

Hertfordshire Infrastructure and Investment Strategy

Final Technical Report

October 2009

Notice

This report has been produced by Atkins Ltd in association with Roger Tym and Partners for Hertfordshire County Council and the Hertfordshire Districts for the specific purpose of the Hertfordshire Infrastructure and Investment Strategy.

This report may not be used by any person other than Hertfordshire County Council and the Hertfordshire Districts without their express permission. In any event, Atkins accepts no liability for any costs, liabilities or losses arising as a result of the use of or reliance upon the contents of this report by any person or organisation other than Hertfordshire County Council the Hertfordshire Districts.

Document History

JOB NUMBER: 5074089			DOCUMENT REF: Final Technical Report			
01	Draft for Client	CB/RA	RA	PMW	PMW	23/2/09
02	Final Draft	RA/CB	RA	PMW	PMW	15/05/09
Revision	Purpose Description	Originated	Checked	Reviewed	Authorised	Date

Contents

Section	Page
1. Introduction	5
Study Context	5
Study Overview	5
Report Structure	6
Stakeholder Involvement	6
2. Context	9
Study Area	9
Planning Context	10
Regional and Sub-Regional Infrastructure	13
Other Studies	14
3. Growth Locations	17
Introduction	17
RSS Housing Growth	17
Purpose of Masterplans	19
Approach to Masterplanning	21
Masterplans 2021 and 2031	23
Assigning the Remaining RSS Dwelling Growth to 2021	24
4. Demographic Assessment	29
Introduction	29
District Dwelling Requirements	299
Deriving the Population and Household Levels	31
Deriving the Employment Requirements	388
Summary	399
5. Infrastructure Needs and Costs	41
Historic Infrastructure Deficit	41
Masterplanning/Assignment of Growth	41
Generic Issues and Approach to Defining Infrastructure Needs	41
Strategic Infrastructure Needs and Costs	45
Local Infrastructure Needs and Costs	60
Other items	65
Overall Summary of Need and Costs	67
Way Forward	71
6. Funding Issues	72
The Use of Mainstream Funding to Support the Cost of Growth	72
Mainstream Public Funding Sources	72
Net Cost of Need to be Met by CIL	80
Other Funding Sources	83
7. Viability	85
Method	85
Analysis	87

House Prices and Land Values	90
Conclusions on Viability	90
Cash Flow and Timing Issues	90
8. Structure and Level of CIL Charge	91
Overall Level of Charge	91Error! Bookmark not defined.
Structure of CIL Charge	95Error! Bookmark not defined.
Other Considerations	97
9. Funding Considerations and the Funding Model	100
Introduction	100
Technical Issues	100
Structure of the Model	101
Timing of Infrastructure Costs/Funding in the Model	101
Future Use of the Model	102
10. Delivery and Management	104
Introduction	104
The Evidence Base that Core Strategies Need on Infrastructure	104
CIL and Policy on Developer Contributions	107
Proposed Approach for Taking HHS Forward Through LDF Process	107
Management of the CIL Funding Model	109
11. Recommendations and Way Forward	115
Recommendations	115
The Way Forward	119
Programming Issues	125
Profile of the Occupants of New Houses	128
New Migrants	129
The Trajectory of Housing – Experience of Past Recessions	130
Population Forecasts	130

List of Tables

Table 3.1 – RSS Dwelling Provision for Hertfordshire 2001 - 2021	17
Table 3.2 – Dwellings to be Accommodated in KCDC Masterplanned Areas	20
Table 3.3 – Options Evaluation	22
Table 3.4 – Dacorum Site Capacity	23
Table 3.5 – Welwyn Hatfield – Capacity of Masterplanned Areas	23
Table 3.6 – Identification of the Balance of Dwellings to Assign 2021	25
Table 3.7 - Growth Assignment by District, 2021	26
Table 3.8 – Dwelling Requirements to 2031	27
Table 3.9 - Growth Assignment by District, 2031	27
Table 4.1 - Dwelling Requirements Within District Boundaries, 2008/9-2020/21 and 2008/9-2030/31	29
Table 4.2 - Population and Households by District, 2021 and 2031	36
Table 4.3 - Net Employment Change, 2006-2021 and 2006-2031	39
Table 5.1 – Categorisation of Infrastructure Types	44
Table 5.2 – School Age Population from Housing Growth (to 2031)	48
Table 5.3 – Estimated Standard Costs and Sizes (Primary and Secondary Schools)	49
Table 5.4 – Education Infrastructure Costs	49
Table 5.5 – Potential Priority Interventions	56
Table 5.6 - Potential Locations for the Connections to the Gas Network	58

Table 5.7 - Costs of Outdoor Sports Facilities, Q2 2008	64
Table 5.8 - Strategic Infrastructure Costs by Category	67
Table 5.9 - Example of Likely Scale of Local CIL Charges	68
Table 5.10 - Estimated Cost of Local CIL Items	68
Table 5.11 – Infrastructure Costs by District	70
Table 5.12 – Infrastructure costs by KCDC	70
Table 6.1 - Identified Mainstream Funding by Service	79
Table 6.2 - Overall infrastructure funding gap & required CIL	81
Table 6.3 – Top ten infrastructure items requiring CIL funding	83
Table 7.1 - Effect of Aggregate Planning Contributions on notional land values	88
Table 7.2 - Effect on affordable contribution levels of changing assumptions	89
Table 8.1 - Required CIL by Local Authority	92Error! Bookmark not defined.
Table 8.2 - CIL cashflow	95
Table 8.3 - CIL prioritisation	98Error! Bookmark not defined.
Table 9.1 – Funding Model Time Periods and Assumed Housing Growth	102
Table 10.1 - Comparison of Current Hertfordshire LAA Themes with Items in the HHS	110
Table 10.2 - HHS Funding Model: Key Management Issues	113
Table 11.1 - HHS Funding Model Plan of Action	122

List of Figures

Figure 2.1 – Study Area	9
Figure 4.1 - District Populations Following RSS Housing Targets	31
Figure 4.2 - Standard Profile of New Housing Occupants Compared with Hertfordshire County	32
Figure 4.3 - Trajectory of Housing Construction 2006/07 to 2030/31	33
Figure 5.1 – Education Requirements Calculation	49
Figure 5.2 – Strategic Infrastructure Costs (%) by Category	67
Figure 5.3 - Estimated Cost (%) of Local CIL Items	69
Figure 6.1 - Public sector funding gap by strategic infrastructure category	80
Figure 9.1 - Funding Model Structure	101

Appendices

Appendix A - Demographic Assessment	127
A.1 Demographic Assessment	128
Appendix B – Infrastructure Needs and Costs	133
B.1 Infrastructure Needs, Costs and Funding	134
B.2 Strategic items	134
B.3 Local Items	142
Appendix C – Infrastructure Requirements and Costs	145
Appendix D - Stakeholder List	147
D.1 Stakeholder List	148
Appendix E - Viability	151
E.1 Viability: Method and Analysis	152
Appendix F – Housing Land Values Evidence from Previous Recession	163

1. Introduction

Study Context

- 1.1 The Government's Housing Green Paper *Homes for the Future: More Affordable More Sustainable (2007)* recognises the challenge of housing supply not keeping up with demand. The Green Paper sets out the Government's proposals for improving housing which includes plans to deliver three million new homes by 2020. These three million homes include those already planned for in adopted Regional Spatial Strategies (RSS) and those in RSS under review along with new Growth Points.
- 1.2 It is vital that new housing growth is supported through appropriate infrastructure provision, and the Government is in the process of introducing a new method of funding infrastructure provision, through the Community Infrastructure Levy (CIL).
- 1.3 The East of England Plan identifies the Region's contribution to this housing growth agenda and includes proposals for major housing growth in Hertfordshire over the next 20 years. Providing the infrastructure required to support this major growth, such that Hertfordshire develops in a way that creates sustainable liveable communities, is the subject of this study.

Study Overview

- 1.4 The Hertfordshire Local Authorities comprising the ten District Councils and the County Council commissioned Atkins, Roger Tym and Partners and URS to carry out an assessment of Hertfordshire's future infrastructure requirements and the identification of funding mechanisms necessary to secure its provision, in order to support the future growth in homes and jobs in Hertfordshire in the period to 2021, with consideration also given to the period to 2031.
- 1.5 The objectives of the study are as follows:
- To provide District Councils with the evidence base required in the preparation of Local Development Documents;
 - To inform local authorities and public sector agencies and service providers in their future service planning;
 - To assist utility companies in establishing and articulating their views;
 - To establish an Infrastructure and Investment Funding Model that incorporates a Community Infrastructure Levy (CIL) approach to funding services and infrastructure needs arising from growth in the County to 2021 and proposes a levy for incorporation in Local Development Documents (LDD);
 - To assist in bids for public funding;
 - To provide an evidence base for infrastructure requirements for the Review of the Regional Plan to 2031;
 - To provide an understanding of infrastructure requirements at strategic growth locations;
 - To inform the development of a new Sub-regional Economic Strategy; and
 - To ensure that the strategy is clear, robust and has flexibility to allow for changes in the future.

CIL Consultation (Autumn 2009)

- 1.6 Around the same time that this report was published, the Government published its consultation document on the Community Infrastructure Levy. Given this timing, the report does not represent,

in itself, a solely appropriate response to the consultation. Rather, it will be for the study partners to formulate their own response which will be informed by the HIIS Study and its recommendations.

Report Structure

- 1.7 This Final Technical Report sets out the Consultants' findings and recommendations. When read in conjunction with the Funding Model, prepared as part of this study, it comprises the Hertfordshire Infrastructure and Investment Strategy (HIIS). The Report is structured as follows:
- Section 2** summarises the spatial and planning policy context to the study;
- Section 3** identifies the potential locations for future housing growth that have been used as the basis for HIIS;
- Section 4** sets out the key demographic assumptions underpinning the study;
- Section 5** identifies the infrastructure needs to support growth in Hertfordshire for the period to 2021 and 2031 and estimates the costs of funding the infrastructure;
- Section 6** identifies the funding available to deliver infrastructure needs, including an assessment of mainstream public funding sources and the net cost to be met by the HIIS Funding Model;
- Section 7** provides an assessment of the impact that varying the Community Infrastructure Levy would have on the viability of housing development;
- Section 8** provides an analysis of the structure and recommended level of the CIL charge;
- Section 9** establishes an Infrastructure and Investment Funding Model;
- Section 10** provides an assessment of delivery and management issues;
- Section 11** sets out the study recommendations and the way forward.

Stakeholder Involvement

- 1.8 The Hertfordshire Infrastructure and Investment Strategy (HIIS) has been formulated in partnership with key stakeholders in the County. A specially convened 'Reference Group Review Body' was established to oversee the HIIS with representatives from several local authorities and other stakeholder bodies sitting on the Reference Group at monthly progress meetings. A list of those represented on the Reference Group is provided at Appendix D.
- 1.9 Stakeholder engagement has played an important role in the development of the HIIS. In order to ensure that the strategy was robust and achieved acceptance from key stakeholders, workshops were arranged to explore the following:
- The historic infrastructure deficit; and
 - The funding model
- 1.10 In addition to stakeholder workshops service providers were consulted at various stages during the study. Stakeholders were given the opportunity to provide their views on infrastructure deficit, infrastructure requirements to support future growth and the funding model. For a list of stakeholders that have participated in the study see Appendix D.

Key Findings of the Study

1. Following an intensive analysis of future needs in close conjunction with Hertfordshire's service providers, the total growth-related infrastructure bill to 2031 is estimated at £2.666bn at current prices.
2. Few public service providers know their longer term needs, particularly beyond 2021, so this figure is more likely to be an underestimate than an overestimate.

3. There will be opportunities for some of these costs to be met by mainstream public funding. Contributions might also be obtained from Central Government's special purpose funding programmes such as the Growth Area Fund (GAF) and through the Regional Funding Allocation (RFA). We have taken a measured approach to the latter opportunities and have concluded that service providers could secure in the order of £485m from such funding streams.
4. After deducting public funding which might offset the overall cost, there remains a growth-related infrastructure funding requirement of £2.181bn if growth targets are to be met. This is the figure that we recommend needs to be sought from the Community Infrastructure Levy (CIL) between 2011 (when we propose it is introduced) and 2031.
5. In setting CIL, the Hertfordshire authorities do need to be aware of the critical tensions there are between setting a rate to deliver all the necessary public infrastructure, ensuring that the viability of development sites is not compromised, and maintaining the supply of affordable housing. As we reflect below, CIL charging cannot be considered in isolation and some compromises are inevitable.
6. We estimate that this equates to a CIL charge of approximately £23,000 per dwelling. This comprises £18,000 towards the need for strategic infrastructure (which we recommend should be managed collaboratively by the Hertfordshire local authorities) and a further £5,000 provision for various needs that should be defined locally by individual district councils, such as open space, sports and community facilities. This combination of the £18,000 strategic charge and the (as yet undetermined) local charge will be the overall CIL charge. The assessment of local needs should be done as soon as possible.
7. We have not in our study distinguished between dwelling sizes and types, although there would be the potential to vary charges depending on indices such as floorspace or numbers of bedrooms. The draft CIL Regulations and guidance propose a calculation based on a charge per square metre and the conclusions reached in our study can readily be converted to this unit of charge if confirmed.
8. In the short term it must be accepted that CIL cannot make a significant contribution towards infrastructure needs until the housing market has emerged from its current downturn and house prices have recovered sufficiently. Based on the market research available, our view is that house prices will not recover to the peak levels achieved in 2007, until 2014.
9. However, delays in introducing CIL will have significant consequences in terms of raising finance for growth-related infrastructure. It could be introduced as early as 2011, by which time we are anticipating that house prices might have recovered to 90% of peak levels. However, our analysis suggests that with house prices at that level and a CIL set at £23,000 per dwelling, the viability of development in low and medium value areas would be challenging.
10. During this period we estimate that the maximum amount of CIL that it would be practicable to charge between 2011 and 2014 would be £10,000 per dwelling in middle value areas and no charge could be levied in low value areas. Put another way, an effective public subsidy of infrastructure would be required of £13,000 per dwelling in middle value areas and £23,000 per dwelling in lower value areas, aggregated by the number of houses permitted. Note that this is a generalisation of the economics of development across the entire County. These figures do not represent the effective shortfall in relation to any particular site or indeed any district.
11. We assume that a deficit at this level, even if only experienced for a few years, would result in a critical shortfall of funding for infrastructure. So, the issue then becomes how to deal with viability issues between 2011 and 2014. We have identified three ways of dealing with this:
 - (i) The introduction of a CIL could be deferred until 2014.
 - (ii) It could be accepted that development would only take place, in the short term, on the easiest sites to develop, which in practice means that they would be vacant and not present any physical obstacles to development.
 - (iii) Steps could be taken to enhance viability by modifying the arrangements for procuring affordable housing, either by reverting to the practice of accepting free serviced land to satisfy the obligation or by focusing HCA support on the lower value areas.
12. All three have their drawbacks. Deferring the introduction of a CIL would almost certainly reduce the overall sums available for investment in necessary infrastructure, so we discount that option.
13. In the short term in middle value areas, it is accepted that the level of CIL might deter development of some sites that are marginal in terms of viability. However, we doubt that the number of potential

housing starts affected will be significant. The same approach should also be adopted towards lower value areas and in addition steps should be taken to reduce the net cost to developers of providing affordable housing, perhaps by focusing HCA support in these areas.

14. Viability problems are projected to persist in lower value areas beyond 2014 in which case either:
 - (a) districts will have to reassure themselves that development remains viable in the context of the specific characteristics of the sites allocated for development in their area; or
 - (b) the effort to reduce the net cost of affordable housing to developers will have to continue.
15. Given the above, then in the early years of its introduction, a CIL charge set across the county at the equivalent of £23,000 per dwelling to meet Hertfordshire's infrastructure needs can expect to be challenged unless there is financial support for the provision of affordable housing, or a general increase in the availability of mainstream public funding (or a combination of the two). Moreover there is likely to be a considerable timing mismatch between the need for infrastructure and the collection of funding and we anticipate a particular problem in the latter part of the next decade, when infrastructure need is expected to considerably outstrip likely revenues. We anticipate a 'gap' between projected income and expenditure of perhaps £230m during the period 2016 to 2020, but believe that this can be substantially alleviated with careful financial management, if attention is paid to service planning by the infrastructure providers and if the Government makes supportive changes to mainstream funding streams.
16. In order to manage the implementation of new infrastructure in a rational way, it will be necessary to pool CIL receipts across the County. Our report emphasises the benefits of the Hertfordshire authorities working together collectively to set infrastructure priorities and to oversee infrastructure investment. We believe that the Hertfordshire Funding Model which has been provided as part of this study should help to underpin collaborative working and facilitate good financial planning.
17. We conclude our report with a series of recommendations to the Hertfordshire authorities on how to take the HHS findings forward. In the short term there needs to be discussion with a number of key agencies; the commencement of a process which will see a step change in the way in which infrastructure providers plan for service growth and development (with long term service planning becoming the industry standard); and the exploration of appropriate models to manage, distribute and account for expenditure of CIL revenue on infrastructure projects.
18. In the medium to longer term, infrastructure planning needs and the CIL needs to be embedded in the development plan system. The HHS report provides a starting point for this effort but a lot needs to be done.

2. Context

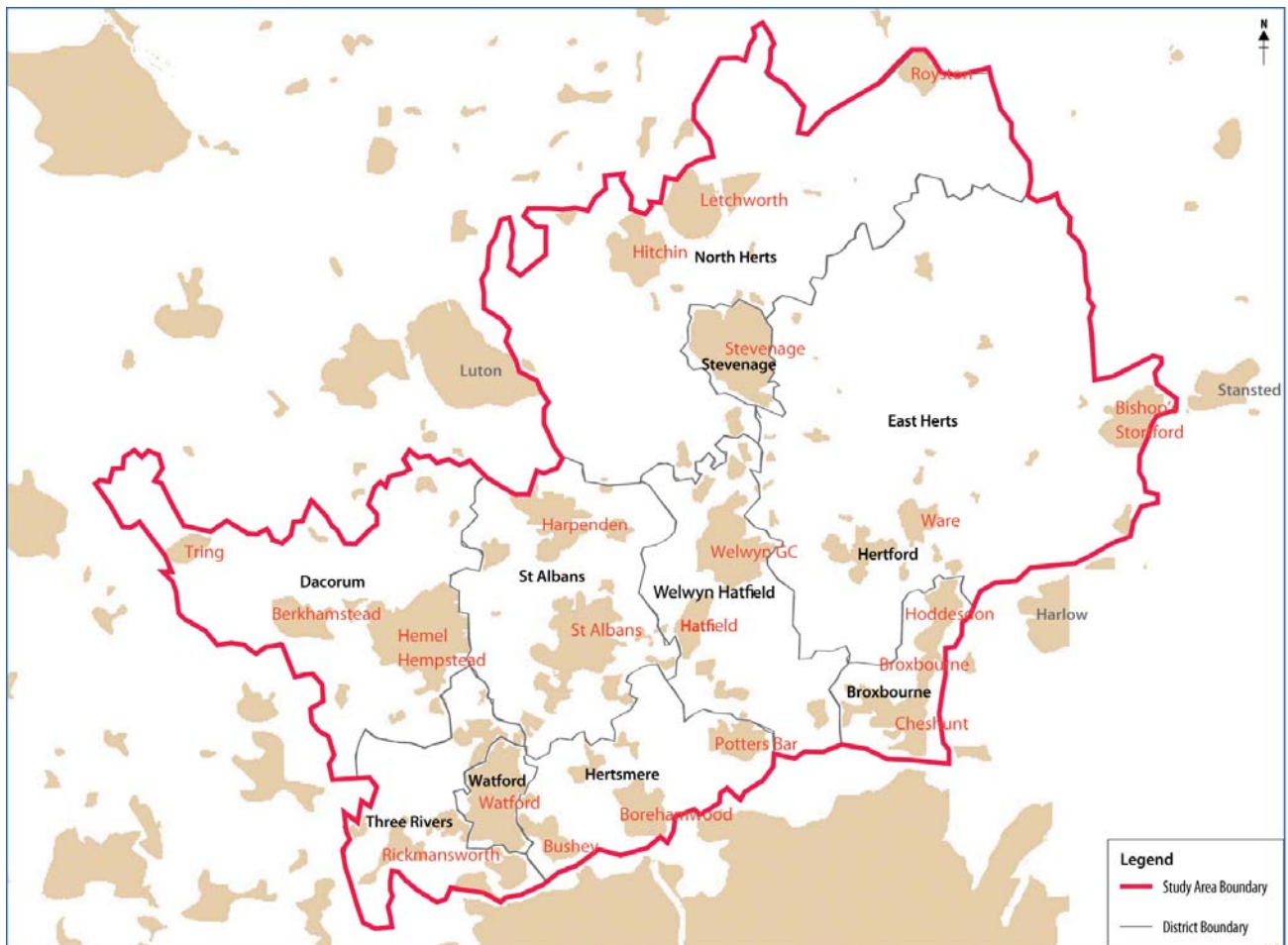
2.1 This section sets out the spatial and planning policy context for the study. In particular it identifies several key contextual issues, including development to the north of Harlow, a large proportion of which will potentially be in Hertfordshire; the existing infrastructure deficits in the County; and the uncertainty with policy on funding infrastructure provision, in particular, relating to the Government’s proposals for a Community Infrastructure Levy (CIL).

Study Area

2.2 The study area is defined as the County of Hertfordshire as shown in Figure 2.1. The proximity of Hertfordshire to Greater London means that the County is influenced to a considerable extent by London and, for the purposes of this study, by people commuting into London for work. This is an important consideration in planning the infrastructure requirements of future growth in the County.

2.3 The surrounding Counties are also required to accommodate substantial housing growth. In particular settlements in Essex and Bedfordshire on the border with Hertfordshire are expected to grow; in the case of Harlow and Luton/South Beds such growth is likely to be accommodated in Hertfordshire with the exact location of growth to be resolved through the local planning process in the Districts concerned. These cross boundary issues are considered as part of the HIIS.

Figure 2.1 – Study Area



Planning Context

National Policy

- 2.4 The national policy context for this study is set out in the revised Planning Policy Statement 12 (PPS12) June 2008 which details Government guidance on Local Development Frameworks. The guidance is clear that an infrastructure planning process should be carried out to inform the core strategy and form part of a robust evidence base. PPS12 states that core strategies should *'be supported by evidence of what physical, social and green infrastructure is needed to enable the amount of development proposed for the area, taking account of its type and distribution. This evidence should cover who will provide the infrastructure and when it will be provided. The core strategy should draw on and in parallel influence any strategies and investment plans of the local authority and other organisations.'*
- 2.5 PPS12 does not provide detailed guidance on how infrastructure planning assessments should be carried out and, as yet, the Government has not published any good practice guidance alongside the policy statement. However the guidance advises that good infrastructure planning will consider *'the infrastructure required to support development, costs, sources of funding, timescales for delivery and gaps in funding'*.
- 2.6 PPS12 notes that the infrastructure planning process should identify as far as possible:
- Infrastructure needs and costs;
 - Phasing of development;
 - Funding sources; and
 - Responsibilities for delivery.

Community Infrastructure Levy

- 2.7 The Government has made provision for a Community Infrastructure Levy (CIL) in the Planning Act 2008. The CIL will be a charge on new developments which local authorities will be empowered, but not required, to charge to help finance the infrastructure needed to support growth. CIL powers are expected to come into effect by October 2009 (subject to the Parliamentary timetable).
- 2.8 PPS12 advises that local authorities should continue to advance their infrastructure planning in order to ensure that there is clear evidence about planned infrastructure, its cost and timing and other likely sources of funding. In short, good infrastructure planning embedded, within an up-to-date development plan, is the basis for charging CIL.
- 2.9 The policy statement on CIL, published in August 2008, provides more detail about how CIL would work in practice. Where CIL is adopted the proceeds of the levy will be spent on local and sub-regional infrastructure to support the development of the area.
- 2.10 In spending CIL the policy statement is clear that CIL *'may only be spent on infrastructure'* and that it *'should be used to fund the infrastructure needs of development contemplated by the development plan for that, not to remedy existing deficiencies'*. However, the Government favours a wide definition of infrastructure in order to give local communities flexibility in choosing what infrastructure they need to deliver development proposals.
- 2.11 The Planning Act 2008 provides that Regulations may set out what is meant by infrastructure and list examples of infrastructure to which CIL could be applied, which includes transport and flood defences but also expressly covers schools, sporting and recreational facilities and open space. The Government's policy statement notes that, to deliver sustainable development in the widest sense, adequate local facilities, such as parks and green spaces, health and social care facilities, police stations and other community facilities, should be provided. Prior to the publication of the Regulations it is not certain what the definition of infrastructure will include although it does appear

the Government may give local authorities some leeway in defining infrastructure to which CIL would apply.

- 2.12 Although, at this stage, the definition of infrastructure is not certain, it is clear from the policy statement on CIL that affordable housing is included within this definition of infrastructure, although, *'it is not the intention that CIL will be used to deliver affordable housing in the first instance'*. Whilst the Government's preference is that planning obligations should be used to achieve the delivery of affordable housing it could receive CIL funding, if evidence shows this to be necessary.
- 2.13 Before CIL may be charged the Government policy statement requires that an up-to-date development plan for the area in question should be in place. It advises further that the formulation of the CIL should start with an understanding of the development strategy for the area, comprised of the RSS and the DPDs in the LDF.
- 2.14 In undertaking infrastructure planning to underpin the CIL regime the policy statement refers to the requirements in PPS12 that DPDs should be 'sound', that is, founded on a robust and credible evidence base. In addition infrastructure planning should, as a minimum, provide a clear statement of: names, items or classes of infrastructure related to delivery of the development strategy; a broad idea of the quantum of infrastructure needed of each type; and an assessment of the other sources of funding available to deliver infrastructure.
- 2.15 In setting the CIL authorities will be expected to prepare a draft charging schedule that sets out the proposed amount to be raised from CIL for each main class of development envisaged in the development plan. The charging schedule *'will be part of and tested in the same way as, other documents within the Local Development Framework'*.
- 2.16 The Government is clear that setting CIL at an unaffordable level will render development unviable and that this should be avoided. The policy statement advises that the affordability of CIL will depend on the proportion it represents of the uplift in value arising from development. However, it notes that the uplift in value might not be the right measure of viability and that the Government is continuing discussions with the development industry to establish whether measures other than value uplift might be more appropriate.
- 2.17 The CIL policy statement allows for the possibility of setting different rates for each land use to reflect the fact that some types of development have a higher intensity of use and a greater impact on infrastructure. However, there is no clear guidance at this stage as to how this variation in rates might be achieved.
- 2.18 The possibility of differential rates of CIL within a local authority area to reflect local circumstances is discussed in the CIL policy statement. The Government does not provide a firm view on this issue and will continue to seek views until the draft Regulations are published.
- 2.19 The statement also provides guidance on the issues arising where a development proposal straddles local planning authority boundaries. In these circumstances the Government proposes that the relevant CIL charging schedule (if any) would be applied to that part of the development within the relevant authority.
- 2.20 Delivering sub-regional infrastructure (infrastructure that is likely to serve more than one local authority area) will require joint working between local authorities. The statement notes that there are different options for funding sub-regional infrastructure and, where possible, the Government will seek to provide a framework enabling local planning authorities to agree voluntarily to fund sub-regional infrastructure through CIL. Indeed this is the Government's preferred way to finance sub-regional infrastructure.

Circular 05 /2005 Planning Obligations and CIL

- 2.21 Circular 05 / 2005 provides guidance to local authorities on the use of planning obligations or s106 agreements. The Circular sets out a requirement that planning obligations should only be sought

where they meet five tests, which includes the ‘necessity test’ i.e. that the obligations must be necessary to make the proposed development acceptable in planning terms and directly related to the development.

- 2.22 The continued relevance (or otherwise) of the necessity test for CIL is an important issue. CIL guidance makes no express reference to this matter and the issue is one of interpretation. As a result there is a need to seek further clarification on this matter from either CLG or the Government Office for the East of England.

Regional Policy

- 2.23 The Regional Spatial Strategy for the East of England was adopted in May 2008. It sets out proposals for substantial housing and job growth in Hertfordshire within a minimum of 83,200 homes and 68,000 jobs. Four Key Centres for Development and Change (KCDC) in the County are proposed and land in East Hertfordshire to the north of Harlow is also identified as a strategic housing location.
- 2.24 The four KCDCs in the County include: the joint KCDC of Welwyn Garden City and Hatfield; Hemel Hempstead; Stevenage; and Watford. Each of the KCDCs except Watford will see strategic scale housing growth in the period 2001-2021 and all will be key locations for employment growth.
- 2.25 In addition to the anticipated growth within the KCDCs and the strategic growth location north of Harlow, all Hertfordshire Districts have significant levels of growth set out in the RSS that will need to be planned for.
- 2.26 The East of England Plan contains a policy that requires EERA to commence an early focused review of the RSS, to be completed by 2011. This review requires the plan to extend coverage to 2031 which will mean that further housing growth is identified for Hertfordshire. This housing growth to 2031 is addressed in the HIIS, although, in advance of the RSS Review the assumed level of growth has been based on rolling forward the annual rates of housing provision identified in the existing RSS.
- 2.27 Two key concerns with the East of England Plan were highlighted prior to the commissioning of this study. The first is the lack of an implementation plan submitted alongside the East of England Plan meaning that the EIP was ill informed about the scale of resources required to deliver the RSS. Secondly the infrastructure requirements of specific growth locations were not identified in the RSS, which meant that there was a deficit in the evidence base addressing the KCDCs’ capacity to deliver growth.
- 2.28 Following the adoption of the RSS, EERA has been working with the East of England Development Agency (EEDA) and the Government Office for the East of England to develop a joint implementation plan to deliver the shared objectives of the East of England Plan and Regional Economic Strategy. As this implementation plan is not yet complete, there is a lack of information on infrastructure delivery at the regional level which HIIS will address by informing the prioritisation of infrastructure demand and the formulation of the joint implementation plan.

Local

- 2.29 The ten Hertfordshire Districts are in the process of preparing their LDFs, which are at varying stages of completion, as is the evidence base needed to underpin them. In this respect HIIS will form an important part of the evidence base for Districts’ Core strategies.
- 2.30 One of the key issues for HIIS is how the funding model/CIL will be embedded into the preparation of DPDs. There are a number of options as to how this can be achieved which are explored in greater detail in Section 10.

Climate Change, energy planning and developing a national infrastructure strategy

- 2.31 In July 2009 the government announced plans to place climate change at the core of the energy planning process. Measures include the preparation of a single Planning Policy Statement on climate change and a raft of initiatives designed to promote the use of renewables (including small scale projects) through the planning system.
- 2.32 This announcement follows hard on the heels of the publication, by the Council for Science and Technology, of “A National Infrastructure for the 21st Century”, which seeks to promote high quality national infrastructure in order to promote sustainable economic growth and productivity, in contrast to current practices, which the Council believes are currently fragmented and lack vision, with little overall responsibility and accountability, and insufficient evidence of forward planning and investment.
- 2.33 Our researches in relation to utility and communication planning and climate change (as embodied in the energy planning process) - insofar as they are contained in this report – are reflective of the current approach, which has yet to put these initiatives at the forefront of infrastructure planning and delivery. Whilst noting this (and the fact that as a consequence, utility planning tends at present not to lead but to follow the growth agenda) we have incorporated in our Recommendations and Way Forward Chapter some thoughts in respect of investigating possible changes to the infrastructure planning process.

Regional and Sub-Regional Infrastructure

The Regional Funding Allocation Process

- 2.34 The Regional Funding Allocation Process was introduced in 2005 as an attempt to integrate transport, economic and spatial development strategies in each region. Through this process regions provide advice to Government on the priorities for transport schemes and funding is provided for local transport and highway authorities’ major schemes under the Local Transport Plan system and major Highways Agency schemes.
- 2.35 Regions were requested to provide information in early 2009 to inform a second round of funding for the period up to 2018/19. For the first time, the RFA also includes all housing and regeneration funding under the control of the new Homes and Communities Agency. EEDA will be working with the HCA in reviewing regional priorities for this element of the RFA.
- 2.36 EERA’s papers and the Regional Transport Forum papers will inform the Region’s submission to the RFA process. The Transport Economic Evidence Study (TEES) Report is one part of the evidence that has informed the submission. The TEES report considers the effects of transport on the region and how it impacts on the economic wellbeing of the region. The key findings from the study are that there is significant congestion on the strategic highway network, both now and forecast in the future; there is significant overcrowding on all rail routes to London; and existing constraints on rail freight movements will be exacerbated by planned commercial expansion. The study gives an indication of the economic cost of congestion at £658m p.a. at current prices, rising to £1,339m by 2021 despite planned investment. TEES identifies priorities for future investment in transport infrastructure. It suggests that there is a diminishing economic return on major infrastructure schemes and that significant travel demand measures will need to be made.
- 2.37 There are potential linkages between HIIIS and the RFA process. HIIIS will provide a focus for the Hertfordshire Authorities to address their infrastructure needs and this is likely to integrate well with the RFA process. It is likely that those public agencies that identify their infrastructure needs and a strategy for delivering them will be more successful in securing funding through the RFA process. That being the case, Hertfordshire will be well placed to secure funding through the RFA process by integrating the findings of HIIIS on future infrastructure needs and priorities.

Regional Infrastructure Fund (RIF)

- 2.38 EEDA is developing a Regional Infrastructure Fund (RIF), a mechanism designed to raise additional funding for infrastructure in the East of England. RIF will assist the region to deliver the infrastructure that is necessary to facilitate growth. In particular, RIF funding can be used in situations where the anticipated public or private funding for a scheme will not be available in full at the time the infrastructure is needed to support planned growth or development. The costs of the capital investment are then recovered from predetermined public and/or private funding streams as they become available. EEDA has commissioned consultants to develop a workable proposition for a RIF for the East of England and they are exploring with partners, such as HCA and the European Investment Bank, how they can ring fence their own funding for RIF.
- 2.39 The RIF will not be standalone but will feed into the Regional Funding Allocation (RFA) process. In the short term RIF is likely to focus on transport projects using RFA Transport Funding; as new sources of funds are identified, the range of projects is expected to widen. A report submitted to the EEDA Board in September 2008 supported the principle of a forward funding mechanism being incorporated into the East of England's RFA submission.
- 2.40 The Board approved the consultation draft of the Preferred Strategy for the RIF in July (2008), which proposed a three stage development:
- Development of exemplar projects during 2009 -10 using capital investment from the Regional Funding Allocation, repaid from developer contributions, to provide proof of concept and develop confidence in the RIF;
 - Scaling up the RIF using new mechanisms following enabling legislation in 2010 -11 (mainly the CIL and Business Rate Supplements (BRS));
 - Bringing in private sector investment from 2012 onwards.
- 2.41 Since July the RIF steering group and consultants have carried out consultation on RIF. The RFA Guidance on Transport enables the use of RIF and variations on it. Since the consultation exercise the Regional Transport Forum has resolved in principle to reserve an RFA allocation for projects of sub-regional or local significance. As part of the prioritisation process these projects will be evaluated for their 'RIF-ability', i.e. transport schemes that can unlock major development sites which, through developer contributions, can then replenish the fund – with the aim of identifying potential exemplar projects.
- 2.42 RFA Guidance on the housing and regeneration funding allocation is also favourable to its use as upfront investment in infrastructure that brings forward housing investment and there appears to be general support for this approach amongst the Government, the Homes and Community Agency, RSLs and other housing bodies.
- 2.43 One of the key issues for RIF will be whether there is potential for borrowing against future CIL income, however, it appears that there are some concerns with this in the Treasury and the consultants working on the RIF for EEDA consider that the best opportunities lie with Business Rates Supplement (BRS) which is potentially simpler to collect and more predictable than CIL.

Other Studies

Historic Infrastructure Deficit

- 2.44 In simple terms, historic infrastructure deficit (HID) can be defined as a shortage of the infrastructure needed to support the existing population and which needs to be addressed before imposing any additional burden as a result of housing growth.
- 2.45 As part of the HISS study the Consultants were commissioned to carry out an assessment of HID in the County to examine the concern that Hertfordshire has a substantial historic deficit that should, as far as is possible, be addressed through the funding model. The findings of that part of

the study are set out in the Infrastructure Deficit Report (March 2009). This report catalogues the existing infrastructure deficits in the County; in total the estimated cost of addressing the identified deficit items is £2.41bn.

- 2.46 During the course of this work there was some deliberation as to how to define HID, and separate HID from growth related needs. For this purpose infrastructure deficiency was defined as:
- Inadequate in size to serve the needs of the current population as evidenced by excess demand or other than in cases such as open spaces where the scale of provision falls short of widely adopted planning benchmarks;
 - Clearly functionally inadequate when measured against typical current standards or adopted policy.
- 2.47 The identification of HID provides a baseline from which the effects of future growth can be considered. HID could be strengthened by further information from service providers which is likely to increase the overall figure of £2.41bn.
- 2.48 The guidance on CIL is that it should not be used to remedy existing deficiencies. This does not mean that CIL must be spent on entirely new infrastructure, but expenditure on repair or refurbishment of infrastructure, where the development circumstances of the local area do not justify this, would not be acceptable. It is, therefore, important to consider the effect of historic infrastructure deficit on the delivery of new development, but Government advice is that it will be unacceptable to seek to use CIL as a means of meeting deficits. The exception is open space and recreational facilities where, under the provisions of PPG17, it is possible to use planning obligations to remedy existing deficiencies.
- 2.49 The funding for HID, on the whole, will need to come from mainstream public funding, including bids for funding from a range of Government programmes. In seeking to address HID the Hertfordshire Authorities could use the HID Report to:
- Lobby for PFI to directly address deficits;
 - Lobby for PFI for services that currently do not have deficits but where, by supporting investment aimed at meeting the needs of the expanded population, it will take the pressure off s106 funding and release it for other purposes;
 - Prioritising existing mainstream public sector and other funds;
 - Prioritising and lobbying for bids for GAF, CIF, etc;
 - Lobbying to address specific barriers to LA funding for key requirements. Examples might include efforts to modify the impact of floor authority status in growth areas and the threat of capping.
- 2.50 Information on HID will help with the prioritisation of funding sources and bids. Indeed, many of the actions that service providers need to be taking in the future relate to better prioritisation. This will help to broaden the depth and accuracy of the information they have available to inform them of the infrastructure deficits for their service.

Harlow Infrastructure Study

- 2.51 The East of England Plan confirms the role of Harlow as a regionally significant housing and employment growth point and a major sub-regional town centre. The housing growth target for the town for the plan period is 16,000 dwellings by 2021.
- 2.52 The distribution of future growth in and around the town is to be determined by a joint or co-ordinated development plan documents to be prepared by Harlow, Epping Forest and East Hertfordshire Districts. However, it is anticipated that a substantial proportion of the growth is likely to be accommodated north of Harlow in East Hertfordshire District. This raises the issue of identifying the infrastructure requirements of this growth in Hertfordshire and how it will be funded.

The expectation is that housing growth north of Harlow will become subject to the provisions of the HIIS funding model.

- 2.53 Atkins and Roger Tym and Partners are in currently undertaking the Harlow Infrastructure Study the findings of which have been integrated into the HIIS study.

Luton / South Beds

- 2.54 The East of England Plan identifies Luton as part of the Luton/Dunstable/Houghton Regis and Leighton Linlade KCDC, which is part of the wider Milton Keynes South Midlands (MKSM) Growth Area. The East of England Plan identifies significant development in the KCDC up to 2021 including 26,300 new homes, 23,000 new jobs and associated infrastructure.
- 2.55 Luton Borough Council, South Bedfordshire District Council and Bedfordshire County Council are working together to produce a joint LDF covering the whole of South Bedfordshire and Luton. The Luton and South Bedfordshire Core Strategy Preferred Option was published in March 2009 for consultation.
- 2.56 The Preferred Option proposes that the first choice location for growth related development should be within existing urban areas, however, sustainable urban extensions are recognised as key to meeting housing requirements. Two preferred urban extensions are identified, on the northern fringe of Luton and a smaller one east of Leighton Buzzard. A further preferred direction of growth has been identified east of Luton and mostly lies in North Hertfordshire District.
- 2.57 Although Policy 2(b) of the MKSM Sub Regional Strategy incorporates potential growth area housing provision in North Hertfordshire and Aylesbury Vale, it will be for North Hertfordshire District to plan for this growth through its LDF.

3. Growth Locations

Introduction

- 3.1 This section sets out the process which the Consultants followed to identify where future growth is likely to be located in the County, so as to inform the development of HIIS. The masterplanning and growth assignment work has helped to inform several key strands of the study including:
- Phasing and the potential location of development assist future population projections (see Table 4.2);
 - Informing discussions with service providers, in order that the service provision and infrastructure requirements of future growth in the KCDCs can be identified (see section 5); and
 - Enabling the input of dwelling locations and phasing into the EERM transport model zones.
- 3.2 For the purposes of identifying future infrastructure needs it was necessary to establish some options for where growth in Hertfordshire could take place. This work was undertaken with the agreement and co-operation of local planning authorities. In carrying out this exercise it is not the intention of the HIIS study to bypass the processes that Districts will need to go through in planning for future growth as part of their Local Development Framework. The masterplanning and development assignment work that has been completed as part of this study is, therefore, only for the purposes of HIIS and it should not be assumed that the 'selected options' for the modelling of infrastructure needs are the Districts' preferred LDF spatial options. Since this exercise was completed, some Districts have carried out further work on spatial planning, which has moved this process forward.

RSS Housing Growth

- 3.3 The RSS sets out the minimum dwelling provision for Hertfordshire for the period 2001 to 2021; a target of 83,200 dwellings is identified. The housing growth allocation for each District is set out in Table 3.1.

Table 3.1 – RSS Dwelling Provision for Hertfordshire 2001 - 2021

District	Dwelling Target 2001-2021	Completed 2001 - 2006	Minimum to Build 2006 - 2021	Notes

District	Dwelling Target 2001-2021	Completed 2001 - 2006	Minimum to Build 2006 - 2021	Notes
Broxbourne	5,600	1,950 (390)	3,650 (240)	
Dacorum	12,000	1,860 (370)	10,140 (680)	Includes provision that may be accommodated in St Albans
East Hertfordshire	12,000	2,140 (430)	9,860 (660)	Excludes extension of Harlow
Hertsmere	5,000	1,080 (220)	3,920 (260)	
North Hertfordshire	6,200	1,900 (380)	4,300 (290)	Excludes 9,600 around Stevenage and any expansion of Luton that may be accommodated in North Hertfordshire
St Albans	7,200	1,830 (370)	5,370 (360)	Excludes an expansion of Hemel Hempstead (Dacorum)
Stevenage	16,000	1,570 (310)	14,430 (960)	Includes 9,600 outside the Borough in North Hertfordshire
Three Rivers	4,000	1,010 (200)	2,990 (200)	
Watford	5,200	1,410 (280)	3,790 (250)	
Welwyn Hatfield	10,000	2,730 (550)	7,270 (480)	
Hertfordshire	83,200	17,480 (3,500)	65,720 (4,380)	

Source: East of England Plan

Key Centres of Development Change (KCDC)

- 3.4 The spatial strategy in the RSS aims to achieve sustainable development by concentrating growth in or around major urban areas, capitalising on existing drivers of growth. To achieve the aims of sustainable development the RSS proposes Key Centres of Development Change (KCDCs) where new development should be concentrated.
- 3.5 The RSS identifies several KCDCs located entirely in Hertfordshire:
- **Stevenage / North Hertfordshire** – Stevenage has a housing target of 16,000 homes up to 2021. Some of this growth will be accommodated in the town itself whilst 9,600 dwellings will be in North Hertfordshire;
 - **Watford** – 5,200 homes to be accommodated within the town;
 - **Hemel Hempstead** – Dacorum has an RSS housing target of 12,000. The LDF process will determine how much of this growth is within and around Hemel Hempstead. The RSS notes the possibility that some expansion at Hemel Hempstead might fall within St Albans District; and
 - **Hatfield and Welwyn Garden City** – Welwyn Hatfield has an RSS housing target of 10,000. The location of this growth will be determined through the LDF process. However, if expansion west of Hatfield emerges as a preferred option then the RSS indicates that some of that growth could take place in St Albans District.

- 3.6 There are two KCDCs that, although not located entirely in Hertfordshire, will require substantial housing growth to be accommodated within the County, namely:
- **Harlow** – Harlow has an RSS housing target of 16,000 new homes up to 2021. Land to the north of Harlow in East Hertfordshire is likely to be required to accommodate some of this growth;
 - **Luton / South Beds** – This KCDC has a target of 26,300 homes up to 2021, some of which may need to be accommodated in North Hertfordshire District.
- 3.7 As part of the HISS study it has been necessary to make assumptions about where the KCDC growth could be located. The reason for doing this is so that implications about likely infrastructure requirements for large scale housing growth in the KCDCs can be identified and costed for the purposes of calculating the CIL and developing a funding model. To assist in identifying locations for KCDC growth and the infrastructure requirements arising a number of masterplan options have been prepared and evaluated as detailed below.

Purpose of Masterplans

- 3.8 The HISS brief required various masterplans to be developed in order to help assess the infrastructure likely to be required to serve future housing growth at the KCDCs. The KCDC Districts are at different stages in their LDF preparation and in some KCDCs the options for accommodating growth are further advanced than others. As a result the study brief required the preparation and testing of masterplan options for housing growth to 2021 and 2031 as follows:
- One alternative option for Stevenage (alternative to the existing Stevenage West proposals);
 - One alternative option for Luton / South Beds (alternative to the indicative masterplan at Hawley put forward by developers);
 - A series of options for the KCDCs of Hemel Hempstead and Welwyn Garden City/Hatfield, covering the districts of Dacorum, St Albans and Welwyn Hatfield; and
 - One alternative to the existing masterplanning work being undertaken around Harlow (alternative to the existing proposals put forward by developers).
- 3.9 Prior to developing masterplans a review of each Districts existing planning policy documents and an assessment of existing planned developments was carried out and discussions were held with each of the District Councils. This exercise helped to confirm the level of growth that needed to be planned for and potential locations for growth.
- 3.10 Table 3.2 sets out the volume of housing to be accommodated in the masterplan areas. In addition, it should be noted that in each District further housing growth will be required outside the masterplan areas so as to meet the RSS dwelling requirements. The assignment of this growth is described later in this section.

