

# Harlow Infrastructure Study

## Stage 2 – Final Report

**March 2010**

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### Document History

JOB NUMBER: 5063408			DOCUMENT REF: Final			
01	Stage 2 – Draft Final Report	MS / HB	RA	RS	RS	Jun 08
02	Stage 2 Final Report	RA / HB	HB	RA	RS	Jan 09
03	Stage 2 - Final	RA/ HB	HB	RA	RS	Feb 10
04	Stage 2 – Final (minor corrections)	RA	HB	RA	RS	Mar 10
Revision	Purpose Description	Originated	Checked	Reviewed	Authorised	Date

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# Executive Summary

## Scope and Purpose of Study

This report was prepared by Atkins with Roger Tym and Partners for Harlow Renaissance, Harlow Council, Essex County Council and English Partnerships (now the Homes and Communities Agency). The study assesses the current infrastructure issues affecting Harlow (these are set out in the Stage 1 Final Report November 2008) and identifies the future infrastructure requirements that are likely to arise from growth of Harlow to meet the Regional Spatial Strategy homes and jobs targets to 2031.

This report will form part of the evidence base for Harlow's emerging LDF and will be incorporated into the Council's infrastructure delivery plan, whilst informing Harlow's approach to developer contributions and or a possible Community Infrastructure Levy (CIL).

This study focuses on the infrastructure demands of *future growth in housing and jobs* in the Harlow area. It does not deal with general infrastructure demand and public spending in the area in future, as these are usually covered by standard funding streams and developer contributions can't usually be used to deal with existing infrastructure deficits.

## Context

The Regional Spatial Strategy for the East of England was adopted in May 2008. It sets out proposals for substantial housing and job growth. The RSS identifies Key Centres for Development and Change (KCDC) that include Harlow. The KDCs will see strategic scale housing growth in the period 2001-2021 and all will be key locations for employment growth.

Policy HA1 of the RSS states that Development Plan Documents should provide for 16,000 additional dwellings between 2001 and 2021, at Harlow, including urban extensions in Epping Forest and East Hertfordshire Districts. Whilst Policy E1 identifies a target of 56,000 net growth in jobs in the Rest of Essex area (Braintree, Brentwood, Chelmsford, Epping Forest, Harlow, Maldon and Uttlesford) up to 2021.

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 Harlow. This housing growth to 2031 is addressed in the study, 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.

## Methodology

In defining the future infrastructure requirements for Harlow the Consultants have taken the RSS housing growth targets as the starting point, whilst the RSS job target has been broken down for Harlow. In consultation with the Harlow District Council the consultants have made assumptions about the broad location of future homes and jobs in order to consider the infrastructure required to support future growth. It should be noted that these assumptions are for the purposes of this study only and therefore the locations identified in the study do not represent a statement of Council policy on the location of growth.

There are several issues around the population profile for the study area. The population is ageing and this has implications for service provision, however new housing may have a younger age profile particularly where lots of family housing is planned. Net population growth in the study area will be reduced by falling household size and by some new housing being occupied by existing residents. It is beyond the scope of this study to deal with these issues, and therefore Regional household size projections have been used to determine population growth. It is

assumed that service providers are aware of these issues and that in some cases (e.g. education) an understanding of these issues is integral to their service planning.

In identifying future infrastructure requirements our approach has been to identify a realistic deliverable level of infrastructure. We have assumed that levels of provision for growth areas will be in line with levels of provision enjoyed by the rest of society.

To identify requirements the Consultants have used a bottom up approach, by consulting with service providers and advising them of the level and possible directions of planned growth and seeking their view on the level of infrastructure required. Where possible consultants have taken account of spare capacity. Historic infrastructure deficits are excluded from the study. Where it has not been possible to get the view of service providers on the level of provision required, the consultants have made assumptions and applied appropriate standards to calculate infrastructure requirements,

The study is necessarily high level, as the exact nature of growth is unclear meaning it is not possible to be precise about required infrastructure at this stage.

## Key Findings

The study identifies infrastructure requirements totalling £753m. Transport and education are the two biggest elements of this cost making up 47% and 29% of costs respectively.

Developers are assumed to make up 81% of total funding, this a cost of £27,527 per dwelling. However, further work on the detailed planning of growth will allow for a more refined split between developer contributions and public funding of infrastructure. Some of the infrastructure costs relate to transport improvements needed to support employment developments and therefore commercial development should make some contribution to the overall cost of transport improvements.

The study identifies the following elements of infrastructure to support growth in Harlow:

- Education – 14 new primary schools and four secondary schools;
- Emergency services – two new police intervention bases and new custody accommodation; a new part time retained fire station, and one new ambulance station;
- Health – 17 new GPs. There are a range of options to providing the new GPs which would include one new large GP surgery to serve north Harlow;
- Libraries – two new libraries;
- Open Space – various strategic open space and recreational infrastructure projects, 94 hectares of on site open space including children's play, allotments etc;
- Community Centres – nine multi purpose sports/community centres;
- Children's Centres – two new children's centres
- Transport – significant new transport infrastructure including a new M11 junction; a new northern spine road; new bus lanes; lengthening of platforms at Harlow Mill Station; and improvements to pedestrian and cycle network;
- Utilities – reinforcement and upgrades to the gas, electricity and potable water networks and upgrades to Rye Meads waste water treatment works.

The study sets out the importance of taking into account the impact of the current economic downturn. The economic downturn provides the inescapable backdrop for delivery of infrastructure in and around Harlow to 2031.

Land prices have fallen faster and further than house prices and are expected to take a long time to recover. This will have an impact on the ability of developers to make a profit from their land.

This in turn will have an effect on housing delivery and could mean developers make changes to the type and mix of development. Developers are already in the process of re-negotiating section 106 planning contributions to reduce the amount that they will have to pay.

Housing is unlikely to be delivered at the rates required to provide 8,000 dwellings 2011-2021. This means there will be a need to focus on key sites. This will allow Harlow to plan on the basis of a more realistic housing delivery rates. One advantage of this is that it allows more time to identify and secure alternative funding sources for infrastructure.

The study identifies various policy recommendations these include:

- Adopting approaches to stimulate the development process, this could include funding up front infrastructure;
- Prioritising funding on sites that unlock the largest amount of development;
- Emphasising the role of mainstream funding – there will be a need to maximise the use of mainstream funding sources as the level of developer contributions secured is reduced;
- Prioritising infrastructure to maximise the impact of scarce resources;

The study identifies recommendations for managing growth. This includes the need for Harlow Renaissance, the local authorities and other stakeholders to focus on delivery. This will require co-ordinated working in particular on cross boundary development in north Harlow, where development is located in Hertfordshire.

There will also be a need for improved contingency planning to ensure that where uncertainties exist over levels of growth or delivery of infrastructure alternative scenarios have been tested and planned for.

The study sets out the need to consider a partnership body to include all major stakeholders (including those in Hertfordshire) to oversee and monitor delivery.

# 1. Introduction

- 1.1 Harlow has highly ambitious targets for housing and jobs to drive forward the regeneration of the town. The provision of high quality infrastructure, in the right place, at the right time, is a key element in going beyond building new housing areas to making places where people want to live, work and play. Ensuring that the roads, schools, health centres and other facilities are in place to meet the needs of new residents and workers ensures that there is no detriment to the availability of facilities and services to existing residents. Indeed with careful planning, facilities for existing residents will be improved as part of provision of new ones.
- 1.2 Atkins with Roger Tym & Partners were commissioned to carry out the Harlow Infrastructure Study in January 2008 by Harlow Renaissance, Harlow Council, Essex County Council and (then) English Partnerships. Our findings will form part of the evidence base of Harlow's emerging LDF, and will be incorporated into the infrastructure delivery plan. As PPS12 envisages, though, this work can be seen as a first step in developing a Harlow area-wide approach to developer contributions or a CIL.
- 1.3 To that end, the study has three main objectives:
- To provide evidence of the current infrastructure issues in or affecting Harlow;
  - To inform the scale, phasing, timing, and sequencing of the infrastructure required to support options for the growth and regeneration of Harlow; and
  - To provide a framework to implement plan-monitor-manage (PMM) to ensure that employment and growth is balanced and sustainable. The Stage 1 Final report (Nov 2008) covers current infrastructure issues. This Stage 2 report deals with the remaining two objectives.
- 1.4 The scope and emphasis of this study is to:
- Establish the scale, phasing, timing and sequencing of infrastructure required to support the levels of growth (both housing and employment) proposed for Harlow in the Regional Spatial Strategy (RSS) in the period 2011 – 2031;
  - Provide an indication of the funding required, the funding status of schemes and key delivery agencies/partners; and
  - Prepare a PMM framework which can be incorporated into wider framework being drawn up in the Harlow Options Appraisal. This includes a spreadsheet setting out costed infrastructure requirements by area and phase, together with the information available at this point on funding.

## Report Structure

- 1.5 The remainder of the report is structured as follows:
- Section 2 Policy Context;
  - Section 3 The level of growth being considered;
  - Section 4 How infrastructure requirements have been determined;
  - Section 5 Social and Community Infrastructure;
  - Section 6 Open Space Recreation and Sport;
  - Section 7 Transport;
  - Section 8 Utilities and waste;
  - Section 9 summary of infrastructure needs and costs;



- Section 10 phasing and funding issues;
- Section 11 delivery Issues;
- Section 12 Management and Monitoring.

## The Study Area covered is „Harlow Plus’

- 1.6 The study area considered in this study is Harlow District and the adjoining areas of Epping Forest District and East Hertfordshire District which, on the basis of the relevant policies in the East of England Plan (the RSS), are potential locations for urban extensions to Harlow. As these will be defined by reviews of the Green Belt boundaries it is only possible to give broad indications of the scale and direction of growth.

## Clear definition of ‚infrastructure’ to work to

- 1.7 Generally, infrastructure has been defined as “the basic physical and organisational structures (e.g. buildings, roads and power supplies) need for the operation of a society.”<sup>1</sup>
- 1.8 The infrastructure categories that the consultants have considered are those which were set out in the Brief these are listed in Table 1.1.

**Table 1.1 – Infrastructure considered in this study**

Transport (Highways, Public Transport, Walking, Cycling)
Healthcare (Primary and Secondary)
Open Space (Strategic, Formal, Informal, Sports and Play)
Emergency Services (Police, Fire and Ambulance)
Utilities (Water, Sewerage, Gas and Electricity)
Education (Early Years, Primary, Secondary, Post-16, Adult, Further and Higher)
Public Realm
Indoor Leisure and Community Facilities (including Arts and Libraries)
Other Community Infrastructure (including Adult and Children’s Social Care and Children’s Centres)
Waste Management

## Primary infrastructure is the focus of this infrastructure plan

- 1.9 Within the overarching category of infrastructure this study deals with ‚primary’ infrastructure, the development industry distinguishes between ‚primary’ and ‚secondary’ infrastructure. It is therefore necessary to clarify which types of infrastructure are seen as primary, and which are not. This is a difficult process, as these definitions are not entirely watertight and in part depend on the size of the site especially insofar as the need for open space is concerned, but the definitions below are fit for the purposes of this study.

<sup>1</sup> Concise OED

## Defining primary infrastructure

- 1.10 Primary infrastructure is required to accompany development in order to allow new households to function in the community such as schools, health, leisure and community facilities, parks, green infrastructure, and transport improvements, both „hard’ and „smart’<sup>2</sup>.
- 1.11 This infrastructure will be largely used by the community living and working in the development but others would not be excluded from using these facilities.
- 1.12 It is possible, even likely, that some primary infrastructure is provided off-site. It is assumed that some developer contributions will be required to support the provision of primary infrastructure. In many instances, other mainstream central or local funding will also be used to support the delivery of primary infrastructure.

## Defining secondary infrastructure

- 1.13 Secondary infrastructure is the infrastructure that developers need to provide within large development sites in order to create developable plots that a) function properly and b) are able to find a market. Therefore, access roads and transport, site-specific drainage, sewage, gas, and electricity and telecoms connections to existing mains services are considered secondary infrastructure. Developers also generally pay for small scale open and play spaces together with on site and adjacent landscaping and so this falls within the definition.
- 1.14 Secondary infrastructure will be delivered and paid for by the developer. It is generally located within the development site boundary, but there are some exceptions to this rule.
- 1.15 Because the consultants assume that all sites will require secondary infrastructure, and because it will be paid for by developers, these secondary infrastructure requirements, costs and funding have not been separately itemised, but have been treated as part of the costs of a development, on a par with building the dwellings themselves. Secondary infrastructure does not usually give rise to funding issues, and attempting to detail it would distract from identifying and costing the primary infrastructure.

