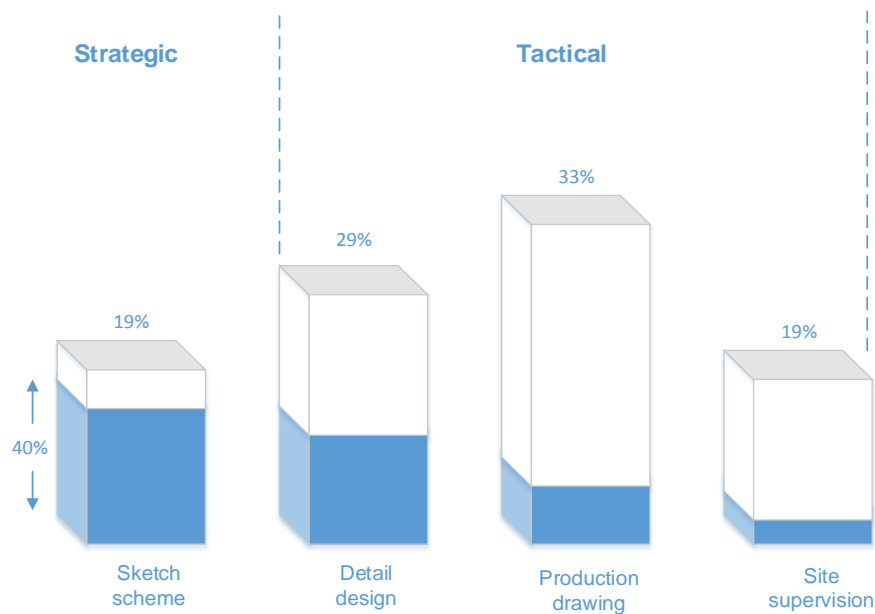


Figure 5.4 - Distribution of decisions in each design stage

Figure 5.4 indicates that over 40% of decisions are made during the sketch plan phase, whereas only 19% of the total time is allotted to this activity. So decisions made during this very early stage strongly affect the following tactical design activities and the final behaviour of the completed building. The greatest risk of making a mistake exists in the early design

stages, where designers tend to rely upon their own previous experience because of the pressures of time (Yamakawa, 1997).

Sinclair (2013) draws similar conclusions in considering Stage 2 (Concept Design) of the RIBA Plan of Work 2013, which he views as the most crucial stage of any project. Beyond Stage 2, the amount of information produced increases exponentially – the more information produced, the greater the amount of information that has to be amended in the event of change, with significant cost implications. Figure 5.5 (Sinclair, 2013) details this situation graphically.

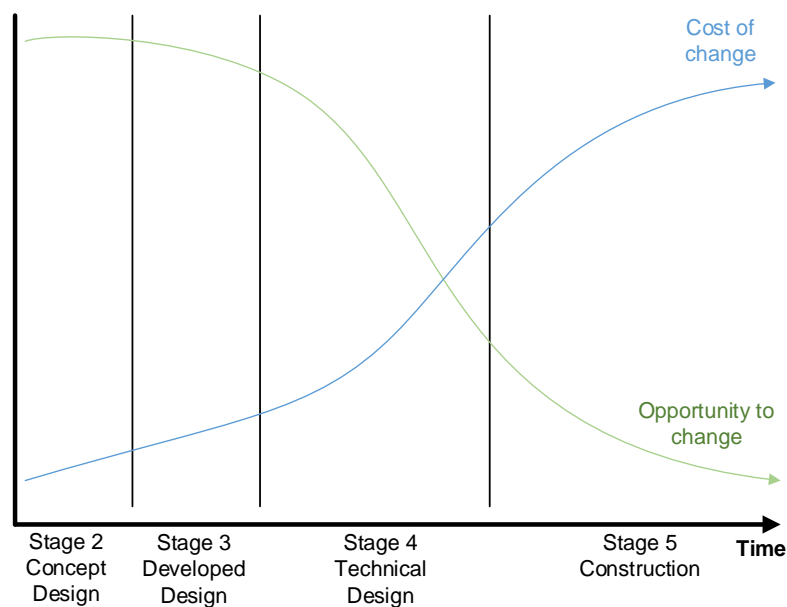


Figure 5.5 - The cost of change within the RIBA Plan of Work 2013

The situation outlined in Figure 5.5 would appear to be reflected in the problems discussed in Chapters 1 and 3, with costly changes to designs and the need for new planning applications at Building Regulations application submission stage resulting from a disjointed regulatory process.

Within BREEAM, timing of the engagement between the design team and BREEAM Assessor is essential, with best results being achieved where initial contact occurs no later than RIBA Stage 2 (Concept Design). Without this, the ability to cost effectively, optimise the building's environmental performance and achieve the desired development rating is compromised (BRE Global Ltd, 2014a). However, issues raised by some interviewees in

relation to clients attempting to trim costs within the design process at the concept design stage offer an insight into why current inefficient processes remain in place.

To protect the interests of the individuals involved, the following comments have not been made attributable to them. The comments highlight how changes made by clients following concept design by handing early design work over to another architect can both frustrate the architects concerned and have implications on later and more detailed design work:

“Very often you're getting a signature architect, a young imaginative firm, who do something really attractive and glossy but whose fees to do the detailed design would be too high, so they get... once you get planning permission you dump Richard Rogers or Norman Foster and then you go for some lesser firm just to do the detailed work. And it's a common pattern. It causes frustration.”

“Whether a client is trying to scrimp with their application, they just employ an architect, don't give them any technical back-up and you can argue whether the architect should be able to do all this stuff themselves – they're just leaving themselves exposed. I suppose the risk is it's cheaper to scrimp on the fees and pick up on the cock-ups later, or you've probably sold the site on. That's the other problem with this incredibly disjointed process and it seems to me, particularly in housing, more often than not the person who makes the planning applications isn't the person who does the Building Regulations application.”

It is difficult to foresee how the above issues might begin to be addressed and in the event that they could not, the handover of information pertaining to early discussions/negotiations with regulators would be obviously be important.

Other interviewees argued that although holistically, the earlier involvement of building control would be more conducive to the design process, problems associated with the existing competitive building control system would prove to be barriers to change. Accordingly, whilst the avoidance of both design and construction rework were viewed as more cost effective outcomes by interviewees, issues such as clients not normally seeing building control as adding value and the profession's public/private sector split raised concerns:

“You've got to have more joined-up thinking there right at the start and building control really need to be there at the start of it and you've got to get paid to do it.” Ant Wilson

“That's the difficulty, I think, in joining it all up because, obviously, the private sector are going to be saying, hang on a minute, you're giving the public sector a head-start.” David Clements

Ultimately, it would seem sensible to suggest that particularly in relation to larger, more complex projects, the ideal juncture for all key regulatory and design stakeholders to initiate interdisciplinary working practices would be at RIBA Stage 1 or 2. Generally, building control bodies should at least be consulted for comments by local planning authorities where planning applications are received at RIBA Stage 3 (Planning and Building Control Working Group, 2010). Recent research between 11 international partners reinforces the need for early collaboration on a European scale, concluding that early interdisciplinary work between key stakeholders from the concept design stage onwards is vital to the successful delivery of sustainable projects (Karlessi *et al.*, 2014). But what is interdisciplinarity? In increasingly recognising the potential of consistent interdisciplinary collaboration as part of this research, it seems prudent at this point to consider definitions of interdisciplinarity.

5.5 Definitions of Interdisciplinarity

Since the early 1990s, the burgeoning array of literature on interdisciplinarity has retained a strong North American bias (Chettiparamb, 2007) and accordingly, it is from the USA that definitions of interdisciplinarity must be drawn. Although the most widely cited definitions relate to study, research and learning, parallels can be drawn with field based scenarios, such as the need to collaborate to resolve the type of problems discussed in Chapters 1 and 3.

Klein (1990) states that interdisciplinarity has been described as a methodology, a concept, a process, a way of thinking, a philosophy and a reflexive ideology. Klein, together with Newell (1996, p. 393), went on to tender a widely cited definition of the nature of interdisciplinary study:

“An interdisciplinary study has a specific and substantive focus that is so broad or complex that it exceeds the scope of a single perspective; interdisciplinarity is characterised by an identifiable process that draws explicitly on disciplines for insights into that substantive focus; those insights must be integrated, and the objective of integration is instrumental and pragmatic.”

In 2005, the National Academy of Sciences in the USA offered this now well cited definition of interdisciplinary research (National Academy of Sciences, 2005, p. 2):

“Interdisciplinary research (IDR) is a mode of research by teams or individuals that integrates information, data, techniques, tools, perspectives, concepts, and/or theories from two or more disciplines or bodies of specialised knowledge to advance fundamental

understanding or to solve problems whose solutions are beyond the scope of a single discipline or area of research practice.”

Boix Mansilla (2010, p. 289) offers her definition of the goal of interdisciplinary learning within *The Oxford Handbook of Interdisciplinarity*, a major body of work on interdisciplinarity that took nearly 10 years to prepare, containing papers written by the world’s leading theorists on the subject:

“Interdisciplinary learning is a process by which individuals and groups integrate insights and modes of thinking from two or more disciplines or established fields to advance their fundamental or practical understanding of a subject that is beyond the scope of a single discipline. Interdisciplinary learners integrate information, data, tools, perspectives, concepts, and/or theories from 2 or more disciplines to craft products, explain phenomena or solve problems in ways not possible through a disciplinary approach.”

Yamakawa (1997) states that with only a limited number of interdisciplinary educational programmes for the built environment, it may not be easy to put the type of ideas outlined in the above quotations into practice. He also cites a widespread lack of understanding and long held disciplinary traditions as barriers to interdisciplinarity, expressing a hope that in time, educational initiatives will diminish some of these problems.

The important role to be played by interdisciplinary education in changing long held disciplinary traditions in the built environment may be attributed to a key term included in all of the above definitions. The process of *integrating* insights, concepts and models of thinking needs to be taught and encouraged over time – it is not a task that can be achieved overnight by simply asking disciplines to collaborate to solve complex problems (Repko, 2008b). This issue will be considered in more detail in Chapter 6.

According to Yamakawa (1997), to enable disciplinary integration in the built environment, an interdisciplinary framework is required to guide working processes, an issue which will now be explored.

5.6 An Interdisciplinary Framework for Regulators and Designers

Design has a key role to play in sustainability, with a designer’s reputation often being enhanced by introducing sustainable design features into their buildings. Whilst they are required to work within the brief of the client, architects also have an opportunity to influence

and inform the client (Pitt *et al.*, 2009). In this respect, the traditional hierarchical design structure outlined in Figure 5.6 (King, 1989) has acted as a barrier to interdisciplinary collaboration (Yamakawa, 1997).

The inherent risk in the arrangement shown in Figure 5.6 is that some members of the design team will not be involved in the process until a later stage, when a brief has already been formed (Yamakawa, 1997). If they are to retain their status as leaders of design innovation to meet the demands of sustainable development, it has been suggested that the architect's modern role is to act as an intermediary between regulators on the one hand, and the design team on the other (Fischer and Guy, 2009).

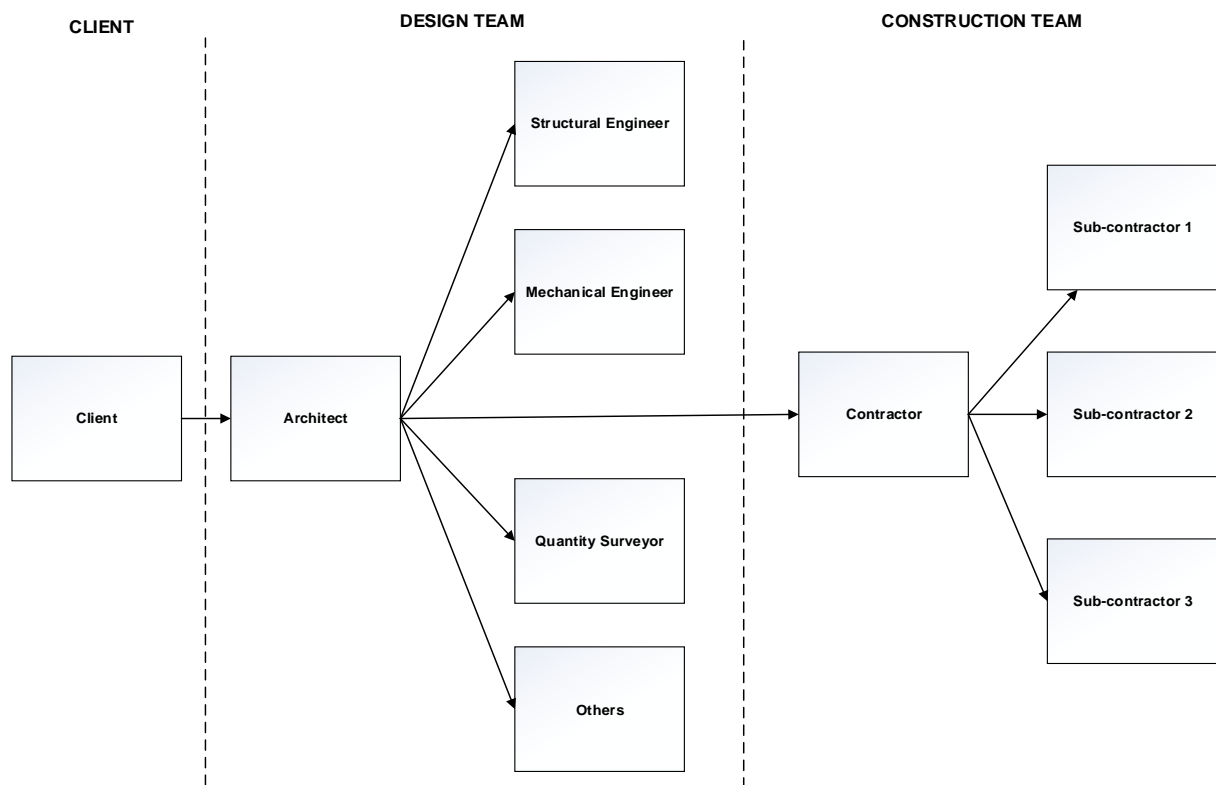


Figure 5.6 - Traditional project team arrangement

BREEAM, with its recognition of the RIBA Plan of Work 2013, would appear to have great potential as a template for statutory codes for domestic and commercial sustainable development. A standards framework such as BREEAM could support consistent interdisciplinary collaboration between planning and building control professionals by encouraging their collective involvement at appropriate stages of the design process. However, in addition, a more holistic collaborative approach between regulators and design teams is encouraged by BREEAM (Barlow, 2011).

Interdisciplinary working as a means to overcome complexity is a common theme running through research on sustainable development (Schweber and Haroglu, 2014; Lützkendorf and Lorenz, 2011; Ozorhon, 2013). Clarke (2013) states that interdisciplinary working is a highly effective way of understanding different roles within a project team, with the opportunity for changing knowledge, attitudes and behaviours. Going a step further, Yamakawa (1997) asserts that an interdisciplinary working methodology is now an essential characteristic of building design as modern buildings have become increasingly complex.

In keeping with their views on the need for early collaboration in the design process, interviewees broadly advocated interdisciplinarity as a means of overcoming increasing complexity within the built environment:

“Whether they're going to be the exciting challenges of how we adapt and adopt new technologies to produce far more efficient and effective elements of the built environment, or whether they're on the problem side, the fact is that the drivers need us to put our collective heads together.” Andrew Edkins

“There's just a huge range of specialisms needed to support that wide-ranging knowledge and of course there's a lot of information which is being assembled as well about the built environment. So you've got both of those things requiring very broad-ranging skills to cope.” Sebastian Macmillan

The increasing potential of BIM to support interdisciplinary collaboration is now recognised by the RIBA Plan of Work 2013 (Royal Institute of British Architects, 2013). Accordingly, in recognising the potential of interdisciplinarity to help overcome the complexity associated with sustainable development, the technological advances being made in the field of BIM would appear worthy of consideration.

5.7 The Potential of BIM as an Interdisciplinary Support Tool

The Government's Construction Strategy (Cabinet Office, 2011a) was introduced with the intention of requiring the use of collaborative 3D BIM (incorporating digital project and asset information) on its projects by 2016. Together with industry, the UK Government set out a four year programme to reduce capital expenditure and the carbon burden from the construction and operation of the built environment by 20% through a modernisation of the sector (Underwood and Ayoade, 2015).

Projects utilise BIM at one of four levels, with the simplest, Level 0 (L0), consisting of the use of 2D CAD files for the production of information, and the most complex, Level 3 (L3), involving the production of 3D models. In the UK, developers of the most advanced L3 models are beginning to examine the inclusion of regulatory rules engines that allow automated checking facilities for Building Regulations compliance (Royal Institute of British Architects, 2013). The author has had involvement in the development of a Building Regulations rules engine as part of the investigation of such a BIM L3 tool named RegBIM (Cardiff University, 2012). However, funded by the Singapore Ministry of National Development, a system capable of checking 2D drawings with a view to re-engineering fragmented processes (BP-Expert) was in use as far back as 1995 (Malsane *et al.*, 2015). BP-Expert was replaced by the ‘e-PlanCheck’ automated code-checking tool in 2000 as part of the Construction and Real Estate NETwork (CORENET) project, which has since been used as the basis for pilot projects in Norway and the USA.

Whilst advocating BIM as a potential means of promoting interdisciplinary collaboration not only between design team members, but also between design teams and planning/building control practitioners, interviewees highlighted a number of problems with its development. Again, due to their critical nature, the following comments are anonymised:

“My understanding at the moment is there's a bit of a battle on as to who controls BIM, which system, which model, which methodology do you use... different professions which are actually vying to control BIM, because they see it as a control process, where they see it as making money for themselves.”

“My feeling is that clients want to spend the least amount of money possible before they get permission. So you've got that sort of tension and that seems to me one of the massive pitfalls of this BIM revolution, because everyone talks about, you know, putting more effort in early in order to be more efficient.”

“I'm a BIM fan but it's been hijacked by contractors and it doesn't work if it's hijacked by contractors. In my view, if you followed BIM and you've got everything on line in one place in a model, there is no role for a quantity surveyor. I think the other one is, you hand over something that you've shown to work. And then the contractor should install what is given to him. He doesn't want to do that. He makes his money through variation orders. For BIM to work properly, you cut out the middleman... put more of the fee up-front and you save it on the commissioning and the end bit, because you know it's going to work, you haven't got people putting all these claims and counter-claims in for extra bits of work.”

As well as highlighting current problems associated with the current ownership and version control of BIM, the above comments again touch upon the barriers to early collaboration between the design and regulatory professions. The latter comment offers suggestions as to the role that BIM could play in ensuring that the value of upfront collaboration is recognised and paid for by clients, rather than money being spent on wasteful processes at a later point in the development process. But having considered how best to encourage consistent interdisciplinary fieldwork, what sustainability categories should regulators and design teams be asked to address together?

5.8 Sustainability Categories

5.8.1 The Current Situation

In Chapter 3, Tables 3.1 and 3.2 set out the broad and complex array of sustainability categories and associated issues addressed by regulators and design teams. In relation to the current statutory framework, Chapter 3 detailed how sustainability categories and issues are spread in a disparate manner throughout many guidance, policy and second tier documents, resulting in confusing and frustrating experiences for stakeholders.

Tables 3.1 and 3.2 have also demonstrated that although broadly similar, there are differences between the sustainability categories dealt with by the different statutory and voluntary frameworks. Building upon existing knowledge, including the recommendations made by the Housing Standards Review Challenge Panel (2013), this research has examined the viability of forming statutory domestic and commercial codes for sustainable development. When considering the distinct differences between some performance standards for new domestic and commercial buildings, this approach would appear to be well founded. For example, Approved Documents B (Fire Safety), L (Conservation of Fuel & Power) and M (Access to and Use of Buildings) are all split across separate domestic and commercial guides.

In keeping with the examination of the potential use of BREEAM as a template for the simplification of guidance and policy and as an interdisciplinary design framework, what follows is an analysis of the sustainability categories that regulators and design teams might reasonably be required to address. This analysis begins by considering the potential effect of abolishing the CSH, paying particular attention throughout to issues which if not considered collectively within the design process, have the potential to become costly ‘*show stoppers*’ (Penfold, 2010).

5.8.2 Potential Effect of Removing the Code for Sustainable Homes

Although the CSH only covers voluntary standards relating to new housing and not the commercial sector, as alluded to by the Housing Standards Review Challenge Panel (2013), it is likely that its removal will set the tone for policy for all new development. As such, optional requirements may eventually be imposed through local plans for domestic *and* commercial development as a means of rationalising technical guidance and policy in years to come. In relation to the winding down of the CSH, the Housing Standards Review Challenge Panel (2013, p.5) express the following concerns:

“Not all the housing standards have been fully considered and this is acknowledged by the Review. For example, those governing daylight, sunlight, overheating and materials require further investigation, and it is not clear how these various requirements will be accommodated in the new framework, or referred to in other regimes such as planning or deleted altogether.”

The importance of addressing issues such as daylight, overheating and materials as part of a framework for sustainable development stems back to recommendations made by the Sustainable Buildings Task Group (2004). Since then, research has continued to stress the importance of these elements to any valid and robust sustainability standards matrix, making their oversight by the Government surprising.

As detailed in Chapter 3, daylighting design and glazing technology are becoming challenging areas, with guidance for designers being poor or in some instances, non-existent. Although daylighting is included as a *Health and Wellbeing* issue under the CSH and BREEAM, neither the Building Regulations nor the National Planning Policy Framework address daylighting levels in new buildings. The omission from statutory guidance and policy is particularly surprising when considering the well publicised research of the World Green Building Council (2014), which concludes that adequate daylighting is crucial for building occupant satisfaction, health and wellbeing.

In relation to overheating, the Committee on Climate Change (2014) claim that buildings are at risk of overheating and urge the Government to introduce long-term mitigation policies (2015). However, two thirds of the 75 housing providers questioned as part of a survey by Zero Carbon Hub (2015) stated that they have had to deal with overheating issues at some point over the previous five years. This would seem to suggest that overheating has already

become a significant problem that needs to be addressed. Smith and Levermore (2008) identify the need for the consideration of building orientation as a means to improve sustainability and the quality of life. East–west oriented streets suffer from a prolonged period of solar exposure by comparison with north–south oriented streets during the summer. This is a critical factor affecting thermal comfort, as direct solar radiation is capable of elevating the radiant temperature by as much as 25°C, a factor rarely accounted for as part of building designs regulated through the current statutory standards framework (Watkins *et al.*, 2007).

When considering the matter of the responsible sourcing of materials, there would appear to be a contradiction between its encouragement through the National Planning Policy Framework (Department for Communities and Local Government, 2012b) and its neglect as part of winding down the CSH. Manufacturers of masonry materials, who have in the past been criticised for the amount of energy embodied in their products, have made great strides in improving their production techniques to meet CSH and BREEAM standards (Key, 2009). Having heard representations from these manufacturers as part of an examination of the potential effects of winding down the CSH, the cross party House of Commons Environmental Audit Committee (2013, p. 16) conclude that:

“Materials make an ongoing contribution to sustainability. For example, a well-insulated home will contribute to reducing energy demand throughout its lifetime. In addition, a lack of regulated standards risks inhibiting green growth and green exports. DCLG must maintain and develop the CSH assessment standard on sustainable construction materials.”

Although BREEAM considers the impacts of embodied energy within materials, it is interesting to note that there have been calls from environmentally responsible manufacturers to increase the overall weighting of the Materials category as part of its scoring system (UK Green Building Council, 2010). Ultimately, there would appear to be arguments for not only retaining sustainability issues such as daylight, overheating and materials as part of voluntary standards such as the CSH, but of for making them part of the type of potential standards matrix that will now be considered. This is a view that was reinforced unanimously by interviewees.

5.8.3 A Comparison of Statutory and BREEAM Sustainability Categories

As discussed at the beginning of this chapter, it is not the intention of this research to offer a detailed specification of potential improvements to all technical requirements of policy and

guidance linked with sustainable development. Instead, the intention is to set out an overarching framework within which the sustainability categories and associated issues detailed in Tables 3.1 and 3.2 might sit and be reasonably allocated between the planning and building control professions.

It has been established that following over 20 years of development and success on an international basis as a leading design and assessment method for commercial sustainable development (BRE Global Ltd, 2014a; Schweber and Haroglu, 2014), BREEAM is worthy of consideration as a template for changes to statutory guidance and policy. Therefore, it would seem worthwhile at this point to offer a visual comparison of current statutory guidance/policy covering sustainability categories, alongside the categories covered by BREEAM UK New Construction. Bringing together an updated version of Table 3.1 and the BREEAM categories/issues detailed in Table 3.2, Table 5.1 offers this comparison.

Sustainability Category	Building Regulations Approved Documents	Planning Policy Documents	BREEAM UK New Construction Categories
1. Safety – structure, fire, hygiene, combustion appliances/fuel storage, glazing/protection from falling, electrical (domestic only).	A, B, G, J, K, P		
2. Site preparation & contaminated land	C	NPPF	Pollution
3. Toxic substances	D	Local policy	
4. Drainage & waste disposal	H	Local policy	Land Use and Ecology; Pollution (surface water run-off)
5. Access to and use of land/buildings	M	Local policy	Transport
6. Energy – standards	L	Local Policy	Energy
7. Materials and workmanship	Regulation 7	Local policy	Materials
8. Noise	E	NPPF	Health and Wellbeing; Pollution
9. Indoor comfort & health, overheating control	F	Local policy	
10. Group heating, energy networks	L	Local policy	Energy
11. Renewable energy	L	NPPF	
12. Water use	G	Local policy	Water
13. Waste, solid		PPS 10	Waste
14. Flood risk	H	NPPF	Pollution; Waste
15. Reuse of land and buildings		NPPF	Land Use and Ecology
16. Air pollution		NPPF	Pollution
17. Microclimate		Local policy	Energy
18. E-enabling/future proofing		Local policy	
19. Security	Q	Local policy	
20. Private and public open space		NPPF	Transport
21. Biodiversity and natural environment		NPPF	Land Use and Ecology
22. Construction site practices		Local policy	Management
23. Transport		NPPF	Transport
24. Innovation			Innovation

Table 5.1 - Comparison of statutory guidance/policy and BREEAM categories

The first thing that stands out in Table 5.1 is that under Category 1, the matters listed, which are primarily health and safety related, are limited to inclusion within the Building Regulations. However, as considered by Faber Maunsell and Steemers (2010), there are arguments for at least some of these health and safety categories to be included in a standards framework for sustainable development, particularly in relation to *structural safety* and *fire safety*.

When considering the implications of designing sustainable reinforced concrete structures by minimising the energy embodied in the materials, these aspects *structural safety* alone would seem to make it worthy of consideration as a category within a standards framework (Hong *et al.*, 2012; Yeo and Gabbai, 2011). As detailed in Chapter 3, *fire safety* issues can become costly show stoppers when changes to designs required as part of Building Regulations submissions result in the need for new planning applications (AECOM, 2012). This would appear to be recognised by responses to the BREEAM Consultation gathered by UK Green Building Council (2010), which suggested that sustainability aspects of fire safety become part of the voluntary scheme. Health and safety issues currently covered by the Building Regulations might reasonably sit within the BREEAM category of *Health and Wellbeing*, which as detailed previously in Table 3.2, currently covers limited safety issues. Alternatively, these issues could sit under a new and separate category of *Safety*.

In terms of the other issues detailed under Category 1 of Table 5.1, *hygiene* could also reasonably be considered as part of the BREEAM category of Health and Wellbeing. *Combustion appliances* could be considered as part of energy (Category 6), with *fuel storage* (i.e. the storage of heating oil) coming under the BREEAM category of Pollution.

Electrical safety could be included under the BREEAM category of Management, which covers building commissioning and handover. Electrical safety is a category only relevant to domestic applications under the Building Regulations, with works primarily being self-certified by individuals/companies registered under Competent Persons Schemes (CPS). Accordingly, building control's involvement in electrical safety generally relates to auditing certification received from the relevant CPS for the completed work.

Another matter that catches the eye when viewing Table 5.1 is that the issue of *e-enablement*, listed by Faber Maunsell and Steemers (2010) as a sustainability issue in Table 3.1, is not

covered by any statutory guidance/policy or BREEAM. As is demonstrated by Brand (1994), the future proofing of buildings during their design by at least considering the need for/ease of later adaptation is a means of reducing the likelihood of subsequent resource intensive alterations. As such, it would again seem sensible to include e-enablement/future proofing as an issue to be considered within a standards framework for sustainable development, a point recently recognised by the BRE (BRE, 2014).

Innovation, shown as Category 24, is only included as part of the BREEAM UK New Construction scheme. Innovation credits are only awarded in scenarios where ‘Exemplary Level Criteria’ are achieved, rewarding buildings that go beyond best practice in terms of a particular aspect of sustainability. The recognition and encouragement of innovation in this manner is not part of the current statutory regulatory framework for sustainable development.

The final standout discussion point resulting from Table 5.1 is that of the potential of the majority of Categories 2 to 14 being addressed by both building control surveyors and planning officers. This duplication of duties and resulting confusion among stakeholders has previously been discussed in Chapter 3 and will now be considered in further detail.

5.8.4 Reasonable Allocation of Regulatory Sustainability Responsibilities

Outlined in Chapter 3, the problems resulting from increasing technical complexity within the regulatory framework can be linked to the disparate nature of a broad range of guidance and policy, along with the inappropriate timing of stakeholder involvement in the design process. Consequently, this is resulting in a disjointed/confusing array of planning and building control requirements, which often lead to the duplication of information presented to the regulatory professions (AECOM, 2012; Penfold, 2010).

The Planning and Building Control Working Group (2010) examined ways to improve the connection between the planning and building control professions, viewing them as ‘*two sides of the same coin*’. In taking on board the views of a broad cross section of stakeholders in the development consent process, the Working Group state that there is an industry view that the setting of standards needs to be separated from the commercial/voluntary market in laying out assessment techniques and the training needed to support them. Accordingly, the study concludes that a consolidation of standards should identify the shared objectives of planning and building control around sustainability, with clearly defined remits.

Research by the Sustainable Buildings Task Group (2004), Faber Maunsell and Steemers (2010), AECOM (2012) and the Housing Standards Review Challenge Panel (2013) recommends that sustainability issues be divided up between planning and building control. However, there are complications associated with any attempts to introduce such change.

A good example of the task at hand is how best to co-ordinate energy efficiency issues over a major development. In this respect, Faber Maunsell and Steemers (2010) suggest that consideration of renewable energy for a whole site should sit within the Building Regulations, moving away from the principle of building control dealing only with individual buildings. This suggestion seems to ignore the fact that the aspect/orientation of a building, dealt with by planning, has an impact on its energy efficiency in relation to passive solar gain and material choice (Sustainable Buildings Task Group, 2004; Smith and Levermore, 2008). Accordingly, although clarity is needed in relation to regulatory sustainability responsibilities, it is likely that many of the issues outlined in Chapter 3 will only be resolved successfully through collective consideration, beginning at RIBA Stage 2 at the latest.

Although there was disagreement among interviewees as to how sustainability responsibilities should be shared out between the planning and building control professionals, particularly in relation to energy conservation, all who expressed views were in agreement that clarity is required.

Adapted from Faber Maunsell and Steemers (2010) and BREEAM (BRE Global Ltd, 2014a), and following consultation with interviewees, Table 5.2 offers an insight into how the relevant sustainability categories discussed above might be allocated between the planning and building control professions. Under Sustainability Category 7 (Materials), account has also been taken of the consideration of design for eventual deconstruction and potential reuse, an issue which has been the subject of increasing interest and research in recent years (Key, 2009).

Sustainability Category	Building Control	Planning
1. Site preparation & contaminated land	Resistance to moisture	Treatment of land
2. Drainage	Building specific	Site/locality specific
3. Access to and use of land/buildings for all	In and around buildings	Local requirements
4. Energy (performance, local energy networks, renewable energy)	Performance related	Aspect; site specific issues
5. Health and wellbeing	Performance related	Aspect; space standards
6. Pollution	Noise within building; fuel storage	External noise, night time light, air quality
7. Materials	Quality; thermal performance; thermal mass; responsible sourcing; durability; design for reuse	Visual aspects
8. Water use	Performance/equipment	Local requirements
9. Waste	Storage for collection	Recycling; disposal
10. Management	Site practices; commissioning	Life cycle impacts
11. Reuse of land and buildings		
12. Private and public open space		
13. Biodiversity and natural environment		
14. Flood risk		
15. Transport		
16. Safety (fire, structure, hygiene, combustion appliances, glazing, protection from falling, electrical)		
17. Toxic substances		
18. Security		
19. Future proofing/e-enabling of buildings		
20. Innovation	Encourage	Encourage

Key: ■ Shared responsibility ■ Primary responsibility

Table 5.2 - Allocation of sustainability categories

Table 5.2 offers only a simple overview of the matters considered by the planning and building control professions – the sustainability categories shown are merely umbrellas, under which a myriad of complex and often interrelated technical issues sit. Issues are addressed by referencing relevant Building Regulations guidance, planning policy documents and second tier reports/standards referenced within guidance/policy (AECOM, 2012). Many of these documents are also referenced by the BREEAM UK New Construction Manual (BRE Global Ltd, 2014a), although the BREEAM Manual offers the distinct advantage of being a single primary reference for sustainable development standards.

In considering the potential for the consolidation of regulatory standards, a number of interviewees recognised the advantage of a single primary reference such as a code manual like BREEAM. Adrian Penfold believed that BREEAM has proven itself as a good design and standards tool, which if mirrored by the everyday regulatory framework, could promote a more collaborative and standardised approach to development consents. Echoing these sentiments, David Clements stated that:

“BREEAM’s done an excellent job in the commercial side of things and they’re looking over the residential as well but of course what we’re really aiming at is sustainability, isn’t it? If BREEAM is accepted as the measure of sustainability, then it should be consistent across the board; planning, building regulations, the whole thing and also easily accessible.”

Alison Crompton and Bill Gething were in agreement that the use of hyperlinks within electronic copies of a single standards manual could make the process of accessing referenced second tier documents far easier. In the face of challenges set by the need to reference a broad range of guidance and policy documents, a number of regulatory bodies and design teams have developed checklists to assist them in auditing and developing applications for consents.

5.8.5 *The Use of Sustainability Checklists*

As part of their drive for a Code of Sustainable Building, the Sustainable Buildings Task Group (2004) recommended that the Government produce a best practice checklist for delivering sustainable buildings, highlighting where Building Regulations and the planning system complement each other. In doing so, the Task Group paid particular reference to the *Sustainable checklist for developments* published by the BRE (Brownhill and Rao, 2002), suggesting that the wide range of guidance on sustainable development be brought together and cross referenced. Like the Code of Sustainable Building advocated by the Sustainable Buildings Task Group (2004), such a checklist did not emerge, leaving design teams, developers and regulatory bodies in a position of having to develop their own.

Where developed/used, checklists, along with subsidiary checklists for particular aspects of design, have served to help interdisciplinary design teams to ensure that significant points are not overlooked during the development of a project (Yamakawa, 1997). Rydin *et al.* (2007) found checklists to be popular among London planning authorities in translating complex sustainability knowledge into a time-efficient and usable form. Their research also discovered a tension between those favouring a Pan-London (or even national) checklist and those favouring one contextualised to their local conditions. The former was seen as setting a level playing field for developers and providing clarity and certainty, with clear links to the Building Regulations being viewed as an essential component. This issue was raised by two interviewees, who stated that in their experience, although planning authorities have viewed checklists as being a helpful scheme vetting tool, they have led to the setting of inconsistent standards across local boundaries.

Stakeholders participating in the research carried out by AECOM (2012) expressed a desire to see Approved Documents and second tier references intrinsically linked. More recently, the Housing Standards Review Challenge Panel (2013) have suggested that an online portal be created, containing a single set of regulatory guidance for all stakeholders in the development consent process, with highlighted interconnections between regulations, guidance and reports.

The fact that the author has produced domestic and commercial Building Regulations checklists that are used as a training aid by LABC and by a number of building control bodies in England was discussed with interviewees. The checklists are cross referenced to relevant sections of Approved Documents and contain hyperlinks to second tier references. An extract of these checklists, covering ventilation requirements for new offices, is shown in Figure 5.7. Underlined references represent hyperlinks that when clicked, take the user to an electronic copy of each document, whilst the paragraph numbers, tables, diagrams and appendices relate to those contained in Approved Document F.

ITEM	REFERENCES	COMMENTS	COMPLIANT?		
			Yes	No	N/A
<u>NEW OFFICES</u> (F1)					
Ventilation strategy in line with (a) above, with air supply rate of 10 l/s	6.9 – 6.13, Table 6.1a & 6.1b, CIBSE Guide A				
Ventilation strategy in line with (b) above	6.14 – 6.16, CIBSE Manual AM 10 , CIBSE Manual AM 13 , CIBSE Guide A & CIBSE Guide B:2005				
Ventilation strategy in line with (c) above	6.17, Table 6.3, Workplace (Health, Safety, Welfare) Regulations 1992 & HSE INDG244				
Ventilation strategy in line with (d) above	Appendix A				
Measures taken to avoid legionella contamination in cooling towers, hot water systems in large buildings, spa pools, etc.	6.4, CIBSE TM13 , Legionnaires' disease: the control of legionella bacteria in water systems & BSRIA AG19/2000, AG20/2000 & AG21/2000				
Suitable access provided for maintenance to plant	6.6 - 6.7 & Diagram 5. Defence Works Functional Standard, Design & Maintenance Guide 08				
Siting of air inlets to protect fresh air supply from contaminants	6.3, Appendix D, CIBSE Ventilation Hygiene Toolkit & HVCA TR/19				

Figure 5.7 - Extract from Building Regulations application vetting checklist

There was broad agreement among interviewees that such a tool applied to the development consent process as a whole, containing a nationally applied set of standards from which local planning authorities could choose optional requirements, could be a useful tool. However, it was also agreed that the administration of checklists interlinked to relevant guidance would need to be carried out by a central body involved in the setting and management of sustainability standards.

Checklists that complement statutory codes for sustainable development, clearly linking all regulatory requirements, could help to simplify the consent process and support interdisciplinary working between design, development and regulatory stakeholders. But to be successful on both counts (i.e. the administration of codes and checklists), it seems clear that the formation of a body to act as a trusted and forward thinking ‘sustainability standards gatekeeper’ would be vital (Ross, 2012).

5.9 Sustainability Standards Gatekeeper

5.9.1 The Current Situation

As indicated in Chapter 3, there would appear to be a lack of strategic oversight of regulation for the built environment within Government, which has the effect of continuously compounding a complex and confusing regulatory environment (Penfold, 2010). Greenwood (2010, p. 74) sums up the effect that the short term nature of the political election cycle has on regulatory policy as follows:

“The relatively short term nature of ministerial appointments, it is often suggested (and as indicated by prior research on the policy process), works against the establishment of a clear long term policy strategy.”

All interviewees with an opinion on the current setting of sustainability standards expressed frustration with the lack of joined up thinking and inconsistency that results from political election cycles, with the following anonymised comments offering only a flavour of strong views on the issue:

“The Government is a mixture of all sorts of people who, in the end, have got to make the books balance, but also have got to make sure they get re-election, and re-election is a critical thing.”

“If we stop mucking about, once people make a decision about a policy, we’re pretty good at getting on and solving problems in order to meet the requirements, so I think it’s a bit pathetic of the Government to have backed down [on green standards]. If they just hold their nerve a bit everything will be alright.”

“The regulations are never going to be so challenging because of the strength of the different lobby groups, which is why I always feel it’s going to be a minimum standard. You can keep raising the bar but it’s always going to be a minimum standard and that’s why we’re not good in this country, compared to Europe.”

“I think the tinkering about at the edges, and this is typical of the way Government approaches, because all governments work on what can be achieved in one parliament, that’s all they’re interested in, four or five-year model. They don’t look at the long term... when you keep tinkering around the edges you end up with a hybrid monster if you’re not careful.”

Existing research and the views of the experts interviewed as part of this study suggest that stakeholders in the development consent system are unhappy with the manner in which politics continues to impact upon sustainability standards that should be designed with long term societal benefits in mind. But as a politically charged issue of national importance, what are the alternatives?

5.9.2 Who Should Set and Manage Standards?

Whilst voicing opinion that regulatory policy needs to be more coherent and predictable, research has differed in opinion as to who should set and manage performance standards for new development. In suggesting the introduction of a Code for Sustainable Buildings for commercial buildings, the UK Green Building Council (2009) held out the view that standards should be owned by the Government but represent a shared vision with the industry. This, they claimed, would promote collaborative working, both across the construction industry and in partnership with the Government.

Reminiscent of the Government’s move to devolve the setting of interest rates through the Bank of England Act 1998, the Sustainable Buildings Task Group (2004) suggested that sustainability standards should be set independently. The Task Group recommended that the Government and industry set up a joint venture body to develop, establish, manage and maintain sustainability standards. In this respect, reports on standards issues by cross party groups such as the All Party Group for Excellence in the Built Environment (2013) and the House of Commons Environmental Audit Committee (2013) were seen to be objective by

interviewees. However, whilst stating a preference for the setting and management of standards by a cross party group, some experts were wary of the sway a sitting government may still hold as part of such an arrangement, as indicated by the following anonymised comments:

“The only thing is, how much clout does somebody who’s not absolutely in government have? And they will... you’ll have ten conclusions from that cross-party group and, if nine are negative and one is positive, the Government will shout the positive one from the rooftops and ignore the other nine.”

“If they were the people who were implementing them, then the voices which are raised against Government would be raised against them instead... the idea that there is some kind of magic group of outside people who could come to a better decision is not necessarily wrong but it’s a little bit starry-eyed, maybe.”

A commitment by the UK's political leaders to work together to combat climate change, whatever the result of the 2015 general election, appeared to offer an indication that the setting of performance standards by a cross party group may become a politically driven reality (Harrabin, 2015). However, the subsequent postponement of zero carbon targets for new buildings by the newly elected Conservative Government in July 2015 (HM Treasury, 2015) would seem to reinforce the need for a cross party standards group to reduce the likelihood of continuing fluctuations in policy making.

In an ideal world, one of the main functions of an objective sustainability standards gatekeeper would be to provide all stakeholders with a clear, coherent and credible long-term route map towards sustainable development (Lowe and Oreszczyn, 2008). Change is generally viewed positively by stakeholders as long as there is a forecast of how and when standards will be ramped up in the future and standards are applied consistently to all developments in all areas (Faber Maunsell and Steemers, 2010).

5.9.3 How Often Should Standards Be Reviewed?

Recognising the need for a dynamic regulatory system with a continuous improvement of standards over time, the Sustainable Buildings Task Group (2004) set out a model through which future requirements could be displayed as part of a Code for Sustainable Building (see Figure 5.8).

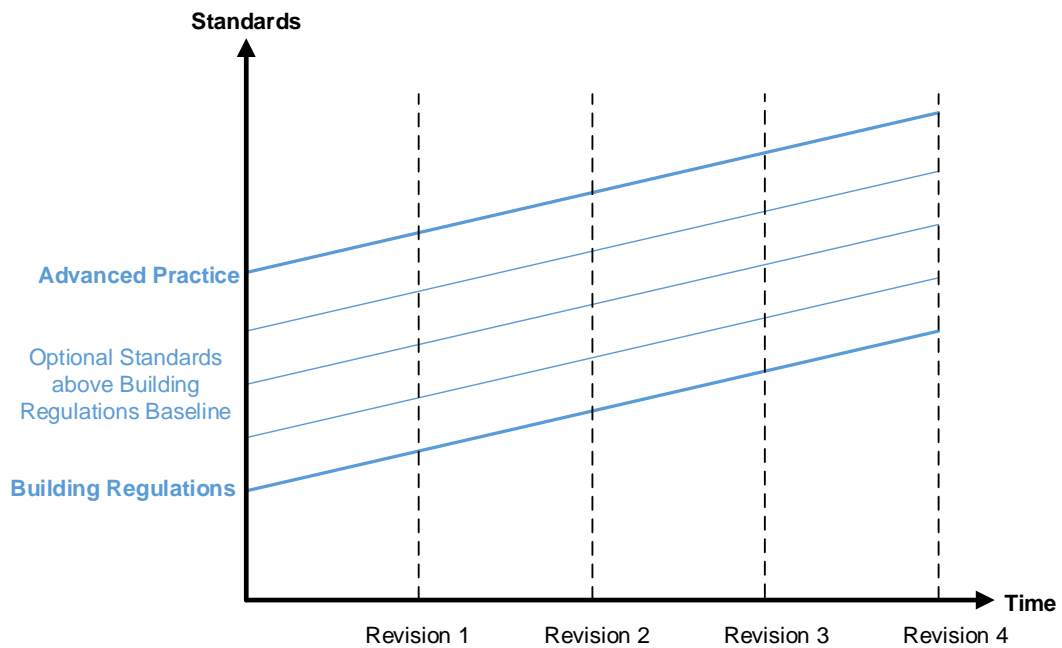


Figure 5.8 - Charting of improving sustainability standards

Interviewees Adrian Penfold and David Clements stressed that demonstrating standards in advance in the manner set out in Figure 5.8 and subsequently achieved by the CSH could act as a ladder of continuous improvement and a leveller of standards nationally. As such, it could inform stakeholders of the required pace of change in the environmental performance of buildings and give developers the opportunity to innovate above the baseline of the Building Regulations (Sustainable Buildings Task Group, 2004).

The Sustainable Buildings Task Group do not indicate suggested timescales between the standards revisions shown in Figure 5.8 in their report. A timescales of 3 years has traditionally been favoured between revisions to Building Regulations (Department for Communities and Local Government, 2009a). Interviewees' opinions on this issue differed, with recommended periods between standards reviews ranging between three and five years, although there was a clear preference for long term strategies set out over a ten-year period, mirroring the CSH strategy. Whilst favouring a five-year period between reviews, Ant Wilson highlighted the barrier that European directives might present in this respect:

“What you need is the ten-year plan, or now you’ve got the 2025 vision of where buildings need to go, so you’ve got a long-term objective of this is where we want to achieve it...if we said we want five years between them [standards reviews], that gives a bit more stability. But Europe seems to work on the three-year process.”

In keeping with the European process detailed by Ant Wilson, Sir Andrew Stunell made a strong case for retaining a three-year review cycle, arguing that this has been proven to enable sufficient stakeholder input as part of consultation processes.

Regardless of the periods between standards reviews, setting out standards in advance, as shown in Figure 5.8, would create a further issue for regulatory practitioners. Planning and building control professionals would be required to possess skills and knowledge of future standards in addition to those currently in force, an issue applied to the built environment as a whole by Alison Crompton:

“Most people want to do a big change, rather than, you know, a ten-year change, rather than a three-year small change because, every time they get used to one thing they’ve got to change it again, and as I say, there’s this repeated thing about you haven’t got enough experience, we haven’t got enough experience to build a 2006 until well into 2010.”

The Coalition Government diluted the definition of *zero carbon* for new homes by removing the requirement to account for energy used to power appliances as part of a building’s energy rating (HM Treasury, 2011). Subsequently, the newly elected Conservative Government postponed up and coming zero carbon targets for new dwellings and commercial buildings in July 2015 as part of an ‘economic productivity drive’ (HM Treasury, 2015). However, future revisions of standards are likely to reintroduce zero carbon requirements and as technologies improve, moving towards a position where it is necessary for new buildings to be carbon neutral, making energy contributions to the grid (Pilkington *et al.*, 2011).

Setting performance standards out in the manner outlined in Figure 5.8 could also give local authorities the opportunity to label the sustainability credentials of completed buildings. In doing so, the lack of available empirical data identified by research attempting to map the extent and nature of sustainable development in England might be addressed.

5.10 The Labelling of Sustainability Performance

5.10.1 The Current Situation

Having successfully gone through the current development consent process, a completed building will be deemed to have met minimum statutory building performance standards. As such, its standing in the wider built environment in terms of level of sustainability is not

marked out, making it difficult to ascertain how much progress is being made in this respect on a national basis (Williams and Lindsay, 2007).

Many developers are still reluctant to invest in sustainable technology, whether it is more insulation, greener materials, controlled ventilation systems or renewable energy sources (Fischer, 2010). As detailed in Chapter 3, volume house builders in particular favour bare-minimum solutions with regard to environmental performance. They will then sell their products to individuals who will be unaware of or unconcerned with the energy performance of their new property. Once the sale has taken place, the higher costs of inefficient dwellings are borne by end users (Fischer and Guy, 2009).

The Housing Standards Review Challenge Panel (2013) recognise the pattern of volume house builders lobbying for (and building to) bare-minimum environmental performance standards as a continuing barrier to sustainable development. Accordingly, they advocate the introduction of the consumer labelling of dwellings to better inform the buying public and as a result, encourage higher sustainability standards. Interviewees were supportive of this view, although a number expressed concerns that even if a model such as BREEAM were used as a template to rate development, the amount and type of information required to achieve recognition should be revisited. In this respect, BREEAM was viewed as being onerous.

The issue of the avoidance of sustainability standards within the volume house building sector has also been recognised politically. In March 2012 at the Ecobuild conference in London, Andrew Stunell, Minister with responsibility for the Building Regulations, labelled new UK housing as ‘a joke’ due to the industry’s failure to build houses that perform to their design specifications (Gardiner, 2012b). Stunell has since suggested that regulators have been kept on the defensive by volume house builders lobbying for deregulation, with performance standards rising too slowly as a result (Stunell, 2014). When coupling Stunell’s views with news of the profits of 8 national house builders rising by 161% in 2011 (Gardiner, 2012a), it seems clear that even during an economic crisis, care must be taken to balance regulatory standards with the claims of lobbyists.

However, although the volume house building sector would appear to offer a poor example in terms of its failure to recognise the benefits of sustainable development, there is evidence to suggest that this is far from the norm within the built environment as a whole in England.

5.10.2 Recognition of the Benefits of Commercial Sustainable Development

The research of Williams and Lindsay (2007) and Fischer (2010) suggests that in addition to the issues identified above in relation to the volume house building sector, developers in the commercial sector have remained unambitious in terms of their sustainability credentials. However, in comparison to the housing sector, there are some notable exceptions, with evidence of clients and their design teams striving to achieve commercial developments that maximise sustainability features in order to benefit end users. This may be attributed to the fact that in many cases, commercial developments end up being occupied by the organisation commissioning them and not sold on to an end user who has not been involved in their specification (Lützkendorf and Lorenz, 2005).

Major corporations in particular are striving for more sustainable buildings for their employees (Lützkendorf and Lorenz, 2011; St Lawrence, 2004). Improved corporate image and correlations between sustainable design features (natural lighting, thermal comfort, etc.) and reduced illness/increased productivity among employees would appear to be the main drivers in this respect (UK Green Building Council, 2009; World Green Building Council, 2014). Sustainable commercial developments have also been shown to attract higher rents and prices and reduce operational and maintenance costs (Pitt *et al.*, 2009).

Architects interviewed by Fischer and Guy (2009) and Clarke (2013) remarked that they specify buildings to higher energy-efficiency standards than regulations require as a matter of routine in order to foster their practice's sustainability credentials – building to minimum requirements was seen as insufficient. Clarke (2013) found that the adoption of the BREEAM rating system generally encouraged design studies to be carried out to a greater level of detail than they would otherwise have been. In this sense, the BREEAM scoring matrix was seen as a driver to think creatively about the sustainable design of buildings.

The theme of best practice in sustainable development being prevalent within the commercial sector was also common within the views expressed by interviewees. Adrian Penfold stated that his employer, British Land, have insisted on the achievement of a BREEAM excellent rating for all office developments for around eight years. Bill Gething, a renowned expert in the green design of both domestic and commercial development, stressed the importance of the role played by BREEAM in setting the aspirations of commercial clients:

“Commercial developers, they seem to value the sort of softer side of the BREEAM system, you know. I mean, things like view, and they actually recognise that you’re sort of compelled to design a better building and it’s not the technical issues that make the difference in terms of rent, it’s quality. It’s quality of environment, quality of construction and normally someone who’s going for a BREEAM award is trying harder than someone who isn’t.”

The above evidence suggests that best practice initiatives exist in the commercial sector, driven by forward thinking corporations. However, the extensive research carried out by the UK Green Building Council (2009) concludes that *all* commercial buildings should meet progressively more ambitious standards over time. In parallel with the recommendation made by the Housing Standards Review Challenge Panel (2013) for new housing, the research suggests that to enable measurement and increase awareness of sustainability nationally, metrics for all new commercial buildings should be made available in the public domain.

The UK Green Building Council (2009) claim that a better understanding of sustainability through the creation of metrics will lead to a strong push from clients and the public to improve innovation and make buildings more sustainable. Stakeholder feedback to the research of Fischer (2010) mirrors this assertion, with respondents stating that robust regulation does not stifle design, but offers challenging targets for innovative design.

5.10.3 Advanced Regulatory Standards and Labelling as a Spur to Innovation

It is suggested by Porter and van der Linde (2000) that an uncompetitive industry is likely to fight regulation instead of innovating. Historically, the construction industry has been viewed as lacking innovative thought (Egan, 1998; Latham, 1994). The results of recent research by Constructionline and Capita suggests that the construction industry is still averse to technical innovation (Construction Manager, 2013). The lack of technical innovation in the built environment was a common theme within data obtained from interviews, with the following comment by Andrew Edkins summing up broader perspectives:

“You’ve got that bit of the industry kind of fixed, they still don’t spend enough on R&D, they don’t spend enough on developing their people and succession planning, they’re too process-orientated and all the sorts of, I can list off all the problems that there are, but the problem that you’ve got is that that only represents a really tiny amount of the construction industry by volume of number employed or number of organisations. The vast majority are local regional builders or other type of player and they frankly aren’t much different from before, you’re doing well if they’ve heard of Egan and Latham.”

Reinforcing this observation in his introduction to the National Planning Policy Framework (Department for Communities and Local Government, 2012b, p.i), the Minister for Planning states that:

“Our standards of design can be so much higher. We are a nation renowned worldwide for creative excellence yet at home, confidence in development itself has been eroded by the too frequent experience of mediocrity.”

During periods of changing regulation, new and developing building components and construction techniques spur designers to make innovative design approaches (Yamakawa, 1997). Gann *et al* (1998) postulate that it is possible to envisage a more stringent regulatory process in which the order caused by standards might create a stable and supportive framework for focused change in the built environment. They state that standards could be used to induce market demand for emerging high-performance technologies, compelling firms to innovate to meet requirements which are deliberately set in advance of current standards. A majority of interviewees offering opinions on such issues concurred with this school of thought, with Sir Andrew Stunell stating that:

“If builders found that people were turning away from the show house because it didn’t have an A certificate or whatever, then pretty soon they’d be responding to that.”

A number of studies commissioned by the Government (AECOM., 2012; Faber Maunsell and Steemers, 2010; Sustainable Buildings Task Group, 2004) have suggested that setting higher regulatory standards is likely to have the effect of stimulating innovative sustainable building methods and systems. Barlow (2012) claims that the labelling of developments resulting from the scoring system attached to the CSH has in fact resulted in an acceleration in innovation by social landlords building to higher than baseline standards.

As suggested by the UK Green Building Council (2009) and the Housing Standards Review Challenge Panel (2013), holding out the option of higher standards and then labelling the final product would seem to offer the potential to stimulate innovation. As reinforced by interviewees, if researchers, building purchasers and building users were given the opportunity to freely view data on sustainable development performance held by local authorities, their enlightenment may have the effect of spurring developers to compete with better contemporaries. In this sense, developers may themselves choose to aim to incorporate

optional requirements in lieu of their imposition by local planning authorities, as outlined by current regulatory procedures shown in Figure 5.1.

The Housing Standards Review Challenge Panel (2013) suggest that a requirement to test compliance through actual as built performance should be introduced as part of a labelling process. Although this observation would seem prudent in light of the widespread evidence of a gap between the designed and as built performance of new housing reported to the Government by the Zero Carbon Hub (2014a), interviewees Alison Crompton and Ant Wilson stated that such an approach would not be feasible. This, they claimed, is due to the fact that measuring as built performance is very much dependent upon how a building is used, particularly in relation to dwellings:

“You cannot penalise the house builder for how the occupant chooses to live in it.” Alison Crompton

“If you’ve got an air-tight building and you’ve got a kitchen and you open the door and you open the front door, you’ve lost two days’ air change in one session. You can’t dictate how people are going to use that home.” Ant Wilson

As renowned experts in internal building environments, the opinions of Alison Crompton and Ant Wilson add weight to the argument that sustainable development should be labeled upon completion and not tested in use.

5.11 Rationalising Building Performance Standards: Summary and Model Requirements

5.11.1 Summary

Through reference to existing research and the data obtained from interviews with experts, BREEAM has emerged through this study as a potential benchmark for a rationalisation of the performance standards shown in Table 3.1 through the development of domestic and commercial code manuals. However, as well as acting as a guide for the allocation and simplification of nationally set performance standards for regulatory practitioners, the ethos behind BREEAM has also been shown to offer the potential to resolve other issues relevant to this study.