Table 3.2 – Dwellings to be Accommodated in KCDC Masterplanned Areas

KCDC	District	Dwellings 2008-2021	Dwellings 2021-2031	Total Dwellings 2008 - 2031	Comments
Stevenage/North Hertfordshire KCDC	Stevenage / North Hertfordshire	6,800	8,000	14,800	As agreed with Stevenage Borough Council and North Hertfordshire District Council (November 2008) the total excludes 5,000 at Stevenage West which it is assumed will come forward in line with an existing masterplan. For 2031 the figure assumes the same per annum rate of growth 2021 – 2031 as for RSS targets 2001 – 2021.
Welwyn Garden City and Hatfield KCDC	Welwyn	2,737	5,000	7,737	Figures are as provided by Welwyn Hatfield District Council (November 2008) for the purposes of HIIIS masterplanning.
Hemel Hempstead KCDC	Dacorum	4,000	3,000	7,000	Figures are as provided by Dacorum Borough Council (November 2008) for the purposes of HIIIS masterplanning.
Luton South Beds KCDC	North Hertfordshire	3,150	2,350	5,500	Figures provided by Luton Borough Council (August 2008) for the purposes of HIIIS masterplanning.
Harlow KCDC	East Hertfordshire	2,300	8,000	10,300	2021 figure is based on RSS assumptions of what could potentially be delivered in Harlow/Epping Forest/East Herts to achieve 16,000 dwellings for the Harlow KCDC. 2031 figure is based on RSS Policy HA1 that at least 10,000 dwellings should be provided north of Harlow.
Watford	Watford / Three Rivers	0	1,200	1,200	As agreed with Watford Borough Council (November 2008)

Source: Consultants

Approach to Masterplanning

- 3.11 The development of masterplans evolved through a series of logical steps:
- The identification of the housing required in each masterplan area (Table 3.2);
 - An appraisal of the planning and environmental context for growth in terms of the settlement pattern, existing infrastructure, the Green Belt and important environmental designations;
 - For each KCDC a review of existing urban character and infrastructure was undertaken to provide an understanding of the context for new growth;
 - An analysis was undertaken of the key opportunities and constraints presented at each growth location;
 - Consultation with KCDC District Councils to establish their views on key opportunities and constraints and the location and form of growth; and
 - The formulation of initial concept masterplans.
- 3.12 Following this process the initial concept masterplans at a scale of 1:10,000 for each of the KCDCs for the growth to 2021 and 2031 were submitted to the Districts for consideration.

Options Iteration and Testing

- 3.13 In order to select the masterplan options that would be used for HIIIS purposes meetings were held with the Districts, including a session with East Hertfordshire to discuss options around Harlow; a joint session with Stevenage and North Hertfordshire to discuss options for the Stevenage / North Herts KCDC and the potential Luton / South Beds KCDC growth; and joint sessions with Welwyn Hatfield, Dacorum and St Albans to discuss the options at Hemel Hempstead, Hatfield and Welwyn Garden City and the potential need for growth to be accommodated in St Albans.
- 3.14 The masterplan options presented to each District are set out in Table 3.3. During discussions with the Districts the issues considered in the evaluation of the options included:
- **Planning issues** – the scope to achieve the required housing targets, potential settlement coalescence and the impact on the Green Belt
 - **Environmental considerations** –including flooding, the effect on agricultural land and the proximity to sites covered by environmental designations
 - **Transport and accessibility** – access to main road and public transport networks
 - **Infrastructure** – the capacity of existing infrastructure and need for new infrastructure
- 3.15 Where necessary, following the meetings, further iterations of the options were prepared and re-considered by the Districts concerned prior to the selection of an option to be used for the purposes of the HIIIS study. These options do not represent a decision by Districts on the location of future development, as this will be for the LDF process to determine.

Table 3.3 – Options Evaluation

KCDC	Options 2021	Options 2031	Evaluation
Stevenage/North Herts KCDC	Option – Land to north of Stevenage and south around Knebworth	Option – Land to north of Stevenage	Land to the south of Stevenage was rejected on grounds of sustainability and coalescence with Knebworth. Further iteration of the option was made to concentrate development north of Stevenage. The selected option up to 2031 includes land to the north of Stevenage plus the existing Stevenage West proposals.
Welwyn Garden City and Hatfield KCDC	Option - North of Hatfield Option – West of Hatfield Option – Brookmans Park Option - Cuffley	Option – North of Hatfield Option – Ellenbrook Option – West of Welham Green Option – South East Welwyn Garden City	The 2021 options at Brookmans Park and Cuffley were not pursued as these were considered to be in locations that are outside the KCDC. The 2031 option at Welham Green was also rejected for this reason. Further iterations of the remaining options were made and it was agreed to include a combination of the sites north and west of Hatfield, Ellenbrook and the site south east of Welwyn Garden City as the selected option to meeting dwelling needs to 2031.
Hemel Hempstead KCDC	Option - Land East of Hemel Hempstead Option – Land North / West of Hemel Hempstead Option – Dispersed combination of sites around Hemel Hempstead	Option - Land East of Hemel Hempstead Option – Land North / West of Hemel Hempstead Option – Dispersed combination of sites around Hemel Hempstead	It was agreed that local transport modelling of the three options was required to make a decision on the selected option. Following this modelling work it was decided that the eastern option plus a site to the west of Hemel Hempstead would go forward as the selected option.
Luton South Beds KCDC	Option - Land east of Luton	Option - Land east of Luton	It was agreed that the selected option would be the existing indicative masterplan for Hawley that has been put forward by developers.
Harlow KCDC	Option – Land south west of Sawbridgeworth	Option – Land south west of Sawbridgeworth	It was agreed that selected option should be based on those proposals put forward by the developer, as this was more in line with the location of development envisaged in the RSS.
Watford	N/A	Option – Land at Leavesden	It is assumed that dwellings will be accommodated within the built up area of Watford.

Source: Consultants

Masterplans 2021 and 2031

Selected Options

- 3.16 The selected masterplan options for the period to 2021 and 2021-2031 are outlined below.

Stevenage / North Herts

- 3.17 The selected option includes land to the north and east of Stevenage as well as the existing masterplan for Stevenage West. The Stevenage West Proposals include capacity for 5,000 dwellings (which is split 3,100 in North Herts and 1,900 in Stevenage). In addition to the 5,000 dwellings at Stevenage West there are 6,800 dwellings shown in the masterplan areas to 2021, and a further 8,000 up to 2031.

Harlow

- 3.18 It was agreed that the existing proposals, put forward by Ropemaker Properties Limited, would be used for the purposes of HHS testing. It is assumed there will be a total of 10,300 dwellings up to 2031 at this location.

Luton / South Beds

- 3.19 It was agreed that the existing masterplan proposals put forward for Hawley would be adopted for HHS purposes. This plan shows a total 3,150 dwellings up to 2031 and a further 2,350 dwellings in the period 2021-2031.

Dacorum

- 3.20 The selected option includes land to the east of Hemel Hempstead (in St Albans District) and land to the west of Hemel. There would be a total of 4,000 dwellings in these areas up to 2021 and a further 3,000 in the period 2021-2031 in the locations indicated in Table 3.4.

Table 3.4 – Dacorum Site Capacity

Period	Eastern Site A	Eastern Site B	West of Hemel
Dwellings to 2021	1,500	1,500	1,000
Dwellings 2021 - 2031	1,585	1,215	200
Total	3,085	2,715	1,200

Source: Consultants

Welwyn Hatfield

- 3.21 The selected option for Welwyn Hatfield assigns growth to three broad locations: north of Hatfield, west of Hatfield (including a small part of St Albans), and south east of Welwyn Garden City. There will be a total of 2,737 dwellings on these locations to 2021 and a further 5,000 dwellings between 2021 and 2031 (refer Table 3.5).

Table 3.5 – Welwyn Hatfield – Capacity of Masterplanned Areas

Period	Location North and West of Hatfield	Location South East of Welwyn Garden City
Dwellings to 2021	2,037	700
Dwellings 2021 - 2031	4,420	580
Total	6,457	1,280

Source: Consultants

Watford

- 3.22 In Watford it was agreed that, for the purposes of HHS modelling, the housing growth during the period to 2031 would be accommodated within the town itself.

Assigning the Remaining RSS Dwelling Growth to 2021

- 3.23 In addition to the masterplanned areas there will also be further housing growth in each of the Districts. It has, therefore, been necessary to carry out a process of assigning the balance of RSS growth to locations in the County for the purposes of both transport modelling and enabling infrastructure service providers to consider the potential implications for their service areas.
- 3.24 The first step in assigning growth was to discount those developments that have already been completed. The East of England Plan identifies dwelling completions for the period 2001-2006. In addition to these completions Hertfordshire County Council (HCC) provided information for the subsequent years since 31 March 2006. Total completions for the period 2001 – 2008 are shown in column b in Table 3.6.
- 3.25 The next step in the growth assignment process was to consider ‘commitments’. HCC provided a list of all committed developments in the County which included those developments that had been started but not completed and those developments with full or outline planning permission. In addition to these commitments HCC provided a list of allocations of future sites that are either allocated in an existing local plan or LDF or may have been identified through other means (urban capacity studies or SHLAAs). It was agreed that these sites should be added to the commitments as they are considered to have a reasonable chance of coming forward for development. The total commitments for each District are set out in column c in Table 3.6.
- 3.26 It is worth noting that, following consultation with the Districts, St Albans and Three Rivers requested that only committed sites be included and North Herts advised that the sites within the SHLAA should be included as commitments/allocated sites rather than those on the list provided by HCC.
- 3.27 After taking account of completions and commitments for each District the balance of dwellings required to meet the RSS requirement has been derived ($a - (b+c) = d$), as shown in Column d Table 3.6.
- 3.28 For Dacorum and Welwyn Hatfield, when the 2021 masterplanned areas are taken into account along with the growth in areas outside the key settlements, further growth will be required to meet RSS requirements (column f). It is assumed that this will be accommodated within/around Hemel Hempstead (on brownfield sites or through small scale greenfield release) and within Welwyn Garden City and Hatfield. Similarly in Stevenage, when completions, commitments and masterplanned areas are taken into account, there will still be an additional balance of 1,275 dwellings which, it is assumed, will be accommodated on sites within the built-up area.
- 3.29 Having identified the remaining dwelling growth to be assigned to 2021 (column d Table 3.6) broad assumptions were made about the location of such growth as shown in Table 3.7. It is important to note that this is for the purposes of testing only and, therefore, the distribution to settlements does not include settlements that are likely to have very small levels of dwelling growth as, for the purposes of modelling, this was not deemed to be useful. Each of the Districts was consulted and the assumptions in Table 3.7 reflect the comments received. As the actual distribution of new dwellings will be decided through LDF allocation and development control processes this growth assignment is purely for the purposes of the HHS study.

Table 3.6 – Identification of the Balance of Dwellings to Assign 2021

District	RSS Requirement (a)	Completions (2001- 2008) (b)	Committed allocated Safeguarded Sites (c)	Dwellings assigned to other settlements (d)	Masterplanned areas (e)	Other non master planned areas KCDC dwellings (f)
Broxbourne	5,600	2,491	1,398	1,711	n/a	n/a
Dacorum	12,000	2,664	2,934	1,548*	4,000	854
East Hertfordshire	12,000	3,474	6,071	2,455	n/a	n/a
Hertsmere	5,000	1,762	1,339	1,899	n/a	n/a
North Hertfordshire	6,200	2,837	4,422	-1,059	Included in Stevenage figures	n/a
St Albans	7,200	2,505	1,971	2,724	n/a	n/a
Three Rivers	4,000	1,605	710	1,685	n/a	n/a
Welwyn Hatfield	10,000	4,162	206	1,399**	2,737	1,498
Watford	5,200	1,947	4,665	-1,412	n/a	n/a
Stevenage	16,000	1,364	1,561	0	11,800	1,275
Total	83,000	24,811	25277	10,950	18,537	3,625

Source: Consultants. Completions and committed development data provided by HCC (04/08/08).

*Remaining dwellings in parts of District outside Hemel Hempstead (provided by Dacorum Borough Council)

** Remaining dwellings in parts of District outside Hatfield and Welwyn Garden City (provided by Welwyn Hatfield District Council)

Table 3.7 - Growth Assignment by District, 2021

District / Settlement	% of dwellings	Total dwellings
Broxbourne	100%	1,711
Broxbourne	10%	171
Cheshunt	25%	428
Waltham Cross	20%	342
Hoddesdon	45%	770
Dacorum	100%	1,548
Tring	25%	387
Berkhamsted	60%	929
Bovingdon	5%	77
Kings Langley (Dacorum)	5%	77
Markyate	5%	77
East Herts	100%	2,455
Bishop's Stortford	50%	1,228
Hertford	25%	614
Sawbridgeworth	5%	123
Ware	15%	368
Buntingford	5%	123
Hertsmere	100%	1,899
Borehamwood	40%	760
Bushey	25%	475
Potters Bar	25%	475
Radlett and smaller communities	10%	190
North Herts	0	0*
Hitchin	0%	0
Letchworth	0%	0
Royston	0%	0
Baldock	0%	0
St Albans	100%	2,724
St Albans City	52%	1416
Harpenden	10%	272
London Colney	27%	735
Bricket Wood/ Chiswell Green/ How Wood/ Park Street and Frogmore	7%	191
Redbourn	3%	82
Wheathampstead	1%	27
Smallford	0%	0
Three Rivers	100%	1,685
South Oxhey	25%	421
Rickmansworth	15%	253
Croxley	10%	169
Chorleywood	5%	84
Abbots Langley	35%	590
Kings Langley	10%	169
Welwyn Hatfield	100%	1,399⁺
Cuffley	30%	420
Brookmans Park	20%	280

* North Hertfordshire figure showing 0% left to be assigned as RSS requirement already committed / allocated or planned for in master planned areas.

⁺ Figures estimated before SHLAA completed.

District / Settlement	% of dwellings	Total dwellings
Welham Green	5%	70
Welwyn	40%	560
Oaklands & Mardley Heath	5%	70

Source: Consultants assumptions agreed with Districts (November 2008)

- 3.30 To calculate the 2031 dwelling targets the RSS provides guidance. It advises that the average rate of provision for the period 2021 to 2031 should be the same as rates in Policy H1 for the period 2006 – 2021 or the rates 2001 – 2021, whichever is higher. Based on this approach the annual average rates of provision by District, as shown in brackets in Table 3.8, have been used to derive dwelling requirements to 2031. Table 3.9 shows the assignment of growth to the main settlements across the County. Watford and Stevenage are excluded from Table 3.9 as they each only include one settlement.

Table 3.8 – Dwelling Requirements to 2031

District	RSS Requirement 2001 - 2021	Dwellings Delivered (2001- 2006)	Minimum to build (up to 2021)	Dwellings 2021 - 2031	Comments
Broxbourne	5600 (280)	1,950	3650 (240)	2800	
Dacorum	12000 (600)	1,860	10140 (680)	1350	Requirement outside Hemel Hempstead
East Hertfordshire	12000 (600)	2,140	9860 (660)	6600	Excludes extension to Harlow
Hertsmere	5000 (250)	1,080	3920 (260)	2600	
North Hertfordshire	6200 (310)	1,900	4300 (290)	3100	
St Albans	7200 (360)	1,835	5365 (360)	3600	
Three Rivers	4000 (200)	1,010	2990 (200)	2000	
Welwyn Hatfield	10000 (500)	2,730	7270 (480)	500*	Requirement outside Hatfield and Welwyn Garden City

Source: Consultants. The figures in brackets show the annual rate of provision.

Table 3.9 - Growth Assignment by District, 2031

District / Settlement	% of dwellings	Total dwellings
Broxbourne	100%	2,800
Broxbourne	10%	280
Cheshunt	25%	700
Waltham Cross	20%	560
Hoddesdon	45%	1,260
Dacorum	100%	1,350
Tring	25%	338

* Although the requirement for Welwyn Hatfield is 5,000 for the period 2021 - 2031, the figure of 500 is included here as this is the amount of dwellings that will potentially be accommodated outside Hatfield and Welwyn Garden City (and the masterplanned areas)

District / Settlement	% of dwellings	Total dwellings
Berkhamsted	60%	810
Bovingdon	5%	68
Kings Langley (Dacorum)	5%	68
Markyate	5%	68
East Herts	100%	6,600
Bishop's Stortford	20%	1,320
Hertford	35%	2,310
Sawbridgeworth	5%	330
Ware	30%	1,980
Buntingford	10%	660
Hertsmere	100%	2,600
Borehamwood	40%	2,640
Bushey	25%	1,650
Potters Bar	25%	1,650
Radlett and smaller communities	10%	660
North Herts	100%	3,100
Hitchin	20%	620
Letchworth	20%	620
Royston	40%	1,240
Baldock	20%	620
St Albans	100%	3,600
St Albans City	60%	2,160
Harpenden	11%	396
London Colney	4%	144
Bricket Wood/ Chiswell Green/ How Wood/ Park Street and Frogmore	12%	432
Redbourn	4%	144
Wheathampstead	1%	36
Smallford	8%	288
Three Rivers	100%	2,000
South Oxhey	25%	500
Rickmansworth	15%	300
Croxley	10%	200
Chorleywood	5%	100
Abbots Langley	35%	700
Kings Langley	10%	200
Welwyn Hatfield	100	500
Cuffley	30%	150
Brookmans Park	20%	100
Welham Green	5%	25
Welwyn	40%	200
Oaklands & Mardley Heath	5%	25

Source: Consultants, assumptions agreed with Districts (November 2008)

4. Demographic Assessment

Introduction

- 4.1 This section addresses the demographic analysis that has been undertaken to inform HHS. The requirements for a range of infrastructure needs, including, amongst other things, community facilities and transport, are driven by changes in population and households. To assess the demand for key facilities it is, therefore, necessary to make use of projections of the future population.
- 4.2 The demographic assessment, coupled with masterplanning, provides the strategic service providers with the tools they require to determine needs at the County level (which they currently plan for) and at KCDC level (which they will also need to plan for in the future). A consistent basis for planning at these scales will provide a sound basis for setting a CIL charge. Without this consistency, the basis of the charge could be subject to challenge. At present, many service providers undertake their own forecasting work in order to determine their future needs. However, these are often not consistent with one another.
- 4.3 The population (and household) projections have to be informed by the dwelling requirements in each District. The first part of the section discusses the dwelling numbers that underpin the demographic assessment. They are slightly different in geographical composition to those that informed the masterplanning, in that they need to provide the dwelling numbers that are to be delivered within the boundaries of each District rather than a breakdown by, commonly, the KCDC area. The projections were required in this format in order to inform the transport modelling, a key part of the study given the substantial requirements for transport investment.
- 4.4 The section then moves on to describe the demographic assessment that was undertaken and how the information was used to inform the transport modelling.

District Dwelling Requirements

- 4.5 It is first necessary to ascertain the levels of housing to be delivered up to 2021 and 2031. As explained in section 3, up to 2021 the District level figures are provided by the adopted RSS for the East of England. These figures are not targets but do represent the minimum levels of housing that are expected to be delivered over the plan period.
- 4.6 Equivalent housing figures up to 2031 are not available. The review of the RSS (which will run up to 2031) has already started but is at a very early stage and is not in a position to advise on appropriate levels of housing development. However, the adopted RSS does provide advice on how to roll forward housing figures beyond 2021. This is in recognition of the fact that many LPAs are producing LDFs to cover a period ending after 2021. At paragraph 5.6 it states that planned annual rates for either 2001 to 2021 or 2006 to 2021 should be rolled forward to 2031, whichever is the higher.
- 4.7 The net additional dwelling requirements between 2008/9 and 2020/21 and 2008/9 and 2030/31 are as shown in Table 4.1.

Table 4.1 - Dwelling Requirements Within District Boundaries, 2008/9-2020/21 and 2008/9-2030/31

District	Requirement 2008/9 – 2020/21	Annual Average to be built, 2021/22 – 2030/31	Total Requirement, 2008/9 – 2030/31
Broxbourne	3,109	280	5,909
Dacorum	6,728	680	13,528
East Hertfordshire	8,526	660	15,126
Hertsmere	3,238	260	5,838
North Hertfordshire	11,530	927	20,800
St Albans	7,303	360	10,903
Stevenage	5,036	320	8,236
Three Rivers	2,395	200	4,395
Watford	3,253	260	5,853
Welwyn Hatfield	5,838	500	10,838
Hertfordshire	56,956	4,447	101,426

Source: East of England RSS and East of England AMR

- 4.8 Coupled with a realistic view of the potential of the housing market to deliver given the current recession, it is important to undertake a 'sense check' of the dwelling delivery requirements for the period 2021/22-2030/31. The figures in the existing RSS are challenging but the roll forward can simply present build figures that have no prospect of being achieved.
- 4.9 The figures for all the Districts have been reviewed and only one (for East Hertfordshire) raises a problem for the period 2021/22-2030/31. Under the guidance provided by the RSS, the roll forward would involve delivering an additional 8,000 dwellings at Harlow North, in East Hertfordshire District. This would be on top of the 'non-Harlow' growth within the District (660dpa, based on the RSS guidance). This being the case a different trajectory is required for East Hertfordshire from the rest of the Hertfordshire Districts. This is because the required delivery rate to achieve these dwelling numbers would be way in excess of that which could be achieved by the trajectory; in fact, it would need to nearly double.
- 4.10 The Consultants consider that the 800dpa that would be required at North Harlow (in East Hertfordshire) between 2021/22 and 2030/31 is not deliverable for three reasons:
- The maximum levels of delivery that have ever been promoted, even in buoyant economic times, are only 600dpa. This was at Swindon Northern Expansion Area; more recently the South Cambridgeshire Core Strategy Inspector accepted a similar delivery rate for Northstowe, but partly because of the involvement of English Partnerships (now part of the Homes and Communities Agency);
 - Other sites making up the Harlow growth area will be developed at the same time, thus further diluting the potential to deliver high rates at Harlow North. There simply would not be the capacity within the construction industry in the region, particularly given the strong growth that is expected in so many other locations;
 - The 8,000 dwellings figure comes from the current Ropemaker scheme. Even if they could theoretically deliver 800dpa, private developers are only keen to complete a certain number of units per week so that they do not flood the market and possibly dilute their returns.
- 4.11 The need, therefore, is to inject a more realistic approach into the delivery of growth in Harlow, post-2021, which the trajectory does. This means delivering a lower number of dwellings in East Hertfordshire between 2021/22 and 2030/31. If all of the Harlow growth

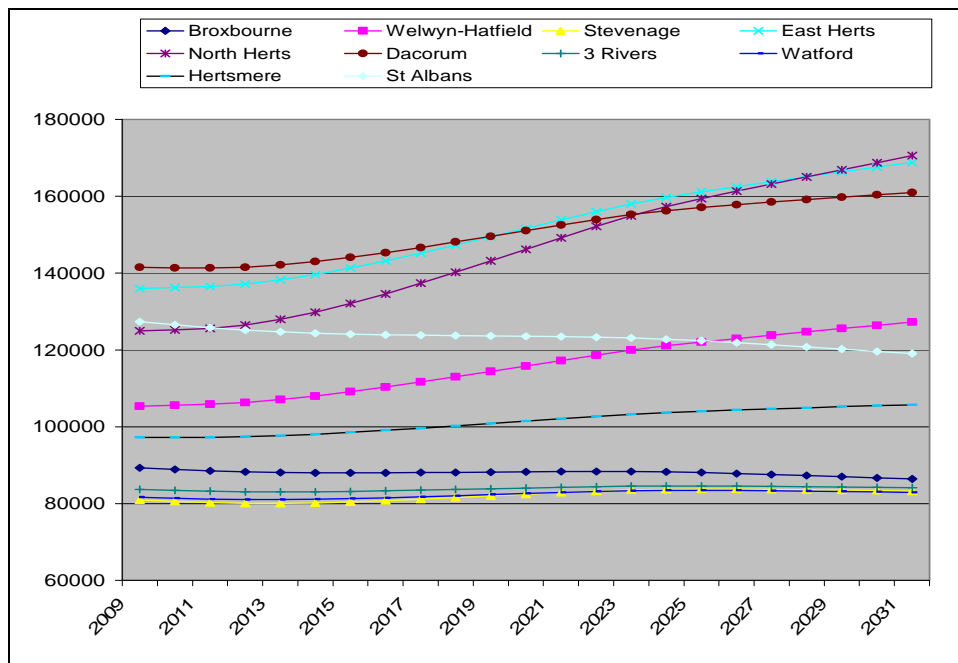
in that period were included, then the total number of dwellings expected to be delivered would be 14,600 (8,000 at Harlow North and 6,600 elsewhere in the District). Using the Hertfordshire-wide trajectory, that is reduced from to 8,200 dwellings (broadly 4,200 at Harlow North and 4,000 in the rest of East Hertfordshire). This is still challenging, but would not be setting a precedent nationally. It would also not call into question the deliverability of any scheme at Harlow North - it would simply be suggesting that the timescale would need to be lengthened beyond 2031.

Deriving the Population and Household Levels

Methodological Considerations

- 4.12 In order to estimate the requirements for additional infrastructure and services that will be generated by the proposed levels of housing, it is necessary to understand the size and profile of the population to which this additional housing relates. The initial belief of many is that total population change is directly related to the level of housing production. Unfortunately this belief is incorrect because population change is influenced by other factors in addition to housing production. Chief amongst these factors is the long-established decline in average household sizes, brought about by changes in age structure and increasing opportunities for people to form separate households. This decline means that in any area a certain amount of new housing is required simply to enable the population to stay constant.
- 4.13 This can be illustrated by the projections of total population prepared under dwelling-led forecasts which matched the RSS housing targets. Figure 4.1 gives the results for individual Districts.

Figure 4.1 - District Populations Following RSS Housing Targets

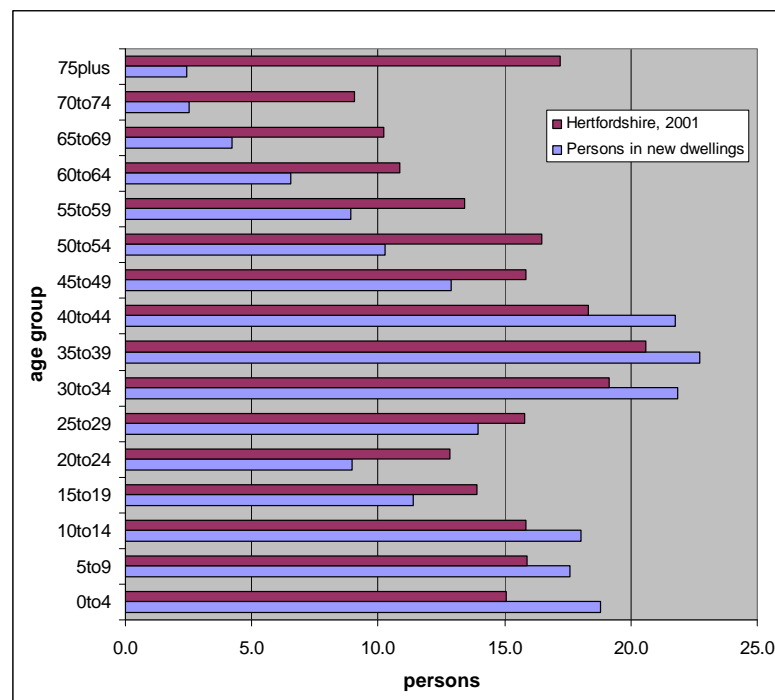


Source: Projections by Hertfordshire Property

- 4.14 For two of the Districts (St Albans and Broxbourne) the population is lower in 2031 than in 2008, despite substantial levels of housing construction: 12,000 units in St Albans and 6,000 in Broxbourne. Since most infrastructure requirements are calculated on a per-capita basis then reference to total population would suggest that these two Districts will require less infrastructure in 2031 than they had in 2008, which is clearly incorrect.

- 4.15 Three other Districts (Stevenage, Three Rivers and Watford) are projected to have broadly stable populations over the 23-year period. So if total population is the guide, the only parts of the County requiring significant amounts of additional infrastructure are Dacorum, Hertsmere, Welwyn Hatfield, North Hertfordshire and East Hertfordshire. This is clearly not a sensible output and the Consultants do not, therefore, regard total population change as a useful measure for use in the HHS Study.
- 4.16 There are also problems with those requirements that depend on particular age groups. For the whole County, the projections by Hertfordshire Property show the number of children of primary school age rising from 81,560 in 2009 to 82,188 in 2021 – an increase of only 628 children. It is well established that many existing primary schools in the County face closure because of the declining number of children. But, as is shown later, children are prominent amongst the migrants who move into new housing. Occupiers of some of this new housing may be able to make use of surplus capacity in nearby primary schools but much new construction is planned to occur in new development areas that are too far away from existing schools. Unless there is to be extensive bussing of primary school children across the County, then continued closures of existing schools will take place alongside construction of new schools in the expansion areas.
- 4.17 To get a realistic measure of requirements for additional services and infrastructure it is, therefore, necessary to focus on the people who will occupy the new housing, whilst making appropriate allowance for the use of spare capacity, where this is feasible. This is the approach that the Consultants have adopted on previous studies of this type.
- 4.18 Profiles of people moving into new housing are often different from those of the entire County. Data are available from the 2001 Census and from population surveys of new housing estates. Figure 4.2 gives a profile of the latter type, submitted by Hertfordshire Property, compared with data for the whole of Hertfordshire. Both parts of the chart give the number of persons by 5-year age group per 100 dwellings.
- 4.19 It is evident that the County has more people in the age groups 45 and over (radically more in the age groups 60 and over) than the standard profile of new housing development. In both the peak ages are between 30 and 44. There is a secondary peak (largely composed of the children of the first group) aged from 0 to 14. The County has rather fewer people in both these peaks.
- 4.20 It should be emphasised that, although the people who move into new housing are termed ‘migrants,’ they are not all new migrants to the County. Many of them will be migrants from other parts of the County, partly as the ‘overspill’ from those areas brought about by reducing household sizes.

Figure 4.2 - Standard Profile of New Housing Occupants Compared with Hertfordshire County

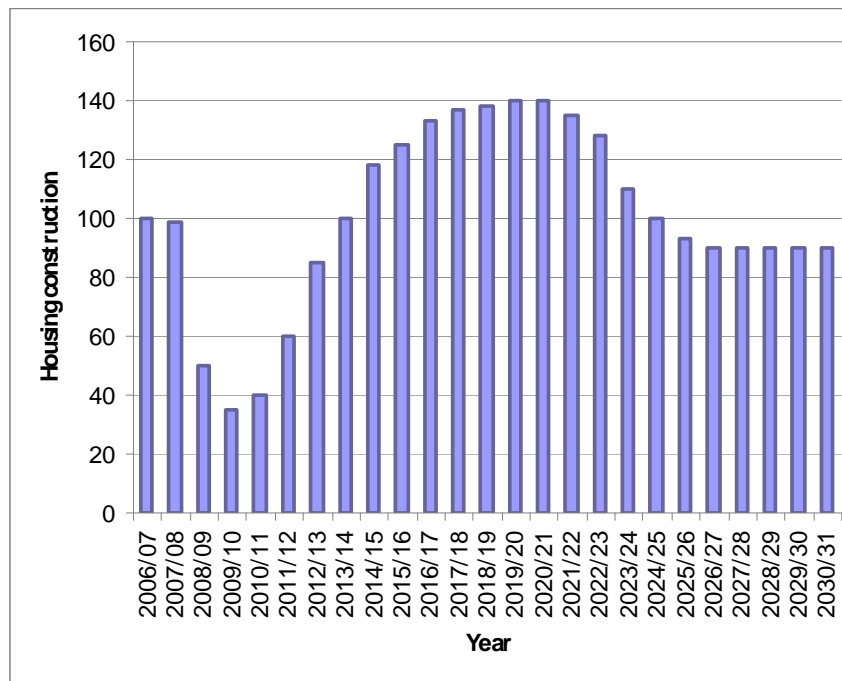


Source: Hertfordshire Property, Census 2001

Trajectory of Housing Production

- 4.21 As shown earlier, the number of new dwellings to be planned for in each District is known for the periods 2008/09 to 2020/21 and 2020/21 to 2030/31. But with the recent collapse in house building it can no longer be assumed that these targets will be met by steady building rates. A likely trajectory of future house building has, therefore, been derived based on the experience of previous recessions. This experience shows that during a recession, housebuilding can decline to around one-third of its pre-recession level and can then take around four years to recover fully. (This is discussed in more detail in Appendix A). The resulting trajectory is shown in Figure 4.3.
- 4.22 Figure 4.3 gives indices of housing construction. The pre-recession years up to 2007/08 are taken as 100. Thereafter, the index falls to a trough of 35 in 2009/10. After recovery to 100 in 2013/14 the index is taken higher in order to catch up with the RSS target by 2020/21. To meet the RSS targets housing production would need to rise to 40% above the pre-recession level, thereafter falling off to meet the 2030/31 target.
- 4.23 It is important to understand that this is a County-wide trajectory that has been created to inform the HHS study. It is a best estimate of what is considered might happen for the County as a whole. It certainly does not override emerging District-specific trajectories that Districts have published in their Annual Monitoring Reports (AMRs). However, the Consultants do not consider that any differences are critical. The approach taken is necessarily broad brush and would not be significantly different when applied similarly to any individual District.

Figure 4.3 - Trajectory of Housing Construction 2006/07 to 2030/31



Source: Consultants' estimates

- 4.24 The index has been constructed using up-to-date information from Nationwide, Halifax and the Council of Mortgage Lenders regarding the fall-off in mortgage lending - about 70% down as of late-2008. It has also been informed by what housebuilders are saying about starts in 2009 (both in public and informally to the Consultants). Whilst figures are produced by District for the purpose of the HHS, the trajectory is trying to take a strategic view and not identify differences in prospects by District. In any event, whilst house prices in one District may be higher than in many other parts of the County, the Consultants would expect the collapse of mortgage lending to impact on purchases and new build housing starts. The anecdotal evidence of early 2009, by which time the country was in a full economic recession, is that this is very much the case.

Population Forecasts

- 4.25 The population forecasts are not only needed to inform the calculation of infrastructure requirements across the service areas, but also specifically to inform the transport modelling undertaken as part of the study. The modelling required information on dwelling, population, household and employment change and absolute levels at 2021 and 2031.
- 4.26 Table 4.2 gives population forecasts for the ten Districts of the County. Each District is divided between the population living in the 'old' – pre-2008 – housing and the new development areas. In some Districts there is more than one development area: thus, for Dacorum, the table distinguishes new development in Hemel Hempstead from new development in the rest of the District. The figures in the table relate to the numbers of dwellings that are planned to be delivered within the administrative boundaries of that District. In other words, it has taken account of where housing figures provided in the adopted RSS for a particular District, are to be delivered in the adjacent District, e.g. Stevenage growth in North Hertfordshire.
- 4.27 An important point to note is that these population and household projections are not appropriate to be used at the District level. The way that the RSS housing figures are

presented in Policy H1 is complex. As has been stated, for the purposes of the transport modelling, the Consultant has had to re-cast these at the District level. The way they were derived in the RSS did not lend itself to doing this easily. Much of the housing requirement in the KCDCs was spread over District boundaries and the policy deliberately did not specify how much growth would fall in each District. So the Consultants have used the best available information (including the masterplanning work) to produce housing requirements at the District level. With this informing the subsequent population and household projections, the same principle has applied.

- 4.28 Therefore, these population projections derived for the HIIS may, in some Districts, differ from District level projections used to inform local planning work. By following the spatial breakdown in the RSS, they can only be applied to the KCDC and County level. So for any one KCDC, the overall population projection will tally with the RSS requirements whereas any single component for an individual part-District within that KCDC may or may not tally with an independently derived district projection. Therefore, this potential difference will follow through to the overall total population projection for that particular District. The same applies to any individual constituent part making up the County total, which is the sum of the KCDCs plus the remaining parts of the County.
- 4.29 This approach has not only been taken because of the way the RSS requirements are presented but also because the needs of the strategic service providers are not determined at the local level; they are determined strategically. Therefore, it is important and necessary for the strategic infrastructure providers to plan on the same strategic spatial scale.
- 4.30 This will be used to inform the strategic element of the CIL. All locally determined items, which will represent the local element of CIL, should have their needs derived from their respective District's population projections. For reasons explained above, this will necessarily differ from those projections used in HIIS. The demographic assessment has been developed principally for the purpose of deriving the strategic element of CIL and the information within it should not be used for any other purpose, including deriving the local element of CIL.

Table 4.2 - Population and Households by District, 2021 and 2031

District	Settlement Extension	Dwellings 2008/9 - 21	Dwellings 2008/9 – 31	Population by settlement / rest of district 2021	Population by settlement / rest of district 2031	Households by settlement / rest of district 2021	Households by settlement / rest of district 2031
Broxbourne new		3,109	5,909	5,790	11,702	3,047	5,791
Broxbourne old				82,560	74,671	37,372	37,372
Broxbourne Total				88,351	86,373	40,419	43,163
Dacorum new	Hemel Hempstead	5,180	7,830	9,647	15,506	5,076	7,673
	Rest of Dacorum	1,548	3,998	2,883	7,917	1,517	3,918
Dacorum old				139,984	137,557	58,523	58,523
Dacorum Total				152,514	160,980	65,116	70,114
East Hertfordshire new	Harlow	2,300	6,500	4,284	12,872	2,254	6,370
	Rest of East Hertfordshire	6,226	8,600	11,595	17,031	6,101	8,428
East Hertfordshire old				137,949	130,553	55,486	55,486
East Hertfordshire Total				153,828	160,456	63,841	70,284
Hertsmere new		3,238	5,838	6,030	11,561	3,173	5,721
Hertsmere old				96,070	92,562	39,599	39,599
Hertsmere Total				102,100	104,123	42,772	45,320
North Hertfordshire new	Stevenage	7,164	12,164	13,342	24,088	7,021	11,921
	East Luton	2,100	4,000	3,911	7,921	2,058	3,920
	Rest of North Hertfordshire	1,900	3,766	3,539	7,458	1,862	3,691
North Hertfordshire old				128,413	125,633	52,995	52,995

District	Settlement Extension	Dwellings 2008/9 - 21	Dwellings 2008/9 – 31	Population by settlement / rest of district 2021	Population by settlement / rest of district 2031	Households by settlement / rest of district 2021	Households by settlement / rest of district 2031
North Hertfordshire Total				149,205	165,100	63,935	72,526
St Albans new	Hemel Hempstead	2,608	5,408	4,857	10,709	2,556	5,300
	Rest of St Albans	4,695	6,765	8,744	13,397	4,601	6,630
St Albans old				109,860	94,931	55,111	55,111
St Albans Total				123,461	119,037	62,268	67,041
Stevenage new	Stevenage	5,036	8,500	9,379	16,833	4,935	8,330
Stevenage old				73,475	66,450	34,087	34,087
Stevenage Total				82,854	83,282	39,022	42,417
Three Rivers new		2,395	4,395	4,460	8,703	2,347	4,307
Three Rivers old				79,759	75,461	35,011	35,011
Three Rivers Total				84,219	84,164	37,358	39,318
Watford new		3,253	5,853	6,058	11,591	3,188	5,736
Watford old				76,839	71,325	34,251	34,251
Watford Total				82,897	82,916	37,439	39,987
Welwyn Hatfield new	Welwyn Garden City	1,623	2,203	3,023	4,363	1,591	2,159
	Hatfield	2,736	6,320	5,096	12,515	2,681	6,194
	St Albans	80	416	149	824	78	408
	Rest of Welwyn Hatfield	1,399	1,899	2,605	3,761	1,371	1,861
Welwyn Hatfield old				106,393	105,781	43,926	43,926
Welwyn Hatfield Total				117,265	127,244	49,647	54,547

Source: Consultants calculations using population projections from Hertfordshire Property

Deriving the Employment Requirements

- 4.31 Table 4.2 provides the dwelling, population and household numbers for each of the relevant areas. Also needed for the transport modelling were the employment forecasts by District up to 2021 and 2031. In Policy E1 the RSS provides ‘indicative’ employment growth targets up to 2021 and says that these targets should be used by local authorities as guidance, but may be tested and revised in the process of preparing LDFs. These forecasts, with minor variations, have survived through successive versions of the emerging RSS. Several Hertfordshire London Arc employment land studies undertaken over the past few years have expressed reservations about the E1 figures, but found that there was no convincing alternative and, therefore, used these figures to forecast land demand - except in Broxbourne, where the study suggested that the E1 figures were not credible, and a trend-based scenario has been used as a stop-gap. Therefore, whilst there is a question mark over using the E1 figures and, for the purposes of this study, the figures have simply been rolled forward to 2031.
- 4.32 In the intervening period, an alternative economic forecast has emerged, through the Joint Modelling study commissioned jointly by EERA and EEDA. This study will both feed into the early review of the RSS (which started just weeks after final publication of the current RSS) and inform the review of the Regional Economic Strategy. It was carried out by the consultancy Oxford Economics (OE) and has produced an integrated model that generates consistent forecasts and scenarios for the economy, demography and housing to 2031¹. To provide an alternative to the E1 targets, the consultants used forecasts commissioned from OE for the London Arc Employment Study². Equivalent forecasts were separately commissioned from OE for the remaining three Districts outside the London Arc – East Hertfordshire, Stevenage and North Hertfordshire – in order to provide consistency across the whole County.
- 4.33 The OE forecast has an important advantage over E1 as it ‘knows’ the actual employment statistics for the period 2001-06. In this period, the region’s employment growth was considerably above the E1 scenario, but the Hertfordshire London Arc’s growth was considerably below it. The OE scenario partially carries forward this underperformance into the future. Accordingly, it shows considerably slower growth than E1, with 30,600 net new jobs from 2001-21 and 34,200 net new jobs from 2006-21 (therefore reflecting an actual decline in jobs between 2001 and 2006). This compares to a figure in the draft RSS for the London Arc of 50,000 jobs between 2001 and 2021³. It must be remembered that these figures are for the London Arc only and the figures for the other three Districts in Hertfordshire need to be added in as well.
- 4.34 As an attempt to predict the most likely economic future, and hence the potential market demand for land and premises, the OE’s scenario is considered to be more credible than E1, because:
- E1’s method and assumptions are not transparent, partly because the Experian forecast that underlies E1 was prepared more than five years ago;
 - E1 earlier is based on very old data;
 - It is disproved by actual data for the period 2001-06;
 - In particular, the Consultants do not know the population and housing assumptions on which E1 rests and have no reason to believe that they accord with the housing provision proposed in the RSS;
 - E1 is policy-driven, based on a regional economic target which has since been abandoned;
 - E1 only runs to 2021, whereas the Councils in their LDFs aim to look to 2026 and beyond.

1 Oxford Economics, Arup, East of England: Joint Modelling for the RES and RSS, Final Report, Revised August 2008.

2 Broxbourne, Dacorum, Hertsmere, St Albans, Three Rivers, Watford and Welwyn Hatfield Councils (2009) *Hertfordshire London Arc Jobs Growth and Employment Land*, Roger Tym & Partners

3 The adopted RSS does not provide a figure for the London Arc; rather its requirement of 50,000 jobs is subsumed into the Hertfordshire-wide figure of 68,000 jobs.

- 4.35 As shown in Table 4.3, the forecasts give the following net employment change to 2021 and 2031. This illustrates the slower growth with the OE forecasts as compared to Policy E1. Under E1 there was a requirement for 50,000 jobs across the seven Districts of the London Arc between 2001 and 2021. However, OE, having taken into account what happened between 2001 and 2006, considers that only slightly more than 50,000 jobs can be delivered over the period 2001-2021 by all ten Hertfordshire Districts, i.e. include the three non-London Arc Districts.

Table 4.3 - Net Employment Change, 2006-2021 and 2006-2031

District	Net Employment Change			
	2001-2006	2001-2021	2006-2021	2006-2031
Broxbourne	2,854	4,868	2,014	2,417
Dacorum	-5,475	3,764	9,239	18,148
East Hertfordshire	5,300	8,804	3,504	4,073
Hertsmere	-5,647	174	5,821	11,405
North Hertfordshire	-4,400	2,492	6,892	11,143
St Albans	1,283	2,147	865	-179
Stevenage	-100	8,755	8,855	13,802
Three Rivers	4,406	6,531	2,125	2,662
Watford	-6,935	-2,487	4,448	8,222
Welwyn Hatfield	5,927	15,586	9,659	17,741
Total	-2,787	50,634	53,422	89,434

Source: Oxford Economics

- 4.36 It was not possible to divide this forecast by settlement as it is not clear exactly where the employment will be located in each District. Also, figures for East Hertfordshire take into account additional employment as a result of the growth of Harlow. For Harlow districts, the forecasts show employment change between 2006 and 2021 of 10,500 jobs and between 2006 and 2031 of 24,200 jobs. However, it is not possible to break this down to specifically show what proportion of this would be at Harlow North, i.e. within East Hertfordshire district. This work will only be done as part of a detailed Harlow North masterplanning exercise, outside the scope of this study.

Summary

- 4.37 This necessarily detailed section has explained how the dwelling, population, household and employment forecasts have been derived. It is important to understand the value of these forecasts. They do not directly enable the calculation of infrastructure needs or the funding of those needs. Moreover, many of the infrastructure items that are required in an area are derived simply by dwelling, rather than from the population or household sizes within those dwellings. Examples include waste and utilities.
- 4.38 However, for many of the major contributors to infrastructure need – such as education, health and childrens' services – the future structure of the population and the way they are housed must to form the basis for their future planning. In reality, many of these service providers will already have their own forecasting techniques and will therefore derive their own view on future needs. In such circumstances, the forecasting undertaken within the HHS Study will provide an important 'sense check' on the assumptions made by service providers and therefore, the expected outputs. Where projections are substantially different there will be a reason why and it will be important to consider which projection reflects a more realistic scenario and therefore the changes that may be required in the assessment of overall need. However, the intention must be that ultimately, all service providers use a commonly agreed series of forecasts so that there is consistency in the assessment of needs.
- 4.39 Where the forecasting undertaken here plays an immediate and vital role is by providing the necessary demographic inputs to the masterplanning work discussed in the previous chapter. For the purposes of the HHS Study, this modelling will assist in setting the transport charge, which will

constitute the largest single item within the CIL. Over the long term, the modelling provides the information that should inform service providers' thinking as to future needs, even if they are unable to articulate this within the timescales of the HHS Study. This section has also explained that these projections should be treated with caution in the way they are interpreted outside HHS, as they have been derived for the purpose of this study alone and should not be used for other planning purposes.

5. Infrastructure Needs and Costs

- 5.1 In order to derive the CIL level, it is first necessary to assess the infrastructure needs associated with growth, and their costs.

Historic Infrastructure Deficit

- 5.2 Discussions with stakeholders and service providers as part of the HID assessment helped to define what a historic infrastructure deficit is. This was crucial to establishing a baseline position so that the needs related to growth can be separated from existing deficits. As a result deficiency was defined as infrastructure that is:
- Inadequate in size to serve the needs of the current population as evidenced by excess demand or other than in cases such as open spaces where the scale of provision falls short of widely adopted planning benchmarks;
 - Clearly functionally inadequate when measured against typical current standards or adopted policy.
- 5.3 Considerable time was spent with service providers helping them to separate out needs related to growth from those that are historic deficits. The only infrastructure area where it is not possible to separate out historic deficit from future need is transport. Therefore, many of the identified transport needs will also directly be addressing current congestion points. But for all other infrastructure needs, growth items need to be separated from deficits, in order to derive a robust CIL charge. It is evident that there is still work to be done by service providers in this respect.