## The Study focuses on the requirements of growth

- 1.16 This study focuses on the infrastructure demands of *future growth in housing and jobs* in the Harlow area. It does not deal with general infrastructure demand and public spending in the area in future, as these are largely covered by the standard funding streams for the categories described above, and will occur whether or not the proposed growth takes place.
- 1.17 Another reason for concentrating on infrastructure related to growth is that developer contributions cannot usually be used to fund existing infrastructure deficits. The consultants have ensured that the infrastructure assessments are to recognised standards of provision so that none of the deficits identified in the Stage 1 report will be exacerbated.

## Categories of infrastructure beyond the study scope

- 1.18 National infrastructure such as strategic transport (motorways and main railways), higher education facilities and major hospitals are considered beyond the scope of the study, as the drivers for investment and the size of catchment areas are well beyond the scale of growth proposed at Harlow.
- 1.19 There are also items of privately provided infrastructure (utilities) which are dealt with differently from those provided by the public sector. Their major infrastructure is paid for as part of their investment programmes. But they cannot be ignored for two reasons:

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<sup>2</sup> A list of categories to be investigated was included in the brief and is outlined in Table 1.1

- They charge developers for local investments to provide additional power or links to their main networks, so equitable payment arrangements are needed to ensure that the cost of these charges is fairly distributed; and
- They have long lead times for provision, so close liaison is necessary to ensure that their investments are co-ordinated with development.

## This study can only provide a strategic overview of infrastructure costs and funding

- 1.20 This study is intended to provide a good strategic overview of likely requirements, costs and funding of infrastructure required to support jobs and housing growth. The phasing identified is intended to give a view of when infrastructure should come on stream. This study will aim to pull out the key issues, and map a likely way forward. It takes into account broad deliverability issues; the relative balance between infrastructure requirements, the costs of those requirements and the available funding. As discussed above it will contribute to the evidence base for Harlow's Core Strategy: the Planning White Paper, CSR 07 and PPS12 all emphasise the need for infrastructure planning. The study is intended to support the Local Planning Authority's growth infrastructure and funding plans, although further detailed supporting work may be necessary. This study will also be sufficiently detailed to draw conclusions, allow sensitivity/scenario testing and produce recommendations.
- 1.21 The objective is to provide a focus for long term strategic financial decisions that will inevitably need to be refined and realigned as the process and time unfolds. The detail of site-specific work will add refinement and may require cost and priorities to be reassessed, but the process is valuable as it offers a framework for decisions against which the need for such matters as more detailed planning can be highlighted at an early stage.

## 2. Policy context

2.1 The revision to the Regional Spatial Strategy was published in May 2008. Key references which identify Harlow as an area for transformational growth to 2021 and beyond are summarised below. Harlow is:

- A key centre for development and change (KCDC). The strategy is described in Policy HA1;
- A priority area for regeneration;
- An area needing a strategic review of the Green Belt;
- A strategically important employment location (and specifically a location for employment generated by the growth of Stansted);
- A town of strategic importance for retailing and other town centre functions;
- A major regional housing growth point, requiring urban extensions into Epping Forest and East Hertfordshire Districts; and
- 
- A regional transport node, within a priority area for further transport study.

2.2 The implications of this in terms of growth in dwellings and population are set out in Section 3.

### Growth Area Policy: funding for unlocking development

2.3 Harlow lies within the London-Stansted-Cambridge-Peterborough (LSCP) Growth Area, and within that, in the London-Harlow-Stansted Programme Area. The Sustainable Communities Plan<sup>3</sup> established the Growth Areas Fund to support the Growth Areas in making a quick start on „early wins‘ housing sites, and to lay the foundations of large scale future growth. Funding is given to help local partners with delivery, provide pump-priming for key projects, and unlock „log jams‘ blocking development.

2.4 The first round of £156m of growth funding was fully committed and used to support over 100 local projects. Harlow was allocated £10m in the first round of funding for a Gateway Project. A second round of £235m was allocated in February 2006 to support over 70 local partner capital projects of which Harlow received £11m towards:

- The regeneration of the Southern Corridor through rationalisation of sites at three neighbourhood centres to free up sites for new housing and renewed facilities;
- The regeneration of Old Harlow: also by assembling sites for new housing around the centre;
- Creation of the Harlow Innovation Centre to support the growth of knowledge-based businesses; and
- Public transport improvements along First Avenue.

2.5 In GAF 3 investment of approximately £45m for the entire Programme area will ensure the delivery of the key objectives to facilitate longer-term regeneration and growth. The majority of this will be spent in, or on Harlow.

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<sup>3</sup> ODPM February 2003

2.6 The investment comprises:

- £7m to unblock key infrastructure constraints;
- £16m to enable delivery;
- £4m for direct delivery;
- £12m to regenerate underperforming and deprived areas; and
- £5m for place shaping.

2.7 GAF funding levers in match funding from a range of sources and support wider investment into the area, a significant portion of which is already committed. This expenditure will be complemented by CIF expenditure on transport improvements. In Round 2 Harlow was awarded:

- £5.6m for dualling the A414 from J7 of the M11 to Southern Way; and
- £3.3m for Phase 2 of the First Avenue Multi-modal Corridor.

2.8 The ongoing role of future rounds of GAF in enabling delivery is discussed in Section 10.

## The evidence base that core strategies need on infrastructure

2.9 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.

2.10 Local government is required to play an infrastructure co-ordinating role. 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.

2.11 The Planning White Paper, CSR 07 and PPS12 emphasise the need for an infrastructure planning evidence base. 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 the H M Treasury's CSR07 Policy Review on Supporting Housing Growth.

2.12 Planning Policy Statement 12 (PPS12) highlights the importance of ensuring that the core strategy is supported by a robust evidence base on infrastructure planning.<sup>4</sup> PPS 12 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 organisations.'*

2.13 The document also notes that:

*'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.'*

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<sup>4</sup> PPS12 June 2008, paragraphs 4.8 to 4.12

- 2.14 It states 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 planning process 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; and
  - The responsibility for the delivery of infrastructure.
- 2.15 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.
- 2.16 PPS 12 also states that infrastructure planning should include specific infrastructure requirements for any strategic sites which are allocated in the core strategy. Although development of the core strategy has not yet reached a point at which strategic sites have been identified, the scale of development proposed to the east and north of Harlow has enabled the consultants to identify specific infrastructure requirements through the consultation process.
- 2.17 There is no detailed guidance on what an infrastructure planning evidence base should consist of. 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 an infrastructure delivery plan.
- 2.18 Given the shortage of guidance, the key point to emphasise is that we are mindful of the need to create a realistic infrastructure plan that will aid spatial growth delivery. But the content of the evidence base is not defined and is likely to vary in terms of being essential depending on the local circumstances.
- 2.19 Given this lack of guidance, the consultants have drawn on experience gained in other studies in this field that have been cited by the Planning Advisory Service as good practice. Inspector's Reports on core strategies have been reviewed to get a better understanding of the Planning Inspectorate's expectation from Infrastructure Delivery Plans.
- 2.20 From the review work and the consultants' experience, it appears that the key is to ensure that the infrastructure needed to support growth is clearly identified along with the range of providers including the developers and others who will be responsible for funding the infrastructure. Further:
- The 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.
  - The Infrastructure Plan is a way of ensuring that aspirational growth proposals in spatial plans are clearly grounded in terms of the likelihood of their 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 the Infrastructure Plan, where all the detailed modelling and master planning 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 it is considered later under the Delivery Process in section 11.

### 3. The Scale of Planned Growth

#### Residential Growth

- 3.1 The scale of residential growth that this study considers is based largely on Policy HA1 of the RSS. The policy states that Development Plan Documents should provide for 16,000 additional dwellings between 2001 and 2021. These should be located in:
- '.... the existing area of the town through selective renewal and redevelopment, including mixed use development in the town centre; and
  - through urban extensions to the north, east, and on a smaller scale the south and west'.
- 3.2 The Green Belt will be reviewed to accommodate the urban extensions, which will extend into Epping Forest and East Hertfordshire. The review to the north should allow for eventual development of at least 10,000 dwellings and possibly significantly more, looking beyond 2031. The period up to 2031 is covered by Policy SS7, Greenbelts. The accompanying text (paragraph 3.32) states that land should be identified on the assumption that growth in the period 2021 -2031 will be at the same average annual rate as in 2001 – 2021: 800 dwellings per year.
- 3.3 For this study the Consultants, in consultation with the client, derived from the RSS the broad scale of growth, indicative locations and phasing as a working guide to assess infrastructure requirements. The dwelling assumptions are set out in Table 3.1.

**Table 3.1 – Dwelling Assumptions**

Period	Dwellings
For the period 2011 - 2021, the balance of the RSS 16,000 dwelling target	13,600
For the period 2021 – 2031, extension of the RSS target annual rate of 800 dwellings per year	8,300
<b>Working Total</b>	<b>21,900</b>

- 3.4 Working from the RSS on the same basis broad locations of growth by phase have been derived, with small extensions to the South and West; about 10,000 dwellings to the north; a limited contribution from redevelopment and intensification; and the remainder to the east, as set out in the Table 3.2.
- 3.5 Household size forecasts to 2031 have been derived on the following basis. DCLG produces household forecasts (which are based upon population projections produced by the ONS in 2004) which estimate the total number of households, as well as the average household size, in 5 year intervals up to 2026. Although the total number of households is available at the Local Authority Level, the average household size is only available at the Regional level. The Consultants have therefore used the regional estimates for the East of England. Household projections (as well as population projections in general) are considered to be more robust at the regional and national level than at the local authority level. Because the projections only go to 2026, the average household size for 2031 has been estimated by projecting forward the gradual decline in household size evident between 2006-2026. The rate of decline appears to decelerate slightly between 2011 and 2026 and this has been taken into account in the estimation for 2031.
- 3.6 The average household size is 2.16, which has been applied to the proposed housing numbers to give population estimates. These are set out in the Table 3.2 below.

**Table 3.2 – Assumed phasing and location of new growth**



Broad Location and Phase of Development	Total Dwellings (2011 – 2031)	Total estimated population (2011 – 2031)
<b>North</b>		
Phase 1 (2011-21)	2,300	4,968
Phase 2 (2021-31)	8,000	17,280
<b>Area Total</b>	<b>10,300</b>	<b>22,248</b>
<b>South</b>		
Phase 1 (2011-2021)	1,500	3,240
<b>Area Total</b>	<b>1,500</b>	<b>3,240</b>
<b>East</b>		
Phase 1 (2011-2021)	8,000	17,280
<b>Area Total</b>	<b>8,000</b>	<b>17,280</b>
<b>West</b>		
Phase 1 (2011-2021)	1,500	3,240
<b>Area Total</b>	<b>1,500</b>	<b>3,240</b>
<b>Urban Intensification</b>		
Phase 1 (2011-2021)	300	648
Phase 2 (2021-2031)	300	648
<b>Area Total</b>	<b>600</b>	<b>1,296</b>
<b>Harlow Total</b>	<b>21,900</b>	<b>47,304</b>

3.7 Figure 3.1 below shows these broad growth locations for residential and employment growth.

## Employment Growth

- 3.8 The scale of employment growth that this study considers is based largely on Policy E1 of the RSS. The policy identifies indicative growth in jobs for the period 2001 – 2021 that should be adopted by local authorities for their policy and decision making on employment. The RSS identifies a target of 56,000 jobs for the „Rest of Essex’ area that includes Braintree, Brentwood, Chelmsford, Epping Forest, Harlow, Maldon and Uttlesford.
- 3.9 The overall RSS employment target of 56,000 is not broken down by local authority area. However Harlow District Council commissioned GVA Grimley to carry out Additional Analysis<sup>5</sup> that built on the Employment Land Review (2008) in order to extend the growth forecast for the Harlow growth area to 2031 and to consider potential locations of employment growth in the Harlow growth area.
- 3.10 The Additional Analysis tests two employment demand forecasts a „Base Case’ scenario (to 2031) to satisfy the requirements of the RSS, and an „Additional Housing’ scenario that assumes a

<sup>5</sup> Harlow Employment Study Additional Analysis ( 2009)

higher rate of growth than the RSS. The Base Case scenario identifies total job growth in the Harlow growth area of 9,521 (including non B-use) for the period 2006 – 2031.