Unlike BREEAM, the current regulatory standards framework takes little account of the design process, with both existing research (AECOM, 2012; Faber Maunsell and Steemers, 2010) and interviewees suggesting that design teams are struggling to cope with the broad array of statutory and voluntary standards. This body of opinion also expressed the view that the current system is excessively costly. Stakeholders are often required to access expensive private sector owned reports and pay substantial fees as part of separate submissions seeking compliance with both statutory and voluntary standards requirements. In this sense, the idea of regulatory code manuals which result in the need for only statutory applications, take account of the RIBA Plan of Work, contain hyperlinks to free second tier references, and thereby act as a useful design tool, proved popular with interviewees. The concept of sustainability checklists mirroring the content of code manuals also proved to be popular.

As skilled standards auditors, there would appear to be a similarity between the duties of BREEAM Assessors and building control surveyors. The involvement of BREEAM Assessors at an early stage in the design process has proved invaluable to successful projects (Clarke, 2013; Schweber and Haroglu, 2014). The value of planning and building control being involved at an earlier stage in the design process in order to avoid later expensive changes to designs and consequently, the possibility of planning re-submissions would seem clear. Both existing research (Fischer and Guy, 2009; Imrie, 2007) and data obtained from interviewees suggests that planning, building control *and* design teams should begin to unravel complex issues together as soon as practicable as part of a dynamic unfolding interdisciplinary process. However, with the built environment being averse to upfront costs and technical innovation (Construction Manager, 2013; Fischer, 2010), drivers are required to change the culture of the construction industry.

The ongoing development of L3 BIM containing regulatory standards guidance/rules engines would appear to have the potential to ensure that the value of upfront collaboration is recognised and paid for by clients. Having had experience of such issues (Cardiff University, 2012), it seems clear to the author that the use of code manuals as a primary reference has the potential to simplify the development of L3 BIM. Concerns were expressed by interviewees that the UK development of BIM has been hijacked by contracting organisations as a mean of making money. Conversely, a state funded automated code checking tool has been in use in Singapore since 2000 and has acted as the inspiration for pilot projects in other countries (Malsane *et al.*, 2015).

Research data also suggested that encouraging developers to demonstrate their sustainability credentials by adopting standards from code manuals which are in advance of the Building Regulations baseline has merit. By rating developments in a similar manner to BREEAM and publishing sustainability performance, local authorities could spur innovation by making buyers more knowledgeable, thereby engendering demand for better buildings. Labelling sustainability performance would also allow researchers who have previously struggled to find data (UK Green Building Council, 2009; Williams and Lindsay, 2007) to track sustainability performance nationally.

The lack of strategic oversight of regulation in Government (Penfold, 2010) and short term political election cycles (Greenwood, 2010) appear to have worked against the establishment of clear long term sustainability objectives. Having committed to work together to tackle climate change following the 2015 general election (Harrabin, 2015), the UK's political leaders appeared to have opened the door to the cross party management of building performance standards. However, the subsequent postponement of zero carbon targets for new buildings by the newly elected Conservative Government in July 2015 (HM Treasury, 2015) would seem to reinforce the need for a cross party standards group to reduce the likelihood of continuing fluctuations in policy making.

With cross party standards management in place, U-turns on performance standards set for the longer term might become less likely. In this sense, interview data suggests that the retention of a ten-year performance target strategy coupled with a three year standards review cycle would be most appropriate.

5.11.2 Model Requirements

In line with the above chapter summary, research data has outlined the importance of the following model requirements as part of attempts to rationalise building performance standards:

1. The creation of a cross party group to set and manage building performance standards with support from built environment experts.
2. The creation of separate codes for domestic and commercial sustainable development, which offer the following features:

- a. The mapping of a ten-year performance standard strategy, reviewed/updated every three years, with developers able to demonstrate their sustainability credentials by choosing future standards that are in advance of the Building Regulations baseline.
 - b. Coverage and clear allocation of responsibility between planning and building control for sustainability categories and issues.
 - c. Hyperlinks to as many free second tier references as possible.
 - d. A format that takes account of the RIBA Plan of Work, encouraging interdisciplinary collaboration between regulators and design teams.
 - e. Involvement of planning officers and building control surveyors as standards advisors during RIBA Stage 1 or 2 in instances where developers are seeking to demonstrate their sustainability credentials by meeting higher than baseline performance standards. If not, building control should be involved as statutory consultees at planning application submission stage at the latest to comment on potential 'show stoppers'.
 - f. A scoring system that allows local authorities to label the sustainability credentials of all new developments, with building control surveyors checking for compliance with planning conditions on site as part of the building completion/rating process.
3. The creation and use of sustainability checklists, mirroring the content of codes for domestic and commercial sustainable development and containing hyperlinks to as many free second tier references as possible.
 4. Whilst not being intrinsically linked to building performance standards as an entity, BIM L3 technology has emerged as a potential interdisciplinary information sharing and support tool. The technology would appear to have the potential to help change the culture of the avoidance of front end project costs by demonstrating that considerable value can be added by getting early design and regulatory work right. Accordingly, a Government funded/developed BIM L3 regulatory rule engine linked to codes for domestic and commercial sustainable development should be viewed as an important support mechanism and a necessary model requirement.

The above model requirements have the potential to rationalise performance standards by:

- providing two reference documents (codes for domestic and commercial sustainable development) that put all primary performance standards in one place and only where necessary, link easily (via hyperlinks in the case of electronic copies) to second tier references;
- clearly allocating sustainability responsibilities between planning and building control in relation to modern building performance standards, helping regulatory practitioners to understand the scope of their role where collaboration is required and reducing duplication of effort (i.e. producing similar information for both regulatory regimes) for design teams;
- making it easier in comparison to the current performance standards framework through structured codes for sustainable development to create sustainability checklists and a BIM L3 regulatory rule engine that offer step by step guidance to compliance for all stakeholders in the development consent process; and
- taking into account the structure of the RIBA Plan of Work 2013, promoting collaboration at appropriate junctures in the development consent process not only between planning and building control practitioners, but between the regulatory professions and other stakeholders such as designers and developers.

By labelling completed development, the model requirements should also aid the regulatory process by engendering market driven innovation in place of the type of standards avoidance detailed in Chapter 3.

Also set out in Chapter 3 were the problems associated with widening skills gap within the regulatory system. Whilst the model requirements outlined above would have the effect of condensing standards into two primary reference documents and clearly allocating regulatory responsibilities between planning and building control, the broad array of issues to be addressed would essentially remain the same. In highlighting a lack of education on regulatory issues within the design disciplines, this chapter has also reinforced another issue detailed in Chapter 3 – the increasing burden being placed upon regulators to guide designers through the building performance standards maze. In addition, a new challenge has been created by the model requirement to create domestic and commercial codes for sustainable development as regulatory practitioners would be required to have knowledge of up and coming standards as well as those in force at any time.

Accordingly, Chapter 6 will now seek to develop model requirements that will form the basis of an educational framework capable utilising the type of standards framework outlined above to produce planning and building control professionals with the skill sets required to tackle complex problems collaboratively.

6 Define Requirements of the Model: Closing the Regulatory Skills Gap

6.1 Introduction

Chapter 3 has discussed the development of a widening skills gap among planning and building control professionals as a result of increasing technical complexity linked to political aspirations for sustainable development.

Although studies have, for a number of years, highlighted the need for interdisciplinary skill sets to enable practitioners to cope with the emerging need for sustainable development (Academy for Sustainable Communities, 2007; Egan, 2004), little has changed. The lack of generic sustainability skills and knowledge possessed by planning and building control professionals has since been described as “*a huge training issue*” (Faber Maunsell and Steemers, 2010, p. 15). As a result of skills deficiencies and a lack of knowledge integration between the professions, stakeholders in the development consent process have expressed frustration, viewing the skills gap as a continuing barrier to sustainable development (AECOM, 2012; Prior and Williams, 2008a).

In light of the problems set out in Chapter 3 that are associated with the widening regulatory skills gap, Objective 2 of this thesis is to: *Prescribe the basis for a higher educational framework capable of closing the existing skills gap by producing planning and building control practitioners with the necessary attributes to enable them to resolve increasingly complex technical issues collaboratively.*

Utilising the knowledge/theory base and research methods outlined in Chapter 4, the aim of this chapter is to construct and define the requirements of an educational framework capable of meeting the above objective.

Since originally setting out Objective 2 in Chapter 3, the model requirements defined in Chapter 5 have reinforced the need for this element of the research, also highlighting a further emerging skills problem. In the author’s experience, planning and building control professionals have little (if any) knowledge of voluntary standards such as the CSH and BREEAM, a perception that has been reinforced by literature (Prior and Williams, 2008a). In taking forward codes for sustainable development as a model requirement, regulatory

professionals would be required to possess the generic skills and knowledge necessary not only to address current minimum regulatory standards, but also standards published in advance of their time.

The above challenge may seem unachievable when considering the manner in which regulatory professionals are coping with the current single tier of minimum but complex regulatory standards. However, regardless of the considerations raised by this research, the introduction of optional requirements by the Government (Department for Communities and Local Government, 2014b) has already set in place a need for knowledge of advanced standards, which will need to be met. The successes of the CSH and BREEAM in instances where skilled and committed design professionals and standards assessors have collaborated to achieve sustainable outcomes would seem to demonstrate that such change could be attained on a wider scale (Barlow, 2012; Schweber and Haroglu, 2014).

Interdisciplinarity is a theme that has developed in terms of its importance to the requirements of this research throughout Chapters 3 and 5. Having initially been recognised as a means to address the skills gap linked to the emergence of sustainable development (Academy for Sustainable Communities, 2007; Egan, 2004), an interdisciplinary design and regulatory framework has emerged during Chapter 5 as a necessary requirement of the model. Accordingly, this chapter will begin by examining the link between sustainability education and interdisciplinarity before moving on to establish and define the requirements of an educational framework capable of closing the existing skills gap.

6.2 Sustainability Education and Interdisciplinarity

6.2.1 Context

The fact that the field led research of Egan (2004) and the Academy for Sustainable Communities (2007) set out a need for interdisciplinary skill sets as a means of addressing the increasing complexity of sustainable development was discussed in Chapter 3. The data collected from interviews appeared to confirm that the observations and predictions made by Egan and the Academy for Sustainable Communities have since come to fruition. Knowledge and skill levels possessed by regulatory professionals were described as being ‘variable’ at best and more often, ‘very poor’. In relation to building control, interviewees David Clements and Ant Wilson suggested that the profession is struggling to cope with complexity, with the disparate approach to service delivery as a result of the public/private sector split being a

major contributing factor. In relation to increasing complexity within the building control sector, Stuart Smith and latterly Ant Wilson noted that:

“It's getting to the stage where you need somebody with a services background to check Part L and you need somebody with a fire engineering background to check your fire safety, and obviously we've had for a long a time structural engineers checking structures.”

“I do a lot of talks to architects who moan like crazy about building control. And I say, well, give the guys a blooming break...whereas consultants, I've got a fire guy, and extra acoustics guy... we've got an extra CHP and district heating... how can any guys be expected to understand all that stuff? You know, they're not trained to necessarily do it. Or they've been on a, you know, couple of days' training course. A couple of days' training course doesn't get into the depths of that stuff at all.”

Within the planning profession, knowledge and skill levels were deemed to be insufficient by all interviewees, with Yvonne Rydin of UCL perhaps best summing up the views expressed:

“If the average planning application falls across your desk you should ideally be able to understand all the energy modelling that is presented within that, which most planners don't, you need to know stuff to do with biodiversity surveys. You need to know about hydrological models in order to work out your sustainable urban drainage and there's no way that your average planner, or anybody, actually, could know all of those things... We don't get building controllers in to talk to our students, and probably we should, because I think if you get the practitioners in to tell people about the reality of the job they're facing, that may well set them up better for when they then get back into their jobs.”

Chapter 5 has set out the disjointed nature of building performance standards, which in turn cover a broad range of sustainability categories and issues that are resulting in the need for knowledge/skill sharing across disciplinary boundaries. In taking the above into account, research relating to education on sustainable development issues was examined to ascertain whether a clear link could be established between sustainable development and the need for interdisciplinary education.

6.2.2 Education for Sustainable Development: The Current Situation

Historically, teaching at universities has been shaped by disciplinary structures, to which a specific socialisation of graduates is linked (Barth *et al.*, 2007; Jones *et al.*, 2010). Jucker (2002) believes that the disciplinary straightjacket of current education is one of the main reasons for an unsustainable situation that is preventing students from looking beyond their own narrow field of vision. Accordingly, it is suggested that built environment educators are

not yet embracing sustainability in a way that will lead to sustainability literate graduates (Murray and Cotgrave, 2007).

Although the sustainability agenda embraces the interrelationship between social and economic wellbeing and environmental degradation, the significance of these issues is as yet poorly reflected in the built environment's current focus on targeting efficiencies in terms of cost, quality and time (Murray and Cotgrave, 2007). Despite this, few commentators argue that sustainable development is set to become a declining issue – conversely, it is a major emerging concern, as evidenced by national and international aspirations for its achievement. With sustainability issues becoming increasingly evident and pressing, Jones *et al.* (2010) suggest that it is safe to assume that higher education initiatives seeking to innovate in this changing world will need to pay increasing attention to interdisciplinarity and sustainability and their interrelationship.

Eagan *et al.* (2002) state that it is important for educators not only to link the breadth and depth of sustainability with what is taught, but equally vital to consider carefully the impact of how sustainability is taught. As such, they champion the potential for pedagogical systems to foster effective interdisciplinary, cultural, and industry communication skills necessary for effectively addressing environmental issues in the 21st Century. In keeping with the observations of Yamakawa (1997) that were outlined in Chapter 5, the research of Fortuin and Bush (2010) and Cotgrave and Kokkarinen (2010) concludes that behaviour changes can only occur if attitudes change. In turn, they suggest that this can only be achieved through interdisciplinary education.

Farron *et al.* (2010) hold out the view that required change presents enormous challenges to professionals in the field of the built environment, their institutional structures and their boundaries, suggesting that interdisciplinarity will become of increasing importance. They argue that if academe does not rise to the challenge of embedding necessary interdisciplinary values, skills and knowledge, graduates will not be enabled to envision and deliver truly sustainable development. Moving forwards, such challenges seem considerable, not only for the regulatory professions, but for the built environment as a whole.

6.2.3 Moving Forwards: Interdisciplinary Education for Sustainable Development

Becker *et al.* (1997) claim that attempts to cope with the complexity of issues raised by sustainability cannot simply aim at adding some new pieces to an existing knowledge base. Instead, they argue for a paradigm shift towards a new knowledge base that is characterised by practices of integration. Similarly, mirroring the thoughts of Rydin *et al.* (2007) detailed in Chapter 3, Barth *et al.* (2007) suggest that collaboratively acquiring competencies relevant to sustainable development through interdisciplinary education can be termed as learning in ‘communities of practice’.

In noting the strong link between interdisciplinarity and sustainability, Jones *et al.* (2010) state that while there is expertise and experience in interdisciplinarity in higher education initiatives in England, it is on the margins of the mainstream. Accordingly, there have been calls for more interdisciplinary education linked to sustainable development issues (Farron *et al.*, 2010; Parker, 2010). A research paper on the status of sustainable development in higher education in England, commissioned by the Higher Education Funding Council for England (HEFCE) as a strategic review, noted that (Policy Studies Institute *et al.*, 2008, p. 30):

“It is quite clear that the whole question of interdisciplinary working, its opportunities and its difficulties, looms large in the minds of those who wish to promote sustainable development... detailed consideration should be given to measures to facilitate interdisciplinarity in course design and teaching.”

Graham (2000), whose research focussed on increasing environmental literacy through interdisciplinary approaches, found that it is important for teachers to explain the role of building professions in relation to each other, integrating disciplinary knowledge and insights. However, this approach relies on teachers themselves having enough knowledge of other professions in order to explain roles to students. It also requires them to be free of excessive bias to their own profession, which may not always be the case in built environment faculties (Cotgrave and Alkhaddar, 2006).

Where used, there has been a consensus of opinion that interdisciplinary approaches to teaching have had positive outcomes within the built environment (Cotgrave and Alkhaddar, 2006). Parker (2010) suggests that a better understanding of the holistic requirements of sustainability, along with an integration of disciplinary knowledge, skills and insights are

urgently required, and that the achievement of such goals can be sped up through interdisciplinary education.

Whilst reflecting the views of other interviewees in seeing the benefits of interdisciplinary education for planning and building control students, some interviewees suggested that designers should also be involved in such a scenario. The following comment by Gerard Wood was representative of these views, stressing the growing importance of bringing all built environment disciplines together to resolve increasingly complex issues:

“Construction projects now are more complex than ever...now, if that's the demand of a professional, then the professional education which we're part of has to reflect that and try and produce the kind of people that can work in those environments.”

However, as part of any attempts to move towards such a situation, interdisciplinarity cannot be fully understood by students without an understanding of the concept of disciplinarity, as it must be appreciated that disciplines provide the necessary foundations for interdisciplinarity (Repko, 2007). Accordingly, having set out definitions of interdisciplinarity in Chapter 5, it is now necessary to consider the emergence and development of both disciplinarity and interdisciplinarity.

6.3 The Emergence and Development of Disciplinarity

There are many different opinions on the timing of the development of disciplinarity but a common thread appears to be woven through all commentaries on the subject – that it was born out of increasing complexity within the sciences and the early development of technology.

Weingart (2010) claims that disciplinary knowledge emerged at the end of the 18th Century when science became the activity of collecting and ordering all available knowledge, which resulted in the dramatic growth of information and the limiting of the realm of possible experiences. Weingart details Linnaeus's *Systema Naturae* as an example, this knowledge base containing 549 species in its first edition in 1735 and 7000 in its last edition in 1766-8, having grown from 10 to 2300 pages. He states that throughout the 18th Century, books, articles and even experiments were addressed to the general public but the more specialised communication among scholars became, the more it was addressed to them, with specialised journals and associations beginning to be formed.

Culligan and Pena-Mora (2010) are in agreement with Weingart in terms of the 18th Century development of disciplinarity, detailing the increasingly complex engineering feats of John Smeaton as leading the initiation of the Society of Civil Engineers in 1771, which was the world's first professional engineering society. The number of engineering institutions licensed by the Engineering Council in the UK alone has since grown to 35. Conversely, Klein (1990) claims that disciplinarity developed in the 19th Century due to technical advancements that began to force universities to offer many specialist (and sub-specialist) programmes to meet the demand of industry. Such differences of opinion would appear to reinforce the thoughts of Chettiparamb (2007), who postulates that the arguments around the historic point at which disciplines are thought to have originated varies by country of argument origin.

In terms of the development of disciplines within the built environment in the UK, the tendency towards specialisation took place during the expansion of economic activity throughout the 18th Century and particularly, the second half of the 19th Century when disciplinarity became institutionalised (Gann and Salter, 1999; Wood and Wu, 2010). Chapman (2009) details the dominance of all but the last 30 to 40 years of the 20th Century by architects and architect planners, with the introduction of the town planning profession being the event that drove a wedge between architecture and planning, allowing other disciplines to assert their position on the built environment ladder of hierarchy.

Becher and Trowler (2001) state that the globalisation of higher education in the UK has led to an expanding system that offers more opportunities for access for lower status groups. By reference to the many areas of practice served at undergraduate and Masters level, Griffiths (2004) alludes to the fact that the built environment knowledge base essentially compromises a microcosm of universities as a whole. He suggests that the built environment has in fact become a multidisciplinary field, a situation whereby wider knowledge is fostered through separation and identity retention (Klein, 2010).

Whilst Sarewitz (2010) is in agreement that historically, technology has been a driver for disciplinarity, he holds out the technological success of the US domestic air transport sector (22 million flights between 2007 and 2008 with no fatalities) as a modern collaborative triumph far too complex to be driven by one discipline. Fuller (2010) describes the work of Gibbons *et al* (1994) as a model of intellectual history, whereby increasingly specialised

disciplines are seen as the natural outgrowth of the knowledge production process and the catalyst for interdisciplinarity.

6.4 The Emergence and Development of Interdisciplinarity

6.4.1 The Emergence of Interdisciplinarity

As detailed in Chapter 5, a number of attempts have been made to define interdisciplinarity and as Klein (2000) points out, it is likely that if you were to ask three scientists what interdisciplinarity means, you would receive three different answers. Although Newell (2010) details the first recorded interdisciplinary general education programme in the USA being available as far back as 1919, he makes clear that conceptions of interdisciplinarity were, until the last decade of the 20th Century, indeterminate.

In 1962, the seminal work of Kuhn (1962) began the process of reinvigorating debate on what had become a lost concept by identifying that as disciplinary practitioners retained a single minded pursuit within their own fields, widening gaps between disciplines were beginning to create more problems than were being solved (Fuller, 2010). Interdisciplinarity then gained momentum in the USA as part of the student unrests in the late 1960s, when demands arose for disciplinary structures in universities to be removed and replaced by more holistic concepts that were closer to practical situations (Chettiparamb, 2007).

In 1972, the Organisation for Economic Co-operation and Development (OECD) published the most prominent and clearest notification of the need for interdisciplinarity to that point in time, this being the development of science (Klein, 2000). The volume published by OECD (Apostel *et al.*, 1972) contained the seminal study of interdisciplinarity by Jantsch (1972), which holds that the formation of an interdiscipline requires each separate discipline to be strong and comfortable enough to surrender their own strict competitive instincts, objectives and concepts for a wider common cause.

Although the work of Jantsch is widely cited, Newell (2010) and Weingart (2000) detail a loss of momentum over the ensuing two decades in terms of interdisciplinary research. However, the dawn of the 21st Century has seen a rapid surge in interest in the benefits of interdisciplinary collaboration as a means of overcoming increasing complexity.

6.4.2 *The Modern Day Development of Interdisciplinarity*

Complexity was the primary driver for disciplinarity in the 18th and 19th centuries and would now appear to be proving to be so for interdisciplinarity, one major difference being that many of the problems being encountered in the 21st Century are global and not regional in origin.

Krohn (2010) cites global climate change research as a good example of a broad complex topic that goes well beyond the realm of any one discipline. Kurland *et al* (2010) cite global sustainability as an issue requiring collaborative consideration. Culligan and Pena-Mora (2010) outline an initiative to improve collaboration between key actors involved in responses to natural disasters.

Newell (2010) states that the complexity of the 21st Century makes academic disciplines insufficient to meet the needs of modern society, with major governmental funding agencies in the USA such as the National Science Foundation and the National Institute of Health earmarking ever larger projects for interdisciplinary research. Newell does however highlight a weakness in the development of interdisciplinarity in that much of the available literature is professional in nature, with academics paying it little regard, a trend that the seminal work of Gibbons *et al* (1994) set out in the mid-1990s.

Gibbons *et al* suggest that a new form of knowledge production (termed as Mode 2) started to emerge in the mid-20th Century, which they detail as being context-driven, problem-focused and generated in an interdisciplinary social context. They differentiate between this, and what they see as the more traditional academic route to knowledge production, which is generated within a disciplinary and primarily cognitive context (termed as Mode 1).

Table 6.1, taken from the work of Gann and Salter (1999), sets out the differences between the 2 modes of knowledge production identified by Gibbons *et al*.

Mode 1	Mode 2
<ul style="list-style-type: none"> • Discipline based teaching • Clear demarcation between universities and industry • Universities educated, industry trained • More students means a better education system • High levels of trust in science - independence 	<ul style="list-style-type: none"> • Interdisciplinary learning • Blurring boundaries between universities and industry, academics and consultants • Greater collaboration • Knowledge production widespread in society • Learning organisations • Research in the context of application • Declining trust in science and scientists

Table 6.1 - Modes of knowledge production

In examining Table 6.1, there would appear to be clear linkages between the problem solving nature of the design science methodology adopted by this research, and the context-driven, problem-focused Mode 2 form of knowledge production set out by Gibbons *et al* (1994). The drivers for the interdisciplinary context in which both forms of knowledge production are set will now be discussed in relation to the sphere of the built environment.

6.4.3 Drivers of Interdisciplinary Knowledge Production in the Built Environment

Although collaborative partnerships have increased and diversified rapidly in the USA, recommendations have been made for further resources within universities, industry and government to be shared more often when carrying out interdisciplinary research (National Academy of Sciences, 2005). Etzkowitz and Leydesdorff (1997) refer to this as the '*triple helix*' of academia-industry-government, which they view as being vital to any modern innovation strategy for education.

The National Academy of Sciences (2005) identify 4 primary drivers for interdisciplinarity today, all of which can be mirrored by the regulatory issues considered in Chapter 3 and the wider demands of the built environment:

1. The inherent complexity and nature of society.
2. The desire to explore problems and questions that are not confined to a single discipline.
3. The need to solve societal problems.
4. The power of new technologies.

In considering the way in which the built environment in England is evolving in the 21st Century due to the emergence of the need for sustainable development, the demand for the

use of technology such as BIM was captured by interviewees Gerard Wood and Martin Conlon respectively:

“Construction projects are more complex than ever, especially the technology that's going into them and the demands of clients, I think that's the biggest driver [of BIM]. I think the Government now has got proposals that if you're not able to use built technologies, you can't win.”

“I think you dismantle the whole education process and start to rebuild it, then technology can play a part in the modern role, not just for specific professional groups, but across the whole construction industry, where they can understand and access that information and also be able to use that information to be able to see how they fit together. You don't have this conflict approach – the industry is founded on conflict.”

Although BIM has been promoted for a number of years, it seems clear that the outgrowth of disciplinary knowledge in relation to more complex construction projects is forcing the Government to promote them as collaborative tools in an effort to create efficiencies and drive out waste (Cabinet Office, 2011a). Accordingly, echoing the views of interviewees, Underwood and Ayoade (2015) suggest that there is a requirement for all universities to respond to the changing need for BIM across the built environment.

In addition to information technology, interviewee Andrew Edkins, made the point that building component and system technology is becoming more complex. This point was reinforced by architect and academic Sebastian Macmillan, who echoing a problem outlined in Chapter 3, put forward fabric and glass technology as being representative of rapidly changing areas that need to be understood by all built environment disciplines.

However, American interdisciplinarity experts Julie Thompson Klein and William H. Newell raised an important point in that not all tasks are complex and require collaboration and that as a result, interdisciplinarity should not be regarded as a wholesale replacement for disciplinarity. William H. Newell summed up this view succinctly, stating that:

“...sometimes it's a local problem, not a global one, but if it's complex you need an interdisciplinary approach, and I argue the converse, that if it's not complex, you do not need an interdisciplinary approach. I think the divide-and-conquer strategy of the disciplines continues to work just fine because we're really talking about a whole approach that's driven by, and as a response to, complexity.”

Having established the drivers for interdisciplinary education for planning and building control students, along with reasons for the emergence and development of both disciplinarity and interdisciplinarity, the current higher educational framework for the regulatory professions will now be considered. As will be demonstrated, the contrast between the interdisciplinary ideals discussed above and current higher educational initiatives for planning and building control students would appear to be stark.

6.5 Planning and Building Control Education

6.5.1 Educational Frameworks

The Royal Town Planning Institute's (RTPI) *Policy Statement on Initial Planning Education* (2012) supports the provision of linked inter-professional education schemes and recognises the importance of interdisciplinary working. However, there is no suggestion in the Policy Statement that degree course content should consider issues that might be examined in parallel with the Building Regulations, such as those outlined in Table 5.2.

Similarly, the benchmark statement for educational frameworks for surveying by the Quality Assurance Agency for Higher Education (2008) states that graduates in surveying should have acquired knowledge and understanding of the linkages and interdisciplinary relationships between the functions of their discipline, and those of related built environment disciplines.

Having in its earliest stages described building control as an ageing profession struggling to recruit and retain staff (Department for Communities and Local Government, 2007), the Government's two year-long review of the building control system advocated closer working relationships with other regulatory functions, including planning. However, the review did not address building control recruitment or educational needs (Department for Communities and Local Government, 2009a). In this sense, the lack of focus on higher educational issues in the building control sector would appear to be at odds with the manner in which such issues are addressed by the planning profession.

Despite a proliferation in the complexity of performance standards in the 21st Century, there is no higher educational framework for the building control profession in English universities. Individuals usually enter the profession with a mixed bag of qualifications and start afresh with training on the job, or through short courses and one day seminars (Lowe and Oreszczyn,

2008). Conversely, the RTPI's website (2014) details the fact that there are 34 accredited planning schools worldwide, with 20 of these being located in England.

As there was no existing data on which English universities contain planning schools and at the same time offer accredited building control related courses, the websites of each of the 20 universities containing planning schools were accessed and information was collated – this is shown in Table 6.2. In making this comparison, the websites of two of the three recognised professional institutions containing building control faculties – the CIOB and the RICS – were also accessed. Lists of accredited qualifications show a clear preference for building surveying degrees (Chartered Institute of Building, 2014; Royal Institution of Chartered Surveyors, 2014).

As can be seen from Table 6.2, there is little correlation in English universities containing accredited planning schools in terms of both planning and building surveying degrees being offered at either undergraduate or Masters level. Nor is there a common approach to the department, school or centre within which either discipline sits. In the only three cases where undergraduate and Masters courses are offered in both disciplines (London South Bank University, Sheffield Hallam University and University of the West of England), the disciplines sit in different schools or departments.

It is worth noting that seven institutions that do not contain planning schools offer CIOB accredited building surveying courses and similarly, eight such institutions offer RICS accredited building surveying courses.

Accredited Planning Schools in England	Planning Undergraduate Course?	Planning Masters Course?	Accredited Building Surveying Undergraduate Course?	Accredited Building Surveying Masters Course?	School, Centre or Department for Planning Courses	School, Centre or Department for Building Surveying Courses
Anglia Ruskin University	No	Yes	Yes	No	Built Environment	Built Environment
Birmingham City University	Yes	Yes	Yes	No	Property & Construction	Property & Construction
Kingston University	No	Yes	Yes	Yes	Surveying & Planning	Surveying & Planning
Leeds Metropolitan	No	Yes	Yes	Yes	Built Environment	Built Environment
Liverpool John Moores University	No	Yes	Yes	No	Built Environment	Built Environment
London South Bank University	Yes	Yes	Yes	Yes	Urban and Leisure Studies	Built Environment
Newcastle University	Yes	Yes	No	No	Architecture, Planning & Landscape	Not applicable
Oxford Brookes University	Yes	Yes	No	No	Built Environment	Not applicable
Sheffield Hallam University	Yes	Yes	Yes	Yes	Planning Regeneration & Housing	Construction, Building & Surveying
University of Cambridge	No	Yes	No	No	Land Economy	Not applicable
University College London	Yes	Yes	No	No	Bartlett School of Planning	Not applicable
University of Birmingham	No	Yes	No	No	Urban & Regional Studies	Not applicable
University of Brighton	No	Yes	Yes	No	Environment & Technology	Environment & Technology
University of Liverpool	Yes	Yes	No	No	Civic Design	Not applicable
University of Manchester	Yes	Yes	No	No	Environment & Development	Not applicable
University of Plymouth	No	Yes	Yes	No	Geography, Earth & Environmental Sciences	Architecture, Design & Environment
University of Reading	Yes	Yes	Yes	No	Planning Studies	Construction, Management & Engineering
University of Sheffield	Yes	Yes	No	No	Town & Regional Planning	Not applicable
University of the West of England, Bristol	Yes	Yes	Yes	Yes	Planning & Architecture	Construction & Property
University of Westminster	No	Yes	Yes	No	Architecture & Built Environment	Architecture & Built Environment

Table 6.2 - Planning and building surveying courses in English universities containing planning schools

6.5.2 Recent Evolution of Regulatory Educational Frameworks

When it came to assessing the reasons why there is no dedicated educational framework for building control in English universities, opinions were sought from Stuart Smith and Martin Conlon, whose knowledge on such matters is among the most extensive in the country. Having been instrumental in the early development of building control degrees, Martin Conlon spoke of their growth in the 1980s and 1990s up to a level of 20 part-time degrees and one full-time degree at the University of Westminster, and gradual demise in more recent years due to a decline in demand.

Asked why there are currently so few undergraduate courses that are specifically tailored to building control, Stuart Smith, who has taught on building control related programmes since 1999, stated that although there has been an increasing demand for graduates, there are insufficient numbers to offer dedicated building control courses:

“It’s because there is no longer the critical mass of numbers coming through for training. We’ve had quite a lot of graduates from building surveying who’ve gone into building control.”

Stuart Smith’s comment appeared to reinforce suggestions made by other interviewees that the developing public/private sector split has served as a barrier to suitable higher education initiatives, with students instead entering building control with building surveying degrees. In addition, interviewees agreed that more needs to be done to promote the profession among young people, with Martin Conlon stating that:

“Something needs to be done to market the profession and whose role that would be is an interesting discussion we could have, but certainly organisations such as LABC and ACAI should play their part.”

The lack of promotion of planning within schools and colleges was put to leading educators Vincent Nadin of Delft University of Technology and Yvonne Rydin, with the former viewing sustainability as a key area in this respect:

“Sustainability is a key topic. All the education I have been involved in has given great emphasis to sustainability and now climate change – and central to this is explaining the role of spatial/urban/town and country planning.”

In considering attempts to attract students to planning courses, Yvonne Rydin was of the belief that perceived career prospects are the driver of choice of discipline:

“I can assume that when people go into something which is a vocational degree, what they're particularly interested in is job prospects at the end of the day. So I don't know how much is value-driven or whether it's kind of employment prospects-driven; I guess it's the latter rather than the former.”

The three comments above by Martin Conlon, Vincent Nadin and Yvonne Rydin could be said to be different in their outlook. However, with literature suggesting that the planning profession requires marketing to attract more young people (Department for Communities and Local Government Committee, 2008; Killian and Pretty, 2008b), and evidence to suggest that interest in building control courses has declined steadily, it seems clear that marketing is required to highlight the exciting challenges being faced by both professions.

Literature (Spence *et al.*, 2001; Wood and Wu, 2010) and empirical data indicate that academia and industry are sporadically working in partnership to examine and form more collaborative educational processes in the built environment. However, the review of available literature also revealed that whilst the Government has previously commissioned reports that have criticised skills levels (AECOM, 2012; Faber Maunsell and Steemers, 2010), there is no evidence to suggest that they have attempted to play an active role in addressing such failings.

Ultimately, the data collected in relation to the part that Government might play in ensuring that the education of regulatory professionals fills the current gap in skills offered some interesting insights. But in light of the differing levels of paradigm development between the two professions (i.e. the monopolised planning practice model with firm educational/research foundations in comparison to a competitive building control marketplace with no educational framework), it is perhaps understandable that opinions differed. Interviewees with building control expertise saw legislative objectives as the drivers of education, with the more research driven interviewees with planning expertise viewing universities as the bastions of planning best practice and knowledge.

But regardless of these differing disciplinary perspectives, a commonality between the professions is the part that professional bodies play in shaping educational initiatives to match their own qualification requirements.

6.5.3 Professional Qualifications

The routes to corporate membership of a professional institution vary greatly between the planning and building control professions. Whilst all planning professionals seek membership of the RTPI after obtaining a postgraduate level qualification, there is no single professional institution that solely represents the interests of building control surveyors. In fact, until recently, the Building Control Performance Standards Advisory Group (2011) suggested that corporate membership of any one of *eight* professional associations and institutions was sufficient to be classed as a ‘qualified and experienced’ surveyor. This has since been reduced to three professional bodies, these being the Chartered Institute of Building (CIOB), the Royal Institution of Chartered Surveyors (RICS) and the Chartered Association of Building Engineers (CABE) (Building Control Performance Standards Advisory Group, 2014). Martin Conlon viewed this issue as resulting in a lack of political recognition of the building control profession:

“Government doesn’t take us seriously as a profession for a number of reasons. That is one of them [disparate routes to professional qualification]... I think we should be speaking with one voice much more than what we do because this constant falling out, bickering between the two is actually damaging the profession.”

The CIOB and RICS have a clear preference for building surveying qualifications as part of entry requirements for their building control faculties. However, an examination of building surveying curricula and the description of the role of building surveyors seems to suggest that such an approach will not generate young building control professionals with the skill sets necessary to meet the challenges that they will face. RICS (2006) detail the main areas of building surveying expertise as being building pathology, design, project management, condition surveying, property management and contract administration. These professional duties are reflected in building surveying undergraduate curricula, which tend to concentrate on the management of existing facilities.

Conversely, only the University of Westminster (2014) offers a full-time and part-time undergraduate course in building engineering, which is accredited by the CIOB and CABE. The curriculum for the course is a more accurate match to the professional demands of building control, although it does not examine such demands in relation to parallel town and country planning issues.

In addition to their seemingly inappropriate requirements for corporate membership of building control faculties, professional bodies would also appear to be acting as a barrier to the type of interdisciplinary collaboration being sought by this study.

6.5.4 Professional Bodies: A Barrier to Change

In consideration of the role that professional bodies might play in developing an interdisciplinary educational framework for planning and building control students and other disciplines involved in the development consent process, interviewees instead viewed them as a barrier to change. The following anonymised comments are indicative of the opinions expressed in this respect:

“Professional institutions act for the interests of their members. If their members are a fairly narrow profession they're going to act on behalf of their interest in that particular narrow profession. There have been barriers to change because change threatens some people and some professions.”

“Professional institutions are like ocean liners and once they've started to change direction it takes miles and miles before they can stop and turn round and I think that's a problem. In any bureaucratic organisation there's always going to be resistance to change and also I think there's always that element of them wanting to be the top one and to be a key controller.”

“The professional institutions have created a preserve of bodies of knowledge and expertise ...but the challenges that we as a society or an economy face fall outside and beyond the realm of their particular skill sector”

“...they champion the skills that are needed in the built environment very effectively, but they can also develop a sort of myopia, because they so much see those skills within a narrow band, they don't always see the bigger picture.”

The barrier that professional bodies were seen to create to interdisciplinary education echoed through conversations with interviewees relating to the current imbalance between built environment professions such as planning and building control. As well as viewing the competition within their own sector as a barrier to academic collaboration, interviewees with building control expertise offered views that the public sector monopoly and resulting strong political influence at local level within the planning sector might be a restriction. Although they are not professional institutions in the same sense as the RTPI, it should be noted that LABC and the ACAI were viewed in the same light in terms of being barriers to change.

In examining the potential changes to the educational framework for planning and building control professionals, one final consideration is important – that of the numbers involved in each profession in England, which might give some idea of the viability of a balance of student numbers.

6.5.5 The Regulatory Population in England

Unfortunately, the fact that there are no dedicated building control schools and few related degree courses means that an accurate comparison of student numbers between the two professions is not possible. It is also the case that no data exists to show the number of planners and building control surveyors currently practicing in English local authorities and that very little historic data exists in relation to trends in the number of practicing professionals.

Planning Matters: labour shortages and skills gaps (Department for Communities and Local Government Committee, 2008), states that in 2008, there were 17,000 planning officers working within local authorities in England and Wales. However, this figure is not broken down to detail those working in planning policy roles, and those working in a development control/consent capacity. LABC (Local Authority Building Control), the member organisation representing local authority building control departments, claim that there are “*over 3,000 professional surveyors*” in local authorities in England and Wales (LABC, 2011, p. 2).

Although the figures above seem to suggest a clear minority within the local authority building control sector, their reliability in terms of the extent of such a minority setting must be seen as questionable. It is also the case that the number of building control surveyors currently working in the private sector is not known. Workforce figures provided in the earlier work of Gann and Salter (1999) also suggest a trend for greater numbers within the planning profession (22,000 in comparison with 8,000 building control professionals).

Recent references to the regulatory population (Farrell Review Team, 2014; Hopkirk, 2015) suggest that modern planning departments are generally under resourced and are unable to cope with increasing levels of consent applications. The survey of public building control services in England and Wales by the author, referenced in Chapter 3 (Key, 2012), suggests a similar position, with Heads of Building Control declaring a lack of resources due to financial constraints being placed upon local authorities. Ultimately, an up to date survey of the regulatory population and workload trends would prove useful in assessing the demands being

placed on the professions, along with their existing and future abilities to cope with such demands.

As has been demonstrated in relation to the planning system (Department for Communities and Local Government Committee, 2008) and suggested by interviewees, there is no evidence to suggest that building control is suitably promoted in order to attract young people into the profession.

6.5.6 Planning and Building Control Education – Overview

General educational policy statements for the planning and surveying professions stress the importance of interdisciplinary collaboration (Quality Assurance Agency for Higher Education, 2008; Royal Town Planning Institute, 2012). The Farrell Review Team (2014) reinforce this observation, stating that built environment courses should be linked with a common foundation course, with classes across disciplines being introduced. Far from being in a position to be taught the meaning and benefits of interdisciplinary collaboration, the building control profession does not even have a recognised higher educational framework (Lowe and Oreszczyn, 2008).

However, despite what would appear to be a stark contrast between the regulatory professions in terms of higher education, professional qualification and potential student numbers, the role of this research is to prescribe a basis for potential improvement. In setting out to do so, it has been established that there is a clear link between sustainable development and interdisciplinary higher education as a means of equipping young professionals to address complex problems (Policy Studies Institute *et al.*, 2008). The role that technology such as BIM might play in enabling built environment disciplines to collaborate more consistently has also emerged as an issue requiring strong consideration as part of future educational initiatives.

There are currently no interdisciplinary higher educational initiatives for the regulatory professions in England. Accordingly, in keeping with the approach taken in Chapter 5, it seemed appropriate to consider a comparison of best practice internationally and built environment related interdisciplinary higher educational initiatives available in England. The aim of such a comparison would be to establish a best practice benchmark for requirements of the model.

As previously mentioned in Chapter 5, Chettiparamb (2007) notes that since the early 1990s, the burgeoning array of literature on interdisciplinarity has retained a strong North American bias. In establishing a clear link between sustainability and interdisciplinarity, Jones *et al.* (2010) reinforce this observation. Accordingly, what follows is an analysis of best practice in North American educational establishments and built environment related interdisciplinary higher educational initiatives available in England.

6.6 Interdisciplinary Education – Global Best Practice

6.6.1 Background

Previous narrative has indicated why the need for a regulatory interdiscipline has developed and why, having examined current educational frameworks, an improved and more collaborative approach is required. The development of interdisciplinarity has been outlined, along with its modern definitions in research and learning settings as a process by which individuals and groups integrate insights and modes of thinking from two or more disciplines to advance their understanding of a subject that is beyond the scope of a single discipline.

What follows is an examination of how interdisciplinarity is being instilled into higher education programmes, particularly in the USA, the origin of the vast majority of recorded case studies. A number of these case studies are examined before moving on to a more detailed analysis of course design and resource requirements, the detail of which has emerged on the back of learning experiences obtained over the longer term within live educational environments.

6.6.2 Interdisciplinary Education – Best Practice Case Studies

Having taken an interdisciplinary undergraduate major at Yale University as far back as the late 1940s, Callahan (2010) helped to set up the Hastings Centre in 1969. This research centre in New York is devoted to the ethical and policy problems of medicine and biology. Callahan describes their first project as a great success, leading to many journal articles and contributions to policy change. An interdisciplinary team of philosophers, theologians, neurologists, lawyers, physicians, sociologists and psychologists was put together to look at the changing definition of death.

The project was driven by new technologies that were enabling hearts and lungs to be kept going for indefinite periods and ultimately, the fast developing technology of organ

transplants. It became to be understood that to be a good interdisciplinary teacher, individuals should have a good disciplinary background in one field and be an educated amateur in another. Three traditions have developed at the Hastings Centre over the years:

1. New staff are advised to talk in ways that would not reveal their own disciplines, ensuring that what they say sounds like ordinary common sense, which means picking up enough law, philosophy, social sciences, etc. to allow them to converse comfortably with experts in each field, but not to sound like them.
2. Under no circumstances does anyone pull disciplinary rank.
3. When hiring staff, it is ensured that no one discipline has disproportionate numbers.

Callahan states that because universities are discipline driven, being free standing has been a great advantage to the centre in terms of its serious interdisciplinary work. Callahan's example highlights the importance of resisting hierarchical settings within faculty based upon perceptions of disciplinary standing within an interdisciplinary grouping. However, Klein (1990) suggests that a 'bridge scientist' or leader is necessary in guiding workshop scenarios. When quizzed on this issue of debate, William H. Newell was in agreement with the published comments of Julie Thompson Klein that disciplinary hierarchy is unavoidable, with some form of course leadership by an individual with interdisciplinary expertise being required:

"It is possible to overcome those differences and various interpersonal differences and so on, but it really helps to have someone with some expertise in interdisciplinary process to facilitate."

Casey (2010) makes the point that centres and institutes in the USA are now under pressure to fulfill needs for Mode 2 research. She sets out successful case studies for 3 interdisciplinary academic centers and institutes, 2 interdisciplinary schools and colleges, and general education programmes in 3 large universities in the USA. Salient points relating to 3 (1 in each of the 3 different types of educational establishment) of these case studies are now considered.

Evergreen State College in Washington State was founded in 1971, with the Deans agreeing to a team-taught interdisciplinary curriculum in which students and faculty would work in yearlong programmes. Students enroll on a single comprehensive programme but the

curriculum is renewed each year. Early development of the college was aided by the fact that of 18 planning faculty and administrators, most had earlier experience within interdisciplinary institutions and they received funding for a year to set up the college. Departments were avoided to ensure faculty would collaborate, with tenure and ranking being rejected in favour of salary scales based upon years of experience. The college serves the community through four public service centres that support innovation and collaboration within key areas. This case study suggests that it may require substantial amounts of resources and time to develop the requisite organisational structures, interdisciplinary curricula and suitably experienced faculty in the regulatory field in England, but that issues relevant to specific localities can be successfully tackled in diverse institutional settings.

At the Hutchins School of Liberal Studies in California, which like Evergreen State College, was founded by individuals with experience of innovative programmes in 1969, faculty collaboratively design and discuss the curriculum. Programme content is renewed on a yearly basis, with lower division education leading (where desired) to a BA course in liberal studies offering 3 separate paths.

Portland State University in Oregon was experiencing declining retention rates and budgetary shortfalls prior to the introduction of a 4-year interdisciplinary education programme for the benefit of students, faculty and the community. The 3 tiered curriculum concludes with students solving complex problems in practice. Following the introduction of the interdisciplinary programme, the retention of first year students rose to 80%, with applications increasing by 40%.

The experiences within the Hutchins School of Liberal Studies and Portland State University suggest that the complex issues tackled by interdisciplinary curricula and the diverse career paths that result may prove to be a more attractive proposition for young people considering regulation as a career in England.

Having analysed her learning experiences from the 8 case studies contained in her research, Casey concludes that:

- the goals and structure of interdisciplinary curriculums should be developed democratically and continually reviewed;

- the skills of the faculty and quality of their training is vital – courses should only be offered if faculty with the right skills are available;
- innovation requires decentralised decision making and entrepreneurial thinking;
- learning should be problem-focused and experientially based; and
- continuous networking within and between educational establishments is required.

Having considered interdisciplinary educational experiences in the USA, what follows offers an overview of how best practice programmes have been designed and developed since the early 1990s.

6.6.3 Faculty and Learning Tools

On the subject of course design, Newell (1994) again highlights the importance of faculty selection, stating that those who are not flexible, willing to take risks, self-reflective, able to admit they do not know, and comfortable with ambiguity may not be appropriate for interdisciplinary teaching. Newell recommends weekly or biweekly meetings of faculty, during which a particular issue or interdisciplinary book is discussed, giving the team the opportunity to work out disciplinary perspectives, key points to be carried forward to the next meeting, and paper/exam topics.

Having set up an interdisciplinary course covering sustainability and involving 3 disciplines, Kurland *et al* (2010) describe how as a team without prior training in setting up such a programme, they initially struggled to think beyond the world views of their own disciplines. Student buy in was also lost because faculty representing all 3 disciplines were not involved in some lectures.

Richter *et al* (2009), in a study of 166 papers relating to interdisciplinary learning, highlight that course descriptions seem to reflect an underlying assumption that simply engaging in interdisciplinary experiences allows students to develop the skills needed to succeed without teaching interventions. However, their conclusions suggest that such an approach significantly hampers students' ability to develop transferable collaborative skills in complex environments.

Echoing comments from interviewees on the effect that technology such as BIM is beginning to have on collaboration within the built environment, interviewee Julie Thompson Klein

highlighted the important part that digital educational tools are beginning to play in interdisciplinary teaching environments:

“I do a lot with on-line learning and virtual collaboration for research... I think that there is another question there about how we use new technologies to enhance that and that takes us, by default, outside of not only traditional academic structures, but the traditional paradigm of education.”

Newell (1994) recommends starting programmes by giving students a text that captures their imagination and ‘hooks’ them and generates early interest in substantive topics that need to be solved as part of interdisciplinary group exercises.

6.6.4 Problem Solving

With faculty and learning tools in place, the first element of devising interdisciplinary programmes is choosing the complex topics to address. Myers and Haynes (2002) offer 3 criteria for developing interdisciplinary study topics:

1. they should be open-ended and too complex to be addressed by one discipline alone;
2. they should be answered with the time and resources at hand; and
3. they should be verified using appropriate research methods.

The next important element of interdisciplinary programme design is to identify the contributions of the disciplines involved and set out an integrative process. Repko (2007; 2008b) suggests that designers of interdisciplinary curricula should avoid treating disciplines in a multidisciplinary way, which is a relationship of mere juxtaposition of disciplines rather than being truly interdisciplinary (Klein, 1990). Students must be taught to think holistically and develop the ability to see an entire problem, encompassing all of its disciplinary perspectives. Klein (1996) believes that disciplinary integration connotes the creation of an interdisciplinary outcome through a series of integrative actions.

Amey and Brown (2005) offer a model identifying such integrative actions based on three stages along four dimensions of:

1. *discipline orientation* – the disciplinary paradigm that guides how members view and interpret the environment and how they typically address solutions to problems in that environment;

2. *knowledge engagement* – how members use disciplinary knowledge and the role they play within the group;
3. *work orientation* – how each member works with other group members; and
4. *leadership* – the behaviours of the person administratively responsible for the group and meeting its contractual obligations.

Table 6.3 details this progression through each stage for each of the four dimensions.

Dimensions	Stage 1	Stage 2	Stage 3
<i>Discipline orientation</i>	Dominant	Parallel	Integrative
<i>Knowledge engagement</i>	Expert	Coordinated	Collaborative
<i>Work orientation</i>	Individual	Group	Team
<i>Leadership</i>	Top down	Facilitative, inclusive	Weblike, servant

Table 6.3 - Interdisciplinary collaboration model

As part of the integrative actions required of interdisciplinary educational programmes, Richter *et al* (2009) put forward a series of potential interventions by faculty in interdisciplinary classrooms in order to overcome disciplinary egocentrism:

- Creating discussion in the classroom by asking students to state explicitly how their discipline can contribute to a specific problem.
- Asking students to reflect on questions such as “what does it mean to be a member/practitioner of my discipline?” and then share those answers with members of different disciplines.
- Creating dialogue in small groups on the modes of thinking and methodologies of each discipline represented.
- Asking each student to identify the strengths and limits of their discipline when first forming teams.

As will now be discussed, the integrative actions associated with interdisciplinary programmes result in the need for assessment techniques that may at times differ from more traditional methods.

6.6.5 Assessment Techniques

Newell (1994) recommends that evaluative assignments should be rational, applied, novel, active and often connected to self, with suggestions that not all valuable assignments need to be graded and that reflective journals are a good way of ascertaining how students develop throughout a programme. He points out that the marking of group projects can often cause unrest if high performing students are placed with those obtaining lower grades as resulting group grades tend to be lower than those the high performing students are accustomed to. He also states that it is essential to ensure that students have been adequately prepared for the tasks they face, with preparatory questions for faculty such as:

- Has class discussion been devoted to integration and synthesis?
- Have students been assigned readings that attempt synthesis?
- Have students been shown models of integration or techniques for integration?

Newell also suggests that discussion worksheets on each reading are filled out by students before class or that the first five to ten minutes of class time is spent having students write freely on the topic of discussion for the day.

Before moving on to examine the issue of the desired educational outcomes of interdisciplinary programmes, a contradiction between the work of Liscombe (2000) and De Mey (2000) throws up a debate relating to the point of entry to education that is worthy of consideration.

6.6.6 Point of Entry to Interdisciplinary Education

Liscombe (2000) points out that opponents of the Individual Interdisciplinary Studies Graduate Program at the University of British Columbia in Canada claim that interdisciplinarity can only occur through a systematic reorganisation of undergraduate curriculums – applicants for this programme have to make a strong case for their area of study being beyond the scope of relevant departmental postgraduate programmes. Conversely, De Mey (2000) suggests that undergraduate level is too soon to introduce complex issues that cross disciplinary boundaries and that interdisciplinarity should only be introduced following a firm grounding in one discipline at undergraduate level.

The opinions of the six interviewees with expertise in interdisciplinary educational initiatives (Andrew Edkins, Paul Kirby, Julie Thompson Klein, Sebastian Macmillan, William H. Newell and Gerard Wood) were relevant to this issue of debate. Each expressed support for at least an introduction to broad ranging issues in the first year of undergraduate programmes, and subsequent deeper learning experiences at postgraduate level. William H. Newell provided this pragmatic and all-encompassing analogy:

“It's like asking, at what level should you teach students physics? And the answer is, well, you can teach it at any level, it's just got to be more sophisticated and more in-depth if it's at a later level.”

Reflecting the views of other built environment educators, Sebastian Macmillan suggested that prior to setting interdisciplinary project tasks in subsequent years, a common first year at undergraduate level could give students the opportunity to become more informed in terms of their career path options:

“At the end of that first year, people become much more informed about what the different roles are and can make an informed choice about what they're going to do by way of that further single-discipline development.”

Vincent Nadin, who having worked in England, now teaches spatial planning at Delft University of Technology, explained that common first years in the Netherlands at undergraduate level have proven successful in terms of broad skill bases and diverse career paths:

“In Delft all undergraduates in the built environment do the same course from the start, which is mostly design, and there are opportunities for specialisms to contribute at various points (building technology, real estate, planning, etc.).”

The empirical data strongly suggested that in contrast to claims that mastery of a discipline should be a prerequisite to interdisciplinary education, an early set of common learning experiences at undergraduate level would be a valid starting point. But despite the level at which students enter interdisciplinary educational initiatives, it is obviously important for them and their potential employers to understand the likely outcomes of their participation.

6.6.7 Educational Outcomes

Repko (2007) comments that an initial clear understanding of the meaning of interdisciplinarity is essential to successful educational outcomes. Both Repko (2008a) and Richter *et al* (2009) reference a substantial body of research in identifying the concern that in the past, there has been a lack of clarity on measurable outcomes and indicators of quality for interdisciplinary education. Each offers their own suggested list of outcomes, which are detailed in Table 6.4.

Learning outcomes suggested by Repko	Learning outcomes suggested by Richter <i>et al</i>
<ul style="list-style-type: none"> • View the course theme, issue, problem, or question from the perspective of two disciplines (i.e. use disciplinary-based [and conflicting] perspectives to better understand a problem) • Perceive connections between the two knowledge (i.e. disciplinary) domains that pertain to the course problem or theme • Integrate conflicting disciplinary insights and viewpoints • Produce a more comprehensive understanding of the course problem or theme and test it by proposing a holistic solution 	<ul style="list-style-type: none"> • Identify contributions that new arenas of knowledge can make to their own disciplinary expertise • Identify ways in which their disciplinary expertise can contribute to the solution of interdisciplinary problems • Identify the value and contributions of other areas of expertise to a particular interdisciplinary challenge • Synthesise both concepts and approaches from multiple domains to develop an integrated solution to a given interdisciplinary challenge

Table 6.4 - Suggested learning outcomes for interdisciplinary education

As can be seen from Table 6.4, the learning outcomes suggested by the research of Repko and Richter *et al* are similar in nature, the main difference being the suggestion by Richter *et al* that the interdisciplinary process should be used to strengthen disciplinary expertise. The issue of educational outcomes was again an issue relevant to all six interviewees with expertise in interdisciplinary initiatives, who commented as follows on the skills and attitudes that should emerge from interdisciplinary education:

“Somebody who reflects on what they're doing in the moment in order to work out whether the solution or the approach or the response, whatever it is that they're doing, is the most appropriate one.” Andrew Edkins

“I think it's more than just doing some teamwork... it has to be about the mixing of disciplines and about the mixing of tasks and it does have to be progressive.” Gerard Wood

“...integrative skills are important and I would add that these days, collaborative skills and the ability to access and use diverse sources of knowledge and information are crucial.” Julie Thompson Klein

“I’m thinking about the buildings that society needs, old-fashioned public service attitude, for the public good. So I think the wider society needs people who understand how to build better buildings. In terms of who they are as people and professionals – generous, open-minded, inventive and analytical.” Paul Kirby

“Communication, collaboration, trust, negotiation and leadership.” Sebastian Macmillan

“See all sides of an issue, empathy, valuating experts, seeking out ambiguity, move beyond tolerance, seek out other perspectives and ideas, and synthesise and integrate.” William H. Newell

Ultimately, what appears to be suggested above is that the built environment needs to move away from pushing students (and consequently practitioners) into scientised silos of knowledge. Instead, individuals are required who are skilled and comfortable enough to surrender their own competitive instincts, objectives and concepts for the wider cause of meeting complex societal needs in the shape of achieving sustainable development (Jantsch, 1972).