Masterplanning/Assignment of Growth

- 5.4 The masterplanning exercise (reported in Section 3) provides an indication of where growth in the KCDCs could be accommodated. Housing growth not included in locations for which masterplans were prepared has been assigned to other areas in Hertfordshire. Once existing commitments have been taken into account, assumptions have been made about the location of growth by District. This exercise has focused growth on the existing urban areas.
- 5.5 Both the HID and masterplanning strands of work have informed discussions with service providers so that they can begin to assess the implications of large scale housing growth in the County for the provision of their services and in order that they can identify the likely infrastructure requirements of growth. The masterplanning and growth assignment work has also been used to identify housing inputs for the specific EERM transport model zones.

Generic Issues and Approach to Defining Infrastructure Needs

The Distinction between Capital and Revenue Funding

- 5.6 It is normally accepted that planning contributions should be primarily focused on providing the physical investment needed to mitigate development impact. In reality what is required can take the form of a one-off capital investment in a facility or amenity or recurring expenditure on supporting the new population. The planning contributions system is currently biased towards the former. In financial parlance, the distinction is made between capital and revenue expenditure but in the guidance on both the use of section 106 and CIL there is more reliance on common sense definitions and some distinctions are implied. For instance, Circular 05/2005 on Planning Contributions talks about assets and facilities as legitimate targets for contributions and distinguishes these from maintenance costs which it regards as only recoverable in limited

circumstances⁴. The CIL Guidance refers to a 'wide definition of infrastructure' but the examples given again emphasise facilities and amenities rather than revenue funded services.

- 5.7 This carries through to the provision for commuted sums in Circular 05/2005 which refers to them purely in the context of physical upkeep⁵. The CIL Guidance makes no reference to this at all.
- 5.8 For many service providers this is an artificial distinction. While the marginal cost of maintaining an extra stretch of road or watercourse might primarily be attributable to its physical upkeep, the main part of the burden of running an additional community centre might comprise the cost of managing it and the services it provides. While it can be argued that these can be paid for out of the extra Government funding and community charge revenue arising from an increase in the population, the same argument can be applied to the cost of maintaining the road. Finally there are some revenue costs, such as the employment of community development workers during the formative years of a scheme, that would seem to be squarely addressed at mitigating the social impact of new development but which would probably be irrecoverable on a strict reading of the Guidance.
- 5.9 Where other service providers are concerned, the distinction between capital and revenue costs can be even more unclear. The cost of acquiring a building or a vehicle in the case of the emergency services in particular, can be shouldered as a capital expense through purchase or as a revenue expense by leasing or borrowing.

The HHS Approach

- 5.10 It is difficult to distil a simple and equitable approach in these circumstances. In this analysis the funding requirements incorporated generally reflect the expressed views of the various service providers. In many cases in the past, these views have not taken into account the full range of issues, particularly the viability of development. This raises the risk that the viability of development and the prospects of achieving an optimal mix of supporting infrastructure will be jeopardised by requirements for higher developer contributions towards each element of provision than are reasonably necessary.
- 5.11 What follows is the Consultants' recommended approach to the calculation of the funding needs of key service providers. However, it is beyond the scope of this study to examine every element of every requirement from every service provider, with the requisite knowledge to recommend alternative ways of providing key services. What is possible is to consider some alternative general basis of budgeting, especially in the longer term. It reflects the proposition that the calls on planning contributions are increasing at a time when land values are under pressure.
- 5.12 Assuming that the overall level of planning contributions is maximised within viability constraints, the general aim of sustainability will best be served if mainstream funds are used to provide types of infrastructure that cannot be funded by any other means. This would involve service providers actively manipulating their investment plans to support the growth agenda. That might be inconvenient to some service providers, but if reasonable assumptions are made about the scale of funding that they might reasonably expect to enjoy in the future, it would not be impossible in the medium to longer term. Clearly circumstances can change for better or worse. The review mechanism built into any useful infrastructure plan should provide a way of ensuring that any initially over-optimistic assumptions about future mainstream funding do not impact on the ability to procure the infrastructure required.

Local Authorities

- 5.13 Local authorities are providers of a wide range of services. An analysis of their funding arrangements is beyond the scope of this analysis. Basically, it comprises Central Government

⁴ Section B18 onwards

⁵ Ibid

support based upon population characteristics and community charge contributions which are capped at certain limits. Elements of Government support are ring-fenced, primarily for education and housing. There is a relatively sophisticated system for planning transport investment and that is dealt with separately as part of the transport study.

- 5.14 The level of this support is determined at the margin by the application of the 'floor damping' mechanism to revenue budgets. This means that local authorities in more prosperous areas get more than they might be entitled to on a strict application of the relevant national funding formulae. The Government deems this sum to be adequate to meet their needs and strictly reduced access to any additional funding (this additional entitlement is paid for by reducing the amount that local authorities in other areas might otherwise have expected to get). Capital expenditure is funded by Central Government either through grant or as supported borrowing where the local authority receives an annual sum equivalent to the notional annual cost of financing the capital investment required. The latter is effectively caught by the floor damping mechanism, with the result that local authorities 'on the floor' only benefit if they have been unusually parsimonious while other local authorities are not fully recompensed. The Consultants' understanding is that Hertfordshire County Council is a floor authority and on this basis, the supported borrowing mechanism is effectively of no value to it.
- 5.15 In the analysis that follows, this has particular implications for investment in education mainly because of the costs involved in providing schools. The Government view seems to be that floor authorities which are, by definition, in relatively more affluent areas, should be regarded as adequately funded, having fewer of the needs associated with deprivation. Understandably the local authorities in growth areas, in particular, do not share this view.
- 5.16 While budgets for education and health have risen rapidly over recent years, and there is mainstream support for social services and 'early years' services; the same cannot be said of the funding for the rest of local authority activity. Analysis of District Council accounts usually reveals a comparatively modest capital programme especially when set against the costs of responding to the growth agenda. A recurring pattern is the extent to which capital investment in recent years has been funded by asset sales. This source of finance is, by definition, finite so the medium term outlook for local authority-led capital programmes is not encouraging. This needs to be reflected in the allocation of planning contributions, simply because, in the absence of developer contributions, there is no alternative mainstream means of funding environmental and community facilities.
- 5.17 One area of opportunity is the use of Private Finance Initiatives (PFI) and there are currently budgets for waste and emergency services. In both cases, economies of scale mean that it is only realistic to use these to respond to the pressure of housing growth in the context of a County-wide investment scheme.
- 5.18 There is also continuing pressure to achieve efficiency savings through reductions in revenue budgets. One response to this has been policies aimed at charging developers commuted sums for maintaining and managing new (and in some cases existing) facilities. These could be seen as going beyond the guidance in Circular 05/2005. In the future it might be more appropriate to make a generic allowance for maintenance and attendant management costs where these are solely attributable to the additional development and, following Circular 05/2005, for the period of years up until the point at which the growth in population should be reflected in the capitation-based funding streams.

Defining Strategic and Local CIL Items

- 5.19 The HIIS study examines infrastructure needs across a whole range of services. These are either strategic or local in terms of the needs they serve. It will therefore be appropriate for certain items to be dealt with by way of a strategic CIL charge, and for other more local items to be dealt with through a local CIL charge. **It is important to note that there is no hierarchy of charging**

between strategic and local CIL items – both should hold equal weight as part of an overall charge.

5.20 Strategic items are those that provide for infrastructure needs that cross a number of Districts. Some of these, such as transport, are self evident, whereas others have required more careful consideration. Individual items may be local but the overall provision of the service considers needs on a strategic scale – this will include health and Children’s Services/Adult Care. Local items are those where needs should most appropriately be determined by the particular local authority. It is this latter consideration that helps to identify which category certain less clear cut items should fall into.

5.21 The rationale for a local CIL, rather than local items being addressed by a standard charge, is provided by the draft CIL Regulations. Paragraph 20 of the CLG, Community Infrastructure Levy, August 2008 states that:

‘The Government is considering whether restrictions on the use of planning obligations should be made once CIL is introduced. There would be a transitional period before any restriction would take effect.’

5.22 Para 5.10 of the document also states that:

‘Other options include reducing the scope of planning obligations through a narrower set of criteria than those set out in Circular 05/05, or preventing planning obligations from being used to secure developer contributions through the use of standard charges.’

5.23 The Districts could, therefore, be in a situation whereby section 106 contributions are significantly reduced and standard charges may no longer be appropriate. A local CIL is, therefore, an appropriate way of taking such needs forward.

5.24 Accordingly, it is the view of the Consultants that the infrastructure services considered by HISS should be categorised as set out in Table 5.1. The justification for this is contained in the remainder of the chapter.

Table 5.1 – Categorisation of Infrastructure Types

Infrastructure Service	Strategic CIL	Local CIL	
Adult care	Yes		
Ambulance	Yes		
Children’s Services	Yes		
Community facilities		Yes	
Cultural facilities		Yes	
Education	Yes		
Employment/retail	Insufficient justification at present for charge		
Fire	Yes		
Flood Defences			Site specific charge
Green Infrastructure (strategic)	Yes		
Health	Yes		
Indoor sports facilities		Yes	
Libraries		Yes	

Infrastructure Service	Strategic CIL	Local CIL	
Municipal waste	Yes		
Open space, sport and recreation		Yes	
Police	Yes		
Transport	Yes		
Utilities – electricity			Site specific charge
Utilities – gas			Site specific charge
Utilities – potable water supply			Site specific charge
Utilities – waste water			Site specific charge
Waste collection		Yes	
Youth facilities		Yes	

5.25 The following section deals with strategic CIL items first, then items that should be subject to a site specific charge and lastly local CIL items. These are listed alphabetically so as not to place a priority on any individual item over another. For each item there is a brief discussion of the main issues. Further detailed discussion of the wider issues is contained in Appendix B.

Strategic Infrastructure Needs and Costs

Adult Care Services

Anticipated Need

5.26 Adult social care covers the following issues:

- Adult Care Services (20-64 years);
 - People with Physical and Sensory Disabilities (18-64);
 - People with Learning Disabilities 18-64;
- Older Peoples Services (65+ years).

5.27 Increasingly, the lines between adults' social care and other services are being intentionally blurred in order to provide a more coherent service to the individual. The Government's White Paper 'Our Health, Our Care, Our Say' promotes multi-agency, integrated community facilities such as Health and Social Care Centres, Community Centres, and extended schools.

5.28 In Hertfordshire, as elsewhere, there is a move to a more bespoke, personalised level of support for older people, adults with disabilities and/or mental ill health and carers. New ways are now being developed to support older and disabled people to live independently within their communities.

5.29 One of the implications of this change in approach is that the new build programme directly provided by adult social care in Hertfordshire is likely to reduce, with increased working in partnership with the private and voluntary sectors.

5.30 The County Council has not been able to indicate whether a significant level of new infrastructure will be required as a result of the proposed growth in dwelling numbers. Either way, ensuring that existing and new buildings are accessible will be a key element of future service provision.

Growth in the numbers of elderly people will lead to a demand for more services, but these will largely be met by services commissioned from the private sector.

- 5.31 As will be shown below, to date there have been no identified requirements or costs. As such, the question of timing does not arise.

Cost

- 5.32 Because of the lack of information, it is not possible to determine whether there are any significant capital costs as a result of the new development.

Priorities

- 5.33 No specific priorities have been identified.

Recommendation

- 5.34 It is recommended that Adult Care Services are included as a CIL item. However, a substantial level of additional work is needed to be able to justify a figure in the CIL. In particular, the service will need to develop a proper forward strategy in order to properly understand needs that will arise from growth. It will then need to use the demographic forecasting and masterplanning work to determine the precise needs by location, across Hertfordshire. Timescale for action: IMMEDIATE

Ambulance

Anticipated Need

- 5.35 The East of England Ambulance Service NHS Trust (EEAST) provides emergency and unscheduled care and patient transport services in Hertfordshire. The Consultants understand that no specific studies or strategies to identify infrastructure needs as a result of growth in Hertfordshire have been completed to date. Indeed, some more detailed physical planning relating to new development has been frozen due to the abrupt slow down in housing development.
- 5.36 At this stage the Consultants have, therefore, taken a high level approach to estimating ambulance service infrastructure requirements in the absence of any firm information from EEAST. Existing staff to population ratios are used to estimate new staff requirements based on population increases, with a corresponding new requirement for ambulance stations and vehicles (i.e. new capital requirements).
- 5.37 The Consultants have used an ambulance staff to population ratio of 1:1,000, based on the experience elsewhere. Based on the population estimated in the new housing growth (200,786), this gives a high level estimation of new staff of approximately 200. Assuming a new station is required every 40-80 new staff (depending on size and location of the station), and a new vehicle (plus equipment) for every 10 new staff, this equates to 2-5 new stations and 20 new vehicles.

Cost

- 5.38 The Consultants' research found that the Scottish Assessors 2005 replacement cost estimation for ambulance stations indicates a cost of £900 per sq m for 'standard' stations and £1,150 per sq m for 'good' stations (including Control Centres). It is understood that a new station for approximately 80 staff and 30 vehicles, costs in the order of £3.5 million.
- 5.39 The Consultants have assumed a station cost of £2 million on the assumption of an average station staff size of 40 and £135,000 per vehicle. Assuming that five stations are needed at £2M per station, this would cost £10M. Some 20 new vehicles at £135,000 per vehicle would cost £2.7M, therefore, the total cost would be £12.7M. A table showing the requirements, costs and funding assumptions is set out in Appendix B. It is recommended these are reviewed in more detail with EEAST in due course. Priorities
- 5.40 In terms of which of the growth locations is a priority, EEAST has given no further views than that set out above.

Recommendation

- 5.41 It is considered that the requirement for ambulance facilities should be met by a strategic CIL charge. However, this must be supported by robust evidence and therefore further work is needed in this area In order to fully justify its inclusion as a CIL item.
- 5.42 Further work is also needed with EEAST to determine whether the assumptions made in assessing need are reasonable. Timescale for action: SHORT TERM

Children's Services

Anticipated Need

- 5.43 Since April 2006, education and social care services for children have been brought together under a Director of Children's Services in each local authority. Children's social services have a general duty to safeguard and promote the welfare of children, with specific responsibilities to support:
- Children at risk;
 - Disabled children; and
 - Looked after children.
- 5.44 As part of their general duty towards children, local authorities are also responsible for delivering a nationwide network of Children's Centres, service hubs where children under five years old and their families can receive seamless integrated services and information. Under the Ten Year Strategy for Childcare, every community will be served by a Children's Centre by 2010, with a target of one centre per 800 children under five.
- 5.45 Children's Centres are expected to be local and accessible to parents, so each is only expected to deliver to a relatively small geographic area.
- 5.46 Hertfordshire County Council is in the process of providing child care spaces on the basis of a new building for every 800 children. Each will provide an integrated 'one-stop' facility covering childcare, health and parenting services. The calculations were done based on need as of 2005, with some adjustment since then for new population numbers. The 82 centres that will be operational in Hertfordshire by March 2010 will be sufficient for the existing population of young children. Any new development will mean a requirement to develop a new Children's Centre.
- 5.47 Hertfordshire County Council envisages that, for any new growth location (i.e. East Luton, Harlow North or the KCDCs), they would create a Children's Centre alongside or as part of any new primary school with foundation stage provision that they were creating. They also stated that they would consider the need for any pre-school/daycare places for under fives as it would make sense to build these alongside the Children's Centre and school. However, specific needs have not been identified.

Cost

- 5.48 It has not been possible to attribute any costs to these services.

Priorities

- 5.49 No specific priorities have been identified.

Recommendation

- 5.50 It is recommended that Children's Services should be included as a CIL item. However, a substantial level of additional work is needed to be able to justify a figure in the CIL. In particular, the service will need to develop a proper forward strategy in order to properly understand needs that will arise from growth. It will also need to justify its approach to the use of different types of centre.

- 5.51 Along with this, it will need to work closely with the education, health and local planning authorities to consider the merits of co-locating in more centralised 'one stop' facilities. Timescale for action: IMMEDIATE

Education

Anticipated Need

- 5.52 The Consultants have assessed anticipated needs for Primary, Secondary and Further Education, all of which are primarily delivered by Hertfordshire County Council.
- 5.53 It should be noted that education is now part of a wider approach to children's services. Every Child Matters White Paper and the Children Act 2004 focused on providing a joined up approach to Children's services. There are a large number of changes under way affecting the delivery of children's education service delivery, including greater parental choice, the move to transfer post 16 education funding from Learning and Skills Councils to local authorities in March 2010, the creation of Children's Centres, Sure Start programmes, Extended School provision, the creation of Academies, Voluntary Aided Schools, and delivery and roll out of programmes such as Building Schools for the Future to help rebuild or refurbish existing schools. Anticipated needs could, therefore, be subject to significant change in the future.
- 5.54 To understand the precise education infrastructure requirements resulting from housing growth, an assessment of existing, and projected, surplus capacity is required. This then needs to be compared against the likely location of new growth, which has been assessed as part of the masterplanning exercise (see Section 3), to establish the need, type and location of new schools in the County. It is understood that this is still in the process of being carried out but, in any event, it is not possible to project local demand accurately over a long time period due to variability in local births.
- 5.55 In addition, while this will establish net new education requirements, it does not take account of capital expenditure required on existing schools. Although the current CIL guidance stipulates that CIL should not be used to remedy historic deficit, it is not clear how the reverse situation will be dealt with i.e. to what extent new housing development can take advantage of existing capacity and, thereby, reduce the contribution required from developers under CIL from what would otherwise be required where no existing surplus was available.
- 5.56 As set out in Section 4, total population in the Hertfordshire Districts is either projected to remain broadly stable or decrease up to 2031, despite new housing growth. However, many existing schools in Hertfordshire are not in the right location to meet need. In particular, those in the 'new towns' of Hertfordshire were built in central locations. These new towns are now established towns, with an ageing population and less demand for school places. Most of the school age population is located on the perimeter of these towns in more recent developments. This pattern is likely to continue in the future with additional provision being required for new housing whilst at the same time in other, established locations, demand may be static or in decline.
- 5.57 In the absence of growth, the capital potentially generated by the closure and sale of existing school sites could be reinvested in the current school portfolio. This could be critical to maintaining the desired quality of service, where existing mainstream funding will not be sufficient. An assessment of the condition, and required works, to the existing education stock is also required.
- 5.58 Consequently, the Consultants have assessed requirements on the basis of the estimated number of new school aged pupils generated by new housing growth at this stage rather than actual schools (see Table 5.2). It is recommended that this approach should be reviewed and revised, as necessary, when new, or more detailed, information is available.

Table 5.2 – School Age Population from Housing Growth (to 2031)

Age	School Category	Estimated Population (to 2031)
5-11 years	Primary	19,116
11-16 years	Secondary	20,668
16-18 years	Further Education (inc. Sixth Form)	6,833

Source: Projections carried out by Hertfordshire Property

- 5.59 It should be noted that, in terms of 16-18 year olds, the figure given in Table 5.2 does not represent the actual number of people that will require further education (FE) spaces. The Consultants have been asked to use the target of 80% of pupils staying on to sixth form and understand there are no sixth form colleges in Hertfordshire. This equates to an estimated population requiring FE provision of 5,466.

Cost

- 5.60 The cost for education provision for this study is based on a cost per pupil for new or refurbished/extended school provision. This is summarised in Figure 5.1.

Figure 5.1 – Education Requirements Calculation

<p>Estimated school aged population X Cost per pupil for new/refurbished school provision = Education Infrastructure Cost Requirement</p>

- 5.61 The Consultants have been provided with the estimated standard costs and sizes for new primary and secondary schools (based on the West Stevenage bond schedule) as set out in Table 5.3.

Table 5.3 – Estimated Standard Costs and Sizes (Primary and Secondary Schools)

School Category	Cost (BCIS 1Q2006)	Cost (BCIS 2Q2008)	No. of Pupils	Cost per Pupil (at 2Q2008 cost)
Primary	£6,115,342	£6,531,185	450	£14,514
Secondary	£20,375,472	£21,761,003	1,080	£20,149

Source: HCC

- 5.62 While in reality some schools could be refurbished/extended to accommodate pupils arising from new housing growth, it is assumed, for current purposes, that these costs should be the same as for new build.
- 5.63 Based on the above costs and estimation of pupil numbers generated by new housing growth, the education infrastructure costs are derived (see Table 5.4).

Table 5.4 – Education Infrastructure Costs

School Category	Estimated Population (to 2031)	Cost per Pupil (at 2Q2008 cost)	Estimated Infrastructure Cost
Primary	19,116	£14,514	£277.5M

School Category	Estimated Population (to 2031)	Cost per Pupil (at 2Q2008 cost)	Estimated Infrastructure Cost
Secondary	20,668	£20,149	£416.4M
Further Education (inc. Sixth Form)	5,466*	£20,149	£110.1M
TOTAL	45,250	-	£804.0M

* adjusted to 80% of estimated population

Source: HCC / Consultants

Priorities

- 5.64 No specific education infrastructure priorities have been identified by the County Council.

Recommendation

- 5.65 Education is recommended for inclusion in the strategic CIL. This will allow the County Council (and other education providers in the County) flexibility to utilise existing capacity and make best use of developer contributions to plan and provide new education infrastructure across the County.
- 5.66 The shape of future provision and age ranges is likely to be substantially different to the system that has operated to date. There is an increasing move to merge secondary and post 16 provision in some of the new schools and have through schools from Age 11 to 19 years. This means that education requirements will need to be reviewed on a regular basis. Timescale for action: SHORT TO MEDIUM TERM

Fire

Anticipated Need

- 5.67 Hertfordshire Fire and Rescue Service (HFRS) is part of the Community Service Directorate of the County Council. The Fire Authority is the County Council. Portfolio responsibility for the fire service rests with the executive member for Community Safety.
- 5.68 HFRS is driven by the HCC attendance standards of one fire engine within 10 minutes and the 2nd within 13 minutes and 3rd within 16 minutes.
- 5.69 The Consultants are aware that there is generally less coverage in the north and east of the County. In particular, the northern areas surrounding the A10 corridor have been identified as a particularly difficult area in which to meet attendance standards. In terms of future requirements relating to new housing and jobs growth, detailed requirements are not known at this stage, as more information on the location, size and timing of future development is required before detailed planning will be undertaken. However, the masterplanning work (see Section 3) has been sent to HFRS, and the Consultants recommend that HFRS use this masterplanning as a basis for undertaking such analysis.
- 5.70 For the purposes of this study the Consultants have been provided with the following information by HFRS, although this may be subject to change and should, therefore, be reviewed in due course:
- If Harlow North accommodates 25,000 dwellings then a new fire station to cover the area is highly likely to be required. Should development only total about 10,000 dwellings, there is still the potential need for a retained (part time) station;

- Growth in the north of Stevenage may result in the need for a new station. Stevenage is currently the HFRS' busiest station, so there is limited capacity to deal with new housing growth as a result of workloads as well as attendance times. The identified need is for a new station (either RT or WT) or a relocation of Baldock in conjunction with a new station.

5.71 It is, therefore, assumed for the purposes of this study that two new stations are required.

Cost

5.72 In terms of costs, a new two pump station (such as may be required for Stevenage) is currently being built in Watford for approximately £5M. A new RT station (such as may be required in Harlow North) would be approximately £2M for build.

5.73 It is assumed a total cost for HFRS is approximately £7 million (excluding land acquisition costs).

Priorities

5.74 In terms of which of the growth locations is a priority, the HFRS has given no further views than those set out above.

Recommendation

5.75 It is considered that the requirement for fire and rescue facilities should be met by a strategic CIL charge. However, this must be supported by robust evidence and therefore further work is needed in this area in order to fully justify its inclusion as a CIL item. Timescale for action: SHORT TO MEDIUM TERM

Green Infrastructure (Strategic)

Anticipated Need

- 5.76 Green infrastructure is the responsibility of the ten District Authorities and the County Council along with numerous other organisations who are involved in the planning, creation, conservation and maintenance of green infrastructure.
- 5.77 For the purposes of setting the strategic CIL it is important to distinguish the elements of green infrastructure (GI) that are strategic and those that, although they form part of a wider network, are considered to represent locally significant GI. Strategic GI is those parts of the GI network that individually or collectively are of significance for more than one District and, therefore, could potentially be funded by the strategic CIL. Those elements of GI that are not strategically significant could be funded through the local element of CIL or section 106 / standard charges.
- 5.78 In assessing the GI needs from new development the general approach would be to apply standards of provision to the planned population increase in the County. This approach is possible at the local level where most Districts have completed PPG17 assessments and have adopted open space standards. However, at the County level, there are no adopted green space standards and there is no Green Infrastructure Strategy. In the absence of adopted standards, information has been sought from Hertfordshire County Council to identify the potential needs for GI arising from planned growth.
- 5.79 The provision of new Strategic GI will, in general, be opportunity led, and, in some cases, the provision of new strategic GI may be difficult to achieve. However, the provision of new GI may not always be the best way of meeting the needs of new growth; often the best option will be to make qualitative improvements to existing GI which could improve the accessibility to the GI network, or make improvements to those spaces that are likely to see an increase in usage as a result of planned growth.
- 5.80 Hertfordshire County Council prepared a Green Infrastructure Framework (January 2009) to respond to the need for new or enhanced green infrastructure to meet requirements from new housing and other growth. The GI Framework sets out the need to develop a GI strategy for the County that clearly highlights existing GI resources, gaps and deficiencies, sets out a strong vision

for improving and sustaining GI, identifies priorities, and proposes delivery mechanisms. At this stage the need for GI resulting from growth has been derived from information provided by HCC.

5.81 HCC advises that the planned growth will place additional pressure on each of the strategic GI assets identified above. However at this stage HCC have not provided evidence in support of this assumption as no detailed assessment of GI needs or a County GI strategy are in place. The County Council has indicated that several projects within the North East London Green Arc initiative would entail improvements to existing GI which they consider to be required to support growth. These projects include:

- Improvements to towpaths on the River Lee Navigation;
- Improvements to towpaths on the Stort Valley; and
- Improvements to Broxbourne Woods.

5.82 It should be noted that there are likely to be other GI projects that would be need to support growth but at this stage, they have not be identified.

Cost

5.83 The total cost for GI as identified by the County Council is £5.2M. This is based on estimates of costs for the above projects provided by Hertfordshire County Council and are quoted at current day prices (2008) with no allowance for inflation.

Priorities

5.84 The priorities for GI are not clear at this stage. The County needs to develop a Hertfordshire GI strategy that clearly sets out the priorities for the enhancement and provision of new GI to support growth.

Recommendation

5.85 Strategic GI should be funded by CIL in future; however, there is a need to carry out further work to assess the requirements from growth before the funding in the CIL can be finalised. Timescale for action: SHORT TO MEDIUM TERM.

Health

5.86 The prime focus of funding for local health services is the Primary Care Trusts (PCTs). Primary health care services in Hertfordshire are delivered by the West Hertfordshire NHS PCT and the East and North Hertfordshire PCT.

5.87 It should be noted that the following areas fall outside the HHS study:

- **Pharmacies and Optometrists** - PCTs do not financially support the initial provision or ongoing costs of pharmaceutical and optometric premises. This is a private sector function;
- **Dental Premises** - PCTs issue a contract to dentists but there are no ongoing capital or revenue issues. Dentists are contracted to provide an agreed level of units of dental activity. For this they receive an income. All running costs are charged against this income.

Anticipated Need

5.88 Appendix B discusses how population growth might be translated into demand for primary healthcare services. However, the situation is complex for a variety of reasons, not least the changing way that health services are procured and provided.

5.89 The health authorities have been unable to provide a sufficiently clear view on what is needed to support growth. In Section 11 on the way forward an indication is given of what is necessary for the health authorities to do to progress this work.

5.90 It is assumed that the infrastructure will be needed over the same build out period as the housing development. In the funding model, infrastructure costs are included pro rata in line with the assumed phasing of development.

Cost

5.91 Given the importance of health services to HHS, a figure for possible costs of £72M was agreed with the health authorities as an interim cost. Such a figure is based on typical experience elsewhere and it will be necessary to do work on local needs in order to derive clear costs.

Priorities

5.92 In the absence of a definitive view on the capital needs arising from growth, it is not possible to determine priorities. Therefore, a priority action for the health authorities is to define their needs clearly.

Recommendation

5.93 Health services are recommended for inclusion in the strategic CIL. This will allow PCTs maximum flexibility for rational planning of health services and to maximise the total developer contribution.

5.94 Significant further work is needed by the healthcare authorities to identify their needs and the associated funding that will be available. Timescale for action: IMMEDIATE.

Municipal Waste

Anticipated Need

5.95 County and Unitary Authorities are responsible for the treatment and disposal of municipal waste. Hertfordshire's County and District Councils have set up the Hertfordshire Waste Partnership (HWP). The HWP has set a target that, by 2012, 50% of all household waste will be recycled.

5.96 New households potentially give rise to the following requirements:

- **Civic Amenity Sites or Recycling and Household Waste Sites (RHWS).** These may need to be extended, redeveloped or relocated to accommodate the increased waste throughput.
- **Waste Transfer Stations.** Depending on the location of new development, it may be more economical to transfer waste from collection vehicles for onward transport to treatment/disposal facilities.
- **Waste Treatment Facilities.** These typically have a lifespan of at least 25 years and need to be designed to accommodate housing and waste growth over this period. It is generally not feasible to extend or upgrade waste treatment facilities and the capital costs for providing one large enough to deal with growth over its life a larger facility must be borne at the beginning of the project.

5.97 Feasibility work undertaken in 2008 has concluded that waste treatment facilities could be centred on a single site or multiple sites and that further analysis of site availability and planning prospects would be required. This work is progressing and a number of spatial combinations are being considered principally one or two processing sites. Therefore, needs have yet to be fully identified.

Cost

5.98 The different types of facility each have their own cost. A new Civic Amenity Sites/RHWS site may cost up to £2.5M, although this would include land costs. A maximum cost of £2M without land costs has been assumed. The cost of a waste transfer station is of the order of £1.5M. The cost of Waste Treatment Facilities depends entirely on the scale and technology adopted.

5.99 A figure of £200M for the provision of new waste disposal/treatment facilities has been identified by the HWP.

Priorities

- 5.100 No specific priorities have been identified.

Recommendation

- 5.101 It is recommended that the provision of strategic waste facilities for the disposal of waste should be included in the CIL. It is important to be clear that this does not include the collection of waste, which is a local item that should be dealt with by way of a local CIL charge. Once the details of the PFI scheme are finalised, it will be necessary to determine if any further work is required to assess needs. Timescale for action: SHORT TO MEDIUM TERM.

Police

Anticipated Need

- 5.102 The Hertfordshire Police Authority (HPA) has stated that it will have a deficit in the provision of resources in all of the areas where significant growth is planned. Specifically this relates to North Harlow, East Luton and the KCDCs.
- 5.103 Based on current information, there would be an operational requirement for an Intervention Base (also referred to as a Type 2 facility) in each of the KCDCs. These facilities comprise a standard specification office building with a gross floor area of between 1,100m² and 1,400m², plus 40 car parking spaces. This gives a land requirement of 0.4ha (1 acre).
- 5.104 It should be noted that, whilst the HPA propose a requirement for a facility of this size in all KCDC locations, it is anticipated that once further information is available on the exact location of the proposed development, social mix and associated infrastructure to be incorporated into development, it is likely that the requirement may reduce from an Intervention Base to a Neighbourhood Police Station which has an approximate gross floor area of 170m². Clearly this would provide a corresponding reduction in the associated capital cost.
- 5.105 HPA states it is critical that new or enhanced police facilities are provided early on as local police need to be able to build relationships with expanded or new communities from the outset, and to react to the need for police services, demand for which will typically commence as soon as growth starts. However, as the Consultants have not been provided with detail of this in relation to specific infrastructure requirements, it is assumed that the infrastructure will be needed over the same build out period as the housing development.

Cost

- 5.106 Based on recent projects at Hatfield, Stevenage and Hertford, the development cost (i.e. construction, professional fees, etc, but excluding the cost of land) of an Intervention Base at 2008 prices equates to £1,800/m². Therefore the capital cost of this facility (excluding land) is in the range of £1.98M to £2.52M. A total cost per Intervention Base of £2M is assumed.
- 5.107 The impact of the proposed developments at North Harlow and Luton East are likely to require not only the creation of a new Intervention Base but also custody provision which would be shared by the respective adjoining Forces (Essex and Bedfordshire). This would represent a significant capital investment which, based on recent developments undertaken, is likely to result in a net cost of approximately £20M (to maximise efficiencies, the HPA would close and dispose of existing inadequate cell accommodation in the surrounding area). There is a debate as to how much of this is attributable to these proposed developments and identification of a 'tipping point' associated to these developments. Depending on the exact location and timing of these developments, this 'joint' operational provision could be located in Hertfordshire. HPA are currently engaged with both Essex and Bedfordshire Forces and their respective County Councils to progress this issue.

- 5.108 The HPA considers there is a need for an Intervention Base to serve each of the KCDCs, so this would cost £15M (six centres at £2.5M each). Furthermore, additional custody centres would add a further £20M. Therefore, the total cost would be £35M.

Priorities

- 5.109 In terms of which of the growth locations is a priority, the HPA have given no particular view.

Recommendation

- 5.110 It is considered that the requirement for police facilities should be met by a strategic CIL charge. However, this must be supported by robust evidence, the framework for which is coming forward through the ongoing development of a charging formula. In order to fully justify its inclusion as a CIL item, further work is needed in this area. Timescale for action: SHORT TO MEDIUM TERM.

Transport

Anticipated Need

- 5.111 The Transport Technical Report should be referred to for definitive detail regarding the transport elements of the HIIS study, Sections 10 to 12 discuss interventions, needs, costs, and funding arising from growth. The transport investment is based upon the costs of all interventions required to cater for RSS growth.
- 5.112 Historic transport deficit has been identified and locations where further pressure will occur due to growth have been acknowledged. In many instances, it is impossible to ascribe a particular item of transport infrastructure to a particular housing growth area. The Transport Technical Report reflects a study that is necessarily at a strategic level, and does not seek to assign individual schemes to particular development sites, the multimodal interventions identified create sufficient capacity to enable the overall growth to be delivered. All schemes have an identified lead partner including those that cater solely for historic deficit.
- 5.113 The HIIS study has concentrated on primary infrastructure, which comprises the multimodal transport network outside the development sites, rather than secondary infrastructure which is everything the developer needs to provide within the development site. The specific transport infrastructure requirement for any given development will be influenced by its trip generation potential, which is linked to both land use mix and location relative to the existing network and services.
- 5.114 The Transport Technical Report identifies a full list of schemes that are necessary for growth (see Table 10.1). The list of schemes is based in the first instance on the County's Infrastructure Plans, and those of other providers such as the HA and DfT, and has been supplemented and confirmed by consultation with the various planning authorities following a series of workshops. The final list has been subsequently developed with new interventions to take account of strategic masterplanning (as set out in Section 3), Sustainable transport policy and practice and due considerations related to delivery of an appropriate and functional network. Where appropriate interventions have been tested in the East of England Regional Model.

Cost

- 5.115 The cost of infrastructure relates to the capital cost of transport infrastructure required to support anticipated future growth and demand. Costs identified in the Transport Technical Report (Chapter 11) are total costs.
- 5.116 Where possible, costs already identified for schemes from published sources have been used, such as those available from the inventory of deficit schemes (identified in Transport Technical Report Appendix B). Other cost estimates have been based on similar types of schemes; for example, the cost of a generic park and ride installation. For a number of the schemes it has been necessary to make reasonable estimates.

- 5.117 The HIIS project recognises the need to include soft infrastructure as part of the transport programme to support growth. This includes ‘Smarter Choices’ schemes; these have been costed and included in the funding model. The costing of Smarter Choices is based on the premise that these measures remove car trips from the road network. This represents a measurable saving, but is offset by the cost of Smarter Choice initiatives. An average cost per trip has been derived, through independent research and case studies, to estimate overall costs.
- 5.118 Costs are summarised in Table 11.3 of the Transport Technical Report by District, type and period (2011-2021 and 2021-2031). Overall costs are £1.1B up to 2031. For the period to 2021 costs are £936M, whilst costs for the 2021 -2031 period are £169M.
- 5.119 Costs in the period 2021-2031 are lower than those of 2011-2021, since the analysis has indicated that the majority of existing and new schemes identified for inclusion in the funding model will be required by 2021.

Priorities

- 5.120 Table 5.5 presents examples of the interventions that should be considered for prioritisation. They are not given in order of priority and should not be considered as the only schemes suitable for prioritisation. Priorities have not been given yet as the actual process will require finalising once plans for growth have been completed as part of the LDF process, and phasing of growth across the county is identified and confirmed in greater detail. Schemes that will be funded at the national level, such as the Thameslink Programme, have not been included in Table 5.5 as the HIIS partners can have little control over their implementation; however, such schemes should be considered essential for growth and lobbying to ensure that they progress is a priority.

Table 5.5 – Potential Priority Interventions

ID	Scheme	Reasons for Prioritisation
N1	Implementation of HCC cycling strategy	Facilitate reduction in car trips and therefore congestion, particularly for shorter journeys
N6	A1000/ B6426 bus priority	Enhancing bus services around Hatfield rail station and between Hatfield and Welwyn Garden City
N13	ATM J6-8	Improving north-south movement through the centre of the county and between Stevenage and Welwyn Hatfield
N18	A4147 corridor Junction improvements	Improved access between Hemel Hempstead and St Albans
N19	St Albans relief road improvements	Improved access around northern St Albans, facilitating local and other east-west movement
N25	A1(M) J8 Capacity enhancement	Improve access to the A1(M) for growth around Stevenage and A1(M) and reduce existing congestion
N27	Smarter Choices	Promotion of sustainable travel across the county will have county and local benefits
R11	Abbey Line passing loop	Improving rail connections between St Albans and Watford
S252	Watford Junction Rail Interchange	Improvement in intermodal connectivity and improvement in road network efficiency within Watford including benefits for the bus network
S31	Breakspear Way junction improvements	Improved access to the M1 from Hemel Hempstead and between Hemel Hempstead and St Albans

Recommendation

- 5.121 It is considered that the requirement for transport infrastructure should be met by a strategic CIL charge. Timescale for action: SHORT TO MEDIUM TERM.

Site Specific Items

- 5.122 All of the following items were considered specifically for whether they should be included in the CIL as strategic items or whether they should be dealt with as site specific items. In all cases, the nature of provision meant that it was deemed to be more appropriate to deal with them as site specific charges.

Utilities – Electricity

Anticipated Need

- 5.123 Electricity is generated from power stations and transmitted through a national network of electricity lines operating at 275kv and 400kv before connecting to local networks owned by distribution companies. EDF is the appointed distribution company for the Hertfordshire area.
- 5.124 Electricity in Hertfordshire is supplied from the National Grid overhead ring main to primary sub-stations which, in turn, supplies the towns and villages within the catchments via smaller sub-stations and a network of underground cables.
- 5.125 EDF has highlighted network supply issues with St Albans, Hatfield/Welwyn, Stevenage and Watford. Some capacity is available for Hitchin, Letchworth, Bishops Stortford, Hertford and Hemel Hempstead. There are some capacity issues which are being rectified at Royston and Watford.
- 5.126 Following preliminary discussions with EDF it is anticipated that the extent of developments planned will require major strategic infrastructure works. The proposed large developments planned to the north and west of Stevenage will need a direct underground feed from Wymondley 400kv system and will require a 132kv primary substation with a number of secondary 33kv substations. The developments planned for Hemel Hempstead will require additional 33kv substations fed from the existing 132kv primary substation. New 33kv substations will be required to serve the developments planned for the southeast of Hemel Hempstead and North Hatfield. As there is little spare capacity in the existing network it is likely that further substations will be required adjacent to the majority of planned developments.

Cost

- 5.127 As a guide the cost of a new sub-station would be in the region of £2M and the off-site network cable works are likely to be between £1-3M dependent on the extent work works and upgrading works needed to serve the developments. EDF were unable to provide clear estimates of total cost for infrastructure that would be required to support new development.

Priorities

- 5.128 The scale of growth planned in Hertfordshire up to 2031 will require new electricity sub-stations to be built. The planning and installation of these sub-stations can take about two years. Planning of the infrastructure needs to commence as soon as possible to ensure that it can be installed in the timescale required for the development

Recommendation

- 5.129 Developers would be expected to pay for the proportion of costs associated with the electricity infrastructure required to support the development. It is, therefore, recommended that electricity supply infrastructure should not be included within a strategic CIL charge.

Utilities – Gas

Anticipated Need

- 5.130 Gas is delivered through seven reception points into the United Kingdom and distributed through a National Transmission System (NTS). National Grid is responsible for the NTS which covers the whole of Great Britain.

- 5.131 A series of off-take points in the NTS supplies gas to twelve Local Distribution Zones. In the Hertfordshire area National Grid Gas is the licensed gas transporter. Three off-takes from the National Grid system supply the whole of the Hertfordshire area.
- 5.132 National Grid Gas Distribution has estimated that there is likely to be a 15% increase in annual gas demand by 2016/17. The capital expenditure to meet this increase in demand together with general infrastructure replacement, is of the order of £160M over a five year period
- 5.133 Large scale growth of the type envisaged in the KCDCs particularly where the development would be in the form of new urban extensions, will generally require a direct connection to a medium or high pressure pipeline.
- 5.134 The masterplanning exercise carried out as part of HHS has identified potential locations for future development. Following preliminary discussions with National Grid and using the masterplanning as the basis for determining the potential locations for connection points to the gas network system, the available infrastructure is set out in Table 5.6.

Table 5.6 - Potential Locations for the Connections to the Gas Network

Location	Pressure	Connection Point
North and West Stevenage	Medium Pressure	Corey's Mill Lane
North East Hemel Hempstead	Medium Pressure	Three Cherrytrees Lane
South East Hemel Hempstead	High Pressure	Breakspear Way
West Hemel Hempstead	High Pressure	Piggots End
South East Welwyn	High Pressure	Crosses the site
North Hatfield	Medium Pressure	Comet Way
North Harlow	High Pressure	Station Road

Source: Consultants

Cost

- 5.135 For each of the main developments the cost of the major infrastructure is likely to be in the region of £2M depending on the extent of the off-site reinforcement required.

Priorities

- 5.136 The installation of major off-site gas mains could take up to two years and will, therefore require forward planning and would be dependent on the phasing of the developments planned. Planning of the infrastructure needs to commence as soon as possible to ensure that it can be installed in the timescales required for the development.

Recommendation

- 5.137 Developers would be expected to pay for the new infrastructure required to support the development. Therefore, it is recommended that gas supply infrastructure should not be included within a strategic CIL charge.

Utilities – Potable Water Supply

Anticipated Need

- 5.138 Potable water supply in the study area is provided by Three Valleys Water. The whole of Hertfordshire County is located in the Three Valleys Water catchment area.
- 5.139 Water is supplied to the catchment from boreholes and surface water abstraction. Some 60% of the supply is from 260 boreholes located in the chalk aquifers in the catchment and the remaining supply is from surface water abstraction from the River Thames in the south.
- 5.140 Three Valleys Water has published a draft Water Resources Plan which sets out the Company's strategy for ensuring that there are sufficient water resources and supply to meet the future demand in the period between 2010 and 2038.

- 5.141 The Government has produced a water strategy 'Future Water' for England which sets out a vision for water use to 2030 and highlights that future water demands can be met by the water companies implementing a 'twin-track' approach by seeking additional water supplies and by demand management using measures that will reduce the average water consumption.
- 5.142 Over the last 20 years Three Valleys Water has invested heavily in creating a strategic network of water mains to ensure that water can be transferred around the water supply zones to meet present demands and to cater for future growth. Therefore there are no particular issues at the strategic level. However, there is little spare capacity in the existing non-strategic water supply infrastructure to serve the proposed major developments. The network infrastructure upgrade needed to serve these developments will require the installation of large diameter water mains and will no doubt require upgrading of the downstream water mains. This is not considered an issue that will not normally stifle growth and is likely to be overcome relatively easily.
- 5.143 Three Valleys Water is actively implementing demand management policies by encouraging the use of water meters. The Government is promoting a policy of water reduction measures through legislation and is moving towards a zero carbon new homes policy which will have the effect of reducing water consumption by 50% by 2016.
- 5.144 The Rye Meads Water Cycle Study has recently been undertaken to understand the long-term implications for potable water and wastewater for the Stevenage, Hertford, Welwyn and Harlow. The study will provide a strategy for investment needed to serve the proposed developments in this part of the County. The study is due to be published for consultation in 2009, Until this study is completed it is not possible to be certain as to what infrastructure would be required to meet the needs of planned developments in this part of the County.

Cost

- 5.145 Three Valleys have been unable to provide an estimate of costs for likely infrastructure to support future growth. With the information currently available it is not possible to identify a potential cost for new potable water infrastructure.

Priorities

- 5.146 The infrastructure upgrades needed to serve the developments could take several years to construct, it will be important that infrastructure required to support the KCDC growth is planned in early and to support the phasing of development.

Recommendation

- 5.147 Funding for potable water infrastructure is through the water company's asset management plan, with those upgrades to the network that are necessary to serve development funded by each developer. Therefore it is recommended that potable water supply infrastructure should not be included within a strategic CIL charge.

Utilities – Wastewater

Anticipated Need

- 5.148 Thames Water is the UK's covers the majority of the Hertfordshire drainage catchment. Anglian Water is responsible for the Stevenage drainage network and surrounding towns to the north.
- 5.149 The Hertfordshire drainage catchment can be split into two main catchments with the east draining to Rye Meads STW and the west draining southwards to Maple Lodge STW.
- 5.150 Rye Meads STW is located east of Hoddesdon and serves Harlow, Stevenage, Welwyn Garden City, Ware and Hertford with the treated flows discharging to the River Lee. Maple Lodge STW is located near Rickmansworth and serves the towns of St Albans, Hemel Hempstead and Watford.
- 5.151 Thames Water aim to have spare capacity at both wastewater treatment works to accommodate future growth subject to consent limitations that the Environment Agency apply to the works.

- 5.152 Thames Water are looking to provide capital investment in the next round of capital funding (2010-2015) to upgrade the Rye Meads STW to provide sufficient treatment capacity for future growth equivalent to 50,000 population which should ensure a design horizon to 2026. Maple Lodge STW has some capacity issues and the consented flows are expected to be reached in 2016 meaning that further capital investment in the STW will be required in the future to allow for growth. The size of developments proposed in the catchment draining to Maple Lodge STW should mean that no major capital works will be required to the sewer system.
- 5.153 It is likely that surface water run-off from masterplanned areas will be restricted by the Environment Agency to greenfield run-off rates. It is anticipated that the developments will be designed to incorporate Sustainable Drainage Systems (SuDS) to ensure that run-off is managed in a sustainable manner.
- 5.154 A Water Cycle Study has recently been undertaken for the Rye Meads catchment to determine the most suitable option for draining the future developments planned in Stevenage, Welwyn and Harlow.
- 5.155 The draft consultation is due to be published in 2009 and until the strategy has been agreed by all stakeholders then the infrastructure requirements cannot be confirmed at this stage. However, preliminary discussions with Thames Water have indicated that the existing sewer network infrastructure is reaching the limit of its available capacity and will need to be upgraded to cater for the large developments planned. In particular the trunk main from Stevenage, which discharges in a south easterly direction towards Rye Meads STW is known to be overloaded.
- 5.156 Thames Water has recently consulted the public and stakeholders on their 25 year Strategic Direction Strategy 'Taking Care of Water'. The strategy highlights the issues with the centres of population growth being close to the sources of rivers, leading to strict standards for discharge of treated effluent. Forthcoming legislation such as the Water Framework Directive, will set even stricter controls on effluent discharged to rivers.