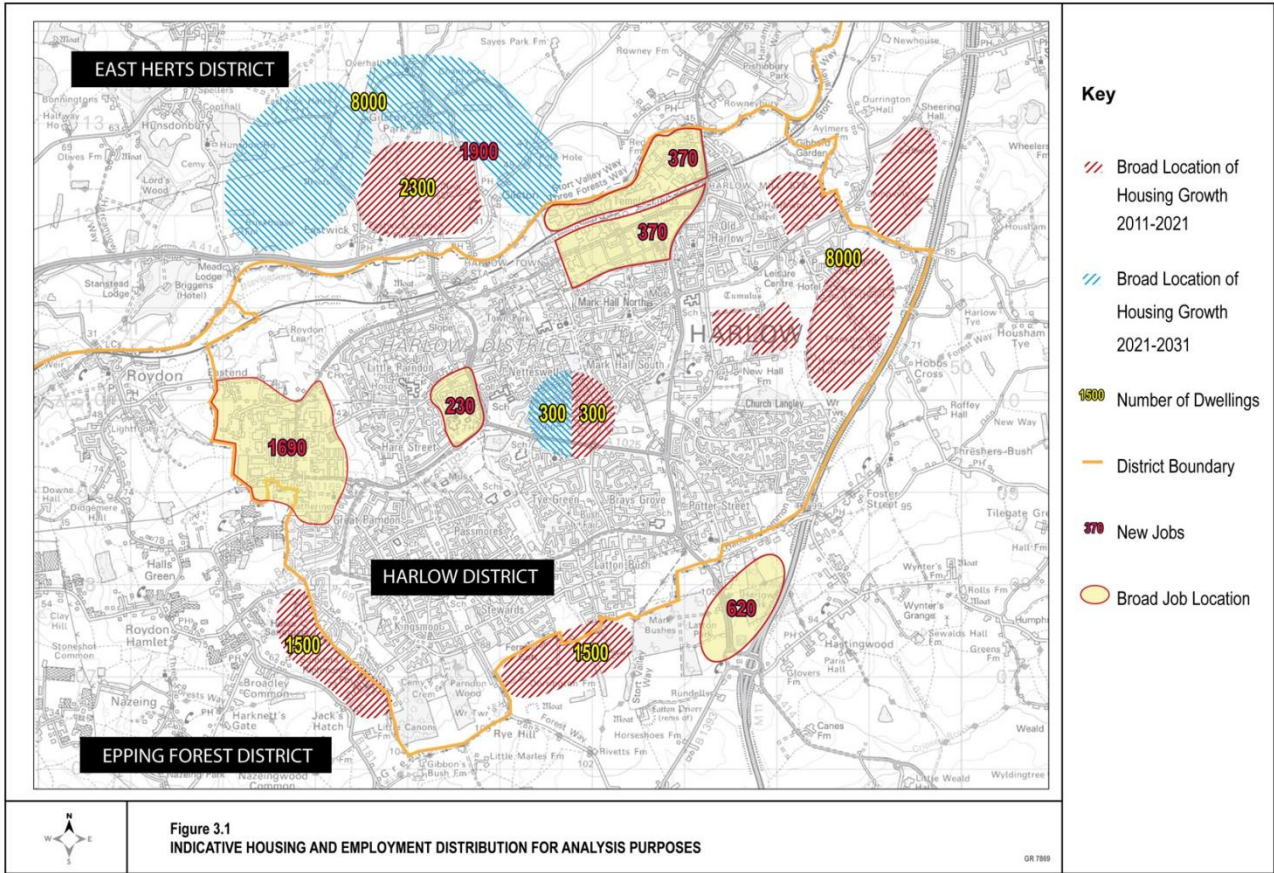
- 3.11 For the purposes of identifying infrastructure requirements of the new employment growth assumptions about the location, potential employment floorspace and job growth in the study area have been developed in consultation with the client. The job growth and total floorspace growth identified in the Base Case Scenario was used as a starting point. In order to identify where the employment growth will be located it was assumed the proportion of floorspace for each employment type (office, manufacturing and distribution) would be the same as the employment land supply identified in the GVA report<sup>6</sup> (with the exception of J7 which it is assumed would only be required for distribution floorspace) for the different employment types at each site. The number of jobs at each site have been derived by applying the employment densities to the floorspace estimate.
- 3.12 Table 3.3 identifies the floorspace and jobs at each location up to 2031, the job growth in each location is identified on Figure 3.1 (totals on Figure 3.1 are rounded).

**Table 3.3 – Indicative Distribution of Jobs and floorspace up to 2031**

Location	Office		Manufacturing		Distribution		Total sqm	Total jobs
	sqm	jobs	sqm	jobs	sqm	jobs		
Town Centre	5,102	228	0	0	0	0	5,102	228
Pinnacles	36,563	1635	4,434	54	0	0	40,997	1689
Edinburgh Way	6,802	304	825	10	3,195	51	10,822	366
Temple Fields 3	0	0	309	4	1,198	19	1,507	23
Temple Fields 1 & 2	0	0	4,640	56	17,971	289	22,611	346
East Herts 1 (north Harlow)	42,515	1901	0	0	0	0	42,515	1901
Junction 7	0	0	0	0	38,337	617	38,337	617
<b>Total</b>	<b>90,982</b>	<b>4069</b>	<b>10,208</b>	<b>124</b>	<b>60,701</b>	<b>977</b>	<b>161,891</b>	<b>5170</b>

<sup>6</sup> Harlow Employment Study Additional Analysis ( 2009) Chapter 6 Table 2.

**Figure 3.1 – Broad Locations of Growth**



## 4. Determining Infrastructure Requirements

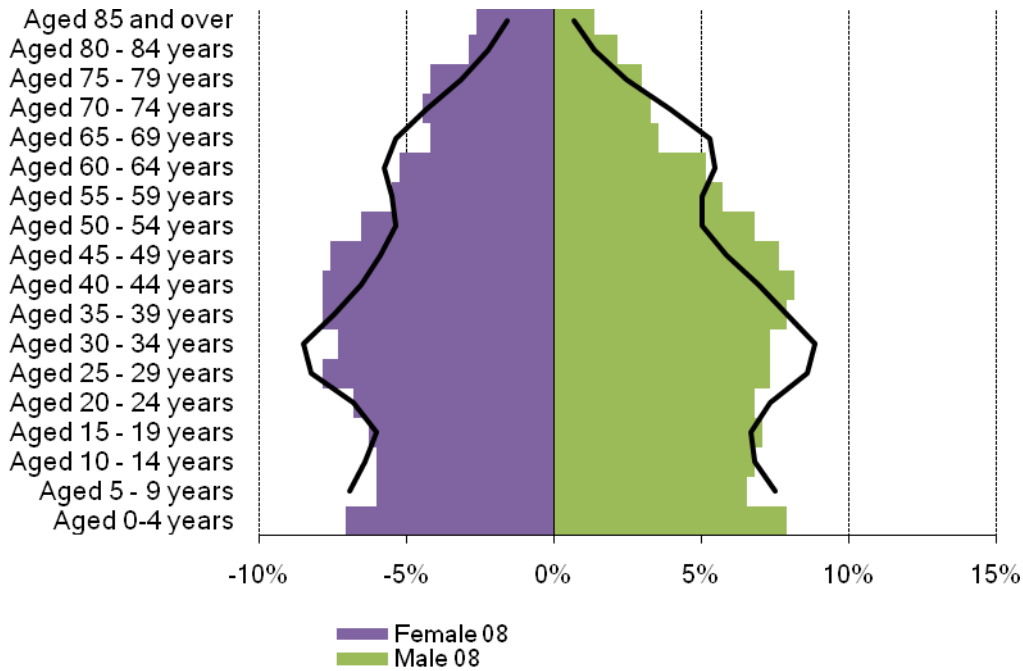
### Introduction

- 4.1 This section explains the approach taken to infrastructure requirements, costs and funding in the subsequent sections of this study.

### Estimating Infrastructure Requirements of Growth

- 4.2 This part of the study looks at the infrastructure *required* to support planned infrastructure growth. The Consultants have not looked at 'historic infrastructure deficits'.
- 4.3 This infrastructure plan will focus on the infrastructure requirements of *future growth in housing and jobs* in the Harlow area. It does not deal with general infrastructure demand in the town and its surroundings in future.
- 4.4 The argument has been made that 'historic infrastructure deficits' should be made good before new growth can be put in place. Whilst these arguments may or may not be sound, broadly speaking, our approach has been to cover the infrastructure required to ensure that infrastructure loads are not *worsened* by new growth. Because this work may be one of the inputs to assist in determining a CIL or developer contributions tariff, historic deficits have been excluded, as there is very limited scope for this to fund deficits. It would not be reasonable to use the infrastructure plan to load the costs of general social change, or already existing infrastructure deficits, onto developers and landowners.
- 4.5 There are two demographic issues which need to be borne in mind with this study. The first is the changing demographic profile of the population; the second is the relationship between the provision of new housing stock and the population growth.
- 4.6 Firstly, the population profile of the area is aging, with implications for the pattern of service provision overall; but there may be a younger age profile in the new housing than in the rest of Harlow, particularly if there is a high proportion of family housing in the new dwelling mix. As Figure 4.1 shows, over the 17 year period from 1991 to 2008, the population in the district has increased by 4,000, a modest growth of 5%. Much of this population increase has occurred in those aged between 40-55 years old and those over 75+. Both of these age categories have seen an increase of 4,100 and 2,700 residents respectively. However these increases have been offset by a decline in those aged 20-35 (-2,500), thereby highlighting the aging population in the district

Figure 4.1 – Harlow Population Profile



- 4.7 Secondly, the net growth in population from the residents of new dwellings is brought down by falling household sizes overall. It is often the case that some of the residents of proposed new houses will already live in the same local authority area. In areas where the average household size is reducing, an increase in housing stock may not result in a commensurate increase in the local population, even allowing for new occupants of the vacated houses. For example, new housing might cater for divorcees, or suppressed households, who previously lived in existing households within Harlow. This reduces the extra pressure on the local community infrastructure as a result of the proposed development. It is therefore possible that jobs and housing growth may to some extent represent an alteration in the location of demand, or lower population densities.
- 4.8 Time and budget does not allow us to deal with these issues formally. In any case, there is no work available which separately identifies the demographics of the occupants of the new housing mentioned in the RSS. Therefore the regional household size projections described in paragraph 3.1.6 above have been used to take account of these effects, and make the assumption that the population in the new housing will be similar in profile to that in the existing housing.
- 4.9 It has been assumed that service providers are broadly aware of these issues (in some cases, such as education, an understanding of these matters is core to their work).
- 4.10 It is not desirable to load an infrastructure plan with a very long gold-plated „wish list’ of perceived needs. PPS12 is clear that Core Strategies need to:
- Have evidence of deliverability, with evidence strong enough to stand up to independent scrutiny;<sup>7</sup> and
  - Have evidence of „what physical, social and green infrastructure would enable the amount of development proposed for the area, taking account of its type and distribution’.<sup>8</sup>

<sup>7</sup> CLG (2008) Planning Policy Statement 12 (17)

<sup>8</sup> Ibid (8)