Having considered all relevant aspects of best practice in North American educational establishments, what follows is an assessment of the development and current status of interdisciplinary education in the built environment in England.

6.7 Interdisciplinary Education – English Built Environment

6.7.1 Background

Information relating to interdisciplinary educational programmes and learning experiences in North America has been found to be extensive and detailed. Conversely, as has previously been concluded by Gann and Salter (1999) and Wood and Wu (2010), information relating to interdisciplinary programmes and learning experiences within the English built environment has been found to be extremely limited. This may be at least in some part due to the barriers and problems that are claimed to have existed, which are detailed in Table 6.5.

In 1998, the Ove Arup Foundation commissioned Gann and Salter to carry out a scoping study of built environment undergraduate and postgraduate courses. They found that due to the increasing complexity of design, engineering and managerial decisions, interdisciplinary skills were becoming essential in the professional environment but that disciplines were unwilling to share knowledge (Gann and Salter, 1999). Some of the issues outlined in Table

6.5, such as the need for suitable partnerships between academia, industry and government, can be linked to experiences in the USA, suggesting that all sectors need to work in partnership in order to develop successful interdisciplinary educational programmes.

Barrier/Problem	Detail
<i>Staff relationships</i>	Participants within research carried out by Wood (1999) claimed that some teaching staff feel threatened if those from other disciplines encroach on their territory.
<i>Students progress at different rates</i>	Makes it difficult in some instances to pitch educational programmes at the right level (Gann and Salter, 1999).
<i>Professional institutions</i>	Professional institutions act to protect disciplinary skill sets, which have been maintained through educational programmes, strengthening disciplinary demarcation lines (Gann and Salter, 2001; Gann and Salter, 1999; Griffiths, 2004; Temple, 2004; Wood, 1999; Wood and Wu, 2010; Morrell, 2015)
<i>Students unable to make an informed choice on suitable career paths</i>	Lack of suitable information for built environment career opportunities (Gann and Salter, 1999).
<i>Size of employing organisations</i>	Appetite for graduates who have the ability to think creatively and holistically within large firms but smaller firms tend to desire those with fundamental skills in a particular discipline (Gann and Salter, 1999).
<i>Academic prestige</i>	In order to be taken seriously by research funders or other sections of the academic community, some within built environment academia have sought to 'scientise' their subjects (Griffiths, 2004).
<i>Falling numbers in applications to universities</i>	Due to a lack of positive promotion of the industry and unattractive employment conditions (Gann and Salter, 1999).
<i>Government and industry</i>	Don't play a strong enough part in driving change within higher education (Gann and Salter, 1999).

Table 6.5 - Barriers to innovative educational initiatives

Although Gann and Salter identified a lack of employer support for postgraduate programmes in 1999, they put forward the view that a firm grounding within a professional discipline should be obtained before interdisciplinary skills are taught by postgraduate courses. This view again casts an interesting light on the fine balance involved in introducing interdisciplinary ideas at a point in time at which students are knowledgeable and comfortable enough to address complex issues and conflicts with the opinions of interviewees.

In order to establish a comparison with North American best practice interdisciplinary educational initiatives, detailed case studies drawn from experiences in the built environment

in England were sought from existing literature. However, as will now be discussed, such studies were difficult to find.

6.7.2 Built Environment Education – Case Studies

Some built environment related higher education websites contain brief case studies on what are described as interdisciplinary (but amount to multidisciplinary) experiences in built environment education. However, despite an extensive search, only 2 detailed sources of literature describing interdisciplinary learning experiences relating to built environment courses in England could be located, one relating to undergraduate programmes and the other relating to a postgraduate programme.

The experiences of Wood and Wu (2010) in setting up interdisciplinary project work within undergraduate programmes at the University of Salford demonstrate parallels with the longer term experiences recorded by academics in the USA.

In attempting to draw together 5 disciplines within collaborative project settings, Wood and Wu found that initially, not enough consideration had been given to the faculty resources required. They concluded that a core team of at least 5 tutors and a strong interdisciplinary module leader would be required for subsequent interdisciplinary workshops.

Wood and Wu also found that some students were not happy with the scope of the project brief, which was revised several times as a result. Students were also unhappy with group assessment and marking criteria, which caused concern for students seeking a high degree classification. These issues can be compared with the experiences of Newell (1994), who highlights the importance of pre-course preparation and suitable assessment criteria for coursework.

In setting out his substantial experience of interdisciplinary work at the Hastings Centre in New York, Callahan (2010) notes that it is important to maintain a disciplinary balance among faculty. What Wood and Wu (2010) found was that it was difficult to maintain a disciplinary balance among students due to the popularity of their quantity surveying course. In terms of promoting collaboration and in parallel with the earlier comments of Julie Thompson Klein in terms of the benefits of digital educational collaboration, the University of Salford's online '*Blackboard*' facility has proved to be an effective tool in helping to facilitate and support group work.

Kirby (2001) describes the inception of the IDBE Masters Programme at the University of Cambridge and his experiences of directing the programme. Kirby details how the IDBE programme was born out of a conference at the University of Cambridge in September 1991, which was sponsored by the Ove Arup Foundation. One outcome of the conference was that the Foundation offered startup funding for an interdisciplinary Masters degree and as a result, the IDBE programme has been running since 1993.

The aim of the IDBE programme is to engage young professionals with at least 3 years of experience in practice, thereby leaving them better placed to embark on broader areas of study. As Kirby suggests, this also gives faculty the license to leave interdisciplinary groups to interact without regular teaching intervention. Kirby states that through observation of group work, a measure of diversity was found in the differing motivations of the students, with six categories of individual resulting:

1. The competitors – faith in their own ability causes them to be frustrated by the apparent lack of competence within other disciplines, resulting in a desire to wrest some power from them.
2. Comfortable specialists – seek to enrich their discipline by exposure to new stimuli.
3. Team workers – wish to understand their co-collaborators more fully and hope to be heard more clearly.
4. Team leaders – need to understand the motives and methods of others in order to be more able to direct them.
5. Renaissance princes and princesses – no ambition to lead or be led, but hope to fulfill a quest for personal growth.
6. The disenchanted – have lived out the consequences of a premature choice of career and find that the consequent enforced specialisation leaves them professionally competent but uninvolved.

It seems sensible to suggest that in line with the thoughts of interviewees, the introduction of students to interdisciplinary issues at an early stage in undergraduate programmes may serve to iron out some of the differing student motivations outlined by Kirby, who was in fact one of the interviewees in question.

As very little information was available in relation to the establishment of built environment interdisciplinary initiatives in England, armed with knowledge gained from North American

case studies, the author questioned built environment interviewees further on their experiences of such issues.

6.7.3 Experiences of Interdisciplinary Educators in the Built Environment

The interviews carried out with leading experts in interdisciplinary education in the built environment were designed to expand upon an underdeveloped and emerging area with very little literature available from which to draw experiences.

There was unanimous support from the interviewees for universities as providers of interdisciplinary programmes for the built environment. Gerard Wood made the following observation in relation to obtaining industry support during the interdisciplinary projects developed by the University of Salford:

“I have to say we’ve engaged with local industry and local organisations in devising these scenarios and we’ve had great success.”

Like the IDBE Masters programme, which has been supported by the Ove Arup Foundation, Andrew Edkins spoke of the important part that industry played in the inception of the Strategic Management of Projects (SMP) Masters programme at University College London (UCL):

“The original idea for the course was Bob White, who at the time was running MACE, and his issue was this kind of silo thinking... they worked with other organisations, and those other organisations had completely different views and knowledge bases.”

Such partnerships could result in a positive outcome for the regulatory field (and the built environment as a whole) if more of the consultancies and companies that planning officers and building control surveyors engage with through application processes were to engage in interdisciplinary initiatives.

The question of whether interdisciplinary theory was utilised by built environment programmes was particularly relevant at undergraduate level, where students have less knowledge and experience of tackling complex issues collaboratively. Texts that might capture the students’ imagination are used by UWE, as detailed by Paul Kirby:

“Well, things like Reyner Banham, Architecture of the Well-Tempered Environment, maybe

Dean Hawkes's stuff, which is talking about buildings in that mainstream, some sense of environmental responsibility.”

However, regardless of the level of study, there was no evidence of the use of interdisciplinary theory, with the following statement by Gerard Wood being representative of the overall situation:

“We don't sit them down and tell them about the theory of interdisciplinary work and some of the definitions of it, we just say if you want a career in construction, property and design, you're going to have to work with other disciplines every day... and therefore at Salford we believe it's an important part of your educational experience.”

When it came to examining the additional time required in setting up and maintaining interdisciplinary programmes, experiences were very different.

Gerard Wood confirmed that the additional time (in comparison to disciplinary modules) required in setting up and administering interdisciplinary modules, which are reviewed annually, is around 50%. Paul Kirby's undergraduate programme at UWE, Architecture and Environmental Engineering, was modelled on a pre-existing programme, Architecture and Planning, making his curriculum relatively simple to set up, particularly as staff experienced in interdisciplinary issues were readily available. It is interesting that both of the undergraduate programmes offered by UWE are accredited by the three leading professional bodies covering the disciplines involved and that on completion of the programmes, students can take one of two established career paths.

At undergraduate level, all disciplines involved in interdisciplinary work are represented by faculty members, with knowledge integration being evident across two subjects at UWE, and disciplinary expertise/knowledge integration being evident at the University of Salford. At postgraduate level, Course Directors act as facilitators and bring in leading internal and external expertise regularly when subject focus is required. In this respect, teaching intervention is, as might be expected with more experienced student practitioners, less prevalent at postgraduate level but is essential nonetheless.

Investigation of assessment strategies found that interdisciplinary built environment programmes are very much aligned with those used for disciplinary courses. However, in relation to the development of interdisciplinary initiatives, Paul Kirby and Gerard Wood

suggested that students should be given the opportunity to comment on the performance of team members during and following interdisciplinary problem solving exercises.

The final consideration under the heading of interdisciplinary education in the built environment is the need to understand how knowledge is currently produced by the different disciplinary fields (Gann and Salter, 1999).

6.8 Knowledge Production in the Built Environment

Chynoweth (2006), through an examination of the work of Biglan (1973), draws out 5 main built environment subject disciplines (Management, Economics, Law, Technology and Design) and highlights their positioning and breadth of standing within Biglan's Disciplinary Model (see Figure 6.1).

Biglan (1973) outlines the fact that academic departments are organised by subject matter, and that a department in which there is more than one discipline is the exception. Figure 6.1 shows that as has been detailed by Griffiths (2004) and the papers contained in *Advanced Research Methods in the Built Environment* (Knight and Ruddock, 2008), there are a wide variety of academic areas within the multidisciplinary built environment. These academic areas populate all areas of the chart, which plots disciplines according to their position in terms of paradigm development. Biglan (1973) suggests that the social sciences and business areas (shown in the applied/soft quadrant) strive for a paradigm but are yet to achieve one.

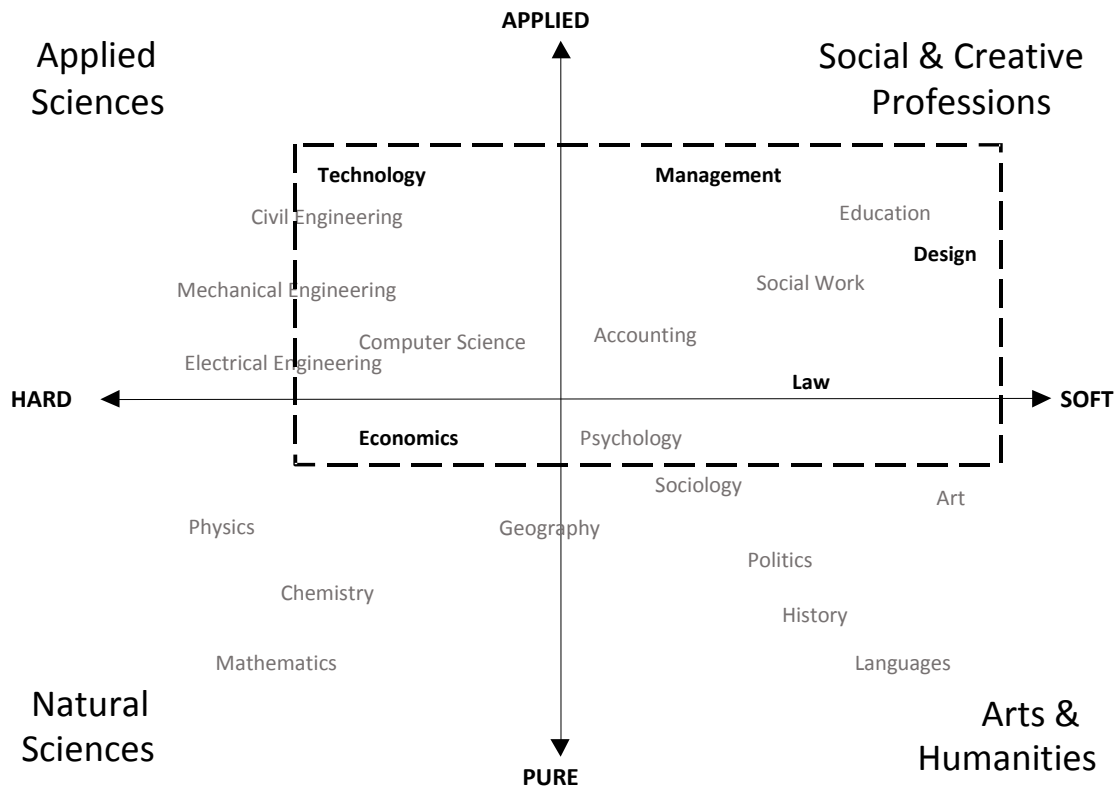


Figure 6.1 - The built environment knowledge base

Jantsh (1972) holds out architecture, urban planning and regional planning as fields that have moved towards interdisciplinarity and Chapman (2009) details the historic importance of architects and architect planners within the built environment. When considering the construction of our built environment, along with construction management and technology (Chynoweth, 2006), the disciplines of architecture and planning still provide important linkages between other built environment professions. However, interviewee Sebastian Macmillan suggested that rather than enabling architectural students to orchestrate complex design scenarios, existing architectural schools are isolating them from students from other disciplines who they will engage with in the field:

“In particular in schools of architecture, let's be honest, you don't expose them to the full range of stakeholders. They never meet the building control officer, a fire officer, the planning officer, a client, a structural engineer, a civil engineer, building services engineer, a façade specialist, a geo-technical specialist, an IT specialist. And so they carry on for years, untrammelled by any of these people and then suddenly they pop out at the end and supposedly they've got this terrific skill base which they've been developing in isolation, but they've lost touch with the full range of stakeholders that they need to work with. And I personally think that's a great pity.”

A common thread running through this research as a result of the methodological stance taken by the author is the potential redefinition of the built environment as a design science, with innovative artefacts being developed to solve complex problems in the field (Koskela, 2008; Voordijk, 2009). Accordingly, the implications of such a development on the educational issues considered by this chapter are now discussed.

6.9 Natural Problem Solving Commonalities: Sub-interdisciplinary Groupings

As Biglan (1973) suggests, rather than strive for an academic knowledge production paradigm, it would seem more appropriate for the built environment to utilise disciplinary groupings with natural problem solving commonalities in practice based environments. Rather than being tied to traditional paradigmatic boundaries of academic knowledge production, an approach allied to natural problem solving linkages in the practice of constructing sustainable development would appear to be more appropriate. If the ultimate aim were to see the built environment as a whole develop into an interdiscipline, such groupings with natural problem solving commonalities in practice based environments might be termed as *sub-interdisciplinary* groupings.

Adapted from Yamakawa (1997), Figure 6.2 outlines a potential update to the traditional project team arrangement shown in Figure 5.6, with sub-interdisciplines such as design and construction management being formed to collaboratively solve complex problems. Other sub-interdisciplinary groupings could be formed to tackle issues such as the management of the existing built environment within a gradual movement towards a full built environment interdiscipline.

Unlike Figure 5.6, Figure 6.2 includes regulation, moving away from a position of being conceived and experienced as an external constraint, towards being viewed as a key space of intermediation within the design process (Imrie, 2007; Fischer and Guy, 2009). Here, the architect acts as an intermediary between the design team and regulatory services during the design process. Where necessary, direct contact between members of the design team and construction management teams (i.e. specialists in energy, drainage, fire engineering, ecology, etc.) and planning/building control professionals is supported.

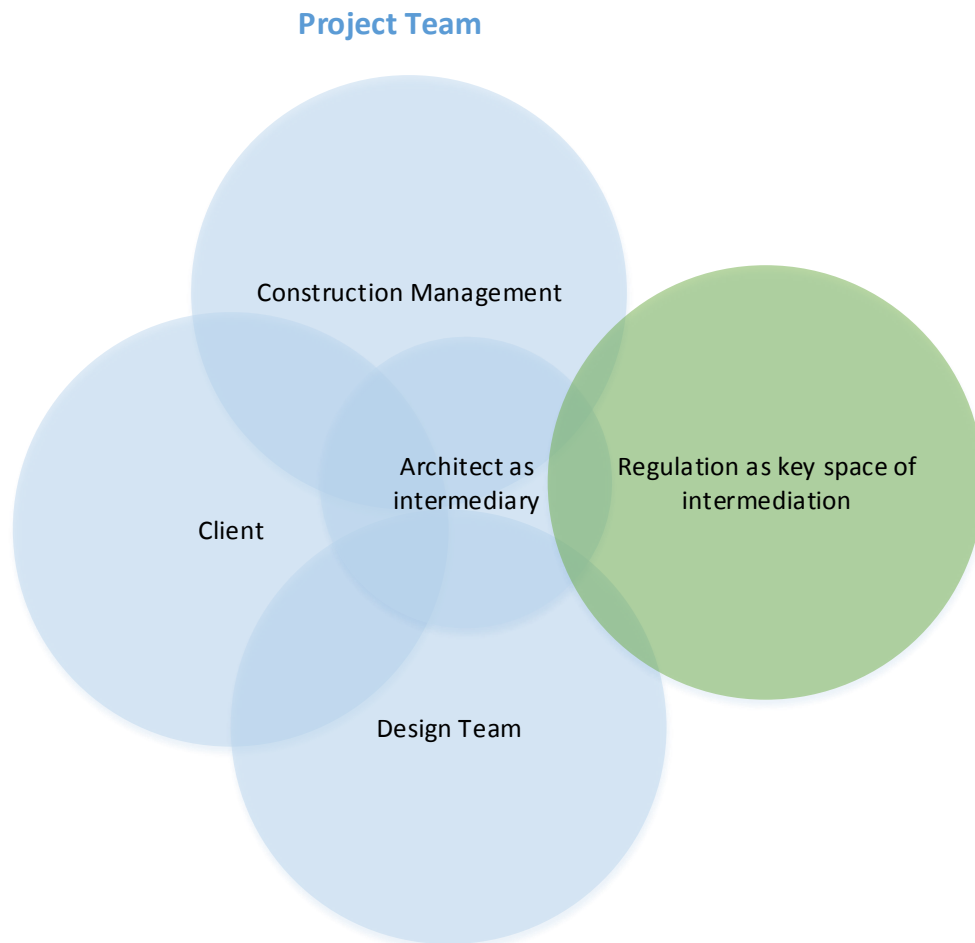


Figure 6.2 - Sub-interdisciplinary problem solving groupings for new development

Morrell (2015) holds out the view that professional bodies must find a common voice or risk being irrelevant as a continuing ethos of self-interest is resulting in them being frozen out of policy decision-making by the Government. Gann and Salter (2001) go as far as to offer what may be seen by many as a radical proposal, that ultimately, it is possible for the built environment to have one professional body, with sub-groups focusing on specialist knowledge domains. The built environment obviously has some way to go if it is to achieve such levels of integration.

6.10 Closing the Skills Gap: Summary and Model Requirements

6.10.1 Summary

Having been driven by their own differing objectives for many decades, planning officers and building control surveyors are now collectively central to ensuring that the Government's aspirations for sustainable development are met (Cullingworth and Nadin, 2006; Department for Communities and Local Government, 2007). However, despite the emergence and

development of this modern challenge, there is currently little if any correlation between their educational frameworks.

The framework for the planning profession is clear, detailed, and in most cases, disciplinary – planning is a Masters level profession leading to a single and universally recognised professional qualification. But with interview data reinforcing the problems outlined in Chapter 3, degree programmes do not appear to be producing planning practitioners with the necessary skills and knowledge to enable them to deal with their sustainability performance standards responsibilities. Conversely, although the technical demands outlined in Chapter 5 would seem to suggest that building control should at least be regarded as a graduate profession, no dedicated higher educational framework exists. Building surveying degrees, with curricula that are largely unconnected to the demands of the building control profession, would appear to be the qualification preferred by a disparate range of professional bodies competing for corporate members.

Collectively, existing educational frameworks for regulatory professionals are unlikely to enable them to collectively deal with the type of sustainability issues set out in Chapter 5. The codes for domestic and commercial sustainable development that emerged as a model requirement from Chapter 5 could prove to be useful instruments in demonstrating disciplinary and interdisciplinary building performance standard responsibilities to students.

Interdisciplinary higher educational initiatives are now required and if academe does not rise to the challenge of embedding necessary interdisciplinary values, skills and knowledge, it is unlikely that graduates will be enabled to envision and deliver truly sustainable development (Farron *et al.*, 2010). Although the research objective was to offer potential solutions to the regulatory skills gap, interviewees reinforced design issues set out in Chapter 5, suggesting that regulatory *and* design students should be brought together through interdisciplinary undergraduate initiatives, starting with a common first year.

Through many decades of experience, educational establishments in the USA have built up the sort of strong knowledge base that was missing when interdisciplinary educational initiatives in the English built environment were examined. American case studies, complemented by the thoughts of two of the world's most renowned academics on interdisciplinary education and theory, have detailed how through many years of trial and error, successful educational outcomes have been achieved. The use of interdisciplinary

theory, faculty with multidisciplinary knowledge sets, electronic information sharing tools and innovative assessment techniques have been central to this success.

As noted by Jones *et al.* (2010) interdisciplinarity in higher education initiatives in England was also found by this research to be on the margins of the mainstream. Having said this, experiences detailed by built environment interviewees with high levels of expertise, who could currently be said to be the exception to the faculty rule, were extremely valuable in formulating model requirements. The experts highlighted how vital education would be in having the ability to shape the early progress of young professionals by schooling them in disciplinary contributions to complex problems and the benefits of true interdisciplinarity. Many students are not likely to possess the traits associated with those who historically, have been drawn to interdisciplinary study as individuals rather than naturally being tutored in such thinking.

Gibbons *et al* (1994) detail the emergence of Mode 2 knowledge production, which is problem focused and generated in an interdisciplinary social context, as opposed to Mode 1, which is the more traditional disciplinary academic approach. Rather than being tied to traditional paradigmatic boundaries of academic knowledge production, a design sciences approach, allied to natural sub-interdisciplinary problem solving linkages in the practice of constructing sustainable development would appear be appropriate for the built environment. The opinions of experts at the forefront of developing built environment related interdisciplinary higher educational initiatives reinforced this assertion.

The National Academy of Sciences (2005) and Etzkowitz and Leydesdorff (1997) promote the importance of a ‘triple helix’ or partnership between academia, industry and government in innovative education strategies such as interdisciplinary approaches. In a field such as regulation, where government policy drives continually changing objectives, industry is the customer, and academia provides the educational foundations, such an approach would appear to be a sensible one. Interviewees confirmed the importance of links with industry in setting up built environment related interdisciplinary initiatives for design and management disciplines – as originators of performance standards, the involvement of Government in interdisciplinary initiatives for the regulatory professions would seem to be essential.

As advocates of the use of BIM technology, it would also seem to make sense for the Government to promote the schooling of collaboration between regulatory and design

students through the type of version of BIM L3 (containing a regulatory rule engine) discussed in Chapter 3 at the earliest opportunity.

6.10.2 Model Requirements

In line with the above chapter summary, research data has outlined the importance of the following model requirements of interdisciplinary educational initiatives:

1. Positive promotion of regulatory functions for the built environment to young people considering career options.
2. Adequate resourcing and experienced faculty in setting up interdisciplinary programmes, with faculty members being strong in their own discipline and knowledgeable in at least one other.
3. Use of a moderator (or faculty team leader) in each interdisciplinary session to bring order to activities.
4. A common first year within undergraduate programmes across the built environment to promote flexibility across diverse career paths.
5. Following a common first year, team projects in subsequent years through which students learn to solve complex problems as part of sub-interdisciplinary teams (i.e. regulatory, design, construction management) in a wider interdisciplinary setting.
6. A detailed analysis of disciplinaryity and what each discipline can bring to a complex problem being studied.
7. A grounding in interdisciplinary theory through the study of core texts in addition to regularly reviewed curricula that might ask students to collaboratively explore projects addressing the sustainability categories set out in Table 5.2.
8. A requirement for faculty members to teach using a common sense language rather than maintain a disciplinary dialogue.
9. A ‘triple helix’ approach (involving Government, industry and academia) to developing curricula that in relation to performance standards issues, are founded upon the codes for sustainable domestic and commercial development and sustainability checklists that emerged as a model requirement from Chapter 5.
10. The use of online and BIM L3 technologies to constantly aid information sharing and collaboration.
11. A design sciences approach to knowledge production that is allied to natural sub-interdisciplinary problem solving linkages in the practice of designing, regulating and constructing sustainable development.

12. Clear learning outcomes. The built environment needs to move away from pushing students (and consequently practitioners) into scientised silos of knowledge production. Instead, individuals are required who are skilled and comfortable enough to surrender their own competitive instincts, objectives and concepts for the wider cause of meeting complex societal needs in the shape of achieving sustainable development.

The model requirements set out above would require the type of pan industry shift in focus in education that was recently recommended by the Zero Carbon Hub (2014a) in highlighting the detrimental effect of poor skill levels upon the performance of completed development. By incorporating the above model requirements, it should be possible to develop an educational element of the model that promotes the gradual integration of regulatory insights, knowledge and skills, as set out by commentators such as Amey and Brown (2005).

Chapters 5 and 6 have served to outline the increasing complexity of technical requirements associated with regulation for the built environment in England and have begun to set out how such complexity might be overcome. However, as suggested in Chapter 3, the consolidation of building performance standards and the requisite skilling up of practitioners would seem to be pointless if the service delivery framework within which they operate does not support such change. Accordingly, Chapter 7 will seek to develop model requirements that will form the basis of a service delivery framework with the potential to support consistent interdisciplinary collaboration between planning and building control services in England.

7 Define Requirements of the Model: Creating a Service Delivery Support Framework for Consistent Collaborative Working

7.1 Introduction

As detailed in Chapter 3, the manner in which the competitive building control sector has evolved over the last 30 years has resulted in an increasingly fragmented regulatory service delivery framework in England.

Figure 3.1 has set out the current variations in regulatory service provision in graphic form, demonstrating the increasingly prevalent '*public choice*' features of the building control sector in England. The number of service delivery options that are remote from local planning services continues to grow, making it increasingly difficult to envisage a collaborative regulatory environment at a local level on a consistent basis. The monopolised planning system, which is often politicised at a local level, does not exhibit the same public choice/risk based features of the building control sector (Cullingworth and Nadin, 2006). Collectively, the situation would appear to be at odds with recent Government calls for performance driven competition for local authority service commissions and accordingly, joined up local service provision for the benefit of local communities (HM Government, 2011a; Local Better Regulation Office, 2009).

The way in which the building control sector has been shaped on the back of a mode of competition established in the 1980s (Foulger and Stephenson, 2004) has also created a sector which is exhibiting many traits of market failure (Baldwin and Cave, 1999; Esty and Geradin, 2001). In some instances, rather than being supportive of the drive for innovative sustainable development, these traits are resulting in a regulatory function which is acting against it, particularly with reference to the volume house building sector (LABC, 2014c; Lane, 2010).

With substantial pressures being placed on local authority budgets (HM Treasury, 2010), applicants for public sector planning and building control consents are facing the increasing likelihood of having a proportion of their fees used to cross subsidise other public services (Arup, 2010; Department for Communities and Local Government, 2009b; Key, 2012). This scenario conflicts with the 'cost recovery only' or 'non-profit' basis set out by the Government for administering charges for fee earning public services (HM Treasury, 2007).

Customers of both public and private sector building control services are currently paying a proportion of their fees towards ongoing marketing activities, as well as 20% VAT because competition exists on a national basis (HM Revenue & Customs, 2013). Customers of private sector building control services are paying a proportion of their fees towards profit taken by directors/shareholders, as well as registration fees paid to the CIC (Ankers, 2013). As suggested by Esty and Geradin (2001), the ‘across local borders’ nature in which competitive regulatory frameworks are operated would appear to create inevitable inefficiencies that are detrimental to public interests.

In light of the problems set out in Chapter 3 that are associated with the current disparate regulatory service delivery framework in England, Objective 3 of this thesis is to: *Formulate a service delivery framework that would support consistent collaborative working between planning and building control services and meet Government aspirations for sustainable development through non-monopolistic, continuously improving and not for profit regulatory services at a local level.*

Accordingly, utilising the knowledge/theory base and research methods outlined in Chapter 4, the aim of this chapter is to construct and define the requirements of a service delivery framework capable of meeting the above objective.

The chapter begins by revisiting the subject of ‘*better regulation*’ for the built environment in the 21st Century as a means of establishing regulatory principles that might provide the basis for solutions to the above objective. It will then seek to draw model requirements from recent Government led reviews of public service delivery and information relevant to the current local government transformation initiative – Localism.

7.2 Better Regulation for the Built Environment in England

7.2.1 Better Regulation and Public Choice

Having been around since its introduction in the Tudor and Stuart periods (Ogus, 1992), regulation has generally been viewed as an activity that restricts behaviour, thereby preventing the occurrence of undesirable activities and market failures (Baldwin and Cave, 1999). But as outlined in Chapter 3, competitive regulatory agencies of the 21st Century, including building control, would appear to have become ‘*captured*’, operating for the benefit of regulated markets rather than in the wider public interest (Potter *et al.*, 2014).

Whilst some interviewees suggested that competition within building control has resulted in a more business-like approach than planning, feedback broadly reinforced the problems set out in Chapter 3. Speaking with vast experience in public and private sector building control, David Clements and Martin Conlon both expressed views that constant bickering between the sectors is resulting in a low reputational status for building control and regulatory fragmentation. As experts in regulatory policy and theory, Mike Feintuck and Julia Black stated that through a competitive regulatory system such as building control, inconsistencies and losing sight of desired regulatory outcomes were inevitable outcomes. With direct experience of such outcomes, Ant Wilson offered the following view, which was similarly expressed by other interviewees:

“Building control is not consistent. I’ve done work with LABC and approved inspectors – they all don’t always trust one another and they come down to the lowest common denominator of we can’t do it because it’ll cost us more. If we do a proper job we wouldn’t ever win it. So, because it’s competitive, I think in the end the building loses out.”

Echoing problems detailed in Chapter 3, Paul O’Brien held out the opinion that ultimately, hidden costs (i.e. VAT, profit, marketing, etc.) not known to or considered by stakeholders result in increased costs for customers:

I think we need to recognise that the move towards choice will increase costs and I suspect that for numerous services that local government provides, the public just want us to get it right.”

Mirroring the views of interviewees, Baldwin (2010b) suggests that the Government’s current public choice based better regulation regime is founded on aspiration, resulting in benchmarks whose only consistent output is lowest cost and least intrusive, in turn creating divergent and inconsistent approaches to regulation. Risk assessment, a strong feature of the current better regulation regime in England, is widely cited as a contributing factor to such inconsistency.

7.2.2 Better Regulation and Risk Assessment

According to MacGillivray *et al.* (2011) risk based regulation has become something of a mirage, which does little justice to the far more complex, messy, and multidimensional character of governance as practiced. The uncritical adoption of inspection methods without attending to the matters of how risks are defined, who has a stake in their definition and assessment, and what the practical limitations are to the implementation of risk assessment

appear to have become prevalent features of regulation in the UK (Lloyd-Bostock and Hutter, 2008; Phipps *et al.*, 2011).

Attempts to regulate according to risk reveal often under-examined regulatory challenges and create new ones by putting greater pressure on such factors as evidence, institutional capacities and decision-criteria (Rothstein *et al.*, 2006). Like the hidden cost of competitive regulation, interviewees suggested that risk based regulation can in fact prove to be more onerous and costly than setting out standardised inspection regimes. In this sense, Julia Black summarised the situation as follows:

“I think risk based regulation is much more challenging for politicians than they really understand. Having to fill in ridiculous amounts of information. I think there is an onus on regulators, to actually think about data requirements and actually think, well, how much of the information it will require do we actually use and how much just effectively sits in a box somewhere.”

A number of interviewees raised an issue discussed in Chapter 3, whereby the deregulated building control system in New Zealand was blamed for extensive building defects (Bill, 2010; Meacham *et al.*, 2005). Accordingly, concerns were expressed that while risk assessment may benefit developers, defects may result for which the end users of buildings have no means of compensation or redress. Chris Findley and Julia Black suggested that compensatory measures should be put in place by regulators inspecting on a basis of risk to cover the eventuality of defects arising at a later date. In the event of a continuation of current risk based regimes, Mike Feintuck highlighted likely regulatory thought processes in a competitive environment:

“If we don’t define risk, then risk becomes a very convenient cover for discretion.”

Baldwin *et al* (2010b) suggest that the notion of politicians trading regulation for re-election due to interest group demands are now being re-examined, particularly in light of the recent banking crisis, which was largely the result of a ‘soft touch’ approach to the regulation of financial institutions. Baldwin (2010) suggests that any government seeking to achieve ‘better regulation’ will come up against three central challenges/questions:

1. What is better regulation?
2. How can it be achieved?

3. How can one assess whether it has been achieved?

In attempting to address the above questions, an increasing number of commentators in the field of regulation have begun to advocate a re-examination of the merits of *public interest* theory.

7.2.3 Regulation in the Public Interest

Baldwin *et al* (2010b) suggest that the time has come to move away from ‘*public choice*’ centred regulation and look again at the merits of ‘*public interest*’ theory. The regularly cited work of Ogus (1994) set out public interest goals, loosely described as ‘community values’, that 20 years later appear to be well aligned with the Government’s Localism agenda. According to Bell (1992, p. 30):

“The public interest is used to describe where the net interests of particular individuals may not be advanced, but where something necessary to the cohesion or development of the community is secured.”

The seminal work of Stigler (1971) set the scene more than 40 years ago for what appears to have since become a recurring theme – that behaviour in politics is essentially no different to that in the market, resulting in policies that tend to maximise individual and group preferences rather than serving the public interest. This view was reinforced by interviewees, with Mike Feintuck’s expansion upon Selznick’s (1985) definition of regulation which was set out in Chapter 3 being indicative of the opinions expressed:

“He [Selznick] talked about sustained and focused control exercised by a public agency over activities that are valued by a community. And that’s sort of a classic starting point. I always would add to that, just to make it more explicit, the idea that we’re talking about limiting private power. Inherent in the concept of regulation is the limitation of private power. I think that regulation has to meet expectations of the law, of the constitution and of democracy. Are there values that go beyond the economic? Is there still something we can think of as community values or public interest values? Because, otherwise, all we’re left with is regulation intervening to correct market failure and I think there has to be more to regulation than that.”

Baldwin and Cave (1999) suggest that historically, the problem with public interest theory is that an agreed conception is difficult to identify. They postulate that in the past, critics of public interest theory have argued that regulatory complacency can result, with the training of practitioners becoming neglected, leading to low levels of professional competence. However,

the outcomes of Chapter 6 would seem to suggest that this problem is actually more prevalent in the building control sector due to the fragmentation caused by public choice.

The public sector has changed significantly since Baldwin and Cave set out problems associated with public interest theory, with monopolistic complacency being driven out through severe budget cuts and the creation of a public sector market ideology (HM Government, 2011a; HM Treasury, 2010). Again, interviewees reinforced the presence of a more appropriate environment for public interest theory in the 21st Century, with Mike Feintuck again best summarising the broader body of opinion:

“There are other ways of incentivising behaviour – there’s nudges that you can give to public services to encourage them to operate in different ways. It doesn’t have to be subject to market or quasi-market forces. What you’ve got to do is you’ve got to measure the outcomes and see the extent to which those outcomes actually deliver things which are of value.”

With appropriate performance measures in place as part of the requirements of such levels of transformation, the public sector of the 21st Century is likely to be a more challenging environment for regulation of the built environment in the public interest. But as will now be discussed, the challenges set by global climate change provide a necessary locus within the built environment for regulation in the public interest.

7.2.4 Regulation of Sustainable Development in the Public Interest

As outlined above, market failure is one of the main drivers of regulation. Climate change, central to the requirement for sustainable development, has become so severe an issue that it has been described as “*the greatest market failure the world has ever seen*” (Stern, 2007; p. xviii). In light of such modern challenges, a public interest regulatory model, which concentrates on general well-being, reflects common values and can contrasted with sectional or vested interests, would seem not only appropriate, but vital for the built environment (Bartle, 2009).

Ogus (1994) suggests that an acceptable public interest model should be linked to citizenship expectations, with fundamental measured aims that should be protected. In contrast to the current public choice and risk based building control regime, public interest focused regimes take a more consistent approach to issues such as inspection. Accordingly, their broadest aim is to demonstrate public-spiritedness and efficiency that the public can have confidence in (Baldwin and Cave, 1999; Bartle, 2009).

As outlined in Chapters 5 and 6, the experts interviewed as part of this study were unanimous in their beliefs that the level of regulation should be measured to ensure that developers are not unduly hindered. However, they were also unanimous in suggesting that sustainable development in the long term interests of communities should be *the* primary regulatory objective of planning and building control services. Interviewed as a leading authority on regulation both nationally and internationally, Julia Black underlined the opinions of participants working within the built environment:

“The whole message of why the regulation is there in the first place gets completely lost. They [the Government] don’t put across the message of why the regulation is there in the first place and what it is that it’s trying to achieve. And there is something there that it’s trying to achieve, which is over and beyond the interest of the business. And the reason why the business is being regulated is we’re trying to achieve some wider social good here, which is, in this particular instance, long-term sustainability issues over short-term profit.”

Revisiting the three questions posed above by Baldwin (2010) and considering the outcomes of Chapters 5 and 6 at this point, a picture appears to be emerging whereby better regulation of the built environment might be considered as an interdisciplinary public interest model. The manner of achievement of such a model, Baldwin’s second conundrum, will not emerge until the results of the study are set out in later chapters.

In terms of answering Baldwin’s third question and meeting the challenge set by Ogus (1994), a means of assessing the achievement of measured aims began to develop as a theme in Chapter 5 through the proposal to label sustainable development. This could be seen as the beginnings of a performance framework for regulatory bodies acting in the public interest, with enhanced transparency being central to demonstrating that modern public interest objectives have been met (Bartle, 2009). In attempting to balance the needs of developers and regulators, other issues that might form part of a regulatory performance matrix were considered by Penfold (2010) as part of his recent review of non-planning regulatory bodies in the UK.

7.2.5 *The Penfold Review*

In July 2010, the report *Penfold Review of Non-Planning Consents* was published by the Department for Business Innovation & Skills (Penfold, 2010). The purpose of the review was to examine the role that non-planning consents such as building control play in business investment decisions and address as many barriers to such decisions as possible.

Penfold suggested that non-planning consents were having a serious impact on the effectiveness of the end to end development process and that developers were frustrated by inconsistency, uncertainty about the timing of decisions, and finding difficulty in resolving differences of view across and between consenting bodies. Figure 7.1 (Penfold, 2010) summarises the concerns raised by respondents to Penfold’s review under the main themes of complexity, uncertainty and culture/working practices.

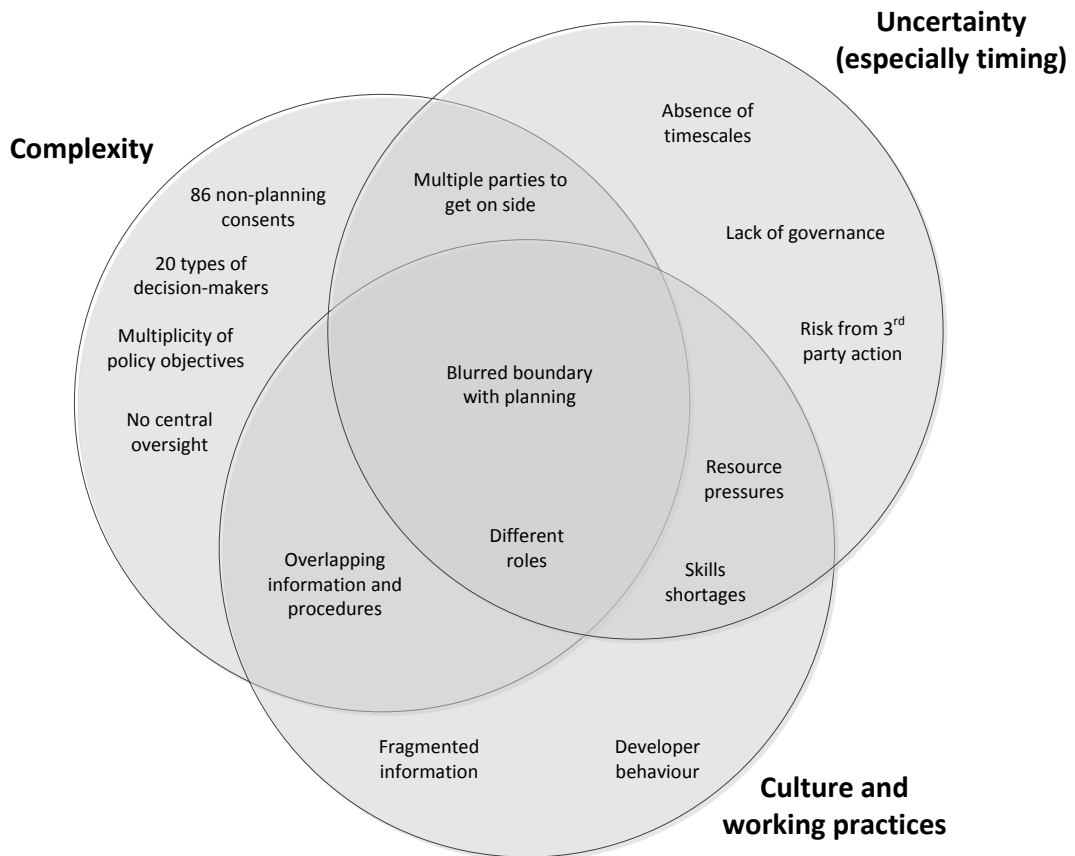


Figure 7.1 - Summary of concerns raised by respondents to the Penfold Review

The report suggested that all factors relevant to ‘if’ a development could go ahead should be considered by planning and non-planning regulatory bodies at the same time, and that subsequently, non-planning consents should concentrate on ‘how’ the development is built and operated. As such, whilst highlighting the existing silo approach to regulatory work within local authorities, Penfold set out the basis of a collaborative regulatory framework, designed to benefit all stakeholders in the development consent system. Among the main recommendations made by Penfold were that the Government should:

- ensure that fees for regulatory services are set in line with the not for profit ethos of the report *Managing Public Money* (HM Treasury, 2007);
- create an environment in which performance information on all regulatory bodies is readily available;
- encourage local authorities to adopt ‘development management’ good practice, whereby a designated development coordinator is appointed for all major projects and guidance and pre-application advice is set out in a clear statement; and
- promote the use of pre-application discussions and put in place clear rules of engagement between planning and non-planning consent decision makers.

In making the recommendation that the Government should create an environment in which performance information on all non-planning bodies is readily available, Penfold set out a framework for a ‘*Quality Development Code*’. As well as setting out service standards, it was suggested that there should be a commitment to publishing information on performance against the standards set, and to seeking and acting upon customer feedback. Only then might robust national benchmarking data emerge that would highlight high and poorly performing local authorities.

When asked to expand upon his review and offer views on the situation since its publication, interviewee Adrian Penfold held out the belief that performance measurement should still be seen as the primary driver for continuing regulatory efficiency and improvement. However, having highlighted within the review that a lack of strategic oversight of regulation was a source of inefficiency, inconsistency and frustration among stakeholders, he stated that he had seen no evidence since that might suggest an improvement in the situation. Like Julia Black and Mike Feintuck, Adrian Penfold suggested that without a central body or figurehead to orchestrate change, the siloed and territorial nature of government departments would make it difficult to envisage joined up regulatory policy.

The *Penfold Review of Non-Planning Consents* is part of a considerable body of work since the late 1990s that has sought to scrutinise and modernise planning and building control service delivery in England. Having analysed this work, the author found that whilst painting a picture of the often disjointed manner in which current service delivery framework has evolved, his literature review offered little in the way of helping to shape the model requirements sought by this chapter. Accordingly, this literature review is offered as an annex

to this chapter (Appendix C), giving readers interested in the shaping of the current situation an opportunity to obtain an overview.

7.2.6 *Summary*

The overriding ethos of the regulatory system for the built environment in England would appear to be vitally important to any change programme designed to result in better regulation and consistent collaboration between different regulatory regimes. With climate change, the world's greatest ever market failure driving the need for sustainable development (Stern, 2007), it seems clear that the outcomes of public choice and risk based building control outlined in Chapter 3 are not capable of meeting current and future societal needs. Such outcomes are in keeping with those in other markets regulated through risk based means, most notably leading to failure within the banking sector in 2008 (Baldwin *et al.*, 2010b). Data obtained from interviews with regulatory experts has reinforced and embellished the themes emerging from existing literature in this regard.

Efficiency, value for money and transparency are now central to the Government's desire to see a performance driven market ideology within the public sector (HM Government, 2011a). The problems associated with public interest theory in the past include complacency as a result of monopolised service delivery (Baldwin and Cave, 1999). The developing market ideology within the public sector on the back of severe cuts in public spending by the Government is unlikely to support such inefficiencies. Accordingly, the utilisation of *public interest* centred regulatory foundations to support the service delivery changes required to optimise levels of sustainable development would now appear to be a necessary *and* viable option (Bartle, 2009). Again, the rich data obtained from interviews suggests a belief that combined with austerity and an element of localised competition, performance measurement should now be a sufficient driver of regulatory service efficiency at a local level.

In balancing the needs of developers and the wider public, such regulatory foundations could serve to standardise performance standards, inspection and consequently, fees. With fewer variables, developers would be in the position of being able to set out firmer plans for their projects and ultimately, the primary aim of regulation would be an optimisation of the environmental performance of buildings (Bartle, 2009).

Having examined the requirements of better regulation as the basis of a service delivery framework capable of supporting consistent interdisciplinarity between planning and building

control services, what follows is an analysis of recent public sector transformation initiatives. Whilst attempting to draw out model requirements with the potential to contribute to the desired service delivery framework, this analysis will use Localism, the Government's latest transformation initiative, as a benchmark to direct and shape further enquiry.

7.3 Local Government Service Reform

7.3.1 Background

After many years of consideration, a consensus has not yet been reached on how regulation of the built environment in England might best be approached to ensure that the development consent system is more consistent and meets present and future societal needs. But in addition to pressures to change the planning and building control systems due to the shortcomings outlined in previous chapters, local authorities are continually being required to operate with diminishing financial resources.

Public service reform was effectively commenced by the Conservative Government led by Margaret Thatcher in the 1980s, when decentralisation, large-scale privatisation and an overall contraction of the state became major elements of policy (Di Domenico *et al.*, 2009). This reform continued following the election of Tony Blair's 'New Labour' Government in 1997 and has been ongoing to the present day.

Gershon's report *Releasing resources to the front line* (2004) began the transformation of local government service delivery in earnest in the 21st Century by identifying potential areas for savings within the public sector of more than £20 billion over a 4 year period. Gershon defined efficiency as reforms that achieve:

- a reduced number of inputs (e.g. people or assets), whilst maintaining the same level of service provision; or
- lower prices for the resources needed to provide public services; or
- additional outputs, such as enhanced quality or quantity of service, for the same level of inputs; or
- improved ratios of output per unit cost of input; or
- changing the balance between different outputs aimed at delivering a similar overall objective in a way which achieves a greater overall output for the same inputs (allocative efficiency).

Areas such as back office functions, procurement, transactional services, policy and regulation were targeted by Gershon, with suggestions that regulation should be more risk based, holistic and simplified. The Labour Government followed up Gershon's recommendations on regulation through their report *Consent Regimes – Reducing Unnecessary Bureaucracy* (Office of the Deputy Prime Minister, 2006), which recommended that nearly 50 regimes be repealed, consulted on, modified or reviewed.

In October 2006, the Government examined the effectiveness of local authorities through their White Paper *Strong and prosperous communities* (Government, 2006; Department for Communities and Local Government, 2006e), which resulted in a request for borough and county councils to make cases for or against the formation of unitary authorities. What the White Paper sought was a means to create better and more accountable public services for less money by cutting out wasteful processes and creating efficiencies by unifying the resources of neighbouring local authorities where appropriate. Regardless of the choices taken by local authorities, the Government's 2007 Comprehensive Spending Review (House of Commons Treasury Committee, 2007) set local authorities a target of 3% annual efficiencies, resulting in further targeted savings of £4.9 billion over a four year period up to 2011.

Subsequently, the worst global recession since the 1930s, which began in 2008, led the incoming Conservative/Liberal Democrat Coalition Government's 2010 Comprehensive Spending Review to demand that local authorities look for 7% annual savings over a 4 year period in order to reduce a large public spending deficit (HM Treasury, 2010). With the cumulative effect of reducing local authority budgets by 28% by 2015, the Government's spending cuts signaled the end of an era for local government, the cuts going beyond the efficiencies outlined by Gershon (2004). The cuts have resulted not only in service budgets being rationalised, but also in the closure of many public facilities and the cessation of non-statutory services to the public (Boardman and Morales-Oyarce, 2012). As part of the Government's 2013 Spending Round, overall local government spending was reduced by a further 2.3% for the 2015/16 financial year (HM Treasury, 2013).

Boardman (2012) suggests that traditionally, local authorities have tackled spending cuts through 'salami slicing' service budgets and that due to the unprecedented demands created by the Government's 2010 Comprehensive Spending Review, a fundamental rethink of how public services are delivered is required. According to Boardman, the emergence of the Coalition Government's Localism agenda is widely viewed as the catalyst for such a rethink.

7.3.2 *The Emergence of Localism*

On coming to power in May 2010, the Coalition Government immediately set out a commitment for localised decision making, reducing the cost of public service, and improving public service standards through their vision for the *Big Society* (Conservative Party, 2010a). In the paper *Decentralisation and the Localism Bill: an essential guide* (HM Government, 2010, p. 9), the Government stated that:

“Public sector monopolies not only limit the choice available to service users, but ration the opportunities available to other potential providers – especially those in the voluntary sector. Restricting diversity of provision means there is less innovation – and therefore improvement in service delivery; less variation – and therefore response to local conditions; and less competition – and therefore progress on efficiency.”

Within a year, the Government had put forward their Localism Bill (Department for Communities and Local Government, 2011b), which was given Royal Assent in November 2011. The main focuses of the resulting Localism Act 2011 were:

1. new freedoms and flexibilities for local government;
2. new rights and powers for communities and individuals;
3. reform to make the planning system more democratic and more effective; and
4. reform to ensure that decisions about housing are taken locally.

The Department for Communities and Local Government suggest that in giving councils a *general power of competence*, the Act gives them more freedom to work together with others in new ways to drive down costs, stating that (2011a, p. 8):

“The best councils are constantly on the lookout for new and better ways to design and deliver services. Many recognise the potential of social enterprises and community groups to provide high-quality services at good value, and deliver services with and through them.”

As detailed in Chapter 3, a new *National Planning Policy Framework* was also developed by the Coalition Government as part of their Localism agenda. This states that accessible local services that reflect the community’s needs and support its health, social and cultural well-being are central to the goal of achieving a high quality built environment (Department for Communities and Local Government, 2012b).

Council overview and scrutiny committees, who currently play a crucial role in examining the work of local public bodies by helping to make sure they offer a good service to residents, now have greater flexibility in how they carry out their role under the Localism Act 2011. This again suggests that performance measurement will come to the fore in years to come. It is likely that performance measurement will become an important tool in deciding how services are delivered and by whom, with the Government's Open Public Services agenda creating a market ideology through a diverse range of public service providers.

7.3.3 *Open Public Services White Paper*

As part of their Localism agenda, the Coalition Government published their *Open Public Services White Paper* in July 2011, stating that:

"We want control of public services to be as close to people as possible. Wherever possible we want to decentralise power to the individuals who use a service. But where a service is used by a community collectively, the control over services needs to be exercised by a representative body. In these circumstances we are clear that the principle should be to decentralise power to the lowest appropriate level." (HM Government, 2011a, p. 8)

The Coalition Government's plans for public service modernisation are set out in the White Paper, based upon 5 principles:

1. *Choice* – Wherever possible the Government aim to increase choice.
2. *Decentralisation* – Power should be decentralised to the lowest appropriate level.
3. *Diversity* – Public services should be open to a range of providers.
4. *Fairness* – Fair access to public services.
5. *Accountability* – Public services should be accountable to users and taxpayers.

In applying their 5 principles to different public services, the Government states that it recognises that there can be no one-size-fits-all policy prescription and that different public services have different characteristics. As a result, three different categories of public service are defined (HM Government, 2011a):

1. *Individual services* – Personal services such as education, skills training, adult social care, childcare, housing support and individual healthcare that are used by people on an individual basis.

2. *Neighbourhood services* – Services provided very locally and on a collective rather than an individual basis, such as maintenance of the local public realm, leisure and recreation facilities, and community safety.
3. *Commissioned services* – Local and national services that cannot be devolved to individuals or communities, such as tax collection, prisons, emergency healthcare or welfare to work.

If alternative modes of service delivery were to be considered for statutory regulatory services such as planning and building control, it is clear that they would fall within the *commissioned services* category.

7.3.4 Commissioned Public Services

In relation to commissioned public services, the Government makes clear in the Open Public Services White Paper their intention to open up monopolised and quasi-judicial functions such as planning to competition. Local politicians play a vitally important role in the planning process and as such, it is unlikely that this service area will ever be subjected to competition nationally on a project by project basis, as is the case with the building control system in England.

Ultimately, the Coalition Government's framework for the transformation of local government services through their Open Public Services White Paper (HM Government, 2011a) and the Localism Act 2011 is intended to offer the following benefits:

1. *For individuals* – People should have more choice, especially in the services they need and care most about and the money to fund the services to which they are entitled should flow to providers in response to the choices that people make.
2. *For communities* – Any neighbourhood should be allowed to take control of very local powers and services (such as street improvement, recreational services, parking and licensing of certain premises, other than for the provision of alcohol) via their parish, town or neighbourhood council.
3. *For local government* – The Government's plans to decentralise the funding and delivery of public services should give local councils more freedom to innovate in the services that they control and greater opportunities for influence across public services in the round through leadership.

4. *For public service staff* – The Government’s plans tear up the rule book that stops public sector staff doing the job as they see fit, restoring professional responsibility and discretion, offering public service staff new opportunities to innovate, improve and inspire, and encouraging public sector staff to start their own enterprise. Under Section 81 of the Localism Act 2011, local authorities have a duty to consider an expression of interest from two or more employees wishing to run their own service.
5. *For independent providers of all sizes from any sector* – New opportunities for all types of provider to compete to deliver public services and, if successful, to innovate and expand as purchasing power shifts to individuals, neighbourhoods and a more diverse range of commissioners.

Since publication of the Open Public Services White Paper and the follow up reports Open Public Services 2012 (HM Government, 2012), and Open Public Services 2013 (HM Government, 2013), many public services in England have been mutualised, with employees forming not for profit social enterprises. The range of public service sectors that have adopted this approach since 2010 include fire and rescue, adult and community learning, culture and libraries, social work, social care, education, health, leisure, environment, housing and community safety (Mutuals Taskforce, 2012b). As part of the process of becoming staff led social enterprises, service teams are required to demonstrate how such change will be of benefit to sustainable local communities and development.

7.3.5 Sustainable Development and Service Reform

A golden thread runs through two major Acts attributable to public service delivery; the Local Government Act 2000 and the Localism Act 2011 – a requirement for sustainable local communities and development. The Local Government Act 2000 requires local authorities to promote the improvement of economic, social and environmental wellbeing within their localities.