Cost

- 5.157 As the level of infrastructure required to support new development is unclear at this time, it is not possible to provide an estimate of the likely cost of wastewater infrastructure.

Priorities

- 5.158 The water companies have a statutory obligation to provide a drainage connection on request. However, the construction of new infrastructure and upgrading of existing infrastructure is a long time consuming process due to the issues with procurement and land acquisition. Even for relatively small infrastructure reinforcement it can take on average between two and five years before the necessary infrastructure is in place before development can proceed. Large developments that require major trunk sewers or new or extended sewage treatment works could take up to 10 years, the need for early planning is therefore essential.

Recommendation

- 5.159 Developers would be expected to pay for the proportion of costs associated with the infrastructure required to support the development. Therefore it is recommended that waste water supply infrastructure should not be included within a strategic CIL charge.

Local Infrastructure Needs and Costs

- 5.160 Local CIL items are those for which needs are determined and provided at the local level. It is, therefore, appropriate that the individual Districts are the ones that determine these needs.
- 5.161 The needs and costs of the local CIL items will be entered into the Funding Model by the individual Districts themselves. In this respect, each District will have sole ownership of the local CIL element of the Funding Model. They will be able to set their own charges for this element of the CIL.

- 5.162 Each District is most appropriately placed to determine its own needs. Districts are also free to determine costs for local CIL items, provided they are justified. Alternatively, Districts may wish to use a standard menu of costs. In the following assessments for each item, a proposed cost is given. This is based on an extensive assessment of case studies, published guides and interpretations of data from sources including Spons and the Building Cost Information Service (BCIS), provided by the Royal Institute of Chartered Surveyors. In addition, 96 supplementary planning documents (SPDs) have been reviewed and information drawn from 57 of them.
- 5.163 Unlike for strategic items, no advice is given on prioritisation. This is for each individual District to determine. In all cases, the overall recommendation is that these items are considered as part of the local CIL.
- 5.164 It is important to reiterate that there is no hierarchy of importance between the strategic CIL and the local CIL. Both are part of a proposed overall CIL charge for Hertfordshire and should always be given equal weight.

Community Centres and Youth Facilities

Anticipated Need

- 5.165 Community centres and youth facilities (mostly youth centres) are both meeting places used by members of a community for social, cultural, or recreational activities. There is a general consensus on the need to provide community centres/neighbourhood centres and youth facilities as part of the infrastructure requirements.
- 5.166 Community centres or village halls are particularly important in rural communities that are experiencing a decline in rural services such as closure of schools, post office, village shops, churches, etc. However, difficulties can arise over the management and the cost of maintenance of community centres. These are not a statutory service and provision and management of these can vary from public, private to voluntary sector.
- 5.167 Services for young people are delivered through a variety of organisations (including the Youth Service, and the community and voluntary sector) and are based on a range of facilities, of which purpose-built youth facilities are only one but the one requiring significant public sector capital expenditure.
- 5.168 There is no national standard setting out a fixed ratio of level of physical youth provision to population or numbers of dwellings but it is considered that the growth areas/KCDCs will need new purpose-built provision.
- 5.169 As yet, there is no specific need for a new youth facility identified as part of the growth areas/KCDCs. It will be important for further work to be undertaken in order to derive a justifiable level of provision.
- 5.170 In development terms, the facilities for youth and community are both best provided after the 'community is residing' in the area in order to determine the specific requirement of the community and their commitment to support with management of the facility. However, if there are delays in provision then there could be adverse implications on the spare capacity in existing areas which will be needed to serve additional infill development. Also, it could affect the sense of belonging to a community or even whether people choose to use sustainable transport measures or not. So in reality, it is most appropriate that youth and community facilities are provided early in the build programme.

Cost

- 5.171 A youth facility or community centre needs to have an area of at least 250m² in order to provide an adequate range of services. A reasonable basis on which to plan is considered to be 0.4m² per dwelling and a cost budget of £1,700 per m² to cover construction, fees and basic equipment. This should cover, for instance, the facilities specified in Sport England's Design Guidance on dual

purpose 'Village and Community Halls'. This works out at £680 per dwelling (0.4m² per dwelling x £1,700 per m²).

- 5.172 It is anticipated that in many places the preference will be to extend or renovate existing premises. There is no way to generalise accurately about renovation costs although the cost of extension is often the same as the cost of new build, with the value of access to existing shared services offset by negative economies of scale in the construction contract. The Consultants suggest that, where the real intention is to build anew or extend a community centre, the full rate of £1,700/m² is used. Where the aim is renovation, half the rate (£850/m²) should be used.

Cultural Facilities

Anticipated Need

- 5.173 Cultural facilities consists of a wide range of facilities and services including museums, art galleries, creative space, theatres/performing arts space and heritage exploration. The list is wide ranging, depending on local assets and community aspirations. Such facilities can have a special role in helping with 'Place Shaping' and increasingly in creating and developing the creative business sector economy.
- 5.174 The infrastructure requirement for cultural facilities varies considerably depending on type of facility and location. There is not a simple standard requirement. Some local authorities have identified specific requirements in respect of cultural facilities. It is appropriate for each local authority to undertake its own assessment.
- 5.175 There is no particular timing requirement for such facilities. However, it will be desirable for the benefit of the new community to provide some form of cultural facilities early on within a development.

Cost

- 5.176 As the costs vary considerably depending on the type of facilities, it is not possible to estimate a cost at this stage. Each District will have different specific needs, even from the same type of facility, so generic costing could potentially be misleading.

Libraries

- 5.177 Library provision has been included as a local CIL item because, in the view of the Consultants, it operates very much at a local level. This is despite the fact that the service is provided at a County level by Hertfordshire County Council. In some respects, arguments could be made for it being included as either a local or a strategic item. This may therefore be an issue that the study partners will wish to address in advance of finalising a CIL charge.

Anticipated Need

- 5.178 Library provision in Hertfordshire is undertaken by Hertfordshire County Council. In 2005 it embarked on consultation on a new vision and implementation plan entitled, '*Libraries for the 21st Century*'⁶. This had the aim of creating a new direction for the service, accompanied by a substantial programme of investment.
- 5.179 The libraries implementation plan (for consultation purposes) identified that eleven libraries were priorities for replacement. Much of this provision will likely be addressing historic deficits. No view has been given on the additional needs arising from growth and it will be important to clearly define this.
- 5.180 Not only is this service a statutory requirement but most new libraries now provide a hub of other community activities and so it is considered that they are an important requirement for early community infrastructure provision as part of the new development.

⁶ Libraries for 21st Century - Change for Excellence 2005-2015 published Jan 2006

Cost

- 5.181 Library requirements will vary depending on location, size and existing provision elsewhere. The detailed design, components, and form of the final library provision will be developed as part of the detailed design and masterplanning of major growth. Locational factors in getting the most of library usage and throughput will be important considerations for the masterplanning stage. Experience has shown that libraries that are a part of other joint service centres or close to major retail outlets can secure better use.
- 5.182 It is likely that over time, the type of delivery of the library service could change considerably with much greater use of outreach and electronic services, and joint shared multi use centres.
- 5.183 For this study, a national standard requirement has been used based on published information by the Museums and Library Archives (MLA) – ‘A Standard Charge Approach 2008’⁷. The MLA recommends a figure of 30m² per 1,000 population as a benchmark for local authorities. Whilst this is considered to be (in the absence of a view on an appropriate local standard) the most reasonable standard to adopt, the Consultants’ view is that it is quite high. Therefore, it is recommended that further work is done at the County level to determine an appropriate standard.
- 5.184 The MLA standard cost for construction and fit-out has been used to estimate costs. A recommended current benchmark figure here is £3,000 per m².
- 5.185 Using the benchmark figures above gives a cost of £90,000 (30m² x £3,000) per 1,000 people, or £90 per person for new housing. This figure would then need to be related to the estimated occupancy of new dwellings in proposed housing schemes.
- 5.186 Extending an existing library will be at a lower cost than a totally new development. However, for the purpose of this study the Consultants have assumed all provision will be for new provision as most major growth will be focused in new areas away from existing libraries.

Open Space, Sport and Recreation (including Indoor Leisure Facilities)

Anticipated Need

- 5.187 In PPG17, open space is defined as ‘*all open space of public value, including not just land, but also areas of water such as rivers, canals, lakes and reservoirs which offer important opportunities for sport and recreation and can also act as a visual amenity*’⁸. This includes parks, green corridors, outdoor sports facilities, allotments, community gardens, cemeteries, civic spaces, including civic and market squares, and other hard surfaced areas designed for pedestrians. Also, this includes amenity greenspace (most commonly, but not exclusively in housing areas) and informal recreation spaces, greenspace in and around housing, domestic gardens and village greens.
- 5.188 Sport and recreation is not formally defined for the purposes of PPG17. However, for the purposes in this study, the Consultants have followed PPG17 guidance on the definition of this category. This encompasses facilities for sport and recreation, including swimming pools, indoor sports halls and leisure centres, and so on.
- 5.189 The HIIS Study does not cover private, voluntary and specialist sports provision including for instance indoor and outdoor tennis clubs, stadia, and golf courses. Also, whilst included in the assessment, no requirement for cemeteries has been explicitly identified. However, it is recognised that in several areas where there is significant growth, it will be potentially necessary to provide additional burial space. This is picked up in some Districts within their PPG17 assessments. In any event, it is a specific local item that each local authority should identify individually.

⁷ www.mla.gov.uk/website/publications

⁸ PPG17, Annex, para 1

- 5.190 In PPG17, the Government has stated that open space standards are best set locally, stating that national standards cannot cater for local circumstances, such as differing demographic profiles and the extent of existing built development in an area⁹.
- 5.191 In line with this guidance, a number of Districts have performed PPG17-compliant assessments of open space and leisure needs. At the time of writing, those that have not are in the process of undertaking this work. Each district will define its needs in its appropriate PPG17 assessment.

Cost

- 5.192 The proposed standard costs of the individual items that make up open space, sport and recreation are as follows:
- **Urban parks and gardens:** a reasonable budget for mid-2008 and including fees but not land is £180,000 per ha for an urban park and £82,000 per ha for a neighbourhood park.
 - **Natural and semi-natural greenspaces:** there is no single model for the provision of natural and semi-natural greenspaces. These differ from a Country Park because they need less interventionist investment in landscaping and facilities. A reasonable figure for a typical space is £10,000 per ha.
 - **Green corridors:** the concept of a green corridor is not defined well enough such that it is amenable to costing. Specific proposals would be needed. Also, strategic green corridors would be covered under strategic green infrastructure, part of the strategic CIL.
 - **Outdoor sports facilities:** reasonable budget estimates are given in the Sport England 'Kitbag'. These are:

Table 5.7 - Costs of Outdoor Sports Facilities, Q2 2008

Facility Type	Facility Details	Costs
Changing Rooms	4 team changing pavilion	£565,000
Outdoor Tennis Court	2 court, macadam, fenced and floodlit	£135,000
Grandstand	500 seater with no undercroft	£495,000
Synthetic Turf Pitches	Sand based 100 x 64m fenced and floodlit	£600,000
	Rubber crumb 100 x 64m fenced and floodlit	£740,000
	Water based 100 x 64m fenced and floodlit	£925,000
Athletics Track	6 lane floodlit	£1,150,000

Source: Sport England 'Kitbag'

- **Amenity greenspaces:** the costs for amenity greenspaces will depend on their individual specification. In practical terms the creation of amenity greenspace as defined in PPG17 might only involve some earth moving, grass and possibly a footpath, so provision at the lower end of the cost range is considered adequate. The proposed figure is £20,000 per ha.
- **Local Equipped Areas for Play (LEAPs) and Neighbourhood Equipped Areas for play (NEAPs):** The proposed figures are £40,000 per LEAP and £80,000 per NEAP.
- **Multi-Use Games Areas (MUGAs) and Shelters:** The proposed figures are £60,000 for a MUGA and £5,000 for a shelter.

⁹ CLG (2006) PPG 17: *Planning for open space, sport and recreation*, para 6

- **Skateboarding:** The proposed figure is £40,000 for each themed activity facility. In this case, a themed activity facility will typically encompass a broader range of facilities than just skateboarding; it will include BMX courses and artificial snowboarding tracks.
- **Allotments:** the proposed figure for allotments is £100,000 per ha.
- **Community gardens and urban farms:** these are usually ‘one offs’ and a specific budget is not practical.
- **Churchyards and cemeteries:** It is assumed that in most cases the requirement will be to extend existing cemeteries (although it is recognised that in some locations, new land for burial space will need to be found). In practical terms the extension will need a fence or wall, access paths and possibly equipment storage, with the first of these being the major cost. The proposed figure is £50,000 per ha.
- **Civic space:** these are one-off items that are design-led. It is therefore not possible to provide a single charge figure.
- **Indoor leisure facilities:** This mostly relates to swimming pools and sports halls, as other items are particular one-offs. The most suitable source for deriving the cost of facilities for a given population is the Sport England ‘*Sports Facilities Calculator*’. The proposed figure for a 4-court sports hall and a 25m, 5-lane swimming pool is £2,717,500 each.

Waste Collection

Anticipated Need

- 5.193 Waste collection relates to the provision of ‘wheelie’ bins and recycling boxes for individual dwellings. The need will increase directly in line with the increase in the number of new dwellings.

Cost

- 5.194 Typical costs reflected in existing SPDs are around £50 per house and £70 per flat for the provision of wheelie bins. A figure of £150 per dwelling, to include individual bins and recycling boxes, is recommended.

Other items

- 5.195 The HHS study was required to consider employment and retail and also flood defences. At present, neither has sufficient justification for inclusion in the CIL.

Employment and Retail

- 5.196 The need for infrastructure does not arise only from new housing development. It also comes from other major land uses. In this case, it is appropriate to consider the needs arising from employment and retail development. There may be other uses that should accommodate a charge but, in reality, the returns from development would be insufficient to be able to justify it. This would in all likelihood lead to a reduction in development of these uses which could compromise wider goals of the spatial strategy.
- 5.197 For retail and employment development, the approach is to identify the proportion of vehicle movements on the road network that this new development creates, out of all vehicle movements. This is informed by the transport modelling and specifically the East of England Regional Model (EERM). This splits the morning peak hour traffic by type. Approximately 25% of all this traffic is accounted for by commercial trips. These consist of:
- Heavy goods vehicles (HGVs);
 - Light goods vehicles (LGVs); and
 - Executive business (these are people travelling to and from meetings by car)

- 5.198 Information from the transport assessment shows that, based on the cost of the transport requirements, there is a current projected shortfall in funding of approximately £676M. So if this, £169M (i.e. 25%) can be attributed to commercial traffic on the roads so should be funded by the developments that create that traffic, i.e. new commercial premises.
- 5.199 The next stage is to determine the gross additional employment floorspace to be created in Hertfordshire. This can only be done by extrapolating forward past rates of development at the same rate. Data from the Hertfordshire County Council Development Monitoring System shows that, over the period 2001/2 to 2007/8, the annual average gross gain in B-class employment floorspace across Hertfordshire was 202,000m². Extrapolating this forward over the 20-year period 2011-2031 gives a total requirement of 4,040,000m² of floorspace.
- 5.200 Therefore, for every 1m² gross gain in commercial floorspace, there should be a charge of approximately £42 on developers in order to address the shortfall in the funding for the identified transport infrastructure¹⁰. Retail trips should be modelled differently, ideally on a case-by-case basis, reflecting the different profile of traffic. However, as a guide, the same analysis a carried out above derives a similar figure. Extrapolating retail development from the past seven years into the future, and adopting the same split of traffic, means that if retail development is added to B-class employment development, the charge decreases slightly to £37.
- 5.201 It is recommended that further work is done in this area to provide sufficient justification for a charge. At present therefore, it cannot be included as part of the CIL. However, if justification were provided, then it could be included as part of a strategic CIL because of the typical impact that employment and major retail development has on the strategic road network.
- 5.202 Part of the reason for further work needing to be undertaken is that such a charge on employment and retail development would be a new phenomenon. Whilst the concept of a CIL is new, charging residential development a form of tariff for its impact most certainly is not. In addition, employment investment in particular is footloose. In other words, it can choose where it locates and so if one area is charging it for new development whereas another one is not, it is more than likely that the decision on where to locate will fall in favour of the area without the charge. Whereas the same could, in theory, be said of residential development, the values make it far more resistant to such charges. Also, residential development typically expects to pay for its impacts; historically, this has been less the case for employment and retail development.
- 5.203 So it will be necessary to undertake further work, particularly on viability, to determine whether such a charge would have a significantly detrimental effect on new investment. If, in consultation with commercial developers and inward investment agencies, this is deemed to be likely, then pursuing a charge could have wider negative impacts. In particular, it could compromise the employment market in the county, which would in turn increase levels of out-commuting as residents have to travel further to access jobs.

Flood Defences

- 5.204 To date the Environment Agency have not given any indication of what might be required to mitigate the impacts of the potential growth locations. Clearly, further work is required to assess this.
- 5.205 It is the Consultants' recommendation that flood defence items are something that should be considered on a site-by-site basis by way of a site-specific charge. Only if a Strategic Flood Risk Assessment identifies significant strategic needs could flood defence be included as part of the strategic CIL.

¹⁰ £169m divided by 4,040,000m² of gross floorspace equals £42/m².

Overall Summary of Need and Costs

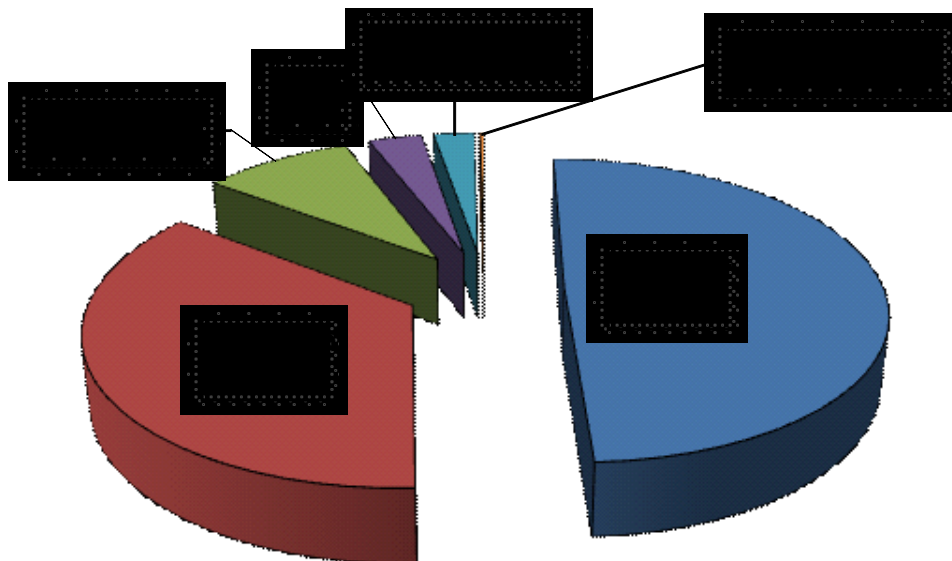
Strategic CIL items

5.206 Table 5.8 and Figure 5.2 provide a summary of the current estimated costs for the strategic CIL items. This gives a total cost for strategic infrastructure of £2.24Bn. However, it should be noted that several categories have a zero figure. This means that further work is needed to determine a cost figure. Those categories which do have a figure attached to them will need further work in order to verify these costs.

Table 5.8 - Strategic Infrastructure Costs by Category

Strategic Infrastructure Category	Estimated Cost
Transport	£1,106.0M
Education	£804.0M
Municipal waste	£200.0M
Health	£71.9M
Police	£35.0M
Ambulance	£12.7M
Fire	£7.0M
Green Infrastructure (strategic)	£5.2M
Adult care	£0.0M
Children's Services	£0.0M
Total	£2,241.9M

Figure 5.2 – Strategic Infrastructure Costs (%) by Category



Local CIL items

- 5.207 The needs of individual Districts in respect of local CIL items are most appropriately determined at the local level. Some Districts have provided information on their local needs but many have not. It is therefore not appropriate to consider this information in the HIIIS.
- 5.208 Where needs are defined locally, then costs will vary from District to District. For the purposes of the HIIIS it is important to have an understanding of the possible level of charges for local CIL items. Table 5.9 below takes some typical needs and assigns the resultant charges to them, based on the costs recommended above.

Table 5.9 - Example of Likely Scale of Local CIL Charges

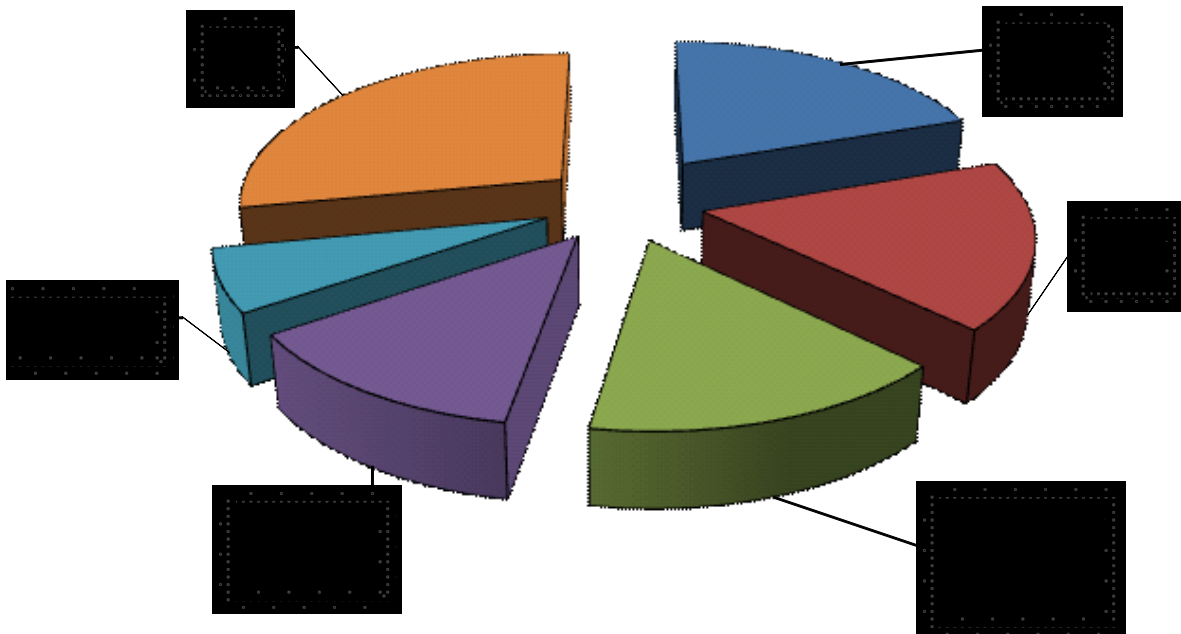
Infrastructure Item	Cost Per Required Item	Basis for Deriving Need	Charge Per Dwelling
Urban parks and gardens	£180,000 per ha	PPG17 assessment - 0.53ha/1000 pop	£187
Natural and semi-natural greenspaces	£10,000 per ha	PPG17 assessment - 7.76ha/1000 pop	£152
Sports pitches	£125,000 per ha	PPG17 assessment - 2.30ha/1000 dwgs	£288
Amenity greenspaces	£20,000 per ha	PPG17 assessment - 0.55ha/1000 pop	£22
LEAPs	£40,000 per facility	PPG17 assessment - 0.29ha/1000 dwgs	£773
NEAPs	£80,000 per facility	PPG17 assessment - 0.29ha/1000 dwgs	£232
MUGAs	£40,000 per facility	PPG17 assessment - 0.29ha/1000 dwgs	£870
Shelters	£40,000 per facility	PPG17 assessment - 0.29ha/1000 dwgs	£73
Skateboarding	£40,000 per facility	PPG17 assessment - 0.29ha/1000 dwgs	£232
Allotments	£100,000 per ha	PPG17 assessment - 0.22ha/1000 pop	£43
Churchyards and cemeteries	£50,000 per ha	Assume 3ha of burial space per District	£15
Libraries	£3,000 per m ²	National standard of 6m ² /1000 pop	£176
Indoor leisure facilities	£2,717,500 per facility	Assume a 4-court sports hall and a 5-lane swimming pool per District	£536
Community and youth centres	£1,700 per m ²	Assume requirement of 0.4m ² /dwg	£680
Cultural facilities	£5,000,000 per facility	Assume one 500-seat studio theatre	£49
Waste collection	£150 per dwg	For wheelie and recycling bins	£150
Total			£4,477

- 5.209 Table 5.9 shows that, if all the items shown are included within a local CIL, then there would be a total charge of £4,477 per dwelling. It is important to make clear that this is just a theoretical example. It does not necessarily represent the standards or costs that a District may adopt. Moreover, it may not include all of the items that a District may wish to include in its local CIL (or indeed it may have far more items than a District may wish to include). Potentially therefore, an assumption of a local CIL charge being no more than £5,000 per dwelling is considered to be reasonable, on the basis that minimal public funding will be available (see Section 6).
- 5.210 If these charges are applied to the dwelling levels required to be built over the period to 2031, then the total cost this would generate would be approximately £423M, split by category as shown in Table 5.10

Table 5.10 - Estimated Cost of Local CIL Items

Local Infrastructure Item	Estimated Cost
MUGAs	£83.5M
LEAPs	£74.2M
Community and youth centres	£65.2M
Indoor leisure facilities	£54.4M
Sports pitches	£27.6M
Skateboarding	£22.3M
Urban parks and gardens	£18.5M
Libraries	£17.5M
Natural and semi-natural greenspaces	£15.0M
Waste collection	£14.4M
NEAPs	£11.1M
Shelters	£7.0M
Cultural facilities	£5.0M
Allotments	£4.3M
Amenity greenspaces	£2.1M
Churchyards and cemeteries	£1.5M
Total	£423.4M

Figure 5.3 - Estimated Cost (%) of Local CIL Items



- 5.211 It is important to reiterate that this is not the actual local CIL cost. This is simply a high level assessment of what it could be if the recommended charges are used. It will be for each District to determine their local CIL needs and the associated costs.

Infrastructure Costs by Area

- 5.212 Infrastructure costs by District were assessed and are shown in Table 5.11. Where requirements are considered Countywide, such as some strategic transport infrastructure, or have been established using a high level methodology, such as education, the costs have been pro-rated based on the assumed level of residential development in the District.
- 5.213 There is substantial variation in infrastructure between district on this basis, ranging from approximately £95M in Three Rivers to approximately £440M in East Hertfordshire. The districts include the KCDC (within Hertfordshire) which are set out in Table 5.12.

Table 5.11 – Infrastructure Costs by District

District	Strategic	Local	Estimated Cost
Broxbourne	£79.8M	£23.5M	£103.3M
Dacorum	£305.0M	£49.2M	£35.4M
East Hertfordshire	£374.0M	£63.6M	£437.6M
Hertsmere	£119.7M	£25.3M	£145.0M
North Hertfordshire	£352.8M	£83.1M	£435.8M
St Albans	£295.0M	£50.8M	£345.9M
Stevenage	£151.4M	£37.3M	£188.6M
Three Rivers	£76.2M	£19.3M	£95.5M
Watford	£337.3M	£24.4M	£361.7M
Welwyn Hatfield	£151.7M	£46.9M	£198.5M
Total	£2,242.9M	£423.4M	£2,666.3M

Costs by KCDC

- 5.214 The infrastructure costs by KCDC (within Hertfordshire) are shown in Table 5.12. Approximately 45% of the total infrastructure costs have been assigned to the KCDCs. The costs for individual KCDCs vary substantially, from approximately £90M for the East Luton KCDC to over £275M for the Watford KCDC.

Table 5.12 – Infrastructure costs by KCDC

KCDC	Strategic	Local	Estimated Cost
Stevenage / North Herts	£176.1M	£58.4M	£234.5M
Hemel Hempstead	£202.1M	£26.8M	£228.9M
Welwyn / Hatfield	£137.6M	£31.4M	£169.0M
Watford	£286.1M	£5.3M	£291.4M
Harlow – growth in East Herts	£125.9M	£43.1M	£169.0M

KCDC	Strategic	Local	Estimated Cost
East Luton – growth in North Herts	£68.7M	£21.1M	£89.8M
Total	£996.5M	£186.1M	£1,182.5M

Way Forward

- 5.215 There are significant gaps in the information provided by the service providers. These gaps must be addressed over time. Section 11 identifies the work that key service providers will need to undertake in order to derive a robust idea of their needs.

6. Funding Issues

- 6.1 This section provides a summary of the funding available to deliver the needs identified in the Section 5. It starts with an assessment of mainstream public funding sources and then goes on to explore the net cost of need to be met by the HHS Funding Model.

The Relative Contribution of Public versus Private Funding to Support the Cost of Growth

- 6.2 There is no generally accepted approach to the principle of the extent to which developer contributions should be sought towards the cost of facilities when mainstream funding is available for the same purpose. The logic of 'mitigation of impact' in Circular 05/2005 suggests that if a development gives rise to the need for a facility, then the development should pay for it unless the planning authority decides otherwise. In contrast, the Draft CIL Guidance says that '*while CIL will make a significant contribution to infrastructure provision, core public funding will continue to bear the main burden, and local authorities will need to utilise CIL alongside other funding streams to deliver infrastructure plans locally*'. Neither Circular 05/2005 nor the Draft CIL Guidance adequately address the issue of how need is to be measured. Should it be the absolute impact of a scheme or the marginal impact? This is fundamental because, as discussed in Section 4, not all occupants of a new housing development will be new to the District. Logic dictates that charges should be levied on the basis of the contribution that additional housing makes to a change in population across an area as a whole, but in practice that can be almost impossible to calculate on a reliable basis. There is a need for a practical response to the real problem of providing the infrastructure required.
- 6.3 Precedent provides limited assistance in resolving these problems. A lot of current practice in relation to planning contributions has a strained relationship to some of the principles set out in Circular 05/2005 and does not reflect the assumption in the Draft CIL Guidance that public funding will bear a major part of the burden of the costs of growth. The development industry was more ready to accept higher charges when land values were higher and before the tightening of the rules governing public subsidy for affordable housing provision and the imposition of the Code for Sustainable Homes. In the future this will probably change in more difficult markets and, if a CIL is introduced, there will be increased initial scrutiny and less scope for subsequent debates about scheme viability.

Mainstream Public Funding Sources

Strategic CIL items

Adult Care

- 6.4 With the new ways of providing services, Adult and Social Care Services will continue to provide some services directly and commission others, such as day care, home care, community meals, short breaks and residential care. Increasingly they will enable support through direct payments for service users and carers and individual budgets will also become available.
- 6.5 It is assumed that the additional revenue funding required to meet the growth needs associated with population growth will be built into the government funding formula once the additional population increase is taken into account. Therefore, no specific funding is assumed.

Ambulance

- 6.6 Eeast is funded largely by the PCTs, with some additional charitable donations. It is therefore assumed that there is mainstream funding to pay for new infrastructure related to growth, but due to the funding 'time lag' there is a need for the annualised equivalent of the capital costs of the required facilities for three years.

- 6.7 The Consultants have calculated this at approximately £2.9M and, therefore, assumed £9.8M of mainstream funding is available from the PCT (i.e. £12.7M minus £2.9M).

Children's Services

- 6.8 Funding in any given area depends on 'need' criteria, i.e. how deprived an area is, etc. Funding for new buildings beyond the 2010 target is not clear. DCSF funding of £300,000 per children's centre should be available after 2010 on the basis that the Government will wish to continue its pledge of full coverage. It is understood that there are no local authority capital budgets for providing new children's centres.

Education

- 6.9 The bulk of capital funding (excluding Building Schools for the Future) is allocated by formula to education authorities by central Government in line with the national spending review. Thus the published information for this study relates to the period from 2008 to 2011. This funding is provided in the form of a grant or as supported borrowing.
- 6.10 The main sources of capital funding for the purpose of this study are made up of Basic Needs Funding (BNF), Modernisation Funding and Building Schools for the Future (BSF) funding. A summary of these sources, in addition to other education funding sources, is set out in Appendix B.
- 6.11 BNF is the main funding source for responding to population growth. The County has been allocated £21,473,378 for the period 2008/9 to 2010/11. However, there are two key issues with the use of this for funding growth requirements. Firstly, there is no allowance made in BNF for a situation in which there is a need for spaces in one part of an education authority area to be offset by a reduction in the number of spaces required in another part. Although the Consultants have not been provided with an assessment of the extent to which this is likely to happen in Hertfordshire, this is likely to be an issue. Usually, the proceeds of selling a surplus school only make a small contribution to the cost of constructing a new one elsewhere. In any event, these receipts will diminish if planning contributions increase.
- 6.12 Secondly, BNF is notional in that it is in the form of what is described as 'supported borrowing'. As Hertfordshire County Council (HCC) is a floor authority in terms of distribution of revenue support grant, it does not in fact receive any 'support' to any borrowing that it might make. HCC has not, therefore, received any actual additional resources to reflect demand for additional places, and no borrowing to support new provision has taken place.
- 6.13 There is also modernisation funding available to support building programmes for new or refurbishment of existing provision. The current 2008 – 2011 Capital Allocation is £36,424,812. However, the Consultants understand there is a multi-million pound backlog of improvements to schools to improve condition and suitability to minimum modern standards and to meet health and safety requirements.
- 6.14 Finally, there is Building Schools for the Future (BSF) funding. This brings together significant investment (circa £45bn nationally) in buildings and in Information and Communications Technology (ICT) over the coming years to support educational reform. It will be used for replacing and renewing the existing school stock and funded through the PFI mechanism. Generally speaking the sums available have been adequate for these purposes, although this has not been the case in Hertfordshire. In Stevenage, the County Council has had to contribute an additional £40m from capital receipts and other sources to the funding provided by government to provide a realistic budget for the type of investment programme government has required. Many education authorities also claim that the need to use PFI for new building in some circumstances is poor value for money and makes it difficult to meet the highest standards of provision. Some local authorities also object to the alleged use by DCSF of BSF to promote Academy schools.
- 6.15 There is no firm Government commitment to fund the BSF programme beyond the duration of the current spending review or indication of when each of the remaining areas in the county will

receive funding. Even if some funding were available in the future, BSF funding does not cover the full costs of new provision for marginal additional pupils; the PfS funding formula is based on additional pupils generating only 75% of the costs of new additional provision.

- 6.16 Consequently, based on information provided by HCC, the Consultants have assumed for the purposes of this study that no mainstream funding is, in practice, available to fund the education requirements resulting from housing growth.

Fire

- 6.17 Hertfordshire County Council (HCC) receives (on behalf of Hertfordshire Fire and Rescue Service) both Central Government grant and Council Tax. Grant funding is increasingly 'reduced' against inflation meaning that any shortfall must come from Council tax. The ability to raise Council Tax is fettered and subject to the capping regime and 'must be substantially below 5%'. There is access to PFI funds for larger schemes, usually those involving major service reconfiguration, though it is understood that a recent potential PFI bid did not come to fruition.
- 6.18 Unlike infrastructure such as schools, few new developments are large enough to warrant a new fire station or even an extension to an existing one and are, therefore, not delivered by the development process. As HFRS is part of the County Council and the Council is caught by its floor authority status in terms of borrowing to pay for large capital items, it is unlikely there will be significant funding available to pay for growth unless there is any surplus capital made available in the Council's budget or central government grant available for growth areas can be used. The Consultants are not aware that at this time either exists.

Green Infrastructure (Strategic)

- 6.19 The Hertfordshire County Council budget for 2008/9¹¹ includes a budget of £5.5M for Environmental Management, which covers the following key services: CMS (partly funded by the County Council), maintenance of the public Rights of Way network, management of rural estates and the Hertfordshire Biological Records Centre. The capital programme includes an annual provision of £85,000 per annum over the three years 2008/9-2010/11, and the major capital schemes earmarks £960,000 split equally over three years 2008/9-2010/11 for management of the Rights of Way network.
- 6.20 Much existing funding for GI is provided by organisations involved with managing their own GI assets and some from Government funding schemes. Hertfordshire's Strategic GI is currently funded by a variety of sources, which include funding from: Natural England; landowners; local authorities; Hertfordshire County Council; S106; the Environment Agency; and in the case of LVRP a precept on tax payers in Hertfordshire (£1.3M from Hertfordshire taxpayers 2007/8), Essex and London Boroughs.
- 6.21 The Hertfordshire GI framework identifies potential funding for future GI which could include: the new growth point fund, developer contributions and CIL, private sector funding, environmental stewardship schemes, small scale funding grants, private sector sponsorship, AONB Conservation Board, joint delivery projects, and conservation trusts.
- 6.22 Under GAF2 10% of funding was ringfenced for Green Infrastructure and GI providers could bid directly to CLG for grant in aid. However, under the new funding system, funding is no longer ringfenced and is only available to Local Authorities, UDCs or statutory bodies. However, CLG guidance on Programme of Development (2008) makes it clear that GI is still a priority for sustainable growth and encourages GI providers to work in partnership with local authorities to ensure GI needs are reflected in the Growth Fund Programme of Development. Two of the projects that HCC has identified as being required to support growth will be funded by GAF (ie towpath improvements in the Stort Valley).

¹¹ Hertfordshire County Council Budget Book (2008/9 Edition)

Health

- 6.23 Funding for health services is provided to PCTs on a capitation basis. The PCTs are expected to manage their requirements within this. They have a degree of flexibility in this respect including the use of their own capital, realisation of surplus assets and through various forms of the Private Finance Initiative (PFI).
- 6.24 NHS Local Improvement Finance Trust (LIFT) is also available and new forms of LIFT are now available countrywide. LIFT is a Public/Private Partnership (PPP) financing vehicle for improving and developing frontline primary and community care facilities. Its explicit objective is to allow PCTs to invest in new premises in new locations, not merely reproduce existing types of service. LIFT finance is also available to assist with developing premises for small practices and 'single handed GPs'.¹²
- 6.25 There is also increasing private sector involvement in the creation and funding of new health centres which are then leased to GP practices with the rent met from the PCT's revenue funding within the PCTs budgetary restraints (e.g. development companies such as Primary Health Properties and Carecapital, together with a number of specialist investment funds).
- 6.26 PCTs get funding for GP premises from the Department of Health. This funding is ringfenced, and is paid to GPs.
- 6.27 However, PCTs do not receive a specific budget for new premises developments as such. Funding for expansion to the current provision would be at the expense of other competing priorities and ultimately may not be possible.
- 6.28 The revenue consequences are the important thing for the PCTs. Capital costs are embedded in the revenue costs attached to new development. Therefore, other sources of funding for new facilities have to be explored. As part of this it is the PCT's policy to seek section 106 contributions towards healthcare for housing developments.
- 6.29 Given the fact that the healthcare authorities have been unable to identify their needs associated with growth, it has not been possible to determine the levels of funding that might be available to them.

Municipal Waste

- 6.30 As committed to in Hertfordshire Waste Partnership's strategy, the partners are looking to procure services from an appropriate provider to deliver the required services. This is to take the form of a private finance initiative (PFI) and in April 2009 it was announced that Hertfordshire County Council would receive £115M in PFI credits to implement a waste management scheme that has the potential to divert 170,000 tonnes of municipal waste annually from landfill.

Police

- 6.31 The Hertfordshire Police Authority (HPA) is revenue funded by a mix of Central Government and local government funding, with the former only intended to cover national projects. It is assumed that the Police will effectively fund their capital requirements out of their revenue budget by saving, borrowing or renting.
- 6.32 The police service has a PFI budget but the problem is that the actual capital cost of responding to the growth agenda is often fairly limited in any specific area and that PFI as a mechanism is uneconomical to use on smaller projects. It follows that where consideration is being given to using PFI to upgrade the police estate, there is no reason why the cost of responding to population growth should not be included within it. But where there is no such plan it would simply be uneconomical to assume that PFI could be used as a funding mechanism.

¹² http://www.dh.gov.uk/en/Procurementandproposals/Publicprivatepartnership/NHSLIFT/DH_4076707

6.33 The HPA is currently putting together a formula to justify a charge on development. This has been commissioned by the Association of Chief Police Officers and the Association of Police Authorities and is being developed nationally. It is likely to be adopted nationally later in 2009. The formula is based on needs being population, not housing, driven. It reflects the fact that not all occupiers of new housing are new to an area so it discounts the population in new housing to reflect the fact that many occupants will be in-migrants. This follows the approach taken in HHS.

6.34 This formula is, as yet, still in draft and there are several issues that would need to be reviewed to ensure that it is consistent with the information used by other service providers and within the spirit of the CIL Regulations. However, the recommendation is that planning contributions are assumed to have to meet the full cost of growth needs. This is because the capital needs of the Police are comparatively small and also because the pressure on local authority capital budgets is likely to become increasingly severe.

Transport

6.35 The existing mainstream funding available for the transport infrastructure can be split as follows:

- DfT and HA schemes, some of which are considered to be fully funded;
- Projection of existing funding such as LTP or equivalent; and
- Regional Funding Allocation.

6.36 A number of schemes are known to be fully funded by DfT, such as large rail projects and M25 widening. Although these schemes feature in the list of interventions, due to their significance to the county, they are not included in the funding model or costs because of their funding status.

6.37 RFA funding has only been assumed for current RFA bids, which are: Croxley Rail Link; Watford Junction Rail Interchange; and Little Hadham Bypass. There is a total of £195.5M to 2021 (in approximately 2008 prices). Assuming this is accurate it is judged that the same amount would be available for similar schemes between 2021 and 2031. This has not been allocated to schemes over the second ten year period as it is not clear what schemes would be appropriate.

6.38 RFA represents a funding last resort and is usually highly oversubscribed with individual schemes competing not only with others in the same authority, but with other regional schemes as well. The proportion of schemes awarded RFA funding in Hertfordshire in recent years is of the order of a few per cent and there is, therefore, a major shortfall in the funding of the larger LTP schemes.

6.39 It is assumed funding for the current LTP period will remain constant from 2011 to 2031. It is considered that one third of this will be available over this timescale, the remainder going towards smaller schemes and those not appropriate for CIL funding. This gives a total LTP budget of £79.5m from 2011 to 2031. However, the schemes that will need LTP funding are all anticipated to be required by 2021, meaning that only half of the total funding from this source will be available (i.e. LTP funding between 2011 and 2021) resulting in only £39.8m being available for the schemes to which LTP funding will contribute. This is spread according to scheme cost across eligible schemes on a pro rata basis (excluding for example HA schemes).

6.40 Although a number of areas in Hertfordshire currently benefit from GAF funding it has been indicated that transport schemes would be unlikely to have the first call on this source, and it has therefore been assumed that GAF would not contribute towards the cost of transport growth impacts.

6.41 In addition to schemes appropriate for CIL funding it is anticipated that monies will be secured through negotiation for off-site public transport, cycling and walking measures. It will be essential to ensure that developers will be able to relate the results of their individual contributions to proposed schemes. Anticipated section 106 funding will therefore need to be related to the specific package of measures for which contributions will be sought. Packages will become more definitive as plans progress and it becomes clear what level of new development will be accommodated in each strategic sector / sub-area.

Utilities – Electricity

- 6.42 While there is some spare capacity in several of the towns it is considered that, in general, the proposed housing growth will require a substantial investment in infrastructure before a connection is permitted. This may be in the form of additional sub-stations and new and heavier duty cables. All costs associated with these works including design will be sought from the developer.
- 6.43 EDF may be prepared to fund some strategic infrastructure if that has the benefit of reinforcing supply to the existing networks. However, the developer will be recharged a proportion of these costs.

Utilities – Gas

- 6.44 The cost of the network infrastructure both on-site and off-site will be borne by developers. The gas company may wish to install strategic pipelines at an early stage of the developments and will recharge a proportion of the costs to each developer. National Grid will not install infrastructure on a speculative basis to serve potential developments and will need to enter into agreements with developers before any work is commenced. Ofgem the gas and electricity regulator will not accept the practice of speculative main laying as this would be seen as anti-competitive and against the interests of the consumer.

Utilities – Potable Water Supply

- 6.45 In general the water resource and treatment upgrades needed to serve the developments will be funded by the Company's five year Asset Management Plan. The network upgrades necessary to serve the developments will be funded by each developer. If the proposed infrastructure upgrade would provide benefit of security of supply to that part of the system then the Water Company may contribute to the costs of the works.
- 6.46 Three Valleys Water may wish to take the opportunity to oversize the water mains to serve potential adjacent development sites. The extra costs could be initially funded by the water company and would be reclaimed when these developments are commenced. This would be dependant on them obtaining the necessary funding in the 5 year capital programme and the approval from the Regulator, Ofwat. The water company would only seek to carry this out when they have a firm commitment from the developers of the sites and that all the sites would be developed in a reasonable timescale.
- 6.47 The Water Industry Act 1989 recognises the impact of new developments on the existing water supply network and allows water companies to make an infrastructure charge for each property connected to the water supply. These charges are designed to ensure that existing customers do not have to bear the full burden of the investment needed to serve new developments. This charge is separate to the cost that they charge developers for the requisition of new mains which is based on the total cost of the mains off-site pipework and any necessary upgrades downstream.

Utilities – Wastewater

- 6.48 Funding of new sewer upgrades needed to serve future developments will generally be funded by the developers. If it is necessary to lay off-site sewers to serve the developments then the normal procedure is for the developer to requisition a connection point under Section 98 of the Water Industry Act 1989. The water company will then design and construct a suitable sewer, which may include for enhancements to the downstream sewer system to cater for the proposed flows. All costs associated with the requisition will be recharged to the developer.
- 6.49 If a strategic system is required to serve more than one development then the water company may choose to design the system to cater for the future flows. The developer will then be required to pay for the proportion of costs associated with that development with the remainder paid for by the water company who will recharge those costs as the other developments progress.

6.50 In the same manner as the potable water infrastructure charge there is a similar charge for the right to connect to a sewer system. This is based on a standard charge per property but may be scaled back for larger developments.

Local CIL Items

Community Centres and Youth Facilities

6.51 Most community centre developments are dependent on external funding in the form of grants or developer contributions to support the capital cost of providing the infrastructure and for major extensions/repairs. Typically the type of grants used include Lottery, Charities, Neighbourhood Renewal Programmes, local authority grants administered via the Rural Community Councils and Landfill Grants. It is very difficult to provide any degree of certainty that such funding streams will be able to fund a certain level of need.

6.52 There are two funding sources for youth facilities at present:

- **Myplace**, which only has a budget of £190M across England over the next two years. It is described as a 10-year programme, but no further funding rounds have been identified as yet;
- **Local authority capital budgets**. These vary greatly by location and over time. Few have any explicit capital expenditure for this at present, and the situation is likely to get worse as asset sales receipts fall.