- 4.11 The key concepts are those of enabling development, and deliverability. Infrastructure provision should not be so elaborate and costly that it forms a barrier to development.
- 4.12 The study adopts a pragmatic approach that balances deliverability with providing for sufficient infrastructure to ensure the growth is sustainable. It is not our proper role to barter with service providers in order strip infrastructure requirements or costs out of their plans. But the study approach has sought to identify a realistic level of infrastructure provision, in the following ways.
- Our rough rule of thumb is that the social infrastructure and amenities requirements for growth in this plan should be broadly in line with the levels of infrastructure enjoyed by the rest of society.
  - Wherever possible, our approach has been to work from first principles. Service providers have been advised of the assumptions on the broad directions and scale of proposed growth. They have been invited to explain what requirements they have, given this planned growth, and invited them to explain why this infrastructure is required. This process has built a realism and transparency into the approach.
  - The Consultants have attempted, wherever possible, to take account of service providers' existing spare capacity. This has the effect of reducing infrastructure requirements, and so their costs and funding requirements.
  - The Consultants have not dealt with historic deficits in our study. As discussed above, it is assumed that this work is intended to contribute to creation of a Community Infrastructure Levy or other tariff arrangements. It is not realistic to ask developers to fund historic infrastructure deficits through the development process.
- 4.13 Whilst the Consultants have tried to be realistic, it is not possible to design infrastructure requirements down to a price. There are instances when the costs of legitimate infrastructure requirements exceed the available funding (be it mainstream funding, developer contributions, or a combination of both). Clearly, in these instances there is a funding gap to be plugged. Our method is designed to show these instances clearly.
- 4.14 Service delivery is continually being reconfigured, strategies change. This affects levels of infrastructure required to support new growth
- 4.15 In this study, we are aiming at a moving target. Public services, and hence the infrastructure they demand for delivery, are in a constant state of flux. For example, Lord Darzi's review of NHS delivery will not be the last of its type, but has implications for infrastructure requirements. Similarly in health care, technology is likely to affect infrastructure requirements over the next few years in ways which may be difficult to predict. In other service areas, joint use community / education/ PCT buildings infrastructure are currently being examined, all of which alter infrastructure demand; and funding levels (and, consequently, legitimate infrastructure requirements) vary with political exigencies of the moment. Most service providers do not plan beyond three years, and so cannot by definition be expected to know their requirements in (say) ten years time.
- 4.16 This means that infrastructure requirements as a result of growth are difficult to predict and are necessarily subject to a considerable margin of error. The requirements listed in an Infrastructure Plan should thus be kept under review and updated as important changes are introduced.
- 4.17 In most instances, the precise nature of growth is unknown, meaning that being precise about the required infrastructure is not possible. It is important to point out that the study deals with infrastructure requirements at a high level. The level of forward strategy development varies between service providers. The study is far in advance of detailed site masterplanning work. In each instance, Environmental Assessments and Transport Assessments will be carried out that would map out likely infrastructure needs and costings in more detail and precision. Therefore it is certain that more detail will emerge as the planning process proceeds, and that this detail will

supersede the assumptions made here. The spreadsheet model provided with this study has therefore been designed to be updated with this detail, and assumptions amended.

## Estimating the costs of infrastructure for growth

- 4.18 Each subsequent section on service provision looks at the costs of infrastructure required for growth. The cost of infrastructure required for growth is just that – the capital costs of the infrastructure necessary to allow growth to take place.
- 4.19 Our overall approach is, where possible, to use service providers' own cost estimates. However, in many cases these do not exist. In these instances, the consultants have used various sources including case studies, published guides and interpretations of data from cost guides such as Spons and the Building Cost Information Service (BCIS). Cost figures do not allow for internal project management costs but usually include a construction cost contingency and professional fees (such as architects, surveyors, and so on). Costs are provided at 2008 prices unless stated otherwise.
- 4.20 Where possible, cost figures include fitting out as well as construction. They do not include land costs for two reasons:
- For many categories of infrastructure – schools are an example - land is often provided by developers at no charge.
  - Land prices vary considerably with condition and location, so there is no 'standard price'.
- 4.21 Our aim in these sections is to show the mainstream funding available for the infrastructure in question. A broad definition of 'mainstream funding', means funding from the public purse via local and regional authorities, public agencies and central Government. This might include PFI, or special purpose funding such as GAF or CIF.
- 4.22 It is important to note that, these estimates are necessarily going to be subject to a relatively wide margin of error. (It is noted that the Government accepts that this knowledge is likely to be imperfect in paragraph 2.20 above).
- 4.23 The Consultants have started from the basic assumption that mainstream funding can, very generally, be relied on to pick up a good share of the capital infrastructure requirements of a growth in population in a given area.
- 4.24 This approach tends to reduce the funding shortfall overall. It also tends to reduce the demands placed on developer contributions, because the assumption is that mainstream funding will be available to pick up costs rather than developer contributions.
- 4.25 Where possible, mainstream Government funding should be used in preference to developer contributions. The Consultants have adopted this principle in order to:
- Avoid the inefficiency, possible perverse incentives and lack of transparency caused when developer contributions are used to fund services which should be paid for by mainstream funding (see below in our remarks on double funding); and
  - Free up more funding for service themes - such as open space and community facilities - for which there are often no obvious other dedicated capital funding streams.
- 4.26 Developer contributions (either in the form of Section 106 or CIL) are not intended to subsidise the long-term additional revenue costs incurred by service providers as a result of new development. Circular 05/2005 makes it clear that use of developer contributions is acceptable for:
- The 'time lag' instance mentioned below - where revenue expenses are incurred in advance of the additional population resulting in an increase in capitation based funding. The lag experienced varies between services but three years seems to be an acceptable average.

- Commuted sums for maintenance of open space until it is 'bedded in' and high specification elements of highway infrastructure, which is a well established principle.
  - Subsidising public transport until a development is complete so that there is an alternative to car use from an early stage.
- 4.27 Some service providers have a funding formula that calculates funding by reference to population sizes. This means that as population grows as a result of new housing, their Government funding rises. However, this is not the whole picture: there are a number of components of these funding formulas (including factors such as population deprivation, rurality, and so on).
- 4.28 Service providers in this position include education (which receives a local authority grant, but one ringfenced by central Government), health / PCTs, Police and the Fire Service.
- 4.29 Local authorities are also funded on a formula that includes population numbers and their characteristics. The services that local authorities provide (such as libraries and waste) can therefore be said to be at least partially funded on a per capita basis.
- 4.30 'Double funding' of service providers needs to be avoided. Double funding occurs when service provider agencies that receive capitation based funding seek reimbursement from developers of the capital cost of providing facilities.
- 4.31 The Consultants believe that this double funding has become increasingly common practice over the past few years, as more service public agencies have used Section 106 payments as a means of bolstering their budgets. In our view, developers have for the most part acquiesced to this in order to reduce uncertainty and expedite planning permissions and in the context of a situation in which the overall scale of demands made through Section 106 Agreements was more affordable during times when markets were strong.
- 4.32 Double funding is undesirable. In effect, one part of the economy is paying hidden subsidies to another part. This would artificially depress activity in one part of the economy (in this case the example might be house building and employment space development) and artificially inflate it in another (for example, provision of community centres). Firstly, this is an example of a cause of economic inefficiency. Secondly, whilst the effect of this process may be no bad thing, if this is the choice that society wishes to make, then it should be made explicitly and balanced against possible reductions in overall delivery of housing and employment.
- 4.33 In theory, then, double funding is a bad thing. But in reality, service providers can legitimately argue that their capitation-based funding does not reflect the real costs of service provision to new housing and jobs. It seems to us that they can argue this on the following grounds.
- Capitation related funding does not provide for the capital implications of step changes in the location and distribution of demand for their service. Service providers can reasonably argue that their funding assumes that they are able to use existing capital assets – such as buildings – which are already in existence. Capital funding is therefore modest, and relates to the upkeep and maintenance of existing facilities. Their capital funding is therefore not adequate to deal with step changes in the location and distribution of demand for their service. For example, the number of primary pupils across an LEA may not be growing, but if there is a large new housing development, a new school will still be required.
  - Time lags aren't provided for in capitation-related funding. There is a strong argument that service providers should also receive revenue funding equivalent to the cost of providing additional services until such time as their capitation funding increases as a result of the increase in population. The Consultants accept that this is a problem. However, the Government appears to wish to avoid significant planning contributions going to revenue funding: documentation on CIL shows the general direction of travel of the Government in this respect, and points out that planning contributions are primarily aimed at capital and not



revenue expenditure.<sup>9</sup> Also, the problem may be shrinking: the Government is aware of the issue, and suggests that future funding will respond more quickly to population change. (CSR 07 has mentioned this as an issue). Work for Buckinghamshire has suggested that recent changes in health service funding have cut the time lag in their case to a more manageable level.<sup>10</sup>

- 4.34 The Consultants have made allowance for these problems in the estimation of developer contributions which should be made available for these service providers.
- 4.35 Other arguments sometimes made by service providers looking for developer contributions seem to us to be weaker. They are as follows.
- Providers are locked into business plans. Service providers sometimes argue that they are locked into planning cycles which mean that they have no ability to fund facilities until the next planning round. However, this argument has less traction given current economic conditions. In general business plans do not go beyond 3 years from the current time. Significant new housing is unlikely to be built over the next few years. Together with improved sub-regional governance arrangements described in section 11, this problem can be overcome in practice if care is taken to ensure that growth is understood and anticipated by service providers;
  - Insufficient funding. Some service providers argue that they are struggling to provide the service required from within their existing budgets. This may be the case, but we would suggest that this is a matter for the agency in question and their funders to resolve. It is not the role of the planning system to covertly subsidise service provision, no matter how socially worthwhile that provision may be.
- 4.36 Too much detail on funding is actively unhelpful, for the following reasons.
- If service providers are going to make best use of their own resources, they will require the flexibility to juggle funding streams (whether S106, CIL, or mainstream funding). It would be counterproductive (and probably impossible) to effectively pin them down to specific investments and contributions. Too much detail could „tie their hands’ and frustrate their ability to make best use of public funds and the efficient allocation of resources in both time and space.
  - Funding streams alter frequently, making commitment medium and longer term difficult and detail redundant.
- 4.37 It is assumed that developer contributions will cover costs which cannot be covered by mainstream funding. How realistic this approach will prove to be, particularly in the current housing market, will be shown by the viability assessment which it is understood is being carried out as a separate exercise. In case this shows that there is a significant funding gap between service providers’ expectations of what can be raised through developer contributions and what is viable, approaches to dealing with the issues are set out in Section 11.

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<sup>9</sup> Work from the CLG is implicit rather than explicit on this point. See CLG (2008) *The Community Infrastructure Levy* para 2.19 onwards

<sup>10</sup> Buckinghamshire County Council, Aylesbury Vale District Council, Aylesbury Advantage (2008) *Buckinghamshire Infrastructure Study* (Hewdon, Colin Buchanan & Partners)

## 5. Social and Community Infrastructure

### Introduction

- 5.1 This section identifies the social and community infrastructure requirements needed to serve future growth in Harlow. Social and Community infrastructure includes the following: adult social services; arts, cultural and heritage; children's services; community facilities; education (primary, secondary and post 16); adult community learning; emergency services; health; libraries; and youth services.
- 5.2 Each of these infrastructure types are considered in turn below.

### Adult Social Services

#### Introduction

- 5.3 Adult social care covers the following issues.
- Adult Care Services (18-64 years)
    - People with Physical and Sensory Disabilities (18-64)
    - People with Learning Disabilities 18-64
  - Older Peoples Services (65+ years)
- 5.4 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.

#### Infrastructure Requirements Resulting from Proposed Growth

- 5.5 Infrastructure requirements arise as a result of population (housing) growth. No appreciable demands arise from jobs growth. Societal changes, rather than housing growth, mean that demands for adult social care are rising.
- 5.6 Any residential development is likely to have an impact on both Counties' Adult Social Care provision. Some developments may have a more acute impact. Developments likely to house a high concentration of older people, people with learning disabilities or people with physical disabilities will have a greater demand on services.
- 5.7 Adult social care (particularly services for the over 65 age groups) is likely to be driven by changes to the demographic profile of the area in general rather than housing growth in particular. In line with the rest of the country, Harlow's population is ageing, placing growing demands on social care services.
- 5.8 There are significant strategic changes to service delivery in adult social care in order to cope with some of these demands. In Essex and Hertfordshire, as elsewhere, there is a move to a more bespoke, personalised, level of support for older people, adults with disabilities and/or mental health problems and carers. New ways are now being developed to support older and disabled people to live independently within their communities, so although Adult and Social Care Services will continue to provide some services directly and commission services (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.