It would appear that local authorities will fail to demonstrate this in terms of the operation of their regulatory services if their own economic needs prevail and regulatory services are not supported in a manner that allows them to utilise income appropriately and operate under a sustainable business model. If an expression of interest to run a public service is accepted by a local authority, in accordance with the Localism Act 2011, it must carry out a procurement exercise and consider how it might improve social, economic or environmental well-being by means of the exercise.

When considering the discussion contained in Chapter 3 in relation to sustainable development, social, economic and environmental wellbeing relate to the Government's 1999 strategy for sustainable development (Department for the Environment, 1999) and not the most recent strategy (HM Government, 2005). However, as the ethos of the older definition is embedded in local government legislation, it would seem appropriate to adopt it for the purposes of this research.

In an environment where because of mounting budget pressures being placed upon local authorities, decisions taken corporately are not always in the best interests of service stakeholders (Arup, 2010; Hampton, 2005; Chartered Institute of Public Finance & Accountancy, 2010), mutualisation is likely to become an increasingly popular service delivery option for service teams. But in addition to the promotion of staff led social enterprise through the Government's Open Public Services agenda, a further recent development is that of private sector organisations bidding to take control of public regulatory services.

7.3.6 Commissioned Regulatory Services - Early Developments

At the time of conducting this study, no evidence of public sector staff or third sector led planning or building control service commissions from local authorities existed, the prevalent emerging scenario being the involvement of large private sector organisations.

Capita developed Urban Vision with Salford City Council in 2005 (Building, 2006), signing a 12 year contract to provide the first public/private sector planning and building control partnership in England. Capita then went on to sign a 15-year contract with Breckland Council in 2009 (Capita, 2009) to run their planning and building control services.

Balfour Beatty signed ten a year contract with North East Lincolnshire Council in 2010 to run their planning and building control services (North East Lincolnshire Council, 2010). Subsequently, Capita signed ten year contracts with North Tyneside Council in 2012 (North Tyneside Council, 2012) and the London Borough of Barnet in 2013 (London Borough of Barnet, 2013).

Perhaps not surprisingly, little information is available in relation to how the contracts for planning and building control services were put together, or why private sector organisations would choose to run public regulatory services. On the surface, such an arrangement at least

supports service delivery at a local level and accordingly, consistent collaboration. However, on the basis of a lack of available literature on a relatively new scenario, further investigation was required through empirical sources to build a picture of the reasons for and outcomes of private sector involvement in public sector regulatory service provision.

7.3.7 Experiences of Private Sector Involvement in Public Services

Interviews were secured with three individuals with substantial experience of private sector involvement across a number of local authorities.

Chris Findley, helped set up the Urban Vision joint venture between Capita and Salford City Council but had since remained employed by the Council as Assistant Planning Director due to the need to retain democratic oversight of planning decisions. Having overseen the joint venture since 2005, he was among the most experienced individuals in England in terms of private sector involvement in planning and building control services from a public sector perspective when interviewed in 2013.

Dave Jolley, who had been Assistant Director of Building and Development Control with Salford City Council until 2005, was then seconded to Urban Vision as Planning and Building Control Director. He has since been instrumental in setting up outsourcing contracts for planning and building control services between Capita and the councils of Breckland, North Tyneside and the London Borough of Barnet. His position with Capita as a national figurehead made him the most experienced individual in the commissioning of regulatory services when interviewed in 2013.

As Strategic Director of Finance and Resources, Fiona Rooney was responsible for organising one of the largest outsourcing arrangements between North Tyneside Council, Capita (for externally facing services) and Balfour Beatty (for back office services). At the time of being interviewed in 2015, as Interim Director of Resources and Strategic Commissioning for Copeland Borough Council, she was in the process of examining the potential merits of outsourcing a number of the Council's services.

When asked why they believed that local authorities choose to outsource their services to the private sector, all three interviewees were unanimous in stating that the main driver was primarily a financial one:

“What’s difficult for the politicians is making those choices around cuts, because they don’t get voted in to cut services. They don’t get voted in to make people redundant. There’s some huge pressures on members. It’s easier to make those choices within a private sector organisation.” Chris Findley

“They want to pass the risk on, reduce the cost of the service and also add additional commerciality into the team.” Dave Jolley

“It was primarily financial [reason for outsourcing] but it was also a Conservative mayor who was okay with testing the market and with outsourcing. In terms of the timescale, we had to make the savings, there wasn’t much choice but to ask the markets.” Fiona Rooney

Both Chris Finley and Fiona Rooney confirmed that at the point of entering into their respective agreements with Capita, their planning and building control services were performing well. Accordingly, having established the reasoning behind the four outsourcing initiatives in which interviewees had experience, the next step was to examine outcomes in order to ascertain the viability of such an arrangement as part of the model requirements. As no experiences of private sector involvement in planning and building control services could be found in existing literature, the outcomes of outsourcing in other public sector service areas were also sought and taken into consideration.

7.3.8 Outcomes of Private Sector Involvement

As discussed in Chapter 3, third party agreements for the delivery of public services contain a not for profit stipulation, with any surplus income required to be reinvested in the services for the benefit of customers. Alternatively, in the case of continuing surpluses, a reduction in the level of charges paid by customers should be considered (Chartered Institute of Public Finance & Accountancy, 2010; HM Treasury, 2007). However, speaking frankly, Dave Jolley confirmed that it is always Capita’s intention to take profit from public services for the benefit of shareholders:

“Obviously they want to make a profit, they’re a private company, they have shareholders, so they’re driven by not just growing the business, but they have to make a profit.”

When pressed on this by the author in relation to non-profit requirements set out for third parties running public fee earning services, Dave Jolley suggested that profit making was now an accepted norm for private sector providers and that non-profit requirements should be re-examined.

Asked for his opinions on Urban Vision after eight years from Salford City Council's perspective, Chris Findley was of the opinion that their planning and building control services could have been delivered as efficiently in-house, without the loss of profit to Capita:

“Private sector vehicles, from my perspective, now understanding a lot more about them, can actually be as bureaucratic if not more bureaucratic than the local authority sector. They’ve just got different drivers. Profit is the big driver in the private sector. You could have stayed here and it wouldn’t have made a difference. We’d have still had a good service, delivering a good service for Salford. We could go down the mutual route. Rather than Capita taking what I think is a fairly significant profit slice out of everything, we would retain that by actually delivering the services ourselves in an efficient manner.”

Chris Findley was also critical of the fact that Capita had placed new staff on zero hours contracts, creating tensions between these employees and staff working alongside them on superior local authority terms and conditions.

Both Chris Findley and Dave Jolley suggested that Capita had taken profits from Urban Vision by charging a management fee to run planning and building control services and asking employees to take on work from other local authorities. Similarly, Fiona Rooney confirmed that Capita had taken on 21 external customers for North Tyneside's employees to deal with within the first 6 months of the beginning of their tenure as service providers. She also believed that despite denials, Balfour Beatty were sharing senior back office managers between North Tyneside and other outsourced services elsewhere, creating more bureaucratic management structures.

Paul O'Brien has been involved in countless efficiency seeking initiatives by local authorities in England, including the use of alternative service delivery models. In keeping with the limited experiences of private sector involvement in the delivery of planning and building control services to date, his wider experiences suggested that the outcomes within the public sector as a whole were not positive:

“Is there actually any evidence that actually proves that the private sector can actually do things more efficiently? Because if there is, I’ve not seen it.”

The review of literature carried out as part of this study would seem to confirm the experiences detailed above, as no information could be found detailing widespread successes linked with the privatisation of public services. The outsourcing of non-regulatory public

sector services to private sector organisations has been shown to fail due to perverse contractual incentives, weak public sector oversight and a lack of transparency (Institute for Government, 2014). In addition to these areas of failure, Jackson (2009) highlights poor performance, poor customer satisfaction, high costs and a lack of workforce motivation as drivers for over 50 local authorities to insource services previously outsourced to the private sector. On the basis of their outsourcing experiences, these councils became convinced that they were in a position to offer more efficient, customer focused and businesslike services.

During the production of this thesis, a number of major failings linked to privatisation within the National Health Service (NHS) were emerging in the media. Such cases included the collapse of the first outsourcing arrangement through which an NHS hospital had been taken over by a private operator, leaving the NHS to pick up a significant bill for the hospital's financial failure (Wright, 2015).

7.3.9 Summary

The ideology behind the Government's Localism agenda is to stimulate diversity and innovation in localised public service provision, thereby reducing cost and improving standards. In doing so, it aims to localise decision making and decentralise the running of services to the lowest appropriate level (HM Government, 2011a). Such attributes would appear to make commissioning an attractive proposition, with capabilities to reduce bureaucracy and create a level playing field for all potential service providers to be judged upon. However, interview data indicated that rather than being driven by issues related to service performance and social benefits, decisions to offer contracts to private sector service providers are being primarily based upon economic drivers.

There is evidence to suggest that the outsourcing of public sector services to private sector organisations has failed on a widespread basis and for a number of reasons (Institute for Government, 2014; Jackson, 2009). Such failures, along with a resulting realisation that efficient and businesslike services can be offered by the public sector, have led to dozens of local authorities insourcing the public services they had previously outsourced to the private sector (Jackson, 2009). As someone in the unique position of having been responsible for helping to set up a long running public/private sector joint venture for planning and building control services, Chris Findley echoed experiences detailed by literature.

The frank views offered by Dave Jolley suggested that Capita, a private sector organisation now involved in the running of an increasing number of regulatory services, are ignoring the not for profit stipulation attached to fee earning public services (Chartered Institute of Public Finance & Accountancy, 2010; HM Treasury, 2007). In this sense, having outlined the manner in which public regulatory income is being used to cross-subsidise other service areas in Chapter 3, an increasing number of customers would now seem to be danger of paying monies not directly linked to their development consent applications.

Ultimately, there would appear to be a conflict between the enabling of for-profit involvement in public regulatory service provision and the Government's out and out promotion of the benefits of staff led and third sector non-profit social enterprise (HM Government, 2011a). As such a prevalent service delivery option within the Government's current public service reform agenda, it seemed sensible to examine the development, meaning and potential benefits of social enterprise.

7.4 Social Enterprise

7.4.1 Context

The Government's aspirations for rationalised regulatory processes, competitive and business like local services and sustainable development are likely to require significant change if they are to be realised.

For a number of years, the three main political parties in the UK have strongly advocated social enterprise as a potential enabler of a more sustainable and business like market ideology within the public sector. But how did such a situation arise and what is social enterprise?

7.4.2 The Emergence of Social Enterprise

In seeking historical points of reference in academic literature, Ridley-Duff and Bull (2011) claim that the early to mid-1970s is the period when the terms social entrepreneur and social enterprise began to appear. They suggest that the term social enterprise was first used by Dholakia and Dholakia (1975) to distinguish marketing activities in state and co-operative enterprises from private sector approaches.

The term social enterprise gained institutional support in the UK in the early 1990s through the co-operative movement and the community regeneration sector, with Social Enterprise Europe being founded in the north of England by consultants developing social audit tools for co-operatives in 1994 (Ridley-Duff and Bull, 2011).

As outlined in Chapter 6, the recent emergence of interdisciplinarity has been linked to the growing need for sustainable development (Jones *et al.*, 2010). Similarly, Vickers (2010) notes that opportunities for social enterprises have increased in recent decades in parallel with the growth of national and international policy towards sustainable development. Vickers also postulates that the level of social enterprise activity within the UK has risen sharply in line with public sector reforms, a development which is reinforced by a substantial body of commentary.

7.4.3 The Development of Social Enterprise in the Public Sector

By 1999, a coalition of co-operatives and development agencies had formed Social Enterprise London (SEL), who had close links to the then Labour Government and since then, social enterprise has achieved policy recognition in many different countries (Teasdale, 2010). Within 18 months of SEL's formation, the term social enterprise was used for the first time in a Government publication in the context of organisations trading for a social purpose. However, Teasdale postulates that as some members of the SEL's influence grew, social enterprise gained strong support within the Government as a way of transforming public services rather than for community regeneration.

In 2002, the Labour Government published the report *Social enterprise: a strategy for success*, in which they set out a vision for an environment in which social enterprises could flourish, stating that (Department of Trade and Industry, 2002, p. 8):

“The Government believes there is significant potential for more public services to be delivered by social enterprises, and that local authorities in particular have an important role in opening up procurement processes.”

In 2006, the Labour Government formed the Office of the Third Sector, with the responsibility for policy development for social enterprise in the public sector being passed to the Cabinet Office. This led some commentators to conclude that the institutionalisation of social enterprise could now be associated with the privatisation of public services, with the re-

labelling of voluntary organisations delivering public services as social enterprises (Di Domenico *et al.*, 2009; Haugh and Kitson, 2007; Teasdale, 2010).

The Community Interest Company Regulations 2005 were created in order to further enable organisations to undertake formalised social enterprise activities. Community interest companies (CICs) are now synonymous with social enterprises (Nicholls, 2010), which can be owned and operated by local authority staff, or private/third sector organisations. As Bland (2009, p. 6) suggests, this would seem to make them ideal in terms of correcting a regulatory framework for the built environment which currently, puts some stakeholder groups at a disadvantage:

“Social enterprise can fill the gap by providing the motivation, ingenuity and customer focus that successful private companies are good at – while avoiding the simplistic ‘one size fits all’ approaches that often characterise public services”.

Bland also details how the unique governance structures and environmental motivations of social enterprises can result in a speed of impact in areas within which they are utilised that is unmatched by solutions which rely upon price alone to motivate required change. Accordingly, he suggests that such a similar business-like approach is required within local authorities.

On coming to power in May 2010, the Coalition Government quickly distanced itself from the language of the previous Labour Government, re-naming the Office of the Third Sector the Office of Civil Society (Teasdale, 2010). However, through their Open Public Services White Paper, the Coalition Government in effect continued the work of New Labour by introducing the principles of social enterprise systematically across the entire public sector (HM Government, 2012; HM Government, 2011a).

Seanor (2011) suggests that the way in which a problem is conceived is a critical skill for social enterprises as this process affects the way solutions are developed and highlights the fact that some commentators have begun to see social enterprise in the UK as filling identified gaps in statutory services. As such, it would seem that problem solving in relation to the issues currently associated with the regulatory framework for the built environment in England can be seen as a potential locus of both social enterprise and social entrepreneurship.

Having considered the emergence of social enterprise in the UK and its subsequent development in the public sector, what follows considers the early and developing definitions of the concept.

7.4.4 Definitions of Social Enterprise - Context

As was the case with interdisciplinarity in Chapters 5 and 6, social enterprise is a relatively new phenomenon and despite over a decade of Government investment into research, there is no single agreed set of words that clearly defines the term (Ridley-Duff and Bull, 2011; Seanor, 2011; Teasdale, 2010; Chartered Institute of Public Finance & Accountancy, 2011). This has prompted an upsurge of academic interest in the field, along with a number of practice based mapping exercises attempting to ascertain the scale, scope and nature of social enterprise (Peattie and Morley, 2008).

Some welcome the lack of a single definition of social enterprise as it provides flexibility and allows for further development and innovation (Seanor, 2011). However, the Chartered Institute of Public Finance & Accountancy (2011) suggest that a working definition is required to enable an analysis of the differences between different social enterprise types and what relevance these differences have to an application to public service delivery. Ridley Duff and Bull (2011) claim that the definition of a social enterprise is not an abstract intellectual exercise but is a dynamic process engaged with on a daily basis by people deciding how to develop the identity of their enterprise, what the rules for economic support are, and how far such rules can be bent. Social enterprises are not a single organisational form but are a large range of organisations which have evolved from not for profit, co-operative and mainstream business (Defourny and Nyssens, 2010; Teasdale, 2010).

The following paragraphs reinforce the context provided above by detailing the earliest definitions of social enterprise before setting out how the interests of certain business groups have played their part in shaping subsequent Government definitions.

7.4.5 Early Definitions of Social Enterprise

The earliest reference containing a definition of social enterprise discovered as part of this review of relevant literature dates back to the early 1980s in *Social Audit: A Management Tool for Co-operative Working* by Spreckley (1981, p. 3):

“An enterprise that is owned by those who work in it and perhaps reside in a given locality, is governed by registered social as well as commercial aims and objectives and run co-operatively may be termed a social enterprise. Traditionally, ‘capital hires labour’ with an overriding emphasis on making a ‘profit’ over and above any benefits either to the business itself or the workforce. Contrasted to this is the social enterprise where ‘labour hires capital’ with the emphasis on personal and social ‘liberation’ from exploitation by capital.”

The above definition pre-dates by 18 years what Teasdale (2010, p. 9) suggests was the first tentative definition of social enterprise in England, a definition offered by SEL during their first conference in 1999:

“Social enterprises are businesses that do more than make money; they have social as well as economic aims and form the heart of what is now coming to be known as the “social economy”. Aims include the creation of employment, stable jobs, access to work for disadvantaged groups, the provision of locally based services and training and personal development opportunities.”

As will now be discussed, in building upon the work of SEL, subsequent Government definitions would appear to have been shaped by lobbyists and as a consequence, have retained a provision for private benefit.

7.4.6 Government Definitions of Social Enterprise

Building upon their strong relationship with SEL, the Government’s first use of the term social enterprise was in the context of organisations trading for a social purpose (HM Treasury, 1999, p. 14):

“Social enterprises are businesses run for a social objective, rather than for the sake of profits to be distributed to shareholders. At community level, social enterprises are a very diverse group, including financial services providers (e.g. credit unions), retailers and operators of childcare facilities. Social enterprises can strengthen the social and economic fabric of deprived communities, not least by providing services that are not profitable enough to attract private sector firms.”

Teasdale (2010) postulates that early Government research focused upon creating a definition that would be non-legalistic and vague enough to enable the inclusion of as wide a range of forms as possible. Accordingly, he states that the Government’s definition was set to exclude co-operatives and some social businesses, ruling out the inclusion of organisations with some element of private benefit. However, following a period of intense lobbying, the word ‘principally’ was added to the Government’s first published definition, suggesting that social

enterprises were not driven by profit rather than not delivering any profit to shareholders/owners (Department of Trade and Industry, 2002, p. 7):

“A social enterprise is a business with primarily social objectives whose surpluses are principally reinvested for that purpose in the business or in the community, rather than being driven by the need to maximise profit for shareholders and owners. Social enterprises tackle a wide range of social and environmental issues and operate in all parts of the economy.”

The above definition is still cited (Chartered Institute of Public Finance & Accountancy, 2011) but the Coalition Government have more recently included a legal definition of social enterprise in the *NHS Bodies and Local Authorities (Partnership Arrangements, Care Trusts, Public Health and Local Healthwatch) Regulations 2012*. Over a number of paragraphs within Page 18, the Regulations define a social enterprise as a charity, a Community Interest Company (CIC) or charitable incorporated organisation that distributes less than 50 per cent of its profits to shareholders. The Regulations also state that a social enterprise acts for the benefit of the community and has provisions to pass its assets to another social enterprise on dissolution or winding up. This legal definition would appear to be less clear than previous definitions in relation to social purpose as an outcome of business activity.

7.4.7 Summary

Since gaining institutional support in the 1990s through the co-operative movement, social enterprise has achieved considerable policy recognition in the UK as a means of creating a market ideology within the public sector (Teasdale, 2010; Vickers, 2010).

As a means of delivering social and environmental benefits on a non-profit basis, social enterprise has the potential to fill gaps in statutory service provision by providing the motivation to innovate within otherwise monopolised areas (Bland, 2009; Seanor, 2011). The social and environmental challenges set out in previous chapters would appear to make regulation for the built environment an ideal locus for social enterprise as a means of localising competition and as a result, enabling consistent collaboration. It has been found that there is no single agreed definition of social enterprise, which to date, has allowed flexibility of service development around the term (Seanor, 2011). However, with for profit features creeping into some definitions, a working definition would be required for a social enterprise driven regulatory market ideology in order to establish clear ground rules particular to such service provision (Chartered Institute of Public Finance & Accountancy, 2011).

Nichols (2010) claims that England has the most developed institutional support structure for social enterprises in the world. Despite being a relatively new concept within the public sector, the public service area of housing has adopted social enterprise as a means to improve performance and value for money for a number of years. Subsequently, the NHS has become an evolving service area that continues to adopt social enterprise as a means of making savings and enhancing performance. Accordingly, what follows is an examination of these areas as part of an attempt to better understand the use of this relatively new but seemingly valid form of service delivery within the context of the current competitive public sector environment.

7.5 A Market Ideology through Social Enterprise: Experiences to Date

7.5.1 Background

The Government continues to attempt to engender a more businesslike approach to the delivery of public services (HM Government, 2014c). However, there would appear to be a danger that if this is not introduced with a more socially and environmentally centred ethos, the regulatory framework in England will experience a depth of detrimental transformation which will be difficult to reverse (Ross, 2010; Baldwin, 2010).

According to Black (2005), regulatory innovation consists of innovation in the performance of regulatory functions, institutional structures and organisational processes in a regulatory regime and that an idea whose time has come should be chosen for development. There is evidence to suggest that through local operation for social and environmental purposes, social enterprise is a mode of delivery that is now worthy of consideration for regulatory services such as planning and building control (Seanor, 2011; Vickers, 2010; HM Government, 2011a).

In aiming to formulate a competitive, localised and non-profit regulatory service delivery framework that might support consistent collaboration, what follows begins by examining the established system of social enterprise within the social housing sector. The more recent development of social enterprise within the NHS is then examined. The ultimate aim of this exercise is to ascertain if any lessons might be learned as part of attempts to advocate a viable environmentally and socially focused market ideology for regulation of the built environment in England, as advocated by legislation such as the Localism Act 2011.

7.5.2 Social Housing: An Established Culture of Social Enterprise

Registered social landlords (RSLs), also known as housing associations, date back to the 19th Century when they emerged as philanthropic bodies who met the housing needs of the poor in England. They are voluntary and independent non-profit organisations whose main role is to provide housing for low-income households – any surplus income generated must be reinvested for social housing purposes (Cope, 1999; Malpass, 2000). All services provided by RSLs affect local communities in significant ways, with partnerships reshaping neighbourhoods in line with the Government's agenda for sustainable communities (Jin Ham, 2009).

RSLs have emerged as social enterprises responding to community needs through additional roles aimed at covering issues such as crime, education, health and employment (Cope, 1999). Malpass (2000) suggests that through partnering arrangements for development purposes, local authorities can exert considerable influence over the pattern of housing provision by RSLs, including stipulations that RSLs operate from local offices. According to Malpass, from a RSLs point of view, it can appear that they are effectively agents for local authorities – building only what councils want and letting properties to their nominees at rents councils specify.

7.5.3 The Creation of a Social Housing Market Ideology

Under the Conservative Government of the 1980s, a new performance management culture drove RSLs towards a more business-like ethos. Housing policies of the time introduced privatisation, competition and more stringent performance standards, resulting in the encouragement of the formation of housing associations as part of sweeping change (Jin Ham, 2009). The widespread privatisation of local authority housing since the 1980s has resulted from the development of a stock transfer policy (Ginsburg, 2005), with RSLs taking over a significant proportion of local authority housing stock and becoming the only providers of new-build social housing (Walker and Smith, 1999).

The Decent Homes Standard was introduced by Tony Blair's New Labour Government as part of its Spending Review in July 2000, resulting in requirements for all social housing to meet set standards of decency by 2010 (Office of the Deputy Prime Minister, 2004a). This forced many local authorities unable to meet these standards to transfer their housing stock to housing associations. The Labour and Coalition Governments have since supported these

Large Scale Voluntary Transfers (LSVTs) with public funds, with HM Treasury providing gap funding to meet any shortfall between expected rental income and the costs of achieving the Decent Homes Standard (Smyth, 2012). The diverse market ideology that has been created through social enterprise in the housing sector is demonstrated by the fact that as of January 2015, there were 1,760 public, third and private sector not for profit RSLs operating in England (HM Government, 2015).

RSLs operate under a regulatory framework laid down by parliament that until the introduction of the Housing and Regeneration Act 2008, was operated by the Housing Corporation (Jin Ham, 2009), which had existed since 1964 (Cope, 1999). According to the Housing Corporation (1999), the introduction of competition into the social housing sector in England has led to housing associations working more effectively. The research of Jin Ham (2009) demonstrates that the activities of RSLs are strongly determined by housing policy and regulation and that performance measurement has been regarded as a key element of change in the social housing sector for more than 20 years.

7.5.4 Social Housing: Regulation and Performance Management

Jin Ham (2009) details how the performance measurement system for social housing has been operated through a procedural framework determined by regulatory organisations. The key element of its administration is self-assessment and a relationship of trust being built up over many years between RSLs and these regulatory organisations. Jin Ham claims that assessing performance is now a core business practice, evolving from early frameworks which concentrated upon financial matters, to a system whereby the assessment of stakeholder satisfaction has made RSLs more knowledgeable about social factors.

Since 1 April 2012, RSLs have been regulated by the Homes and Communities Agency (HCA), having been regulated for a short period prior to that by the Tenant Services Authority (Homes and Communities Agency, 2012). The current regulatory framework, developed through changes introduced by the Localism Act 2011, lays down two main sets of standards that RSLs must measure their performance against – *economic standards* (covering issues such as governance and value for money) and *consumer standards* (covering stakeholder expectations). RSLs are governed by management boards and local councillors, who are responsible and accountable for meeting regulatory standards, and being transparent and accountable for their organisation's delivery of business objectives.

7.5.5 Social Housing and the Importance of Good Governance

Social housing management boards consist of seven to fifteen members, must meet at least 3 times a year, and must be constituted so as to ensure that no single interest group may exert undue influence (Cope, 1999). Under arrangements brought about by the new regulatory framework, tenant panels, MPs and local councillors have a more prominent role in scrutinising RSLs – good governance is viewed by the HCA as being the bedrock of every organisation’s ability to run itself effectively and efficiently (Homes and Communities Agency, 2012).

From a value for money perspective, the current regulatory framework dictates that RSLs should articulate and deliver a comprehensive and strategic approach to achieving value for money in meeting their organisation’s objectives. Accordingly, management boards must maintain a robust assessment of the performance of all their assets and resources (including financial, social and environmental returns). The regulatory framework requires RSLs to (Homes and Communities Agency, 2012):

- have a robust approach to making decisions on the use of resources to deliver the provider’s objectives, including an understanding of the trade-offs and opportunity costs of its decisions;
- understand the return on its assets, and have a strategy for optimising the future returns on assets – including rigorous appraisal of all potential options for improving value for money such as the potential benefits of alternative delivery models – measured against the organisation’s purpose and objectives;
- have performance management and scrutiny functions which are effective at driving and delivering improved value for money performance; and
- understand the costs and outcomes of delivering specific services, which underlying factors influence these costs and how they do so.

Management boards are required to demonstrate to all stakeholders how they are meeting the value for money standard and on an annual basis, must publish a robust self-assessment which sets out how value for money is being achieved in delivering business objectives. In terms of consumer standards, management boards and local councillors are responsible for ensuring standards are met, with the regulators role being limited to setting the standards and intervening only where failure of the standard could lead to risk of serious harm to tenants.

RSLs are asked to ensure that tenants are given a wide range of opportunities to be involved in policy development and the scrutiny of the organisation's performance, and are provided with accessible, relevant and timely information about (Homes and Communities Agency, 2012):

- how services can be accessed;
- the standards of housing services they can expect;
- how the organisation is performing against those standards;
- the service choices available, including any additional costs that are relevant to specific choices;
- progress of any repair work;
- how tenants can communicate with them and provide feedback;
- the responsibilities of the tenant and provider; and
- arrangements for tenant involvement and scrutiny.

RSLs are required to have an approach to complaints that is clear, simple and accessible. They are also required to publish information about complaints each year, including their number, nature and outcomes. Ultimately, in line with the Localism Act 2011, RSLs are required by their regulatory framework to cooperate with partners to help promote social, environmental and economic wellbeing in the localities within which they operate.

It would appear that regulatory services such as planning and building control could learn much from the established framework of performance driven social enterprise within the social housing sector. But to obtain an insight into the modern and emerging challenges of *establishing* competitive social enterprise within a public service area, it seemed appropriate to examine its increasing prevalence within the NHS.

7.5.6 Developing Social Enterprise in the NHS

Social housing is an established system of competitive and localised social enterprise, whose success has been built upon robust and regulated performance measurement and governance frameworks (Jin Ham, 2009). The regulatory framework for RSLs offers a level playing field for all competing service providers.

At the time of carrying out this research, no case studies were available for the establishment and operation of regulatory social enterprises. Therefore, the continuing and well publicised emergence of social enterprise in the NHS is now examined in order to ascertain whether any lessons can be learned that might benefit similar developments amongst planning and building control services in England.

7.5.7 Creating a Community and Efficiency Based Market Ideology

Among the public sector as a whole in recent years, the NHS in particular has sought to progressively introduce a market ideology that incorporates private and third sector providers (Hall *et al.*, 2012). In addition to encouraging the engagement of external service providers, the NHS introduced the *Right to Request* scheme in 2008 as a vehicle to enable staff to develop their own social enterprises (National Health Service, 2009). Subsequently, under the Coalition Government, Right to Request was replaced by *Right to Provide*, with the Health Secretary Andrew Lansley declaring a wish to transform the NHS into the largest social enterprise sector in the world (Hall *et al.*, 2012; Miller and Millar, 2011).

The Social Enterprise Investment Fund (SEIF) was set up by the Department of Health in 2007 to enhance the role of staff led social enterprise in the provision of health and social care and since it began, has invested over £100 million. By 2012, there were 20,000 public servants working in public health social enterprises, with contracts totalling £1 billion (Mutuals Taskforce, 2012b).

To obtain an insight into the drivers for the creation of staff led social enterprises in the NHS, interviews were carried out with two leading figures in the field. Tracey Bush is Managing Director of Spiral Health in Lancashire, a Community Interest Company (CIC) developed with a community focused ethos of responding to public needs and reinvesting financial surpluses in the service for the benefit of patients. Similarly, Jonathan Williams is Chief Executive of East Coast Community Healthcare in Suffolk, a CIC set up with the same principles of Spiral Health.

In addition to their community interest values, Tracey Bush and Jonathan Williams respectively made it clear that removing the inefficiencies aligned with bureaucracy and the enablement of flexible, smart business practices in the interests of commissioners and patients were high priorities for their recently formed organisations:

“I suppose our main drivers were around breaking down bureaucracy and being able to make decisions. We’ve got lots of evidence now of how we’ve made things happen, whereas previously in the NHS, it could have taken months and months to turn something round, so I’ve been able to make change happen very quickly. We’ve moved the patient on to being a person and not being a patient. So I suppose from looking at it as service delivery and product, we’ve very much focused on what the customer wants and needs.”

“The first thing that the commissioners are concerned about is will they get a consistency of delivery. Will it be cost-effective. But the other part of this is how flexible are you going to be to change. The services are constantly changing because of political interference as much as anything. So I marketed us very actively with our commissioners on the basis of you can talk to us, you’ve got a relationship with us, I’m here at your door whenever you want to talk to us. This is a partnership as well as being a contractual relationship, and that’s very powerful.”

Commenting on the broader challenges facing the public sector, Paul O’Brien stressed that if financial resources could be retained locally as part of alternative models of service delivery such as the CICs discussed above, this would at least maintain community benefits not offered by some private sector providers:

“We looked at Swindon Council and the money that they spend as a council – how it circulated in the local economy. And the reality of that was that for every pound that Swindon Council spent, £1.64 circulated in the local economy; it has a multiplying effect. If services are provided by 400 people employed 400 miles away delivering back-office stuff, that money isn’t circulating back in the local economy, it’s circulating in somebody else’s economy.”

In addition to their application to outsourced public planning and building control services, the views of Paul O’Brien would also appear to be applicable to private sector involvement across local borders in the building control sector. Regulatory fees paid to approved inspectors are often not exchanged or spent within the locality in which development takes place.

As well as the benefits that would appear to be offered to commissioners and local communities by social enterprises/CICs, the empowerment of service teams is often viewed as a key attribute of their ethos and operation.

7.5.8 Empowering NHS Service Teams

The formation of public service employee led social enterprises (also known as ‘spinning out’) is often advocated on the basis of giving more business freedom, reducing bureaucracy and in particular, removing the need for the layers of middle management that have been

synonymous with the public sector (Blond, 2009; Mutuals Taskforce, 2011; Rees *et al.*, 2012; Social Enterprise UK, 2012). Blond (2009) sets out the results of a NHS Staff Survey from 2008, with only 27% believing that senior managers involved them in important decisions, 26% believing that their employees valued the work that they did, 15% believing that communication between headquarters and staff was effective, and 18% believing that patient care was not their employer's top priority.

A similar staff survey of the planning profession was carried out by Clifford (2007), with 612 out of the 1,987 RTPI members approached responding to a postal questionnaire. 63% of respondents were not convinced the Government's reform agenda was helping to reduce bureaucracy, 70% felt that planning was not a well-respected profession, and 90% were of the opinion that targets were too obsessed with speed of decision, causing stress without properly assessing planning outcomes. An up to date survey of the planning and building control professions might prove to be a useful tool in garnering data in relation to the perceived success or failure of regulatory goals and whether individuals feel valued in the current regulatory climate.

Limb (2011) details the experiences of two health sector employee led social enterprises (Inclusion Healthcare and Ripplez), which suggest that a feeling of team empowerment and quicker decision making have resulted from spinning out. Similar sentiments are also reflected in research carried out by Hall *et al* (2012), which involved 16 semi-structured interviews with individuals employed within the NHS involved in the Right to Request process. These individuals spoke of a wish for less bureaucracy and being 'masters of their own destiny', sentiments that were reinforced by interviewees Tracey Bush and Jonathan Williams respectively:

"We're not just a CIC. All our staff are involved in decisions around strategic running of the company. Staff actually come to work and feel valued and feel that it's a nice place to work. They like coming to work and they like the values of what we're about and don't feel like they're just a number." Tracey Bush

"Staff had become disengaged. They'd lost faith with the bureaucracy and somehow the organisation had to become something that they couldn't really relate to. I'd say that staff feel more engaged with the organisation... they are seeing that the resources that we do have are being spent in the right areas." Jonathan Williams

A number of individuals interviewed by Limb (2011) stated that the creation of social enterprises was seen as a way of avoiding the engagement of profit making private sector organisations and subsequently, being employed by them. Having obtained an overview of the limited existence to date of private sector involvement in running public planning and building control services, this seemed to be an area worthy of further investigation.

7.5.9 NHS Service Team Resistance to Private Sector Involvement

Le Grand (2006) suggests that a distinction can be drawn in the public sector between *knights* (honourably committed to the public good) or *knaves* (primarily interested in personal gain), mirroring the findings of Hall *et al* (2012). Le Grand suggests that whilst '*knightly motivation*' or '*altruistic behaviour*' in the pursuit of efficiency and social objectives is desirable, '*knaveish motivation*' can also prove to be positive within public service delivery when high status is sought by an individual solely for the purpose of conferring benefits to others. Expanding his published views and with particular reference to the NHS, interviewee Julian Le Grand offered the following assessment of resistance to private sector involvement:

"I think that there are a number of people who have been incentivised to move in the mutuals direction precisely because of what they see as a fundamental insecurity. These are often highly experienced people who know what they're doing in the area concerned and they resent the idea of somebody coming in and creaming off the profits or indeed just creaming off the work more generally and they think they can do a better job."

As figureheads of staff led CICs in the NHS, interviewees Tracey Bush and Jonathan Williams reinforced views expressed in the research of Limb (2011), with the following comment by Jonathan Williams being representative of opinion:

"The idea that any surplus that we would make would be then be put back in the funding to be able to develop services was very, very popular with the staff. I think when you are a public service, it can be seen as being ethically incorrect to be making big profits."

But although knightly motivation would seem to be prevalent within the NHS, it would appear that the marketing and business skills needed to impress commissioning bodies are not. Unfortunately, this may have the effect of making it difficult for community focused organisations to compete against large, experienced private sector organisations during service procurement exercises by local authorities.

7.5.10 Competing with the Private Sector

Whether public sector staff are pushed or jump towards spinning out as a social enterprise/CIC, a number of commentators (Blond, 2009; Local Government Research Unit, 2011; Muñoz, 2009; Rees *et al.*, 2012) highlight the risks of public service monopolies passing to private sector oligopolies. In such instances, views persist that neoliberal thinking dominates Government policy, with widespread privatisation and deregulation resulting (Blond, 2009).

The mutualisation of public service areas such as the NHS through employee led social enterprises is being strongly driven by the Government. However, it has been shown that individuals with limited business experience and skills are likely to require early help, advocacy and initial contracts of at least 5 years if their fledgling enterprises are to succeed (Local Government Research Unit, 2011).

Interviewees Tracey Bush and Jonathan Williams both stated that setting up their CICs had placed a considerable strain on staff time and that neither organisation had the necessary expertise to develop a business case. Accordingly, both organisations ended up employing specialist consultants to help them with business, legal, human resources and financial issues. Having experienced the difficulties of setting up a staff led CIC, Jonathan Williams held out the belief that politically, more should have been done to assist small social enterprises that are at the heart of current transformation policy:

“When the Government created the market economy for health services, I think they should have created alongside it a significant development programme for those services that were going to be exposed to it. To be frank, what they did was really open up, particularly community services, for the private sector, because people like ourselves competing against the private sector is really, really tough. Sometimes there’s a feeling you get from some of the commissioners that social enterprise is just a quirky adjunct and that the important conversations are between the big players”

Both interviewees also agreed that whilst staff are now happy as employees of CICs, as public sector employees, it had been difficult to convince them to transfer to the new companies due to perceived risks to terms and conditions, particularly pensions. This problem was reinforced by Julian Le Grand, who went on to highlight the risks and strains placed upon the type of social entrepreneurs required to drive staff led enterprises:

“I think that the chief barrier [to social enterprise] has been senior management. The senior managers sort of not seeing it as in their interests and hence blocking it. For these things to work it usually has two or three rather dynamic individuals who are keen to set the mutual up and running – they have to be found and they have to be encouraged. The rest of the staff are usually fairly apathetic.”

Among other issues, Tracey Bush and Jonathan Williams also confirmed that shorter than preferred initial contracts (3 years for East Coast Community Healthcare and only 1 year for Spiral Health) had added considerable risk to the establishment of their CICs. Julian Le Grand stated that the Government was in the process of attempting to negotiate changes to European Union procurement rules to offer initial contract protection to fledgling social enterprises. All three interviewees were in agreement that a minimum initial contract length of 5 years should be sufficient to enable newly formed small to medium enterprises (SMEs) to establish a firm business standing and prove their worth to commissioners. As an aside to this chapter, a wider analysis of the barriers to the creation of SMEs and emerging solutions is offered as Appendix D to the thesis.

In contrast to some of the problems experienced by staff led CICs, there is nothing to prevent established private or third sector organisations becoming social enterprises and registering as not for profit CICs (Department for Business Innovation & Skills, 2010). By doing so, they too could commit to re-investing any surpluses generated for the benefit of the communities they serve, thereby demonstrating the same social purpose trading requirements as those set out for public services.

7.5.11 Summary

The established culture of localised not for profit social enterprise within the social housing sector, overseen by local authorities, would appear to be indicative of the type of service delivery framework being sought by this study. In this respect, some key lessons have been learned through a study of service delivery frameworks in other areas of the public sector that have adopted or are attempting to adopt social enterprise, including:

- that competition through social enterprise can help to drive good service performance;
- that competition in a non-profit environment is feasible;
- the importance of robust service performance frameworks;
- the importance of good governance;
- the importance of business skills in a more businesslike working environment;

- the reduction of bureaucracy associated with the public sector, with service leaders able to make business decisions more quickly.

These lessons, which will now be discussed in turn, not only show how improvements can result from such a service delivery framework, but also highlight the challenges of creating and operating within such a framework.

The introduction of not for profit competition has led to housing associations working more effectively and becoming more knowledgeable about social value, with regulated performance measurement frameworks being a key element of change for over 20 years (Jin Ham, 2009). Good governance is viewed as the bedrock of every provider's ability to operate effectively and efficiently, with every RSL being required to publish performance information and deal with complaints in a transparent manner (Homes and Communities Agency, 2012).

More recently, the NHS has sought to progressively introduce a market ideology, with government financial assistance beginning to tempt service teams to set up their own not for profit social enterprises/CICs (Mutuals Taskforce, 2012b). Such developments have added a further service delivery option to the public, third and private sector options prevalent within the social housing sector. However, with limited business skills, fledgling social enterprises/CICs need substantial levels of early support and advocacy to enable them to compete with private sector organisations during procurement exercises. In light of this finding, it would seem sensible to suggest that business skills should be added to the skill set sought through the model requirements of Chapter 6, and that improved Government advocacy and support should be a model requirement stemming from this chapter.

Literature suggests that service teams that have managed to go on to create and operate successful social enterprises have reported a less restrictive and consequently more effective and efficient business environment (Limb, 2011). Again, such results were confirmed by interview data gathered by the author.

In many cases, staff led social enterprises in the NHS have been formed only to avoid the involvement of profit making private sector organisations in their public services (Hall *et al.*, 2012). In this sense, it seems strange that as a service area with social objectives that are equally as strong as those attached to the housing sector, a non-profit constraint does not appear to have been attached to competition within the NHS. Similarly, unless such a

constraint is attached to and monitored within the regulatory sector, there would appear to be a danger that profit making oligopolies through organisations such as Capita and Balfour Beatty will emerge (Blond, 2009; Rees *et al.*, 2012). This would not be in keeping with the not for profit requirements attached to public service provision or the Government's aspirations for diverse delivery through organisations trading for a social purpose (HM Government, 2011a; HM Treasury, 2007).

Like social housing and the NHS, regulatory services such as planning and building control carry substantial social responsibilities. As detailed in Chapters 5 and 6, they also have substantial environmental responsibilities. Building upon lessons learned, what follows considers the type of requirements that might be attached to the localised, competitive and not for profit service delivery framework sought by the research objective attached to this chapter.

7.6 A Modern Regulatory Service Delivery Framework

7.6.1 Background

Opening monopolised and poorly performing public regulatory services up to competition at a local level from private and third sector organisations is the Government's way of engendering a more businesslike regulatory environment. Social enterprise is central to this ideal (HM Government, 2011a). Local context is considered to be an important element in social enterprise development and network dynamics (Seanor, 2011; Chapman *et al.*, 2007).

Social enterprises are, in the eyes of the Government, businesses that trade for a social purpose (Department of Trade and Industry, 2002). There can be few more worthy social purposes than regulation of the built environment, although this would now appear to be lost in a political landscape founded upon maximising private economic benefit (Baldwin, 2010). However, at a local level, elected members are often keen to see the sustainable outputs of regulation for the benefit of their communities, a point underpinned by interviewee Sir Andrew Stunell:

“Many councilors want to see their development sustainable so that the planning system is going in that direction and so is the building control system. How you pull that together, I don't know.”

In essence, if existing accounting guidance is strictly adhered to, public regulatory services could be said to broadly operate under the type of non-profit social enterprise typified by the

housing and health sectors. These sectors have demonstrated that the social enterprise ideology is supportive of a diverse range of localised service delivery options that could serve to enable a level competitive playing field and consistent collaboration between planning and building control services.

Although the current political and regulatory landscapes in England present a number of complex and unique challenges to consistent collaboration, 16 European countries have combined planning and building control regimes (Pedro *et al.*, 2011). These countries include Denmark, whose increasingly innovative approaches to sustainable development have received recent praise from RIBA (Royal Institute of British Architects, 2015). The existence of such combined regimes would seem to suggest that although difficult to envisage when taking into account the present fragmented regulatory system in England, the outcomes sought by this study could be achieved over time.

Unlike other forms of mutual such as co-operatives, which normally pay dividends to owners/members (Teasdale, 2010), perhaps the most important feature that a framework of social enterprise has the capacity to offer is a not for profit constraint on business activities. Therefore, what follows considers the application of such a constraint before ascertaining how competitive service delivery with social and environmental objectives might be driven by applicable levels of performance measurement and democratic accountability.

7.6.2 Non-Profit Regulatory Social Enterprise

Social objectives are often lost when an element of profit for private gain is attached to the activities of social enterprises (Seanor, 2011; Vickers, 2010). In examining the non-profit label traditionally attached to social enterprises, Le Grand (2006) terms this characteristic as the '*non-distribution constraint*'.

In contrast to the seemingly inefficient, inconsistent and often unethical fee estimate system associated with risk based building control, and PPAs that were discussed in Chapter 3, charges set under public interest systems tend to be regulated nationally by the Government (Baldwin and Cave, 1999). Although the use of PPAs has recently threatened the impartiality and consistency of decision making by offering some developers a better service for an additional layer of charges (Tribal Group, 2010), a system of nationally set fees is currently in place for planning services. The defence of a recent 15% rise in planning fees by the

Government through a statement outlining how small a component of development costs such fees are would seem to suggest their support for such a system (Werran, 2012).

Although interviewees were unanimous in stating that regulation should be a not for profit activity, two individuals with private sector backgrounds were asked to put themselves in the position of being a development consent applicant before accepting the notion. The views of regulatory experts Julia Black and latterly Mike Feintuck summed up the problems that might normally be associated with for profit-regulation:

“I don’t think it should be a profit-making activity. I think it completely distorts incentive that is a profit-making activity. The minerals management service in the US, who are responsible for regulating deep-sea oil drilling, they were responsible for issuing the licenses and collecting the royalties and for regulating and their performance bonuses within the regulator were based on the royalties that they brought in and the speed with which they processed licenses. There was obvious conflict of interest there... it’s just a recipe for a massive conflict of interest at best and slightly more corrupt activities at worst.”

“You’re not going to have parties playing on a level playing field in that for-profit bodies are competing with not-for-profit bodies and they are differently geared to deal with those kinds of processes, so there’s a degree of inevitability about what will happen in that kind of situation.”

Setting building control fees nationally through a detailed analysis of the resources required to service each project type as part of a localised and non-profit service delivery framework would have the effect of levelling the playing field for all service providers. It would also remove VAT, profit, sector representative/registration (i.e. ACAI, LABC & CIC) and day to day marketing costs from the charges matrix (HM Revenue & Customs, 2013; HM Treasury, 2007). As such, in line with Government aspirations (HM Government, 2011a), competition for service commissions and continuing tenure would be judged upon performance issues such as social outcomes and the most efficient use of available financial resources rather than lowest price.

7.6.3 Performance Measurement

With origins in the private sector, performance measurement has been a common feature of reform in the public sector since the 1980s, with measurement systems becoming more complex over time (Jin Ham, 2009). It should be noted that it is not the intention of this research to develop a set of performance indicators for planning and building control services

– as Jin Ham has demonstrated, the study of performance measurement issues related to a service area can form the basis for a doctoral thesis in its own right.

So in considering the scope of current performance measurement frameworks for planning and building control services, which service related areas need to be monitored if service managers, commissioners, councillors and communities are to obtain the necessary value from service outputs? To answer this question, existing methods of planning and building control performance measurement will now be examined and compared with recent commentaries on such issues on a broader basis, along with recorded successes in other service areas.

7.6.4 Recent Government Initiatives

Compulsory Competitive Tendering (CCT), which involved a statutory requirement to expose certain public services to competition, was designed not only to engender improvements in service delivery, but also a cultural change amongst local authority staff. As such, it was the centerpiece of Conservative policy in the 1980s (Iles and Wilson, 2002).

The Labour Government elected in 1997 replaced CCT with their Best Value initiative, which was concerned with ‘value’ rather than ‘cost’, aiming to offer a more balanced view of performance by incorporating financial and less tangible indicators. Under Best Value, councils were required to implement the ‘4 Cs’ by (Iles and Wilson, 2002; Department of the Environment, 1998):

- *challenging* why a particular service is needed at all;
- *comparing* performance with other users across a range of relevant indicators;
- *consulting* with local taxpayers, service users and the wider business community in the setting of performance targets; and
- *competing* in the sense of demonstrating that the preferred means of delivering a service has been determined by means of a competitive process.

The Best Value framework placed an emphasis on performance management and the continuous improvement of service quality, efficiency and effectiveness, to be achieved through a centrally prescribed regime of performance standards. However, since the introduction of Localism by the Coalition Government, the collection of most performance

data and target/standard setting have become sector led (Hughes, 2012). Having worked closely with the last two governments on public sector transformation, interviewee Julian Le Grand highlighted why politicians believed it became necessary to marry performance measurement with an element of competition to drive service quality:

“The lesson we learned from the Blair years really was that you needed some sort of external pressure to lever up quality. You couldn’t rely upon knightly motivations or the public service ethos alone to drive up quality; you had to have some sort of external pressure. The Blair Government started off with targets and performance management but decided the side effects of that were too costly and so moved towards choice and competition as a means of providing that external pressure and I think it was the right decision.”

With performance measurement and localised competition as central drivers to regulatory service performance, the basis of the manner in which the planning and building control sectors currently measure performance will now be considered. This overview is followed by a comparison of research on best practice performance measurement in the public sector and performance criteria set out for the two regulatory disciplines.

7.6.5 Current Performance Measurement – Planning

Of the RTPI members surveyed Clifford (2007), 90% were of the opinion that Government planning targets were too obsessed with speed of decision. Such views are reinforced by Penfold (2010), who suggests that time based targets have become more important than quality of service, with applications that are not dealt with within a prescribed timescale ceasing to have priority.

Penfold makes reference to the fact that at the time of writing his report, a pilot set of customer satisfaction based indicators was being trialled in line with recommendations made by the Killian Pretty Review (Killian and Pretty, 2008b). This development was expected to be a benchmark for other public service areas but the pilot exercise did not result in a continuing measure of customer satisfaction and was not carried forward.

The quarterly returns required of planning services by the Government’s single data list continue to concentrate upon the percentage of permissions granted and speed of decision making (Department for Communities and Local Government, 2012e). The Coalition Government sought to penalise poor performance by centralising the decision making of local authorities designated as being very poor, introducing a quality measure based upon the

appeal success rate for major developments (Department for Communities and Local Government, 2013b).

Penfold (2010) stresses that for their part, regulators do not always receive the information they need from applicants and have scarce resources in dealing with applications that are not fit for purpose. In this sense, it seems relevant to suggest that if the Government sees fit to judge service quality on appeal successes, it should also draw social value from the defects in applications that are corrected by planning services.

7.6.6 Current Performance Measurement – Building Control

In contrast to the Government’s quarterly requirements for planning performance data, there is no statutory requirement for any performance information from building control bodies.

A firm of consultants was appointed by the Building Control Performance Standards Advisory Group (BCPSAG) and Office of the Deputy Prime Minister (ODPM) as far back as April 2004 to construct a set of performance indicators. Table 7.1 (Building Control Performance Standards Advisory Group, 2015) shows that the experimental performance standard exercise for building control has been ongoing since 2007/08 and details the number of responses year on year.

Financial Year	Local Authorities	Approved Inspectors	Total
2007/08	107	39	146
2008/09	68	36	104
2009/10	60	36	96
2010/11	45	40	85
2011/12	146	53	199
2012/13	82	59	141
2013/14	146	76	222

Table 7.1 - Number of responses to BCPSAG building control performance exercises

When considering that there are around 320 local authority offices and over 90 registered approved inspectors in England and Wales, it can be seen from Table 7.1 that support for the performance framework administered by BCPSAG has been poor/sporadic. This would seem to suggest both apathy for the perceived value of the indicators and complacency in a scenario with no redress for non-participation. Even in instances where returns have been put forward by building control bodies, many of the indicators have been left blank (Building Control Performance Standards Advisory Group, 2011).

When the development of building control performance indicators was initially considered by the BCPSAG and ODPM in 2004, both were keen to ensure that all building control bodies could submit data without fear that their data could be identified. This was with the express aim of protecting organisations such as the NHBC (Building Control Performance Standards Advisory Group, 2011). Such practice would not appear to be in keeping with Government aspirations for service performance transparency through the publication of high quality performance information (HM Government, 2011a).

7.6.7 The Need for High Quality Performance Information

Trustworthy and valid performance measures that are analysed competently and communicated clearly are important for service managers, service commissioners, councillors and members of the public (Hughes, 2012). Systems are required that monitor outputs, finances and quality of service in order to reach a view about whether outcomes are improving (Bovaird *et al.*, 2012).

Hughes (2012) suggests that performance *measurement* creates quantitative or qualitative values for inputs (service resources), processes (actions that deliver outputs), outputs (services offered to customers) and outcomes (impacts of a service's actions that demonstrate success or failure), which become performance *information*. He states that all well managed organisations in all sectors use performance information intelligently for three essential reasons:

- To help set *aspirations* – what is the organisation trying to achieve and what are its goals?
- For *accountability* – is the organisation achieving what it needs to and is it delivering value for money?
- For effective *management* – where is performance poor and what can the organisation do better?

A single top-down system of performance measurement is unlikely to meet the needs of all service users. Such a system is more likely to lead to a reluctant 'compliance' approach to performance measurement that focuses on burdens, rather than a 'commitment' performance culture that focuses on benefits (Hughes, 2012). Taken from the work of Hughes, Figure 7.2

illustrates the roles of performance information in informing people inside and outside local authorities.

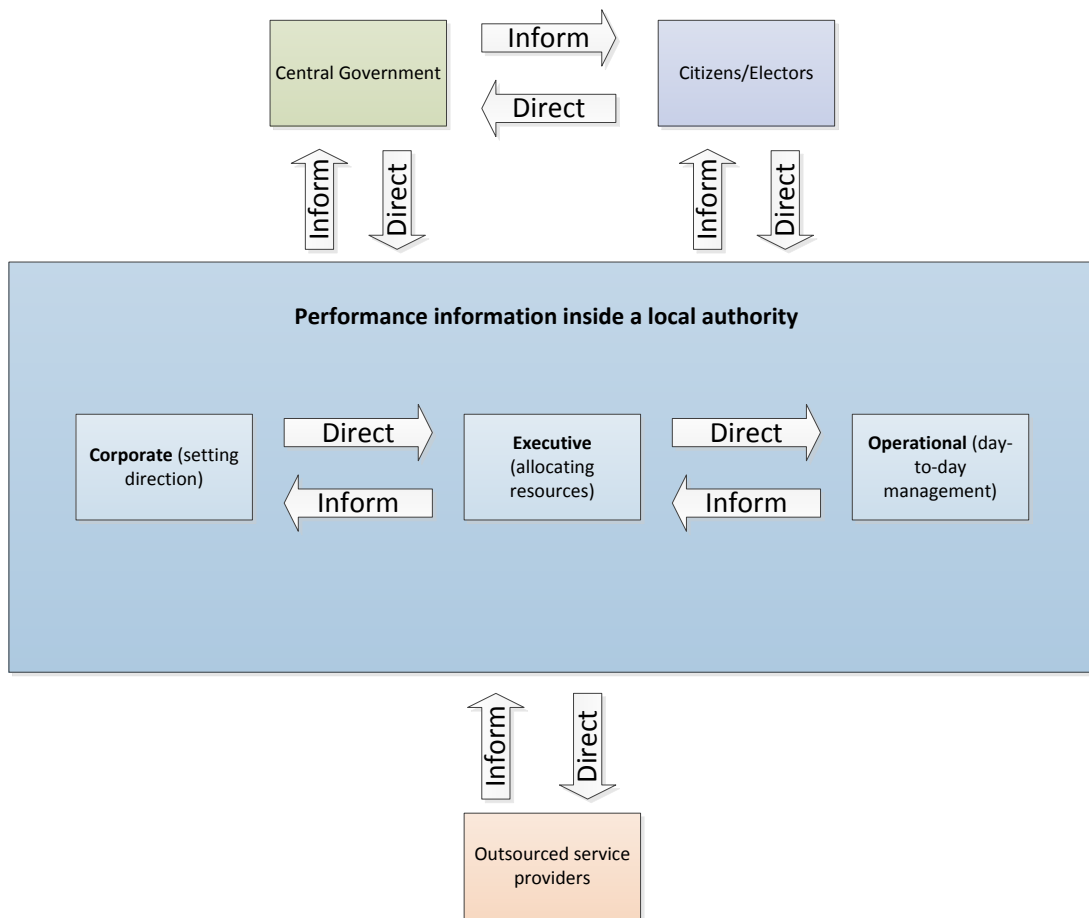


Figure 7.2 - Levels of performance information in the public sector

Interviewees Paul O’Brien and Mike Feintuck were of the belief that competition is not necessarily required to drive service quality in the public sector and that performance measurement alone could achieve necessary service quality. However, in line with the above comments of Julian Le Grand, there was a broad consensus among interviewees that a combination of robust performance measurement and competition for local commissions represented a viable driver of high quality regulatory service provision.

As an individual with extensive experience of operating within and reviewing the regulatory landscape for the built environment, Adrian Penfold summed up such views succinctly:

“Should there be measurement and should there be carrots and sticks? I think, yeah, there should.”

Hughes (2012) states that performance measurement systems should be designed to support decision-making in a particular service area and to answer questions. The *Local Authorities Regulatory Services Excellence Framework* (Local Better Regulation Office, 2010a) resulted from 6 years of work and research into other recognised standards. As such, the Excellence Framework was the first nationally agreed set of standards for the performance of regulatory services when it was published in 2010.