6.53 Given the above, it is assumed that there is no funding from mainstream sources to cope with growth.

Cultural Facilities

6.54 Capital funding for cultural facilities tends to be predominantly from grant sources such as Tourism Agencies, East of England Development Agency, Heritage Lottery, Arts Council and Charities, as well as mainstream local authority funding.

6.55 There has been little evidence of developer contributions supporting major cultural facilities in the past. However, some local authorities have secured funding of a percentage for art schemes. An example of this is the Hallam Fields sustainable urban extension (SUE) in Charnwood. They secured a contribution of £45,000, based on negotiations which used 1% of the cost of the project as a starting point for the negotiations (but secured an amount that was less than 1%). This funding was then used to lever in additional funding from the Arts Council and Arts for Business. The main use of the funding was to undertake a range of community consultations that will form the basis for more permanent art installations on the site to create a sense of place and community cohesion.

6.56 Given the above, it is assumed that there is no funding from mainstream sources to cope with growth.

Libraries

6.57 The main sources of funding for libraries tend to be either grant sources such as Lottery, People's Network, or mainstream local authority funding.

6.58 For the purpose of this study it is assumed that there is no mainstream funding available. This is because no clear view was given on the potential from more certain funding sources, i.e. local authority funding. In the absence of bids for other grant sources, it is simply not possible to input a figure for possible funding on any reasonable basis.

Open Space, Sport and Recreation (including Indoor Leisure Facilities)

- 6.59 In consultation with the Districts it has become clear that, in the great majority of cases there is either negligible or nil capital budget set aside for the acquisition of new open space to serve the demands of growth.
- 6.60 Capital investment of this sort is normally considered to be within the remit of local authorities but there are no dedicated mainstream sources of funding to support any investment. There are some small and specialised sources of funds for specific and narrowly defined projects but these cannot sensibly be used as a platform for strategic investment. It is not practical to assume that the Districts will be able to contribute significantly to capital expenditure beyond what might be expected by way of creating and maintaining funding amenities for existing populations.
- 6.61 It is, therefore, assumed that funding to meet the capital costs of provision of these facilities is not available from existing mainstream funding.
- 6.62 Where money is available from developer contributions it is anticipated that these funds will be allocated to a central fund for improvements to, and enhancement of, recreation and community infrastructure. Some of this money can then be used towards match funding Lottery and other grant aid.
- 6.63 However, it is not possible to be precise about how successful authorities will be in attracting match funding. Adopting the precautionary principle, it is assumed that no match funding will be available.

Waste Collection

- 6.64 This comes directly from local authority capital expenditure budgets. There is no other available source of funding to address this.

Overall Summary of Identified Funding

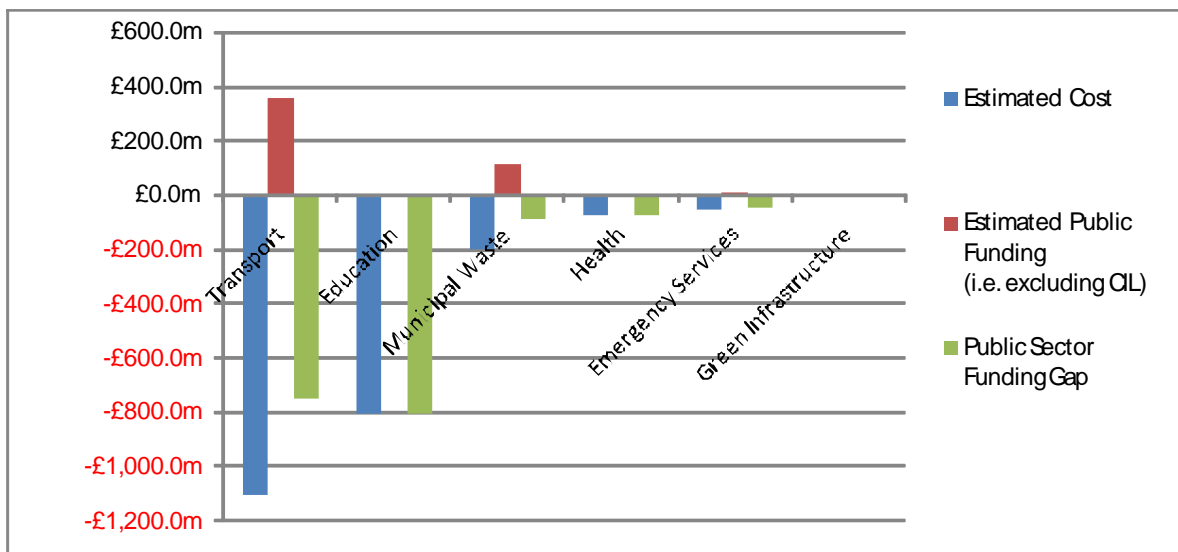
- 6.65 A summary of the identified mainstream funding is given in Table 6.1. This shows that the level of mainstream funding identified to date that could contribute towards development is nearly £485M.

Table 6.1 - Identified Mainstream Funding by Service

Infrastructure Services	Funding
Adult care	£0.0M
Ambulance	£9.8M
Children's Services	£0.0M
Community facilities	£0.0M
Cultural facilities	£0.0M
Education	£0.0M
Fire	£0.0M
Green Infrastructure (strategic)	£0.0M
Health	£0.0M
Indoor sports facilities	£0.0M
Libraries	£0.0M
Municipal waste	£115.3M
Open space, sport and recreation	£0.0M
Police	£0.0M
Transport	£359.5M
Waste collection	£0.0M
Youth facilities	£0.0M
Total	£484.6M

- 6.66 Certainly it is necessary for all service providers to be clear on what their capital programmes are for the next five years. In many respects, these programmes are fixed and will represent what can be delivered through known funding schemes over that period. It is beyond that period when there is greater uncertainty and a robust method for determining the prospects for securing funding are needed. This highlights, through the infrastructure process, the need for service providers to update their capital programmes at suitably regular intervals.
- 6.67 The study has revealed that much of this potential from other mainstream funding still remains unclear across a host of service providers. Many do not seek to access all possible forms of funding, preferring instead to deliver the level of service that they can within the confines of their core funding. Figure 6.1 shows education has the largest public sector funding gap, with no mainstream funding currently identified.

Figure 6.1 - Public sector funding gap by strategic infrastructure category



- 6.68 It is fundamental that there is a better understanding of the potential of the full range of funding streams available to service providers. The Draft CIL Regulations are clear that all mainstream funding opportunities must be explored before seeking developer funding.

Other Funding Sources

- 6.69 Below is a brief discussion of some of the other significant funding sources that may be available to contribute towards addressing funding needs.

Regional Infrastructure Fund (RIF)

- 6.70 The Consultants are aware that the East of England Region is considering establishing a Regional Infrastructure Fund (RIF). This has already been considered in other regions and implemented in the South West. The RIF seeks to identify new sources of funding to deliver infrastructure in the region and would be used as part of the Regional Funding Allocation process in the context of an integrated regional strategy.
- 6.71 The RIF is sometimes seen as being a means of adding to the amount of capital available for permanent investment. The Consultants consider that this will be relatively difficult to achieve on any scale and understand that the only potential 'new money' identified might be raised through a supplementary business rate, essentially a levy on business. This might well be unpopular in the short term at least and there are clearly problems with raising funds towards infrastructure projects that might at any particular point in time, be remote from the contributors or their interests.

- 6.72 Where it might have an application, is resolving cash flow issues on the 'critical path' for infrastructure delivery, perhaps on a rolling programme basis with repayments from CIL planning contributions downstream. An approach to dealing with detailed timing and cash flow issues is outside of the scope of this study but it is possible that this is an area in which any RIF might be a useful tool for resolving specific problems.
- 6.73 The Homes and Communities Agency is a key provider of support primarily through subsidy for the provision of affordable housing. In the past this used to consist of grants that were not assessed on a formulaic basis and which were not readily made available in instances in which development was viable without them. Recently there has been a change of emphasis and the Agency is adopting a new approach based on a 'single conversation' with relevant authorities about how best to support growth in their areas. The conclusions and recommendations of the HHS Study reflect what is currently known about this emerging approach insofar as it is suggesting that a higher rate of overall planning contributions could be sustained on a County-wide basis if support for affordable housing were to be focused on the lower value areas.

Regional Funding Allocation (RFA)

- 6.74 In summer 2005, the Government announced the introduction of the Regional Funding Allocation (RFA) process. This process invited regions to give advice to the Government on policy and public spending decisions within defined budgets for the period up to 2016. A second RFA round is currently underway and advice was due for submission to Government by February 2009. RFA2 funding streams include transport, regional economic development, housing and regeneration.
- 6.75 With a CIL in place, Hertfordshire authorities would be in a stronger position to bid for such funds, as they would be able to use receipts – or the guarantee of future receipts – to make a contribution towards RFA priorities. This would serve to 'stretch' available RFA monies and also potentially to enhance a scheme's relative priority in the RFA list of potential schemes.

Local Authority Business Growth Initiative (LABGI)

- 6.76 The original three-year trial of the Local Authority Business Growth Initiative (LABGI) returned a proportion of the increase in business rates to qualifying local authorities. CLG is consulting on radical changes to the methodology that would simplify the regime and reduce the number of eligible authorities. Of the ten Authorities in Hertfordshire, only St Albans and East Hertfordshire expressed a preference for LABGI.
- 6.77 LABGI is funded by ringfencing part of the overall revenue from business rates and is not 'new' money. As such, its potential to provide significant additional funding to support CIL is relatively limited.

Net Cost of Need to be met by CIL

- 6.78 Table 6.2 shows that, based on the assessment of costs and available funding, there is a shortfall in funding of £2.18Bn. This would need to be made up through the CIL charge, which would equate to a charge of £23,000 per residential unit based on the requirement to deliver 95,925 dwellings in the County between 2011 and 2031. This charge would be broken down as £18,000 for the strategic CIL items and £5,000 for the local CIL items reflecting the respective costs for and funding of strategic and local infrastructure.

Table 6.2 - Infrastructure Funding Gap and Required CIL

	Strategic and Local Infrastructure	Strategic Infrastructure	Local Infrastructure
Strategic infrastructure	£2,241.9M (from Table 5.8)		

	Strategic and Local Infrastructure	Strategic Infrastructure	Local Infrastructure
Local infrastructure	£423.4M (from Table 5.9)		
Total costs	£2,665.3M	£2,241.9M	£423.4M
Mainstream Funding	£484.6M (from Table 6.1)	£484.6M	£0.0m
Shortfall in Funding (to be met through CIL)	£2,180.7M	£1,757.3M	£423.4M
Required CIL per dwelling to cover shortfall*	£23,000	£18,000	£5,000

* based on the requirement to deliver 95,925 dwellings between 2011 and 2031

- 6.79 Focusing on the required strategic CIL per dwelling, this present figure could be broken down by item as shown in Table 6.3 below:

Table 6.3 – Example of likely scale of strategic CIL charges

Strategic Infrastructure Category	Estimated mainstream funding gap	Required CIL (per dwelling)
Transport	£746.5m	£7,782
Education	£804.0m	£8,382
Municipal Waste	£84.7m	£883
Health	£71.9m	£750
Police	£35.0m	£365
Herts Fire and Rescue Service	£7.0m	£73
Green Infrastructure	£5.2m	£54
Ambulance Service	£2.9m	£30
Total	£1,757.2m	£18,319

- 6.80 It is important to stress that, at present, not all information on needs and particularly funding has been provided. Therefore the overall CIL requirement is likely to change. This is particularly the case for strategic CIL items, where, as Table 6.1 shows, there are large gaps in the information on mainstream funding available. Once this has been provided, it will almost certainly serve to reduce the shortfall in funding. Whilst this alone will serve to reduce the strategic – and overall - CIL requirement, it is likely to be counterbalanced by the increase in needs – and therefore costs - once all service providers have fully reported on this. The local CIL requirement is less likely to reduce as available funding is far lower. However, it is for the individual districts to determine their needs and therefore the local CIL element that is charged in their particular district.
- 6.81 Receipts from the strategic CIL items will go into a central CIL pot to be distributed across the county as appropriate. Districts will retain all local CIL receipts from development and be able to use these within their local area. More detail on the management arrangements are given in sections 9 and 10.
- 6.82 Table 6.4 shows the top ten infrastructure items requiring CIL funding. It has been assumed a number of Highways Agency schemes are included in the CIL and are unfunded. These three major schemes are estimated at £292.8m, equating to over 95% of the total Highways Agency scheme costs identified and approximately 25% of all transport costs identified.

Table 6.4 – Top Ten Infrastructure Items Requiring CIL Funding

Infrastructure Item(s)	Infrastructure Category	Lead Partner	Priority	Estimated Cost	Estimated Mainstream Funding	Funding Required from CIL
A1 ATM J6-8	Transport	HA	3	£164.0M	£0.0M	£164.0M
Bus East-West PT Corridor	Transport	HCC	3	£150.0M	£0.0M	£150.0M
Demand Management Smarter Choices	Transport	HCC	4	£114.7M	£0.0M	£114.7M
M1 J6-10 ATM	Transport	HA	3	£89.6M	£0.0M	£89.6M
New Waste Disposal/treatment	Municipal Waste	HCC	3	£200.0M	£115.3M	£84.7M
M25 J17-19 ATM	Transport	HA	2	£39.2M	£0.0M	£39.2M
KCDC Intervention Bases (type 2 facilities)	Police	Herts Police Authority	3	£35.0M	£0.0M	£35.0M
East Herts-Multi District existing schemes	Transport	Mainly HCC	3	£26.0M	£1.9M	£27.9M
Cycle implementation of HCC cycling strategy	Transport	HCC	4	£36.0M	£12.1M	£48.1M
A602 Ware-Stevenage Road Improvements	Transport	HCC	3	£20.0M	£0.0M	£20.0M
Total				£874.5M	£14.0M	£888.5M

- 6.83 In reality, Hertfordshire will benefit from a range of Government-funded investment on strategic national and regional projects likely, if not certainly, to be outside the CIL process. The latest CIL proposals¹³ state that “some commentators have expressed concern that CIL should not be given to national bodies. However, there is a consensus that the spending of some national bodies, some of which form part of central government, is essential to unlocking development at a local level”. It goes on to state that “the spending of these agencies, and others, provides substantial benefits to a local or sub-regional area in a particular part of the country, rather than being of purely national benefit. Accordingly, the Government believes that these bodies should be able to receive funding from CIL revenues. However a decision to allocate funding to national bodies should form part of the wider process of infrastructure planning alongside other infrastructure”.
- 6.84 In addition, previous CIL guidance indicated that CIL should not be used to remedy existing deficiencies (i.e. historic deficit). The three Highways Agency schemes set out below include elements of historic deficit, and therefore it may not be possible to include all these costs in a CIL.
- 6.85 If it is assumed Highways Agency schemes are publicly funded, the transport costs reduce from £1,106.0m to £813.2m. This would mean the required CIL to meet unfunded infrastructure costs would reduce from approximately £23,000 per unit to £20,000 per unit.

CIL cashflow and funding balance issues

- 6.86 Table 6.5 below shows infrastructure costs and CIL revenues on a timeline basis from 2011 to 2031 on the basis of a CIL charge equivalent to £23,000 per dwelling. It shows the overall shortfall

¹³ Communities and Local Government - Detailed proposals and draft regulations for the introduction of the Community Infrastructure Levy: Consultation (July 2009)

of income, both at the strategic and local level and the particular issues encountered in the years 2016 to 2020 where a very substantial funding hole of approximately £230m appears.

Table 6.5 - CIL Cashflow and funding balance (£M)

	2011	2012	2013	2014	2015	2016-20	2021-25	2026-2031	Total
Strategic Infrastructure Costs	£64.4m	£74.6m	£183.4m	£159.1m	£94.3m	£897.1m	£471.4m	£297.4m	£2,241.9m
Mainstream Funding	£14.5m	£14.4m	£115.7m	£83.3m	£15.6m	£108.1m	£107.3m	£25.7m	£484.6m
Strategic CIL (£18,000/unit)	£47.3m	£67.0m	£78.8m	£92.9m	£98.5m	£541.9m	£445.8m	£354.5m	£1,726.6m
Strategic Infrastructure Funding Balance	-£2.6m	£6.7m	£11.0m	£17.2m	£19.7m	-£247.1m	£81.7m	£82.7m	-£30.6m
Local Infrastructure Costs	£11.6m	£16.4m	£19.3m	£22.8m	£24.1m	£132.9m	£109.3m	£86.9m	£423.4m
Local CIL (£5,000/unit)	£13.1m	£18.6m	£21.9m	£25.8m	£27.4m	£150.5m	£123.8m	£98.5m	£479.6m
Local Infrastructure Funding Balance	£1.5m	£2.2m	£2.6m	£3.0m	£3.2m	£17.6m	£14.5m	£11.5m	£56.2m
Overall Funding Balance	-£1.1m	£8.9m	£13.6m	£20.2m	£22.9m	-£229.5m	£96.2m	£94.3m	£25.6m
Cumulative Funding Balance	-£1.1m	£7.8m	£21.4m	£41.6m	£64.6m	-£164.9m	-£68.7m	£25.6m	-

7. Viability

7.1 The preceding analysis of infrastructure needs, costs and funding suggests that it will be necessary to raise approximately, and on average, £23,000 per unit from CIL to pay for all the infrastructure required to support growth. The exact sum will vary depending on locally defined needs.

7.2 However, it is not simply a case of setting a CIL at £23,000 per unit across Hertfordshire. This section considers whether a charge of £23,000 is practical in the context of the viability of the development on which it would be levied. The detailed analysis that underpins this section is set out in Appendix E.

Method

7.3 The impact of various levels of charges on the economics of residential development were tested at the outset of the study and reviewed in the context of the rapid deterioration of the housing market thereafter. This affected:

- the value of development land and thus the developer's ability to contribute to infrastructure and affordable housing costs; and
- the likely pace of development which has implications for the timing of both planning contributions and the need for additional facilities and amenities.

7.4 This analysis focused on residential development because this will:

- form by far the greatest part of the developments; and
- generate most of the new needs, excepting impact on the transport network.

7.5 Judgements about what levels of charge might be sustainable involve assumptions about:

- House prices and the impact of the recession. Values in Hertfordshire are relatively high (for example probably about 50% higher than Milton Keynes overall) but there are areas with lower prices, such as Harlow, Stevenage and in parts of Hemel Hempstead where prices are at about the same level. Prices also vary within towns.
- The residual value of land after all planning requirements have been met, that is needed to maintain an adequate supply of land onto the market.
- The types of sites earmarked for development in the context of their existing use value and preparation costs.
- The impact of policy issues such as layout and design rules and requirements for affordable housing in the context of the potential availability of HCA grant.

7.6 It would not be practical to do a separate calculation of what might be viable in each district (or neighbourhood) in Hertfordshire, so this assessment necessarily generalises about what might be practical in typical conditions within the housing markets across the County and has been devised for that purpose alone. The model cannot be used to determine or predict the value of any particular site or differences between sites.

7.7 The economics of development have been explored using a hybrid residual land value / discounted cash flow analysis to predict the worth of larger schemes over longer time scales and using normative assumptions about the value and cost of development. This model was chosen because it is most closely aligned with the economics of large scale housing development, where schemes are delivered over long time scales by volume housebuilders who use an equity-rich funding mix and whose main objective is to maximise the annual return on their invested capital. In contrast, a traditional residual land value appraisal is best suited to analysing debt funded

schemes delivered over a short time scale. A similar (but not identical) approach was used in DCLG's study of "The Financial Viability of the Eco Towns Programme" published in March 2009. Use of a cash flow approach is essential in this case because the timing of costs and receipts is key to returns. Quite simply, if a housebuilder makes 20% margin on developing a house over one year, he has made a reasonable return. But if it takes him 5 years to achieve that profit a higher annual return might have been made (at less risk) by putting the money in a bank deposit account!

- 7.8 The main influence on viability in most cases is the assumed level of house prices. The second most important influence is the basic construction cost. Another important factor is the return that it is assumed that the developer will need to achieve. In practice, different companies have different targets. A target return of just over 18% per annum equivalent to 4.25% per quarter gross of finance costs has been assumed reflecting the assumption that schemes will comprise a mix of higher return/higher risk market housing elements, and lower return/ lower risk affordable housing. This is at the low end of the range of anticipated returns in normally competitive market conditions.
- 7.9 This was applied to a notional case study development in order to illustrate the effects of a CIL on the overall level of developer contributions. The notional development was a 25ha greenfield scheme where a significant proportion of the land (40%) was made available free of charge as open space or for social infrastructure. The initial calculations were undertaken in 2008 and based on house prices in three notional locations in the County with typically high, medium and low house prices, at the peak of the market and then recalculated on the basis of subsequent falls in house prices of 10% and 25%. The most recent research from Savills, embodied in their note entitled 'Housing Market Recovery' published in March 2009, suggests that this assumption remains appropriate. Some recent reports (in October 2009) have suggested that prices have already returned to only 10% below peak levels. We would caution against relying on these. As it stands the rate of sales is low and the better and thus more valuable homes are more likely to attract buyers. In these conditions studies of trends based on aggregated transactional data tend to exaggerate the pace of recovery.
- 7.10 Key cost assumptions included the extra costs arising from the imposition of Code for Sustainable Homes (CSH) Level 3 and Level 4 standards in accordance with the current timetable (i.e. Code Level 3 in 2010 and Code level 4 in 2013), and the assumption that no HCA grant would be available to offset the cost of providing affordable housing. Generally, the assumptions erred on the side of caution and the land prices predicted by our model were marginally lower than might have been found in the property market at its peak.
- 7.11 It was assumed that the value of the land left in the hands of the landowners and developers after deducting CIL for strategic and local items, generic planning contributions required by Districts through standard charges, and meeting affordable housing requirements; would need to be in the range £1.0M - £1.5M per gross hectare of land. (That is, for all of the land required to implement a scheme, not just the area actually built on). This is a subjective judgement on what will be required to make it a reasonable probability that landowners will bring forward the requisite amount of land for development¹⁴. These residual land value assumptions are described in more detail in Appendix E and are pitched at a level to:
- Provide an adequate incentive to landowners to bring land to the market. A key factor is the extent to which landowners believe that delaying a sale might result in a reduced level of charge perhaps as a result of a successful challenge to the scheme or a change in Government policy;
 - Allow landowners and developers to incur additional costs to overcome other obstacles to development and which are not reflected in the appraisal model, for instance buying out

¹⁴ As far as we are aware there are no directly relevant studies of landowner behaviour in this respect the last being based on the impact of the Development Land tax in the 1970's.

existing occupiers, paying for site specific access works or dealing with unusually severe contamination or coping with ground conditions that require additional substructure.

- Provide a cushion against falls in land values during the development period.

7.12 The £1.0M - £1.5M per hectare should be adequate to cover most obstacles to development that might be encountered on larger sites which have negligible value in their existing use. Where the number of obstacles is genuinely limited, for instance empty, flat and well drained sites suited to building off strip foundations and with good access to the road and utilities networks, the lower end of the target range might be appropriate. (The scope of this study excluded a check on site characteristics at this level of detail so the Consultants had to generalise and take a cautious view). Many of these sites will be held by major housebuilders under option agreements which allow them to draw down land from the owner as and when required for development. The price for each tranche is usually calculated by reference to the values achieved net of the various costs of development. These option agreements will usually include a minimum price for the land. In the past a typical figure would have been around £250K to £500K per hectare. Housebuilders who hold land under option agreements have a lower incentive to maximise land values than outright owners.

7.13 However at the other end of the scale it needs to be recognised that a residual land value of £1.5M frequently will not be high enough to:

- Justify buying out existing owners of land that has significant current use value such as older industrial estates that are still substantially occupied;
- Permit the development of smaller sites that require extensive access works;
- Develop on land that poses severe physical constraints such as a requirement for expensive flood protection works.

7.14 District councils need to consider this when assessing viability issues in the context of their Employment Land Reviews and Strategic Housing Land Availability Assessments and the land resulting land allocations that in their DPD's

House Prices and Land Values

7.15 Any recovery in house prices will not necessarily be accompanied by an equivalent and parallel improvement in land values. This is because land values are the result of subtracting the anticipated costs of development from the anticipated receipts. So if, say, the price of land absorbs roughly one third of receipts from house sales and if those receipts fall while costs stay the same, the value of land might be expected to fall three times as fast as house prices.

7.16 In reality while the pattern is clear the arithmetical relationship is not quite so exact and at certain stages in the cycle of peaks and troughs in house prices the value of land 'undershoots' what might be expected on the basis of those prices in the same way as it can 'overshoot' at other points in the cycle. The delay in land values 'catching up' with increases in house prices is in part due to the fact that by the time house prices had recovered their former levels, building costs have moved further ahead. It is also due the housebuilders' practice of withdrawing new investment to preserve cash when the rate of sales is falling and then, with financial probity taking precedence over commercial opportunism, prioritising the need to rebuild their balance sheets by developing land they already control rather than buying in additional sites. Most of them maintain 'land banks' equivalent to around 5 years take up and can survive without buying new sites for several year, thus depriving the market of land buyers.

7.17 In their research forecast entitled, 'UK Residential Development Land Mid Year 2008,' Savills suggested that '*... values (are) likely to be restored to their 2007 peak in most of the regions before 2014. The Consultants do anticipate a return of developer confidence to boost land values ahead of this date but it is unlikely that land values will return to their 2007 peak by then.*'

- 7.18 The Consultants consider this analysis provided by Savills to be the most robust view of the impacts of the recession on the development industry. Further analysis set out in Appendix E to this report illustrates how Savills might have arrived at this conclusion by drawing on data from the last recession.
- 7.19 Anecdotal evidence in 2008 suggested that the value of greenfield sites was less affected by the recession than brownfield urban sites previously deemed most suitable for flats. The Consultants believe that Hertfordshire was not as badly affected as some other areas by the previous recession in the early 1990s, perhaps because of specific local factors such as relative economic performance. But the current recession is expected to hit the service sector harder so and Hertfordshire should not plan on the expectation of any degree of immunity.

Analysis

- 7.20 Table 7.1 sets out conclusions about the effect of aggregate planning contributions at the peak of the market in 2007 (e.g. strategic CIL charges plus local CIL charges but not including charges for site specific of £20K, £25K and £30K per dwelling in areas with low, medium and high house price levels. As can be seen, the target residual land value level of £1.5M would be achieved even after paying contributions of £30K per dwelling at medium and higher house price levels. It should be noted that these residual value figures are not directly comparable with the historic reported value of sites sold in the open market. This is a high level analysis of the relative attraction of the various options and does not purport to model future land values under any scenario with a degree of accuracy in relation to any specific area or site.

Table 7.1 - Effect of Aggregate Planning Contributions on Notional Land Values

House Price Levels	Planning Contributions Package		
	£20,000	£25,000	£30,000
Low e.g. Stevenage, Harlow	£1.27M	£1.16M	£1.05M
Medium (Base Case) e.g. Dacorum, Welwyn Hatfield	£1.73M	£1.62M	£1.51M
High e.g. St Albans	£2.17M	£2.05M	£1.94M

Source: Consultants

- 7.21 These figures were then re-calculated under differing scenarios:
- In Scenario 1, a 25% drop in house prices from peak values reflecting forecasts which suggested that this might be reached by late 2009 following further decline from February 2009. In this scenario, a small section 106/CIL contribution might be obtainable in the high value areas on a reasonably consistent basis and nowhere elsewhere.
 - In Scenario 2 a 10% drop in house prices (which again reflected forecasts when the analysis was undertaken in 2008 and which suggested that full recovery in prices in nominal terms might be achieved before 2014) following a recovery in the market starting at the end of 2009. The implied assumption is prices at 10% below peak level at the end of 2011. As it stands, the risk is that this timing/value assumption will prove mildly optimistic. The planning contributions package that might be affordable in the context of reduced house price assumptions was then recalculated on the basis that, Countywide, a typical residual land value of £1.5m per ha (i.e. at the upper end of the range) would be needed in order to avoid compromising development viability and thus the land supply. In this scenario it is considered that a contribution of £25,000 per dwelling or more might be obtainable in high value areas, around £10,000 from middle value areas, and nothing from low value areas. This is summarised in Table 7.2.

Table 7.2 - Effect of Drop in House Prices on Aggregate Planning Contributions

House Price Levels	Potential planning contributions package following a drop in house prices of:	
	10%	25%
Low e.g. Stevenage, Harlow	Nil	Nil
Medium (Base Case) e.g. Dacorum, Welwyn Hatfield	£10,000	Nil
High e.g. St Albans	£25,000	minimal

Source: Consultants

7.22 We have not analysed the scenario based on a 25% drop in house prices from their peak values. At that level it is clear that a CIL is not viable both in terms of the sums achievable per dwelling and in the wider economic context the number of houses that are likely to be built. In that instance, radical steps would need to be taken at Government level to achieve housing growth targets on a satisfactory basis.

7.23 The assumption in this study is that CIL could potentially be introduced as early as 2011, at which time house prices will have returned to 90% of peak values as anticipated in Table 7.2, but that the peak values anticipated in Table 7.1 might not be restored until 2014. The analysis suggests that in the interim period (2011-2014), the sums that might be raised without prejudicing the viability of the contributing developments in lower and medium value areas will not meet the cost of the infrastructure required to support growth across the County. This is even the case after potential public sector funding contributions are taken into account. So two approaches were tested which modified the overall planning contributions regime to support a higher level of charge. These were:

- Reducing the target residual land value: Assuming that the land allocated for housing would be relatively inexpensive to develop, thus justifying a reduction in the target residual land value from the upper end of the range to the lower end (i.e. £1.5M per ha to £1M per ha);
- Reducing the effective developer subsidy for affordable housing: either by
 - (a) requiring developers to provide free land for development of affordable housing by RSLs and others rather than providing the affordable units themselves or;
 - (b) assuming that affordable housing would only be provided in instances in which support from the HCA was available to offset costs. In practice this can be achieved by using 'cascades agreements' in which the amount of affordable housing provided by a developer is directly linked to the amount of grant made available.

7.24 The potential to use these mechanisms in Hertfordshire is discussed in more detail in Section 8.

7.25 Table 7.3 shows the impact of these approaches in terms of the aggregate level of planning contributions (strategic and local CIL) that could be achieved starting from each of these bases.

Table 7.3 - Effect on Affordable Contribution Levels of Changing Assumptions

House Price Levels	Reduce Target Residual Value from £1.5M to £1M / ha	Free Land for Affordable Housing	Assume HCA Grant
Low	£13,000	£15,000	Nil
Medium	Over £30,000	Over £30,000	£17,000
High	Over £30,000	Over £30,000	Over £30,000

Source: Consultants

- 7.26 Clearly the reduction in residual land values that developers would accept has a significant effect, permitting theoretical contribution levels of £30,000 in high and medium value areas, i.e. well in excess of the £23,000 CIL level required to plug the funding gap. In low value areas however, the theoretical contribution level would still only be £13,000, well short of what is needed. A similar impact is seen when free land is provided for affordable housing. If HCA grant is available, then the effect is less positive, with available contributions in medium value areas reducing to £17,000 and no contribution being available in the low value areas.
- 7.27 This demonstrates the need to explore the different options. More detailed analysis of the scenarios is contained in Appendix E. Further consideration of these options and recommended actions for the client group are discussed in Section 8.

Conclusions on Viability

- 7.28 The current analysis of infrastructure costs and mainstream funding in Sections 6 and 7 suggests a CIL of approximately £23,000 per unit would be required. In this section the consultants have assessed whether this level of CIL would be viable.
- 7.29 The key determinant of the level of CIL that will be viable will be the level of house prices when it is introduced. If house prices recover to the previous 'peak' levels experienced in 2007, a CIL charge of approximately £23,000 per unit should be viable in all but the lowest value areas. To ensure development in these areas could still bear this level of CIL, one or more of the following would be necessary:
- Target land that is inexpensive to develop for housing.
 - Modify the arrangements for procuring affordable housing, e.g. secure other public sector grant funding on a significant scale.
- 7.30 However, current house prices are significantly below 'peak' levels. Our analysis suggests that at the earliest point in time at which a CIL could be introduced in Hertfordshire – in 2011 - house prices might have returned 90% of peak levels. At this level of house prices, a CIL of approximately £23,000 per unit is still likely to be viable in the high value areas. But in the middle and low value areas, it will be necessary again to use one or more of the approaches outlined in the bullet points above in order to ensure that development can bear the full charge and remain viable.
- 7.31 These possible mechanisms for addressing viability issues are discussed in more depth in Section 8, within the context of assessing the level of charge the development industry will be prepared to pay in practice. Also in this section, the structure of any CIL charge – and the issues associated with this – is discussed.

8. Level and Structure of CIL Charge

Introduction

8.1 In Sections 5, 6 and 7, the following have been assessed:

- Estimated strategic and local infrastructure needs and costs;
- Estimated mainstream funding;
- The resultant funding gap that would need to be funded by a CIL (which equates to an average charge of approximately £23,000 per residential unit); and
- Whether this level of CIL is viable in different areas of the County (in terms of general differences in residential values) after taking into account the impact of the current recession on house prices.

8.2 We now go on to discuss the issues revolving around the level of charge and also its possible structures – namely either a single or variable CIL.

Level of CIL Charge

Overall level of charge

8.3 The Consultants' initial conclusions are that in order to secure the funding of all future growth related infrastructure a CIL requirement of approximately £23,000 per residential unit is needed. Our conclusion, based on a high level County wide analysis is that an overall charge set at this level is practical although in some places it might deter:

- sites with significantly higher abnormal development costs than our broad assumption (see Section 7); or
- sites which are valuable in their current use (for instance, old but functional industrial estates).

8.4 There are two further important exceptions. Our analysis indicates that in lower value areas and for the foreseeable future, if the CIL is set at £23,000, either development will be limited to sites that are relatively easy to develop or steps will have to be taken to enhance viability, perhaps through alternative mechanisms for securing and delivering affordable housing requirements. This might also be the case in the short term in medium value areas if, for instance, house prices do not meet our assumed level of 90% of previous peak levels (in nominal terms) when CIL is introduced.

8.5 In practice the views of the development industry on any charge will be influenced by precedent. We note that in other growth areas where house prices are lower tariff charges in the region of £20,000 per dwelling are being sought. Notwithstanding until house prices have recovered it cannot be assumed that the development industry will be uniformly willing to pay a sum of this order or to accept it without challenge. We therefore recommend that steps be taken to avoid setting an aggregate charge for strategic and local infrastructure that is markedly in excess of the £23,000 per dwelling that we are recommending as a target.

8.6 It would be advisable to test this with the development industry through an early round of consultation. In this respect it is important to recognise that developers know their new developments need to be accompanied by schools and other social infrastructure, and that good provision of such infrastructure has an impact on the price they will get for their houses. They also realise that the ability of local authorities to fund such infrastructure is constrained and is likely to become more so in the future.

- 8.7 The CIL Guidance makes it clear that public funding should be used to meet infrastructure costs and any CIL which is based on a demonstrable and genuine readiness of local authorities to use mainstream funding to pay for these (from mainstream budgets where they can), is more likely to win acceptance from developers than a proposal which aims to secure full developer funding in every instance, with the intention if using mainstream funds for other purposes. The point is often made that the needs of existing residents should be prioritised but, in practice, most occupants of new schemes are moving within the area and are not migrating into it.
- 8.8 The pace of development will be mainly driven by the potential rate of sales which will, in turn, depend in large part on a return of confidence in the economy and a reduction in mortgage rates. But planning requirements generally and CIL and affordable housing requirements specifically will play an important role in determining viability in marginal situations. In this context it is important to consider the likely impact on the overall contributions from a CIL of setting the charge at a deliberately high, or deliberately low, level. The level of collection of planning contributions in any given period will depend on the number of units contributing as well as the level of the charge. Setting a charge that is too high can delay or reduce development and thus actually reduce aggregate contributions or critically delay receipts.
- 8.9 Because the recommended level of CIL is based on projections of the residual value of land which are contingent on future changes in house process we recommend that this analysis of viability is actively reviewed and updated nearer to the point in time at which CIL might be introduced.
- 8.10 It is important to be clear that the £23,000 per dwelling is **not** the recommended CIL level; it is the sum that is broadly considered acceptable as a potential aggregate charge which best reconciles infrastructure needs and development viability across the County. In practice it will incorporate both strategic and local charges and the latter will vary between Districts. We have estimated that on average an appropriate figure might be around £5,000 per dwelling. Each District will have to make its own calculation. In some areas and particularly where some elements of the infrastructure required exist or are already planned and funded, a lower sum might be more appropriate. In some areas needs will be greater but we would caution against any significantly higher charge other than in exceptional circumstances, in high value areas and when house prices fully recover.
- 8.11 It is therefore critical to understand what development can afford when considering the introduction of a CIL. A high level analysis of the development economics in Hertfordshire was undertaken in the previous section on viability. This analysis considered what development could bear in different market value areas of Hertfordshire, and under different property market recovery scenarios. A summary is shown in Table 8.1 of the amount that development might yield across the County if house prices recover to 90% of peak levels, plus the effective shortfall in financing infrastructure that will need to be made up by the public sector

Table 8.1 – Viability of development with house prices at 90% of peak levels

	Practicable charge	Additional public contribution to infrastructure costs required
High value areas	£23,000	£0
Medium value areas	£10,000	£13,000
Low value areas	£0	£23,000

- 8.12 It is important to reiterate that:

- this is a generalisation of the economics of development across the entire County and **these figures do not represent the effective shortfall in relation to any particular site or any district.**
- this shortfall only persists on this scale until house prices fully recover.

8.13 In particular, this analysis highlights the importance in medium and low value areas of the nature of sites allocated to deliver growth. In our analysis we allowed reasonable land and abnormal costs across all value areas. If the sites allocated have few constraints and the land owner has, or will, accept a lower land price than other higher value areas, then it is possible that no or limited compromise on planning requirements will be needed to achieve a £23,000 per unit CIL. We therefore recommend further detailed analysis is undertaken to establish if this will be possible.

Ways of addressing gap in CIL viability

8.14 Given the potential deficits shown above in medium and low value areas before house prices return to peak levels, there is likely to be a critical short term shortfall in funding for infrastructure during the relatively short period (2011 to 2014) that we consider will represent the time it will take to return to peak house prices. So the issue then becomes how to deal with viability issues in this period. We have identified three options for dealing with this.

Option 1: Defer CIL

8.15 The introduction of a CIL could be deferred until 2014, when peak house prices have returned. This is not an option that is recommended or considered feasible in this context because it would almost certainly reduce the overall sums available for investment in necessary infrastructure.

Option 2: Only develop the easiest sites

8.16 It could be accepted that, in the short term, development would only take place on the easiest sites to develop. In practice, this means that they would be vacant and would not present any significant physical obstacles to development. It would also be incumbent on the local planning authorities to allocate sites for immediate delivery that exhibit these characteristics. Clearly a major issue would be whether there are sufficient sites of this type available to developer in the short term; if not, then delivery rates could be very low, which would require a significant uplift after 2014 in order to deliver the RSS requirements.

Option 3: Enhance viability by modifying arrangements for procuring affordable housing

8.17 One of the principal reasons why the CIL is less viable in medium and lower value areas is because of the significant costs that developers have in delivering affordable housing requirements. Relieving developers of the full cost of meeting this requirement will help to increase the level of developer funding available to pay the necessary CIL charges. The modification of arrangements for procuring affordable housing could take two forms.

8.18 Firstly, the local planning authority could revert to the practice of accepting free serviced land to satisfy the obligation, which relieves the developer of further subsidising the construction costs. This shifts the burden of responsibility onto the local authority and the affordable housing providers (the Registered Social Landlords) and has implications for the pace of delivery of that affordable housing and also for any policies to achieve mixed tenure communities. But it could be advantageous in terms of promoting access to HCA grants or their willingness to invest into joint ventures with housebuilders which is an increasingly attractive option for them.

8.19 Alternatively, support from the Homes and Communities Agency (HCA) could be secured to provide public subsidy for the delivery of the affordable housing requirements through Section 106 Agreements. The Government recognise the requirement for such an approach and so are exploring where this needed through the HCA's 'Single Conversation'. This gives local authorities the opportunity to make their case for a subsidy towards the provision of affordable housing, where they can demonstrate significant needs that cannot be addressed by other means. The

Hertfordshire authorities with lower value house prices and/or problematic sites may be able to secure this subsidy, so freeing up developer funding to address infrastructure needs through the CIL.

- 8.20 This is clearly an advantageous option but there are many other areas that are considering the same possibility. Clearly not all local authorities will be successful in securing this funding.
- 8.21 We recommend that a combination of Options 2 and 3 are taken forward and explored in terms of their potential to act as 'balancing' mechanisms. In the short term in middle value areas, it is accepted that the level of CIL might deter development of some sites that are marginal in terms of viability. However, we doubt that the number of potential housing starts affected will be significant in the context of overall housing requirements. The same approach should also be adopted towards lower value areas and in addition steps should be taken to reduce the net cost to developers of providing affordable housing, perhaps by focusing HCA support in these areas.
- 8.22 Viability problems are projected to persist in lower value areas beyond 2014, in which case either:
- districts will have to reassure themselves that development remains viable in the context of the specific characteristics of the sites allocated for development in their area; or
 - the effort to reduce the net cost of affordable housing to developers will have to continue.

Other ways of reducing the CIL requirement

- 8.23 Much of the mainstream public funding that will be used to pay for social infrastructure comes from Central Government as supported borrowing¹⁵ rather than grants. The level of this support is determined by the application of a 'floor damping' mechanism to revenue budgets. This means that local authorities in more prosperous areas, such as Hertfordshire which has floor authority status, get more funding than they might be entitled to on a strict application of the relevant national funding formulae. The Government deems this sum to be adequate to meet their needs and strictly reduces access to any additional funding.
- 8.24 So, in short, as a floor authority Hertfordshire will have access to less additional support than others. It is recommended that the County Council should explore the possibility of getting its floor authority status amended, as was permitted for Kent County Council. This will then enable it to access the Basic Needs budget for extra school places.

Cashflow issues

- 8.25 Unfortunately, the above does not solve all problems. The current total estimated CIL requirement of £23,000 per unit (either as an average across the County but with different local authority CIL charges, or as a single CIL charge) is based on the total infrastructure costs identified to 2031 (and respective mainstream funding over the same period). In addition to the viability issues outlined above in achieving this, such a level of CIL charge does not necessarily ensure that there would be sufficient funding at all times to pay for infrastructure requirements, e.g. where major infrastructure requirements are required in advance of significant housing growth.
- 8.26 There is likely to be a considerable timing mismatch between the need for infrastructure and the collection of funding and we anticipate a particular problem in the latter part of the next decade, when infrastructure need is expected to considerably outstrip likely revenues. As shown in Table 6.5, we anticipate a 'gap' between projected income and expenditure of perhaps £230m during the period 2016 to 2020, but believe that this can be substantially alleviated with careful financial management, if attention is paid to service planning by the infrastructure providers and if the Government makes supportive changes to mainstream funding streams.

¹⁵ This is where the local authority receives an annual sum equivalent to the notional annual cost of financing the capital investment required

Structure of CIL Charge

- 8.27 It is possible that the final CIL Regulations will permit variations in the CIL charge across a charge area based on variations in viability rather than differences in needs. With the Regulations only at draft stage, it is not possible to be definitive about whether this will survive in the final document. CLG have been keen to retain the support of the development industry for the CIL proposals and we note that in a press release dated September 27th 2009, the British Property Federation (BPF) stated their strong objection to the inclusion of a variable CIL within the final Regulations.
- 8.28 However, whilst the Regulations are still at draft stage, it is possible that a variable CIL may be an option, so it is necessary to explore its advantages and disadvantages relative to a single CIL.

Single versus Variable Level CIL – advantages and disadvantages of each approach

- 8.29 The draft CIL Regulations also indicate there are certain criteria that will need to be met regardless of the level of charge(s). Arguably the most important is that almost all development will have to pay the charge(s); only in exceptional cases will there be any flexibility to reduce the CIL charge in individual cases (the BPF are also seeking the inclusion of increased flexibility in the final regulations).
- 8.30 Consequently, the CIL must be set at a level that ensures the charge is viable for all but exceptional circumstances (as required by the draft guidance).
- 8.31 Irrespective of the particular circumstances across different parts of Hertfordshire, the advantages and disadvantage of a single and a variable CIL charge are summarised in Table 8.2:

Table 8.2 – Advantages and disadvantages of single vs variable CIL charge

Charge	Advantages	Disadvantages
Single	Simplicity - just one charge to set and subsequently review	Potential difficulties in determining a single level of viable charge
	May be easier to get district, and potentially developer, buy-in by virtue of equality of contribution level per dwelling	A low CIL (on viability grounds) could create a significant funding shortfall. This will make agreeing prioritisation between districts challenging. Conversely, a high CIL with no compromise on other requirements will focus development on easy greenfield sites.
	Easier to budget income and therefore investment.	Potential difficulties if local CIL charge element varies greatly from district to district.
	Easier to implement – less discussion over what category development falls into.	A high CIL could compromise development in lower value areas. Balancing mechanisms to alleviate this cannot be guaranteed.
Variable	Greater recognition of differences between areas and/or types of development sites.	A range of charges may be needed which could lead to more uncertainty.
	Less need for balancing mechanisms to ensure that all areas can pay.	Developers may focus development/purchase of land and options in areas with lower CIL levels
	Much more able to reflect variable local CIL costs across districts	Risk of challenge that CIL represents a tax on development if set to reflect ability to pay rather than variations in needs
		Possible issues of one district being seen to cross-subsidise infrastructure in another

- 8.32 One key consideration is the implications of the two alternatives on the potential level of receipts. It is not possible at this stage to accurately quantify the differences in the likely level of receipts based on the analysis in this study. Depending on the structure of the charges, and the ability to utilise balancing mechanisms, either CIL approach could in theory yield a higher level of receipts.
- 8.33 In terms of a single CIL, if balancing mechanisms (as discussed in paragraphs 8.16 to 8.19) are not possible, then the analysis indicates that a CIL level of £23,000 per unit will not be possible in all districts. In these circumstances, the CIL will need to be set at a level that sites in lower value areas can afford. This would mean the level of receipts would be significantly below that required to 'plug' the public sector funding shortfall for the infrastructure identified in this study.
- 8.34 Consequently, unless comprehensive balancing mechanisms are put in place, a variable charge is more likely to secure the greatest potential level of receipts. We recommend further investigation into balancing mechanisms is undertaken if a CIL is to be progressed (see below).