- 5.9 Strategic changes mean that infrastructure requirements for adult social care are falling. The emphasis is on keeping cared-for adults in the social 'mainstream'. One of the implications of this change in approach is that the new build programme directly provided by adult social care in Harlow is likely to reduce, with increased working in partnership with the private and voluntary sectors. Strong emphasis needs to be placed on providing housing options which allow people to stay where they are, to 'live the lives we want to live' and avoid social isolation. This emphasises the need for mixed tenure and flexible housing, building in sustainability and diversity at the outset in all new communities and in other major developments.
- 5.10 Neither County Council anticipates a significant level of new service-specific infrastructure being required as a result of the proposed growth in dwelling numbers. The emphasis is more on the availability of premises for the third party services described below, and this impacts on the general requirement for community facilities, as set out in their specific section. 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. The role of Social Services will be largely the assessment of third-party providers; commissioning services (residential or day-care) from them; and monitoring to ensure that provision meets standards.

### **What will Infrastructure Cost?**

- 5.11 There will be no significant capital costs as a result of the new development. The increase in the numbers of elderly people will drive the needs for greater service provision, but, as described above, this will largely be met by third-party provision. To the extent that this is commissioned by Social Services departments the demand for revenue spending will increase.
- 5.12 However, Essex County Council is currently reviewing their Developers' Guide to Infrastructure Contributions. In line with Department of Health guidance, it is likely that the guide will seek developer contributions towards the costs of providing supported accommodation and extra care housing. We are not currently able to estimate what the costs and contributions would be.

### **Funding New infrastructure**

- 5.13 Mainstream funding will adjust to reflect population changes. It is assumed that the additional revenue funding required to meet the growth associated with growth will be built into the government funding formula once the additional population increase is taken into account. The capital spending by third parties will need to be supported with revenue funding to pay for the care/support costs of placements.

### **Issues**

- 5.14 As with other service areas, we have assumed that in the main Harlow growth areas to the East and North, and, to a lesser extent to the South and West, it will be necessary to provide a multi-purpose community centres from which social services for adults can be provided (see section on community centres below).
- 5.15 As the infrastructure provision is limited we have not considered the priority of this service area.

## **Arts, Culture and Heritage**

### **Introduction**

- 5.16 The infrastructure requirement for arts, cultural and heritage facilities varies considerably depending on type of facility and location. There is not a simple standard requirement. However, Harlow has a strong community arts tradition and a strong tradition of public art, and it is assumed that these will both continue in the projected growth of the town.

## Infrastructure Requirements Resulting from Proposed Growth

- 5.17 It is assumed that with the proposals for a new playhouse (and possibly gallery space) as part of the redevelopment of the Market Square and the dual-use of the new Gateway Sports Hall there will be no requirement for major new cultural facilities over the study period.
- 5.18 The Consultants have assumed there will be a requirement for public art in the growth areas, and for community arts facilities. There will be a requirement for multi-use community/sports halls (this is discussed in the section on community facilities below), with one of their roles being to provide local performance and rehearsal space.

### What will Infrastructure Cost?

- 5.19 There is no set standard for defining the costs of public art. One approach, which is based on defining funding rather than a requirement, is called Percent for Art, which sets a developer contribution of 1% of the capital costs of a development to be devoted to public art. This has the potential to raise £19.7m in the study area.
- 5.20 The cost of providing multi-use halls is estimated at £8.7m: this covered in the section on community facilities below. This may well need to be supplemented to meet requirements for some specialist facilities for theatre, music, dance and exhibition space. The Consultants do not have any costs for these, but outline some possible funding sources below.

### Funding New Infrastructure

- 5.21 Assuming average construction costs per dwelling of the order of £90,000, a 1% contribution per dwelling would raise £900 from each of the 21,900 projected dwellings, giving a total of £19.7m or nearly £1 million per year over the study period. This is included in the costs spreadsheet (See Appendix A) for the time being, although it is appreciated that there is no agreement for such provision at present. Seeking such an amount will have to be agreed in the context of other demands on developer contributions, including other demands for facilities for the arts.
- 5.22 Sources of funding for additional facilities for performance, rehearsal and exhibitions include:
- Local authority mainstream funding, although the information available suggests that Harlow DC has no significant budget for this;
  - Developer contributions, depending on the 'capacity' of this source against the demands of other services; and
  - Grants from bodies such as the Arts Council, Heritage Lottery Fund and charitable trusts.

### Issues

- 5.23 Maintaining Harlow's traditions of public art and community arts will be one means of carrying the town's sense of place over to its growth areas. Providing facilities for the arts within multi-purpose community centres will be part of the offer making Harlow's growth areas attractive places to new residents. However, in terms of priority, this provision is less urgent than services such as education and health, and arts provision may be regarded as desirable rather than essential.

## Children's Services

### Introduction

- 5.24 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.

5.25 As part of their general duty towards children, local authorities are also responsible for delivering a nation-wide 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.

**Infrastructure Requirements Resulting from Proposed Growth**

5.26 Children’s social services do not see a direct relationship between new housing and additional demand for their services leading to an additional requirement for ‘infrastructure’ in the sense of premises such as children’s homes and day centres. ‘Demand’ is correlated better with levels of deprivation rather than housing growth as such.

5.27 As a result of this they do not envisage a significant requirement for capital expenditure on buildings as a result of the new housing proposed in and at Harlow. The new population will lead to a requirement for an increased level of service provision. There will be a requirement for additional accommodation for the staff delivering the additional services. This is discussed further in the section on community facilities below.

5.28 Children’s Centres are expected to be local and accessible to parents, so each children’s centre is only expected to serve a relatively small geographic area. Harlow itself now has full coverage, but Essex County Council consider that the proposed eastern and northern growth areas will require at least one centre each.

5.29 Costs of children’s centre provision has, until now, been determined by available funding. DCSF currently provide capital funding of £300,000 per new Children’s Centre to meet their target of covering every community by 2010. This usually limits the scale of provision to satellite facilities in refurbished buildings and existing community facilities rather than new ones. As yet there is no funding beyond 2010 to cover any additional demand from the proposed new dwellings in or at Harlow, and the current scale of funding is not sufficient to construct a centre serving a substantial growth area, which, from costs in other areas we estimate in the range £800,000 to £1.5m.

**What will Infrastructure Cost?**

5.30 Costs for each centre are estimated 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. The total cost of two centres is £2.4m.

**How can they be funded?**

5.31 There are currently three potential sources of funding which have been identified for children’s centres.

**Table 5.1 – Potential Funding Sources for Children’s Centres**

Funding Source	Notes
DCSF funding of £300,000 per centre	Only lasts until 2010 so will not be available to cover the growth of Harlow unless renewed. It is assumed that it will be renewed at the current level in order for the Government to be able to maintain its pledge of full coverage.
Local authority capital funding	Our understanding is that there are no dedicated capital budgets for providing new children’s centres
Developer contributions	Developer contributions are a potential source of funding for children’s centres. A tariff

Funding Source	Notes
	approach will ensure that all dwellings make a contribution towards centres.

5.32 The total cost for each centre is assumed to be £1.2m, £300,000 will be met by DCSF and the balance of £900,000 from developer contributions.

**Issues**

5.33 As discussed in more detail in the section on Community Facilities below, Essex County Council envisage children’s centres in multi-purpose community facilities where they would be co-located with other social and community services.

5.34 Children’s centres are an important part of the suite of social and community services required to support a new community. However, it is not considered that they are of the same order of urgency as education and health facilities, especially if there is nearby provision which can be accessed initially. We therefore consider that children’s centres are desirable rather than essential and therefore recommend that they be phased in as development of the housing in the eastern and northern growth areas proceeds, rather than up-front provision being made.

**Community Facilities**

**Introduction**

5.35 The majority of the proposed growth for Harlow will take place in sustainable urban extensions to the east and north of the existing urban area. These will be large areas of new development without the infrastructure of church halls, clubs and other buildings found in established areas. In order for residents to have recreation and other facilities with which to start building communities they will need a good provision of multi-use centres in which a variety of activities from arts, sports and social care can be undertaken.

**Infrastructure Requirements Resulting from Proposed Growth**

5.36 There is no fixed standard for provision of community centres: requirements we have identified in other places range from 0.2 square metres per dwelling to 1 square metre per dwelling. In paragraph 6.9, a requirement for a notional nine multi-purpose halls is identified, based on Sport England’s design guidance on dual purpose „Village and Community Halls’<sup>11</sup>. The Sport England Guidance’s provides an example of a facility with a sports hall large enough for a badminton court, a small hall, lounge, bar and ancillary facilities with a total area of 570 square metres. Nine of these would provide about 5,130 square metres in total, or 0.23 square metres for each of the 21,900 additional dwellings: within the range found elsewhere, albeit at the lower end.

5.37 Harlow’s Head of Community Services has pointed out that a key issue with community centres finding the running costs. Small centres present a particular problem. In Harlow successful community centres are run by community associations such as Great Parndon CA. Therefore, there may be an argument for fewer, larger, facilities, which reflect Harlow’s urban densities, offer a good range of facilities, and which have the critical mass to generate an income stream from activities to make them attractive to organisations such as community associations to manage.

5.38 Essex County Council consider that there will be a need for two children’s centres and two youth centres, one in the east growth area and one in the north Harlow growth area (see the specific sections on Children’s Services and Youth Services for details). They envisage co-location of these with multi-use community facilities so that they are linked with wider provision for families

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<sup>11</sup> Village and Community Halls, Design Guidance Note, *Sport England, 2001*

and with other services such as health and education. They also consider that providing staff bases for social services staff would also be advantageous.

5.39 We therefore identify a total requirement based on the total 5,130 square metre area of the 9 recreation/community centres described in Section 6, without specifying how it will be distributed in practice, in terms either of numbers of facilities or their individual areas. This is a matter for more detailed planning as the proposals for development of the growth areas are worked up. The space requirements of co-located facilities such as children's centres and youth centres are additional to this.

5.40 Expansion and improvement of existing facilities will probably be the best option to serve growth within the existing urban area.

### **What will Infrastructure Cost?**

5.41 Our cost estimate is based on a construction and outfitting cost of £1,700 per square metre, derived from our experience in other areas. For 5,130 square metres, the cost will be £8.7 million, or £969,000 per centre. As these facilities combine a community and sport role, these costs are shown in Section 6 (Tables 6.4 and 6.7).

### **Funding New Infrastructure**

5.42 Because of their close links to housing, multi-use community facilities are normally funded from developer contributions. There may be opportunities to apply to Sport England for funding the sports element (see Section 6 for details).

### **Issues**

5.43 In order to help new communities develop in the growth areas it is important that community facilities are provided as early as possible, and we would regard them as highly desirable, particularly if they are provided as part of a co-location package from which several services may be run. This raises three issues:

- The benefits of a Tariff/CIL funding mechanism to provide funding for construction „up-front‘, rather than waiting for contributions from the housing served
- The need for an endowment to help cover running costs as the catchment population builds up.
- The benefits of co-location: it may be easier to make early provision if it can be part of a development for several services.

## **Primary and Secondary Education**

### **Introduction**

5.44 This section sets out Essex County Council's (the LEA's) assessment of the need for Primary Schools (including Early Years & Childcare provision), Secondary Schools and Post-16 Education provision to meet the needs of the growth proposals for Harlow. Hertfordshire County Council were consulted on the education requirements arising from the proposed growth at north Harlow, however no information was available from HCC at the time of writing.

5.45 Because we do not have a breakdown by dwelling size of the growth proposals the assessment is based on a broad-brush approach of a house generating 0.09 Early Years & Childcare places; 0.3 primary school places and 0.2 secondary school places. To the extent growth in Harlow takes the form of flats rather than houses the requirement will be lower. For north Harlow we have used a broad brush assessment from Hertfordshire County Council of one form of entry per 1,000 dwellings.

- 5.46 All children are expected to be able to benefit from extended school provision from 8am to 6pm from 2010. The DCSF has an extended schools funding pot for capital works, but the Consultants have taken the view that new schools will be built to include any necessary facilities and this is therefore included in the costings below.