7.6.8 *The Local Authorities Regulatory Services Excellence Framework*

The 4 themes set out by the Local Authorities Regulatory Services Excellence Framework cover *leadership and strategy, customer focus, resource management and achievement of sustainable outcomes*. The framework was intended to be used as a guide to service quality and as a reference point for other regulators and government departments.

Table 7.2 offers an overview of the main criteria associated with each of the 4 themes of the Excellence Framework.

Themes	1. Leadership, strategies and collaboration	2. Focus on and engagement with customers	3. Resource, activity and people management	4. Achieving outcomes effectively and sustainably
Main Criteria	1.1 Service vision, direction and planning 1.2 Integration with local and national priorities and strategies 1.3 Collaboration with others	2.1 Engagement of customers and stakeholders 2.2 Understanding local needs and communities 2.3 Responsiveness to customers and stakeholders	3.1 Effective resource and partnership management 3.2 Activities are based on a sound understanding of risk and use of intelligence 3.3 Learning and supportive culture	4.1 Delivering sustainable outcomes 4.2 Performance management 4.3 Review and scrutiny for continuous improvement

Table 7.2 - Overview of the Excellence Framework

As a set of performance standards for regulatory services, the Excellence Framework would appear to be synergetic with the aims and objectives of planning and building control services. Theme 1 asks for the type of business leadership skills that are now required within the regulatory environment, particularly since the introduction of competition for commissions through the Government’s Open Public Services White Paper (HM Government, 2011a). Such requirements have been highlighted by interviewees such as Tracey Bush and Jonathan Williams in relation to setting out a vision for and operating their CICs.

Theme 2 stresses the importance of customer engagement, a theme echoed strongly by all interviewees involved in the review of service provision. In setting out his own views in this respect, Dave Jolley highlighted the merits of such an approach in comparison to current performance measurement in the planning sector:

“Speed of performance is an element, but it’s not the most important element. It’s actually what the customer thinks, because they’re very conscious that by putting too much emphasis on speed of performance, it can drive the wrong behaviours and get the wrong result.”

Theme 3 requires that public services operating with a community focus also ensure that they maintain the most efficient use of the resources available to them. As outlined in Chapter 3, the results of a straw poll of Heads of Building Control carried out by the author (Key, 2012) would seem to suggest that their knightly motivations in attempting to maximise financial resources for the benefit of customers are being ignored by some local authorities. Fee income would appear to be being used to cross subsidise other service areas and activities. This view was reinforced by interviewees, with Adrian Penfold discussing his previous experiences of excessive overheads as leader of a building control team, and Sir Andrew Stunell expressing concerns in relation to cross subsidisation between high and low cost planning applications:

“When said I need to double the size of my building control team, and I could afford to do that because the fee we would get from [a well-known high value project], it’s a huge fee, as you can imagine, my finance director decided that he wanted half of that fee to cover the central costs and my finance director and I ended up in a bit of a row.”

“I obviously don’t think that ridiculous profits should be made out of regulatory system, but I don’t have a problem with local councils having a surplus on their account. When you look at planning, the big debate in Whitehall is whether there should be cross-subsidies between small applications and large applications – small applications are more expensive.”

Again and perhaps not surprisingly, interviewees were unanimous in their belief that organisations providing community focused services should be asked to clearly demonstrate their efficient use of resources. As the leader of a CIC accountable to NHS commissioners and the public, Tracey Bush stated that:

“From my point of view, the bit that’s important is the purse string – the tax-payer’s purse string. So what you get for that and where the money goes and how it’s spent and the best quality and the best value. That can be delivered in any service model. I suppose to me, it’s about what’s best for the purse string and for the public purse.”

Theme 4 of the Excellence Framework (Local Better Regulation Office, 2010a) specifies the need to demonstrate the value and sustainable outcomes of regulation, which may be partially answered in this instance through the model requirement set out in Chapter 5 to label the level of sustainability attached to each development. This requirement is closely in keeping with Government aspirations for the development and stewardship of a sustainable built environment in England, the achievement of which could be seen as adding social value to local communities.

But as will now be discussed, social value would appear to be both a difficult attribute to measure and an issue not given enough recognition by service commissioners.

7.6.9 The Measurement of Social Value

Penfold (2010) sets out the need for recognition of the contribution made by regulatory bodies to sustainable outcomes. Such requirements draw parallels with research emerging from the NHS on the need for services and social enterprises to measure the social value associated with their activities, and for commissioners to evaluate such indicators as part of procurement exercises (Department of Health, 2007).

The *Guide to Social Return on Investment* (SROI Network, 2012), which is the culmination of a 3 year programme of research funded by the Cabinet Office, recognises that managing social value is becoming increasingly important to the public and private sectors. The guide sets out a framework for measuring and accounting for social value, termed as Social Return on Investment (SROI), seeking to reduce inequality and environmental degradation and improve wellbeing by incorporating social, environmental and economic costs and benefits. The purpose of SROI is to measure change in ways that are relevant to the people or organisations that experience or contribute to it, telling the story of how change is being created by measuring social, environmental and economic outcomes, using monetary values to represent them. This enables a ratio of benefits to costs to be calculated – for example, a ratio of 3:1 indicates that an investment of £1 delivers £3 of social value.

Vickers (2010) highlights the growing role of social enterprises in furthering innovative approaches to environment related Government policy development in the UK. The ‘*trading for a social purpose*’ element of social enterprises is often assumed to include environmental objectives (Department of Trade and Industry, 2002; Chartered Institute of Public Finance & Accountancy, 2011).

Interviewees reinforced the importance of measuring social and environmental outputs and the difficulty of doing so, with the following quotations being indicative of views expressed:

“I think that there’s a lack of that understanding of those really important things and my worry is that, if we’re not careful, we’ll lose some of the really important things as the cost comes down. I count it as really important because of saving the planet... it’s life-threatening, but it’s not attributable to something.” Ant Wilson

“It’s very difficult to quantify [social value], even though we’ve got lots of guidance about how you can quantify it. When it comes down to marking the tender documents, those all-important method statements, it’s very difficult to articulate the social value, and I don’t think the Social Value Act has really helped us that much in that respect. Are we good at it? No, we’re not very good at it and, in fact, the tender exercise I’m going through at the moment, I’m sitting this morning with an auditor who is looking at the way in which we’re setting up our social impact analysis for the next year. It’s a learning curve for us.” Jonathan Williams

As will now be discussed, as well as stressing the importance and difficulties of measuring social value, interviewees also suggested that it is not high on the priority list of commissioners, whose main objective would appear to be financial savings.

7.6.10 The Reality of Demonstrating Social Value

Social Enterprise Mark, the only international certification scheme for social enterprises, claim that 74% of customers would rather buy from a company that makes decisions based on concern for society and the environment. They also claim that 88% of commissioners prefer bidders who have a public service ethos (Social Enterprise Mark, 2013). Interview data would not appear to support this assertion, as demonstrated by the comments below:

“Probably not [answer to whether social value is recognised by commissioners], depending on how close it would be in terms of price and stuff like that.” Paul O’Brien

“I suspect the social value stuff will always be pretty marginal in commissioners’ minds and maybe understandably in the sense that they would actually want to be sure that the organisation concerned performs.” Julian Le Grand

“We produce a social value report internally, but we’re never asked by the commissioners to share that. We’ve actually gone for two tenders where it wasn’t even mentioned so it’s not there, it’s not embedded within their frameworks at all.” Tracey Bush

“I would say that the NHS haven’t got a clue, they don’t even go near it [social value].” Jonathan Williams

Ultimately, it would appear that in times of austerity, if local authorities are to commission regulatory services on a not for profit basis, in keeping with the social housing sector (Jin Ham, 2009), financial probity is likely to be an important requirement.

7.6.11 Financial Probity

As discussed above, data considered by this study would seem to suggest that in keeping with the basic financial principles of fee earning public service delivery set out by the Government (HM Treasury, 2007), stakeholders believe that regulatory services should be run on a not for profit basis. Hughes (2012) states that the feature that sets local government performance information apart from that in the private sector is the link to public accountability. He draws attention to the Audit Commission's discussion paper *The truth is out there*, which outlines the benefit of publishing financial data (Audit Commission, 2010, p. 7):

“Putting more information into the public domain is a good thing in a democracy. It can give more people greater choice, and an opportunity to express well-informed views on the things that matter to them. More transparent information on public spending has the potential to open a dialogue with the general public that could identify savings, reduce waste and expose corruption.”

Presently, only public building control bodies out of the services being covered by this research are asked to publish financial data under the Building (Local authority Charges) Regulations 2010, although there is no prescribed format for this information. In relation to data publication, the Government's Open Public Services 2013 paper (HM Government, 2013, p. 5) makes the following commitment:

“We will ensure that important data about public services, user satisfaction and the performance of all providers from all sectors is available to the public in an accessible format. This will include data on spending, performance and equality.”

If services are to compete for regulatory public service commissions, transparency in relation to the manner in which income is managed and resources are allocated is likely to be essential to all stakeholders for the following reasons (Bovaird *et al.*, 2012; Audit Commission, 2010; HM Government, 2013):

- existing public services will be required to show that income is sufficient to fund the resources required to run services effectively and efficiently;

- employee led social enterprises may want to demonstrate that they can lower service costs by negotiating contracts for accommodation and support services with providers outside local authorities and this may also have the effect of highlighting existing inefficiencies to local authority decision makers;
- private/third sector organisations will need data to show how existing services are performing financially (whether these be public or commissioned services) in order to target business opportunities;
- commissioners will need detailed financial information to allow them to decide which service delivery option suits their strategy and community best; and
- customers of the services will require the information if they are to have their say on which provider is perceived to best suit their needs.

Guidance prepared by the Chartered Institute of Public Finance & Accountancy (2010) on how financial statements on public building control activities should be set out on an annual basis (see Figure 7.3) would seem to be a good template from which to build financial performance requirements for regulatory services.

	Chargeable Activities £	Non-chargeable Activities £	Total Costs
Expenditure			
Employees	xxx	xxx	xxx
Accommodation	xxx	xxx	xxx
Transport	xxx	xxx	xxx
Supplies and Services	xxx	xxx	xxx
Third Party Payments	xxx	xxx	xxx
Support Services	xxx	xxx	xxx
Depreciation and Impairment Losses	xxx	xxx	xxx
Capital Financing Costs (notional interest)	xxx	xxx	xxx
TOTAL EXPENDITURE	xxx	xxx	xxx
Income			
Building Regulations Charges	xxx	xxx	xxx
Miscellaneous Income	xxx	xxx	xxx
TOTAL INCOME	xxx	xxx	xxx
Surplus/(Deficit) for the Year	xxx	xxx	xxx
Surplus/(Deficit)			
Brought Forward	xxx		xxx
Carried Forward	xxx		xxx

Figure 7.3 - Suggested CIPFA template for public building control services

In terms of the publication of the type of publicly available information outlined by Figure 7.3 in the interests of fee paying customers, Paul O'Brien's comment was representative of the comments made by interviewees who expressed opinions:

"I happen to believe in democratic accountability for public money. Local democracy isn't perfect by any means but at least there's somebody there to challenge how a service has been provided or how efficient a service is on behalf of the communities."

However, in relation to Paul O'Brien's comment, the Government's abolition of the Audit Commission (HM Government, 2014a) would appear to give cause for concern in terms of a resulting lack of challenge to the type of cross subsidisation highlighted by this study.

Having considered the requirements of performance measurement requirements prevalent among literature and interview data, what follows is an illustration of what the future might look like in this respect for non-profit regulators operating competitively.

7.6.12 Performance Measurement – Moving Forwards

Table 7.3 details the current areas covered by planning and building control performance indicators. The table demonstrates that whilst planning data is very much geared towards the number of different application types and speed of decision making (Department for Communities and Local Government, 2014c), the developing building control framework is very service focused (Building Control Performance Standards Advisory Group, 2014). No current standards are community focused in terms of the value added through regulatory interventions that lead to the type of sustainable outcomes which might benefit building end users rather than the developers who submit applications.

Current Quarterly Planning Performance Indicators	Current Annual Building Control Performance Indicators
Number of planning applications	Best practice process management (rating out of 100 based on coverage and operation of management system)
Number of planning decisions	Complaints (technical issues, service issues and proportion satisfactorily resolved)
Number of applications granted	Staff turnover (number of direct employees replaced during the year divided by number of direct employees)
Speed of decisions	Sickness absence (average number of days lost per employee)
Number of residential decisions	Training (average number of training days given per direct employee)
Number of householder developments	Investors in People (employees covered by Investors in People commitment and recognition)
Number of prior approvals for permitted developments	Staff make-up (proportion under 24, proportion over 55 and proportion of females)
Number of applications for gypsy and traveler pitches	
Number of cases of enforcement action	
Number of Regulation 3 and Regulation 4 consents	
Number of applications received for determination	
Number of applications decided under delegated powers	

Table 7.3 - Current planning and building control performance indicators

It would appear that each discipline could learn much from their contrasting performance frameworks, and from the requirements set to ensure the financial transparency of public building control bodies. However, what ultimately results from this study is that the 4 broad themes of measurement set out by the Local Authorities Regulatory Services Excellence Framework (Local Better Regulation Office, 2010a) appear to be worthy of further exploration in terms of potential application to planning and building control services.

By considering an approach such as that set out by the Excellence Framework, it is more likely that performance data would result that could be analysed competently by planning and building control services, and be communicated clearly to stakeholders through publication on an annual basis. Le Grand (2006) states that it is often argued that if a non-profit constraint is attached to organisations contracted to provide public services, they will not exploit their informational advantage to the detriment of public interest. Although existing public regulatory services and those contracted to deliver them are bound by such a constraint, Le Grand postulates that complacency may result and that a possible way to overcome this is a governance structure in which all stakeholders are represented.

7.6.13 The Importance of Good Governance

The Homes and Communities Agency (2012) view good governance as being the bedrock of every social housing organisation's ability to run itself effectively and efficiently. Such views are commonplace among commentaries on public services, as well as on the operation of social enterprises.

Defourney and Nyssens (2010) identify a commitment to democratic ownership as a necessary condition of the ideal type of social enterprise within Europe. If non-profit social enterprise is to flourish, it is likely that local authority scrutiny committees will have an important role to play in monitoring the performance of regulatory services such as planning and building control in the future. What follows is an assessment of current standards and practices as a means of drawing out the necessary attributes of a framework for good governance for planning and building control services.

7.6.14 Good Governance Standard for Public Services

The Independent Commission on Good Governance in Public Services (2004) noted that at the time of publication of their *Good Governance Standard for Public Services*, it was surprising that there was no common code for public service governance. The new standard was set out with the purpose of encouraging public bodies to review their own effectiveness, whilst at the same time providing commissioners and regulators of public services with a common framework for assessing good governance practice.

The standard built upon the seven 'Nolan Principles' (Committee on Standards in Public Life, 1995) for the conduct of individuals in public life, these being Selflessness, Integrity, Objectivity, Accountability, Openness, Honesty and Leadership. It set out six core principles of good governance, which are detailed in Figure 7.4 (Independent Commission on Good Governance in Public Services, 2004).

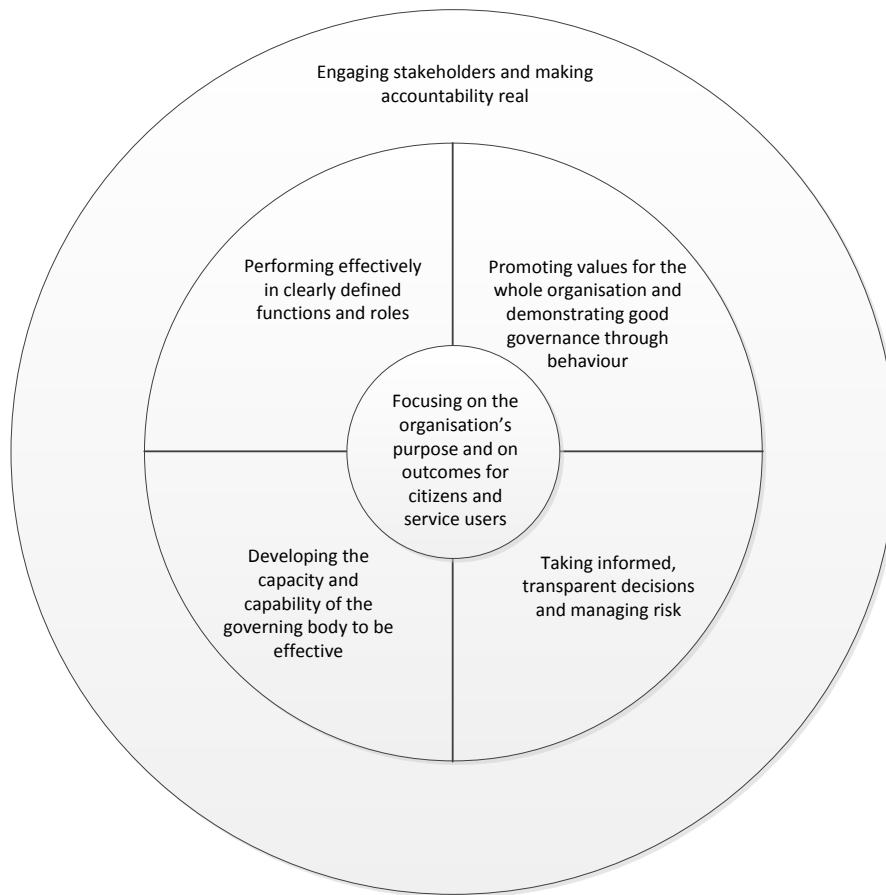


Figure 7.4 - Principles of good governance

As Figure 7.4 shows, a clear organisational purpose, shown at the centre of the diagram, is viewed by the Independent Commission on Good Governance in Public Services as being *the* hallmark of good governance. Their report highlights the importance of considering ‘public value’ when setting out such a purpose. The term public value has since been replaced by the previously discussed term of ‘social value’ as a means of enabling the development of community focused organisations such as social enterprises.

7.6.15 Governance and Social Enterprise

It seems clear that the need for accountability through an appropriate governance structure should be central to public services such as planning and building control. However, opinion on the issue suggests that governance is a neglected area within social enterprise research (Low, 2006).

Social enterprise can take many organisational forms and not surprisingly, there is no single recognised template for governance structures. As companies limited by guarantees or shares, CICs have memoranda and articles of association, which set out a company's objectives and

define and describe the duties and responsibilities of directors, along with legal and administrative requirements. In addition, a community interest statement needs to be prepared and maintained, outlining how its activities provide benefit for a community and how this will be achieved (Chartered Institute of Public Finance & Accountancy, 2011).

Many social enterprises have an open membership structure linked to one or more stakeholder groups, such as service users, customers, employees, suppliers, volunteers and supporters. Like the Department for Communities and Local Government Committee (2012), Le Grand (2006) suggests that stakeholders such as regular customers should be part of service performance monitoring exercises. In this sense, interviewees Tracey Bush and Jonathan Williams confirmed how important customer feedback is as part of demonstrating the value of the work of their CICs.

Member influence on governance is typically through voting at general meetings and the election of board members, with voting on fundamental business issues typically being on a one member, one vote basis (Le Grand, 2006). Low (2006) postulates that corporate governance results in board members qualifying purely on the basis of expertise in managing and accumulating assets. In contrast, he suggests that non-profit governance is built on the notion that those managing an organisation at the highest level should be on the board because of who they represent rather than their ability to manage the assets of the organisation.

Non-profits such as social enterprises are theoretically owned by the community rather than by shareholders, with their assets held in trust and *locked-in* for community benefit. This is an arrangement which prevents the transfer of the assets out of the control of services in the public interest (Dunn and Riley, 2004; Blond, 2009; Office for Public Management, 2010). In instances where contracts are not renewed or services fail, assets pass to the new service provider.

Fowler (2000) suggests that social enterprise calls for a specific type of capability to manage a profitable enterprise in a not for profit organisation, a requirement that can be linked to the development of *stewardship theory*.

7.6.16 Good Governance for Regulatory Social Enterprise: Stewardship Theory

Mason and Royce (2007) state that although social enterprises should have recognised board skills as an essential part of their operation, the performance capability at board level is under

researched. As an alternative theoretical approach, Mason and Royce, along with other academics (Dart, 2004; Low, 2006) offer '*stewardship theory*', with service leaders being conceptualised as '*stewards*' and motivated by non-financial incentives. In offering stewardship theory as an alternative governance strategy, they claim that such a basis of trust offers more likelihood of the delivery of strategic objectives.

Mason and Royce (2007) suggest that stewardship theory aligns with the ethos of social enterprise and the psychological and social profile of its leaders. If the leader lives within the community being served, decision making will closely align with community needs as the leader will have empathy and focus on the recipients of social benefit. Similarly, board members who are trained to provide the skills required of the social business are more likely to be usefully positioned to assist leaders strategically in their activities. Mason and Royce postulate that as part of the ethos of stewardship theory, staff will have the opportunity to liaise with board members or 'functional consultants' on a more frequent basis.

There was strong support for adequate governance among interviewees, with Adrian Penfold, Dave Jolley, Chris Findley, Fiona Rooney and Paul O'Brien all recounting positive experiences of democratic accountability within local government, particularly in relation to planning. In terms of the commissioning authorities they discussed which were overseeing outsourced services, governance boards would often consist of at least one senior manager (chief executive or director), a finance expert and an elected member.

However, the data emerging from interviews with Tracey Bush and Jonathan Williams drew firmer parallels with the description of stewardship theory. Relationships with their commissioners appeared to be more of a two-way process of communication. Challenges were often being made to commissioners on their own or their organisation's shortcomings, including the non-attendance of meetings and overcharging for support services (i.e. human resources, information technology support, etc.) and accommodation being locked into contracts. In relation to the latter, both interviewees highlighted the importance of the use of data setting out the costs of support services and accommodation that are readily available in the open market when making their arguments. With staff voting for members of each CIC board, there also appeared to be more likelihood of ensuring the presence of the skills and competence needed to set and manage strategic objectives.

One attribute often advocated by commentators (Department for Communities and Local Government Committee, 2012; Le Grand, 2006) that was missing from the data obtained from interviews with Tracey Bush and Jonathan Williams was a customer presence on their boards. Due to the transient nature of their patients, feedback was achieved via regular tours of their facilities by board members. However, when considering the potential involvement of customers in the strategic planning of the objectives of planning and building control services, the existence of a regular customer base should enable their involvement on boards of regulatory organisations.

Stewardship theory would also appear to align with the ethos of the Government's aspirations for devolving decision making to the lowest appropriate level as part of a not for profit and competitive service delivery framework (HM Government, 2011a).

7.7 Regulatory Social Enterprise: A Definition and Framework

A performance driven market ideology of social enterprise would appear to be a good fit for competitive and locally accountable regulation that supports consistent collaboration, thereby complementing the model requirements emerging from Chapters 5 and 6. However, none of the previously outlined definitions of social enterprise appear to closely match the not for profit fee setting ethos for public regulatory services. Accordingly, a working definition is required for a social enterprise driven regulatory market ideology in order to establish clear ground rules particular to such service provision (Chartered Institute of Public Finance & Accountancy, 2011).

Having examined a wealth of literature relating to the development and meaning of social enterprise, and having balanced this information against the public interest based demands of regulatory services, it would seem reasonable to reconsider the Government's 2002 definition (Department of Trade and Industry, 2002).

By removing '*principally*' from text relating to the reinvestment of surpluses for social purposes and inserting a requirement for democratic accountability, the Government's 2002 definition can be developed to match the ethos of regulatory services with social and environmental objectives:

A regulatory social enterprise is a business with primarily social objectives whose surpluses are reinvested for that purpose in the business or in the community, rather than being driven

by the need to maximise profit for shareholders and owners. Regulatory social enterprises tackle a wide range of social and environmental issues and are democratically accountable for their financial and performance standards.

The above definition would appear to encapsulate all relevant demands of public regulatory services such as planning and building control. It could serve the purpose of enabling a diverse range of local service providers and at the same time, consistent interdisciplinary collaboration.

Figure 7.5 offers an indication of how, in comparison to the current service delivery framework shown in Figure 3.1, a competitive service delivery framework of localised non-profit social enterprise/CICs might begin to enable consistent collaboration between planning and building control services.

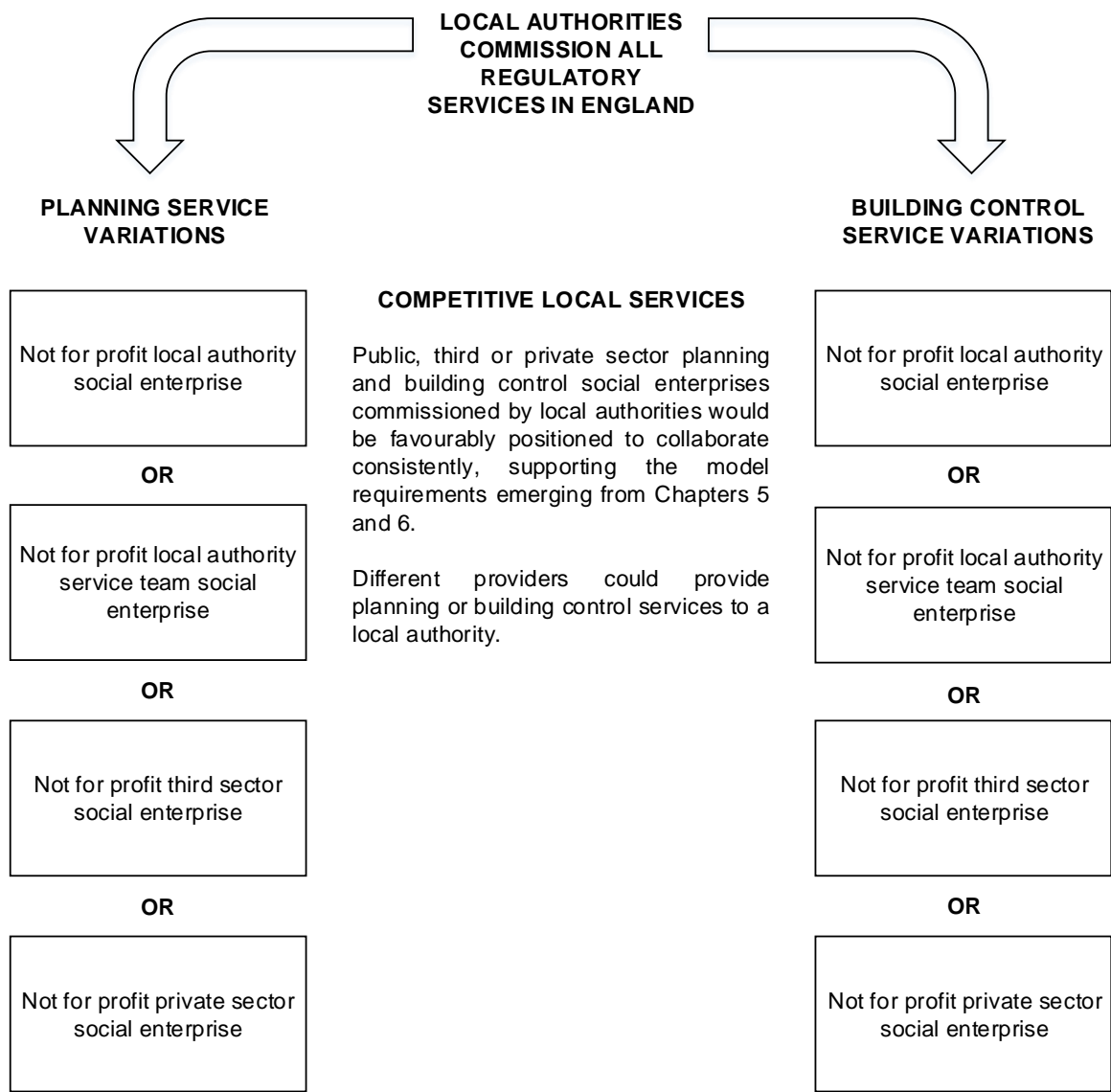


Figure 7.5 - Potential framework for competitive regulatory social enterprise

Over time, all regulatory service providers, regardless of sector, could be registered under a collective term in a similar manner to RSLs in England, thereby operating on a level playing field. Social, environmental and financial performance would become the benchmarks driving choice of local service provider, with continually improving performance being a necessity of continuing tenure.

7.8 Creating a Service Delivery Support Framework for Consistent Collaborative Working: Summary and Model Requirements

7.8.1 Summary

The purpose of this this chapter was to develop model requirements that will contribute to the formulation of a regulatory service delivery framework capable of:

- supporting consistent collaboration between planning and building control services in England to enable regulatory practitioners and students to meet the technical and educational challenges that have emerged from Chapters 5 and 6; and
- meeting Government aspirations for sustainable development through non-monopolistic, continually improving and not for profit regulatory services at a local level (HM Government, 2011a).

The chapter began by seeking to redress the balance between the economically driven public choice framework for regulation that currently exists for the immediate benefit of the business community, and the long term needs of building end users through sustainable development. Written and empirical data suggested that when considering the potential long term economic and environmental consequences of ignoring climate change (Stern, 2007), a return to public interest centred regulatory foundations for the built environment would appear to be required.

Through an examination of data held by regulators in relation to the minimum level of demands that should reasonably be placed on developers to ensure optimum levels of sustainable development, regulatory and financial demands upon them could be standardised nationally (Bartle, 2009). However, timekeeping in relation to fee and non-fee earning activities has been found to be sporadic in the planning system (Arup, 2010). In addition, as suggested by Sir Andrew Stunell, there is also political concern in relation to fees from large projects being used to cross subsidise smaller applications. Accordingly, the existing standardised framework of planning fees would need to be re-examined as part of an exercise to also standardise building control fees on a national basis.

In parallel with the concept of interdisciplinarity (Jones *et al.*, 2010), the emergence of social enterprise has been linked with international policy towards sustainable development (Vickers, 2010). Accordingly, with sustainable development as a major policy objective, it

would appear that the regulatory framework for the built environment is a potential locus of both interdisciplinarity and social enterprise.

Building upon public interest centred regulatory foundations for the built environment, a performance driven and locally competitive service delivery framework of social enterprise has emerged as a potential means of supporting consistent regulatory collaboration. Since the end of the 20th Century, a similar ideal has in fact been achieved within the social housing sector. 1,760 not for profit social enterprises are in existence in England, all of whom operate on a level playing field under the same set of regulated performance criteria (Homes and Communities Agency, 2012). Performance management has been a key element of change within the social housing sector for over 20 years (Jin Ham, 2009). In addition, social enterprise is becoming an established method of not for profit service delivery in the NHS and lessons have been learned on the modern development of social enterprise by this study through experiences described by interviewees in this field.

Both written (Institute for Government, 2014; Jackson, 2009) and empirical data suggests that private sector involvement in public services has failed on a broad basis and that regulation should not be a profit making activity. However, unless action is taken to reverse current trends, private sector regulatory oligopolies are likely to emerge (Blond, 2009). As has been shown within the NHS, to be in a position to compete with large private sector organisations, fledgling regulatory SMEs will require far better support from local and central government than is currently available (Local Government Research Unit, 2011). The forms of support required would appear include initial funding, a better appreciation of social value as part of procurement exercises, business advice, advocacy, and initial contracts of at least 5 years. Similarly, the lack of business skills possessed by practitioners operating within a rapidly evolving public sector would seemingly need to be addressed through the type of educational initiatives emerging as model requirements from Chapter 6.

With public, third and private sector non-profit social enterprises competing on a level playing field, and with a social purpose at the centre of their business ethos, one could begin to imagine a scenario whereby continuing tenure might be based upon good performance. By creating a localised competitive playing field for non-profit regulatory social enterprise, it would be possible to drive out VAT, profit, ongoing service marketing costs and representation/registration fees (LABC, ACAI, CIC, etc.) from building control fees.

Performance measurement through a tool such as the Local Authority Regulatory Services Excellence Framework (Local Better Regulation Office, 2010a) would appear to have the potential to demonstrate whether services are or are not meeting the ideals set out within the definition of regulatory social enterprise offered by the author. The model requirement for sustainability labelling that emerged from Chapter 5 could generate data that might be used to demonstrate social value. Such ideals could form the basis of a set of principles to which all potential service providers would be required to sign up to, in a similar fashion to the memoranda and articles of association for existing CICs (Department for Business Innovation & Skills, 2010). This could be driven through a statutory requirement for annually published performance data, as per the manner in which performance is currently driven in social housing (Homes and Communities Agency, 2012).

Stewardship theory (Dart, 2004; Low, 2006; Mason and Royce, 2007) has been highlighted as a potential candidate for an appropriate governance strategy for localised regulatory social enterprise. Stewardship theory has the capacity to meet Government aspirations for the devolution of responsibility for service performance to service leaders (HM Government, 2011a). It also challenges board members and commissioners to skill up to attain the capabilities required to assist service leaders in setting strategic objectives and drives customer involvement in service delivery (Mason and Royce, 2007).

Chapter 3 discussed what would appear to be increasing levels of cross subsidisation and profiteering on regulatory fees, activities which have been reinforced and expanded upon by this chapter. Such findings would seem to suggest that in addition to appropriate governance, and in a similar fashion to the role of the HCA in social housing, some means of national oversight/regulation of the activities of local authorities as commissioning bodies is required. As highlighted by interviewees Tracey Bush and Jonathan Williams, service leaders might also be assisted in attempting to maximise value for money for customers if data on support service and accommodation costs in the marketplace was readily available. A statutory requirement to publish the type of financial information outlined in Figure 7.3 (Chartered Institute of Public Finance & Accountancy, 2010) would make overcharging on overheads (and consequently, the cross subsidisation of other service areas) more difficult for local authorities.

Ultimately, with regulatory services being localised as part of a competitive service delivery framework, interdisciplinarity could be supported in all instances, enabling practitioners and

students to collaborate consistently to meet the type of challenges outlined in Chapters 5 and 6. When considering the existence of combined planning and building control systems in 16 European countries (Pedro *et al.*, 2011), such change would seem to be achievable over time.

7.8.2 Model Requirements

In line with the above chapter summary, research data has outlined the importance of the following model requirements for enabling consistent collaboration between planning and building control services at a local level:

1. A return to the use of public interest theory for regulation of the built environment in the interests of long term sustainable development for the benefit of current *and* future generations of society.
2. The creation of a localised and competitive framework of not for profit social enterprise by Government, with each service provider required to sign up to a standard set of principles similar to the memoranda and articles of association for existing CICs.
3. The development of a package of measures by Government designed to encourage the development of regulatory social enterprises/CICs, including initial funding, a better appreciation of social value as part of procurement exercises, business advice, advocacy, and a stipulation of initial contract terms of at least 5 years.
4. The development of standardised fee schedules and inspection regimes for building control by Government for different project types, based upon the resources required to assess applications and inspect all critical stages of building work. This exercise should include the introduction of time keeping across fee and non-fee related activities for the planning profession and re-assessment of current standardised planning charges, particularly in relation to major projects.
5. The creation of a performance measurement framework by Government, based upon the Local Authority Regulatory Services Excellence Framework developed by the Local Better Regulation Office, with all regulators operating under a common set of performance criteria.
6. Creation of a central agency by Government to ensure oversight of service performance information and the ongoing financial activities of local authority commissioners.
7. A statutory requirement to return (to a central agency) and publish performance information annually.

8. A statutory requirement to return (to a central agency) and publish financial information outlining service income and spending in detail on an annual basis, with the scope of information being similar in nature to current CIPFA recommendations for public building control services.
9. The use of a governance structure based upon stewardship theory, with locally operating service leaders responsible for performance with continual guidance from commissioner and customer board members.
10. A grounding in business and finance as part of the student skills set to be developed as part of the educational model requirements outlined in Chapter 6.

The above service delivery requirements have the potential to stem the tide of fragmentation across the regulatory framework for the built environment through local service delivery, whilst at the same time providing a non-monopolistic regulatory landscape. Collectively, the requirements would appear to have the capability to support the performance standard consolidation measures emerging from Chapter 5 and the type of interdisciplinary higher educational requirements that resulted from Chapter 6.

Having set out the model requirements linked to the three objectives attached to this study, Chapter 8 will now bring them together through a process of synthesis, in line with the research methodology outlined in Chapter 2 and Figure 4.1. As such, having analysed and refined a considerable body of literature and empirical data, the author will essentially become the research architect, drawing all defined requirements together to design and develop the desired model (Simon, 1969).

8 Design & Development of the Model

8.1 Introduction

Each of the previous three chapters has defined the requirements necessary to the desired model. As detailed in Chapter 2, the *design and development of the model* process step is inherently creative by nature (Lukka, 2003). The desired output of this process step is an objective centred solution that meets the overall aim of the research (Peffer *et al.*, 2007), in this case, an enabling model for consistent collaboration at a local level between planning and building control services in England.

In keeping with the structure of the thesis, the issues addressed in Chapters 5, 6 and 7 will first be considered separately with the aim of offering a visual representation of the potential solutions emerging through model requirements from each. Once formulated, the three visual representations of potential solutions will be brought together to form the completed model.

8.2 Rationalising Building Performance Standards

8.2.1 *Codes for Sustainable Domestic and Commercial Development*

In setting out the model requirements for rationalising building performance standards in Chapter 5, the creation of separate codes for domestic and commercial sustainable development by using BREEAM as a benchmark emerged as an instrument capable of supporting consistent regulatory collaboration. Creation of the codes can be viewed as one of the cornerstones of the potential changes to emerge from this study. But if such an instrument were to prove successful, it seems clear that the effects of policy short termism born out of political election cycles and constantly changing regimes would need to be addressed.

Interviewees were generally of the opinion that like existing scrutiny committees and House of Commons groups, a cross party standards group would have the potential to endure across election cycles. Accordingly, a ten-year performance standards strategy, reviewed every 3 years, could be incorporated in codes for domestic and commercial development. This would enable all stakeholders to plan for future requirements and make U-turns such as the abolition of the CSH and zero carbon targets less likely.

A major problem highlighted by previous research (AECOM, 2012; Faber Maunsell and Steemers, 2010; Penfold, 2010) and interviewees was a duplication of regulatory duties. Table

5.2 offered a simple overview of how the broad sustainability categories considered by the planning and building control professions might be allocated. Moving a step further, Table 8.1 sets out regulatory responsibility for sustainability issues under categories aligned with the BREEAM New Construction Technical Manual for Non-domestic Buildings (BRE Global Ltd, 2014a).

Sustainability Category	Building Control Issues	Planning Issues
1. Management	Construction practices commissioning; building user guide.	Life cycle cost and service life planning.
2. Health and wellbeing	Ventilation; thermal comfort; visual comfort; hygiene; moisture control; security; e-enabled buildings.	Space standards; orientation of buildings/shading/daylighting.
3. Safety	Fire safety; structural safety; combustion appliances; glazing/protection from falling; electrical safety (domestic only).	
4. Access	Access in and around buildings.	Local requirements set in local plan.
5. Energy	Reduction of energy use and carbon emissions in buildings.	Low carbon development design; local energy networks; renewables; energy efficient transportation systems; drying space.
6. Transport		Public transport accessibility; proximity to amenities; cyclist facilities; maximum car parking capacity; travel plan.
7. Water	Water consumption; water efficient equipment; external water use (domestic only); monitoring/leak detection (commercial only).	Local requirements set in local plan.
8. Materials	Quality; thermal mass; responsible sourcing; insulation with low embodied impact; efficiency (reuse or recycled content); design for durability; design for reuse; life cycle impacts.	Visual impact.
9. Waste and drainage	Construction waste management; use of recycled aggregates; building waste recycling, storage & collection; foul and surface water drainage to buildings.	On site waste sorting and collection facilities; impacts and treatment of foul and surface water from site.
10. Land use and ecology		Site selection (including treatment of contaminants); ecological value and protection of ecological features; minimising impact on existing site ecology; enhancing site ecology; long term impact on biodiversity.
11. Pollution	Resistance to passage of internal sound; fuel storage.	Impact of refrigerants; NOx emissions; reduction of night time light pollution; reduction of external noise pollution.
12. Innovation	Use of technologies/systems in advance of those included in codes.	Use of technologies/systems in advance of those included in codes.

Table 8.1 - Allocation of sustainability issues under codes for sustainable development

Safety has been added to the categories currently covered by BREEAM in order to bring all related Building Regulations issues under the umbrella of the codes. Similarly, *drainage* has been added to the *Waste* category. As is the case with BREEAM, not all issues listed in Table 8.1 are part of current minimum regulatory standards. Developers wishing to demonstrate sustainability credentials would be in a position of choosing to address such non-compulsory issues, thereby achieving higher building ratings.

The management and use of codes for sustainable development have the capacity to meet the objectives of this research by promoting consistent collaboration between planning and building control practitioners. In addition, the use of checklists mirroring the content of codes for domestic and commercial sustainable development was viewed by interviewees as a tool with the potential to guide regulators and design teams through requirements set by codes and second tier references. As outlined in Chapter 5, the advantages of regulatory and design teams unravelling complex issues together became a necessary consideration of this study.

8.2.2 Design and Regulation: Conjoined as Part of a Dynamic Unfolding Process

The current statutory development consent framework would appear to pay little attention to the design process, resulting in regulation often being viewed as an external constraint by design teams. To make matters worse, many developers do not see the benefit of investing upfront to drive waste out of the design and regulatory processes, again viewing regulation as red tape rather than a value adding exercise. Figures 5.4 and 5.5 have demonstrated the importance of getting early design decisions right. Beyond RIBA Stage 2, the amount of information produced increases exponentially, resulting in considerable cost if amendments are required due to early oversights (Sinclair, 2013). Accordingly, two important requirements emerged as part of the results of Chapter 5.

BREEAM has successfully taken account of the RIBA Plan of Work for many years, with the early involvement of BREEAM Assessors in the design process proving invaluable to successful projects (Clarke, 2013; Schweber and Haroglu, 2014). In view of this evidence, it seemed appropriate to introduce planning officers and building control surveyors to the design process at RIBA Stage 1 or 2 as standards advisors in instances where developers choose to address non-compulsory issues. In normal circumstances, building control surveyors would become involved as a statutory consultee as part of the planning process at RIBA Stage 3.

The use of BIM was viewed by interviewees as being not only capable of driving collaboration between designers and regulators, but also of demonstrating accuracy of design information and ruling out the possibility of contractor claims for site variations. However, concerns were also expressed by interviewees that the development of BIM has been taken over by contractors as a means of making money. Accordingly, it was deemed necessary for the Government to develop a BIM L3 rule engine allied to their own codes for domestic and commercial sustainable development that could be used by all stakeholders to view with accuracy the development of compliant design proposals.

8.2.3 A Visual Representation of Potential Solutions

Having revisited the model requirements that emerged from Chapter 5, Figure 8.1 sets out potential solutions as a natural flow of resources and activities that take the building design process into consideration.

Design and assessment tools such as codes for sustainable development, sustainability checklists and BIM L3 would offer regulatory and design professionals a means through which to establish their project responsibilities and plan for the future. Such tools would also encourage stakeholders to work together to solve complex problems rather than making the problems worse by working in isolation, as discussed in Chapters 3 and 5. In addition, design and regulation, viewed by many as conflicting processes, might move towards being conjoined as part of a dynamic unfolding interdisciplinary process with valuable economic, social and environmental outcomes.

However, like the inclusion of optional requirements in the Building Regulations as a result of the abolition of the CSH, the introduction of codes for sustainable development would have the effect of placing additional knowledge and skills requirements on all stakeholders. As discussed in Chapters 3 and 6, regulatory practitioners are already struggling to cope with the increasingly confusing and complex array of statutory performance standards without also considering advanced standards on a regular basis. The reasons for the existing regulatory skills gap will now be revisited, followed by a visual representation of potential solutions to the problems being encountered and the problems that might be created through the introduction of advanced performance standards.

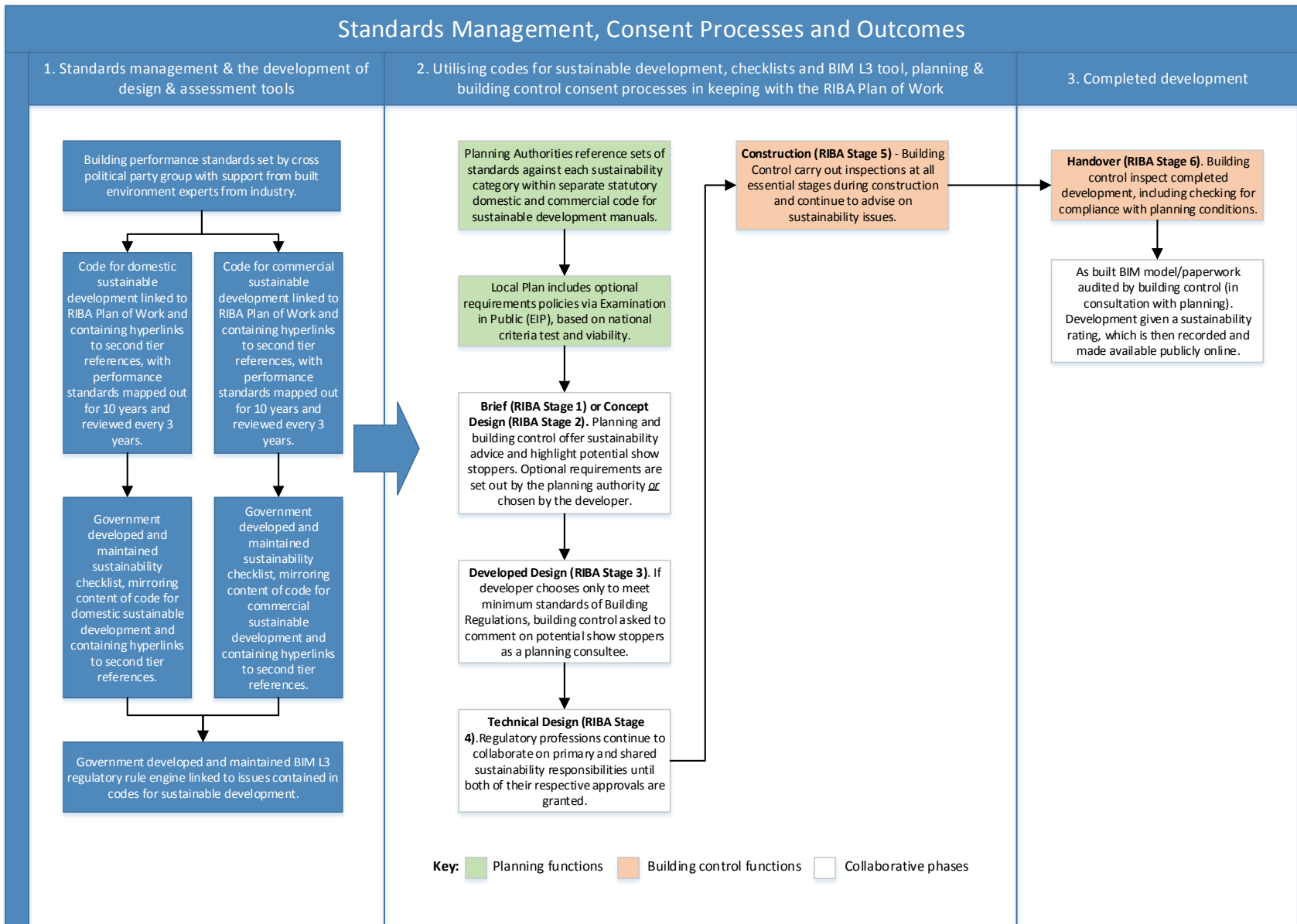


Figure 8.1 – Rationalising building performance standards: a visual representation of potential solutions

8.3 Closing the Regulatory Skills Gap

8.3.1 A ‘Triple Helix’ Approach to Establishing the Foundations of Learning

The increasingly complex and confusing array of performance standards set out in statutory and voluntary documents would appear to have become a minefield for stakeholders in the development consent process to navigate. In contrast, emerging as model requirements from Chapter 5, the creation of codes for domestic and commercial sustainable development, sustainability checklists and BIM L3 containing a regulatory rule engine could serve as a foundation for learning and interdisciplinary thought.

Currently, professional bodies who are keen to protect their own disciplinary interests (and as a result, member numbers), are central to the establishment of curricula for undergraduate courses. By introducing the input of the Government and industry into academic initiatives through the utilisation of the guides and tools emerging from Chapter 5, a ‘triple helix’ or three-way partnership of knowledge sharing could be engendered. As detailed in Chapter 6, such a partnership has been found to be important in the success of North American interdisciplinary educational programmes (Etzkowitz and Leydesdorff, 1997; National Academy of Sciences, 2005).

But as stressed in Chapter 6, even with a foundation for regulatory learning and a triple helix setting the pace on building performance standards issues, the issue of falling student numbers would need to be addressed as part of any educational change programme.

8.3.2 Attracting Student Numbers: Making Regulation More Interesting

There are a number of issues that over a period of time, would appear to have gradually discouraged more and more young people from entering into the regulatory professions. Accordingly, one of the main tasks of a triple helix would be to ensure the more positive promotion of the planning and building control professions. This task should be made easier by promoting the regulatory professions in line with the scenario detailed in Figure 8.1 – as being conjoined with design as part of a dynamic unfolding interdisciplinary process with important economic, social and environmental outcomes.

In addition to the more positive promotion of the regulatory professions, experiences of interdisciplinary educational programmes in North America have demonstrated that offering

flexible career paths has proved to be more attractive to students (Casey, 2010). The suggestion by interviewees of a common first year across all built environment undergraduate programmes would provide young students who are unclear on their career options with an opportunity to become acquainted with each discipline before making an informed decision. As such, a scenario through which students could choose to switch from design degree courses to regulatory programmes or between planning and building control courses after their first undergraduate year is likely to prove more attractive.

As was the case with the examination of building performance standards issues in Chapter 5, a common link between sustainable development and the need for interdisciplinarity was found to be prevalent among commentary on the regulatory skills gap covered in Chapter 6. Accordingly, the model requirements linked to the setting up of interdisciplinary undergraduate programmes, are now discussed.

8.3.3 *Setting up Interdisciplinary Undergraduate Programmes*

North American case studies (Casey, 2010; Kurland *et al.*, 2010), Wood and Wu (2010) and the views of interviewees all highlight the importance of ensuring that adequate time and experienced faculty are available when setting up interdisciplinary courses/modules.

In addition to furnishing regulatory students with interdisciplinary skills, research data suggests that it would be necessary to develop faculty who as well as being strong in their own discipline, are knowledgeable in at least one other. It is also necessary for interdisciplinary sessions to be led by a moderator (Klein, 1990) and for faculty to become used to teaching using a common sense language rather than maintaining a disciplinary dialogue (Callahan, 2010). Yet again, the triple helix partnership of government-industry-academia would have an important part to play in setting out what would be a significant change programme but nevertheless, the type of change programme that has been recommended for many years (Egan, 2004; Farrell Review Team, 2014; Policy Studies Institute *et al.*, 2008).

Again moulded from literature relating to North American best practice initiatives and the experiences of interviewees, the model requirements emerging from Chapter 6 highlight the need to provide students with a clear understanding of both disciplinarity and interdisciplinarity. A common first year of undergraduate programmes should make clear to students the role of each discipline in collaboratively solving complex problems, thereby also

informing them on their career options. Similarly, first and subsequent years of undergraduate programmes should offer a grounding in interdisciplinary theory through the study of core texts to give students insights into the type of integration of disciplinary knowledge and concepts necessary to solve complex problems (Amey and Brown, 2005).

In relation to setting up interdisciplinary undergraduate programmes, the last thing that became apparent from the research outlined in Chapter 6 was the need for regular group projects (Casey, 2010; Myers and Haynes, 2002). Only by asking regulatory students to solve complex practice based problems within sub-interdisciplinary groups (i.e. regulatory, design, construction management) in a wider interdisciplinary setting are they likely to form a detailed understanding of the type of dilemmas that they will face collectively in the field.

Before offering a visual representation of potential solutions to the problems detailed in previous chapters, the model requirements relating to the outputs of interdisciplinary education will be revisited, namely knowledge production and educational outcomes.

8.3.4 Knowledge Production and the Outcomes of Interdisciplinary Education

Literature and interview data studied as part of the research outlined in Chapter 6 suggest that the academic community in the built environment are scientising disciplines and striving for singular knowledge production paradigms in order to protect their territory. The model requirements highlight the need to move away from disciplinary knowledge production paradigms and towards a paradigm of an interdisciplinary design science. As such, an ethos of problem solving in the practice of designing, regulating and constructing sustainable development would be introduced (Voordijk, 2009). Knowledge produced in an academic context would then feed back into the setting and achievement of performance standards, including the development of innovative systems and technologies designed to achieve advanced standards at the higher end of the sustainability scale.

In addition to the skills required to resolve performance standards issues, a further skills related requirement emerged from Chapter 7 in relation to service delivery issues. With the Government now driving a market ideology in the public sector, literature and empirical data highlighted the increasing need for business related skills among regulatory practitioners. Accordingly, such skills should be viewed as a necessary outcome of interdisciplinary educational programmes.

As a result of such a shift in built environment knowledge production, the attributes of graduates would be aligned to a problem focused context. Accordingly, new regulatory practitioners should be skilled and comfortable enough to surrender their own competitive instincts, objectives and concepts for the wider cause of meeting complex societal needs in the shape of achieving sustainable development.

8.3.5 A Visual Representation of Potential Solutions

Having revisited the model requirements that emerged from Chapter 6, Figure 8.2 sets out potential solutions to the regulatory skills gap as a natural flow of resources and activities.

Previous chapters have indicated a lack of balance between and inadequacy of planning and building control education in relation to increasingly complex building performance standards issues and as a result, the detrimental outcomes of poor skill levels. In contrast, Figure 8.2 portrays an educational system with the core purpose of producing regulatory practitioners with the interdisciplinary skill sets necessary to solve modern problems collaboratively in the field. Like the potential solutions related to rationalising building performance standards detailed in Figure 8.1, the potential solutions to the regulatory skills gap shown in Figure 8.2 are inclusive of other built environment disciplines as part of a problem solving ethos.

As discussed in Chapter 3, research problems related to the current regulatory service delivery framework present considerable barriers to the potential change detailed in Figures 8.1 and 8.2. Without a service delivery framework in place that is capable of supporting consistent collaboration between planning and building control services and more broadly, between the two regulatory services and design teams, such change would be unachievable.

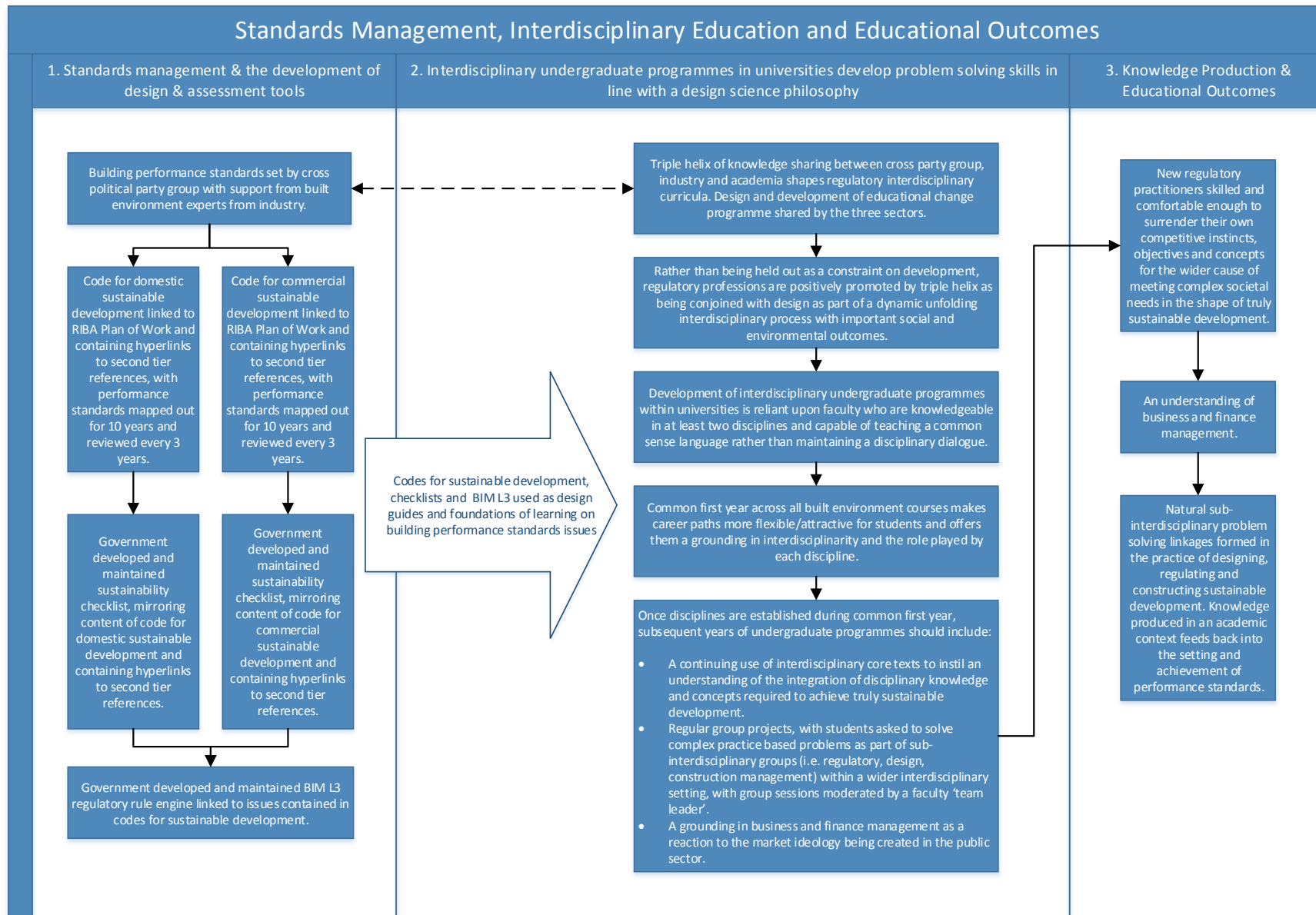


Figure 8.2 - Closing the regulatory skills gap: a visual representation of potential solutions

8.4 Creating a Service Delivery Support Framework

8.4.1 A Return to Regulation in the Public Interest

As discussed in Chapter 7, preventing the failure of markets is one of the main drivers of regulation (Baldwin and Cave, 1999). With climate change being described as “*the greatest market failure the world has ever seen*” (Stern, 2007; p. xviii), the necessity of revisiting public interest theory as part of the challenge of achieving sustainable development seems clear.