Single vs Variable CIL – making the choice

- 8.35 With the above factors in mind, it is necessary to define the parameters of the debate in order to understand whether a variable or a single CIL should be adopted in Hertfordshire. In order to do so, there are a series of key questions that need to be answered and areas of particular focus. These must be considered by the 11 Hertfordshire local authorities. The questions are:
- Is there a sufficient understanding of the economics of developing the specific sites that each LPA chooses to take forward in its LDF? Does the LPA understand, for each site, what abnormal costs might be incurred in development, including providing local access, extinguishing existing uses and dealing with other physical constraints?
 - What is the likelihood of balancing mechanisms (e.g. affordable housing grant) to increase viability in lower value locations? The availability of such mechanisms could make a standard CIL charge more appropriate (or equally rule it out if they are likely to be absent).
 - Is there a willingness to forgo maximum levels of receipts in higher value areas in order to set a standard charge which reflects decreased viability in lower value areas?
 - Equally, is there a willingness for higher value areas to put their enhanced levels of contribution under a variable CIL to cross-subsidise costs in lower value areas which would otherwise struggle to deliver their own needs?
 - What system would landowners and developers be more receptive to?
- 8.36 These are all factors which will need to be considered before a decision can be made on whether to pursue a standard or variable charge for Hertfordshire. A standard charge approach has the benefit of simplicity but would be jeopardised without appropriate balancing mechanisms. A variable CIL would be better able to reflect development economics but is more complex to establish. Ultimately it is likely to be a question of making a decision based on a balance of the relative strength and weaknesses of both approaches.
- 8.37 It is the Consultants' recommendation that **a single CIL should be adopted**. There are several reasons for this:
- The recommended single CIL has a significant level of variability in it already. Whilst the strategic element is fixed, the local element will need to be defined by each individual local authority. As such, it is likely that each authority will effectively be charging a slightly different level of CIL to reflect their individual local needs.
 - A variable CIL will create considerable complexity. A range of charges may be needed and could lead to complex debate with developers about the precise differences in viability between different locations, therefore creating more uncertainty. Given that this will be the first approach to charging of this kind in the County, and given the need to deliver significant RSS housing targets, it is prudent to take a simple and straightforward approach.

- It is our view that there must be considerable doubt as to whether variable CIL will be included in the final Regulations. As such, and given that the Hertfordshire authorities should commence further work on the CIL immediately in order to be ready for the 2011 start date, it is prudent to adopt a single CIL approach.

Other Considerations

- 8.38 The draft CIL Regulations state that a charging schedule will be required for a CIL. This schedule will set out the basis and levels for the CIL. The Guidance recognises that there are potentially different CIL levels required due to:
- Different development classes (e.g. residential and commercial);
 - Structure and level of CIL charge (see above);
 - Variances in infrastructure need/costs between areas (see above);
 - Variances in viability within a development category (e.g. between different housing markets areas or land type, such as greenfield or brownfield development).
- 8.39 This study has concentrated on the requirements of housing growth, and therefore the required CIL charge is on the basis of residential development at this stage. A view on a possible charge for employment and retail development has been given in Section 5. This study has set out proposed strategic and local elements of a CIL; where reference is made to a single CIL, this is in the context of the strategic element being at a single level across the county. It has been assumed for the purposes of this analysis that local CIL elements of a charge are the same, although in reality there could be significant variation depending on local needs. It will be for each District Council to determine and set its own local CIL charge, and to collect and distribute receipts accordingly.
- 8.40 In terms of variances in size, the draft CIL Guidance states that to ensure consistency and simplicity, the Government is minded to define at national level the descriptions of the unit of development that may be charged. The study has calculated the charge on a residential per unit basis and has not tested any other units of development at this stage. It would be worthwhile considering adjusting the charge so that it reflects the size of the dwelling, i.e. one-bed, two-bed, etc. in the future. However, the difficulty with this approach is that at the outline application stage when some of these charges need to be settled, many developers will not have decided the precise mix of dwellings on a site and in any event that this may subsequently change. However, this needs to be considered as a matter of detail when developing the CIL evidence base further.
- 8.41 In terms of the final two variables (viability and cost differences), the draft CIL Guidance points to existing tariffs designed by local authorities to reflect these differences, such as to address a particular flood risk or brownfield development areas with particularly difficult economic conditions. The Guidance states the Government will continue to explore with industry bodies and local authorities whether it might be appropriate to allow different CIL rates within a local authority area, and if so under what circumstances and how it might work. A firmer view on this issue is promised in the draft CIL Regulations.

Prioritisation

- 8.42 As noted, it is unlikely that any CIL will provide sufficient receipts to completely address the shortfall in mainstream public funding. Therefore, choices will need to be made as to which infrastructure requirements represent the greatest priority in order to support growth. A mechanism for prioritising infrastructure needs will help to ensure that only essential items are included. In particular, focusing on a more detailed cash-flow of requirements over the next five years or so would help to ensure a robust and deliverable CIL could be implemented.

8.43 An initial attempt at prioritisation is made in Table 8.6 below and shows the CIL required for different assumed priority categories (4=essential, 3=important, 2=desirable, 1=tentative).. It should be noted that all 'local' infrastructure items are assumed to be priority 3.

Table 8.3 – Initial high level prioritisation of CIL requirements

Assumed Priority	Infrastructure Category	Estimated Public Sector Funding Gap (£M)	Required CIL (per unit)
4	Transport	£145.6	
	Education	£804.0	
Total (4)		£949.6	£9,900
3	Transport	£493.2	
	Health	£71.9	
	Libraries	£17.5	
	Police	£35.0	
	Allotments	£4.3	
	Ambulance Service	£2.9	
	Amenity greenspaces	£2.1	
	Churchyards and cemeteries	£1.5	
	Community and youth centres	£65.2	
	Cultural facilities	£5.0	
	Herts Fire and Rescue Service	£5.2	
	Indoor leisure facilities	£7.0	
	LEAPs	£54.4	
	MUGAs	£74.2	
	Municipal Waste	£83.5	
	Natural and semi-natural greenspaces	£84.7	
	NEAPs	£11.1	
	Shelters	£7.0	
	Skateboarding	£22.3	
	Sports pitches	£27.6	
Urban parks and gardens	£18.5		
Utilities	£0.0		
Waste Collection	£14.4		
Total (3)		£1,123.3	£21,609
2	Transport	£97.0	
	Adult Care	£0.0	
	Children's services	£0.0	
Total (2)		£97.0	£22,621
1	Transport	£10.7	
Total (1)		£10.7	£22,733
Total (all)		£2,180.7	£22,733

- 8.44 Table 8.6 shows that only a limited proportion of estimated unfunded infrastructure requirements (i.e. estimated infrastructure costs less estimated mainstream funding) are considered to be of a lower priority (i.e. categories 1 or 2).
- 8.45 This shows that, based on the information available, all categories of priority could be delivered with a CIL of £23,000 per unit.
- 8.46 It is not appropriate for the Consultants to provide greater analysis of prioritisation in the HHS than has been provided. The main reason is that to do so until all needs have been identified would be premature. Certainly the goal must ultimately be for all service providers to be undertaking long term service planning on a broadly like-for-like basis so that priorities can then properly be compared. At present, this would not take place on a level playing field.
- 8.47 Moreover, this prioritisation must be weighed up against the viability analysis. Without an understanding of what development can afford and what the infrastructure issues are with the delivery of each site, then it is likely that prioritisation will be inaccurate.
- 8.48 Lastly, it is inevitable that the large number of competing priorities points to the decision making process requiring significant political and technical input across the County. It is more appropriate that such inputs are fully informed by the complete analysis.
- 8.49 A full list of infrastructure requirements, costs and priorities is set out in Appendix C.

9. Funding Considerations and the Funding Model

Introduction

- 9.1 A robust evidence base will be required to support local planning authority LDFs and any CIL they may wish to impose. The Consultants have, therefore, developed an infrastructure funding model (the Funding Model) for this study, which has been used to produce some of the analysis in previous sections.
- 9.2 The Funding Model brings together the key infrastructure information set out in this study, which includes:
- Infrastructure items required to accommodate new growth;
 - Estimated costs of these infrastructure items;
 - Estimated public sector (including mainstream) funding available to pay for this infrastructure; and
 - The anticipated timing of the infrastructure items, costs and public funding.
- 9.3 As infrastructure requirements, costs and funding information will change over time, the funding model has been designed to be easily updated in the future. A full list of infrastructure requirements, costs and priorities is set out in Appendix C.

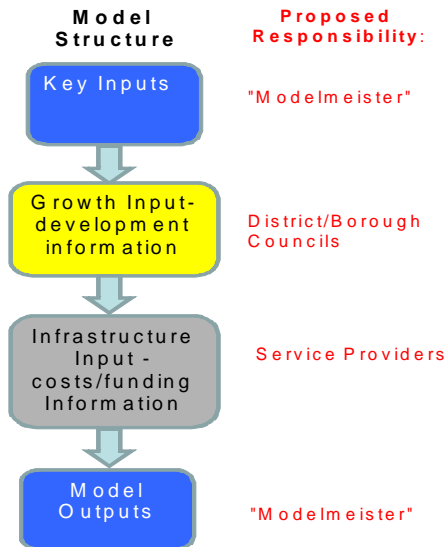
Technical Issues

- 9.4 The Consultants' Funding Model is a spreadsheet that has been designed in Microsoft Excel 2007 'Compatibility Mode'. For further information on technical issues and a step by step guide on how to use the model (including screen shots), refer to the RTP Funding Model User Guide which has been prepared as part of this study. This guide should be read by anyone wishing to analyse the infrastructure information in this study in more detail (although a full breakdown of infrastructure costs is attached at Appendix C) or modify the information in the future. Administration of the model is discussed in more detail below.

Structure of the Model

- 9.5 Set out below is a basic flow diagram for the structure of the model. Again, more detailed information on this is provided in the User Guide.

Figure 9.1 - Funding Model Structure



Timing of Infrastructure Costs/Funding in the Model

- 9.6 The model starts in 2011 and finishes in 2031. The start date of 2011 is an estimation of when a Countywide CIL could be operational based on current information and available guidance. It should be noted there are viability concerns relating to achieving the required CIL level (see Section 7), chiefly due to the current economic conditions, which indicate it **may** not be possible or desirable to implement a CIL on this date. However, this viability analysis does conclude that, as at May 2009, it is considered reasonable for a CIL charge to start in 2011.
- 9.7 It is important to note that, in order to ensure that 2011 is a reasonable date to start the CIL, the authorities are not just at the mercy of the markets. There are factors that are within the control of the authorities; in particular, the sites they allocate as part of their LDFs. What will delay the start of a CIL will most likely be cashflow, so it is vital that the sites which are most capable of delivering housing at the lowest cost are allocated to come forward first. If there is an issue with cashflow over the periods 2011-2013 then it will be because LPAs have allocated sites for the short term which have constraints to their delivery.
- 9.8 As most service providers only forward plan in detail for a limited number of years, the first five years in the model (2011 – 2015) are set out annually. Beyond the first five years, the timing is set out in three blocks of 5 years (or 6 years in the final block to take the model to 2031). This is summarised Table 9.1, along with the estimated housing numbers in each District.

Table 9.1 – Funding Model Time Periods and Assumed Housing Growth

	2011	2012	2013	2014	2015	2020	2021-25	2026-31	Total
Broxbourne	146	207	243	287	304	1,674	1,377	1,095	5,334
Dacorum	300	425	500	590	625	3,440	2,938	2,336	11,153
East Hertfordshire	394	559	657	776	822	4,522	3,721	2,958	14,409
Hertsmere	157	222	261	308	327	1,798	1,479	1,176	5,728
North Hertfordshire	515	730	858	1,013	1,073	5,906	4,859	3,863	18,818
St Albans	320	454	534	630	668	3,674	2,915	2,318	11,512
Stevenage	231	327	385	454	481	2,649	2,179	1,733	8,439
Three Rivers	120	169	199	235	249	1,371	1,128	897	4,369
Watford	152	215	253	298	316	1,738	1,430	1,137	5,538
Welwyn Hatfield	291	412	485	572	606	3,335	2,743	2,181	10,624
Total	2,626	3,720	4,376	5,164	5,470	30,108	24,769	19,693	95,925

Future Use of the Model

Basis for Infrastructure Planning and Delivery

- 9.9 The Hertfordshire Authorities may wish to 'pool' together the strategic element of their respective CIL funding to deliver strategic infrastructure items. This would be particularly beneficial where there are important cross border infrastructure items to be delivered.
- 9.10 A joint funding model could, therefore, be used as a basis for an agreed strategic element of a CIL charge between the Hertfordshire Authorities on this basis. A 'frozen' model could be used as the evidence base for the CIL, which could then be updated to reflect changes in housing delivery projections, infrastructure requirements, costs and mainstream funding.
- 9.11 The joint model, assuming it is sufficiently detailed, could form the basis of decision making on infrastructure projects. CIL investment decisions could follow a similar process to planning permissions. For example, potential infrastructure projects would firstly need to be in accordance with the agreed Funding Model. A strategic 'review board' (for example constituting local authority members) would agree any changes to the Funding Model on a regular basis (e.g. twice a year). Investment decisions would be assessed by a 'scrutiny board' (e.g. comprising local authority officers), but with the major investment decisions taken by the review board. Both boards would include representatives from Districts and service providers.

Administration of the Funding Model

- 9.12 If a joint funding model is to be used by the Hertfordshire Authorities (such as outlined above), an administrator would be required to collect, analyse and circulate infrastructure and CIL information relating to it. This would be an ongoing requirement as it is envisaged the Funding Model would need to be updated on a regular basis for a variety of purposes. These could include: as the evidence base for a charging schedule of a CIL; infrastructure investment decisions such as those described above; and a form of 'accounting statement' on CIL monies collected and spent (although the funding model created for this study is not designed for this use).
- 9.13 The Consultants have suggested in the Funding Model workshops undertaken with the Hertfordshire Authorities and service providers that this administrative role (or 'modelmeister' as shown in Figure 9.1) could be best played by the County Council. However, it should be noted that this would be purely an administrative role and would not include any decision making.

10. Delivery and Management

Introduction

- 10.1 This section considers an approach to embedding the HISS into the Local Development Framework (LDF) of each of the ten local planning authorities in Hertfordshire. In particular, this relates to the Funding Model, which represents the charging schedule that underpins the CIL.
- 10.2 It is important to recognise that the recommendations contained in this report are made in advance of the guidance being published by Government on the CIL and will need to be reviewed when these CIL Regulations are published. The Government has indicated that this will not be until April 2010.
- 10.3 This section goes on to look in detail at the proposed arrangements that the Hertfordshire Authorities may wish to consider to establish infrastructure investment priorities and manage the assignment of CIL revenue transferred to it from the charging authorities. There are several potential established management structures available but the most appropriate one appears to be a Multi-Area Agreement (MAA) first put forward in the 2006 Local Government White Paper.
- 10.4 The conclusion of this section is that bespoke management arrangements for the CIL model are necessary to demonstrate proper transparency and accountability for strategic expenditure funded from CIL, to enable collective agreement on investment priorities and a shared philosophy for dealing with the infrastructure consequences of growth. Details of the MAA would need to be worked through in the coming months to agree a structure to be introduced when the time for operating CIL is right.

The Evidence Base that Core Strategies Need on Infrastructure

- 10.5 There has been a growing recognition of the link between spatial plans and infrastructure provision in achieving timely and sustainable delivery of spatial growth. This has taken on a greater importance in recent years through planning documents.

Requirements Arising from PPS12

- 10.6 The Local Government White Paper on Strong and Prosperous Communities published in October 2006 referred to local authorities playing a positive co-ordinating role in the delivery of infrastructure to ensure that the right infrastructure is provided at the right time. An increased emphasis on 'place shaping' was also made.
- 10.7 The Planning White Paper 2007 states that '*local authorities should demonstrate how and when infrastructure that is required to facilitate development will be delivered*'. This has also been a major theme in HM Treasury's CSR07 Policy Review on Supporting Housing Growth.
- 10.8 Planning Policy Statement 12 (PPS12) highlights the importance of ensuring that the Core Strategy is supported by a robust evidence base on infrastructure planning. It states that:

'The core strategy should be supported by evidence of what physical and social infrastructure is needed to enable the amount of development proposed for the area, taking account of its type and distribution. This evidence should cover who will provide the infrastructure and when it will be provided. The core strategy should draw on and in parallel influence any strategies and investment plans of the local authority and other organisations¹⁶.'

- 10.9 PPS12 also notes that:

¹⁶ PPS12 June 2008, paragraphs 4.8 to 4.12

'Good infrastructure planning considers the infrastructure required to support development, costs, sources of funding, timescales for delivery and gaps in funding. This allows for the identified infrastructure to be prioritised in discussions with key local partners'¹⁷.

- 10.10 PPS12 sets out what should be considered as part of the infrastructure evidence base and emphasises the need for the alignment of investment plans of a range of key infrastructure providers. In particular, PPS12 states that the infrastructure evidence base should take account of:
- The scale, type and distribution of development proposed for the area;
 - The physical, social and green infrastructure needed to enable the development proposed;
 - The phasing of development;
 - The cost, sources of funding and gaps in funding (recognising that the budgeting processes of different agencies could mean that less information may be available when the core strategy is being prepared than would be ideal);
 - The uncertainty of investment plans and undue reliance on critical elements of infrastructure whose funding is uncertain;
 - The prioritisation of infrastructure requirements in discussion with key partners;
 - The responsibility for the delivery of infrastructure.
- 10.11 Key infrastructure providers are to be encouraged to reflect the Core Strategy within their own future planning documents and seek alignment between their infrastructure planning and the planning process.
- 10.12 PPS12 also states that infrastructure planning should include specific infrastructure requirements for any strategic sites which are allocated in the Core Strategy. This is one of the reasons why the masterplanning exercise (see Section 3) for Hertfordshire was so important, focusing as it did on the existing and potential locations for strategic sites. Sites classed as being strategic are *'those which are key to the delivery of the overall strategy'¹⁸.*
- Guidance on Infrastructure Planning**
- 10.13 Unlike some areas of the Core Strategy where the evidence base requirement is accompanied with a guidance manual on how to prepare the evidence, (for instance in the case of retail, strategic housing land availability and employment); there is no such provision for undertaking the evidence base for infrastructure plans.
- 10.14 Given the shortage of guidance, the key point to emphasise is the need to create a realistic infrastructure plan that will aid the delivery of spatial growth. But the required content of the evidence base is not defined and will vary in its importance, depending on the local circumstances.
- 10.15 In light of this the HIIS study has relied more on the Consultants' experience and expertise in this field which has been cited by the Planning Advisory Service as good practice. In addition Inspectors' Reports on Core Strategies have been reviewed to establish the expectation from Infrastructure Plans. However, it is clear that in the main, Inspectors have avoided making what might seem like any deliberate statement on the detailed inputs into an infrastructure plan. Rather, they have tended to identify where plans may be deficient and why.

¹⁷ PPS12 June 2008, paragraph 4.9

¹⁸ Planning Inspectorate (2007) *LDFs: Lessons Learnt Examining Development Plan Documents*, para 3.11

Key Need

- 10.16 From the Consultants' review work and experience it appears that the key is to ensure that the infrastructure needs should be identified along with the range of providers, including the developers and others who will be responsible for funding the infrastructure. Further:
- An infrastructure plan will be of no use if it is an unrealistic 'wish list' that has no likelihood of getting delivered and will hinder the overall delivery of the planned growth;
 - An infrastructure plan is a way of ensuring that aspirational growth proposals in spatial plans are clearly grounded in terms of their likely delivery through a rigorous process that considers infrastructure 'showstoppers', funding, phasing, joint collaboration and delivery mechanisms and builds these considerations into the core strategy and monitoring framework;
 - At this stage in the development of an infrastructure plan, where all the detailed modelling and masterplanning is not yet available, it is important to note a point by the Inspector in his response to the Joint North Northamptonshire Core Strategy. The Inspector stated that '*I do not believe that for soundness, the specific solutions need to be identified in the Core Strategy, only that appropriate solutions would need to be found*';
 - The Inspector will want to see there is a realistic prospect of delivery and if gaps in funding are identified then a mechanism should be in place to demonstrate how these are to be addressed in the future;
 - The need for infrastructure to support housing growth and the associated need for an infrastructure *delivery planning process* has been highlighted in the Government's Housing Green Paper. The Consultants consider this as an essential element of infrastructure planning and is considered later in this section.

The Role of HIIS in Providing the Necessary Evidence Base

- 10.17 Part of the role of HIIS is to provide, as far as is possible, an understanding of the evidence base for each District, such that it will comply with the requirements of PPS12. What HIIS does not do is provide all of the evidence that each individual District will need in order to provide an Infrastructure Delivery Plan (IDP). Rather, what it does is provide the framework for assessing needs and provides as much information as has been possible to collect on exactly what those needs are. However, it is up to each authority to determine how they wish to approach the development of an IDP. It can either:
- Provide an input into the selection of a preferred option or options for development, based on where the infrastructure is best able to be provided; or
 - Provide a clear understanding of the infrastructure needs of an already selected preferred option – in this case, it would need to be demonstrated that this is a better option than the other possible options considered.
- 10.18 Each District will have its own view on this and will, therefore, have different expectations of the outputs to inform that, within the requirements of PPS12.
- 10.19 On strategic items, HIIS has been able to understand some needs. However, the study clearly documents the need for service providers to undertake further work in order to provide the Districts with more information on needs and funding. This will, in turn, inform their IDPs. But until this work is done, there is insufficient information to be able to understand fully those strategic needs.
- 10.20 It is important also to reiterate that care needs to be taken when breaking down the strategic CIL items within the Funding Model by District. Because these items are strategic, by their very nature they are not supposed to be easily apportioned District-by-District. It will be important, within each IDP, for the respective Districts to provide a clear method for apportioning strategic needs to their administrative areas. A better approach may be to assess strategic needs at the strategic scale

(either KCDC or even County) as done within this study. This will require further working between the Districts.

- 10.21 Furthermore, it has been made clear that HIIS and the Funding Model have provided Districts with the tools to determine their local CIL items. Each District will need to determine its particular needs and the relative priority of those needs in order to be able to provide evidence on what local infrastructure items must be provided to enable development. The local CIL part of the Funding Model gives a clear framework that the Districts can use to provide the necessary local information to be inputted into the IDP.

CIL and Policy on Developer Contributions

- 10.22 CIL is progressing through the Parliamentary process to become law probably in 2010. Key details of this important part of the Planning Act 2008, however, still remain unclear. The Planning Act is designed to replace current legislation on approving important infrastructure projects.
- 10.23 The detail of the CIL is yet to be resolved and the Consultants consider that three specific aspects are still in dispute:
- Several large local authorities, including Manchester and Bristol, are pressing for assurance that the CIL will not replace section 106 agreements currently negotiated directly between councils and developers;
 - Many councils, as well as the British Property Federation, have been lobbying for land value increases to be factored into the levy because they are worried that the proposed CIL cannot effectively measure the viability of the schemes on which it will be imposed;
 - From the legal point of view, there are concerns that CIL could breach European legislation because councils charging a lower levy could be seen as unfairly subsidising projects in their areas.
- 10.24 The Government has said that CIL will not replace planning obligations under section 106¹⁹, but local authorities and developers remain concerned about possible overlap between this scheme and the idea of planning gain supplements originally proposed in 2004 but officially rejected last year.
- 10.25 The requirement is for HIIS to represent the 'robust' evidence base that will be required for every one of the ten Districts' LDFs to be declared sound. The HIIS will provide the framework around which the Funding Model is hung. Because it provides the evidence for the charge, the Funding Model itself, as a discrete element, will need to be robust. Only if these two parts, individually and in tandem, are robust will the overall evidence base be deemed sufficient to comply with the requirements of PPS12.

Proposed Approach for Taking HIIS Forward Through LDF Process

- 10.26 Assuming that HIIS provides a robust evidence base, then the issue is how to integrate the evidence base that it represents within a Core Strategy. The CIL Guidance states at paragraph 3.38 how it is minded to deal with this. It sees the CIL charging schedule as a legal document that is also part of the folder of documents that make up the LDF (although it notes that the precise legal status is still being considered). It also states that:

'The Government is currently minded to propose that the charging schedule will not formally be part of the development plan. However, it will be tested in a similar way to development plan documents to ensure robustness and provide a full opportunity for stakeholders to test it [paragraph 3.38].'

¹⁹ CLG, *Community Infrastructure Levy*, August 2008, para 18.

- 10.27 This would suggest that the CIL charging schedule will take the form of a Development Plan Document (DPD) or Supplementary Planning Document (SPD). Until the Regulations are published, there is uncertainty about the exact form this will take. Nevertheless, whether it is a DPD, SPD or equivalent, the charging schedule will need to be subject to some form of independent scrutiny, with the HHS study forming the core of the evidence base behind it.
- 10.28 When talking about infrastructure planning, PPS12 is clear that it considers the work which informs this is part of the evidence base:
- 'The outcome of the infrastructure planning process should inform the core strategy and should be part of a robust evidence base [paragraph 4.10]'*
- 10.29 Therefore, the planning of infrastructure, the identification of how it will be funded, when it will occur and who will deliver it, does not represent a part of the LDF in the same way that a Core Strategy or a Site Allocations DPD does. In itself, HHS does not seek to 'shape' places in Hertfordshire; rather it enables place shaping to occur through the spatial planning process.
- 10.30 This is why the implication by the Government in the CIL Guidance that they are minded to have the CIL as some form of DPD, SPD or equivalent is favourable. Whether a DPD or SPD, the CIL (principally represented by the Funding Model) will need to be subject to independent examination. This will reduce the likelihood of legal challenge by developers at a later date.
- 10.31 Following legal advice taken as part of the HHS study it is recommended that the potential of a Joint Countywide DPD should be explored. This would be joint between all of the ten local planning authorities in the County. Its principal advantage is that it would avoid the need for ten separate DPD processes each to consider HHS, with the associated concern that if one Core Strategy was found to be unsound in respect of HHS then it could undermine the introduction and operation of CIL across the County.
- 10.32 This approach is supported by PPS12 which endorses joint working between authorities. Paragraph 4.17 states that:
- 'Local authorities should explore and exploit opportunities for joint working on core Strategies...Critical discussions on infrastructure capacity and planning may be more effectively and efficiently carried out over a larger area than a single local planning authority area...Joint working between local planning authorities can address these issues properly...'*
- 10.33 Paragraph 4.18 gives guidance on the form that this joint working may take:
- '...In other [places] joint working on evidence and overall policy direction is being used as the basis for the production of two or more separate plans to the same timetable.'*
- 10.34 A good example of how this has been applied in practice is in North Northamptonshire. The North Northants Joint Planning Unit (JPU) was formally established in October 2004 by Corby, Kettering, Wellingborough and East Northamptonshire Councils, together with Northamptonshire County Council. The JPU is coordinating the preparation of a Local Development Framework for North Northamptonshire. The Core Strategy was adopted in June 2008 and a month later an SPD on sustainable design was adopted.
- 10.35 As in the example above a Joint DPD could be examined once. This would allow all objectors to be heard, enable the HHS Consultants to make an effective contribution at one examination, and enable the Inspector to have a proper overview of the issues. It was felt that it should also be relatively straightforward for Local Development Schemes to be altered to accommodate this discrete process and, if it could be brought forward soon, would greatly assist each District as an evidence base to support its own Core Strategy.
- 10.36 So, even if a District does not have an adopted Core Strategy, it could still adopt the HHS charging schedule as a Joint DPD. It would be sensible to subject HHS to public consultation at an early

stage, even before a Joint DPD has been prepared, so as to identify if there are likely to be any major issues to be addressed.

- 10.37 It is likely that the most efficient and robust means of producing a Joint DPD that all ten Districts in Hertfordshire could agree would be through a Local Area Agreement (LAA), Multi-Area Agreement (MAA) or similar approach. In respect of this, the arrangements for establishing the infrastructure investment priorities and managing the assignment of CIL revenue transferred to it from the charging authorities are considered below

Management of the CIL Funding Model

- 10.38 It is notable that the CIL Guidance assumes very simple arrangements for collecting and distributing CIL. Authorities that prepare development plans (ie Districts, Unitary Authorities, London Boroughs) are identified as the charging authorities and it is envisaged that, in most circumstances, they will be the collecting authorities.
- 10.39 However, the CIL Guidance fails to give proper consideration to the fact that development plan authorities in a two tier system (i.e. District Councils in Hertfordshire) provide only a limited range of services themselves and, most crucially, the main strategic infrastructure (transport, education, health for instance) are provided by others. Additionally, there is an increasing move for such infrastructure requirements to be provided in partnership.
- 10.40 If there were no formal arrangements between the charging/collecting authorities and the infrastructure spending agencies or partnerships, it would be necessary to create a plethora of potentially very complex agreements between parties to ensure CIL revenue was properly expended. The aim with the CIL Funding Model is to bring these arrangements under a single structure and offer collective decision making on investment priorities and expenditure.
- 10.41 The CIL Funding Model acknowledges the role of **partnership** already being played in Hertfordshire, most notably the Sustainable Community Strategy signed off by Hertfordshire Forward in June 2008, which identifies a number of key areas of concern for improvement (e.g. jobs, prosperity and skills, safer and stronger communities). It recognises also the **leadership role** local authorities and elected members are able to play through such partnerships and it also recognises the importance of **joint working**, not only in partnerships to deliver key services and infrastructure but also to tackle issues that cross local authority boundaries both within and beyond Hertfordshire. Finally, it recognises the importance of a shared community **vision**, acknowledged in PPS12 and elsewhere to be a critical element underpinning the creation of Sustainable Community Strategies.
- 10.42 The proposed model will, it is felt, have benefits for all involved in the infrastructure planning and investment process, as follows:
- For the Hertfordshire local planning authorities (the District Councils) and Hertfordshire County Council as the Waste Planning Authority, there can be comfort in the knowledge that they will have a close involvement in setting infrastructure investment priorities for resources they have collected, and that there is a strong link between the charging schedule regime in the LDF and the actuality of investment;
 - For the major infrastructure services providers (most notably the County Council, but also the Police, PCTs and others) there is the simplicity of a collective decision making process on investment in which they will have a critical role;
 - For developers contributing CIL, there is clear evidence of a comprehensive system for defining and overseeing how their contributions are invested;
 - For all parties including local communities, regional and Central Government, there is the prospect of a transparent, fully accountable system for investing in growth-related infrastructure.

Multi and Local Area Agreements

- 10.43 In establishing a suitable structure for the CIL Funding Model management arrangements, the Consultants consider that there are two options: a Local Area Agreement (LAA) and a Multi-Area Agreement (MAA).
- 10.44 LAAs are the vehicle for creating Local Strategic Partnerships. Hertfordshire currently has an LAA which covers the period 2008-2011. A commitment to deliver infrastructure, with the Funding Model as the mechanism for assessing that, could be part of this arrangement. The individual themes in the existing LAA fit well with the infrastructure elements in the CIL, as shown in Table 10.1.

Table 10.1 - Comparison of Current Hertfordshire LAA Themes with Items in the HHS

Theme	CIL/Standard Charge Item	Comment
Jobs, prosperity and skills	Economic development	Unlikely to be part of the CIL as proposed
Safer and stronger communities	Police, health, community infrastructure	
Children and young people	Children's care services, education, health	
An ageing population and health and well being	Sports facilities (indoor and outdoor), health, adult care services	
Transport and access and promoting sustainable development	Transport, municipal waste	
Housing, affordable housing and quality neighbourhoods and sustaining Hertfordshire's unique character and quality of life	Affordable housing	More generally applied to the need to deliver housing

Source: Hertfordshire LAA, 2008-2011

- 10.45 Ideally the inclusion of CIL arrangements would be part of any review of the LAA. However, if there were a commitment to move sooner than this on the CIL, then it may have to be added to the existing LAA. This would need to be considered at an early stage by the relevant authorities.
- 10.46 An alternative approach would be an MAA. This concept was first proposed within the October 2006 White Paper, *Strong and Prosperous Communities*, and was strongly endorsed in the July 2007 Sub National Review.
- 10.47 MAAs are an option open to councils covering a functional economic area, working together with local agencies to boost economic growth and tackle deprivation and financial inequalities, in return for action by Government to devolve more powers and reduce barriers to delivering better outcomes. Actions so far have included more flexible resources on housing, integrated and flexible employment and skills investment and a refocusing of national targets to increase support to businesses.
- 10.48 So an MAA is a framework in which adjoining authorities work in partnership, and comprises a voluntary agreement between local authorities with a common interest who then enter into a contract with Central Government, although it should be stressed that the intention of such arrangements is that they should be bottom-up and organic, rather than top-down and prescriptive.
- 10.49 MAAs should have an economic core and relate principally to economic development, although MAAs for other activities are not ruled out.
- 10.50 An MAA appears to be well suited to circumstances where the following conditions apply:

- There are strategic challenges and issues which cross administrative boundaries;
- Where value added benefits could be achieved by a number of local authorities working together; and
- There is a particular focus on driving economic growth, creating stronger communities or directing infrastructure investment.

- 10.51 The Government's Review of Sub-National Economic Development and Regeneration, published in July 2007, states that MAAs should focus on activities where sub-regional working can add most value. The rationale for cross-boundary delivery of objectives must be evidence-based.
- 10.52 In terms of their management and operation, the following factors are important considerations:
- Local authority partners and public sector bodies will share collective responsibility for outcomes;
 - Through the operation of an MAA, sub-regional partnerships will have transparent arrangements for ensuring financial and democratic accountability;
 - In two-tier authorities, County Councils and participating Districts will be co-signatories to MAAs.
- 10.53 MAAs set targets for a three-year period. This does not fit exactly with the 5-year forward planning considered appropriate for the Funding Model. However, the in-built flexibility in the Funding Model means that the review of MAA targets can be reflected easily without compromising the delivery of growth. Indeed, given that the MAA will be tied back to the Funding Model, it will actually be the latter driving the former, i.e. if fundamental changes are made to certain inputs in the Funding Model (e.g. the prioritisation of particular infrastructure schemes), then this can be reflected in the MAA review. What this certainly provides is a sound framework for monitoring and evaluation, as required of LDFs.
- 10.54 The Government has recently published draft legislation to allow for the creation of MAAs with statutory duties. The Local Democracy, Economic Development and Construction Bill was published in December 2008 and, in respect of MAAs, will provide a further option to local authorities to work together on economic development by allowing MAAs to be put on a similar statutory footing as LAAs.
- 10.55 As with existing MAAs, local authorities wishing to pursue such an agreement will nominate one authority – a lead authority – to be responsible for preparing and submitting the MAA. The Government will legislate to provide for a duty to be placed on named partners (including other local authorities in the area) to co-operate with the lead authority in agreeing targets, and a requirement for partners and the lead authority to have regard to those targets in the execution of their functions.
- 10.56 At this stage, the Consultants have no particular view on who should be the lead authority. It could be Hertfordshire County Council but it could equally be any one of the Districts. In any event, all the Districts and service providers would assist in the preparation of the MAA and have an equal say on all relevant matters.
- 10.57 The Government sees the advantage of MAAs (over LAAs) being that they can improve performance in dealing with strategic, sub-regional issues that are either difficult or incapable of being dealt with at a localised level. This will create larger accumulations of finance to lever in other funding programmes and private finance, thereby giving flexibility in being able to tackle issues. It should also, through the experience of operating an MAA, forge stronger partnerships. As such, the MAA model is considered to be tailor made for the operation of the CIL Funding Model.
- 10.58 However, only when the CIL Regulations are published can there be any certainty as to the potential mechanisms available and the Government's view on which is most appropriate.

Requirements of an LAA/MAA

- 10.59 To date, MAAs appear to have been used as an agreement between local authorities and Central Government with some input from service providers. In this case the pan-Hertfordshire MAA would also need to be an agreement between local authorities.
- 10.60 Whatever is included in an LAA or MAA, the targets can be agreed by the partner authorities in its preparation. What must be remembered though, is that their whole purpose is to aid the monitoring of delivery of the targets, rather than in identifying the targets that need to be set. So the MAA would be a mechanism of providing monitoring advice on the CIL and nothing more.
- 10.61 The first seven MAAs were produced in July 2008. Two relevant examples are in Tees Valley and South Hampshire.
- 10.62 In the Tees Valley, five local authorities have created a partnership (Tees Valley Unlimited) to create a single, rationalised funding stream for project investment with a 5-year investment programme, involving the delegation by the Regional Development Agency (One North East) to the partnership of responsibility for a range of programmes. Tees Valley Unlimited is given discretion to re-profile the sequencing of individual projects between and within a wide range of funding streams in order to deliver an investment programme agreed with the Government and RDA.
- 10.63 The second example was an MAA produced by the Partnership for Urban South Hampshire (PUSH). PUSH involves a partnership of 11 authorities including the County Council as well as a total of eight partners (including the RDA and Homes and Communities Agency) with a focus on tackling the barriers to achieving success in investment in employment and skills and strategic transport investment.
- 10.64 A key action for this MAA is for exploratory dialogue to see how section 106 monies and the proposed CIL could be directed towards sub-regional infrastructure investment.
- 10.65 Two of its eight outcomes and eight enabling measures relate to infrastructure:
- **Transport infrastructure:** a balanced approach to facilitate growth and improve management of the highway network, as part of a comprehensive strategy to deliver sustainable transport solutions in South Hampshire;
 - **Non-transport infrastructure:** creating what they call an 'Infrastructure Delivery Partnership' – essentially a joint agreement between the LPAs and appropriate service providers - and setting in place sub-regional funding mechanisms to support strategic infrastructure provision.
- 10.66 The MAA did not set any specific quantifiable targets for this, but instead set targets to determine the appropriate scope for CIL and various funding mechanisms. In the case of HIIS, much of this has already been undertaken and more specific targets could possibly be set. However, it illustrates the applicability of infrastructure to the MAA mechanism.
- 10.67 Against each target, the relevant responsible body must be identified. This would enable administrative matters such as the management of the funding model to be built into the MAA.
- 10.68 Therefore, it would be possible to develop an MAA which has infrastructure as its central theme, underscored by the need to deliver high levels of housing growth as required by the RSS.

Alternatives Structures

- 10.69 There are other potential management structures that might help inform the CIL Funding Model management arrangements. The first of these are Urban Regeneration Companies (URCs), independent companies established by the relevant local authority and Regional Development Agency to stimulate new investment into areas of economic decline, co-ordinate plans for their regeneration and development, and engage the private sector in this process. There are 19 in all

across England. Whilst some of the investment decision making processes have relevance to the CIL Funding Model proposed for HHS, they are only for single local authorities and are focused on areas in significant economic decline.

- 10.70 Of relevance, because it was pre-eminent in establishing a developer tariff system is the Milton Keynes Partnership Committee (MKPC). Created in 2004 and now established as a sub-committee of the Homes and Communities Agency (HCA), the MKPC was created to ensure a coordinated approach to planning the delivery of growth and development in the expansion areas to the east and west of Milton Keynes.
- 10.71 The key objective is to ensure the co-ordination and implementation of the delivery of growth and ensure that homes, infrastructure and jobs are provided as part of a co-ordinated approach. Whilst the overall model provided by MKPC is probably not as appropriate as that offered by an MAA, Hertfordshire has much to learn from it in terms of the co-ordination of investment, particularly in KCDCs and other growth locations.

Potential Management Arrangements

- 10.72 A CIL Funding Model management structure needs to respond to the opportunities and challenges identified above. Table 10.2 sets out the key principles that could be followed.

Table 10.2 - HHS Funding Model: Key Management Issues

Management Requirement	Comment
Creation of a vision	An MAA (if this is the chosen model) needs to be compatible with the principles of Hertfordshire Forward and other visioning work established across the County.
Partnership	Key to successful funding model arrangements would be the active engagement of the County Council and all ten Hertfordshire local authorities: indeed without this the prospects for a Countywide approach to delivering growth related infrastructure will be remote indeed.
Political leadership	There needs to be a strong member presence in the management of the CIL Funding Model. Early thoughts are that a pan Hertfordshire body that has already been established – the Hertfordshire Infrastructure Planning Partnership (HIPP) – might be the suitable body to take on executive powers under the MAA.
Officer Group role	Sitting under the member group, there would be the need for a suitably constituted officer group with the responsibility for reviewing income and projected expenditure on projects, setting priorities, recommending funding approval to HIPP and overseeing and accounting for expenditure: ongoing monitoring and future cashflow projections would also be a key part of this role. Again all authorities would need to be members of this to ensure collaborative working and collective decision making.
Administrative role	Certain day to day functions such as the imputing of data, preparation of progress and monitoring reports (and perhaps some of the more straightforward tasks identified for the officer group) would need staff detailed to these tasks, either co-opted from local authorities or specifically appointed and funded from CIL revenue.
Involvement of EEDA	It would seem essential to include EEDA in the management arrangements because of the links with the funding programmes they operate, the sub-regional element of HHS, the potential for forward or joint funding of projects combining CIL with other funding initiatives and the move towards the Integrated Development Programme (IDP).
Engagement of other key parties in the	Other MAAs (notably the South Hants PUSH MAA) have sought to incorporate other agencies in the MAA. In the case of HHS it will be

Management Requirement	Comment
process	worthwhile looking at involving service and infrastructure providers (e.g. PCT, Police, Highways Agency) and well as national/regulatory bodies such as the Environment Agency and Natural England.
Potential involvement of HCA	The new Homes and Communities Agency has a key role in the Milton Keynes Partnership and may possibly do so here: their involvement will be worth exploring..
Arrangements for key growth locations	The potential for a number of management sub-groups in key growth locations (e.g. the KCDCs, other growth locations in Hertfordshire associated with the Luton and Harlow expansion) may also be worth examining.

Source: Consultants

- 10.73 It is recommended that the issues set out in Table 10.2, together with consideration of the most appropriate overall management structure should be explored further by the Hertfordshire Authorities.

11. Recommendations and Way Forward

Recommendations

- 11.1 A number of recommendations arise from the HIIS Study. These recommendations are made prior to the publication of the CIL Regulations by Government, expected to be in April 2010 and, as such, they will need to be subject to review.

Adopt HIIS Funding Model as the Charging Schedule for the County

- 11.2 The Hertfordshire Funding Model, although currently incomplete because of the various strands of further work required, has been devised such that it can represent the charging schedule for the County. It provides the detailed evidence base for the CIL charge and also identifies the necessary level of requirement to support a District's Infrastructure Delivery Plan (IDP), as required by PPS12. Further work will be needed by the respective Districts on their IDPs as they move towards the Preferred Options Stage of their Core Strategy.
- 11.3 It will be important to agree how often the Funding Model is updated. In reality, new information will be coming forward at regular intervals and would, in theory, impact on the level of CIL charge. However, it is impractical to change the CIL charge regularly for several reasons, not least that it would remove the advantage of certainty that it brings to Districts, service providers and developers alike. It is recommended that the CIL charge should be reviewed and updated every 3-5 years, as per the need to review the LDF process in which its legal basis is grounded.

Refinement of Service Provider Needs

- 11.4 Before a robust CIL charge can be justified, more work is required by the service providers in order to define their needs clearly and to establish forward costs and possible public sector funding. The currently identified CIL level is likely to change, although the Consultants do not consider that any change will be significant, given that the infrastructure area with the best information to date is transport and this accounts for the large majority of the CIL charge.
- 11.5 Service providers will need to work with one another, with the Districts and with the County Council to determine more clearly their needs in response to growth and to justify these needs. Without a robust evidence base for any individual service provider's share of the charge, then the CIL may be exposed to legal challenge by a developer. The recent Secretary of State decision in Greenhithe, Dartford²⁰, emphasises the importance of proper justification for a tariff.
- 11.6 In particular, there will need to be a consistent basis for determining demographic projections of future population and households. The work done in the HIIS Study has been used to inform the transport modeling and also to accompany the masterplanning work which the service providers should be using to determine their future needs. The intention should be that they adopt these future projections to define their own needs or at least incorporate an agreed approach into their own forecasting models. It will therefore be necessary, as early on in the process as possible, for the service providers to meet and agree a common approach to the demographic projections.

Review the Basis for Charging

- 11.7 The potential for both a single and a variable CIL has been considered in the HIIS Study. At this stage, based on the information available and the viability analysis undertaken, it is considered that a single CIL is likely to be the most appropriate mechanism through which the highest level of CIL receipts can be collected. However, it is necessary for service providers' needs to be refined (as discussed above) and further sensitivity testing done on viability on a district-by-district basis, in order to determine whether this is the case.

²⁰ Appeal Ref: APP/T2215/A/08/2078475

- 11.8 For the residential CIL, the HIIS Study has calculated the charge on a per unit basis. It would be worthwhile considering adjusting the charge so that it reflects the size of the dwelling, i.e. one-bed, two-bed, etc. The difficulty with this approach is that at the outline application stage when some of these charges need to be settled, many developers will not have decided the precise mix of dwellings on a site and in any event that this may subsequently change. However, this needs to be considered as a matter of detail when developing the CIL evidence base further. It is possible that the CIL Regulations, when published, will provide either advice or direction on the charging basis for CIL.
- 11.9 As presented, the proposed charges for commercial space (employment and retail) should be based on a per square metre calculation.
- 11.10 More generally, it is important to bear in mind the implications of the recent Greenhithe appeal decision. Specifically this demonstrates the recent apparent vulnerability of standard charges to challenge. Therefore, it emphasises the need to move towards the adoption of a local CIL as soon as possible after CIL is introduced.

Establishing Management Arrangements

- 11.11 The day-to-day working of the Funding Model must be agreed. With a range of service providers and ten local planning authorities wishing to input information into the Model, it will be important that the arrangements for this are clear and transparent. The Consultants recommend that a single person or body, the Modelmeister, is given responsibility for inputting new information into the Model in respect of the strategic CIL, and for distributing collected funds as necessary. It is for the Hertfordshire authorities and service providers to decide where this person/body should sit.
- 11.12 The local CIL element of the Funding Model should be the sole responsibility of the individual planning authorities to collect information from other service providers, update and generally maintain. It will be advantageous for planning authorities to share information with one another, in order to ensure a broad consistency in charging levels.
- 11.13 It should be noted that the Funding Model is not an accountancy tool that can be fed into a District's own accounting systems. It has not been developed for this purpose and its timescales for forward planning and review are sufficiently different to make the two incompatible.
- 11.14 Whilst this study proposes a potential management structure for the Hertfordshire Funding Model for the authorities to consider further, there are in addition various management structures that have already been established across the country to identify, plan for, fund and deliver infrastructure. These need to be explored in further detail to determine which approach is right for Hertfordshire.

Talk to National and Regional Interests

- 11.15 The Hertfordshire Authorities and service providers are one of the first to undertake and complete a CIL study. In many respects, they are the ones that are leading the way but also potentially the first to have to tackle intrinsic problems that will arise. In light of this, it is important that an early dialogue is opened up with GO-EAST and CLG to understand whether HIIS is likely to be compatible with the emerging CIL Regulations. Indeed, this provides the opportunity, through the CIL consultation process, to influence the way the final CIL Regulations are shaped. Hertfordshire is currently the only area that has undertaken and completed analysis on the potential for, and shape of, a Countywide CIL. It would certainly be in the Government's best interests to learn from this practical experience.
- 11.16 There are other elements of HIIS that also impact on strategic agencies. In particular, recommendations on affordable housing grants will require early dialogue with the Homes and Communities Agency (HCA) in order to understand the potential for these recommendations to be put into practice. Equally, the role of EEDA is vital, particularly as a source of funding. Recognising their input into the HIIS study as a member of the Reference Group, it will be

important to open early dialogue that picks up on these and other relevant matters of technical detail.