## Infrastructure Requirements Resulting from Proposed Growth

### Primary Schools

- 5.47 The Consultants have assessed the requirement for primary schools by broad growth area and phase. All new primary schools will include commensurate Early Years provision. Wherever possible the County Council prefers to build new primary schools with two forms of entry as this is most effective in terms of deployment of resources. Based on recent experience, Essex LEA estimates the costs of a two form entry school (including early years provision) to be £7.5m and a one form entry school to be £5m at current prices. The consultants have used these costs although it should be noted that they are considerably higher than those derived from the cost per place figures on the Teachernet<sup>12</sup> website.
- 5.48 The range of Early Years and Childcare settings include playgroups, day nurseries and childminders. Such provision is largely private or voluntary. The Early Years and Childcare Service has a statutory duty to ensure access to a sufficient range of provision in its area and provides practical, and in appropriate cases, financial support to providers. Each substantial new community will need to include a Children's Centre to offer a focus for the range of services available, and this provision is included (see the section on Children's Centres above).
- 5.49 There will be no need for additional primary schools in the urban area as existing space capacity will be sufficient for the child yield of the 600 proposed dwellings, particularly as a higher proportion of these are likely to be flats than in the urban extensions.
- 5.50 The requirement for primary schools in the urban extensions and their costs are summarised in the Table 5.2. As already mentioned, schools are two form entry (420 places) with commensurate Early Years & Childcare provision unless otherwise specified.
- 5.51 The requirement to meet growth to the east could be met through a range of measures including new schools and expansion of existing provision.
- 5.52 Although there is currently surplus capacity in Harlow primary schools, the County Council is closely monitoring the demand for primary school places in the light of an increased birth rate across Harlow which may reduce any oversupply of places in the town. In any event the new schools proposed for growth to the South and West will be required to meet growth there and help anchor the new communities.
- 5.53 The lower proportion of places to dwellings proposed for Harlow North, as compared with the other growth directions, reflects the likelihood that development on this scale will include a higher proportion on flats than the other urban extensions.

**Table 5.2 - Requirement for Primary Schools to meet the needs of growth at Harlow 2011-2031**

Broad Growth Location	Indicative Dwellings			No. Primary Schools (2 FE)			
	2011-2021	2021-2031	Total	2011-2021	2021-2031	Total	Cost (£m)
East	8,000		8,000	6	-	6	45
South	1,500		1,500	1	-	1	7.5

<sup>12</sup>

<http://www.teachernet.gov.uk/management/resourcesfinanceandbuilding/schoolbuildings/schooldesign/costinformation/>



Broad Growth Location	Indicative Dwellings			No. Primary Schools (2 FE)			
	2011-2021	2021-2031	Total	2011-2021	2021-2031	Total	Cost (£m)
West	1,500		1,500	1	-	1	7.5
North	2,300	8,000	10,300	2	4	6	45
Total	13600	8,300	21,900	10	4	14	105

### Secondary Schools

- 5.54 Brays Grove School in Harlow closed last year. Effectively there is little surplus secondary school capacity in the town at present and larger year groups should be coming through into secondary schools from 2015 onwards, potentially requiring additional capacity irrespective of planned growth.
- 5.55 With one exception (St Marks), Harlow secondary schools do not have Sixth Forms. Post-16 Education is provided at Harlow College. The proposals for provision of Post-16 Education are discussed below.
- 5.56 The estimated costs of new secondary schools are set out in Table 5.3.

**Table 5.3 – Estimated Cost of new secondary schools**

Size of School	Cost (£m)
Six form entry (900 place)	21
Eight form entry (1,200 place)	25
10 form entry (1,500 place)	30

- 5.57 Secondary schools have much larger and less defined catchment areas than primaries, so the proposals to meet growth are more broad-brush, and can be summarised as follows:
  - Two 1,200 place secondary schools to meet the needs of growth to East, South, and West of Harlow, and within the town, at a total cost of £50m.
  - Two 900 place (6 form entry) to meet the needs of growth in North Harlow, at a total cost of £42m. The schools will be on sites with space to expand to 8 form entry if required.

### Post 16 Education

- 5.58 The LEA plans to continue centralised post 16 provision on the Harlow College site. This is described in more detail in the next section.

### What will Infrastructure Cost?

- 5.59 The total estimated capital cost of the requirement for new schools is £197m (primary £105m, secondary £92m).
- 5.60 The increased revenue costs will be reflected in increased Government funding allocations, which will reflect the increased numbers of pupils. As funding only „catches up’ after a delay there is a gap which the LA will need to fill.

## Funding New Infrastructure

- 5.61 Capital resources available to the local authority are primarily in the form of capital allocations from the DCSF, comprising a mix of grants, borrowing approvals and PFI credits. These allocations are made on a formulaic basis under a number of headings:
- Basic Needs for additional places;
  - Modernisation funding;
  - Building Schools for the Future (BSF); and
  - The Primary Capital Programme (PCP).
- 5.62 Apart from Basic Needs, the focus of these streams is on modernisation through replacement rather than new-build to meet large-scale new development although there are opportunities to use BSF with the aim of extending a school and providing additional places in the process. This is particularly useful in respect of secondary provision. In the last Comprehensive Spending Review the Government suggested that BSF might be more oriented to supporting growth than hitherto.
- 5.63 Both Essex and Hertfordshire are floor authorities, so they are not able to access Supported Borrowing, which reduces the scope for use of Basic Needs.
- 5.64 Whilst future arrangements for funding are uncertain it is evident that the timescales for some of the additional school provision identified above extend beyond the life of, for example, the BSF and PCP programmes. It is clear that the available formulaic allocations will be insufficient to meet the totality of the additional costs identified above, unless there is a significant change in the basis of future allocations. The government expects local authorities to supplement their resources by the addition of S106 contributions, where applicable, to help meet the additional infrastructure costs arising from large-scale developments, such as those envisaged in Harlow. In the absence of any firm indications of funds from the sources mentioned above, we have therefore assumed that the estimated costs will be met from developer contributions.

## Issues

- 5.65 It is assumed that post-16 education will take place largely at Harlow College, as described below. Hertfordshire has a higher proportion of secondary schools with 6<sup>th</sup> forms than Essex, but we have assumed that there will be a common structure across the expanded town.
- 5.66 There is a two year lead in period before construction of a new school can start, taking account of site feasibility studies, and consultation on the need for the school and on who will run it. Close liaison between the LPA and LEA is therefore essential to ensure that school provision meshes in with housing and feasible school sites are identified before other land use allocations preclude options that should have been considered. A delivery group facilitates the co-ordination necessary.
- 5.67 The costs of primary schools are based on Essex LEA's recent experience. They are high compared with figures from Teachernet and those in our Hertfordshire Infrastructure Study and should be reviewed when detailed discussion on new provision begins.
- 5.68 Although the LEAs' assumption is that the new schools will be funded from developer contributions the Consultants consider that over the period of this plan it will be possible to find some funding from other (possibly new) sources towards school costs in growth areas, and that the LPA and LEA should work towards this.
- 5.69 It is essential that education provision is made as new houses are built.

## Post-16 Education

### Introduction

- 5.70 Provision of post-16 education in Harlow is largely delivered by Harlow College, although Further Education (FE) colleges do not have defined catchment areas, and just over half the students at the college come from outside Harlow.
- 5.71 The Government's current priority is to increase participation rates in education or training for 16-18 year olds, and particularly to reduce the number of young people who are 'not in education employment or training' (NEET). Apprenticeships 16-18 are priority for future growth in participation. The current national participation rate is 78% and the Government's target is to raise this to 100% of 17 year-olds from 2013 and 100% for 18 year-olds from 2015. In partnership with LEAs, the LSC is funding an extensive programme of capital works to colleges HMA to accommodate this.
- 5.72 Demographic projections show a decline in the 16-18 year age group nationally over the study period, and the driver for new infrastructure against a background of falling numbers in the key 16-18 age group is the Government's target for increased participation rather than housing and jobs growth.
- 5.73 The position for Harlow College is more complex, as there will be growth in 16-18 year-olds in Harlow to offset declines elsewhere in the catchment.
- 5.74 The current driver for growth at the College is rising participation rates: the numbers of 16-18 year group students has grown by 400 in the last three years, and now stands at about 3,000, of whom 1,250 are undertaking Level 3 non-craft courses, such as A Level.
- 5.75 The College's aspirations to meet current demand and an improved pattern of provision were reflected in a bid the LSC for a £30m capital programme to 2014, comprising:
- A 'bespoke' 6<sup>th</sup> Form centre, to be run jointly with the schools. This is costed at £15m. The aim is to improve 'A' Level provision at Harlow, to help raise aspirations;
  - A Vocational Centre, cost £5m, following a feasibility study which identified a need for further vocational training in the area;
  - A Craft Centre, Cost £10m.
- 5.76 Following the crisis in LSC funding none of these is going forward at present, and there is no prospect of funding being found for them in the immediate future.
- 5.77 Funding (EEDA, HEFCE and the Harlow-Stansted Growth Area Partnership) has been agreed for a Higher Education Centre to be located on the College's campus, for delivering degree-level courses with ARU. Cost £9.3m. Courses are due to start in summer 2011.
- 5.78 The proposed new facilities were clearly of considerable importance for Harlow's economic development as they would have helped to deliver the skills and qualifications needed to underpin the town's economic regeneration.
- 5.79 The 16-18 year elements of the programme described above were intended to deal with recent growth and did not provide for increases arising from the projected increases in the number of dwellings over the study period.
- 5.80 However, it is not clear that there will be a requirement for additional facilities specifically to meet the demands of growth in Harlow, as opposed to meeting the demands of the other drivers for growth, taking into account:
- The College's extensive (250,000) catchment, so that it caters for growth over a much wider area;

- The decline overall in the 16-18 year cohort; and
- The reduced need to provide for adults as the focus of adult training shifts towards the workplace, leaving spare capacity.

5.81 The consultants have therefore concluded that there are no significant infrastructure requirements arising specifically from the growth proposals for Harlow.

### **Funding New Infrastructure**

5.82 Because there are no significant infrastructure requirements arising specifically from housing growth, the question of funding post 16 education does not arise for this study.

### **Issues**

5.83 The responsibility for the funding streams for capital funding for 16-18 year education will shortly move from the LSC, which is being abolished, to LEAs, which may lead to some changes in approach. At present there is no indication that this will result in additional funding for Harlow College's aspirations described above.

## **Adult Community Learning**

### **Introduction**

5.84 Adult Community Education in Harlow currently caters for 1,000 learners taking FE funded courses and 1,700 taking non-accredited courses. Although its space and facility requirements are relatively modest it is a significant part of the offer for new residents, and therefore increased provision is included. Current intentions are to centralise provision, but it is assumed that this will need to be larger than if the proposed growth was not taking place, and that there may well need to be separate facilities in north Harlow.

5.85 The requirement for additional facilities is based on the proportion of the Essex population engaged in adult community learning. The proportion of Essex's population engaged in adult community learning is estimated at 0.005 (the crude proportion is much higher, but does not take into account that this is part time study). Applied to the projected 47,000 population in the growth areas of Harlow, this gives a requirement for 235 students.

### **What will Infrastructure Cost?**

5.86 The costs of additional provision are based on Essex County Council's requirements for developer contributions. Their current estimates of construction and fitting out costs are £8,341 per student, which applied to 235 students gives a cost of £1.96m.

### **Funding New Infrastructure**

5.87 There is no dedicated funding stream for this provision, so the consultants have assumed that funding would be from developers' contributions.

### **Issues**

5.88 This does appear to be a service where there is considerable scope for savings from co-location with other facilities such as libraries, schools, or Harlow College.

5.89 While this service is an element of the quality of life „offer' for a growth area it is not essential that provision is made at the same time as new housing. In terms of priorities, we consider it tentative – provision may be made when the opportunity arises.

## Emergency Services - Police

### Introduction

- 5.90 Essex Police are responsible for policing Harlow. There is a Harlow police district whose boundaries are co-terminus with the District. District HQ is in Harlow police station which serves the town. The growth area to the north of Harlow is the responsibility of Hertfordshire Constabulary.