Public interest theory can be viewed as one of the cornerstones not only of the regulatory service delivery and policy frameworks that it would help to shape, but of all the potential changes emerging from this study. Viewing regulatory services once again as assets acting democratically and transparently in the long term interests of local communities would prove to be a major enabler of changes to performance standards, educational initiatives and ultimately, service provision.

As will now be discussed, the creation of a localised and competitive framework of not for profit social enterprise can be viewed as another major enabler of interdisciplinary education and consistent collaborative practice.

8.4.2 A Localised and Competitive Framework of Non Profit Social Enterprise

Black (2005) maintains that regulatory innovation consists of innovation in the performance of regulatory functions, institutional structures and organisational processes in a regulatory regime and that an idea whose time has come should be chosen for development. As has been the case with interdisciplinarity, the emergence of social enterprise has been shown to be linked with international policy towards sustainable development (Vickers, 2010). In parallel with codes for sustainable development and public interest theory, a localised and competitive framework of not for profit social enterprise could be viewed as a cornerstone of the potential changes emerging from this study and an idea whose time has come.

Literature and particularly empirical data has suggested that regulation should not be a profit making activity and that a level playing field is necessary for all service providers. Having proved successful in the social housing sector as a framework for localised competition among non-profit service providers, social enterprise emerged as a field leveller in respect of

both financial and service delivery requirements. As such, it meets the objective addressed by Chapter 7, which resulted from political aspirations set out by the Government's Open Public Services White Paper (HM Government, 2011a). Although such a development may prove unpopular to stakeholders benefitting from the current modes of service delivery, it could be argued that what has been applied to the socially conscious housing sector might reasonably be applied to socially conscious regulatory bodies.

With the current mode of competition in the building control sector being replaced by opening up commissioning opportunities with local authorities, all service providers would be required to sign up to a common set of principles, similar to those set out for CICs. However, with limited business experience, public sector service teams would require a set of measures to be put in place by the Government to enable them to compete with private and third sector organisations for regulatory commissions.

Ultimately, success and continuing tenure would then be based upon service outcomes and not lowest cost, with fees standardised at a national level and based upon data relating to the resources required to service different application types. However, the requirement for a framework of competitive nonprofit social enterprise in turn resulted in the emergence of further model requirements due to the inadequate performance measures that are currently in place.

8.4.3 Performance Measurement and Financial Probity

At present, the performance measurement frameworks utilised by planning and building control services would allow neither commissioners nor the services themselves to accurately judge regulatory performance. Again, the social housing sector has shown how performance measurement as a core activity can drive improvement and innovative change in a public service area (Jin Ham, 2009).

By using the *Local Authorities Regulatory Services Excellence Framework* (Local Better Regulation Office, 2010a) as a foundation upon which to build a suitable performance framework, the Government could enable regulatory services to demonstrate their true worth. Services could utilise sustainability labelling data resulting from the model requirement that emerged from Chapter 5 as a means to demonstrate social value, an indicator contained in the Excellence Framework.

By requiring all service providers to publish performance data and the type of financial information outlined in Figure 7.3 (Chartered Institute of Public Finance & Accountancy, 2010), the transparency and financial probity required of services by Government could be assured. However, even with adequate performance measures in place, local and national oversight as a means of making services and local authorities democratically accountable for their actions have emerged through Chapter 7 as necessary model requirements.

8.4.4 *Local and National Oversight of Regulatory Activities*

With the Government keen to devolve the running of public services to the lowest appropriate level as a means of reducing bureaucracy (HM Government, 2011a), *stewardship theory* emerged as a potential governance structure for regulatory social enterprise. Literature (Dart, 2004; Low, 2006; Mason and Royce, 2007) and interview data suggested that a combination of local service leaders (or stewards) and knowledgeable commissioner and customer board representatives could ensure stakeholder engagement and democratic accountability.

However, the recent activities of local authorities (i.e. overcharging regulatory services for accommodation/support services and cross subsidising other service areas with regulatory income) resulted in further model requirements. Central regulation/oversight of performance and financial information emerged as a means to discourage both overcharging on overheads and the inappropriate use of regulatory income.

8.4.5 *A Visual Representation of Potential Solutions*

Having revisited the model requirements that emerged from Chapter 7, Figure 8.3 sets out potential solutions to existing service delivery issues as a natural flow of resources and activities, portraying a service delivery framework that has been set out as a political aspiration (HM Government, 2011a).

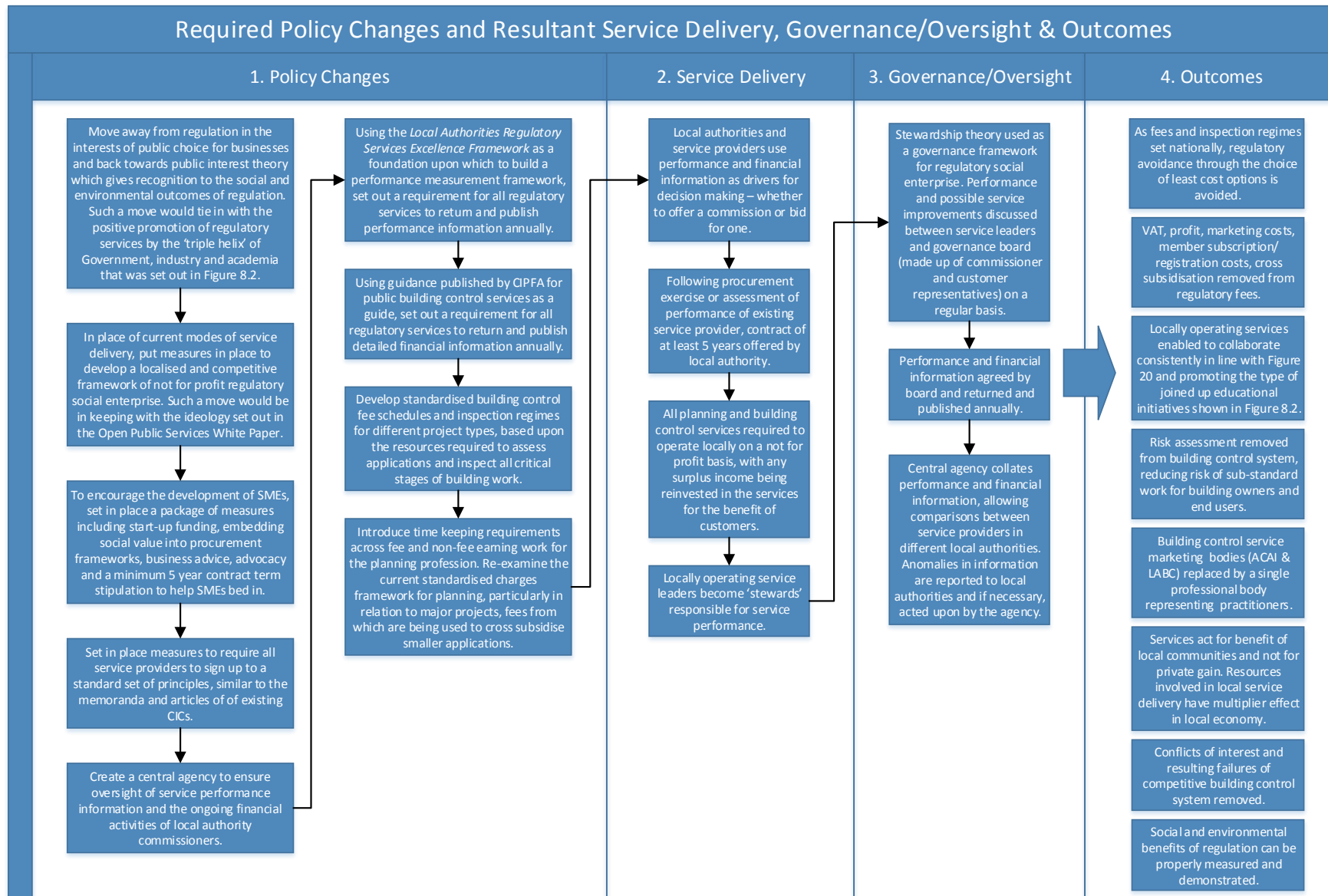


Figure 8.3 - Creating a service delivery support framework: a visual representation of potential outcomes

8.5 An Enabling Model for Consistent Interdisciplinary Collaboration

8.5.1 Model Template

Having set out visual representations of solutions to the 3 research objectives in Figures 8.1, 8.2 and 8.3, the next task was to consider how they should be brought together to form the completed enabling model for consistent interdisciplinary collaboration. In order to accomplish this task, it was deemed necessary to first consider the experiences of other professional fields in utilising models to set out complex transformation programmes.

As detailed in Chapter 2, the design science research methodology adopted by this study has been used to solve problems in the field of information systems/technology. As a result, model templates have been developed to assist in implementing complex software process improvement projects for governments and very large organisations. One such template is the IDEAL Model, which was developed by the Software Engineering Institute (SEI), with five phases providing a path of actions that together constitute an improvement programme (Casey and Richardson, 2004). Figure 8.4, taken from the work of Kautz *et al.* (2000), details the phases of *initiating*, *diagnosing*, *establishing*, *acting* and *leveraging* attached to the IDEAL Model.

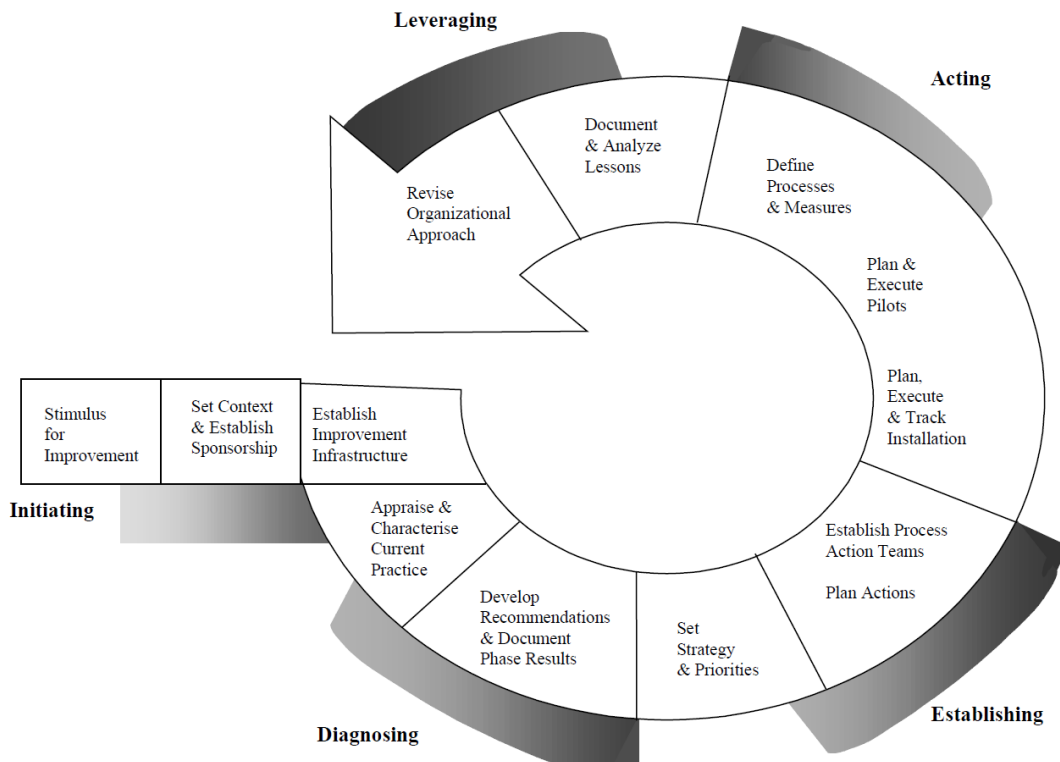


Figure 8.4 - The IDEAL Model

Casey and Richardson (2004) describe the IDEAL Model as a lifecycle paradigm and a good basis for continued improvement during future iterations of the process improvement cycle. As such, the IDEAL Model could be viewed as an appropriate base from which to build a model for consistent regulatory collaboration that in line with political aspirations (HM Government, 2011a), might also be seen as a template for continuous service improvement. However, as will now be discussed, variations to the guiding framework provided by the IDEAL Model were necessary to make the resultant model applicable to the circumstances of this research.

8.5.2 *Synthesis of the Research Solutions*

As discussed earlier in this chapter, public interest regulatory theory, codes for domestic and commercial development and a localised and competitive framework of not for profit social enterprise could be viewed as the cornerstones of potential solutions emerging from this study. Accordingly, in lieu of the initiating phase contained in the IDEAL Model, these three developments could be viewed as the *enablers of change*.

Next, the first active phase of the regulatory cycle would be *interdisciplinary learning*, with regulatory students being equipped with the skills and knowledge to tackle complex performance standards issues collaboratively with other sub-interdisciplinary groups (i.e. design and construction management). Whilst it is appreciated that existing practitioners would need to adapt to the technical change introduced through codes for sustainable development, Chapter 6 has demonstrated that educational change is necessary to match existing and future skills needs. Emerging from higher education, new practitioners would enter a service delivery framework through which they could utilise codes for sustainable development, sustainability checklists and BIM L3 containing a regulatory rule engine to collaboratively solve complex problems in the field. This phase of the model can be seen as the *interdisciplinary practice* of executing regulatory duties. In carrying out their duties within a competitive service delivery framework, regulatory practitioners and services would be under constant scrutiny to ensure that they are meeting their legislative objectives and operating in an ethical manner. This phase of the model reflects continuous *reflection and assessment*. Finally, learning and performance data would be the subject of *feedback* into the *enablers of change*.

Figure 8.5 gives an overview of the research problems detailed in previous chapters, offering a straight visual comparison with Figure 8.6, the completed model.

5. System Improvement Issues

4. Performance/Accountability Issues

3. Practice Based Issues

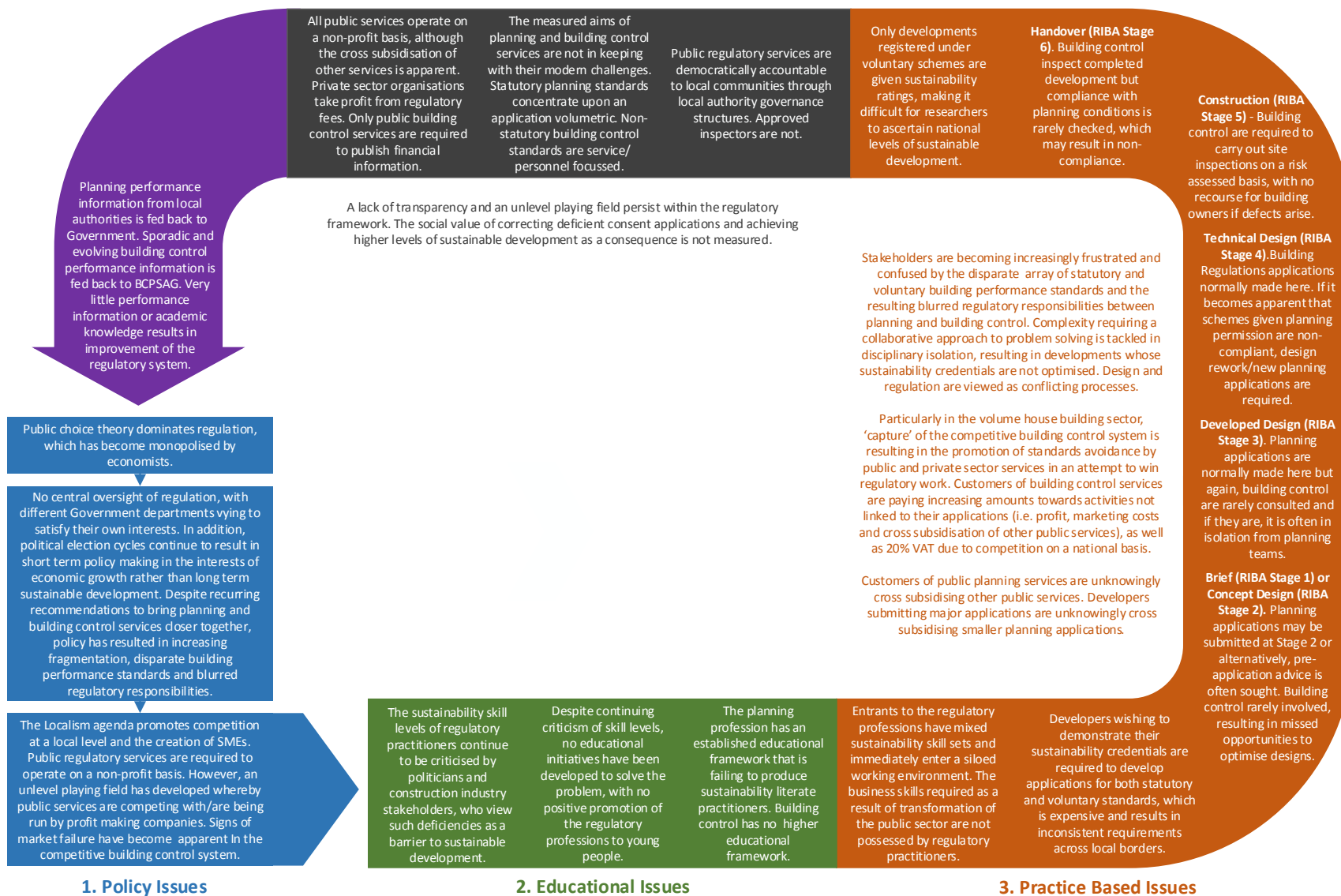


Figure 8.5 - Overview of problems in the regulatory framework

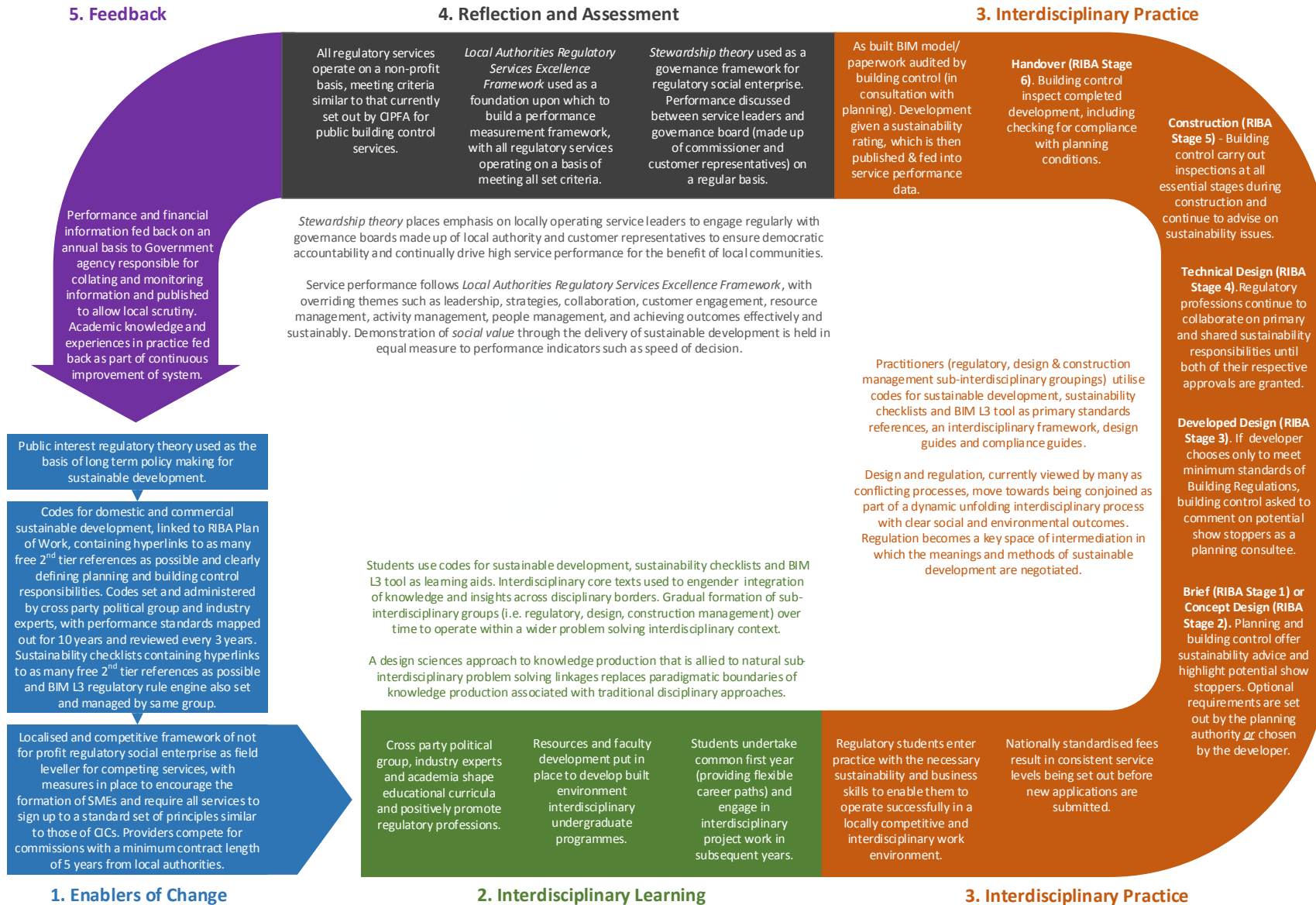


Figure 8.6 - An enabling model for consistent interdisciplinary collaboration

8.6 Summary

If employed, the completed model has the potential to resolve the problems identified throughout the course of this research, the most prominent of which are summarised in Figure 8.5. Although the model represents a considerable shift away from current practices, it has been designed and developed in line with Government and stakeholder aspirations and has taken account of best practice initiatives currently in place in the built environment and other sectors. In fact, the existence of combined planning and building control regimes in 16 European countries (Pedro *et al.*, 2011) suggests that even greater levels of integration than those shown in Figure 8.6 are possible. These countries include Denmark, whose increasingly innovative approaches to sustainable development have received recent praise from RIBA (Royal Institute of British Architects, 2015).

The literature and empirical data considered as part of this study have demonstrated that interdisciplinary education, interdisciplinary practice and performance driven and competitive non-profit social enterprise have proved successful in differing scenarios, both nationally and internationally. When considering the political, environmental, social and economic demands on regulation of the modern built environment, such facets of the completed model can be viewed as ideas whose time has come as part of required innovation in the performance of regulatory functions (Black, 2005).

The early involvement of BREEAM Assessors in the design process has proved to be invaluable to successful projects registered under the voluntary standards scheme (Clarke, 2013; Schweber and Haroglu, 2014). Accordingly, there would appear to be merit in suggesting that suitably skilled planning and building control professionals could begin to collaboratively play a similar role under codes for sustainable development instead of being viewed as constraints to development.

In line with the design science methodology outlined in Chapter 2 and Figure 4.1, the iterative manner in which the model was evaluated via feedback from expert interviewees will now be discussed.

9 Evaluation of the Model

9.1 Introduction

As detailed as part of research approach considerations in Chapter 2, it was known that it would not be possible to test the desired policy driven model in use and accordingly, it was necessary to adopt the *informed argument* method of evaluation. As a result, through the type of methodological process iteration that is synonymous with design science studies, the numerous developing requirements of the model have been evaluated by 25 leading experts throughout the course of the research. These evaluated requirements were then brought together through a process of synthesis by the author to design and develop the completed model represented by Figure 8.6.

This chapter summarises the method of model evaluation employed by the study. Whilst not detailed as part of the informed argument evaluation process described by Hevner *et al.* (2004) and Johannesson and Perjons (2012), interviewees were offered the opportunity to comment upon the completed model. Accordingly, the manner of consultation and outcomes of this exercise are also discussed.

9.2 Evaluation during Model Requirements Definition, Design & Development Process Steps

Although presented in a chronological order in this thesis for the benefit of the reader, the activities undertaken throughout the course of this research have involved continuous process iteration, as outlined previously in Figures 2.2 and 4.1.

In Chapters 5, 6 and 7, themes relative to the 3 research objectives were drawn from over 400 referenced publications and archival sources, in turn containing feedback from hundreds of stakeholders in the English development consent framework. In parallel, transcripts from interviews with 25 leading experts, containing approximately 250,000 words, were used to continually test the viability of these themes and gauge opinion upon the potential utility of the developing model. Informal interactions (emails and telephone conversations) were also used to gauge opinion on the developing outcomes of the study.

Due to the nature of the research, which in seeking to develop an innovative enabling model, has taken account of a broad range of issues, interviewees with particular expertise in built

environment issues felt more comfortable to comment on the developing model as a whole. The views of interviewees were central to establishing model requirements and subsequently, the design and development of the model. Accordingly, feedback on the broader aspects of the emerging model was positive, with the following comments being representative of the many received:

“To me it's a no-brainer that you want to have your planners and your building control people, together with your architects, all in the same room at the same time learning that the thing that they're probably going to spend most of their practical lives doing is actually working with each other, so wouldn't it now be a great opportunity from the very beginning?”
Andrew Edkins

“I think there's a lot of scope for moving to a collaborative approach, beyond the adversarial approach. Yes, getting everybody together near the beginning.” Sebastian Macmillan

“If you can enable collaboration so that you avoid rework and redesign, I think that can only be a good thing.” Gerard Wood

“It's the collaborative model [incorporating planning and building control] that will work best in the long run.” Dave Jolley

“The idea of having planning and Building Regs into something like BREEAM where you have differentiators. You have a minimum standard, then a higher standard and the local authority could set a higher standard if they wanted to. I think in terms of regulation that would be preferable. It wouldn't stop anyone from using an exemplary standard as a differentiator.” Bill Gething

“I've no problem with the model you're proposing, where we're moving to an interdisciplinary approach – it makes sense. It could be a good model to solving complex problems and the use of technology in particular. I think BIM is a big player in this.” Martin Conlon

“I think that the idea of linking it up so it is common is the only logical way to do it, instead of having different vested interests and I still can see that happening with planning and building control.” Ant Wilson

“Facilitating more joining up, that seems sensible and more sharing of expertise... it's a good idea because nobody wants to have to do rework.” Alison Crompton

“With one set of regulations – one body which combined planning and building control – that would be the improvement.” Paul Kirby

“There needs to be more co-ordination, more of a one-stop shop and I think the local authority is the body that needs to provide this... I think you’re onto something there [competition at a local level driving performance and enabling collaboration].” Adrian Penfold

“It’s all getting pretty messy but I think a voice from you saying that that exercise needs to be pushed forward is worthwhile. We ought to get compliance as good as we can make it and I agree with your point that, if we could integrate the various codes, that would be very good indeed and I’m encouraging you to do it... that sounds like a good plan.” Sir Andrew Stunell

As discussed in Chapter 2, the design and development process step has been viewed as being inherently creative, with the author becoming the ‘research architect’ to combine model components (Lukka, 2003; Simon, 1969). However, in the author’s experience of utilising the design science research methodology, the work carried out during the requirements definition process proved essential to developing both an informed argument and the model.

9.3 Comments on the Completed Model

Despite having been instrumental in establishing the requirements that emerged from Chapters 5, 6 and 7, and having commented on the broader aspects of the developing model, all interviewees were asked for comments on the completed model represented in Figure 8.6.

In June 2015, each interviewee was sent a copy of Chapter 8 via email, with a recommendation that if background information on Figure 8.6 was needed, Chapter 8 should be reviewed and if necessary/requested, earlier chapters could be provided by the author. As a busy period of the year for all concerned, particularly academics, some interviewees were unable to comment due to work pressures, stating either that they had nothing to add to previous feedback, or that they would attempt to respond at a later date. In the case of the latter, subsequent approaches were made by the author until it became impractical within the constraints of the study to seek or await feedback. Pries-Heje *et al.* (2008) recognise such difficulties as part of the evaluation process, stating that an appreciation of the possible extent of evaluation within the constraints of a study is a necessary element of any design science research project.

In terms of the eight responses received, all were again largely positive, with interviewees also being complementary on the manner in which the diagrams in Chapter 8 had captured a complex set of issues succinctly. However, a number of amendments or corrections were suggested.

Interviewees Tracey Bush and Jonathan Williams, experts in the setting up and running of non-profit SMEs in the public sector, stated that they only felt comfortable covering service delivery issues and that this aspect of the model would, in their opinion, be achievable for regulatory services.

Building control experts David Clements and Stuart Smith both agreed that the model had the capability to solve the research problems summarised in Figure 8.5. Having been called upon by the Government to help review housing performance standards, David Clements went on to offer more detailed views on the current state of regulation of the built environment:

“The work done by the Housing Standards Review was aimed at reducing the overlap and duplication of sustainability requirements between planning and building control and a number of those measures have now been put in place. Whilst the regulatory requirements become ever more complex, the support and remuneration given to both planning and building control is inadequate to attract the necessary skill levels. The split of building control into public and private sectors provides competition which is healthy in many ways but also results in lower standards of compliance checking to meet challenging fee bids.”

Stuart Smith expanded upon the educational aspects of the model, commenting on his recent experiences in relation to educating building control students through mainstream building surveying degree programmes:

“An approved inspector has just taken on two MSc Building Surveying conversion graduates with very little building control course content – 10 credits of fire safety. This also suggests that there is no longer a ready supply of ‘traditional route’ graduates but also our undergraduates are being snapped up by mainstream building surveying employers, which is the main focus of their course.”

Regulatory experts Julia Black and Mike Feintuck were also in a position to comment upon the potential utility of the model as a whole, with Julia Black commenting that it “sets out a clear way forward” and Mike Feintuck expressing the same opinion, stating that:

“I thought the commentary on ‘capture’ [of the building control system] was really interesting, offering unusually clear, direct and strong examples of two concurrent forms of capture. I was interested by your approach offering regulation via social enterprise as a response which mobilises the concept of ‘competition’ – smart! Only other thing that jumped out was the concept of ‘stewardship’. It was something that I thought was an interesting line of discussion within academic legal circles some years ago, but I’d thought it had lost some profile, so I’m pleased to see that this is still being worked on and used.”

Similarly, as internationally renowned experts in interdisciplinary theory and large scale problem solving, Julie Thompson Klein and William H. Newell were able to offer opinions on the completed model. Julie Thompson Klein stated that when considering the scope of the research project, the emerging concept of transdisciplinarity, an extension of interdisciplinarity for large problem solving, would be worth consideration for any future research. Commenting on aspects of the model connected with engaging students, she raised a point in relation to ‘business as usual’, which was discussed when setting out the objectives of the research in Chapter 3 and later in Chapter 8:

“Your ideas for engaging students are excellent, but are they limited to special programs or do they become embedded into business-as-usual in curriculum and training?”

A more detailed analysis of a viable cultural lead in to the type of educational programmes detailed in Figure 8.6 could be viewed as a suitable topic for further research.

Similarly, although the requirement for a moderator/facilitator in interdisciplinary educational settings was discussed in Chapter 6, William H. Newell highlighted the fact that this had not been made explicit as part of Chapter 8, which was subsequently changed to reflect the following comment:

“Stipulating that the representatives from academia should be “knowledgeable in at least two disciplines” is not enough. You need someone to serve as moderator with expertise in interdisciplinary studies.”

However, on the broader aspects of the model, William H. Newell offered the following views:

“In general, you have extended models of interdisciplinary study such as Allen Repko’s and my own by setting out in exquisite detail the steps from the construction of a more comprehensive understanding, to policy implementation in one particular field. As such, your thesis represents a significant contribution to the professional literature on interdisciplinary studies. I like your idea of having both performance standards and the educational change programme developed collaboratively by representatives of three main interest groups – a cross party political group, industry, and academia. I’m particularly interested in the relationship between interdisciplinary studies and design science.”

As noted in Chapter 6, the interrelationship between the complexity of sustainability and interdisciplinarity has been highlighted by previous research (Jones *et al.*, 2010). William H.

Newell's interest in the relationship between interdisciplinary studies and design science would appear to signal a potential area for further research, with the author being invited by Professor Newell to write an article on the subject for the annual American publication *Issues in Interdisciplinary Studies*.

Ultimately, the views offered by interviewees on the completed model mirrored the positive feedback received throughout its design and development, strengthening the informed argument on its potential utility.

9.4 Summary

Evaluation is an intrinsic feature of design science research and is concerned with the evaluation of outputs, including theory and models. Accordingly, the choice of an appropriate evaluation strategy is a significant issue (Pries-Heje *et al.*, 2008).

As it was not possible to employ and test the policy driven model outlined in Figure 8.6, an informed argument for its potential utility has been set out throughout the thesis, which has been summarised and expanded upon in this chapter. The research methods employed by the study have complemented the chosen evaluation strategy, with leading experts guiding the definition of requirements and commenting on the developing and completed model.

In shaping the requirements of the model, one might naturally expect that the views of interviewees are unlikely to change when such requirements are employed as part of a regulatory operational model and broadly, this was found to be the case. In this sense the author has found that the work carried out during the requirements definition process proved essential to developing both an informed argument and the completed model. With the exception of a few comments highlighting omissions from or suggesting minor changes to the model outlined in Figure 8.6, evaluation of the model would appear to confirm its potential utility.

The following concluding chapter will now summarise how the objectives of the research have been met and set out the resulting original contribution to knowledge and recommendations for further work. Finally, through critical reflection, the limitations of the research are discussed.

10 Conclusions, Limitations and Recommendations

10.1 Introduction

The overriding aim of this research was to develop a model with the capacity to enable consistent collaborative practice at a local level between planning and building control services in England.

The separate challenges attached to the overriding research aim were linked to the three main research problems areas, namely increasing technical complexity, the resulting regulatory skills gap and service delivery issues within a context of continuing public sector transformation. Accordingly, the objectives of the research were to:

1. Demonstrate how building performance standards for new sustainable development might be rationalised to promote consistent collaborative working between planning and building control practitioners at appropriate junctures in the development consent process.
2. Prescribe the basis for a higher educational framework capable of closing the existing skills gap by producing planning and building control practitioners with the necessary attributes to enable them to resolve increasingly complex technical issues collaboratively.
3. Formulate a service delivery framework that would support consistent collaborative working between planning and building control services and meet Government aspirations for sustainable development through non-monopolistic, continuously improving and not for profit regulatory services at a local level.

The prescription of a model containing the above attributes was viewed as a potential means of addressing a wide range of problems being experienced by the regulatory professions and other stakeholders within the development consent system. A number of these problems were initially observed at a local level by the author as a practicing building control manager before being confirmed and expanded upon at a national level by this study.

The standout problems associated with the research have been shown to stem from short term and inconsistent policy making as a result of political election cycles, coupled with a lack of central oversight of regulation and public service transformation within Government. A

summary of the findings and conclusions of the study will now touch upon these standout problems as part of a discussion of the achievement of each of the three research objectives.

10.2 Summary of Findings and Conclusions

10.2.1 Objective 1 – Rationalising Building Performance Standards

As a reaction to political aspirations on a global scale for sustainable development, building performance standards under New Labour increased in complexity from the beginning of the 21st Century. Global climate change has been described as “*the greatest market failure the world has ever seen*” (Stern, 2007; p. xviii). However, despite such well referenced claims, and the fact that the three main political parties made a promise to work together to tackle climate change leading up to the 2015 General Election, notable U-turns have since been made on zero carbon targets and green standards. To a chorus of disapproval from leading figures in the construction industry, the Conservative Government removed zero carbon targets set to come into effect in 2016 as part as what they have termed as an ‘economic productivity drive’.

By definition, the Government’s current concentration upon economic growth is likely to result in the consumption of non-renewable resources and carbon creation by today’s corporations that will detrimentally impact upon future generations of society. Such a philosophy does not appear to be in keeping with the social and environmental demands of sustainable development that are golden threads which run through statute. Considerable changes have taken place since planning and building control services came into being on a national basis in the mid-19th Century, including the rapid expansion of populations and development. Any attempt to extrapolate such levels of change over the next two centuries is likely to conform that continuing political promotion of short term personal gain above all else as a reaction to today’s lobbying business community will not prove to be sustainable over the long term.

Even when taking recent U-turns on sustainability standards into account, without central oversight, regulatory guidance has been spread disparately across hundreds of primary statutory/voluntary documents and second tier references. Whilst each gives advice on achieving particular regulatory requirements, this study corroborates the findings of previous work in this field that collectively, the current situation results in disjointed and wasteful design and regulatory processes. As a symptom of disparate performance standards and

despite increasing technical complexity, mono-disciplinary problem solving has been shown to be prevalent among planning and building control services.

In contrast to statutory building performance standards, voluntary schemes such as BREEAM have developed consistently over a number of years to reflect the needs of true sustainable development not only nationally, but on a worldwide basis. Building performance standards inform all design projects for new development. With design teams now dealing with a host of issues due to recent technological advances, the importance of competent standards advisors as part of the design process has emerged as a potential means of removing waste from the early stages of the development process.

The role of BREEAM Assessors in successful projects that have resulted in sustainable and efficient development would seem to confirm that such an arrangement has potential in a wider regulatory environment. This would also appear to have the potential to remove the politically driven perception among the business community of regulation as 'red tape'. Instead, it could be portrayed as being conjoined with design as part of a dynamic unfolding process with valuable long term economic, social and environmental outcomes. In this sense, the economic benefits of regulation could be measured in terms of maximising building efficiency and durability for owners and users in addition to short term gains for developers by minimising wasteful design/regulatory processes. These findings accord with the observations of Imrie (2007) and Fischer and Guy (2009).

Accordingly, in meeting the requirements of Objective 1 by setting out a rationalised standards framework that promotes consistent collaborative working between planning and building control practitioners, the results of this study also promote design stage collaboration. Codes for domestic and commercial sustainable development linked to the RIBA Plan of Work, sustainability checklists and BIM L3 containing a regulatory rule engine have been found by the study to have the capacity to enable such change. However, they also have the capacity to address a number of other problems associated with the research.

With codes being set and managed by an enduring cross party group with advice from industry experts, policy U-turns as a consequence of a constantly changing political environment and a drive for votes during elections would become less likely. By setting out a ten year forward plan for performance standards and setting in stone three year standards reviews, codes for sustainable development could give stakeholders confidence to set in place

their plans for the future. Attaching a sustainability rating to completed development through the codes and making this data publicly available offers the possibility to demonstrate the social value of regulation. Such a move would also have the capacity to make property purchasers more informed, enable national studies on levels of sustainable development and drive construction innovation.

However, in meeting Objective 1, perhaps the most basic and practical potential benefit of the codes, sustainability checklists and BIM L3 regulatory rule engine that emerged from this research as potential problem solvers is the manner in which performance standards would be rationalised. By bringing all high level guidance together within two code reference manuals containing hyperlinks to second tier references, and by clearly setting out sustainability responsibilities between the regulatory professions, all stakeholders would be likely to benefit from resulting simplification. Ultimately, the type of sub-interdisciplinary and wider interdisciplinary working practices that have been intrinsically linked by the study to the solving of complex problems associated with sustainable development could be enabled by the model.

10.2.2 Objective 2 – Closing the Regulatory Skills Gap

The evidence gathered as part of the study suggests that as a result of the increasing complexity and disparity associated with building performance standards, regulatory skill levels are becoming stretched beyond disciplinary limits. As discussed above, with design teams also struggling to cope with increasing standards complexity and disparity, the requirement for the planning and building control professions to skill up in order to fulfill required advisory roles would never appear to have been greater.

But despite continuing political criticisms of regulatory skill levels and stakeholder frustration leading to claims that such deficiencies are a barrier to sustainable development, no higher educational initiatives have been developed that might begin to address the problem. The results of this study indicate that the well-established planning higher educational framework is not producing sustainability literate practitioners. The building control profession does not possess a dedicated higher educational framework, with professional bodies seeking building surveying degrees as part of membership requirements – degrees whose curricula bears little resemblance to the demands of the profession.

Having established a link between the complexity associated with sustainable development and the requirement for interdisciplinary problem solving as part of the work aimed at rationalising building performance standards, the same link became apparent in relation to educational issues. This link, and the association between the need for interdisciplinarity and the problem solving attributes of the design science research philosophy adopted by this research may have important implications for future built environment education, research, and practice. It is hoped that the research will serve as a basis for future studies in this respect.

In keeping with the views of Farron *et al.* (2010), the regulatory skills deficit observed by this study suggests that unless academe rises to the challenge of embedding necessary interdisciplinary values, skills and knowledge, graduates will not be enabled to deliver truly sustainable development. However, consistent with the findings of Etzkowitz and Leydesdorff (1997) and the National Academy of Sciences (2005) when considering the stakeholder demands of regulation, this research supports the idea that Government and industry should also play their part in meeting this challenge.

A cross party group and industry experts emerged from the achievement of Objective 1 as appropriate gatekeepers of model ingredients such as new codes for sustainable development, sustainability checklists and BIM L3 containing regulatory rule engine. If employed, these model ingredients would become performance standards guidance, design tools and an all-encompassing support framework for interdisciplinary practice *and* education. Accordingly, the results of this study advocate that a ‘triple helix’ or three-way partnership between Government (represented by the cross party group) industry and academia be set in place to establish a development programme for interdisciplinary educational initiatives. With the number of entrants to the planning and building control professions dwindling in recent decades, this partnership is also viewed as having an important part to play in positively promoting the economic, social and environmental value of regulators.

Ultimately, in meeting Objective 2, undergraduate interdisciplinary programmes with a common first year followed by problem solving group projects in subsequent years emerged as a means to provide the following important model requirements:

- make regulatory (and wider built environment) career paths more flexible and attractive to students by clearly explaining the roles of all disciplines in the development process during the first year;

- engender a design science problem solving ethos for the regulatory professions and the wider built environment;
- building upon North American best practice, use interdisciplinary theory as a foundation for gradually integrating disciplinary knowledge and concepts as a means of addressing the complex problems associated with sustainable development;
- through group projects, bring together students from as many sub-interdisciplinary groups (i.e. regulation, design, construction management) involved in the development process as possible as part interdisciplinary teams to resolve complex problems representative of those to be tackled in the field; and
- provide regulatory students with an understanding of business and finance management to help enable them to operate in a competitive regulatory marketplace.

Students emerging from the type of educational initiatives outlined by the model are more likely to be suitably skilled and comfortable enough to surrender their disciplinary instincts and objectives in the interests of collaboratively achieving truly sustainable development. They are also more likely to be capable of operating within the proposed competitive service delivery environment resulting from the achievement of Objective 3.

10.2.3 Objective 3 – Creating a Service Delivery Support Framework

Since the 1980s, when services such as planning and building control were free of charge and considered to be of general community benefit, a regulatory ethos of public choice has gradually replaced that of regulation in the public interest. This would appear to have resulted in an inconsistent and disjointed development consent system. The findings of this study suggest that rather than being viewed as adding social value by helping to achieve sustainable development in the interests of current and future communities, regulators are viewed politically as undesirable constraints to economic growth. Accordingly, the message as to why regulation of the built environment exists appears to have become lost, with short term personal gain becoming a prominent political aspiration for the regulated market *and* a corporate aspiration for private sector regulators.

Despite the introduction of increasingly complex building standards in the early years of the 21st Century that naturally demand collaboration between planning and building control services, inconsistent Government policy has continued to drive the services further apart. The emergence of the Coalition Government's Localism agenda in 2010 appeared on the

surface to be a potential catalyst for creating an environment of joined up local services for the benefit of local communities. However, perhaps as an unintended consequence of Localism and public sector spending cuts, local authorities have since been encouraged by the Government to set up profit making approved inspectors operating outside their own localities.

Building control, a public statutory function opened up to private sector competition nationally and on a project by project basis as far back as the 1980s, has evolved into a major barrier to consistent regulatory collaboration at a local level. Corroborating the findings of Esty and Geradin (2001), the outcomes of this study suggest that regulatory competition across local/federal borders results in a pseudo (or fake) competitive market. Competing building control bodies have been found to be promoting standards avoidance in an attempt to win regulatory work. Some regulated organisations appear more intent on driving regulatory involvement and its costs out of their activities rather than procuring building control services from a perspective of best service provision and value. In this sense, it is difficult for building control services to compete on a basis of providing value adding services when their services aren't valued by the regulated.

The risk resulting from the risk based inspection regimes that are used to determine building control fees is passed on to building users, with no recourse for any resulting building defects. In a period of unprecedented transformation within the public sector, it is unlikely that the building control system could be regarded as a best practice blueprint for other regulatory service areas. Stakeholders across the built environment as a whole are likely to draw more value from the efficiencies that could be achieved by the type of joined up regulatory system that are prevalent in European countries with successful approaches to sustainable development, such as Denmark.

Although the results of the research suggest that the calculation of nationally set planning fees needs to be re-examined, developers at least have the benefit of knowing these costs when setting out their proposals. Whilst there is evidence to suggest that fees from larger applications are being used to cross subsidise the work associated with smaller applications and other council services, nationally set planning fees have recently been defended as a concept by the Government. Conversely, building control fees are unknown, subject to 20% VAT due to competition across sectors and local boundaries, and are loaded with hidden costs (profit, marketing, cross subsidisation of other council services, etc.) that add no value to

construction projects. When considering that regulatory fees cover statutory functions carried out in the public interest, the findings of this study suggest that regulation should be a non-profit activity and that all monies paid for regulatory work should only cover regulatory work.

A combination of a return to public interest regulatory theory and the creation of a framework of localised, competitive and performance driven non-profit social enterprise have emerged from this study as viable solutions to the challenges posed by Objective 3. Such developments are likely to prove unpopular to those benefitting from current modes of service delivery. However, when considered objectively, the type of non-profit market ideology that appears to have proved successful within the socially conscious housing sector should not be seen as unreasonable to socially conscious regulatory bodies acting in the public interest.

Although the proposed changes have the potential to introduce procurement costs in each locality every 5 years, it is unlikely that such a scenario would prove as costly and inefficient as the day to day marketing resources associated with the current building control system. With all potential service providers competing on a level playing field, the talents of individuals currently employed to market public or private sector building control might be put to better use as part of a single professional body representing all practitioners.

The mode of service delivery outlined in Figure 8.6 can be seen as a support framework for consistent collaboration at a local level not only between planning and building control services, but also between regulators and design teams. It would support the advocated building performance standards and educational changes designed to meet Objectives 1 and 2, whilst also making regulatory services and their local authority commissioners democratically accountable for resource use and performance.

10.3 Original Contribution to Knowledge

Although a large number of publications connected with the areas addressed by this study have been accessed by the author, it has been found that there is a lack of existing research in relation to the methodological approach taken and outputs sought. Accordingly, in achieving the three research objectives, the use of the design science research approach and the resulting model outlined by Figure 8.6 are original contributions to knowledge.

However, as outputs of the research and elements of resulting model, the following can be viewed as original contributions to knowledge in their own right:

- Deficiencies and inefficiencies attached to policy making and as a consequence, the current development consent framework have been set out in greater detail than any publication available to the author throughout the course of the study. In particular, the links made between aspects of market failure as a reason to regulate and the failings of the English building control system represent an original contribution to the understanding of the pitfalls of regulatory competition.
- The ways in which a proportion of the fees paid by customers of planning and building control services is contributing to activities not linked to their consent applications (i.e. cross subsidisation of other public services, profit taken by private sector organisations and in the case of the building control system, marketing costs and 20% VAT due to competition across local borders) have been outlined.
- For the first time, sustainability categories attached to statutory and voluntary building performance standards have been brought together to form a viable means of rationalising standards and setting out regulatory responsibilities through codes for sustainable development.
- Through codes for sustainable development, the research has set out in detail the importance of conjoining the design and regulatory processes as a means of reducing the need for design rework and optimising levels of sustainable development.
- The deficiencies and inconsistencies of current higher educational frameworks for the planning and building control professions have been outlined, together with the reasons for the current regulatory skills gap.
- As suggested by interviewee William H. Newell, existing models of interdisciplinary study have been extended by detailing the steps from the construction of a more comprehensive understanding of the concept, to policy implementation in one particular field.
- A link has been shown to exist between design science and interdisciplinarity in establishing a means to address the type of complex problems associated with sustainable development.
- Having set out a framework for interdisciplinary higher education and practice, the concept of '*sub-interdisciplinarity*' has been introduced as a means of engendering gradual disciplinary integration towards a built environment interdiscipline.
- Using current best practice in other public sector areas as a benchmark, a theoretical framework for a non-profit market ideology for regulation at a local level has been set out.

- A definition for regulatory social enterprise has been outlined, highlighting the importance of social and environmental objectives and democratic accountability.

10.4 Critical Reflection on the Results of the Research

In terms of the design science research methodology employed by this study, the results are subject to the limitations of the research circumstances such as the complexity of the setting, availability of participants and available means of evaluation of the emerging model.

As a practitioner researcher, the author has been explicit in presenting the research setting, problems, and nature and analysis of research data. As discussed in Chapter 4, continual reflection-on-action was encouraged by the design science research approach but as a building control manager, a lack of balance across planning and building control issues could be viewed as a research weakness. The author attempted to overcome this by engaging with 5 planning experts, the largest proportion by discipline within the sample of 25 interviewees. In reviewing the results of the research, it seems clear that building control issues are prevalent. However, whilst subjectivity cannot be ruled out in this respect, it is also the case that building control has more responsibility for performance standards issues than planning and due to competition on a national basis, is also the source of more research problems.

The choice of sample to conduct the semi-structured interviews could be considered a project limitation due to its relative small scale. It would appear obvious that in terms of experience, a sample of 25 individuals is not a fair representation of overall views and opinions when considering the range of subjects covered by this thesis. The reliability of qualitative research will always be in question as it relies upon individual opinions, feelings and emotions – no individuals are exactly alike. But as experts who were found to be guiding and shaping knowledge and policy development in their respective fields, and with a vast amount of rich data resulting from the interviews, the author has, within the constraints of the research, attempted to formulate robust results.

One of the main limitations of research utilising qualitative research methods is the transferability of field findings. Accordingly, although the experts who participated in this research were carefully chosen by the author, the reader should be cautious in attempting to transpose the findings to other situations. A further limitation of qualitative research methods is that one person's views can come across more strongly than others and may skew analysis.

Having said all of the above, it should be noted that the opinions expressed by interviewees broadly mirrored those of the hundreds of stakeholders who had participated in earlier research projects examined as part of this study.

When considering the level of expertise sought from interviewees, availability was forecast to be a problem but where individuals were unable to take part, the author was extremely fortunate to subsequently secure interviewees with similar or wider experience. However, as suggested by recommendations for further enquiry resulting from the study, a lack of information relating to artefact evaluation methods proved to be problematic.

To date, most of the research connected with artefact evaluation methods has been produced for the field of information systems development, where artefacts can be tested in a live environment. As the model being developed by this research could not be employed, it was necessary to use interviewee expertise to comment on emerging elements of the desired operational model and gradually build an informed argument for its potential utility. The author attempted to retain a flow to the story behind the research, building an informed argument by referring to expert opinion without overloading the reader with quotations. As outlined in Chapter 4, subject to agreement from the interviewees, an offer to make interview data available has been made to allay any concerns of concealed subjectivity in statements made on data by the author.

At the outset, all interviewees were informed that following interviews, further approaches might be made by the author for further information/opinions and in most instances where this was the case, interviewees were kind enough to respond. However, it was not made explicit that a request would be made to study and feedback on information relating to the completed model, which was an afterthought on the part of the author as an add-on to the chosen evaluation strategy. This did not prove to be popular with extremely busy experts who had already given up much of their limited available time to participate in the research and engage in follow up communications via telephone and email. Ultimately, although the author has attempted to evaluate the model in the most extensive manner possible within the constraints of the research, not being in a position to test it or obtain more expansive feedback on its potential utility may be viewed as a limitation.

10.5 Recommendations

In the process of advancing the knowledge and understanding of regulation of the English built environment, further directions of enquiry have been created. Accordingly, the following areas of work are recommended:

- Design science and interdisciplinarity have been shown to be complementary to tackling the type of complex problems associated with the achievement of true sustainable development. Accordingly, further research is required into the potential benefits of adopting these approaches across the built environment, with particular reference to design science artefact evaluation methods, an area currently neglected by research.
- Explore international planning and building control regimes in relation to levels of collaboration and successes/failures as part of attempts to achieve sustainable development as a means of establishing lessons that could be learned from international best practice.
- Building upon the sustainability category framework resulting from this study, construct detailed proposals for domestic and commercial codes for sustainable development, sustainability checklists and BIM L3 containing a regulatory rule engine.
- Establish how interdisciplinary theory might be utilised through higher educational initiatives in the built environment to aid gradual disciplinary integration.
- Ascertain current populations of planning and building control professionals in England, together with practitioner's perceptions of the current regulatory system and their role within it.
- Investigate how the type of changes detailed by the model might begin to be introduced through existing practice in addition to the grassroots level proposed.
- Review the difficulties associated with setting up and operating regulatory SMEs and demonstrate how they might be overcome.
- Quantify what private sector businesses are paying for accommodation and support services and carry out a comparison with those allocated to regulatory services by local authorities.
- Through a process of detailed time/resource analysis, devise new nationally set fee schedules for planning and building control services in England, including standardised inspection fees for building control based upon visits at all essential

stages of the construction process. As part of this exercise, establish and publish average percentage splits between fee related and non-fee related regulatory work in England to provide services and local authorities with a basis upon which to plan their budgets and activities.

- As a benchmark for performance measurement, build upon the *Local Authorities Regulatory Services Excellence Framework* to develop a detailed performance framework for planning and building control services that allows them to demonstrate their social value.
- Using *stewardship theory* as a benchmark for service governance, develop a detailed governance framework for planning and building control services.

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Appendix A: Comments Received from Heads of Building Control in Relation to the Application of the Building (Local Authority Charges) Regulations 2010

1 Background

The introduction of the Building (Local Authority Charges) Regulations 2010 on 1 April 2010 built upon the principle of devolving charge setting to local authorities. The aim of the new Regulations was to provide more flexibility, fairness and transparency, thereby improving standards in the competitive building control environment in England and Wales (Chartered Institute of Public Finance & Accountancy, 2010). Requirements of the Regulations include allowing public building control services up to five years to balance large deficits due to the inevitability of fluctuating levels of income and use any surpluses generated to train staff and modernise/improve services for their customers.

In September 2012, heads of building control within all 319 local authority offices in England and Wales (where the Building (Local Authority Charges) Regulations 2010 also apply) were approached via email (Key, 2012) in order to ascertain whether they believed that the Regulations had helped them to resource their services appropriately on a non-profit basis. The question posed was as follows:

In light of the enormous pressures now being placed upon local authorities to balance corporate budgets, do you think that the Building (Local Authority Charges) Regulations 2010 are working in respect of protecting appropriate public building control service resources?

The following tabulated comments are taken from the detailed replies (with narrative in support of a 'yes' or 'no' answer) among the 145 that were received. Having offered all respondents anonymity to protect their interests, any information that might be linked back to a local authority (i.e. budget figures) have been removed and replaced with an 'X' or generic information (i.e. 'region of England' to replace the named region). Each separate cell contains feedback from a different head of building control.