- 11.17 It is recommended that the HIIS Reference Group should identify a list of additional important consultees and put together an appropriate programme of consultation. This should dovetail with the Government's CIL Regulations consultation, which is not likely to be commenced before Autumn 2009.
- 11.18 In addition the outcomes from this study are available for use as part of the evidence base for a variety of functions, including a basis for a response to the draft East of England Implementation Plan and its submission to EERA as additional evidence for the Regional Plan review, as well as using the findings of this study in mounting a response to further consultations.

Taking soundings from the development industry

- 11.19 Should the Hertfordshire authorities decide to introduce a system for securing funding for future growth related development that is to rely heavily on development charges, then it will be important to seek the support of the development industry for such measures. Whilst to date the development industry appears generally supportive of the concept of CIL, there may well be concerns about the impact on scheme viability and the Hertfordshire authorities need to explore these in detail with the industry.

Districts to Define Local CIL Charges

- 11.20 HIIS does not just address strategic charges. It also accounts for and includes charges at a local level within the CIL. This is important so as to avoid the possibility of developers paying a strategic CIL and then having no further funds to cover local items. By keeping strategic and local items together developers are aware of the full CIL costs that they will have to cover.
- 11.21 It is important that Districts define their own local charges. Each District will have its own view on the importance of particular local infrastructure items and will also have different standards for the provision of infrastructure to address needs. HIIS has, therefore, left Districts to provide this information into the Funding Model themselves. Recommendations have been made on appropriate levels of charge for each item. These have been derived from an analysis of a large number of supplementary planning documents (SPDs) from across England and the identification of what the Consultants consider to be good practice.
- 11.22 Whereas strategic CIL receipts will go into a central CIL pot to be distributed across the county as appropriate, Districts will retain all local CIL receipts from development and be able to use these within their local area.
- 11.23 It is recommended that Districts adopt these charges for their local CIL items. If all Districts do so, then this will ensure consistency in charging levels that underpin the local CIL. This will reduce the potential for developers to mount a legal challenge to a charge or to question why the charge in one District is substantially higher than in another.

Actions to Take Forward in LDFs

- 11.24 The HIIS study represents an essential element of the evidence base that the Hertfordshire local authorities need to underpin their Core Strategies. There are two strands of the overall study and associated Funding Model which provide this evidence. The first is the overall CIL charge (underpinned by the Funding Model which acts as the charging schedule), covering both strategic and local CIL items, which the Districts, the County Council and the service providers should take forward and put in place in order to secure the necessary funding from developers to address any shortfalls in public funding. The possible mechanisms for taking this through the LDF process are briefly discussed later in this section.

- 11.25 The second strand to the study is the contribution it makes towards each District's Infrastructure Delivery Plan (IDP), a requirement of PPS12. HISS shows, as far as is possible given the information provided by the service providers, the information required of an IDP, namely:
- The strategic items required to be provided in the District;
 - When strategic items should be provided;
 - Who should provide them;
 - How much they will cost; and
 - How much public funding will be available.
- 11.26 Further work will be necessary by each District in order to complete a robust IDP, principally relating to the information coming from service providers and the requirements for particular local items. It will also necessarily be shaped by each District's respective preferred spatial strategy.
- 11.27 The Funding Model can represent the charging schedule for the IDP and each District should update the local CIL items individually for their LDF purposes, both leading up to its examination as part of the Core Strategy Examination in Public and subsequently in order to guide development and monitoring. Each District may prefer to revise the way the Funding Model is presented in order to provide a more straightforward charging schedule that is fit for understanding the strategic, rather than detailed, infrastructure requirements, as required by PPS12.

Potential for Joint DPD

- 11.28 In order for HISS and its Funding Model, as the justification for a CIL charge, to be given full legal status, it will be necessary to embed it in the LDF of all ten of the Hertfordshire local planning authorities. To present HISS as a Development Plan Document (DPD) and take it individually through ten LDF examination processes would be a waste of resources and would also open up the possibility of one District not being permitted to adopt it whilst the other nine are able to. Such a scenario is unlikely, which is part of the rationale for a Countywide study, but could still theoretically occur.
- 11.29 It is considered possible to take HISS forward as a Joint DPD which, if declared sound, could be adopted by all ten of the districts. Whilst such a Countywide approach has not been taken elsewhere, the councils of Corby, Wellingborough, Kettering and East Northamptonshire (making up North Northamptonshire) did have a Joint Core Strategy adopted in June 2008. In addition, legal counsel's opinion has been sought in such matters, and the view of a Joint DPD was endorsed, in principle, a being legally sound way of taking HISS forward.

Developing Local Authority Skills in Infrastructure Planning and Delivery

- 11.30 One of the key lessons to be learned from the HISS study is that local authorities currently do not have the appropriate skills to define long term infrastructure needs and ensure their delivery. This element of the work would involve defining key those skills and resources needed within the Hertfordshire authorities and indeed other service providers to ensure these tasks are being adequately addressed.
- 11.31 The Homes and Communities Agency has recently announced an action plan entitled "*Delivering better skills for better places*" with the idea of developing such competencies very much in mind. It will be important to tap into this and other potential programmes to assist both in service planning and the development of Infrastructure Delivery Plans within LDFs.

Review HISS in the Light of Publication of CIL Regulations

- 11.32 All recommendations made by the Consultants have been informed by the draft CIL Guidance. However, in the absence of the published CIL Regulations, it there is uncertainty as to whether it

will be feasible to implement the recommendations contained in this report. When the CIL Regulations are published – currently this is expected to be in April 2010 – it will be important to review HHS and determine whether any changes need to be made to the approach and associated justification for the CIL charge

- 11.33 Given the likelihood that the Hertfordshire authorities will be preparing a collective response to the draft CIL Regulations based on the experiences and conclusions from HHS, this is likely to be a task that will need to be addressed in late summer or autumn, although the precise timing will be dependent on the date when the government decides on publication.

Potential Amendment of Floor Authority Status

- 11.34 One of the key issues for setting the CIL is the amount of mainstream public funding that can be accessed. Much of this funding comes from Central Government as supported borrowing. The level of this support is determined by the application of a ‘floor damping’ mechanism to revenue budgets. This means that local authorities in more prosperous areas, such as Hertfordshire which has floor authority status, get more funding than they might be entitled to on a strict application of the relevant national funding formulae. The Government deems this sum to be adequate to meet their needs and strictly reduces access to any additional funding.
- 11.35 So, in short, as a floor authority Hertfordshire will have access to less additional support than others. This will, therefore, place additional upward pressure on the CIL charge and could make it unviable. It is recommended that the County Council should explore the possibility of getting its floor authority status amended, as was permitted for Kent County Council.

The Way Forward

- 11.36 There are some immediate actions arising out of this study and the time up to the publication of CIL regulations can be used profitably by the Hertfordshire authorities to address the most urgent recommendations made above. It is acknowledged that the authorities will wish to spend time exploring some important areas of work before they make any commitment to pursuing the adoption of a countywide Funding Model, and principally this relates to obtaining better information from the service providers that will enable completion of data into the Model. At present, the figures in the Funding Model (the charging schedule) are in draft and some infrastructure items have a zero figure assigned to them. This situation will clearly need to be remedied and revisions made.
- 11.37 The gaps in the charging schedule and the uncertainty over many of the figures arise because the information received from the service providers has not been sufficient to justify the charge level. This is fundamental. If any charge is not properly justified, then the whole charging schedule could be subject to legal challenge by developers. Even before that, its examination as part of the LDF process may highlight problems that could delay the adoption of Core Strategies.
- 11.38 Specifically, it will be necessary to have more information provided by the service providers in terms of what they need to support the necessary growth. It will also, in some cases, be necessary to understand the justification given for the forward strategy and for the facilities required and their associated costs.
- 11.39 Throughout discussions with the service providers the Consultants have provided assistance on the levels and type of information needed. This exercise should to be revisited and it is recommended that there should be further discussions with service providers once they are able to provide more information. It will also be important for service providers to meet and ensure that their respective strategies complement one another in order to make maximum use of resources.

Further Work By Service Providers

- 11.40 Generally, what would be helpful from the point of view of using CIL, would be if service providers could adopt a longer timescale for planning capital expenditure projects. The Local Transport Plan

(LTP) system provides a good model, where transport departments know what is in the current five-year plan and are normally looking ahead at priorities for the next five-year period.

- 11.41 Certainly it is necessary for all service providers to be clear on what their capital programmes are for the next five years. In many respects, these programmes are fixed and will represent what can be delivered through known funding schemes over that period. It is beyond that period when there is greater uncertainty and a robust method for determining prospects for securing funding are needed. This highlights, through the infrastructure process, the need for service providers to be updating their capital programmes at suitably regular intervals.
- 11.42 The following list sets out the key areas that service providers need to focus on at present:
- **Health (timescale: immediate action)**
 - At present, the PCT does not use the HUDU Model to determine its needs. It is suggested that this model could be used to define their needs and to determine the viability of delivering on such needs. This should be explored further.
 - Any approach that was taken would need to be done in consultation with the Strategic Health Authority.
 - **Education (timescale: short to medium term action)**
 - There is a need for the County Council to understand better where major development is going in the KCDCs and how this will impact on the provision of school places. Specifically, the potential to use existing school places in neighbouring areas to support some of the growth should be understood.
 - **Police (timescale: short to medium term action)**
 - In order for Police services to be included in a CIL, further justification is needed for the requirements in growth areas, specifically for Intervention Bases.
 - **Fire and Ambulance (timescale: short to medium term action)**
 - Further work needed to more accurately define needs
 - **Adult Care and Children's Services (timescale: immediate action)**
 - Social Services often have difficulties in understanding their capital expenditure needs beyond the short term. Ideally there should be more consideration given to social services' long term operational planning, in order that investment is properly planned rather than being undertaken on an ad hoc basis. Also it is one of the services that would benefit from better liaison with other service providers in complementary areas.
 - **Strategic Green Infrastructure (timescale: short to medium term action)**
 - The principal issue to be addressed is the need for clarity on determining which items are considered as historic deficit and which as growth-related items. It will important to establish clear rules and ensure that only growth items are included in HIIS. Similarly, it will be necessary to revisit needs and ensure that no revenue items are included.
 - **Municipal waste (timescale: short to medium term action)**
 - Further work needed once detail of PFI is confirmed
- 11.43 An action plan identifying the full range of short and medium term actions as well as projected outputs is shown in Table 11.1. below.

Climate Change, Energy Planning and National Infrastructure

- 11.44 We recommend that the Hertfordshire local authorities work with other key agencies to give further consideration as to what sort of future infrastructure planning, funding and delivery regime

can be put in place in respect of current initiatives relating to climate change, energy planning and national infrastructure to ensure that neither these initiatives nor RSS growth requirements are compromised.

Table 11.1 - HIIS Funding Model Plan of Action

Topic		Action	Projected Output
Immediate Actions			
1	Engage with key national and regional partners	Further discussions with key agencies would include the Government Office, DCLG, EEDA and the Homes and Communities Agency. Discussions would focus both on the Hertfordshire Authorities' experiences in putting together HIIS (and the issues that it raises) and how to take the HIIS work forward	No specific output, although the views of these agencies are expected to influence the actions of the Hertfordshire Authorities in taking the HIIS Funding Model forward
2	Further refinement of service providers needs	A key conclusion from this study is that key service providers do not currently do enough to plan service development and infrastructure planning in the longer term, and the need to do so will become imperative with the requirements for infrastructure planning being a key aspect of the Development Plan system. The HIIS report contains a number of recommendations for working with the services concerned and there needs to be concerted work over coming months	Long term service development and infrastructure delivery plans from all key infrastructure providers
3	Preparatory work around Infrastructure Delivery Plans (IDPs)	Local authorities require a much more detailed understanding of PPS12 IDPs for their LDFs: guidance is currently weak. There is the need for a common Hertfordshire-wide approach to this issue. The HIIS study provides the basis for taking such work forward	The preparation of individual district IDPs by each district as part of the evidence base required for demonstrating infrastructure needs and the means for delivering it within the Development Plan process
4	Local authority skills requirements	Local authorities currently lack the appropriate skills to define long term infrastructure needs and ensure their delivery. To take HIIS forward there is the to define what skills are needed and how they can be delivered	A cross Hertfordshire training plan for delivering skills in infrastructure planning and delivery
5	Determine Funding Model management arrangements	To explore in further detail the various management arrangements for the Funding Model open to the Hertfordshire authorities. Included within in such consideration will be the potential for an LAA/MAA, and the idea of an Integrated Development Programme put forward by EEDA. Investigations would involve the views and experience of national/regional agencies (see task 1)	An agreed management structure
Immediate Actions (continued)			

Topic		Action	Projected Output
6	Consultations on the draft HIIS with key interests including developers	The legal opinion obtained from Leading Counsel suggests that the Hertfordshire Authorities need to engage with a range of external interests through formal public consultations to test out the HIIS Funding Model recommendations and secure if possible buy-in to its principles. The development industry needs in particular to be engaged for its views	A report on consultation outcomes for the Hertfordshire Authorities to consider in moving the HIIS Funding Model forward
7	Respond to draft CIL Regulations	CIL draft Regulations are expected to be published for consultations in the near future. When this happens, the Hertfordshire Authorities need to make use of their experience in establishing the principles of the HIIS Funding Model - and the issues that have been raised during the course of its preparation - in a collective response. Because of the pioneering nature of HIIS there is every likelihood that the views of the Hertfordshire Authorities will be judged important	A collective response to the draft CIL Regulations by the Hertfordshire authorities
Longer Term Actions			
8	Adopt the HIIS Funding Model	Agreement amongst the 11 Hertfordshire Authorities that HIIS and the Funding Model should form the basis of a strategic/local infrastructure charging schedule for the County, subject to a number of points of principle and matters of detail being resolved	Overall agreement to the HIIS Funding Model, if possible
9	Agree a local charge regime (Local CIL)	Each District to determine the level of local charges they will seek within the Funding Model using the HIIS Menu of Charges	All 10 Districts to agree to an individual Local CIL charge, which may vary from District to district depending on circumstances
10	Refine the Funding Model schedules/costs of infrastructure required	The HIIS report and Funding Model has been able to take strategic charges as far as has been practicable within the study timetable, but further work is needed. In particular an updated assessment of infrastructure need is required with the help of service providers (see task 2), agreed Local CIL charges need to be factored in (see Task 9), and cashflow/timing issues explored in further detail	An updated costed schedule of infrastructure requirements and charges
11	Determine the most appropriate basis for a strategic CIL charging regime	Further work done on viability, particularly on as district-by-district basis, to determine whether a variable strategic CIL may be more appropriate than a standard cross county strategic CIL.	An agreed level of charge, either in the form of a single strategic CIL or a variable strategic CIL

Topic		Action	Projected Output
12	Preparation of a countywide DPD	Subject to the views of the Government Office, elements of the HIIS strategy can be developed into a countywide DPD on infrastructure needs, funding and delivery, to be adopted by each local planning authority	A prepared countywide DPD on infrastructure needs, funding and delivery

* This is dependent on whether a Countywide DPD could be adopted in advance of District Core Strategies. The view of the Consultants, supported by legal counsel, is that it can (see chapter 10).

** Completion will vary by authority and is dependent on District progress on LDFs; for some Districts this Action will not be complete until 2011.

Programming Issues

- 11.45 At this stage it is difficult to ascertain whether or not the proposed CIL is viable in the sense that it will provide the funds needed at the time they are needed. This is because little is known about which developments are likely to come forward during the early years that a CIL is operational.
- 11.46 The main concern in this respect relates to the transport provisions because these are highly location dependent and have a long lead-in time. The other major cost covered by CIL is schools but these have the twin advantages of not usually being needed at the outset of a scheme and having a shorter lead-in time on the larger schemes when a site has been made available. The main concern will simply be to identify items that are genuinely on the 'critical path' and to prioritise these.
- 11.47 These cash flow issues will be exacerbated if the number of housing starts is low during the early years of a CIL programme and there is a perceived need to respond to the viability issues that developers will face by deferring payments, where practicable. In the past the practice has been to 'front load' obligations under section 106 agreements. During the early years of a CIL there will probably be an overriding need to delay charging and a consequential need to defer implementation elements of the infrastructure for as long as possible. It has not been possible to gauge the likely extent of this problem with the data available during the course of the study. However, this will need to be addressed at an early stage before a CIL can be justified through the LDF process.
- 11.48 The cost of reinforcing utilities lies outside the CIL but also needs consideration in the context of planning the implementation of infrastructure generally. In many cases critical funding will effectively be secured by utility companies during their periodic reviews. Strategic upgrades required before that will either involve developers in extra cost or cause delays. It is assumed that site and location specific upgrades will be handled directly by developers although in some circumstances, Districts may wish to co-ordinate a wider response with costs incurred recouped through a standard charge. Funding these works might be undertaken through the CIL but should result in no net cost and at present this is not reflected in the Funding Model. The exercise of planning the implementation of the infrastructure programme as a whole will be improved if there is close liaison between the Model Meister (who is assumed to have wider responsibilities for co-ordinating the funding of the growth effort) and the utilities.
- 11.49 In the medium term, a wider range of factors need to be taken into account. As it stands, the levels of mainstream public funding implied by the model is, in some cases, lower than is considered to be appropriate in the longer term when:
- Service providers will have had more time to orientate their strategies to fund the required provision;
 - The exact nature of what is required can be ascertained more precisely; and
 - There will probably be additional items to be covered by the CIL.
- 11.50 A key problem in this respect is the comparatively short term planning horizon used by many service providers as a basis for strategic planning. By way of comparison, business planning periods for infrastructure providers in the private sector are typically much longer on the basis that, while circumstances might not change as expected, it is still prudent to have some form of plan. Rather than adopting a timeframe limited to the period in which the 'crystal ball' is relatively clear, an effort is made to identify and mitigate tangible risks where these are identified and to accept a degree of uncertainty.
- 11.51 A key conclusion of this study is that, if the approach to procurement upon which PPS12 and CIL are predicated is to be realised in the most effective manner, there will need to be a shift to longer term service planning and for the statutory planning system to concern itself as much with the process of implementation as issues of land use. The rationale will vary. For instance it is

anticipated that increasingly there will be a need to use mainstream funding to pay for schools in order to create enough 'headroom' in the planning contributions regime to allow local authorities to respond to other needs. That will need to be underpinned by a longer term financial strategy. At the other extreme, as stated before, the Consultants believe that whilst the needs of Adult Care Services is not large in relation to others, it needs to develop a longer term view on how it intends to respond to an ageing population and to embed this in the infrastructure strategy and planning policies generally.

Appendix A - Demographic Assessment

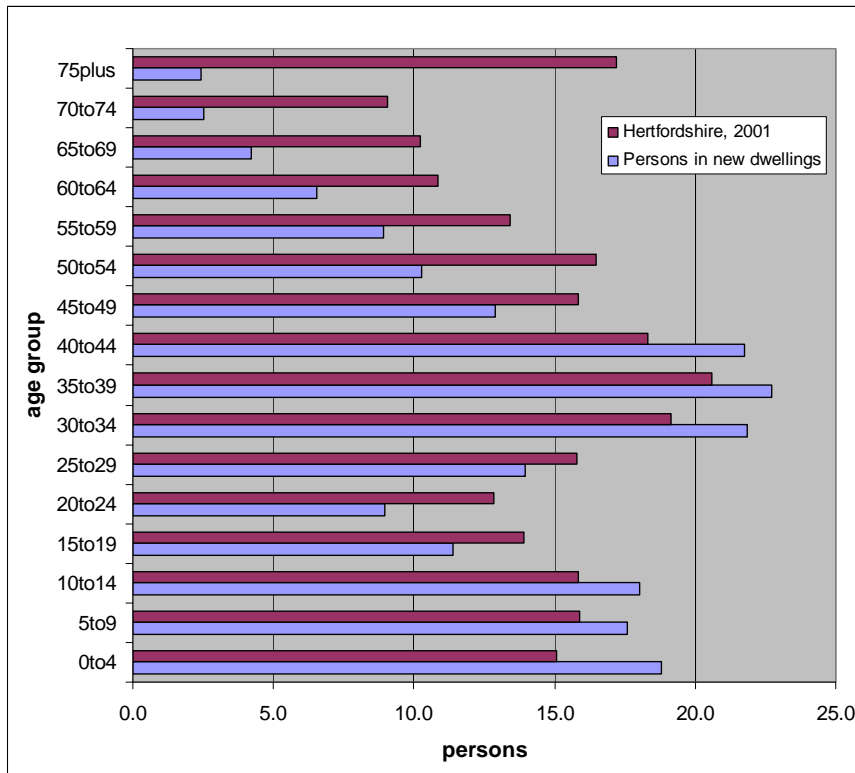
A.1 Demographic Assessment

A.1.1 The text in Section 4 explains the key outputs from the demographic assessment. This Appendix provides more detail on the methodological inputs that informed the assessment. Some text is repeated in order to assist in explanation.

Profile of the Occupants of New Houses

A.1.2 Profiles of people moving into new housing are normally different from those of the entire County. Data are available from the 2001 Census and from population surveys of new housing estates. Figure A.1 gives a profile of the latter type, submitted by Hertfordshire Property, compared with data for the whole of Hertfordshire. Both parts of the chart give the number of persons by 5-year age group per 100 dwellings.

Figure A.1 - Profile of New Housing Occupants Compared with Hertfordshire County



Source: Hertfordshire Property, Census 2001

A.1.3 It is evident that the County has more people in the age groups 45 and over - radically more in the age groups 60 and over. In both places the peak ages are between 30 and 44. There is a secondary peak - largely composed of the children of the first group – aged from 0 to 14. The County has rather fewer people in both these peaks

A.1.4 It should be emphasised that, although the people who move into new housing are termed ‘migrants,’ they are not all new migrants to the County. Many of them will be migrants from other parts of the County, partly as the ‘overspill’ from those areas brought about by reducing household sizes.

A.1.5 To obtain a profile of all migrants at the end of any future year, *N*, it is first necessary to ‘age’ migrants who have moved in before year *N* – that is, to subtract deaths occurring in each cohort and to move the survivors onto older age groups. Migrants who move in during year *N* are then added in. These elements are dealt with in two stages, first discussing migrants moving in year *N*.

New Migrants

- A.1.6 As shown, Figure A.1 above gives the number of migrants moving into a standard bundle of 100 new dwellings, broken down by age. If X new dwellings are constructed in a particular area in a particular year then the number of migrants is obtained by multiplying the numbers in Figure 4.2 by X/100.
- A.1.7 So the trajectory is taken as a standard trajectory applicable to all Districts in the County. To obtain yearly production figures for each individual District, the trajectory is scaled up to match the RSS target for that District. The total of all indices from 2008/09 to 2030/31 is 2,317. This is divided into the target for the District to obtain the scaling factor. Thus, for example, the 2008/09 to 2030/31 target for Broxbourne District is 5,538 dwellings. The scaling factor for that District is therefore 5,638/2,317 which is 2.43.
- A.1.8 The number and breakdown of migrants moving into new housing in any particular year is therefore obtained by finding the number of new dwellings in that year and applying the profile of Figure A.1. To be precise, the number of migrants of age 10 to 14 moving in 2011/12 is given by:

$$T_{2011/12} * S * P_{10-14} / 100$$

where:

$T_{2011/12}$ is the trajectory index for 2011/12

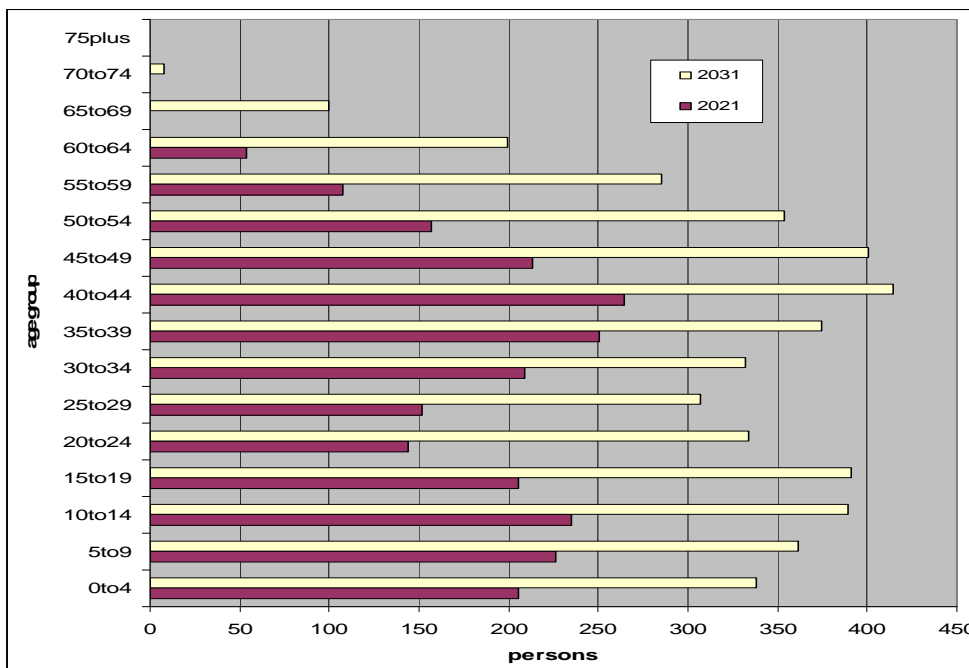
S is the scaling factor for the district in question

P_{10-14} is the number of migrants aged 10-14 in the migrant profile.

Ageing of Migrants

- A.1.9 Having obtained the number of migrants moving into an area in each year, it is then necessary to 'age' these migrants to future years in order to obtain a picture of cumulative waves of migration. To achieve this, the Consultants put forward a standard one-year cohort-survival model which started with zero population and then fed in for each year a tranche of migrants calculated as set out in the previous paragraph. This model used the age/sex specific mortality rates employed by the Office for National Statistics in the official population projections.
- A.1.10 Hertfordshire Property put forward its own model, which used a procedure different from the standard cohort-survival method. After some discussion, the consultants were asked to use the Hertfordshire Property projections of migrants and, subsequently, projections of the total population in each District.
- A.1.11 The Hertfordshire Property output, using the Consultants' housing production trajectory, gave migrant structures for 2020/21 and 2030/31 as shown in Figure A.2. For the first year, the total number of migrants is 2,423 and the total number of dwellings is 1,301, giving 186 persons per 100 dwellings. For 2030/31 the total number of migrants is 4,588 and total dwellings are 2,317, giving 198 persons per 100 dwellings.

Figure A.2 – Estimated Age Structure of Cumulative Migrants, 2021 and 2031



Source: Hertfordshire Property projections applied to consultants' housing trajectory

The Trajectory of Housing – Experience of Past Recessions

- A.1.12 The number of new dwellings targeted for each District is known in the two periods - 2008/09 to 2020/21 and 2020/21 to 2030/31. But with the recent collapse in house building it can no longer be assumed that these targets will be met by steady building rates. A likely trajectory of future house building has therefore, been derived based on the experience of previous recessions. This experience shows that during a recession, house building can decline to around one-third of its pre-recession level and can then take around four years to recover fully. This is discussed in more detail below. The resulting trajectory is shown by Figure 4.3 in the main text.
- A.1.13 Appendix F provides evidence of housing land values from the 1990s recession.

Population Forecasts

- A.1.14 Table 4.2 in the main text gives population forecasts for the ten Districts of the County. Each District is divided between the population living in the 'old' – pre-2008 – housing and the new development areas. In some Districts there is more than one development area: thus, for Dacorum, the table distinguishes new development in Hemel Hempstead from new development in the rest of the District. The figures in the table relate to the numbers of dwellings that are planned to be delivered within the administrative boundaries of that District. In other words, it has taken account of where housing figures provided in the adopted RSS for a particular District, are to be delivered in the adjacent District, e.g. Stevenage growth in North Hertfordshire.
- A.1.15 The calculation proceeds as follows:
 - The 3rd and 4th columns in Table 4.2 give the number of new dwellings in each development area;
 - Population in these new dwellings is obtained by applying the factors of 186 and 198 persons per 100 dwellings, set out above;

- The number of households in new dwellings is estimated as 98% of the number of dwellings, to allow for fictional vacancies and a minimal amount of sharing and second home ownership;
- The number of households in pre-2008 dwellings is taken as the number given by the 2001 Census plus 98% of dwellings completed from April 2001 to April 2008;
- Projections of the total population of each District were produced by Hertfordshire Property to correspond with the RSS dwelling targets. Subtraction of the population in new housing gives the population in pre-2008 dwellings.

A.1.16 In general, figures for single years (2008, 2021 and 2031) give the position in April of each year. Effectively the anniversary of Census day 2001 coincides with the end of each financial year.

Appendix B – Infrastructure Needs and Costs

B.1 Infrastructure Needs, Costs and Funding

B.1.1 The following section seeks to provide additional context to the consideration of infrastructure needs, costs and funding provided in Sections 5 and 6. Not all items are discussed here, only those where the additional information may help future engagement with service providers.

B.2 Strategic items

Ambulance

- B.2.1 The future issues and direction for EEAST is set out in its 'Strategic Direction' (2007-12) document.
- B.2.2 The Trust anticipates that the five-year period covered by this Strategic Direction document will see 'a major shift in the pattern of demand for services'.
- B.2.3 The shift will be driven by 'radical changes in the way that different types of emergency and urgent calls are classified, how they are commissioned, the need to place the patient at the centre of determining how services are delivered, and a focus on clinical evidence of patient outcomes, as opposed to target response times, as the key measure of performance'.
- B.2.4 The ambulance service is therefore demand driven, as opposed to purely population driven. EEAST is already experiencing a 6% a year increase in calls, which has doubled since 1992/93; partly driven by changing public attitudes to using the 999 service, an ageing population profile and increased resources being allocated to emergency capability.
- B.2.5 These challenges are resulting in consideration of major changes to the delivery of the ambulance service, which could result in a more flexible 'hub and spoke' approach, with operational staff not assigned to a single centre and only going there as required (e.g. for training). This could reduce the number of command centres and, therefore, its property portfolio.
- B.2.6 Existing resource levels in Hertfordshire are set out in Tables B.1 and B.2.

Table B.1 – Existing Resource Levels North East Hertfordshire

Station	Staff Level	Resources	Notes
Bishops Stortford	17	1 x 24 hr DMA 1 x 24 hr FRV	Extra DMA on Thurs day and Sat night
Buntingford	5	1 x 24 hr FRV	No change
Hitchin	5	1 x 24 hr FRV	No change
Letchworth	36	1 x 20 hr DMA (sun-thurs) 2 x 24 hr DMA 1 x 9 hr DMA (day shifts only) 1 x 10 hr HDU (day shifts only)	4 extra relief staff for call connect

Station	Staff Level	Resources	Notes
Royston	10	1 x 24 hr DMA	No change
Stevenage	15	1 x 24 hr DMA 1 x 24 hr FRV	No change

Codes Explanation

DMA = Double manned ambulance

FRV = Fast response vehicle

HDU = High dependency unit

Table B.2 - Existing Resource Levels North East Hertfordshire

Station	Staff Level	Resources	Notes
Cheshunt	22	2 x 24 hr DMA	2 x relief staff for call connect
Hatfield	4	1 x 24 hr FRV	No change
Hertford	24	1 x 24 hr DMA 1 x 12 hr DMA (day shift) 1 x 8 hr DMA (night shift) 1 x 10 hr HUD (alternates with WGC)	3 x relief staff for call connect
Hoddesdon	4	1 x 24 hr FRV	No change
Potters Bar	11	1 x 24 hr DMA	1 x person on relief for call connect
Welwyn Garden City	27	2 x 24 hr DMA 1 x 10 hr HUD (alternates with Hertford) 1 x 24 hr SM 1 x 24 hr ECP 1 x 12 hr Day ECP 1 x 8 hr Night ECP	2 x relief staff for call connect
Ware	4	1 x 24 hr FRV	New for call connect
Old Welwyn	0	Planned 1 x 24 hr FRV	In the plan for call connect

Codes Explanation

DMA = Double manned ambulance

FRV = Fast response vehicle

HDU = High dependency unit

ECP = Emergency care practitioner

SM = Station manager

B.2.7 Set out below are the estimated costs and mainstream funding for the ambulance service:

Table B.3 – Estimated Costs and Mainstream Funding for Ambulance Service

	2011	2012	2013	2014	2015	2016-20	2021-25	2026-31	Total
Estimated new population from housing and jobs growth	3,131	4,718	6,696	7,943	9,428	55,320	54,075	52,511	-
Estimated new ambulance staff (1/1000 pop.n)	3	5	7	8	9	55	54	53	194
Cumulative estimated new ambulance staff (1/1000 pop.n)	3	8	15	22	32	87	141	194	502
Estimated new ambulance stations (1 per 40 new staff)	0	0	0	0	0	2	2	1	5
Estimated new vehicles (1 per 10 new staff)	0	0	1	1	1	6	6	5	20
Cost new stations (£2m per station)	£0.0m	£0.0m	£0.0m	£0.0m	£0.0m	£4.0m	£4.0m	£2.0m	£10.0m
Cost new vehicles (£0.35m per vehicles)	£0.0m	£0.0m	£0.1m	£0.1m	£0.1m	£0.8m	£0.8m	£0.7m	£2.7m
Total estimated Cost	£0.0m	£0.0m	£0.1m	£0.1m	£0.1m	£4.8m	£4.8m	£2.7m	£12.7m
Assumed Financing Cost	£0.0m	£0.0m	£0.0m	£0.0m	£0.0m	£1.1m	£1.1m	£0.6m	£2.9m
Assumed Mainstream Funding	£0.0m	£0.0m	£0.1m	£0.1m	£0.1m	£3.7m	£3.7m	£2.1m	£9.8m

Children's Centres

- B.2.8 Information from Hertfordshire County Council indicates that the average project cost of a Phase 2 children's centre is £291,000.
- B.2.9 Hertfordshire County Council has provided a draft specification for a Phase 3 Children's Centre. This is really only a hub and is dependent on there being other community venues available for delivery of services (e.g. a community centre, health clinic, etc). This would cost approximately £600,000.
- B.2.10 The Consultants estimate the costs of a new centre providing full services to be £1.2M, on the basis that these will be large centres serving new growth areas, and taking a conservative view from the examples the Consultants have found in other areas. This will be important when specific needs are identified.

Education

Anticipated Needs

- B.2.11 In terms of the school aged population, the projections by Hertfordshire Property show the number of children of primary school age rising from 81,560 in 2009 to 82,188 in 2021 – an increase of only 628 children. Since schools – and especially primary schools – are quintessentially local facilities the pattern of population change across the county as a whole has only limited impact on

the need both to expand and contract provision in different localities. Nor is it possible to maintain a large number of empty places in schools against the possibility of needs arising at an indeterminate point in the future. This has resulted in a number of existing primary schools facing closure due to the declining number of young people, at the same time as substantial future needs are likely to emerge for additional provision elsewhere. Demographic work has shown that young people are generally prominent amongst the migrants who move into new housing.

- B.2.12 An estimate of the school aged population in the new housing growth to 2031 is set out in Table B.4.

B.11– School Age Population from Housing Growth (to 2031)

Age	School Category	Estimated Population (to 2031)
5-11 years	Primary	19,116
11-16 years	Secondary	20,668
16-18 years	Further Education (inc. Sixth Form)	6,833

Source: Consultants

- B.2.13 It should be noted that, in terms of 16-18 year olds, this is not the actual number of people that will require further education (FE) spaces. The Consultants have been asked to use the target of 80% of pupils staying on to sixth form and understand there are no sixth form colleges in Hertfordshire. This equates to an estimated population requiring FE provision of 5,466.

Funding

Basic Needs Funding

- B.2.14 Basic Needs Funding (BNF) is a capital allocation for building investment based on forecast population growth using a national formula (adjusted for area differentials). It therefore responds to a situation in which there is a need for additional school places aggregated over the entire area covered by an education authority. The County has been allocated £21,473,378 for the period 2008/9 to 2010/11.
- B.2.15 It is assumed there is effectively no BNF available to fund the education requirements set out above.

Modernisation Funding

- B.2.16 This capital funding is available to support building programmes for new or refurbishment of existing provision. The current 2008 – 2011 Capital Allocation is £36,424,812.
- B.2.17 The County notes that Modernisation Funding should be set against a multi-million backlog of improvements to schools to improve condition and suitability to minimum modern standards and to meet Health and Safety requirements. It has, therefore, been assumed that no Modernisation Funding is available to fund the education requirements set out above.

Local Authority Coordinated Voluntary Aided Programme (LCVAP)

- B.2.18 LCVAP is a formulaic programme where the local authority and its partners (usually the associated dioceses) allocate DCSF funding in line with local needs and priorities for Voluntary Aided (VA) schools. A project can be phased over several years. Governing bodies must contribute 10 per cent of the LCVAP project costs.
- B.2.19 The current 2008 – 2011 allocation is £18,294,170. Although an element of this could in theory be used to accommodate the education demands created by new housing growth through Voluntary Aided schools, this funding is not controlled by the Council. There is consequently no certainty

that it would be allocated to new provision. It is understood that in the recent past, no new VA provision has been funded from LCVAP.

- B.2.20 It is, therefore, assumed that no LCVAP funding is available to fund the education requirements set out above.

Building Schools for the Future / Secondary School Funding

- B.2.21 As discussed above, Building Schools for the Future (BSF) is aimed at providing a new approach to capital investment. It is bringing together significant investment (circa £45bn nationally) in buildings and in Information and Communications Technology (ICT) over the coming years to support educational reform. It will be used for replacing and renewing the existing school stock and funded through the PFI mechanism.
- B.2.22 Generally speaking the sums available have been adequate for these purposes, although this has not been the case in Hertfordshire. In Stevenage, the County Council has had to contribute an additional £40m from capital receipts and other sources to the funding provided by government to provide a realistic budget for the type of investment programme government has required. Many education authorities also claim that the need to use PFI for new building in some circumstances is poor value for money and makes it difficult to meet the highest standards of provision. Some local authorities also object to the alleged use by DCSF of BSF to promote Academy schools.
- B.2.23 This focus has restricted the possible application of the BSF to finance the growth agenda. However the last Comprehensive Spending Review (2007) stated that DCSF would be looking at the ways in which their capital programmes responded to the growth agenda and that this review would include Building Schools for the Future Wave 7. In the future, the rules governing new investment in schools might be more supportive of the growth agenda than hitherto. Conversely, there is no Government commitment to fund the BSF programme beyond the duration of the current spending review.
- B.2.24 There is also no indication of when each of the remaining areas in the county will receive funding. The process by which areas have been identified as areas which will receive funding has recently changed and there could be further future changes. The level of funding provided through BSF does not cover the full costs of new provision for marginal additional pupils. On the PfS funding formula, additional pupils generate 75% of the costs of new additional provision.
- B.2.25 Through discussions with the County Council, the Consultants have assumed that no BSF funding is available to fund education requirements generating by new housing growth, although the Consultants recommend this is reviewed when further information is available.

Primary Capital Programme

- B.2.26 Early years education is a particular focus of government support at present. Because this is a relatively new focus of attention there is a more explicit focus on new and universal provision. There is no easy means of evaluating the adequacy of that support in the context of existing and emerging needs.
- B.2.27 It is, therefore, assumed that no PCP funding is available to fund education requirements generating by new housing growth, although the Consultants recommend this is reviewed when further information is available.

Health

The Issues with Developing a Sound Basis for Charging

- B.2.28 The question of the extent to which developer contributions should be sought towards providing health facilities in the growth areas is perhaps the most intrinsically complex issue of its type but has implications for the approach to settling arrangements in respect of other similarly funded services.

- B.2.29 In most cases where services such as mental health, acute and ambulance services are provided by other organisations these are 'bought' by the PCTs or other service commissioning agencies on the basis of a tariff which is supposed to cover the cost of providing that service. The precise configuration of these arrangements varies between areas but the principles remain the same insofar as they affect the equity of funding arrangements between the public and private sector.
- B.2.30 The PCTs themselves are revenue funded on a capitation basis with various adjustments made depending on individual circumstances. It can take a few years for this capitation funding to catch up with actual increases in population even though improvements have been made in this respect in recent years. Operationally, the distinction between capital and revenue funding is blurred and revenue funding can be used to support capital expenditure by means such as borrowing and leasing. A final complication is the fact that a good proportion of primary care provision is directed through parties such as doctors, pharmacists, dentists and opticians who are either directly or indirectly funded to provide their own premises.
- B.2.31 A recent development has been a major increase in the development of health facilities by external parties such as private service providers, property developers and investors and the LIFT partnerships in which PCTs are joined by private investors. There is no longer a need to assume that new health centres on new developments must necessarily be funded and owned by the public sector. It is one thing to require a developer to provide a health centre on a site at their own expense and quite another to require that it is given free of charge to a PCT.
- B.2.32 Lastly, PCTs in growth areas are given additional revenue support to reflect the particular stresses and strains involved in responding to the growing population. There is an ongoing discussion between CLG and DoH about making funding streams mutually supportive in this respect.
- B.2.33 Whilst pharmacies and optometrists fall outside the remit of the HHS study, it should be noted that the PCT does have a role in advising on the optimal location of pharmacy and optometric services to ensure access and patient choice is determined by the national regulations. There is also an inspection role. The new contract for optometrists will allow the local NHS providers to influence where services are located. Similarly, this can also be achieved with the commissioning and tendering of dental services underpinned by the dental strategy and dental needs assessment will feed this strategy.
- B.2.34 Similarly, dental premises are outside the study's remit but it is important to note that PCTs can financially support the business rates for dental practices, the level of which is linked to the practices percentage of NHS work).

Calculating Infrastructure Needs

- B.2.35 At present, when the PCTs become aware of a planning application for housing in their area, they calculate the likely health needs: primary, secondary and tertiary, generated by the new housing development. With the input of local PCT level data, they are able to calculate what health care floorspace is required, and what the costs, both capital and revenue, will be before mainstream NHS funding catches up.
- B.2.36 A rough rule of thumb used by PCTs across the country is that there should be one GP for every 1,800 people. However, it is the case that GPs do run with both significantly more, and significantly fewer, people on their lists than this. In practice, there is a good degree of flexibility in list lengths and not, as might be imagined, any statutory maximum list size. It is therefore often difficult to identify a 'slice' of new provision specifically targeted at new growth.
- B.2.37 The size of an average GP's list means that, even if existing GPs were working at the maximum sustainable rate, 800 new homes would need to be built before a new GP would be required. As a result, there is very often no requirement to provide a new GP surgery for each new development. They state that it is difficult for GPs to build up a practice from scratch: patients are slow to adopt a new surgery. If they move house, people will often travel back to their old place of

residence in order to visit their previous GP which is acceptable as long as the new residence is within the practice's boundary.

- B.2.38 The solution sometimes proposed, that of opening branch surgeries to treat a smaller, more local population, is not always optimal. Branch surgeries are not fully effective if the core services provided do not replicate the main surgery. Smaller branch surgeries are unpopular with GPs. GPs prefer to provide services from one site, and there can also be 'lone worker' issues with small branch surgeries.
- B.2.39 Conversely:
- Larger surgeries are more economically efficient, with shared ancillary and support facilities;
 - Larger surgeries can offer wider range of co-located primary services. The national drivers for change which require a wider range of services to be provided in a primary care setting;
 - Surgeries with a number of GPs are able to pool existing surplus capacity and can (at times) absorb some new housing growth. This can be a combination of physical extension of premises, or more intensive use of existing premises.
- B.2.40 As GP practices accept patients from within an agreed practice boundary, the location of the proposed developments will impact on some practices more than others, particularly in more rural areas where the demand for services from the increased population may fall on only one or two practices covering that area.
- B.2.41 All of these factors make it difficult to settle a single and obviously fair approach to calculating developer contributions towards health facilities. At one extreme some planning authorities and PCTs in London have adopted the 'HUDU' Model which was developed by the GLA to calculate developer contributions towards health infrastructure. This seems to have been inspired by a wish to justify maximum planning contributions generally and can generate a requirement for considerable sums to be paid. But it seems to go beyond a strict reading of the Guidance and the marginal additional cost of providing the services required. For instance:
- It expressly includes allowances for revenue costs that go far beyond maintenance;
 - It includes the capital cost of providing acute and other services and the cost of housing GPs without allowing any offset for rental income or the possibility of private provision;
 - Makes no allowance for the implied assumptions about capital costs embedded in the tariff used to pay for acute, mental health and ambulance services;
 - It takes no account of the additional funding available to PCTs in growth areas.
- B.2.42 There is no obvious and easy answer. Clearly, the best way is to arrive at the judgement based upon the detailed examination of circumstances but it can be difficult to arrive at a shared and objective view. Conflicts of interest mean that this is not always straightforward. One approach appropriate in the growth areas might simply be to recognise that the capitation income received by PCTs tend to lag the growth in population and to compensate them for the cost of financing the annualised cost of capital and maintenance for:
- The number of years by which the receipt of additional capitation funding typically lags the increase in population;
 - The elements of the space which are not occupied by rent paying services such as doctors.
- B.2.43 Assuming a capital cost of 7% p.a. for two years or so, this probably only amounts to around 15% of the total cost. Although the Guidance provides no support for recovering revenue costs these are clearly an issue during the interregnum. An assumption might be that PCTs in growth areas can cover this cost with their supplemental revenue funding. Outside of the growth areas there is no conceptually neat and elegant way of responding but a simple approach might be to suggest

that a higher proportion of the cost of the new capital facilities should be provided for, perhaps 30% or so.

- B.2.44 It follows that there is not seen as being any specific need to provide discrete funding support for the ambulance, mental health or acute services. In any event these agencies are unlikely to have significant additional requirements from the outset of the growth programme and as a result there should be adequate time to programme a response to growth into their capital investment programmes.
- B.2.45 The artificial distinction between capital and revenue costs in the Guidance has made it difficult to find a logical and consistent basis for calculating planning contributions to meeting health costs. At this stage the allocation proposed in the model is based on the Consultants' view of the most appropriate approach, given the information available. We recommend that further consideration is given to this as soon as possible.