### Infrastructure Requirements Resulting from Proposed Growth

- 5.91 Hertfordshire Police Authority (HPA) estimate that they require an „Intervention Base’ in each of their Key Areas for Development and Change and in cross-border growth areas such as Harlow. An Intervention Base consists of a standard specification office building of between 1,100 and 1,400 square metres, plus 40 car parking spaces. In addition, the scale of development at Harlow would require custody accommodation to be shared with Essex (information provided for the Hertfordshire Infrastructure Investment Study).
- 5.92 The Consultants have not yet received information from Essex Police as to their requirements so we have assumed for the time being that, given the distribution of housing growth across Harlow, they will require a similar facility, although this might be met by expansion of the existing Harlow Police station.

### What will Infrastructure Cost?

- 5.93 On the basis of recent projects the development cost (excluding land) of an intervention base equals £1,800/m<sup>2</sup>, giving a cost in the range £2m - £2.5m. We have assumed a cost of £2m per Base, with an additional £3.7m for custody accommodation, giving a total cost of £7.7m. It is assumed half the provision will be divided between Phases 1 and 2, with Essex Police leading on Phase 1 and HPA on Phase 2.
- 5.94 The Police have included costs such as training, uniforms and equipment as part of their Section 106 calculations, and it appears that they propose to include these costs in a new national charging framework which is currently in development and is likely to be adopted in future. For the time being we have only included the £7.7m for accommodation identified above in our cost schedule.

### Funding New Infrastructure

- 5.95 Police services are constrained in their capital spending. The operational capital requirement of the police force is meant to be met through their mainstream revenue budget with the facilities required paid for by saving, borrowing or leasing either directly or indirectly through a PFI deal. This leaves them limited headroom, and explains why they seek funding through developer contributions.
- 5.96 Funding provision for growth in Harlow would only be economical through a PFI deal if it was part of a wider plan to upgrade the police estate. Therefore, it is assumed that provision for growth will be funded from developer contributions. This is because the capital needs of the Police are comparatively small and also because the pressure on local authority budgets is likely to become increasingly severe.

### Issues

- 5.97 The estimated requirement for the police to meet growth in Harlow outlined above is a very much top-down approach. We have not had an opportunity to explore the extent to which the needs of growth could be met by marginal changes to existing facilities and the realistic scale of new facilities to meet the policing requirements of the new developments to the east and north of Harlow. Provision for policing, as for other services will need to be part of the planning of these areas.

- 5.98 The new formula for Police Section 106 charges is, as yet, still in preparation. As noted above, it appears that it will include the costs of recruiting, training and equipping the additional officers required to meet the estimated increased workload arising from growth („staff set-up costs’). While these can be considered costs of growth, how far they are infrastructure costs is potentially a matter for debate. At the least, the evidence for the requirement for additional officers and support staff, and whether there is no mainstream funding towards set-up costs, should be carefully examined.
- 5.99 It is essential that provision is made for the policing needs of new neighbourhoods.

## Emergency Services - Fire

### Introduction

- 5.100 The Fire & Rescue Service in Harlow is provided by Essex Fire & Rescue. To the North of Harlow it is provided by the Hertfordshire Fire and Rescue Service. There are two fire stations in Harlow, one in the town centre and one at Old Harlow.

### Infrastructure Requirements Resulting from Proposed Growth

- 5.101 Essex Fire & Rescue advise that they will require no new facilities to provide cover for proposed growth in the town itself and to the South, East and West.
- 5.102 Hertfordshire Fire & Rescue Service (HFRS) consider that a new part-time (retained) fire station would be required to serve proposed growth at north Harlow.

### What will Infrastructure Cost?

- 5.103 HFRS estimate the costs of a retained fire station to be £2m.

### Funding New Infrastructure

- 5.104 Fire and Rescue services are funded by a combination of government grant and council tax. PFI is available for major configurations, but its use is not practical for single stations. It is assumed that HFRS would seek to fund a new station from a combination of mainstream funding and developer contributions. However, given the pressure on local authority capital budgets, it is likely that funding would be from developer contributions.

### Issues

- 5.105 If the need for a new station is established it would become necessary with the Phase 2 development of North Harlow from 2021.
- 5.106 Provision of fire and rescue services to meet the needs of new communities is essential.

## Emergency Services - Ambulance

### Introduction

- 5.107 Ambulance services in Harlow are provided by the East of England Ambulance NHS Trust (the Trust). This serves both Essex and Hertfordshire, so Harlow and all its proposed growth areas are covered. The ambulance station is situated adjacent to the Princess Alexandra Hospital (PAH) and has recently been refurbished.
- 5.108 Services in Harlow are commissioned by West Essex PCT; and in the growth area to the North of Harlow by North & East Hertfordshire PCT.
- 5.109 The changing patterns of healthcare makes it difficult to predict future requirements, but the Trust considers that in general terms it would expect an increase in the number of people requiring medical assistance in proportion to the increase in population.

## Infrastructure Requirements Resulting from Proposed Growth

- 5.110 There are many varied options for service provision from full ambulance stations to small stand-by points near incident „hot-spots’ to reduce response times. The Trust will need to work with its commissioners to determine what is required to meet the pattern of growth and provision of health services.
- 5.111 In order to give a broad-brush indication of the level of requirements we set out below an estimate prepared on the same basis as used by East Midlands Ambulance Service (EMAS) for an infrastructure study in Leicestershire. The assumptions used to estimate requirements are as follows:
- The current ratio of population to ambulance staff is 1:1,050 and they assume this will continue;
  - After an additional ten staff they would potentially require a further station to accommodate up to 40 staff before requiring an additional station and so on;
  - Each station requires ICT and accommodation for vehicles etc; and
  - Also for every ten staff it would require capital for a vehicle and equipment.
- 5.112 Applying this to the projected population of 47,300 in the growth areas gives roughly the following requirements:
- 45 ambulance staff;
  - A requirement for one new ambulance station, with four vehicles.
- 5.113 East of England Ambulance Service confirm this is broadly what will be required in Harlow, as the existing Harlow Ambulance Station is at capacity, and growth will require additional station facilities..

### What will Infrastructure Cost?

- 5.114 Again, for indicative purposes, EMAS were consulted on costs. The cost of building and fitting out an ambulance station is £3.5m, plus four vehicles at £335,000 per vehicle (£1.34m), making a total of £4.8m.

### Funding New Infrastructure

- 5.115 The Trust is funded largely by the PCTs in the East of England. This funding is tied to service level agreements, and is driven more by demand than housing numbers. For more information on the funding of the PCT’s, please refer to the health section below.
- 5.116 Because the Trust is largely funded by the PCTs, one possible approach (also adopted for funding the PCTs – see Health below), is based on the assumption 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 from developer contributions. This would be raised by the PCTs in their role as commissioner of ambulance services. The indicative cost would be £1.08m (7.5% of £4.8m for three years).

### Issues

- 5.117 Because of the changing pattern of healthcare the provision described above should be treated as indicative: what will actually be provided may well differ significantly. Provision to ensure that target response times are met is essential

## Health

### Introduction

- 5.118 Primary healthcare in Harlow and its proposed growth areas is provided by West Essex PCT in the existing urban area and those areas of Epping Forest which are proposed as Harlow growth areas; and by North and East Hertfordshire PCT in the proposed north Harlow growth area.
- 5.119 This study considers the growth requirements of primary healthcare only. The other areas of health provision are:
- Acute care, which is mostly delivered by the Princess Alexandra Hospital (PAH), run by the PAH NHS Trust; and
  - Mental Health, which is the responsibility of the NE Essex Mental Health Trust.
- 5.120 These services are outside the scope of this study, because PCTs, who operate as the purchasers and thus the funders of acute and mental health services, have funding which adjusts for capitation, so that as population increases, the hospital and mental health trusts' income from the PCT should also increase. In addition, all these trusts cover areas much larger than Harlow, so they have other drivers for growth in addition to growth at Harlow, and income from several PCTs.
- Provision of dentists, optometrists and pharmacies are not consulted as these services are largely provided by the private sector, which responds to increased demand as long as planning and the market provide suitable premises.
- 5.121 Our analysis therefore focuses on health centres, and this is in line with the Government's drive to increase the proportion of healthcare delivered at primary level.

### Infrastructure Requirements Resulting from Proposed Growth

- 5.122 A rough rule of thumb used by PCTs across the country is that there should be one GP for every 1,800 people, although there is a wide variation around this number in individual practices. There are currently 45 GPs in Harlow, giving a ratio of about 1,900 patients to GP. In order to maintain a satisfactory ratio population growth will have to be met by new provision. At a ratio of one GP per 1,800 residents, the projected population of the new housing will require another 26 GPs.
- 5.123 West Essex PCT has reviewed this requirement, taking into account planned growth. Table 5.4 sets out their estimate of what will be needed, which builds on the existing network of health centres in Harlow.

**Table 5.4 – Health Care Requirements**

Broad Location of Growth	Total Estimated Population	Estimated Requirements
<b>Urban Intensification</b>		Current planning assumes this can be accommodated by existing Harlow practices
Phase 1 (2011-2021)	648	
Phase 2 (2011-2021)	648	
<b>Total</b>	<b>1,296</b>	
<b>South</b>		Lister House development will accommodate this additional population. Due to be operational April 2010
Phase 1 (2011-2021)	3,240	
<b>Total</b>	<b>3,240</b>	
<b>West</b>		Barbara Castle Health Centre redevelopment could accommodate this
Phase 1 (2011-2021)	3,240	



Broad Location of Growth	Total Estimated Population	Estimated Requirements
<b>Total</b>	<b>3,240</b>	additional population
<b>East</b> Phase 1 (2011-2021)	17,280	Osler House redevelopment assumes an additional 1,500 patients. Due to be operational April 2011.
<b>Total</b>	<b>17,280</b>	Old Harlow development assumes an additional 11,000 patients Issue of how to provide for the remaining 5,000 patients
<b>North</b> Phase 1 (2011-2021) Phase 2 (2011-2021)	4,968 17,280	Requirement for one very large or two smaller health centres. Under current arrangements provision would be the responsibility of the North & East Herts PCT
<b>Total</b>	<b>22,248</b>	
Harlow Total	<b>47,304</b>	

5.124 The position can be summarised as follows:

- The existing health centres in the town will be able to cover the requirements of residents of new housing in the town.
- The programmed re-provision of Lister House health centre will cover the residents of growth to the south of Harlow
- Redevelopment of the Barbara Castle health centre will serve the residents in growth to the west of Harlow. This redevelopment is not yet programmed.
- In the proposed eastern growth area, a small proportion of the new population will be served by the Osler House redevelopment, which is programmed. A large proportion will be served by the proposed new Jenner House health centre. The proposals and location for this have not yet been finalised. Additional provision will be required for a further 5,000 residents. Options for this are an additional health centre to the east of Harlow, or increasing the size of the new Jenner House health centre to cover the remaining 5,000 residents. While this would make for a very large health centre, with about 12 GPs, it would enable a wide range of additional services to be housed under one roof.
- In the north Harlow growth area there is no significant provision to build on. Provision here will be by North & East Hertfordshire PCT unless/until there is an administrative boundary change. The scale of growth could be met by one very large health centre, with about 12 GPs, or two smaller ones.

### What will Infrastructure Cost?

5.125 Because new, expanded and re-provided health centres will be provided by third parties rather than by the PCTs directly, the latter have not been able to give us costs at this stage. However, from case studies in NHS procurement<sup>13</sup> advice to PCTs we have derived an all-in cost of provision of £1,850 per square metre. Assuming 100 square metres per GP and ancillary uses gives an indicative cost of £185,000 per GP. West Essex PCT has already made financial provision for the re-provision of Lister House, Osler House and Jenner House. The growth not yet provided, and indicative costs for meeting it, is as follows.

<sup>13</sup> <http://www.pcc.nhs.uk/243.php>

Table 5.5 – Estimated Health Centre Costs

Broad Location of Growth	New Population	Approx No. GPs	Provision	Cost
West	3,240	2	Expansion of Barbara Castle HC	£370,000
East	5,000 (not covered by current proposals)	3	Possibly enlarged Jenner House	£555,000
North	22,250	12	New Large HC	£2,220,000
Total	30,490	17		£3,145,000

- 5.126 It is assumed that no significant expenditure will be required to meet the modest growth proposed within the town.