2 'No' Answers

1.	My response would be no but I don't think the answer is simple. I think the reason relates to the hierarchy on BC in the overall scheme of things and that our function cannot be described as core to council objectives.
2.	The straight answer to your question regarding Building regulation charges is NO.
3.	<p>I do not think that the Building (Local Authority Charges) Regulations 2010 are working in respect of protecting appropriate local authority building control service resources. The whole concept is flawed as it does not take into account the following:</p> <ol style="list-style-type: none"> 1. The fact that many projects do not finish neatly within the Financial Year, leading to large 'carry overs' from one year to another. 2. The tendency for L. A's to treat BC fees as 'income' in their accounts not as 'deposited' fees. This results in us having to carry out fee related work on historical projects the fees for which; are either no longer sufficient to recover the cost or have been absorbed into Council general funds in previous years. This results in an unplanned increase in the Non-Chargeable account for L. A's as the cost can no longer be recovered and current fees cannot be used to recover the cost. 3. As Council costs are reduced as a result of efficiency savings the costs to BC are not always being passed on fully, resulting in unnecessary reductions in staff and fee reductions. Across [region of England] LABC, we have received challenges from AI's concerning the low level of fees charged by LABC. In order for LA's and AI's to remain effective as enforcement bodies and compete in the market place and, indeed for the 'market' to remain in existence there needs to be a review of current arrangements before Building Control bodies, both private and public become ineffective in their public protection role, which is surely the whole purpose. <p>Sorry, I felt that a 'No' answer needed explanation.</p>
4.	<p>Hi Mark, in XXXX [a year] I was leading a collaborative project to join together X building control services in [an area of England]. The project was eventually rejected by Chief Executives primarily for financial reasons. We looked in detail at each authority's financial accounting, which uncovered some interesting issues. Some general matters that arose that may be of interest to you were:</p> <ul style="list-style-type: none"> • Most authorities set income targets that were not related to the actual cost of the building regulation service. These income targets appeared to be historical and were increased annually even if the BC service did not achieve the income target the previous year. • Some authorities were making a surplus and this was being used to support other council budgets. • There was a general lack of understanding by finance services of the detail of the charging regulations. • Not all authorities analysed their overheads and there was clear evidence that the building control accounts were carrying overheads not applicable to the building regulation service. • Some Chief Executives were shocked at the level of overheads being carried. • Those who were making a surplus were less enthusiastic about collaborative working.

	In general, therefore, I would argue that the spirit of the charging regulations is not being adhered to by local authorities in [an area of England] and that financial accountants and Service Directors struggle to understand the unique accounting required for building control.
5.	Answer to your question, as far as I am concerned, is no. My evidence is that, try as I might, I cannot get my authority to fix my recharges in period 1, so that I have certainty about my costs when I work out my hourly rates. Even the Section 151 sign off does not appear to have registered corporately either.
6.	No they are not. We used to be a cash cow -finance dept kept altering the percentage fee earning/non fee earning to suit their purpose. Now we are in a recession the percentage split shows us to be in deficit. Despite a 15-month detailed time sheet analysis finance will not shift the percentages that would show that we are financially sound.
7.	No. CIPFA guidance gets lip service.
8.	It would be a "no" from me (in confidence).
9.	I have a remit over two authorities, one is currently running at a deficit the other at a surplus. The authority running at a deficit has a history of over inflating service support cost and only this week I had a somewhat heated discussion with the Head of Finance regarding support cost and ring fencing any surplus. The second authority is running at a surplus, this generally has been ring fenced and used to reinvest into the section, but again with very high support costs. I have just had these looked at and altered as Building Control was paying circa £21k for a desk in the same office as the Planners who were paying £11k a desk!
10.	The simple answer from my perspective is No. My corporate overhead costs are my main issue and how these are defined by the accountants as we don't seem able to control these.
11.	Internal policies have not changed in line with the new regulations, and making the issue very difficult to balance.
12.	My problem here at [a local authority] is not the regulations but the system of recharging into the trading account of support services and corporate costs. Historically if the trading account was in surplus at year end it was always robbed by making additional charges (often nothing to do with the service) or by adjusting the M&A percentages. This has all but stopped since the new charges so now the answer to your question is that the customers are only paying for the service in accordance with CIPFA, however..... The problem is that whilst the recharges are now accounted properly, they are way too high for what is effectively a small business operating in a very competitive market. This is not as a result of massaging figures but as a result of appalling inefficiency of support services whose costs have often risen over the last 3 years and total inflexibility in the method of calculation of recharges whereby each team pay per capita whether you receive a service or not. Very often CEO's and directors are public sector born and bred and simply don't understand commercial problems. They don't understand building control charges

	<p>which is demonstrated by always looking for savings through reducing surveyors and so reducing potential chargeable hours or my trying to impose increases in charges without using the charges model in the belief they can record this as additional income.</p> <p>My point would be that only maybe 50% of the charge paid by customers relates to the team and service and the other 50% helps keep inefficient council services topped up. The solution to this is a fair charging system where support costs are only charged when the service is requested and delivered; not one where services can set their recharges up to 5 years in advance.</p>
13.	<p>In a nutshell I would say NO</p> <p>With creative accountancy additional cost can be found or taken away from building control sections to gain access to surplus or aid deficits although the latter is happening less and less due to the financial pressures that LA's find the budgets under currently. I think that the accountants responsible for the day to day monitoring and coding of items charged to BC departments realise what is allowed and what is not allowed but I think that some are pressurised into creativity/slightly different cost by their directors of finance. This could be something as simple as more expensive accommodation costs.</p> <p>I have a case at the moment whereby some savings have been identified by our director of finance which will result in an £XXX saving from the commercial (fee earning) budget which he feels will be a saving to the authority. I pointed out to my director that any saving of this nature was great but sorry the saving is not the councils but will go back to our customers in form of reducing our fees. This comment was backed up our group account although it is probably akin to nailing jelly to a wall in getting the powers to be to understand/accept this when they are under such financial pressures even if it is illegal. It could be interesting if the person wanting to do this is also the section 151 officer who is signing off the accounts as correct – if a member of the public wished to go through the details and picked this up and someone has made a statement that they are correct. I wonder what the penalties are for the council officer making false statements?</p>
14.	<p>At [a local authority] the CIPFA financial rules have not been applied to demonstrating the council has fully funded the revenue function – and the revenue element has been regularly reduced with no justification – furthermore the challenges to deliver the revenue function has in actual fact increased – this is a continuing feature as we move into the 13/14 financial year</p>
15.	<p>The simple answer is no. The longer answer is that it's not made any difference corporately other than we have a clearer idea of our profit and loss each year.</p>
16.	<p>It's difficult to give a one-word answer to that bit if I'm pressed it would have to be no. There are ways to get round the legislation that are being used. Just to be clear that's a general answer and not necessarily commenting on the position within my authority.</p>
17.	<p>Absolutely NOT!</p>
18.	<p>A definite NO.</p>
19.	<p>Again, in most authorities, I do not think 'Support Services' and other on costs are being attributed to Building Control sections correctly. It is more on the basis of 'bums on seats' rather than on what proportion of services Building Control sections use. As authorities 'reorganise' & 'rationalise' in an effort to balance budgets, it means that those who are left are expected to pick up an even greater amount of service/on</p>

	<p>costs.</p> <p>I do not necessarily think the difficult times LAs find themselves in has caused the above situation; even in the good times, I believe many councils saw BC as an income stream and did not ring fence income for BC or invest in the service. Admittedly, the situation has now been made worse by the economic situation that councils find themselves in.</p> <p>These are obviously my own opinions/comments and not necessarily those of my authority.</p>
20.	<p>Building Control here has had to make very significant cuts (circa X%) in the last 12 months as part of corporate savings (I know this is probably very light compared to other Building Control Services across the country) but there has been a complete ignoring of the fact that this makes no sense ‘to just insist on Building Control budget cuts’ in the light of how the mechanics of the Charges Regulations work.</p>
21.	<p>The simple answer is NO. In reality the requirement of to reduce resources is having a knock on effect on Building Control such that the break-even scenario is given scant regard and in effect non-chargeable work is being absorbed into the Building Control workload.</p>
22.	<p>I can answer this one very easily - the answer is no.</p> <p>Despite showing a profit each year on our trading account, we are required each year to increase our charges in line with the local authority directive for all LA charges to be raised in-line with inflation. (NB we have seen a 40% reduction in employment costs over the last 5 years),</p> <p>The Council are asking for (demanding) even more cuts this year based on BC income targets that cannot and should not be achieved. (i.e. the income targets would mean a profit on our trading account of £XXXXK +).</p>
23.	<p>No.</p> <p>There is still a lack of understanding of the chargeable and non-chargeable parts of service and the assumption of 100% full recover of the overall budget, not just the trading account budget.</p>
24.	<p>Our authority also takes stance that fee income should cover non-fee related activities.</p>
25.	<p>My answer to your question would be no.</p> <p>Unlike my previous authority, I was never able to get the trading account ring-fenced here (and use any reserves for reinvestment)</p>
26.	<p>I think a very basic answer to your question would be no. But that needs some clarification. I think the idea of establishing a robust system of assessing a reasonable fee for the Building Control Service is understandable. However, there is one major flaw, the LA corporate situation. As a result of government grant reductions in addition to a depletion of resources, in house costs are being apportioned to fewer members of staff including BC. As such our support service charges are likely to be higher than if we had to compete in the private sector.</p> <p>The second major point is that in order to balance corporate budgets teams are required to make more income to reduce their net costs. Year on year you will hear BC teams complaining that the income target they have been set is not achievable and has no relationship to actual income historically received. I have for example been</p>

	<p>required to increase my fees by X% to keep in step with corporate requirements. As such during a recession my income targets much like other authorities bears no resemblance to what's going on in the construction industry. The only way to balance the books is to reduce costs. This results in an inability to carry out the building control service to the level required and in line with fees charged.</p> <p>I have argued successfully to have my income target reduced by £XXXX. Sounds good. They then took £XXXX out of my salaries budget to balance the books! Now resolved but in essence LA's don't seem to understand our trading position or if they do they care to ignore it.</p> <p>I recently spoke to a manager who had a ridiculous income target with X surveyors. In essence they were taking around £XXXX per head. Hourly rates are likely to be adjusted to make accounts balance. Again in theory insufficient resources would result in a reduced level of service and a need to make refunds where the fees charging structure allows for such refunds. So we seem to be able to compete on one hand but on the other if we make any surpluses by not making sufficient inspections we have to give them back.</p> <p>It does make you wonder whether there is a stealth approach to the long term privatisation of Building Control. By making our position more and more difficult Private Sector Building Control would continue to grow.</p> <p>I find it interesting that we have to be mindful of setting fees and charges that reflect our real time input when Planning seem to be able to charge extortionate fees without a need to justify them. We recently had a small project to use shipping containers as living units. Planning charged £XX,000 and we charged about £X – XK based on the cost of the work and our input.</p>
27.	No, still face large charges for Customer Services, IT etc. etc.
28.	Hello Mark in answer to the above, I would say NO. We have lost 50% of our staff and share a manager with another department.
29.	<p>No.</p> <p>Reason(s)</p> <p>In addition to natural wastage/ increased efficiency, and in an attempt to “break-even on the chargeable account” I have loaned Surveyors to other areas of the Council, introduced “value-added services” and indeed my own role has changed, and this has left me with a service that, to be honest, is under-resourced. My team are loyal and there is an extremely low sickness/ absenteeism rate, however during leave periods we are now stretched, and additionally there is little time available for training etc. Only time will tell whether this may lead to stress issues (which I am eager to avoid) but I am limited as to what resources I can procure this may be the case with further cuts required in the corporate budget, and the council's now requesting cuts in the “non-chargeable works” budget.</p> <p>We have always prided ourselves on the high standard of service delivery, however perhaps I should resign myself to the fact that this was possible in the past but is not possible nowadays.</p>
30.	I would tend to say no, mainly as the % fee earning to non- fee earning can be manipulated individually by each authority.

31.	<p>Sorry for such a short answer but it has to be a definite NO from me.</p> <p>What should be fairly simple accounting becomes very "confused" when Senior Managers become involved!</p>
32.	<p>In terms of your question, my answer is nearer to no. Re-charges are generally apportioned on the basis of head count or floor area (in the case of office accommodation), but some services provided figures are also added e.g. legal. We have made a slight surplus over the last three years, but this is mainly due to cutting BC costs i.e. staff rather than a significant reduction in re-charges, although these have also reduced. We are unable to set our own re-charges, but we are expected to be a "business" without any control/say in corporate re-charges.</p> <p>We have been through a process of continuous improvement, resulting in certain identified improvements and efficiencies, most of which we were doing off our own bat in any case. One of our main problems is that the IT infrastructure does not support the reduction in staff capacity, although there have been some good improvements here. I also have an ageing office, many of which only know these authorities and thus have no connect or context to the "wider building control world"</p> <p>The reality for us is that even making improvements, cutting costs, retaining a high market share (compared with some of our neighbours) and balancing our budget (part of which we don't control), we have been subjected to a service wide restructure that has deleted my post, reduced team leaders from X to X and downgraded existing qualified staff, but with the addition of X lower grade posts. This structure is being imposed contrary to what I had proposed as part of the service review, so in our case the issue around the budget is not the main one, but more a case of a head of service [a different discipline] introducing a number of [different discipline] posts (BC is going to be run by another service's manager) and the future is bleak. LABC in [a county] is in dire state.</p> <p>I am sorry to end on such a note, but for me I am having to look for a job after XX years' service to various local authorities and I can't honestly see myself doing any more work for a local authority, which is equally depressing.</p>
33.	<p>Mark I've attached an extract from [a report] I presented to argue the fact that setting a proportional percentage of Fee earning to non-fee earning is not a sustainable model as typically the Council part of the budget was being reduced year on year in line with the Fee income on a proportional basis.</p>
34.	<p>My response is 'no'. I think that BC is too small a service for our corporate leaders to give its finances any special treatment or treatment that differs from all over services.</p> <p>It makes life extremely difficult for BC managers.</p>
35.	<p>No</p> <p>It was a nice idea in principle, but:</p> <p>1, We are under ever-increasing pressure to become self-funding, which means generating enough profit from the chargeable function to cover the cost of our non-chargeable activities, an approach totally at odds with the charging principles of the regulations.</p> <p>2, Our end-of-year overheads levy is totally out of proportion to our actual resource usage which again has a distorting effect on our profit/loss figures and fee</p>

	calculations.
36.	<p>The main answer in my experience is No. I would explain further as the regulations are open to a degree of interpretation and a fudge factor can easily be used to manipulate the monies that building control earn so that some of it can be siphoned off to pay for other council services.</p> <p>What I know does occur at authorities is that overheads are loaded higher by a council under the umbrella of overheads that building control have to pay to run the service, when actually the overheads are nothing to do with the effective running of a BC service it is just another way to add this to the BC service and then increase the BC Fees.</p> <p>It is very clear that the above Legislation is now out of date and requires amendment and tightening up so that BC is not exploited in some authorities as it is now and seen as a cash cow for other services. BC should be able to stand alone and negotiate the overheads within an authority based on the factual evidence for the running and management of a BC service.</p> <p>If ever the DCLG and Eric Pickles MP got his/their hands on all of the fudge factors and information that are applied to BC finances and procedures, he/they would have a political field day</p>
37.	<p>Answer:</p> <p>No</p> <p>Reasons:</p> <ul style="list-style-type: none"> • Income targets being set that budget for profit and don't reflect true cost of delivering chargeable service. No intention of aligning income target with costs. • Central support costs being loaded against service to inflate hourly rate calculation to over recover to off-set corporate savings targets levied on both non-chargeable and chargeable budgets • Any year end surpluses being syphoned off, rather than being taken to reserves to invest in service or reduce fees
38.	<p>I have considered your question and feel that there are two issues.</p> <p>The first is that Local Authority accountancy techniques don't always have the flexibility or capability to accommodate the needs of a Building Control service as prescribed by the Building (Local Authority Charges) Regulations 2010. Council Accountancy Services are very often set up to service the Council as a whole (which by its nature is extremely diverse) and not specific functions or services. An Approved Inspector for example would usually only have this specific business and therefore very specific resource requirements and associated costs to service this.</p> <p>Equally within the Local Authority context very often when calculating the cost of a service, recharges etc. are automatically included in the calculations as opposed to adding them on as Overheads and Profit at the end which is usual practice in the private sector. This does mean however that cost recovery services should now be looking at challenging their recharge allocation to try and bring some parity. That said challenge can only be effective if there is appetite corporately to do this, which brings</p>

	<p>me on to my second point.</p> <p>Recharges and costs have to be apportioned and met somehow. Local Authorities by their very nature have higher ‘on-costs’ than most private sector business and if they are not allocated across all the services, using say the rationale of number of FTEs per team, how else would they be met? It does, however have the perverse effect of meaning that Local Authority charges end up being a lot higher making the service uncompetitive with the private sector.</p> <p>I really don’t think it is as simple as Local Authority Employers adhering to the spirit of the Regulations or not, the question should be are Local Authorities actually able to? This issue applies to all cost recovery services in the Council that are also now expected to compete with the private sector. I feel that these services have been placed in a no win situation. Compete with the private sector, but continue to be tied up with red tape, strict audit regimes and prescribed good practice guidance (such as CIPFA) that are just not a part of private sector business, due to disparities in accountability and social responsibilities between public/private organisations.</p> <p>I hope this helps, I would be interested to hear what your conclusions are following this research. All comments are of course given without prejudice and in confidence.</p>
39.	<p>My response to your question would be NO.</p> <p>The reason being that although the charges regulations are being adhered to by my local authority in terms of proportionate support costs, balancing the fee earning account and earmarking reserves. The problem that we have experienced is that as we cannot dictate a reduction in support costs, the only savings that we can make are to direct costs. The result being that as income has reduced our resource has also reduced proportionately in order to break even. The result of operating commercially in a competitive market is that the building control service has not been protected, as a result we have a smaller resource (staff).</p> <p>I hope my comments (in strictest confidence) will be of some assistance.</p>
40.	<p>Simple answer is No.</p> <p>Since joining [a local authority], one of the first jobs I did was convince our accountants to reduce our overhead charges. This has been successful to bring them down to a reasonable level and to be charged with what we use and to a similar level to my previous authority. I do have an issue with trying to seek some clarity on the breakdown of charges i.e. capital charges. The best response I have received here is that the charges are correct but not 100% what they cover!!!</p> <p>The current issue I have, is to try to convince our accountants about the acceptability of carry forwards. We made a request to carry forward a small budget to cover the current possibility that we will be entering into a shared service arrangement with neighbouring authorities in 2013/14 and the likelihood that this will incur additional costs during 2013/14. Agreed with HOS and Director but this has been rejected by the Head of Finance.</p>
41.	<p>I don’t think the 2010 charges regulations do anything to add any greater protection than we had previously.</p> <p>Historically, building regulation fee surpluses were often swallowed up by council’s central budget to cross subsidise other unrelated services. Now of course, we find</p>

	<p>ourselves struggling to achieve sufficient income to cover our own budget.</p> <p>Staff time is split between building regulations fee earning, building regulations non-fee earning and other building control services as an XX%/XX% split respectively. However, our overheads are apportioned 100% to the trading account, deviating from CIPFA guidance. The splits are historical and have not been changed or reviewed in light of the 2010 charges regs.</p> <p>Whilst in the past I would have argued my case that the apportionment is incorrect within my own authority, we are now in a period where the council is cutting its budgets, so taking overheads out of my trading account and apportioning to my other budgets would simply result in pressure to cut staff resources as there isn't the money to fund. At present, we have better chance of survival as a traded service that somehow manages to cover its costs.</p> <p>In order to redress the balance of overhead apportionment to some extent, any revenue we have generated from previously free to use services over the last couple of years has been transferred from the other building control functions account to the traded account at the year end. Again, not following 2010 charges regs or CIPFA guidance but a means to an end to protect resources.</p> <p>For me, the 2010 fee regs have meant no more than changing the way we set our fees to an hourly rate (however that may have been calculated). The regs certainly haven't had the effect of protecting services or creating a finance culture that enables the local authority to compete with the private sector on a level footing.</p> <p>One thing which would have helped me would have been for the 2010 charges regs to have stipulated that disabled adaption building regulation applications remain part of the traded service budget, but should be charged on an individual basis to the local authority central budget. The assumption that costs are covered by the non-fee earning budget account doesn't work for me. The reality is that the traded account subsidises this work as our non-fee earning account budget is fixed.</p>
42.	<p>If local authority based building control as a function is to be an effective self-funded service, then it must be allowed to operate on the same basis as the private sector and without the restrictions / limitations that local authorities place on it. In my opinion the Charges Regulations are effective but local authorities don't provide the freedom and scope for building control to flourish in all cases.</p>
43.	<p>I think that this is a very risky question to ask. My opinion is that Building Control has operated as an income generator for many years in most local authority areas. However, the 'books' will always show that using CIPFA methodology the service breaks-even (around and about)this is the way things have worked in [a local authority] as two since XXXX [a year].</p> <p>I think there are a number of issues to consider:</p> <ul style="list-style-type: none"> • Are you comparing apples with apples? This is an issue which was very apparent when the shared service [between a number of local authorities] was being considered. We all had approximately the same break-even details within [a district] but we had very, very dissimilar support costs (£XXX,000 to £XX,000 spread as I remember... God bless accountants). • The way support costs are allocated is still a problem (reality and perceived accounting systems) will be an issue that I would be nervous raising too

	<p>openly with the DCLG.</p> <ul style="list-style-type: none"> I believe that my employers do not understand the reality of not working to a profit. Further I think that in the current environment Building Control has a weak position because we can't produce a 'profit'. If we don't make money, why have us as a cost.
44.	<p>I have been working in Building Control for many years now, the last XX years as a BC manager.</p> <p>My view is that the Governments Fee Regulating framework is much better than it was but could be improved. Most of us are now setting our fees to suit the type, size and complexity of individual projects with set fees for most types of domestic work and extensions. The real problems for BC in Local Government is the level of on costs made into the service which most of us cannot control completely. In recent times this has improved but it still has a long way to go.</p> <p>I am in [a region of England] and I don't know of any Council in this area that works to the CIPFA Guide for Building Control accounting which is specifically referred to in the Fee Regulations.</p> <p>Most of us have unfair on cost charges which do not truly reflect the services provided to BC internally and the income received is not used for re-investment into the service where trading account surplus is made.</p>
45.	<p>My answer is no – but in my view the regulations themselves are not an inappropriate way of determining charges for the BR services and neither is the new Risk Based Inspection Regime. The problem in my opinion is the way that they may be being interrupted by different local authorities and by finance departments.</p> <p>For instance, [a local authority] does not have a dedicated building control manager; this decision was taken in order to reduce costs and to rectify the deficit that had been built up over a number of years. The deficit was due in part to drop in number of applications, failed merger of BC services with another LA and I also think that some of the redundancy costs were also factored in.</p> <p>I became team leader for [a number of services] (being a planner by profession) after the decisions on reducing costs by removing a BC manager were taken. I have struggled in terms of being able to discuss the support costs and recharges that the BC team are charged by the Authority (though I understand why these charges are made I do wish that they were fairer and more proportionate). Due to the budgetary pressures placed on us as a Council I am feeling less in a position to set overheads, use fee income only to cover fee earning costs and obtain budgets that realistically cover our percentage of non-fee earning activities. I don't think the fault lies with the legislation but do wonder whether it should be extended to require better documentation and justification from finance departments in terms of the re-charges given to BC teams – as this would create a fairer playing field both within Councils and against AIs.</p> <p>There is also think having discussed with BC managers within [a region of England] that there may be an issue in terms of the Services of BC not being fully appreciated by Councils and a lack of understand of what BC can bring to local communities– especially in terms of how BC could assist the pro-growth agendas of many Local Councils and assisting in meeting the sustainability priorities that many Councils have.</p>

	Thanks for your e-mail – it is reassuring that my views are broadly reflected in your research so far – particularly as I do worry about not being a BC trained manager.
46.	My apologies for not replying earlier. It is the resource issue as you say. My basic answer is no although I cannot really complain about the way we are dealt with as they have lived with a deficit over the past 3 years. That has now been addressed. In previous years when we had a surplus we could only keep 25% of it in the BC account. Our income target is set every year and does not relate to the actual cost of the chargeable element of the service and we are expected to achieve this. Most years however this is not far off the chargeable costs but it is the wrong way to do it. In theory I could substantially miss the income target but still meet chargeable costs and potentially be penalised for it. Also when corporate savings have to be made it is across the whole budget area while income target remains the same. It is not from the non-chargeable side of the budget with the Council deciding what services they wish to cease.
47.	In answer to your question the answer is a resounding NO. In order to balance the books [a local authority] is currently making X of the X BC officers redundant using the reduced income as the reason. However, the central recharges we have to carry are disproportionate to the staffing levels when compared to other sections in the authority
48.	It would be a no here in [a local authority]. Our recharge costs are very opaque, with a number of different overheads being bundled together into one figure. There is no scope for us to negotiate our own overheads. Through time-recording we have a reasonable understanding of our staff time (and costs) devoted to fee earning and non-fee earning activities. Whilst, we are not able to obtain overhead costs of any meaningful detail, I would suggest that our budget does not realistically cover our percentage of non-fee earning activities costs.
49.	The fee structure gives us a bit more flexibility in schedule 3 but we do not have the same flexibility with schedule 2 and that is our ‘bread and butter’ work. Las are expected to set their fees to recover costs with any surplus re-invested into the service – the AIs operate differently with a commercial ethos and profit making.
50.	<p>In the current economic downturn, it is difficult to sustain the level of income especially when faced with increasing competition from Approved Inspectors [traditionally this organisations only competed for commercial or large developments, this has now changed with increasingly small domestic works even including thermal upgrades]. Additionally, local authorities as a whole are facing increasing pressures on budgets and are therefore not in a position to provide additional funding support to Building Control.</p> <p>Within our region it has been noted that over the last few years experienced, Building Control Managers have either retired or been made redundant due to department budget constraints and these positions have not been replaced. Their responsibilities have been delegated to middle management. With this change in Regulations in providing quotation for schemes it does provide the flexibility to produce tailored quotations specific to the individual scheme.</p> <p>With increased change in legislation and additional pressures on individual team members it is getting increasingly difficult to remain an efficient quality service provider.</p>

3 'Yes' Answers

1.	I would say yes though six months ago no. We have recently moved into a new central council office where costs have reduced dramatically and increased our home working.
2.	Mark – my answer is possibly “Yes” – but with a definite marker being placed against my answer – as it is purely dependent upon the support given to the BC service by Corporate Accountancy! If the accountants play by the spirit of the Charges Regs and CIPFA guidance, then all should be fine!
3.	Yes - In the BCP we have all surpluses (a bit hopeful at present!) put into a business account for re-investment and generally proportionate allocation of recharges. No - I have first-hand knowledge of authorities that have used BC as a cash cow and apply disproportionate internal service recharges.
4.	Yes. Since LA's have greater freedom over how they manage their fees - to mirror any resourcing/costs they are confronted with.
5.	Since the 2010 regs, the accountants I deal with internally have had a much more flexible approach to financing and I am able to allocate costs on a much more reasonable basis. For example, our Legal charges I allocate 100% to the non-fee earning budget, as the charges all relate to enforcement work. Previously I would have allocated this cost on a general timesheet spread regardless of the cost area – usually a 75/25 split. However, if we had been allowed to do this in previous years we would have made substantial surpluses and been able to build up a reserve which could have offset the deficits we are now making in this building recession. I think the Regulation change has been useful to me personally as we do seem to now be working to the spirit of the Regulation – previously we weren't. However, the timing of the implementation is unfortunate as deficits now translate to staff reductions.
6.	I manage a joint service between [a number of local authorities] and as such I would answer 'yes' to your question. In essence the Building Regulation charges legislation is having the effect intended. We operate a ring fenced Competition Account with charges linked to our actual project input. I guess it would have been helpful if the charges regulations contained a stronger reference to the necessity of ring fencing however this has not been an essential element in our case.
7.	At [a local authority] we run the Building Control section as a business and are treated by Finance as a business unit. All of our on costs are provided and agreed by us, all of our costs are worked out accurately to provide an accurate re-charge. We operate a BCA and a non-BCA. Our BCA account is in balance with no subsidy. Works undertaken by the building control department are re-charged to the Council at agreed rates and accurately every month reported in the respective elements of breakdown, i.e. demolition, dangerous structures, approved inspectors, self-certification, disabled applications / inspections and partnering applications. The LDSA are in the process of permitting the inspections to be undertaken in adjoining boroughs, should they agree when the works have been partnered with the borough concerned. This is subject to insurer's agreement. Apparently this is already in place in a number of areas in England. In the non BCA account we undertake with

	<p>qualified staff in [a number of discretionary services].</p> <p>This therefore allows a balanced budget on the BCA and profit to the Council in respect of the non BCA.</p>
8.	Generally yes, but unfortunately although the theory works the central overheads can still be inappropriately distributed.
9.	Yes - with a but! If all LA follow the CIPFA guidance fully I think it would be better.
10.	Yes, provided that the BC manager is strong enough to convince the finance department of the illegality of using BR income for other purposes.
11.	In response to your question (and apologies for the brief reply) – the answer from my point of view is yes.
12.	Just to confirm that I manage [a number of building control services]. The chargeable income is basically ring fenced and the system works well. Non chargeable work is based on unit cost and set within maximum budgets of £XXK for each authority which is very tight but just about achievable.
13.	I have no experience of any change as a result yet! We are under review and the councillors are aware of the legislation. So far so good.
14.	<p>Mark, we invested a great deal of time working the relationships to ensure that the trading account was both fully ring fenced and only loaded with 'appropriate' support charges. We simply do not pay for anything we do not use. This was no small feat and something that took a great deal of time both at an officer and political level.</p> <p>We have some advantages in that [a local authority] wanted a contract. This was a two edged sword which they used to control us but which we also used to specify what we would do for them, when and for how much. If anything it gave us the opportunity to push non fee earning statutory work into their spotlight and secure a set amount of funding geared to activity levels. A good example is the new competent persons requirements. As we have not previously undertaken this it was not part of our contractual specification. This provides us with the opportunity to negotiate a reasonable charge from scratch.</p> <p>In closing I agree that the Regulations require 'teeth'. It could be argued that ultimately that these teeth are already with the fee paying clients who will simply not tolerate subsidising other functions.</p>
15.	Is yes, but a qualified yes, I have no issue with the regulations as such and the potential to more accurately target cost against fees but I the new regulations have also increased pressure on recourses in administration of BR fees.
16.	<p>Yes, do think that the Building (Local Authority Charges) Regulations 2010 allow for appropriate allocation of funds to cover the fee earning side of our work. The Councils I have worked for all stick to the rules and ring fence this money to just Building Control fee earning account and stick with the split between fee earning and non-fee earning. This does not mean however that the Councils are not always looking at ways of reducing the money available for the non-fee earning side and over inflating the likely future income that will be received.</p> <p>The problems are that we have no control over the Councils recharges and we cannot go outside the authority to get it elsewhere i.e. HR, IT etc. With some Council's this can mean that their hourly rate is high (and therefore not competitive).</p> <p>On top of that I think that the introduction of service plans will lead to pressure on Building Control departments to carry out fewer inspections.</p>

17.	<p>Yes is the answer.</p> <p>It has worked for us, Our Directors and CE recognised the need to honestly ring-fence the BC Trading account back in 2001 and so we have been able to develop the service budget openly and balance the BC resources against income.</p> <p>The corporate overheads charged to the BC service are realistic, which gave us the ability to produce a very competitive generic hourly rate when the 2010 charges regime was introduced.</p> <p>We have a good customer focussed service which has helped maintain our reputation regionally and consequently we are retaining around 80% of the BC market share by numbers of applications.</p>
18.	<p>My response is YES. Since implementation of regulations in 2010 & publication of CIPFA Building Control Accounting Guidance I have been able to tackle previously excessive re-charges & overheads with support of my accountant & Head of Service.</p> <p>It took me a number of years to resolve but I am pleased to say that the spirit of the regulations has been adhered to by my Authority & we can now provide a more competitive service.</p>
19.	<p>The financial team at [a local authority] work within CIPFA guidance and are fully supportive of the Building Control Service.</p>
20.	<p>Hello Mark, at [a local authority] we have a ring fenced building regulation fee earning budget. Our % splits between fee earning and non-fee earning are based upon time sheet recording, which also provides our hourly rate for fees and charges.</p> <p>We have been fortunate that we have managed to get the powers that be to recognise and accept the legalities of the fee regs and CIPFA requirements. There has been some pressure on to review our splits but with the time recording exercise that we do they are still coming in around the same.</p> <p>What this does mean however is that in line with CIPFA any redundancy costs etc. have be based on the same % splits. This can put pressure on Councils so it is in the Councils interests to have as low a contribution as possible whilst putting the burden of redundancy on the BC service.</p>
21.	<p>Since the introduction of the new fees in 2010 we have had to bid for a greatly increased budget to cover our non-fee earning work (approx. 25%).</p> <p>Our previous budget for the BC service was approx. £XK but since 2012-13 this has had to be increased to £XXXXK to cover the non-fee earning work.</p> <p>In previous years there has been considerable subsidisation of the non-fee earning work but his has been greatly reduced since the introduction new fees. The fees attracted for major projects have been reduced by 40-50% by the new fees so this cross subsidisation is no longer possible.</p> <p>I do believe the new fee regs are working but it has meant a complete change on our approach to tendering for work to ensure our fee charged matches the cost of the service for each project</p>

22.	<p>Thank you for your email and research on the Charges structure. I apologise for my late response but offer the following reply to your enquiry:</p> <p>Currently yes but I fear the implications of risk based inspections assessments has not been full experienced. The setting of standard charges for certain types of work is likely to be abandoned in favour of individual assessments that will adversely affect the overall income levels. Individual charging assumes that all available time is productive which cannot be guaranteed.</p>
23.	<p>My basic response to your question is 'YES'</p> <p>However, as many others are doing I am pleased to add comments relating to my experiences. Because we are a partnership consisting of XX LA's we have developed a formal agreement that accepts the chargeable service as being self-financing and therefore 'ring fenced'. We have earmarked reserves for building control although these are held by one or more Partner Authorities because the Partnership is not a legal entity, such as a trust or LA Ltd Company.</p> <p>There is still an element of 'balancing' the budget by accountants so that there is an attempt to treat the residual difference between the total expenditure and fee income as 'non-chargeable'. This has until now been more of an advantage with falling income levels, but with pressure from LA cutbacks they are inevitably looking to reduce this figure so it is becoming harder to justify despite using time recording results. There is always the concern that if our income increases then so will the non-chargeable element, assuming the % split remains, but we will be expected to reduce it.</p> <p>There is still a lack of understanding by those not directly involved in building control. We have been required to reduce travelling. I have told them this will not happen and even if it does the savings will be reflected in our charges so they will not make a saving themselves, in addition to the many practical and commercial reasons why we cannot do it.</p> <p>My main observation which I am sure many will agree with, is that Local Authority accounting and accountants are not set up (or maybe even capable) of supporting a commercially run service! Maybe if they were, many other services and Council budgets would benefit.</p>

4 Summary

Of the 145 replies received in response to the question posed, the most detailed of which are shown above, 92 (63%) of Heads of Building Control stated that the introduction of the Building (Local Authority Charges) Regulations 2010 had not changed anything for their services. In their opinion, their local authority employers, now under immense pressure due to cuts in Government funding, were still allocating disproportionate support costs against their building control services, resulting in a loss of building control staff in some cases.

Claims are also contained in the above responses that building control fee income was being used by councils to cover the cost of all non-fee related service activities (i.e. dealing with dangerous structures, demolitions and enforcement cases), which should be funded by local authorities.

As a result of the concerns raised by this straw poll of peers, the Government issued a circular to all local authorities in England and Wales in February 2014, reminding them of the cost recovery only requirements of the Charges Regulations (Department for Communities and Local Government, 2014a).

Appendix B: Interview Questions

Julia Black

1. In your view, what should the purpose of regulation be and why?
2. What are your perceptions of current regulatory policy towards public choice and risk based inspection regimes in the UK?
3. The government's localism agenda is promoting competition for public regulatory service commissions, which they hope will lead to the development of more effective/efficient services for local communities. What are your thoughts on how current regulatory policy does or does not align with community interests – are there any values that go beyond those linked with economic policies?
4. 30 years ago, planning and building control services were regarded as being of general community benefit and no fees were levied by local authorities for development consents. Fee earning public sector regulatory services now operate on a non-profit basis but the introduction of private sector involvement in service provision has resulted in distributable profits being taken from fees paid by applicants. Should regulation be a profit making activity? Please state the reasons for your answer.
5. Sustainable local communities and zero carbon development have become major policy goals for planning and building control bodies, with disciplinary lines becoming blurred by increasing technical complexity, resulting in the need for interdisciplinarity on a consistent basis. In your opinion, which of the following regulatory systems is most likely to perform most effectively in meeting community needs and why:
 - a. Private sector consultancies operating on a national basis and local authority regulatory services compete for work on a development by development basis?
 - b. Local authority regulatory services retain a monopoly?
 - c. Private sector consultancies and local authority regulatory services compete for local authority commissions for regulatory work, with continuing tenure dependent upon acceptable performance?
 - d. Local authority regulatory services and not for profit consultancies/social enterprises compete for local authority commissions for regulatory work, with continuing tenure dependent upon acceptable performance?
6. For a number of years, the built environment has been criticised for lacking innovative thought. Is regulation more likely to stifle or stimulate technical innovation?
7. At least 9 different bodies have advised the last 2 governments on 'better regulation' since 1997, resulting in continuous changes to regulatory policy. Is regulation subjected to 'policy hyperactivity' by government or should continuous regulatory change be accepted as part of electoral cycles?
8. Research commissioned by the government has suggested that independent specialist research bodies should be given autonomy to set technical development targets. What are your thoughts on independent task groups being given the autonomy to set regulatory goals?
9. What are your thoughts on the level of strategic oversight of regulation within government – is streamlined policy across different disciplines and the enablement interdisciplinary regulation given enough thought?

Tracey Bush

1. In your opinion, what are the basic requirements of any public service?
2. To date, my research has indicated that a desire to avoid private sector involvement, engender employee empowerment and create efficiencies by reducing levels of bureaucracy have been some of the main drivers for developing CICs/social enterprises. What were the main drivers behind the formation of your CIC?
3. To date, my research has indicated that a lack of business skills, inadequate commissioning frameworks, funding, a lack of tax incentives and staff fears/terms and conditions have created barriers to the formation of CICs/social enterprises. What were the main challenges that you faced in setting up the company?
4. What help was available from external agencies to help you overcome the challenges that you faced when setting up the CIC?
5. When considering that the government is attempting to create a market ideology in the public sector, do you believe that it could do more to help staff teams to create their own enterprises and if so, what shape should this help take?
6. What are the benefits that have been created for staff through formation of the CIC and what are their feelings about progress to date?
7. What are the benefits that have been created for customers through formation of the CIC?
8. Have any unforeseen problems/disbenefits emerged since setting up the CIC and if so, how have you overcome them?
9. What performance indicators are in place to demonstrate to the commissioning body that the company is offering quality services, value for money and social value?
10. What governance arrangements are in place and how often do you liaise with representatives of the commissioning body?

David Clements

1. With particular reference to the RIBA Plan of Work, what are your thoughts on how the current development consent system takes account of the design process for new developments?
2. What are your views on the current development consent system (planning and building control) in terms of the manner in which planning policy, Building Regulations guidance documents and second tier references (i.e. British Standards, BRE Reports, etc.) are used to regulate sustainable development – do you find the current approach acceptable or overly complex/expensive?
3. If eventually applied to both the domestic and commercial sectors, are the proposals to introduce optional requirements as part of the Housing Standards Review likely to optimise the existing separate planning and building control systems in terms of process efficiency and ultimately, achieving sustainable development?
4. A number of studies have recommended the introduction of statutory domestic and commercial codes for sustainable development, based upon BREEAM and marrying with the RIBA Plan of Work. Could all-encompassing code manuals, containing design options above the Building Regulations baseline, be tools which might promote a more collaborative and standardised approach to the design and consent processes?
5. What are your views on the potential for manuals and/or checklists that hyperlink all relevant guidance/second tier references?
6. What are your views on the potential of building control bodies mirroring the duties of BREEAM Assessors, becoming involved in the design process at an earlier stage (i.e. concept design/planning pre-application advice) to advise on optional requirements and comment on likely ‘show stoppers’, checking planning conditions as part of the building handover process, etc?
7. Research suggests that nationally, levels of sustainable development are difficult if not impossible to measure and that the built environment as a whole is averse to technical innovation, particularly in the volume house building sector. What are your thoughts on the sustainability labelling of completed developments as a means of measuring regulatory body performance and promoting innovation rather than the imposition of optional requirements through local plans?
8. When considering the recent effects of continuing short term political election cycles upon performance standards, should the setting and management of development performance standards remain with the Government or be passed to an independent body?
9. As a collective, how often should sustainability/regulatory standards be reviewed and how could reviews be improved to increase stakeholder confidence?
10. What are your views on current design and regulatory knowledge and skill levels in relation to sustainable development and the ability of stakeholders to collaborate to resolve complex issues?

Martin Conlon

1. How would you define the term *interdisciplinarity*?
2. Why is it that so few university undergraduate courses exist that are specifically tailored to building control?
3. Do you think enough is being done in schools and colleges to raise awareness of the role of building control?
4. Planning officers and building control surveyors have worked side by side within local authorities for decades. Numerous academic studies and government reports over the last ten years have suggested an interdisciplinary approach between the regulatory professions to sustainable development and other complex issues. Why do you think such issues still aren't being addressed in an interdisciplinary manner through university curricula?
5. My research to date suggests that common learning experiences at undergraduate level (particularly in the first year) may be the way forward for all relevant built environment disciplines – what are your views on the viability of such an approach?
6. My research to date suggests that technology can play an important part in making knowledge resources available to students collaborating on complex interdisciplinary assignments/projects (i.e. online blackboards), and practitioners collaborating in the field (i.e. Building Information Modelling). What are your views of such developments in relation to the value that they may (or may not) add to the development of young professionals?
7. What could the government do to ensure that more robust and sustainable educational frameworks are put in place to meet their long term objectives for sustainable development and greater efficiency within the regulatory process?
8. The ability of practitioners to meet legislative objectives following education should obviously be one of the main drivers of curricula. In your experience, is this in any way compromised by a university's need to generate income in the current economic climate?
9. In the past, professional institutions have acted as a barrier to change and collaborative approaches between disciplines. What are your views of professional institutions in this respect currently?
10. My research to date has considered the creation of '*sub-interdisciplines*' (units consisting of a small number of disciplines with distinct commonalities) such as *regulation, design* and *management*, within a gradual movement away from a built environment multidiscipline and towards an interdiscipline. In terms of attempting to reduce waste early in the design process, what are your thoughts on the creation of a regulatory (Planning and Building Control) sub-interdiscipline and its possible involvement in the design process prior to completion, rather than 2 separate processes following design completion?

Alison Crompton

1. With particular reference to the RIBA Plan of Work, what are your thoughts on how the current development consent system (planning and building control) takes account of the design process for new developments?
2. What are your views on the current development consent system in terms of the manner in which planning policy, Building Regulations guidance documents and second tier references (i.e. British Standards, BRE Reports, etc.) are used to regulate sustainable development – do you find the current approach acceptable or disparate/complex/expensive?
3. A number of studies have recommended the introduction of statutory domestic and commercial codes for sustainable development, based upon BREEAM and marrying with the RIBA Plan of Work. What are your thoughts on the potential use of all-encompassing code manuals as a means of guiding the design process and streamlining, standardising (at a national level) and linking regulatory requirements?
4. As a design professional, how do you view the current development consent framework – as a constraint or as a spur to innovation/ingenuity?
5. Research suggests that nationally, levels of sustainable development are difficult if not impossible to measure and that the built environment as a whole is averse to technical innovation, particularly in the volume house building sector. What are your thoughts on the potential of mandatory sustainability labelling as a means of measuring/publishing performance nationally and driving innovation?
6. In light of feedback to your previous research, what are your thoughts on the competitive building control sector in England in terms of its operation and effects upon attempts to streamline the development consent process?
7. To date, my study indicates that the traditional involvement of building control following technical design (RIBA Stage 4) is resulting in conflicts with earlier planning approvals granted at RIBA Stage 2/3. Consequently, design rework and new planning applications are often required. What are your views on the potential of building control bodies becoming involved at concept design/planning pre-application advice stage to advise on options exceeding Building Regulations requirements and comment on likely ‘show stoppers’, before finally going on to check planning conditions on site as part of the building handover process?
8. When considering the recent effects of continuing short term political election cycles upon performance standards, should the setting and management of development performance standards remain with the Government or be passed to an independent body?
9. As a collective, how often should regulatory standards be reviewed and how could reviews be improved to increase medium/long term stakeholder confidence in their ability to grasp and achieve up and coming requirements?
10. What are your views on the skill levels of design and regulatory practitioners in relation to sustainable development, including their understanding of each other’s roles and their ability to collaborate to resolve complex issues?

Andrew Edkins

1. Interdisciplinarity has been variously described over the last 20 years (as a methodology, a concept, a philosophy, etc). The 3 most broadly quoted definitions (by Klein & Newell, Boix Mansilla and National Academy of Sciences) encapsulate interdisciplinary study and research as a process. How would you now define interdisciplinarity in relation to its application in professional practice?
2. What do you believe to be the main drivers for interdisciplinary education in the built environment?
3. What do you think are the main barriers to interdisciplinary education for the built environment?
4. In putting forward the concept of Mode 2 knowledge production, Gibbons *et al* suggest that practice based knowledge production outside a traditional university setting has become increasingly popular and valid. Do you believe that universities are capable of offering the necessary support structure for interdisciplinary curricula or could industry (and perhaps government) play an important part in the future?
5. How, within higher education, do you believe that students tackling the complex issues that require an interdisciplinary approach might obtain the most effective learning experiences (early at undergraduate level, with disciplinary experience at postgraduate level, or a mixture of both) and why?
6. In your experience, what are the most important aspects to setting up/maintaining an interdisciplinary educational curriculum in relation to:
 - a. time;
 - b. physical and human resources; and
 - c. coursework assessment strategies?
7. The literature that I have studied to date seems to suggest that historically, inquisitive individuals with certain character traits have been drawn to interdisciplinary research or studies. My research aims to look at the possibility of instilling interdisciplinary attitudes across whole disciplines (regardless of individual character traits) through appropriate mandatory educational frameworks, with an introduction to interdisciplinary issues at undergraduate level. What are your thoughts on the possibilities of such an approach – different character traits are inevitable but can interdisciplinary education alter the attitudes of less inquisitive students?
8. Following on from Question 7, do you think that disciplinary equality among course tutors at undergraduate and postgraduate level would be possible within a taught approach, or would some form of leadership be required in course design and delivery?
9. How important is teaching/coaching intervention in workshop environments at postgraduate level?
10. How might interdisciplinary curricula serve to address the built environment's traditionally low profile in terms of choice of career path?
11. What do you believe should be the learning outcomes of a successful interdisciplinary educational programme?

Bill Gething

1. With particular reference to the RIBA Plan of Work, what are your thoughts on how the current development consent system takes account of the design process for new developments?
2. What are your views on the current development consent system (planning and building control) in terms of the manner in which planning policy, Building Regulations guidance documents and second tier references (i.e. British Standards, BRE Reports, etc.) are used to regulate sustainable development – do you find the current approach acceptable or disparate/complex/expensive?
3. A number of studies have recommended the introduction of statutory domestic and commercial codes for sustainable development, based upon BREEAM and marrying with the RIBA Plan of Work. What are your thoughts on the potential use of such tools as a means of guiding the design process and streamlining, standardising (at a national level) and linking regulatory requirements?
4. As a design professional, how do you view the current regulatory framework – as a complex and disjointed constraint or a spur to innovation/ingenuity?
5. Research suggests that nationally, levels of sustainable development are difficult if not impossible to measure and that the built environment as a whole is averse to technical innovation, particularly in the volume house building sector. What are your thoughts on the potential of mandatory sustainability labelling as a means of measuring/publishing performance nationally and driving innovation?
6. Again with particular reference to the house building sector, recent research has demonstrated considerable gaps between designed and as built performance. Should actual as built performance be demonstrated as part of the regulatory process?
7. To date, my study indicates that the traditional involvement of building control following technical design (RIBA Stage 4) is resulting in conflicts with earlier planning approvals granted at RIBA Stage 2/3. Consequently, design rework and new planning applications are often required. What are your views on the potential of building control bodies mirroring the duties of BREEAM Assessors? This might involve building control becoming involved at concept design/planning pre-application advice stage to advise on options exceeding Building Regulations requirements and comment on likely ‘show stoppers’, before finally going on to check planning conditions on site as part of the building handover process.
8. When considering the recent effects of continuing short term political election cycles upon performance standards, should the setting and management of development performance standards remain with the Government or be passed to an independent body?
9. As a collective, how often should sustainability/regulatory standards be reviewed and how could reviews be improved to increase medium/long term stakeholder confidence in their ability to grasp and achieve up and coming requirements?
10. What are your views on the skill levels of design and regulatory practitioners in relation to sustainable development, including their understanding of each other’s roles and their ability to collaborate to resolve complex issues?

Mike Feintuck

1. In your view, what should the purpose of regulation be and why?
2. What are your perceptions of current regulatory policy towards 'public choice' in the UK?
3. The government's localism agenda promotes competition for public service commissions (including regulatory services), leading to the likelihood of better services for local communities. What are your thoughts on how current regulatory policy does or does not align with community interests?
4. What are your thoughts on risk based regulation/inspection regimes?
5. At least 9 different bodies have advised the last 2 governments on 'better regulation' since 1997, resulting in continuous changes to regulatory policy. Is regulation subjected to too much change by government or should continuous change be accepted as part of modern society?
6. What are your thoughts on the level of strategic oversight of regulation within government – is streamlined policy across different disciplines and the enablement interdisciplinary regulation given enough thought?
7. The achievement of sustainable development/communities has become a major policy target for planning and building control bodies, with disciplinary lines becoming blurred by increasing technical complexity. In your opinion, what type of regulatory system is most likely to meet its objectives and why:
 - a. Private sector companies and public sector regulatory bodies compete for work nationally on a development by development basis?
 - b. Local public sector services retain a monopoly?
 - c. Private sector companies and public sector regulatory bodies compete for local authority commissions for regulatory work with continuing tenure based upon performance?
 - d. Public sector regulatory bodies and not for profit consultancies compete for local authority commissions for regulatory work with continuing tenure based upon performance?
8. Should regulation be a profit making (for personal gain) activity? Please state the reasons for your answer.
9. For a number of years, the built environment has been criticised as lacking innovative thought. Is regulation that sets robust long term objectives likely to stifle or stimulate the type of innovation that might benefit sustainable development/communities?

Chris Findley

1. Please provide a brief overview of your role in the partnership between Salford City Council and Capita Symonds.
2. Why did Salford City Council choose to enter into a public/private sector partnership to deliver regulatory services such as planning and building control?
3. Prior to engaging with Capita Symonds, do you believe that your planning/building control services were run with similar levels of commercial awareness in terms of being run to minimise business inputs and maximise their effect on business outputs?
4. Overall, what do you believe the main benefits of procuring private sector services are for commissioning local authorities?
5. What do you believe the main benefits of commissioned/partnered regulatory services are for applicants and local communities?
6. What do you believe the main benefits of commissioned/partnered regulatory services are for the private sector organisations involved?
7. In terms of the assets involved in delivering planning and building control services (i.e. technology), what role have Capita Symonds played in maintaining an up to date working environment for the benefit of staff and customers?
8. In your view, in terms of the implications for employees (i.e. secondment or TUPE arrangements), do you believe that they were happy with the proposals to partner when first mooted and having now worked as part of Urban Vision for a number of years, how do you think they feel now?
9. Should regulation be a profit making (for personal gain) activity? Please give reasons for your answer.
10. Has the democratic input into your planning and building control services (in terms of customer/senior officer/elected member involvement) remained the same, worsened, or has it improved as a result of the partnership?
11. Has the performance management of the services remained the same or has it improved as a result of the partnership?
12. Having learnt from this experience, could you see Salford City Council delivering its planning and building control services differently in the future (i.e. could you envisage the authority or its employees setting up separate enterprises)?
13. What benefits do you think a development team approach at a local level offers to applicants (particularly in relation to more complex schemes)?
14. What effect do you think the government's current 'public choice' (gradual de-regularisation due to market forces) is having on:
 - a. the ability of planning and building control bodies to work collaboratively on a consistent basis, particularly in light of the continuing fragmentation of the building control system?; and ultimately
 - b. the achievement of sustainable development over the longer term?

Dave Jolley

1. Why has your organisation chosen to bid to operate public planning and building control services?
2. What are the barriers to gaining and successfully administering more commissions from local authorities?
3. Are Capita Symonds given the same tax breaks as public bodies whilst managing public services on their behalf (i.e. VAT exemption, business rate breaks, etc)?
4. What do you believe the main benefits of procuring your services are for commissioning authorities?
5. What do you believe to be the main benefits of your services for applicants and local communities?
6. What are the implications for employees (i.e. Transfer of Undertakings (Protection of Employment), pensions, terms and conditions, etc):
 - a. Generally, have they embraced your involvement in their services?
 - b. Are new employees offered the same terms and conditions as those transferred under TUPE arrangements?
7. In situations where you have taken over the running of public services, what are your impressions as to how the services have been run from an accounting/financial point of view – are service support/accommodation costs usually realistic?
8. How do you administer/charge for non-fee earning elements of planning and building control work?
9. Would it help business planning if there was a standard percentage payment for non-fee work, based on an average of national data?
10. How are existing local authority assets (i.e. back office software, ICT/office equipment) dealt with as part of your contracts?
11. Who is responsible for on-going fee earning deficits if they occur until they are balanced (your organisation, the Councils, or a joint approach)?
12. Should regulation be a profit making (for personal gain) activity? Please give reasons for your answer.
13. Would you consider sharing your expertise by providing advocacy to or working in partnership with small to medium public sector employee led enterprises?
14. How is a democratic input into your services maintained (i.e. how do you interact with the Councils and your customers)?
15. What do the performance management aspects of your contracts consist of in terms of lines and frequency of reporting?
16. What benefits do you think a development team approach at a local level offers to applicants (particularly in relation to more complex schemes)?
17. What effect do you think the government's current 'public choice' (gradual de-regularisation due to market forces) is having on:
 - a. the ability of planning and building control bodies to work collaboratively on a consistent basis, particularly in light of the continuing fragmentation of the building control system?; and ultimately
 - b. the achievement of sustainable development over the longer term?

Paul Kirby

1. Interdisciplinarity has been variously described over the last 20 years (as a methodology, a concept, a philosophy, etc). The 3 most broadly quoted definitions (by Klein & Newell, Boix Mansilla and National Academy of Sciences) encapsulate interdisciplinary study and research as a process. How would you now define interdisciplinarity in relation to its application in professional practice?
2. What do you believe to be the main drivers for interdisciplinary education in the built environment?
3. What do you think are the main barriers to interdisciplinary education for the built environment?
4. In putting forward the concept of Mode 2 knowledge production, Gibbons *et al* suggest that practice based knowledge production outside a traditional university setting has become increasingly popular and valid. Do you believe that universities are capable of offering the necessary support structure for interdisciplinary curricula or could industry (and perhaps government) play an important part in the future?
5. How, within higher education, do you believe that students tackling the complex issues that require an interdisciplinary approach might obtain the most effective learning experiences (early at undergraduate level, with disciplinary experience at postgraduate level, or a mixture of both) and why?
6. In your experience, what are the most important aspects to setting up an interdisciplinary educational curriculum in relation to:
 - a. time;
 - b. physical and human resources; and
 - c. coursework assessment strategies (i.e. how is group work assessed – is it unmarked like IDBE)?
7. Is disciplinary equality among course tutors possible, or is some form of leadership required in course design and delivery?
8. What problems have you encountered in maintaining the necessary multidisciplinary mix/balance in tutor/student numbers?
9. The literature that I have studied to date seems to suggest that historically, inquisitive individuals with certain character traits have been drawn to interdisciplinary research or studies. My research aims to look at the possibility of instilling interdisciplinary attitudes across whole disciplines (regardless of individual character traits) through appropriate mandatory educational frameworks. What are your thoughts on the possibilities of such an approach – different character traits are inevitable but can interdisciplinary undergraduate education alter the attitudes of less inquisitive students?
10. Do you believe that teaching intervention is important in classroom/workshop settings (even at postgraduate level) or are there instances where interdisciplinary groupings can be left to tackle the problem on their own?
11. My research to date has considered the creation of ‘*sub-interdisciplines*’ (units consisting of a small number of disciplines with distinct commonalities) such as *regulation, design* and *management*, within a gradual movement away from a built environment multidiscipline and towards an interdiscipline. In terms of attempting to reduce waste early in the design process, what are your thoughts on the creation of a regulatory (Planning and Building Control) sub-interdiscipline and its possible involvement in the design process prior to completion?
12. How might interdisciplinary curricula serve to address the low profile associated with the built environment in terms of choice of career path?
13. What do you believe should be the learning outcomes of a successful interdisciplinary educational programme?