The Need to Plan for Sustainable Communities

- B.2.46 The planning done by the PCTs is largely based on numbers of patients. Whilst this is clearly a sensible starting point, it also needs to recognise that planning properly sustainable communities is not simply about whether existing GPs say they can absorb greater numbers of patients. To achieve integrated infrastructure planning, services need to be easily accessible to the communities they serve. Service provision should also take into account the quality of service, rather than simply the numbers.
- B.2.47 It is recommended that further work is done with the PCTs to properly understand the best way of providing community focused services and to deliver the full range of services needed to support this,

Other Considerations

- B.2.48 Significant cost efficiencies are potentially available through the PCT. Examples elsewhere include co-location of health and school facilities and a shared service facility, including a library, GP, outpatients, intermediate care unit, community centre, and social work base for a council. This type of co-operation needs to be actively encouraged to maximise efficiencies of land use.
- B.2.49 Increasingly, PCTs are being asked to demonstrate how the money they receive in developer contribution is being used, and to explain the precise relationship of the projects funded by the developer contribution to the housing development in question. It is understood that this newly critical approach from developers reflects reduced margins in the development market.
- B.2.50 Unfortunately, this change in approach from developers means that PCTs might have less flexibility to use available funding to best effect in future. This kind of approach (which, admittedly, is within the spirit of Circular 05/05) can encourage the development of health centres in places that are sub-optimal from the point of view of the delivery of health services to support the growing population: obviously, health service need cannot be relied on to coincide with development sites.
- B.2.51 Under emerging CIL Guidance, there will be no requirement to demonstrate 'necessity to planning'. In areas where the overall population will rise at a rate commensurate with the increase in population from new development (this would require some demographic analysis) the CIL approach might also provide a basis for charges covering all new development rather than simply major developments. This would be the preferable outcome: it would mean that PCTs had maximum flexibility in service provision, but would also maximise the total funds available to the health service, as value from all development would be captured.

Municipal Waste

- B.2.52 In order to meet the requirements of the EU Landfill Directive, the Government has set the following targets for recycling and composting of household waste: at least 40% by 2010, 45% by

2015 and 50% by 2020. There are also specific targets for reducing the amount of biodegradable municipal waste going to landfill to:

- 75% of 1995 levels by 2010;
- 50% of 1995 levels by 2013; and
- 35% of 1995 levels by 2020.

- B.2.53 This requirement is in the context of the quantity of waste growing within Hertfordshire at 3.2% per annum (1996-2006), although this has reduced to just 1.7% for the past 5 years. The working assumption used by Hertfordshire Waste Partnership (HWP) for its modelling is that growth will stabilise at 1.75% per annum up to 2040. In addition, a working figure of 400,000 tonnes per annum of residual waste by 2040 is being used for modelling purposes.
- B.2.54 The financial relationship between collection and disposal is complicated due to the use of recycling credits and the alternative financial model. However, it is recognised that the current system is to a large extent based on a framework imposed by Central Government.
- B.2.55 Some Districts suggest that both systems are necessary to finance recycling without which rate payers would face increased costs. However, the funds used to pay for these incentives are raised via the precept. Therefore the financial burden exists, exacerbated by costs associated with calculating, paying and monitoring these systems at both District and County level. In essence, the current two-tier structure prevents proper consideration of ‘whole service costs’ to the tax payer.
- B.2.56 That said, given the amount of effort that has been expended on this issue as well as the need to give Districts (and their budgets) stability at a time when they should be considering service developments to achieve 50% recycling, changing the financial model at this stage was considered by the HWP Members Group would do more harm than good.
- B.2.57 Accordingly, the HWP Members Group recommended that any proposals to change the financial relationship between the districts and the county council be considered as part of longer term work relevant to the establishment of joint working arrangements across the two tier structure.

B.3 Local Items

Libraries

- B.3.1 The Libraries Implementation Plan (for consultation purposes) identified that eleven libraries were priorities for replacement. The table B.5 provides a summary list of the libraries with potential for development and refurbishment opportunities.

Table B.5 - Libraries Replacement and Refurbishment Programme

Location	Programme Details
Borehamwood	This library is poorly located, and too small for the population it serves. Herts Property and Lambert Smith Hampton (LSH) are exploring possibilities with Hertsmere for reprovision of the library as part of the proposed new Civic Core.
Cheshunt	This is an unsuitable Listed building, too small, with a significant maintenance liability. No suitable options for relocation of the library have been identified at present, LSH continues to search.
Harpenden	A converted Victorian building, on a sloping site, with a number of internal changes of floor level. It is undersized, with a maintenance liability. LSH are making a detailed investigation of options for relocation.
Hatfield	It is a well located building, but with an internal layout that makes it unsuitable for 21 st century service delivery. The options of either reprovisioning the library as part of the town centre redevelopment or of remodelling and extending the existing library are under consideration.

Location	Programme Details
Hemel Hempstead	Is significantly too small for the population it serves, with severe access problems to the first floor. The library service is committed to providing a new library for Hemel Hempstead either as part of the Dacorum Borough Council redevelopment plan, or as a stand alone project with West Herts College. Discussions about both options are underway.
Hertford	Unsuitable Listed building on multiple floors with a significant maintenance liability. Negotiations are taking place between LSH, the County Secretary's department and McMullen over the lease agreements for a new library as part of the Dolphin Yard development. The negotiations are nearing a successful conclusion.
North Watford	It is a well located building, but with an internal layout that makes it unsuitable for 21 st century service delivery. LSH and Herts Property are looking at a comprehensive scheme to include HCC properties on both sides of the St Albans Road. Options to explore include a new library on the opposite side of the road to the existing one, in conjunction with other community facilities, or a new library on the same side of the road closer to Asda.
Oakmere	A poorly located library, significantly too small for the population it serves. LSH and Herts Property are working with Hertsmere on the possibility of including a new library in the redevelopment of the Wyllyotts Centre. LSH are also keeping all other centrally located sites in Potters Bar under scrutiny.
Sawbridgeworth	Well located but with severe access problems to the first floor. Plans for the extension and remodelling of the existing building to provide a ground floor library with Town Council offices above are well advanced. However the scheme depends upon the sale of Town Council land and planning permission will not be available for this until 2007.
Stevenage Central	A poorly designed building increasingly unsuitable for 21 st century service delivery, too small for the population it serves. Discussions are in progress for the reprovision of Stevenage Central library as part of the ING/Stanhope town centre scheme.
Ware	The existing library is very well located, although in an unsuitable Listed building. The possibility of extending backwards from the modern library extension while redeveloping the old house for residential or office space is under investigation.
Bushey Oxhey Tring Watford Central* Welwyn Garden City	These five libraries are in reasonable locations, in sound buildings of an adequate size, but are in need of major refurbishments.

* or replacement

Open Space, Sport and Recreation (including Indoor Leisure Facilities)

B.3.2 Many of the Districts' PPG17 assessments contain guideline standards for developer contributions. In line with the locally specific approach advocated by Government, different Districts have taken a different approach to this issue:

- Some of these requirements are in stated in cash terms, whilst others are stated per occupant, others per child, and others by the numbers of housing units constructed. Many add accessibility 'walktimes' onto the specifications of need;

- Different policies' categorisation of open space covers different issues – for example, some split out the category of Park space separately, whilst others' categorisations take account of the fact that park space is covered by other standards, therefore avoid double counting by quoting only the 'articulating space' required to link all the other components of a park together.

- B.3.3 There is nothing wrong with these approaches, but these types of problems mean that the different standards used are difficult to compare across the County. Getting a consistent picture of stated green space requirements around the County is, therefore, quite complex.
- B.3.4 The issue of historic deficits, whilst covered in a separate report, also needs dealing with explicitly here. The Districts' PPG17 assessments can incorporate these historic deficit requirements. PPG17 is the only planning guidance that suggests that developer contributions should be used towards remedying historic deficits, and states that *'development of open space, sports or recreational facilities may provide an opportunity for local authorities to remedy deficiencies in provision...planning conditions or obligations may be used to secure part of the development site for the type of open space or sports and recreational facility that is in deficit.'*
- B.3.5 However, this study works within the framework established by CIL and section 106 guidance. It, therefore seeks to identify the infrastructure needs of housing and jobs growth and not historic deficits, nor does it expect developer contributions to plug any historic deficit.
- B.3.6 The PPG17 Annex points out that, as a matter of policy, some authorities do not require either on-site provision or a contribution to off-site provision for developments of less than a set number of houses. The basis for this is that the cost of negotiating and administering a planning agreement is higher than the value of the benefit gained for the local community.
- B.3.7 The use of uniform standards picks up the requirements of all housing development, including that on smaller sites and in the rural areas. This approach seeks to ensure that developers are not offered a perverse incentive to develop small schemes, or those on greenfield sites.

Appendix C – Infrastructure Requirements and Costs

Appendix D - Stakeholder List

D.1 Stakeholder List

Reference Group

D.1.1 Monthly Reference Group meetings were held throughout the project. The Reference Group included the following stakeholders:

- Dacorum Borough Council
- Stevenage Borough Council
- St Albans City and District Council
- Welwyn Hatfield Council
- Hertfordshire PCT
- Hertfordshire CC (Transport)
- Hertfordshire Police Authority
- Hertfordshire CC (Hertfordshire Property)
- The Environment Agency

Stakeholder Workshops

D.1.2 A stakeholder workshop was held at Ware Priory on the 4th July 2008 in order to discuss historic infrastructure deficit and seek further information on HID from stakeholders. The following stakeholders attended:

- Herts Prosperity Ltd
- Welwyn Hatfield District Council
- Hertsmere District Council
- Dacorum Borough Council
- Hertfordshire Community Foundation
- Hertfordshire PCT (Financial Strategy and Monitoring)
- Hertfordshire PCT (Public Health)
- Hertfordshire PCT (Estates & Facilities)
- Hertfordshire CC (Transport)
- Hertfordshire CC (Key sites and Regeneration)
- Hertfordshire CC (Head Biological Records and Landscape)
- Hertfordshire CC (Strategic Planning and Partnership)
- Hertfordshire CC (Hertfordshire Property)
- Hertfordshire CC (Children Schools and Families)
- Hertfordshire CC (Adult Services)
- Hertfordshire CC (Transport)
- Hertfordshire CC (Historic Environment)
- Hertfordshire CC (Countryside Management)

- Hertfordshire Police Authority
- East Hertfordshire (Planning Policy)
- North Hertfordshire (Regional and Strategic Planning)
- North Hertfordshire (Planning & Building Control)
- Hertfordshire Association of Parish and Town Councils
- Three Rivers District Council
- Stevenage Borough Council
- St Albans City and District Council
- Broxbourne Borough Council
- Watford Borough Council
- EDF Energy

D.1.3 Following the initial infrastructure workshop in July 2008 a second workshop to discuss infrastructure deficit definitions was held on the 19th August 2008. The main purpose of the workshop was assist stakeholders in understanding what can be included as a historic infrastructure deficit. This workshop was precursor to face to face meetings with Districts and other stakeholders to discuss infrastructure deficit. The following organisations attended:

- Stevenage Borough Council
- Three Rivers District Council
- Dacorum Borough Council
- Hertsmere Borough Council
- St Albans City and District Council
- North Hertfordshire District Council
- Welwyn Hatfield District Council
- Broxbourne Borough Council
- East Hertfordshire District Council
- Hertfordshire CC Green Infrastructure
- Hertfordshire CC Transportation
- Hertfordshire CC Education
- Herts Prosperity Ltd

D.1.4 Funding model workshops were held on the 26th September 2008 and 16th December 2008. The first workshop presented a number of key issues with the model that the consultants wanted stakeholder feedback on. The second workshop provided a first draft of the model. Key stakeholders were taken through the model and given an opportunity to identify any key issues with the Funding Model. These workshops were attended by the Districts, HCC and key stakeholders including Hertfordshire Police Authority.

Stakeholder Engagement

D.1.5 Stakeholder engagement has taken place throughout the study, this included face to face meetings, phone conversations, and correspondence via email. In addition to the Districts and HCC departments, the following stakeholders were engaged:

- Lee Valley Regional Park Authority
- The Environment Agency
- Chilterns Area of Outstanding Natural Beauty Conservation Board
- The East of England Ambulance Service NHS Trust
- Hertfordshire Fire and Rescue Service
- Hertfordshire Police Authority

Appendix E - Viability

E.1 Viability: Method and Analysis

Introduction

E.1.1 An assessment of the worth of land for development must precede an estimate of the capacity to pay planning contributions. The method adopted was as follows:

- Set a target for the residual value of development land needed to maintain an adequate flow of sites onto the market in normal conditions. This was set at £1.5M per ha.
- Analyse the residual value of land at the peak of the market to ascertain what level of planning contributions would have been affordable then
- Adjust these figures to reflect a 10% and 25% decline in house prices from peak values and analysed the implication in terms of the level of planning contributions package that would maintain land values of £1.5M ha
- Analyse whether the recovery in house prices from low levels was likely to be accompanied by an equivalent increase in land values.

Minimum Land Prices

E.1.2 The key question is what level of residual land value is required to make it a reasonable probability that landowners will bring forward the requisite amount of land for development? Residual land values must:

- Provide an adequate incentive to bring land to the market. A key factor is the extent to which landowners believe that delaying a sale might result in a reduced level of charge perhaps as a result of a successful challenge to the scheme or a change in Government policy.
- Allow landowners and developers to incur additional costs to overcome other obstacles to development and which are not reflected in the appraisal model, for instance providing additional access infrastructure, buying out existing occupiers, dealing with unusually severe contamination or coping with ground conditions that require additional substructure.

E.1.3 The Consultants comment on each of these as follows:

Incentive

E.1.4 In practice many of the largest sites will be held by major housebuilders under option agreements which allow them to draw down land from the owner as and when required for development. The price for each tranche is usually calculated by reference to the values achieved net of the various costs of development. These option agreements will usually include a minimum price for the land. In the past a typical figure would have been around £250K -£500K. Housebuilders who hold land under option agreements have a lower incentive to maximise land values than outright owners.

E.1.5 In any event the £250K per hectare figure cannot be regarded as a safe benchmark 'minimum value' for land prices for the reasons stated above and also because as recent experience demonstrates a downturn in house prices would have a disproportionate effect on land prices.

E.1.6 The Consultants' conclusion on what developers and landowners might accept is based on direct experience and anecdote. It has been suggested that landowners might accept lower base prices when granting options in the current market. That is possible and no doubt some might, but the Consultants have yet to hear of successful renegotiations being completed on any scale elsewhere.

Additional Costs

E.1.7 At the margin, any charge will have an effect by ruling out development of land that is expensive to develop. This can happen for several reasons:

- Where the current use value of the land is high. By way of example, an old industrial estate in Hertfordshire might be worth £400 sq m - £500 sq m. Many are quite densely developed but even where the plot ratio is only 1:2 this would equate to £2.0M - £2.5M ha, a higher figure than would be obtainable for residential use where planning requirements are onerous. And in these circumstances the cost of demolition, site preparation and additional substructure would add to the cost of subsequent development;
- Where the land is contaminated or presents other physical problems. Too much is sometimes made of the cost of dealing with contaminated sites. For instance in 2005 a report for English Partnerships (English Partnerships Best Practice Note 27 Revised Feb. 2008 "Contamination and Dereliction Remediation Costs e) suggested that a typical budget for cleaning up an industrial site in an area with a low water risk was around £75K - £200K per ha. It is relatively common for greater sums to be expended on additional ground works and substructure on sites that are sloping, wet or unstable;
- Because of unusual planning requirements for design and layout, for instance high environmental standards;
- There are off site infrastructure requirements specific to the site in question. For instance, a stretch of access road or additional utilities.

E.1.8 Any substantial package of planning requirements will deter development of sites that are currently built on and occupied. In contrast there are few sites where an additional investment of up to £500K per ha will not resolve site condition and access problems.

E.1.9 On balance a figure of around £1.5M per gross hectare overall might be sustainable with a marginally lower figure in areas where house prices are lowest. These levels might marginally depress the overall rate of development by deterring redevelopment of sites that are currently in use. The lower level is more likely to trigger landowner and developer resistance.

Residual land values at peak prices

E.1.10 The Consultants created a residual land value appraisal model with a cash flow component to assess the worth of land for development on a notional site and based on house prices at a high point in the market, in Q1 2008. The figures were then reassessed on the basis of a fall in house prices from these levels of 10% and 25%. Difficulties in collecting data on actual transactions for comparison on an equivalent basis and the difficulty in assessing real prices in the current market make this the best approach available but it has the drawback that the results are very sensitive to the inputs.

E.1.11 In this case the critical assumptions are:

- The notional site was greenfield and development did not involve any significant and exceptional costs. 60% of the land could be developed for market and affordable housing with the rest allocated for open space and social infrastructure;
- House prices. The Consultants assembled evidence of the asking price for houses and flats from across the County, focusing primarily on 3 bed units respectively because they tend to be a relatively consistent size. (In this case we assumed 85 sq m which is in fact larger than average but smaller than the new English Partnerships standard). The data collected is listed in **Addendum to this Appendix**. A wider picture of the variation between areas is gained from Land registry data on the prices of existing housing stock. **This is shown in also shown by data in the addendum to this Appendix**. Critically, we based our analysis on (a) typical development densities at 4000 sq m per ha and (b) asking prices, in order to offset the conservative bias introduced by using current prices generally;
- 36% of the new housing is affordable, split 2/1 between social rented and shared ownership accommodation. In both cases the assumed price is at the high end of what we believe RSL's might pay for the stock without grant assistance;

- The other key area is build cost. We estimated the cost of constructing the houses using BCIS Q4 2007 data modified to reflect regional price levels. The Consultants then added a £50 sq m premium for the future cost of meeting the higher environmental standards required by Level 4 of the Code for Sustainable Homes and an allowance for the cost of external works using published case studies and our experience of costs elsewhere.

E.1.12 It is important to note that this is a high level analysis using normative assumptions and while it provides a useful guide to the worth of development land across the County after planning requirements are taken into account, it does not provide a guide to the market value of any particular site.

E.1.13 The model was then used to test the impact of various possible levels of planning contributions on residual land values. The results of this analysis are shown in Table E.1.

Table E.1 – Residual Land Values at Varying Levels of House Prices and s106 Contributions

	Planning Contributions Package		
	£20,000	£25,000	£30,000
House price levels			
<i>Low</i>	£1.27m	£1.16m	£1.05m
<i>Medium (Base Case)</i>	£1.73m	£1.62m	£1.51m
<i>High</i>	£2.17m	£2.05m	£1.94m

Table E.2 – Valuation Office Agency; Land Price Data July 2007

	Small Sites (sites for less than five houses)	Bulk Land sites in excess of tow hectares	Sites for flats or maisonettes
	£5 per hectare	£5 per hectare	£5 per hectare
Cambridge	£6.3M	£8.25M	£10.3M
South Cambridge	£3.5M	£3.5M	£3.8M
Peterborough	£2.2M	£2.5M	£3.0M
Ipswich	£3.25M	£3.1M	£3.15M
Norwich	£3.7M	£3.9M	£4.0M
Luton	£2.35M	£2.35M	£3.25M
Stevenage	£2.8M	£2.75M	£3.0M
St Albans	£6.0M	£6.75M	£10.0M
Chelmsford	£4.69M	£4.69M	£7.0M
Colchester	£4.25M	£4.1M	£4.5M

E.1.14 As a check these results were compared with land values reported by the Valuation Office Agency in Mid 2007 and which would have reflected historic planning requirements. These are shown in Table x below.

E.1.15 As can be seen, the projected levels are much lower than existing levels. This is only partly the result of the increase in planning contributions. It also reflects:

- Pessimistic assumptions about requirements for and grants towards affordable housing

- The Consultants' analysis is geared towards the largest sites and we have therefore assumed that only 60% of the gross site area can be used for development.
- The allowance for the cost of meeting Code for Sustainable Homes Standards
- The simple assumption about the way a site might be developed. In practice a developer can marginally improve returns by varying housing mix etc.
- Competition. All other things being equal we would normally expect reported land prices to exceed those predicted by the model because developers when bidding for land in competition must use optimistic rather than normative assumptions about values and costs to succeed.

- E.1.16 If the figures in the base case in the model are roughly adjusted for these and further assume a £10K planning contribution per dwelling, which is closer to historic norms in many places, the implied residual land value is a more comparable £3.57M per ha.
- E.1.17 Finally, using this analysis based upon house prices at around the peak of the market as a starting point, the future value of the notional site is estimated on the basis of expert opinion on the outlook for house and land prices.
- E.1.18 This suggested that, at the peak of the market development would have been viable in many places even after imposing a substantial planning contributions levy. But in weaker markets contributions of over £15,000 would have pushed land values below the £1.5M threshold which the Consultants considered important to maintaining a healthy land market and to enable development on some more difficult and brownfield sites.

Looking forward : House Prices and Building Costs, 2009 - 2014

- E.1.19 Key sources of data are the reports issued by the RICS, the Halifax and Nationwide Building Societies and indices prepared by the FT and DCLG. All are prepared on slightly different bases. The FT index in October pointed to a 4.3% per cent decline in house prices over the last year and the DCLG index slightly less. These are based on transactional data which can lag underlying changes in market pricing. In contrast figures produced by the mortgage lenders by definition exclude homes bought without mortgages. They have reported annual falls of over 12%. The RICS report includes a poll of agents' expectations which can provide a useful forward indicator. This hinted at a decline in the rate of price falls but was gloomy overall and referred to relative market weakness in the Home Counties. Economist's Global Insight together with agent's Savills and the Nationwide have separately estimated that the peak to trough fall in house prices could be around 25%. This would take average prices in Hertfordshire back to where they stood at the end of 2003. Savills forecast that house prices might return to peak levels in the Eastern Region by 2013.
- E.1.20 Average build costs have risen by around 25% since the end of 2003 although the rate of increase is now levelling off. A small allowance for meeting CSH3 was made in the original analysis but CSH4 should be mandatory within the period covered by this analysis.
- E.1.21 In the analysis it is assumed that house prices will fall by 25% from peak values but by the earliest time any CIL can be introduced in, say, 2012 will have recovered to around 10% off peak values. By 2014 they might have recovered fully in nominal terms. A further 5% has been added to costs to cover achieving CSH4. Standards in excess of CSH4 would significantly add to costs and thus reduce the planning contributions or affordable housing obtainable.
- E.1.22 Using this as a starting point the Consultants then recalculated the planning contributions package that might be affordable in the context of reduced house price assumptions. The conclusion was that:
- With house prices 25% lower, a small section106 / CIL contribution might be obtainable in the high value areas on a reasonably consistent basis and nowhere elsewhere.;

- With house prices 10% lower a £25K+ contribution might be obtainable high value areas, around £10K from middle value areas, and nothing from low value areas.

E.1.23 Three approaches to enhancing the general viability of higher planning contributions were then tested.

Scenario 1: Reducing the target residual land value

E.1.24 It is suggested that any planning contributions might aim to leave a residual value for landowners of £1.5M gross ha to ensure an adequate supply of land to the market. Note that this 'residual land value' will not all end up in the landowners hands. Some of it will be needed to cover costs such as land assembly, local access infrastructure and overcoming ground problems. Note that when a site is occupied for non-agricultural uses a much higher figure will often be needed.

E.1.25 Notwithstanding in this scenario we have reduced this residual land value figure to £1M per gross hectare to reflect the possibility that, in the low value areas at least, the recession might temper landowner's price aspirations. The dangers are:

- That in areas where these costs are high, usually sites that are remote from existing services or which are in non-agricultural use, development will remain non-viable.
- That landowners who are not developers will choose to withhold land from the market in the hope that values increase further or that requirements are relaxed, perhaps following a change of Government.

The outcome is as follows:

	Potential Planning Contribution with House Price Reduction of 10%	Potential Planning Contribution with House price Reduction of 25%
Low	£13k	Nil
Medium	Over £30k	£12k
High	Over £30k	£26k

Scenario 2: Reducing developer subsidy for affordable housing

E.1.26 The second alternative was based on reverting to the practice of requiring developers to provide free serviced land for the development of affordable housing by others. Providing affordable housing without grant represents a major burden on developers. This was discussed in a recent DCLG note entitled "Common Starting Points for Negotiating Affordable Housing in Section 106 Agreements" which was prepared after consultation with Local Authorities who were not enthusiastic about the approach partly because it was seen as providing sub-optimal contributions in a healthy property market. Those circumstances have changed and it might therefore be appropriate to reconsider the merits of the approach. The assumption here is that 25% of the net developable area is provided to RSL's free of charge for affordable housing. This should allow for up to 35% of actual units to be affordable because these homes are generally built with smaller private outdoor areas and thus higher densities. The outcome is as follows:

	Potential Planning Contribution with House Price Reduction of 10%	Potential Planning Contribution with House price Reduction of 25%
Low	£15k	Nil
Medium	Over £30k	£8k
High	Over £30k	Over £30k

Scenario 3 : Assuming Housing & Communities Agency subsidy for affordable housing.

E.1.27 The third approach was to assume that HCA Grant would be available to support the provision of affordable housing. This could simply involve a commitment of support from the HCA or alternatively the use of 'cascades agreements' whereby the amount of affordable housing that a developer is required to provide varies depending on the amount of grant provided by the HCA to

offset the cost. In this case we assumed the availability of £500 sq m grant towards social rented housing only. This is equivalent to £30,000 for a 2 bed flat and £40,000 for a small 3 bed house and is typical of the amount that the Housing Corporation have been providing in the last year or so. The outcome is as follows:

	Potential Planning Contribution with House Price Reduction of 10%	Potential Planning Contribution with House price Reduction of 25%
Low	Nil	Nil
Medium	£17k	Nil
High	Over £30k	£10k

Looking Forward : Land Values

- E.1.28 Trends in land values do not necessarily reflect trends in house prices. The Consultant's expect them to fall further and to take longer to recover. This is because land values are the result of subtracting the anticipated costs of development from the anticipated receipts. So if, say, the price of land absorbs roughly one third of receipts from house sales, and if those receipts fall while costs stay the same, the value of land might be expected to fall three times as fast as house prices. In reality while the pattern is clear the arithmetical relationship is not quite so exact and at certain stages the value of land 'undershoots' what might be expected on the basis of house prices in the same way as it can 'overshoot' at other points in the cycle .
- E.1.29 The delay in land values 'catching up' with increases in house prices is in part due to the fact that by the time house prices had recovered their former levels, building costs have moved further ahead. It is also due the housebuilders practice of withdrawing new investment to preserve cash when the rate of sales is falling and then, with financial probity taking precedence over commercial opportunism, prioritising the need to rebuild their balance sheets by developing land they already control rather than buying in additional sites. Most of them maintain 'land banks' equivalent to around 5 years take up and can survive without buying new sites for several year, thus depriving the market of land buyers.
- E.1.30 Normally the Valuation Office Agency publishes a forecast of future land values in the regular property market report. At present they say *that "due to the effects of the global financial crisis it has been decided not to include a residential land forecast in this (July) edition of the report. The unprecedented volatility in national and international world financial markets will not have been reflected in the previous data series used to compile the forecasts. Until these exceptional events are more fully reflected in these data series, any forecast using this method would be subject to unacceptable levels of uncertainty"*. This uncertainty is reflected in the range of forecasts from others. Savills' estimate that so far in 2008 greenfield land values in the Eastern Region have fallen by just under 20% and brownfield by 30% and might thus be expected to fall further. In their research forecast entitled "UK Residential Development Land Mid Year 2008" values likely to be restored to their 2007 peak in most of the regions before 2014. The Consultants do anticipate a return of developer confidence to boost land values ahead of this date but it is unlikely that land values will return to their 2007 peak by then.
- E.1.31 In order to explore this issue further the Consultants looked at experience in the last recession in the housing market comparing for the period 1986-2000 and specifically at:
- e) Average house prices across the South East using DCLG data;
 - f) Trends in residential land prices across the South East using Valuation Office Agency data.
 - g) Housing completions.
- E.1.32 The result is shown in the addendum. The percentage fall in housing land values (65% from previous high) between 1988 and 1993 greatly exceeded both the fall in completions which

dropped 34% from their previous recent high point and the fall in house prices of 9% from their previous high. Note that this fall is measured in nominal terms. Inflation was higher then and the fall is greater if this is taken into account. It also exceeded the. It took five years for house prices to regain former levels but ten years for land prices to recover to the same degree.

- E.1.33 It is not obvious that the pattern in the 1990's will play out again. At the end of 1990 the country's GDP had just recorded its sharpest drop in 10 years. Inflation was in double figures and interest rates had recently been as high as 15%. In comparison economic conditions since 2000 have been relatively benign but this could change and the 'credit crunch' is a new phenomenon which could continue to starve potential buyers of mortgage finance. It is likely that the fall in house prices will be steeper this time around, in nominal terms at least.
- E.1.34 In short, even if house prices return to peak levels by 2014, it does not follow that land values will recover at the same pace.

Data on New Housing Stock 2008 Q1

Source : Developer's & Aggregators Websites

Location	Unit	Price	Developer	Note
Bishops Stortford	2 bed flats	230	Crest	
Bishops Stortford	1 bed flat	165	220 Wilson Bowden	
Bishops Stortford	2 bed flat	220	Wilson Bowden	
Watford	1 bed flat	200	Crest	
Hemel	1 bed flat	186	Dandara	
Brickets Wood	2 bed flat	235	Gladedale	
Watford	1 bed flat	230	Cairnpark	
Watford	2 bed flat	250	262 Wimpey	
Stevenage	1 bed flat	173	Intro	
Watford	2 bed flat	195	Wimpey	
Watford	2 bed flat	290	Barratt	
Hitchin	2 bed flat	225	Gladedale	
Hertford	2 bed flat	270	Ashwell	
Stevenage	2 bed flat	200	Higgins	
Harpenden	2 bed flat	270	Miller	
Hunton Bridge	2 bed flat	250	Nicholas King	
Harpenden	2 bed flat	270	Barratt	
Berkhampstead	2 bed flat	289	Bellway	
Bishops Stortford	2 bed flat	232	Gladedale	
Hemel	1 bed flat	150	Bellway	40 sq m ?
Hemel	2 bed flat	195	Bellway	55 sq m ?
Hemel Hempstead	2 bed house	295	Bellway	
Rickmansworth	3 bed terrace	365	Bugler	
Watford	3 bed house	288	Wimpey	
Stevenage	3 bed house	275	285 Bovis	
Berkhampstead	3 bed house	343	Bovis	
Stevenage	3 bed house	383	Bovis	
St Albans	3 bed house	385	Barratt	
St Albans	3 bed house	395	Bellway	
Hunton Bridge	3 bed house	345	Nicholas King	
Stotfold	3 bed terrace	245	Wimpey	Small – excluded
Berkhampstead	3 bed house	380	402 Bellway	Det -excluded
Broxbourne	3 bed townhouses	465	Higgins	
Hertford	4 bed townhouse	495	Ashwell	
Hemel Hempstead	3 bed townhouses	333	Bellway	
Watford	4 bed house	300	Wimpey	
Stotfold	4 bed house	415	Wimpey	
St Albans	4 bed house	465	Bellway	
Average overall for incl 3 bed houses		347		
Average of Top three areas		302		
Average for lowest three areas		388		

Averaging the data on the price of existing housing 2008 Q1

Source : Land Registry Data interpolated by www.upmystreet.co.uk

	Semi	Terrace	Flat
Hertford	320	293	215
Bishops Stortford	305	227	191
Hitchin	320	293	216
Letchworth	No data	253	193
Hatfield	300	213	190
Borehamwood	298	272	197
Rickmansworth	336	304	231
Hemel Hempstead	287	228	160
Berkhamstead	415	327	249
St Albans	617	433	310
Harpenden	426	338	264
Welwyn	310	No data	No data
Stevenage	282	183	135
<u>Average of Above</u>	383.27	305.82	231.91
Hertfordshire overall	319	250	196
<u>Comps</u>			
Aylesbury	243	193	146
Ashford	205	182	137
Cambridge Nth	371	258	244
Harlow	284	184	137

Graphical Analysis of house prices. completion rates and land values 1986- 2000

Figure E.1 – Comparison of Trends in House and Land Prices in South East England

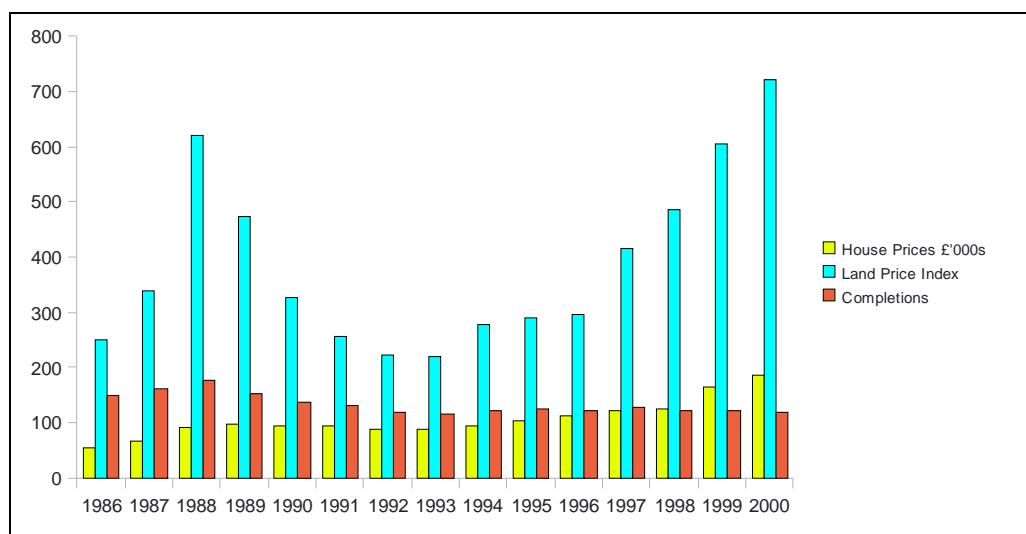


Table E.1 – House and Land Price Data 1986-2000

	House Prices £'000s (SE)	Land Price Index (SE)	Completions (England)
1986	56	250	149
1987	68	339	162
1988	91	620	176
1989	97	475	154
1990	93	328	136
1991	93	256	131
1992	88	224	120
1993	88	219	117
1994	94	277	123
1995	105	290	125
1996	113	297	122
1997	121	415	128
1998	126	487	123
1999	165	604	123

Table E.2 – Housing Completions: town Planning Targets

	Dwellings delivered, 2001/02-2005/06	Delivered, 2006/07	Delivered, 2007/08	Requirement, 2001/02- 2020/21	To be built, 2008/09- 2020/21	Average to be built, per annum, 2020/21- 2030/31	Total requirement, 2008/09- 2030/31
Broxbourne	1,950	260	281	5,600	3,109	280	5,909
Dacorum	1,860	413	391	12,000	9,336	680	16,136
East Hertfordshire	2,140	776	558	12,000	8,526	660	15,126
Hertsmere	1,080	274	408	5,000	3,238	260	5,838
North Hertfordshire	2,923	623	724	15,800	11,530	927	20,800
St Albans	1,830	377	293	7,200	4,700	360	8,300
Stevenage	625	353	386	6,400	5,036	320	8,236
Three Rivers	1,010	335	260	4,000	2,395	200	4,395
Watford	1,410	246	291	5,200	3,253	260	5,853
Welwyn Hatfield	2,730	685	747	10,000	5,838	500	10,838
Hertfordshire	17,558	4,342	4,339	83,200	56,961	4,447	101,431
				65,642		110,112	

Table E.3 - Housing Completions: Projected 'Real world Completions

	Year	Trajectory	Dwelling completions (HERTS)
1	2006/07	100	4,376
2	2007/08	99	4,332
3	2008/09	50	2,188
4	2009/10	35	1,532
5	2010/11	40	1,750
6	2011/12	60	2,626
7	2012/13	85	3,720
8	2013/14	100	4,376
9	2014/15	118	5,164
10	2015/16	125	5,470
11	2016/17	133	5,820
12	2017/18	137	5,995
13	2018/19	138	6,039
14	2019/20	140	6,127
15	2020/21	140	6,127
	Total 2006/07 to 2020/21	1500	65,642
16	2021/22	135	5,908
17	2022/23	128	5,601
18	2023/24	110	4,814
19	2024/25	100	4,376
20	2025/26	93	4,070
21	2026/27	90	3,939
22	2027/28	90	3,939
23	2028/29	90	3,939
24	2029/30	90	3,939
25	2030/31	90	3,939
	Total 2006/07 to 2030/31	2516	110104
	Total 2021/22 to 2030/31	1,016	44,462

Appendix F – Housing Land Values Evidence from Previous Recession

Note

June 17th 2008

For Discussion: Hertfordshire Infrastructure Study - Short Term Outlook for Housing Land Values

In May an estimate was made of the level of S106 contributions that might be obtainable across Hertfordshire on the basis of current house prices. This was a 'snapshot view' of the market. A significant caveat related to the outlook for house prices. Since then new data and anecdotal evidence of house sales during the key spring period has pointed to a significantly deeper downward lurch in the housing market than was expected then. This note (a) reviews that evidence (b) looks at trends in house and land prices during the last recession in the early 1990's to see if there are lessons to be learnt and (c) draws tentative and provisional conclusions for the current study.

The Current Market

It is apparent that:

1. House prices are falling - analysts anticipate a drop of between 5% and 20%
2. The rate of sales has diminished - Spring sales suggest a decline of between 30% and 50%.
3. Housebuilders have cut back investment

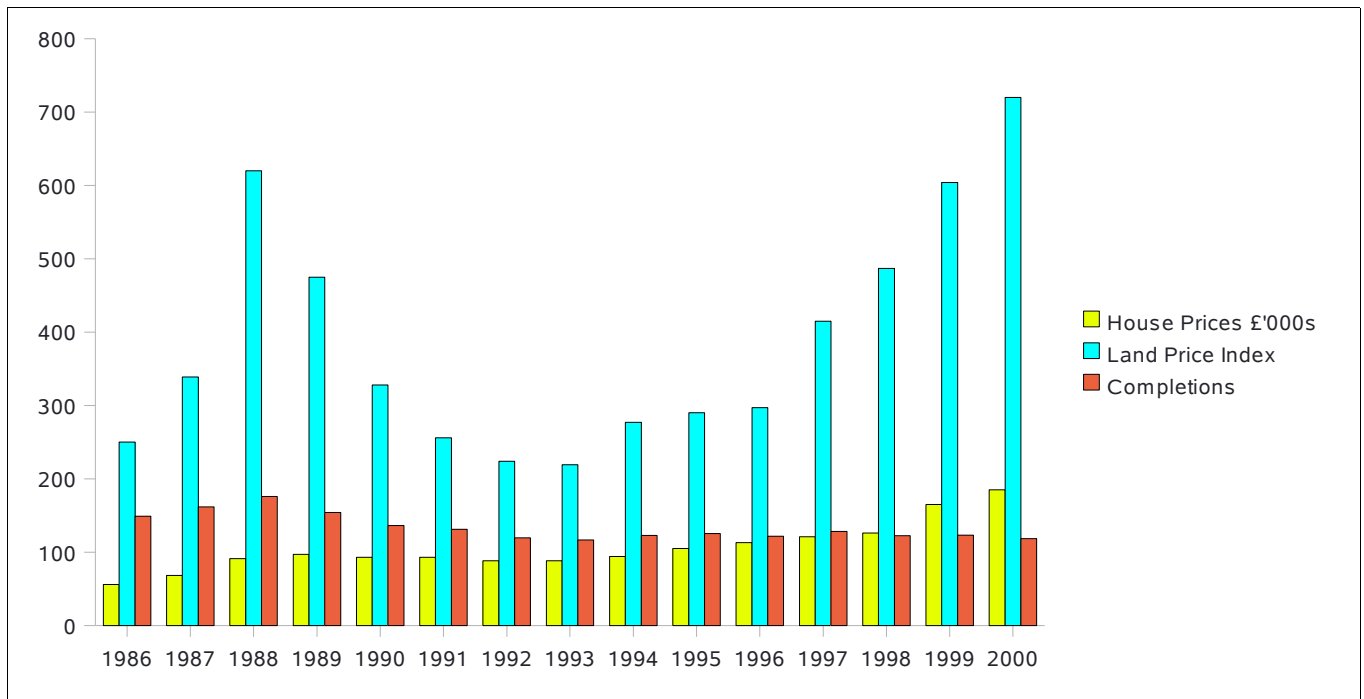
Evidence from 1990's.

We compared for the period 1986-2000, average house prices across the South East using DCLG data and trends in residential land prices across the South East using Valuation Office Agency data. The result is shown in the chart below and the accompanying data. It can clearly be seen that the percentage fall in housing land values (65% from previous high) between 1988 and 1993 greatly exceeded the percentage fall in house prices (9% from previous high) and completions (34% from previous high).

It is not surprising that the any fall in house prices has a disproportionate effect on land values. In theory, land values are the result of subtracting the anticipated costs of development from the anticipated receipts. The industry rule of thumb has been that the price of land absorbs roughly one third of receipts. So if receipts fall and costs stay the same, the value of land might be expected to fall three times as fast as house prices.

What is surprising, is the extent of the fall in land prices, roughly twice what might have been expected on the basis of the rule of thumb, and the time it took for the market in land to return to previous levels. We are not in a position to analyse this further but expect that it is due to the housebuilders practice of withdrawing new investment to preserve cash when the rate of sales is falling which starves the market of land buyers. In effect, the value of land 'undershoots' what might be expected on the basis of house prices in the same way as it can 'overshoot' at other points in the cycle. After the recession it took some time for housebuilders to rebuild their balance sheets and financial probity might well have taken precedence over commercial opportunism. Because most of them maintain a 'land bank' equivalent to around 5 years take up they can survive without buying new sites for several years. A secondary cause would have been the effect on residual land values of a slower rate of sales and consequentially higher financing costs.

Graph : Comparison of Trends in House and Land Prices in South East England 1986-2000



	House Prices £'000s (SE)	Land Price Index (SE)	Completions (England)
1986	56	250	149
1987	68	339	162
1988	91	620	176
1989	97	475	154
1990	93	328	136
1991	93	256	131
1992	88	224	120
1993	88	219	117
1994	94	277	123
1995	105	290	125
1996	113	297	122
1997	121	415	128
1998	126	487	123
1999	165	604	123
2000	185	720	118

Table: House and Land Price Data 1986-2000

There is a good deal of evidence that this sharp curtailing in investment is happening at present. A typical example is analysis from Dresdner Kleinwort quoted in Investors Chronicle on May 20th ""Housebuilders' sales reservations have collapsed by almost two-thirds year-on-year during the critical spring selling season....Prices are sliding, land values are down at least 40 per cent, and company announcements have highlighted the perilous state of the market.....virtually all the housebuilders have now stopped buying land."While a decline in house prices hits profitability, a falling rate of sales threatens the housebuilders solvency as they have no other source of income to service costs and interest payments. The house builder's usual reaction is to preserve cash by cutting overheads where possible but also new investment in both land and development.

Implications

The data suggests that the decline in the market will lead to a decline in new development and housing completions in the short term and this in turn must affect the affordability of Section 106 contributions. But the strength of this relationship is unclear. It is important to note that the macro-economic context is different from the early 1990's in crucial respects such as the Bank of England stance on interest rates. So the analogy is imperfect and should be treated with care. Key issues are dealt with below in 'FAQ' style.

How long might a downturn last?

Some commentators have pointed to the possibility of house prices stabilising in 2010. But the data above shows that while the decline in house prices in the early 1990's only lasted a few years, it took over ten years for land prices to recover to previous highs. In the previous note we referred to the calculation in the Barker Report that macro-economic factors should lead to continuing long term increases in house prices in real (i.e. inflation adjusted) terms.

Developers are not only faced with falling values but construction costs are rising steeply due to the requirements of the Code for Sustainable Homes, higher prices for materials, planning gain and affordable housing. The last two were relatively unimportant in the early 1990's. In the longer term a simple extrapolation suggests that even after making an allowance for rising costs in the short and medium term, rising house prices should lead to increases in land prices gross of the cost of meeting planning requirements in the longer term. The problem is that it is difficult to estimate the time scales involved. (By the same token, adjusting a simple extrapolation of values and costs to include both a short term dip in prices and increase in costs, suggests a perfect storm for housebuilders and a medium term decline in land prices at the very severe end of the scale of expectations).

The core scenario might be a steep short term decline in land prices followed by a resumption of growth from a much lower level.

To what extent would S106 charges at the indicative rate of £20k - £30k dwelling affect the viability of development?

The analysis in our note in May was based on average of 4000 sq m per ha selling at around £4000 sq m i.e. around £16m receipts per hectare. A fall of 10% would reduce receipts by £1.6m

At £20k to £30k a house, and allowing for 25% for the additional developer's margin on cost etc. the typical impact of the Section 106 contributions on land values at a typical density of 40 homes per hectare might be £1.0m to £1.5m per hectare.

We suggested a target residual land value net of all planning obligations of around £1.5m ha. This took into S106 contributions of £20k - £30k per home, the impact Code for Sustainable Homes and affordable housing costs.

So:

A fall in land values of the extent that might be anticipated on purely arithmetical grounds (i.e. as a result of house prices falling by 10% and not to the lower level that would result from a replay of the trends in the early 1990's) would either (a) wipe out the capacity to pay S106 at the level indicated or (b) if S106 were still required, wipe out residual land values.

In practice it is not quite so straightforward due to the effect of the timing of costs and receipts on the NPV, but the broad pattern is clear.

To what extent would S106 charges at the indicative rate of £20k - £30k dwelling affect the pace of development?

It is the rate of potential sales rather than house prices or overall development costs that determines the pace of investment by housebuilders and that will depend in large part on a return of confidence in the economy and a reduction in mortgage rates. But where there is potential short term demand

and the level of prices and costs are critical to viability, then substantial compromise on the latter insofar as planning requirements are concerned could make a marginal difference in the rate of new housing starts.

What other factors might affect land values in the short and medium term?

The pace at which the government implements higher construction standards for new homes, and changes in the requirement for affordable homes and the availability of grants to offset the cost of creating them. It is possible that recent changes to CGT might have a marginally beneficial impact on the rate of land release onto the market.

If planning requirements were cut in the short term, how easy would it be to increase them substantially in the future?

Difficult when a scheme already has planning permission. Easier in other instances in higher value areas. From the comments on historic deficits above it is clear that any additional burden caused by undercharging short term schemes cannot readily be made up by overcharging long term schemes.

Has there been any Government policy response to the downturn so far?

Housing Minister Caroline Flint has said that the Government intends to stick to its targets but noted the observation in the Barker Report that this would be difficult to achieve in a downturn.

Response

The broad options for a response in the Study are set out in the tabulation on the following page.

Table 1 Advantages & Disadvantages of Potential Policy Response to Low Land Values

Option	Advantages	Disadvantages
Cut planning requirements to the bone	<ul style="list-style-type: none"> ● Maximise the rate of development 	<ul style="list-style-type: none"> ● Will new housing have adequate facilities to ensure sustainability?
Require that planning requirements are met in full.	<ul style="list-style-type: none"> ● Ensures that developments are fully serviced and sustainable. 	<ul style="list-style-type: none"> ● Rate of development might be unachievable in any event due to perceived lack of demand. ● Difficult to 'make up' loss of short term contributions later in the programme.
Minimise need for Section 106 funding to achieve sustainability	<ul style="list-style-type: none"> ● Optimises rate of development in context of the need for sustainability 	<ul style="list-style-type: none"> ● Lower rate of development. ● Possible developer /landowner resistance. ● It is possible that the overall amount raised through Section 106 for wider strategic investment might still fall if the rate of development falls. ● Requires active diversion of public sector funding to offset costs arising from housing growth. ● Might impact on achievement of other policy targets. ● Possible reduction in level of Section 106 requirements might be insignificant in terms of drop in land prices. ● If there is a compromise on affordable housing requirements this will have repercussions on affordability.