Julie Thompson Klein

1. Interdisciplinarity has been variously described over the last 20 years (as a methodology, a concept, a philosophy, etc). The 3 most broadly quoted definitions (by Klein & Newell, Boix Mansilla and National Academy of Sciences) encapsulate interdisciplinarity study and research as a process. It is 15 years since Klein & Newell offered what was at that time the first well documented attempt to define interdisciplinarity. How would you now define interdisciplinarity in relation to its application in professional practice?
2. What do you believe to be the modern drivers for interdisciplinarity?
3. In introducing the concept of Mode 2 knowledge production, Gibbons *et al* suggest that knowledge production outside a traditional university setting has become increasingly popular and valid. Other commentators (National Academy of Sciences, Becher & Trowler) detail the importance of a 3 way partnership between academia, industry and government in any innovative education strategy. What do you believe to be the most appropriate and supportive setting for interdisciplinary education/research for professional disciplines (e.g. traditional university setting, arms length university research centre, private/government research centre, etc)?
4. In your experience, what are the most important aspects to setting up an interdisciplinary educational curriculum in relation to:
 - a. time;
 - b. physical and human resources; and
 - c. coursework assessment strategies?
5. Daniel Callahan, in detailing his experiences of setting up the Hastings Centre in New York, suggests that a disciplinary hierarchy within faculty should be avoided at all costs. In your experience, is total disciplinary equality possible, or is some form of leadership required in course design and delivery?
6. At what stage within higher education do you believe the complex issues that require an interdisciplinary approach should be introduced (early at undergraduate level or with disciplinary experience at postgraduate level) and why?
7. Do you believe that teaching intervention is important in classroom/workshop settings (even at postgraduate level) or are there instances where interdisciplinary groupings can be left to tackle the problem on their own?
8. What do you believe should be the learning outcomes of a successful interdisciplinary educational programme?
9. In the UK, professional institutions, who continue to vehemently protect their own territory, have been a major barrier to collaborative curricula and practice within the built environment. What have been the main barriers to setting up interdisciplinary educational curricula in the USA and how have they been addressed?
10. The literature that I have studied to date seems to suggest that historically, inquisitive individuals with certain character traits are drawn to interdisciplinary research or studies. My research aims to look at the possibility of instilling interdisciplinary attitudes across whole disciplines (regardless of individual character traits) through appropriate mandatory educational frameworks. Do you think that this is possible (If yes, why? If no, why)?
11. If your answer to Question 10 is yes, what other integrative actions do you believe may be necessary and how might these be staged?

Julian Le Grand

1. Why is public choice important to local public service delivery – what are the benefits of a competitive but localised and democratically accountable model of service delivery?
2. At the moment, service commissioning only appears to happen when local authorities see fit to go down the commissioning route. Could service performance management play a part in engendering a more consistent market ideology within public service delivery?
3. Having been a government advisor on public service transformation for a number of years, what are the main barriers that have developed/emerged to employee led social enterprise?
4. What are the government doing to overcome these barriers, are they doing enough, and if not, what more needs to be done?
5. In terms of local authority service commissions, early indications are that large private sector organisations have the upper hand in terms of superior business acumen, with a risk of private sector oligopolies developing. As a supporter of staff led social enterprise, how do you believe the development of private sector oligopolies might be avoided as part of the developing market ideology within the public sector?
6. Much is being made of the need for prospective social entrepreneurs to measure and demonstrate the social value their services add to their local communities as part of bids for service commissions – to date, is there any evidence to suggest that such an approach is beginning to have an effect within the commissioning environment?
7. My research has indicated that profit making private sector providers have not sought tax breaks similar to those applied to public sector bodies. Should not for profit social enterprises be afforded the same tax breaks as their parent public sector organisations?
8. What are your thoughts on profit for individual gain within public services against a backdrop of the promotion of non-profit employee led social enterprise – is there room for both approaches to modern public service delivery and if so, why?
9. My research has highlighted the fact that budding social entrepreneurs in the health sector have felt intimidated by senior managers keen to protect their own interests, and that the leaders of many public regulatory services are unhappy that fee income (i.e. for development consent applications) is not being used by their local authority employers to benefit service stakeholders. Have the Taskforce/government considered ways in which social entrepreneurs might be assisted in circumstances where the self-serving ideals of senior managers might prevent knightly intervention by employees that can clearly be shown to be in the interests of service stakeholders?
10. Whilst regulatory services such as building control (and increasingly, planning) are being asked by the government to operate as businesses, their team members have traditionally been sheltered from a competitive market ideology and have become accustomed to public sector terms and conditions. What more can be done to help service leaders/entrepreneurs to convince their teams of the need to adapt in the face of impending change and that spinning out from their parent organisations is a risk that can pay off for them and their customers in the long run?
11. To date, service areas that have clear social purposes (i.e. health and education) appear to have been targeted by the government/Mutuals Taskforce for specific assistance and funding for entrepreneurial activity. Have regulatory services been considered as part of your work and if not, why?

Sebastian Macmillan

1. Interdisciplinarity has been variously described over the last 20 years (as a methodology, a concept, a philosophy, etc). The 3 most broadly quoted definitions (by Klein & Newell, Boix Mansilla and National Academy of Sciences) encapsulate interdisciplinary study and research as a process. How would you now define interdisciplinarity in relation to its application in professional practice?
2. What do you believe to be the main drivers for interdisciplinary education in the built environment?
3. What do you think are the main barriers to interdisciplinary education for the built environment?
4. In putting forward the concept of Mode 2 knowledge production, Gibbons *et al* suggest that practice based knowledge production outside a traditional university setting has become increasingly popular and valid. Do you believe that universities are capable of offering the necessary support structure for interdisciplinary curricula or could industry (and perhaps government) play an important part in the future?
5. How, within higher education, do you believe that students tackling the complex issues that require an interdisciplinary approach might obtain the most effective learning experiences (early at undergraduate level, with disciplinary experience at postgraduate level, or a mixture of both) and why?
6. In your experience, what are the most important aspects to setting up/maintaining an interdisciplinary educational curriculum in relation to:
 - a. time;
 - b. physical and human resources; and
 - c. coursework assessment strategies?
7. The literature that I have studied to date seems to suggest that historically, inquisitive individuals with certain character traits have been drawn to interdisciplinary research or studies. My research aims to look at the possibility of instilling interdisciplinary attitudes across whole disciplines (regardless of individual character traits) through appropriate mandatory educational frameworks, with an introduction to interdisciplinary issues at undergraduate level. What are your thoughts on the possibilities of such an approach – different character traits are inevitable but can interdisciplinary education alter the attitudes of less inquisitive students?
8. Following on from Question 7, do you think that disciplinary equality among course tutors at undergraduate and postgraduate level would be possible within a taught approach, or would some form of leadership be required in course design and delivery?
9. How important is teaching/coaching intervention in workshop environments at postgraduate level?
10. How might interdisciplinary curricula serve to address the built environment's traditionally low profile built environment in terms of choice of career path?
11. What do you believe should be the learning outcomes of a successful interdisciplinary educational programme?

Vincent Nadin

1. How would you define the term *interdisciplinarity*?
2. Planning officers and building control surveyors have worked side by side within local authorities for decades. Numerous academic studies and government reports over the last ten years have suggested an interdisciplinary approach between the regulatory professions to sustainable development and other complex issues. Why do you think such issues still aren't being addressed in an interdisciplinary manner through university curricula?
 - a. In your experience, has the scientisation of knowledge production by university departments hindered interdisciplinary collaboration?
 - b. Are continued links to planning's parent professions (such as architecture) a barrier to the promotion of regulatory educational links?
3. How might curricula be adapted to ensure that future objectives with regard to sustainable development are met?
 - a. Do you think enough is being done in schools and colleges to raise awareness of sustainability and raise the profile of the role of planning professionals in this respect?
 - b. My research to date suggests that common learning experiences at undergraduate level (particularly in the first year) may be the way forward for all relevant built environment disciplines – what are your views on the viability of such an approach?
4. My research to date suggests that technology can play an important part in making knowledge resources available to students collaborating on complex interdisciplinary assignments (i.e. online blackboards), and practitioners collaborating in the field (i.e. Building Information Modelling). What are your views of such developments in relation to the value that they may (or may not) add to the development of young professionals?
 - a. Do you have any experience of such technology being used to aid the development of part-time students?
5. What could the government do to ensure that more robust and sustainable educational frameworks are put in place to meet their long term objectives for sustainable development and greater efficiency within the regulatory process?
6. The ability of practitioners to meet legislative objectives following education should obviously be the main driver of curricula. In your experience, is this in any way compromised by a university's need to generate income in the current economic climate?
7. In the past (as was the case when planning attempted to break away from its parent disciplines in the 1940s), in protecting disciplinary interests, professional institutions have acted as a barrier to change and collaborative approaches to knowledge production. What are your views of professional institutions in this respect currently?
8. My research to date has considered the creation of '*sub-interdisciplines*' (units consisting of a small number of disciplines with distinct commonalities) such as *regulation*, *design* and *management*, within a gradual movement away from a built environment multidiscipline and towards an interdiscipline. In terms of attempting to reduce waste early in the design process, what are your thoughts on the creation of a regulatory (Planning and Building Control) sub-interdiscipline and its possible involvement in the design process prior to completion, rather than 2 separate processes following design completion?

William H. Newell

1. Interdisciplinarity has been variously described over the last 20 years (as a methodology, a concept, a philosophy, etc). The 3 most broadly quoted definitions (by Klein & Newell, Boix Mansilla and National Academy of Sciences) encapsulate interdisciplinarity study and research as a process. It is 15 years since Klein & Newell offered what was at that time the first well documented attempt to define interdisciplinarity. How would you now define interdisciplinarity in relation to its application in professional practice?
2. What do you believe to be the modern drivers for interdisciplinarity?
3. In introducing the concept of Mode 2 knowledge production, Gibbons *et al* suggest that knowledge production outside a traditional university setting has become increasingly popular and valid. Other commentators (National Academy of Sciences, Becher & Trowler) detail the importance of a 3 way partnership between academia, industry and government in any innovative education strategy. What do you believe to be the most appropriate and supportive setting for interdisciplinary education/research for professional disciplines (e.g. traditional university setting, arms length university research centre, private/government research centre, etc)?
4. In your experience, what are the most important aspects to setting up an interdisciplinary educational curriculum in relation to:
 - a. time;
 - b. physical and human resources; and
 - c. coursework assessment strategies?
5. Daniel Callahan, in detailing his experiences of setting up the Hastings Centre in New York, suggests that a disciplinary hierarchy within faculty should be avoided at all costs. In your experience, is total disciplinary equality possible, or is some form of leadership required in course design and delivery?
6. At what stage within higher education do you believe the complex issues that require an interdisciplinary approach should be introduced (early at undergraduate level or with disciplinary experience at postgraduate level) and why?
7. Do you believe that teaching intervention is important in classroom/workshop settings (even at postgraduate level) or are there instances where interdisciplinary groupings can be left to tackle the problem on their own?
8. What do you believe should be the learning outcomes of a successful interdisciplinary educational programme?
9. In the UK, professional institutions, who continue to vehemently protect their own territory, have been a major barrier to collaborative curricula and practice within the built environment. What have been the main barriers to setting up interdisciplinary educational curricula in the USA and how have they been addressed?
10. The literature that I have studied to date seems to suggest that historically, inquisitive individuals with certain character traits are drawn to interdisciplinary research or studies. My research aims to look at the possibility of instilling interdisciplinary attitudes across whole disciplines (regardless of individual character traits) through appropriate mandatory educational frameworks. Do you think that this is possible (If yes, why? If no, why)?
11. If your answer to Question 9 is yes, what other integrative actions do you believe may be necessary and how might these be staged?

Paul O'Brien

1. What are your thoughts on the government's drive for public choice within the public sector?
2. Is the government's notion of diverse service provision within the public sector a viable proposition or is there a risk of private sector oligopolies developing?
3. Performance management has played a large part in public sector transformation over the last 30 years. Should private or third sector organisations be given the opportunity to improve public services with a poor track record?
4. My research has highlighted the fact that the leaders of many public regulatory services have been unhappy for a number of years that fee income from development consent applications has been used to cross subsidise other service areas and not, as laid down by accounting guidance, to benefit stakeholders in regulatory services. Do you believe that in such instances, service leaders and their teams should be given the opportunity to issue a Right to Challenge if it can be clearly demonstrated that this is in the interests of staff, customers and local communities?
5. Much is being made of the need for public sector services wishing to spin out to measure and demonstrate the social value their services add to their local communities as part of bids for service commissions – are service leaders and commissioners in a position to demonstrate and measure such information as part of procurement processes?
6. What are your views on the ideology behind staff led social enterprise and its viability as a form of public service delivery?
7. An environment of profit for individual gain within public services against a backdrop of the promotion of non-profit employee led social enterprise would appear to be developing within the public sector – is there room for both approaches to service delivery?
8. In cases where non-profit staff led social enterprises do manage to get off the ground, what are your thoughts on tax and staff terms and conditions – should public sector parallels apply?
9. My research relates to public regulatory services (planning and building control). In terms of governance, what rules should apply to such services?
10. What are your experiences of local authority services and private sector organisations working in partnership – what lessons can the public sector learn from the private sector?

Adrian Penfold

1. In your review of non-planning consents, you highlighted the fact that a lack of strategic oversight within government was jeopardising attempts to streamline the development consent framework. Three years later, what are your views on this – are there signs (particularly in light of the government’s recent Housing Standards Review) that the situation has improved or might improve?
2. The government are currently promoting a market ideology within the public sector – in terms of competition for the commissions that are likely to result, what are your views in relation to the ability of public regulatory services such as planning and building control to compete with large private sector organisations – are they likely to possess the business skills necessary to secure commissions?
3. Could the type of robust systems of performance management and reporting mentioned in your review of non-planning consents help to drive the type of market ideology within regulatory service delivery at a local level that is being aspired to by the government through their Open Public Services agenda?
4. The government are suggesting that public service entrepreneurs need to measure and demonstrate the social value their services offer to their communities to enable them to compete with private sector organisations for commission contracts. Do you believe that current regulatory performance data requirements encapsulate social value (i.e. a service’s contribution to sustainable development through expert advice offered and the correction of defects in applications)?
5. What are the benefits of a localised and democratically accountable development team approach for regulators, clients and local communities?
6. The government’s initial response to your review stated that they intended to seek to improve the working relationship between public planning and building control bodies. For a number of years, the competitive public/private sector building control system, operating nationally on a project by project basis, has been identified by the government as *the* major barrier to consistent collaboration between the two professions at a local level. In light of the current drive for competition in the public sector via a commissioning approach through the localism agenda, what are your thoughts on the modern position – can too much competition (i.e. locally for commissions and nationally on a project by project basis) be damaging in the quest for a more efficient and effective regulatory framework or should we be seeking to maximise public choice?
7. In your review of non-planning consents, you suggest that clarification is needed in relation to the roles played by planning and building control in regulating energy efficiency issues. In light of the government’s recent Housing Standards review and signs that the Code for Sustainable Homes might be scrapped, could a Code for Sustainable Development, once mooted by the government, be a tool which might promote a more collaborative and standardised approach to development consents?
8. Do PPAs have a place in the regulatory environment, or, as is the case in the building control system, do regulatory professions such as planning need to learn how to calculate bespoke fee estimates, based upon the resources required to service an application as a whole?
9. Should regulation be a profit making (for personal gain) activity? Please provide the reasons for your answer.

Fiona Rooney

1. Please provide a brief overview of your role in the service commissioning work at North Tyneside Council.
2. Why did North Tyneside Council choose to enter into commissioning arrangements to deliver services such as planning and building control?
3. Overall, what did the Council believe the main benefits of procuring private sector services were for commissioning local authorities, particularly in instances where their own public services had performed well historically?
4. What did the Council believe the main benefits of commissioned services were for customers and local communities?
5. What were the main benefits of commissioned services for the private sector organisations involved – how did they sell themselves to the Council?
6. In terms of the assets (i.e. technology) involved in delivering services such as planning and building control, what role did Capita Symonds offer to play in investing in creating maintaining an up to date working environment for the benefit of staff and customers?
7. In your view, in terms of the implications for employees (i.e. TUPE arrangements), do you believe that they were happy with commissioning proposals?
8. Were the Council happy for statutory fee earning services such as planning and building control to become profit making (for personal gain)?
9. What consideration was given to governance arrangements/continuing democratic accountability of services?

Yvonne Rydin

1. How would you define the term *interdisciplinarity*?
2. Planning officers and building control surveyors have worked side by side within local authorities for decades. Numerous academic studies and government reports over the last ten years have suggested an interdisciplinary approach between the regulatory professions to sustainable development and other complex issues. Why do you think such issues still aren't being addressed in an interdisciplinary manner through university curricula?
 - a. In your experience, has the scientisation of knowledge production by university departments hindered interdisciplinary collaboration?
 - b. Are continued links to planning's parent professions (such as architecture) a barrier to the promotion of regulatory educational links?
3. How might curricula be adapted to ensure that future objectives with regard to sustainable development are met?
 - a. Do you think enough is being done in schools and colleges to raise awareness of sustainability and raise the profile of the role of planning professionals in this respect?
 - b. My research to date suggests that common learning experiences at undergraduate level (particularly in the first year) may be the way forward for all relevant built environment disciplines – what are your views on the viability of such an approach?
4. My research to date suggests that technology can play an important part in making knowledge resources available to students collaborating on complex interdisciplinary assignments (i.e. online blackboards), and practitioners collaborating in the field (i.e. Building Information Modelling). What are your views of such developments in relation to the value that they may (or may not) add to the development of young professionals?
 - a. Do you have any experience of such technology being used to aid the development of part-time students?
5. What could the government do to ensure that more robust and sustainable educational frameworks are put in place to meet their long term objectives for sustainable development and greater efficiency within the regulatory process?
6. The ability of practitioners to meet legislative objectives following education should obviously be the main driver of curricula. In your experience, is this in any way compromised by a university's need to generate income in the current economic climate?
7. In the past (as was the case when planning attempted to break away from its parent disciplines in the 1940s), in protecting disciplinary interests, professional institutions have acted as a barrier to change and collaborative approaches to knowledge production. What are your views of professional institutions in this respect currently?
8. My research to date has considered the creation of '*sub-interdisciplines*' (units consisting of a small number of disciplines with distinct commonalities) such as *regulation*, *design* and *management*, within a gradual movement away from a built environment multidiscipline and towards an interdiscipline. In terms of attempting to reduce waste early in the design process, what are your thoughts on the creation of a regulatory (Planning and Building Control) sub-interdiscipline and its possible involvement in the design process prior to completion, rather than 2 separate processes following design completion?

Stuart Smith

1. How would you define the term *interdisciplinarity*?
2. Why is it that so few university undergraduate courses exist that are specifically tailored to building control?
3. Do you think enough is being done in schools and colleges to raise awareness of the role of building control?
4. Planning officers and building control surveyors have worked side by side within local authorities for decades. Numerous academic studies and government reports over the last ten years have suggested an interdisciplinary approach between the regulatory professions to sustainable development and other complex issues. Why do you think such issues still aren't being addressed in an interdisciplinary manner through university curricula?
5. How might curricula be adapted to ensure that future objectives with regard to sustainable development are met?
6. My research to date suggests that common learning experiences at undergraduate level (particularly in the first year) may be the way forward for all relevant built environment disciplines – what are your views on the viability of such an approach?
7. My research to date suggests that technology can play an important part in making knowledge resources available to students collaborating on complex interdisciplinary assignments/projects (i.e. online blackboards), and practitioners collaborating in the field (i.e. Building Information Modelling). What are your views of such developments in relation to the value that they may (or may not) add to the development of young professionals?
8. What could the government do to ensure that more robust and sustainable educational frameworks are put in place to meet their long term objectives for sustainable development and greater efficiency within the regulatory process?
9. The ability of practitioners to meet legislative objectives following education should obviously be one of the main drivers of curricula. In your experience, is this in any way compromised by a university's need to generate income in the current economic climate?
10. In the past, professional institutions have acted as a barrier to change and collaborative approaches between disciplines. What are your views of professional institutions in this respect currently?
11. My research to date has considered the creation of '*sub-interdisciplines*' (units consisting of a small number of disciplines with distinct commonalities) such as *regulation (planning and building control)*, *design (architecture, mechanical engineering, structural engineering, etc)* and *management (construction management, quantity surveying, project management, etc)*, within a gradual movement away from a built environment multidiscipline and towards an interdisciplinary. In terms of attempting to reduce waste early in the design process, what are your thoughts on the creation of a regulatory (Planning and Building Control) sub-interdiscipline and its possible involvement in the design process prior to completion, rather than 2 separate processes following design completion?

Andrew Stunell

1. How do you believe the current development consent framework (planning and building control) is viewed by its customers – as an unwanted constraint or as a spur to innovation?
2. What are your views on the skill levels of design and regulatory practitioners in relation to sustainable development, including their understanding of each other's roles and their ability to collaborate to resolve complex issues?
3. What are your thoughts on how the current development consent system takes account of the design process (i.e. the RIBA Plan of Work) for new developments – is the existing system of separate planning and building control functions in England optimised?
4. What are your thoughts on the current competitive building control sector in England, particularly in relation to its effect upon attempts to achieve a more joined up regulatory approach between building control/planning services and ultimately, energy efficient/sustainable development?
5. The government are currently promoting a market ideology within the public sector through their Open Public Services White Paper. In comparison to the current competitive building control framework, could competition for planning and building control service commissions at a local level be more conducive to promoting a joined up regulatory approach on a consistent basis and a level playing field in terms of service performance standards/governance?
6. Should regulation be a profit making activity (for personal gain or in the case of local authorities, the use of fees to cross subsidise activities not linked to regulatory service provision)? Please provide the reasons for your answer.
7. A number of previous research projects have recommended the introduction of statutory domestic and commercial codes for sustainable development, based upon BREEAM (i.e. setting out standard options in advance of current regulatory requirements) and marrying with the RIBA Plan of Work. What are your thoughts on the potential use of all-encompassing code manuals (containing planning and Building Regulations requirements) as a means of guiding the design process, streamlining regulatory guidance and clearly allocating regulatory responsibilities between planning/building control bodies?
8. Research suggests that levels of sustainable development in England are difficult if not impossible to measure and that the built environment as a whole is averse to technical innovation, particularly in the volume house building sector. What are your thoughts on the potential of mandatory sustainability labelling as a means of measuring/publishing performance nationally and driving innovation?
9. When considering the recent effects of continuing short term political election cycles upon performance standards, should the setting and management of development performance standards remain with the Government or be passed to a cross party group or independent body?
10. As a collective, how often should regulatory standards be reviewed and how could reviews be improved to increase medium/long term stakeholder confidence in their ability to grasp and achieve up and coming requirements?

Jonathan Williams

1. In your opinion, what are the basic requirements of any public service?
2. To date, my research has indicated that a desire to avoid private sector involvement, engender employee empowerment and create efficiencies by reducing levels of bureaucracy have been some of the main drivers for developing CICs/social enterprises. What were the main drivers behind the formation of your CIC?
3. To date, my research has indicated that a lack of business skills, inadequate commissioning frameworks, funding, a lack of tax incentives and staff fears/terms and conditions have created barriers to the formation of CICs/social enterprises. What were the main challenges that you faced in setting up the company?
4. What help was available from external agencies to help you overcome the challenges that you faced when setting up the CIC?
5. When considering that the government is attempting to create a market ideology in the public sector, do you believe that it could do more to help staff teams to create their own enterprises and if so, what shape should this help take?
6. What are the benefits that have been created for staff through formation of the CIC and what are their feelings about progress to date?
7. What are the benefits that have been created for customers through formation of the CIC?
8. Have any unforeseen problems/disbenefits emerged since setting up the CIC and if so, how have you overcome them?
9. What performance indicators are in place to demonstrate to the commissioning body that the company is offering quality services, value for money and social value?
 - a. Contract length?
 - b. Interest from commissioning board – do they even account for social value?
10. What governance arrangements are in place and how often do you liaise with representatives of the commissioning body?

Ant Wilson

1. With particular reference to the RIBA Plan of Work, what are your thoughts on how the current development consent system takes account of the design process for new developments?
2. What are your views on the current development consent system (planning and building control) in terms of the manner in which planning policy, Building Regulations guidance documents and second tier references (i.e. British Standards, BRE Reports, etc.) are used to regulate sustainable development – do you find the current approach acceptable or disparate/complex/expensive?
3. A number of studies have recommended the introduction of statutory domestic and commercial codes for sustainable development, based upon BREEAM and marrying with the RIBA Plan of Work. What are your thoughts on the potential use of such tools as a means of guiding the design process and streamlining, standardising (at a national level) and linking regulatory requirements?
4. As a design professional, how do you view the current regulatory framework – as a complex and disjointed constraint or a spur to innovation/ingenuity?
5. Research suggests that nationally, levels of sustainable development are difficult if not impossible to measure and that the built environment as a whole is averse to technical innovation, particularly in the volume house building sector. What are your thoughts on the potential of mandatory sustainability labelling as a means of measuring/publishing performance nationally and driving innovation?
6. Again with particular reference to the house building sector, recent research has demonstrated considerable gaps between designed and as built performance. Should actual as built performance be demonstrated as part of the regulatory process?
7. To date, my study indicates that the traditional involvement of building control following technical design (RIBA Stage 4) is resulting in conflicts with earlier planning approvals granted at RIBA Stage 2/3. Consequently, design rework and new planning applications are often required. What are your views on the potential of building control bodies mirroring the duties of BREEAM Assessors? This might involve building control becoming involved at concept design/planning pre-application advice stage to advise on options exceeding Building Regulations requirements and comment on likely ‘show stoppers’, before finally going on to check planning conditions on site as part of the building handover process.
8. When considering the recent effects of continuing short term political election cycles upon performance standards, should the setting and management of development performance standards remain with the Government or be passed to an independent body?
9. As a collective, how often should sustainability/regulatory standards be reviewed and how could reviews be improved to increase medium/long term stakeholder confidence in their ability to grasp and achieve up and coming requirements?
10. What are your views on the skill levels of design and regulatory practitioners in relation to sustainable development, including their understanding of each other’s roles and their ability to collaborate to resolve complex issues?

Gerard Wood

1. Interdisciplinarity has been variously described over the last 20 years (as a methodology, a concept, a philosophy, etc). The 3 most broadly quoted definitions (by Klein & Newell, Boix Mansilla and National Academy of Sciences) encapsulate interdisciplinary study and research as a process. How would you now define interdisciplinarity in relation to its application in professional practice?
2. What do you believe to be the main drivers for interdisciplinary education in the built environment?
3. What do you think are the main barriers to interdisciplinary education for the built environment?
4. In putting forward the concept of Mode 2 knowledge production, Gibbons *et al* suggest that practice based knowledge production outside a traditional university setting has become increasingly popular and valid. Do you believe that universities are capable of offering the necessary support structure for interdisciplinary curricula or could industry (and perhaps government) play an important part in the future?
5. How, within higher education, do you believe that students tackling the complex issues that require an interdisciplinary approach might obtain the most effective learning experiences (early at undergraduate level, with disciplinary experience at postgraduate level, or a mixture of both) and why?
6. In your experience, what are the most important aspects to setting up an interdisciplinary educational curriculum in relation to:
 - a. time;
 - b. physical and human resources; and
 - c. coursework assessment strategies (i.e. how is group/written work assessed)?
7. Is disciplinary equality among course tutors possible, or is some form of leadership required in course design and delivery?
8. What problems have you encountered in maintaining the necessary multidisciplinary mix/balance in tutor/student numbers?
9. The literature that I have studied to date seems to suggest that historically, inquisitive individuals with certain character traits have been drawn to interdisciplinary research or studies. My research aims to look at the possibility of instilling interdisciplinary attitudes across whole disciplines (regardless of individual character traits) through appropriate mandatory educational frameworks. What are your thoughts on the possibilities of such an approach – different character traits are inevitable but can interdisciplinary undergraduate education alter the attitudes of less inquisitive students?
10. Do you believe that teaching intervention is important in classroom/workshop settings or are there instances where interdisciplinary groupings can be left to tackle the problem on their own?
11. How might interdisciplinary curricula serve to address the low profile associated with the built environment in terms of choice of career path?
12. What do you believe should be the learning outcomes of a successful interdisciplinary educational programme?

Appendix C: Recent Reform of Development Consent Service Delivery

1 Introduction

In addition to the work linked to the better regulation agenda in England, carried out by 9 different advice bodies since 1997 (Baldwin, 2010; Gibbons and Parker, 2012; Local Better Regulation Office, 2012), development consent service delivery has separately been under constant scrutiny.

In 1998, the then Labour Government built upon an earlier study by the National Planning Forum (1996) in an attempt to simplify the development consent process for applicants via a more integrated approach between planning and building control services. *The One Stop Approach to Development Consents* (Steele and Thomas, 1998) sought to demonstrate through a series of case studies how savings could be achieved by local authorities and developers by working together at the earliest possible opportunity in order to cut out wasteful processes and duplicated work. The report, which highlighted the problems faced by small businesses due to an overly onerous, wasteful and complex development consent process, claimed to demonstrate possible improvements in communication, working relationships, job satisfaction, efficiency and effectiveness due to improvements to pre-application stage work. However, it failed to clearly demonstrate where these improvements were achieved, or recommend areas worthy of further research.

A further six years elapsed before the Government again decided to revisit the possibility of streamlining of the development consent process through their *Unification of Consent Regimes* study (Office of the Deputy Prime Minister, 2004b). The study again suggested that the development consent process was overly complex and wasteful. As the name suggests, in essence, rather than building upon the weaknesses of *The One Stop Approach to Development Consents*, the study examined a far more onerous 'unification' of consent regimes. It concluded that in terms of unifying planning and building control functions, complexities exist which would make this extremely difficult, the most significant being the competitive public/private sector approach to building control. Recommendations that the possibilities of unification be revisited at a later date are contained in the document.

This examination of political literature produced since the above aspirations for a more joined up approach between planning and building control services were set out begins by examining the criticism and defence of the competitive building control system. It then goes on to consider the effects of recent Government reviews of the planning and building control systems in England.

2 Criticisms of the Competitive Building Control System

Published in December 2006, the report *Simplification Plan: The Route to Better Regulation* (Department for Communities and Local Government, 2006d) paved the way for a review of the building control system in England and Wales. In place of the Government's earlier goal of unification of the planning and building control systems, the report made clear that the outcome that would be sought from the forthcoming review would be the attainment of an understanding of how both systems might best deliver sustainable development together. This view was backed by other Government reports at that time such as *Code for Sustainable Homes: A Step Change to Sustainable Home Building Practice* (Department for Communities and Local Government, 2006c) and *Building a Greener Future: Towards Zero Carbon Development* (Department for Communities and Local Government, 2006a).

In 2007 the Labour Government began an initiative to examine the views of relevant stakeholders in relation to possible improvements to the building control and planning systems in England and Wales. Following on from a major ministerial round table meeting with construction industry representatives in June 2006, *Achieving Building Standards: Final Report* (Science Applications International Corporation, 2007), resulted from a review of approximately 100 relevant reports, a stakeholder consultation involving 200 individuals, and an online discussion forum. The report concluded that the Building Regulations were excessively complex, not fit for purpose and, in fact, 'at tipping point'. Major failings highlighted in the report included poor stakeholder management and communication, poor performance management, a lack of integration, and a lack of joined up processes.

An interim note entitled *The Future of Building Control* (Department for Communities and Local Government, 2007) detailed the failings of the building control system in England and Wales and set out the requirement for a full consultation paper on the way forward. Contrary to *Achieving Building Standards: Final Report* (Science Applications International Corporation, 2007), which hinted at a possible move towards self-regulation on building

control issues, the paper set out a clear intention to modernise and strengthen the building control system in England and Wales.

A report to the Conservative Party Shadow Cabinet (Goldsmith and Gummer, 2007) conflicted with the tone set by the Government's interim note on the future of building control (Department for Communities and Local Government, 2007). Stating that building control surveyors are largely untrained and incapable of conversing with professionals and experts working in the built environment, the report suggested that the Building Regulations Approved Documents and local authority and private building control bodies should be abolished. It was claimed that this would put the onus for compliance on the designer, thereby stimulating innovation. The report by Goldsmith & Gummer (2007) contains very little and at times no detail on the data/methods used to reach the conclusions contained in the document. It also appears to fail to recognise that not all individuals that submit Building Regulations applications are professional or experts, or that the building control profession contains a large number of highly qualified experts.

The building control system in England and Wales was clearly under attack from all political sides in 2007 and accordingly, was forced to respond.

3 Defence of the Competitive Building Control System

Seeing a threat to their profession, having previously been at loggerheads in terms of their role within the two tier competitive regulatory system and its overall viability, public and private sector building control representatives joined forces. Together with the RICS and ABE, they produced the report *A Building Control System for the 21st Century* (Building Control Alliance, 2007). The report, under the auspices of the newly formed Building Control Alliance (BCA), discussed the six areas deemed worthy of further investigation by the Government's Future of Building Control interim note (Department for Communities and Local Government, 2007), these being:

1. a vision for the future;
2. modernising the system;
3. new routes to compliance;
4. a customer centric approach;
5. improving the approach to regulation; and
6. performance management and future capacity.

Whilst recognising and addressing the shortcomings previously highlighted by Government, not surprisingly, the report ignored the debate around the continuing viability of a two tier regulatory system. Instead, it concentrated on the positive feedback obtained from some users of the system and the failings of less onerous systems in other countries, such as Norway.

At around the same time as a review of the building control system in England and Wales was announced, the planning system in England and Wales also received criticism from the Government in the White Paper *Planning for a Sustainable Future* (HM Government, 2007), which looked at the system's ability to cope with future challenges such as climate change and increasing the supply of housing. Whilst generally recognising the planning system as being fit for purpose, the report viewed it as being obstructive, overly complex and wasteful in many situations. The main underlying principles of the White Paper were that planning should be responsive, transparent, streamlined and consultative.

In 2008, ten years after the Labour Government had begun to examine the merits of a more joined up development consent process, the planning and building control systems in England and Wales were heading inexorably towards totally separate Government reviews.

4 Labour Government Reviews of the Planning and Building Control Systems

The Future of Building Control: Consultation (Department for Communities and Local Government, 2008b) was published in March 2008, with the Government seeking stakeholder opinion on the building control system. When the Government published a summary of responses to the document later that year, it became clear that having been reassured by the Government's interim note (Department for Communities and Local Government, 2007), building control professionals appeared to be reverting to type. Public sector respondents to the consultation argued in large numbers that the system should be returned exclusively to the public sector, whilst private sector respondents suggested that the review was weighted in favour of the public sector. On the question of whether more should be done to require planning and building control bodies to operate as one function to simplify the process for applicants, only 51% of public sector building control respondents and 27% of private sector building control respondents answered yes. Interestingly, 71% of construction industry respondents (i.e. contractors and designers) were in favour of such proposals.

It seems likely that the suggestion of '*one function*' rather than '*teamwork*' to local authority respondents was a factor that affected their response, with planning professionals having

historically been regarded as the ‘senior’ discipline regularly made responsible for the running of building control services (Department for Communities and Local Government, 2008c). The reluctance of private sector respondents to a more collaborative approach with the planning profession would seem to stem from the fact that they work remotely from local authority planning services and perceive such a move to be a threat to their business activities.

Future of Building Control: Implementation Plan (Department for Communities and Local Government, 2009a), set out a series of changes required to make the system fit for purpose. The report made clear a commitment to making navigation between planning and building control services easier through a streamlined approach, whilst acknowledging that due to the two tier building control system, this would be difficult to achieve.

Commissioned by the Government, the *Killian Pretty Review* was launched in June 2008 with a ‘*call for solutions*’ (Killian and Pretty, 2008a) from stakeholders to help make the planning system faster and more responsive. Recommendations made as part of the review’s final report included permitted development rights, a more proportionate approach to requests for information, the introduction of an ‘accredited agents’ scheme for minor developments, and improvements to the pre-application process. However, building control is mentioned only once throughout the 166 pages contained in the report (Killian and Pretty, 2008b), this being a suggestion that the energy performance requirements for new buildings should come solely under the control of the Building Regulations.

Before forming the current Coalition Government in May 2010, the Conservative Party published their Policy Green Paper No. 14 (Conservative Party, 2010b), in which the planning system in England and Wales was described as “*broken*” and the building control system as being “*unnecessarily prescriptive and overly complex*”.

Despite the contents of the reports detailed above, since coming to power in May 2010, the Coalition Government has again carried out separate reviews of the planning and building control systems in England, primarily with the aim of cutting red tape in an attempt to stimulate the economy.

5 Coalition Government Reviews of the Planning and Building Control Systems

Following an extensive consultation with Parliament and the public on a draft framework that was published in July 2011, a new National Planning Policy Framework was published on 27

March 2012. The framework contained the following key elements (Department for Communities and Local Government, 2012b):

- making sure the local plan – produced by communities – is the keystone of the planning system;
- establishing a presumption in favour of sustainable development that means that development is not held up unless to approve it would be against collective interests;
- guaranteeing strong protections for the natural and historic environment, and requiring improvements to put right some of the neglect that has taken place; and
- raising design standards so that the requirements for design are the most exacting yet.

Consultation documents covering proposed changes to the Building Regulations and building control system in England were published by the Government in January 2012, with a report containing the summary of responses published in December 2012 (Department for Communities and Local Government, 2012a). One of the main changes to emerge from the 2012 consultation was the introduction of risk based service plans for local authority building control bodies. This resulted in the removal of seven of the statutory stages at which builders were required to notify building control during a construction project and the introduction of the requirement for local authorities to price regulatory inspection regimes on the basis of the perceived level of competency of builders.

The development of a risk based approach to inspection for building control stems from the recommendations made to Government by Hampton (2005) but seemingly fails to consider the differences between building control and the services that Hampton's review covered in detail. Environmental health and trading standards services primarily deal with static local businesses, upon which data can be gathered over long periods of time. Building control bodies are constantly dealing with an environment in which unknown sub-contractors come and go on construction sites. There is no recent research to suggest that the criticisms of the UK construction industry made by Latham (1994) and Egan (1998) such as its fragmented and nomadic nature have been addressed. In this sense, when applied to building control, the suggestion made by Black (2010) that not all regulation should be characterised or indeed characterise itself in terms of risk would seem to be relevant.

Like the contradictions set out previously in terms of Government support for local service delivery and at the same time, maintenance of a competitive and at times remote building

control system, there also appears to be contradiction between the Coalition Government's aspirations for more local decision and their policies. Gardiner (2012b) details the fact that on 6 September 2012, Eric Pickles, Secretary of State for Communities and Local Government, made a statement setting out the Government's intention to allow the Planning Inspectorate to take over planning decisions from local authorities who consistently perform poorly. This proposal was subsequently implemented following consultation with stakeholders (Department for Communities and Local Government, 2012c; Department for Communities and Local Government, 2013b). In effect, such a move centralises planning decisions rather than tackling the poor performance of local planning authorities by seeking to improve and innovate local service delivery.

6 Conclusions

This examination of recent reform of the development consent system in England has highlighted what would appear to be significant inefficiencies and contradictions in legislative policy development since the late 1990s. Weaknesses in the existing framework would appear to be being compounded by a lack of strategic oversight of the development consent framework in Government, with reviews of the planning and building control systems continuing to be carried out in isolation of each other.

The political aspiration for regulatory collaboration in the built environment and local decision making is clear and evidenced over a number of years. However, this aspiration appears to be continually being compromised by the Government's continued support for the competitive building control system, which on a number of occasions, has been identified as a major barrier to change. When threatened with change, representatives of the public and private building control sectors have joined forces to protect their interests, only to recommence infighting when suggestions of creating closer links with the planning profession have subsided.

Ultimately, recent reform of the development consent system would appear to have done little to simplify the development consent process for applicants via a more integrated approach between planning and building control services, an ideal originally set out at the end of the 20th Century (Steele and Thomas, 1998).

Appendix D: Barriers to the Creation of Regulatory SMEs

1 Introduction

As part of the Government's Localism agenda, planning and other monopolised public services have been earmarked for competition from existing SMEs through the Open Public Services White Paper (HM Government, 2011a). The Government is also encouraging public service teams to start up their own not for profit social enterprises/SMEs to enable them to reduce the impacts of bureaucracy upon decision making.

Under Section 81 of the Localism Act 2011, local authorities have a duty to consider an expression of interest from existing non-profit SMEs or two or more local authority employees wishing to run a regulatory service under the *Community Right to Challenge*. Literature examining the early experiences of SMEs and fledgling employee led social enterprises in public sector areas such as the NHS has found that the barriers to winning contracts from public sector commissioners broadly fall within the following categories:

1. Lack of business skills
2. Commissioning frameworks
3. Funding
4. Taxation
5. Staff terms and conditions

This review of literature considers each of the above in turn, beginning with an examination of how a lack of business acumen might affect the ability of prospective social entrepreneurs to set up and operate their own regulatory SMEs. Although the transformation of the public sector continued apace during the production of this review, to the author's knowledge, no non-profit planning or building control SMEs were created in England prior to its completion.

2 Lack of Business Skills

Research carried out by the Local Government Research Unit (2011) suggests that if employee led enterprises are to have long term success and stability, it is likely that they will initially require support, advocacy and expert advice. This view is backed by the Office for Public Management (2010), who hold out the view that strategic business planning and marketing are day to day activities in the private sector but are largely unfamiliar activities to

public sector employees. In offering these views, the Office for Public Management also identifies the fact that the relentless pace of policy making over the past decade, along with the Government's 'stop-start' approach to reforming the public sector, has created an unstable environment for budding social entrepreneurs.

In examining the experiences of SMEs attempting to win public sector commissions, the research of Muñoz (2009) demonstrates that a number of social enterprise practitioners do not know how to effectively capture their added social value or present it to the public sector. The social entrepreneurs and public sector commissioners involved in the research agreed that there is a need to help social enterprises to submit professional tenders.

The studies of Miller and Millar (2011) and Hall *et al* (2012) investigated the outcomes of social enterprise spin-outs from the NHS. Their studies suggested that whilst clinicians lacked confidence in their business skills, those leading larger service areas were more familiar with business planning processes that would underpin an enterprise's survival in a business marketplace. An interesting observation resulting from the work of Miller and Millar (2011) is that clinicians reported difficulties in finding the time and resources outside their day to day responsibilities to develop a business case. As a result, they often struggled to achieve the milestones required to access financial support from the Social Enterprise Investment Fund. Where external support from consultancy firms in relation to business case development and legal advice was obtained, it was deemed by clinicians as being essential to their business moving forwards.

The report *Mutual and cooperative approaches to delivering local services* by the Department for Communities and Local Government Committee (2012) contains claims that there is a lack of entrepreneurial enthusiasm in local authorities and that employees lack the necessary commercial skills to develop a SME. In the report, the Institute of Local Government Studies offer the view that organisational structures and political thinking in many local authorities is constraining entrepreneurial spirit. In parallel with other studies detailed above, the report highlights the issue that public sector staff generally have little or no awareness of the contract and procurement restrictions that may prevent local authorities from 'gifting' their services to them. The tensions between the Government's aspirations for the delivery of public services through staff led enterprises and the barriers to the creation of regulatory SMEs resulting from local authority commissioning frameworks are now examined.

3 Commissioning Frameworks

The lack of business skills possessed by many local authority employees who might consider spinning out to form their own social enterprises would appear to present a considerable barrier to the development of SMEs in the regulatory field. In addition, there is evidence to suggest that the attitudes of local authority commissioners and European Union (EU) procurement rules are factors that are also likely to prevent social entrepreneurs from both developing and moving forward with business plans.

Social entrepreneurs participating in the research of Muñoz (2009) and Chapman *et al.* (2007) felt that in their experience, the mindset of local authority commissioners resulted in a situation in which it was not worth engaging with the public sector. This was due to a perception that SMEs were effectively being designed out of procurement processes through the creation of larger contracts which were more attractive to established private sector organisations.

The studies of Reed and Stanley (2005) and the Office for Public Management (2010) suggest that organisations such as social enterprises need to ‘scale-up’ in order to compete effectively for public service contracts. Some social entrepreneurs involved in the work of Muñoz (2009) felt that they could increase their ability to respond to larger contracts by working in collaboration with other social enterprises and suggested that private companies might be encouraged to sub-contract to social enterprises. In attempting to create planning and building control social enterprises such a scenario might involve existing public services partnering up with local private sector planning consultancies or approved inspectors, thereby sharing a broader field of expertise and skills. In instances where neighbouring public services might consider joining up to form a larger enterprise, it must be borne in mind that a larger contract would be created that would trigger a procurement exercise and be more likely to attract private sector interest (Muñoz, 2009).

As well as a perception of mistrust among public sector commissioners towards the use of social enterprises to deliver their services (Chapman *et al.*, 2007; Department for Communities and Local Government Committee, 2012; Muñoz, 2009), there is evidence to suggest that the intimidation of employees expressing a desire to run their services may also be a barrier. Aspiring social entrepreneurs employed in the NHS have expressed concerns that the attitudes of their senior managers towards their proposed spin outs has led to difficulties in

proceeding towards the submission of an Expression of Interest. Fears of repercussions as a result leading a Right to Request against the wishes of senior managers were prevalent in such scenarios (Miller and Millar, 2011).

In the event that a Community Right to Challenge could be put forward by members of existing public sector planning or building control services, a procurement exercise would be triggered under the Public Contracts Regulations 2006. This legislation implements European Directive 2004/18/EC, setting out rules imposing certain procedures for awarding public contracts (Slaughter and May, 2011). Under such conditions, it is unlikely that staff led social enterprises or established local SMEs with a limited business track record will survive when faced with open competition for their work from large private sector organisations (Local Government Research Unit, 2011; Department for Communities and Local Government Committee, 2012). To counter such problems and encourage the development of employee led local social enterprises, the Government have begun to set in place a number of enabling measures.

The *Public Services (Social Value) Act 2012* has been introduced by the Government with the express aim of establishing a requirement for local authorities to consider social, economic and environmental well-being in addition to financial considerations when commissioning public services. The Government have also set up the *Commissioning Academy*, which is open to commissioners across the public sector and is designed to provide them with the confidence and knowledge to move forward with alternative modes of service delivery, such as employee led social enterprises (HM Government, 2013). In contrast, the Cabinet Office's *Mystery Shopper Service* provides a route for suppliers to raise concerns about public sector commissioning practice (Mutuals Taskforce, 2012b). However, it is likely that initially, what employee led regulatory SMEs will require most is an incubation period, during which they can learn how to operate as a new business.

In recognising the problems posed to fledgling social enterprises by EU procurement rules, the Mutuals Taskforce (2012b) put forward recommendations to Government that included:

- pressing for a temporary exclusion for mutuals to enable them to be established before being subject to full and open competition; and

- ensuring the *'in-house'* provisions, under which contracts between public authorities are exempted from the application of the public procurement rules where certain conditions are met, continue to provide a route for the development of mutuals.

In 2011, the UK Supreme Court ruled in the case of *Brent London Borough Council and Others v Risk Management Partners Limited* that *'in-house'* procurement by public authorities benefits from the Teckal exemption to the public procurement regime. This ruling was established from case law of the European courts – the now renowned *Teckal Case* exemption from normal procurement rules (from the case of *Teckal Srl v Comune di Viano and Azienda Gas-Acqua Consorziale (AGAC) di Reggio Emilia, C-107/98 [1999] ECR I-8121*). By following this precedent, local authorities can set up what is now termed as a *Teckal Company* and award a contract to the separate legal entity (Mutualisation Taskforce, 2012; Mutuals Taskforce, 2012a; Slaughter and May, 2011). The exemption applies where:

- the public authority exercises a level of control over the separate entity which is similar to that it exercises over its own departments (the *'control test'*); and
- the separate entity carries out the essential part of its activities with the controlling public authority or authorities (the *'function test'*).

If these two tests are satisfied, the contract between the local authority and the separate entity will not have to be put out to tender. Such an arrangement would appear to be a suitable vehicle to enable incubation periods during which fledgling planning and building control social enterprises could develop their business skills before entering into full blown procurement exercises.

However, in the event that the commissioning barrier can be overcome to result in the development of regulatory social enterprises with the ability to offer long term sustainable outcomes to commissioners and local communities, funding is likely to become an issue that might again jeopardise their viability.

4 Funding

If social enterprises are to be viable and sustainable organisations, they will require access to finance to set up and grow (Mutuals Taskforce, 2012b). Start-up costs have been identified as

a considerable barrier to the development of employee led social enterprises (Nuttall, 2012; Mutualls Taskforce, 2012b).

One of the main reasons why some public sector planning and building control teams might consider setting up their own social enterprises in the future is the allocation of disproportionate support and accommodation costs against their service budgets by local authority employers (Key, 2012; Arup, 2010). By spinning out, budding regulatory social entrepreneurs may deem it possible to reduce support and accommodation costs, thereby utilising a greater proportion of fee income for the benefit of the services and their customers. Hall *et al.* (2012) detail how employee led social enterprises in the NHS have found it difficult to secure funding from external sources, with Primary Care Trusts being the dominant source of finance. Regulatory SMEs are likely to require significant time and resources to develop a business case and become established.

To get into a position of operating sustainably on a self-financing and non-profit basis, it is likely that fee earning regulatory social enterprises will need to start their life with at least one year's budget in advance, along with a healthy surplus with which to offset potential fee income deficits in their fledgling years. As would appear to have been the case in the NHS, an obvious source of finance is likely to be local authority employers wishing to see an initial investment reap long term savings and service improvements. Alternative sources of start-up finance such as the Government's Mutualls Support Programme exist and offer access to a fund containing millions of pounds (Cabinet Office, 2011b), as utilised by Cleveland Fire Service to the tune of £95,000 (Cabinet Office, 2012). However, budding regulatory social entrepreneurs could again learn from the experiences of their NHS counterparts, who have found it difficult to access such funding due to a lack of the type of business skills required to reach the necessary application milestones (Miller and Millar, 2011). As such, until this skills gap is bridged, a vicious circle of skills deficiencies preventing fledgling SMEs gaining access to alternative sources of start-up funding is likely to persist.

Nuttall (2012) found that as well as struggling with general business development issues, many public sector employees considering setting up their own SMEs find issues such as taxation too difficult to make their plans worth moving forward. In the view of the Department for Communities and Local Government Committee (2012) and the Mutualls Taskforce (2012b), tax incentives have an important part to play in helping SMEs to get established.

5 Taxation

The Mutuals Taskforce (2012b) recommend that the Government consider offering a number of different tax reliefs to fledgling social enterprises, such as Share Incentive Plans (SIPs). These are tax and national insurance contributions (NICs) advantaged plans that help employers to encourage employees to hold shares in a company or group they work for. Tax and NICs are not charged when a participant is awarded shares under a plan (Chartered Institute of Public Finance & Accountancy, 2011). The other tax relief schemes recommended for wider accessibility by the Mutuals Taskforce (2012b), such as the Enterprise Investment Scheme (EIS), the Venture Capital Trust (VCT) and Community Investment Tax Relief (CITR), all involve relief for investors offering finance to social enterprises rather than the enterprises themselves (Chartered Institute of Public Finance & Accountancy, 2011).

Value Added Tax (VAT) is another complex area requiring expert advice. Many areas of public service such as planning are VAT exempt. However, to avoid distortion of competition in the building control sector, fees charged by local authorities are treated as consideration for taxable supplies and so are subject to VAT (HM Revenue & Customs, 2013). Assuming that competition on a national basis within the building control sector could be replaced by the commissioning approach at a local level outlined in this thesis, third parties providing public regulatory services could operate without the complication of VAT.

Schedule 5 of the *Local Government Act 1988* sets out certain types of property that are exempt from business rates. If SMEs are to offer regulatory services such as planning and building control in the public interest, and from their own premises on a non-profit basis, it would seem appropriate that such services be considered for exemption by the Secretary of State.

Perhaps the most pertinent observation in relation to overcoming taxation barriers is that made by Nutall (2012), who in offering his review of employee led SMEs to the Government, suggests that simple toolkits should be developed, including off-the shelf models to cover legal, tax and other regulatory issues. Among the issues that might be encompassed by such off-the-shelf models are staff terms and conditions, which are now considered as the final major barrier to the formation of regulatory SMEs.

6 Staff Terms and Conditions

For some public services, the main barriers to the formation of SMEs relate to staff concerns about pensions and terms and conditions. For many members of staff, unfamiliarity creates anxieties about the risks involved in moving away from the protection of the public sector (Office for Public Management, 2010). Such anxieties are highlighted in the case studies offered by Miller and Millar (2011), with some proposed social enterprises in the NHS not being able to proceed due to staff opposition.

During the setting up stage of employee led social enterprises, Mutuels Taskforce (2012b) state that the following highly important and technical issues need to be worked through:

- assessment and the transfer of employment rights, including terms and conditions covered by the Transfer of Undertakings (Protection of Employment) Regulations (TUPE); and
- assessment of the transferability and options for the future provision of pension entitlements.

TUPE implements the 1977 and 1998 European Council Acquired Rights Directive, protecting the continuity of employees' terms and conditions of employment when a business is transferred from one owner to another. The Directive offers limited opportunity for a new business to vary terms and conditions with the agreement of the employees (Chartered Institute of Public Finance & Accountancy, 2011).

Until 23 March 2011, the Government's *Code of Practice on Workforce Matters in Local Authority Service Contracts* required service providers to give new employees terms and conditions that were no less favourable than TUPE transferees. These requirements included membership of the Local Government Pension Scheme (LGPS) or a scheme of similar quality. However, this Code of Practice was withdrawn, the Government's rationale being that the Code had favoured larger providers and that its withdrawal would enable SMEs to enter the public sector market (Chartered Institute of Public Finance & Accountancy, 2011).

Transferring to a new social enterprise is likely to be a daunting proposition for many local authority employees. But in instances where NHS staff have followed their convictions and transfers have taken place, there is evidence to suggest that terms and conditions have

remained comparable, whilst provisions such as training have become more flexible (Limb, 2011).

It would appear unlikely that a small regulatory social enterprise would get off the ground without the full backing of its staff and in instances where public planning and building control teams are high performing and operate efficiently, this will be particularly understandable. However, as the transformation of the public sector continues apace, it is likely that employees being earmarked for private sector takeovers will have a choice to make – *should we jump or wait to be pushed?* According to Hall *et al.* (2012), the altruistic tendencies of public servants in the NHS have tended to result in a leap towards greater business autonomy for the social betterment of their services to their customers.

7 Conclusions

The Government have made clear their intentions to create a performance driven market ideology in the public sector by opening up monopolised local authority services such as planning to competition through provisions contained in the Localism Act 2011. In doing so, they have set out clear aspirations for the delivery of public services through staff led non-profit social enterprises/SMEs as a means of reducing the impacts of bureaucracy upon decision making. However, the findings of this review of literature detailing the recent experiences of budding public sector entrepreneurs suggests that there are a number of interlinked conflicts between political aspirations for staff led SMEs and their enablement.

Although the Government have introduced the *Public Services (Social Value) Act 2012* as a means of levelling the commissioning playing field, some SMEs have struggled to capture their added social value in bids for contracts as a result of inadequate business skill sets. Initiatives such as the *Commissioning Academy* have been introduced to give commissioners confidence in alternative modes of service delivery such as staff led SMEs. However, there is evidence to suggest that rather than encourage the development of SMEs, commissioning bodies have designed them out of procurement processes by deliberately creating larger contracts to attract bids from established private sector organisations. Conversely, if neighbouring public services were to consider scaling up to issue a *Community Right to Challenge*, they might trigger a procurement exercise and consequently, interest from private sector organisations with greater experience of preparing polished bids.

When considering the recent experiences of individuals in sectors such as the NHS, the procurement environment being created by public sector commissioners would appear to have the potential to present considerable challenges for budding regulatory social entrepreneurs. Assuming that these challenges can be overcome, the initial protection from EU procurement rules afforded by the Teckal exemption would appear to offer fledgling SMEs the most viable path to the development of the type of business skills and knowledge they will come to depend upon.

It seems clear that regulatory service team leaders seeking to spin out from their parent organisations in an attempt to reduce levels of bureaucracy for their customers will require more help from the Government than is currently being offered to budding social entrepreneurs. In addition to improvements that might help SMEs to become established, such as the temporary exclusion from EU procurement rules recommended by the Mutuals Taskforce (2012b), the creation of toolkits, as suggested by , could assist in their development and operation. Nuttall holds out the view that the Government should develop off the shelf business development models, covering issues such as funding, tax, regulation and contract law.

However, perhaps most worryingly, the findings of this study suggest that in some instances, local politicians and senior public sector managers are constraining the entrepreneurial spirit of employees in order to protect their own interests. Until such time as the Government can act to remove this fundamental hurdle and ensure the protection of employee terms and conditions, it is likely that the prevalent participants in procurement exercises will be large for-profit private sector organisations. The danger of such a scenario is that far from creating the diverse range of not for profit SMEs aspired to by the Government, private sector oligopolies may develop over time.