### Funding New Infrastructure

- 5.127 The PCTs will only pay the IT costs of the new/re-provided centres. The other capital costs will be met by third-party providers. For example, Lister House and Osler House are owned by Harlow Health Centres Trust, who will be responsible for the capital cost of re-provision, and cover the costs by charging the GP practices rent. In turn, the PCT will cover this cost through its payments to the GPs, for which it has ring-fenced funding through the capitation process described below.
- 5.128 Funding for health services is provided to PCTs on a capitation basis. The Trusts are expected to manage their requirements within this. They have a degree of flexibility in this respect including use of their own capital, realisation of surplus assets and through various types of PFI.
- 5.129 The proposals for new provision in Harlow is an example of 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 PCT's budgetary restraints (e.g. development companies such as Primary Health Properties and Carecapital together with a number of specialist investment funds).
- 5.130 In theory, capitation funding should provide PCTs with the necessary funds to reimburse GPs the rent of the new facilities. In practice it is not straightforward. Firstly, facilities will need to be built in advance of the full realisation of the population increase, and secondly there will be a subsequent time lag before Health Service revenue funding catches up with the population growth. Changes to the funding allocation mechanism should go some way to address this but will probably not eradicate it. Neither is it entirely clear that capitation funding responds fully to the needs of the growth. This was tacitly recognised by Government with a specific budget for additional strategic capital investment in the Growth Areas but we understand that this only amounted to £20m during the period 2005-6. The result is that NHS budgets in areas experiencing growth are invariably under pressure.
- 5.131 Department of Health finance publications show that there is an upwards adjustment to financial settlements in areas labelled ODPM Growth Areas including Harlow.<sup>14</sup> However, West Essex PCT still seek developer contributions towards the costs of new facilities.

<sup>14</sup> See NHS Revenue Resource Allocations and Limits: Exposition Book. DoH Expository 2006-07 and 2007-08 Primary Care Trust initial revenue resource limits. Growth areas adjustments are shown in Table 3.5. [http://www.dh.gov.uk/en/Managingyourorganisation/Financeandplanning/Allocations/DH\\_4104471](http://www.dh.gov.uk/en/Managingyourorganisation/Financeandplanning/Allocations/DH_4104471)

- 5.132 PCT revenue does catch up with growth, but there is a time lag before it does so. PCTs get funding for GP premises from the Department of Health. This funding is ringfenced, and is paid to GPs. .
- 5.133 The major concern is to overcome the „time lag’ in funding. At Harlow, the PCT will not build the facilities themselves, they will pay rental costs to GPs to enable them to use a new facility. The Consultants suggest using developer contributions to cover rental costs during the „time lag’ and thereafter mainstream funding on the assumption that mainstream funding has „caught up’.
- 5.134 PCTs should receive the annualised equivalent of the capital costs of the required facilities for (say) three years. It is assumed this equates to 7.5%p.a. of the capital costs e.g. if the capital cost of a new health centre costs £1m, the cost of renting, running etc this facility would be £75,000 p.a. To cover this cost for three years to allow the funding formula to catch up with growth would require a developer contribution of £225,000.
- 5.135 This approach has been applied to the costs in Table 5.5. This would generate the contributions set out in Table 5.6.

**Table 5.6 – Estimated Developer Health Care Contribution**

Broad Location of Growth	Provision	Cost	Developer Contribution (7.5% of cost for 3 years)
West	Expansion of Barbara Castle HC	£370,000	£83,250
East	Possibly enlarged Jenner House	£555,000	£124,875
North	New Large HC	£2,200,000	£499,500
Total		£3,145,000	£707,625

- 5.136 These would have to apportioned between the number of new dwellings involved.

**Issues**

- 5.137 Because there is flexibility around the ratio of one GP to 1,800 patients there is theoretically some room for manoeuvre around new provision, with existing practices taking on additional patients until the new population is sufficient to justify a new practice. However, it is clearly essential to ensure that there are adequate health services in a new community.
- 5.138 Expanding an existing practice, as proposed at Jenner House, has the advantage of building on what is established, rather than running the risks and costs of a new venture. Larger practices can offer the wider range of diagnostic and other services which the Government wishes to see delivered as part of primary care.
- 5.139 On the other hand there is concern at the trend towards larger health centres among some GPs and patients as they are seen as having the potential to disrupt continuity of care.
- 5.140 There is scope for significant efficiency savings from multi-user buildings. There are benefits of co-location in the context of community facilities and there must be financial and operational advantages to co-location of health centres with facilities such as children’s centres.
- 5.141 A CIL-type standard charge might be useful to allow PCTs maximum flexibility for rational planning of health services and to maximise total developer contribution.
- 5.142 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.

## Libraries

### Introduction

- 5.143 There are currently five libraries in Harlow: in the town centre; in Old Harlow, in Tye Green, Staple Tye and Stow. The proposals for the redevelopment of Harlow Town Centre North include a new town centre library, but as this is re-provision rather than increased provision it will not meet demands arising from growth. The scale of growth proposed will require additional provision: the requirement is explained below.
- 5.144 Our estimates of the additional library provision required to meet the proposed growth of Harlow is based on discussions with Essex and Hertfordshire County Councils, and informed by the Museum, Libraries & Archives Council's (MLA) findings<sup>11</sup> on standards of provision and costs. MLA recommends provision of 30 square metres per 1,000 population as a benchmark. MLA found that most local authorities' provision was in the range 25-35 square metres per 1,000 population. MLA's benchmark construction and fit out cost figure is £3,000 per square metre. At 30 square metres per 1,000 people this gives a cost of £90,000 per 1,000 people or £90 per person.
- 5.145 Essex County Council's standard is slightly lower than this range at 23 square metres per 1,000 population, but their cost of provision is slightly higher. The Council's guideline figure for construction and fit out and initial stock is £97.50 per person. Its trigger for new library provision is an increased population of 7,000.

### Infrastructure Requirements Resulting from Proposed Growth

- 5.146 Applying Essex's trigger to the growth proposals for Harlow identifies a clear need for a new facility for growth to the east of Harlow, where the projected population is 17,280. Applying Essex's standard of 23 square metres per 1,000 gives a requirement for a library of about 400 square metres. By then applying the guideline figure of £97.5 per person to the projected population of 17,280 gives a cost of £1.68m.
- 5.147 Hertfordshire Library Service consider that a library will be required to serve the growth proposed to the North of Harlow. They estimate that a development of about 10,000 dwellings will require a library of about 1,080 square metres. Applying the MLA benchmark cost of £3,000 per square metre this would cost £3.24m.
- 5.148 Proposed growth within Harlow and to the south and west is on a smaller scale than to the north and east. Although the population of the proposed 3,600 new dwellings is projected to be 7,800, this will be not be concentrated in a single location and would not require a new library. Essex do consider that there would need to be some investment in existing facilities. On the basis of a cost per person of £90, this could total £700,000.
- 5.149 The total cost of the requirement is therefore £5.62m.

### Funding New Infrastructure

- 5.150 There are no specific funding streams for libraries. Essex expects to fund new libraries from developer contributions as they have no budget within mainstream funding for this purpose.
- 5.151 Hertfordshire is currently implementing a comprehensive modernisation programme of its library service: 'Libraries for the 21<sup>st</sup> Century'. The Consultants therefore assume that the County would seek to fund a new stand-alone library from developer contributions.

## Issues

- 5.152 As discussed elsewhere in this report libraries will need to be located with other social and community facilities. Potential sites will need to be identified as part of the masterplanning process for the north and east growth areas. Libraries are arguably less essential to new residential areas than facilities such as education and health. As desirable facilities they can be phased in as housing development proceeds, rather provided in advance of demand.

## Youth Services

### Introduction

- 5.153 The Green Paper 'Youth Matters' identified four key challenges facing services for young people:
- How to engage more young people in positive activities and empower them to shape the services they receive;
  - How to encourage more young people to volunteer and become involved in their communities;
  - How to provide better information, advice and guidance to young people to help them make informed choices about their lives; and
  - How to provide better and more personalised intensive support for each young person who has serious problems or gets into trouble.
- 5.154 Services for young people are delivered through a variety of organisations in the community and voluntary sector based in a range of facilities. Purpose-built youth facilities run by the Youth Service are only one element of this, but the one requiring significant public sector capital expenditure. The Youth Service provides financial and other support to other organisations. Much of Youth Service provision is targeted on vulnerable young people and is delivered through a range of channels, of which youth centres are only one.
- 5.155 There is no national standard setting out a fixed ratio of level of physical youth provision to population or numbers of dwellings. In consultation with Essex County Council we are working to a pragmatic standard that a purpose-built youth centre will be required in major urban extensions.

### Infrastructure Requirements Resulting from Proposed Growth

- 5.156 On the basis of the standard described above two purpose-built youth centres will be required: one in each of the eastern and northern growth areas of Harlow. These should have an area of at least 250 square metres to provide for a range of activities (subject to any revised requirement from Hertfordshire Youth Connexions for the northern growth area).

### What will Infrastructure Cost?

- 5.157 Based on our experience in other areas, costs of construction, fitting out and equipping a youth centre are of the order of £2,000 per square metre, so the costs per centre will be about £0.5m, and total costs, £1m.

### Funding New Infrastructure

- 5.158 There are three funding sources for youth facilities at present:
- Myplace, a capital funding programme for youth facilities administered by the Big Lottery Fund on behalf of DCSF, which only has a budget of £190 million 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, although neither Essex nor Hertfordshire appear to have budgets for capital spend on new youth facilities.

- Developer contributions: youth facilities are part of a package of community facilities to support new housing development which could form part of a Planning Obligations SPD or a CIL.

### Issues

- 5.159 As discussed above under Community Facilities, Essex County Council envisage a youth centre forming one element (a „wing’) of a multi-purpose set of facilities which could include a children’s centre, and community space useable for a range of uses in order that the benefits of co-location can be realised.
- 5.160 The scale of proposed growth is such that a range of provision for young people will be required. Because new urban extensions will not contain the established social infrastructure, such as church halls, which is found in older urban areas, it will be important that there are sufficient multi-purpose facilities in community centres and schools from which services for young people can be delivered.
- 5.161 Youth facilities are part of the „suite’ of community facilities needed by a new community, and help in-coming young people by providing activities and opportunities to meet. While not essential in to the same extent as education and health it is desirable that they are provided early to help make a new development area a place for young people.

## 6. Open Space, Recreation and Sport

### Introduction

- 6.1 The Consultants investigated potential infrastructure requirements for open space, recreation and sport. The identification of infrastructure improvements and estimated costs to meet growth up to 2031 included:
- Identification of broad geographical sub-groups within Harlow;
  - Assessment of projected population growth to 2031;
  - Quantitative analysis of indoor sports facilities, supply and demand;
  - Site visits for first hand observation coupled with desk-top exercise to identify potential open space, sport and recreation infrastructure improvements;
  - Consultation with representatives from Harlow Council to identify any additional infrastructure requirements;
  - Preparation of estimated costs by project and geographical sub-group, based on the consultant's experience; British Cost Information Service; Harlow Section 106 contributions and Spons Landscape & External Works price book and Sport England Kitbag.
- 6.2 This section has looks at Strategic/Recreation Projects, considering Harlow at large; the broad locations of growth investigating the potential for site level infrastructure within each of the these areas; and indoor sports facilities.

### Strategic/Recreation Projects

#### What are the infrastructure requirements resulting from proposed growth?

- 6.3 Following a review of the Chris Blandford Green Infrastructure Plan (2006) (see Stage 1 Report p34) and subsequent site visits in and around Harlow a number of Strategic Projects (SP) and Recreation Projects (RP) have been identified. These Projects were defined only after consideration had been given to their relationship with potential growth areas of the future. Strategic Projects consider the wider context of the expansion of Harlow as a whole while Recreation Projects relate to Site Level Infrastructure and are in addition to open space requirements identified in Harlow open space, sport and recreation standards.
- 6.4 The proposed infrastructure improvements presented in Tables 6.1 and 6.2 have been broadly defined with assumptions made regarding the area of space to be included and the type of environments/habitats and supporting amenities to be provided.
- 6.5 Table 6.1 lists Strategic Projects that would be required to support growth in Harlow. Strategic Projects 1-11 were defined after site visits and relate to recommendations identified by the Chris Blandford Green Infrastructure Plan (2006). Strategic Projects 12-14 have been identified following discussions with officers from Harlow District Council.

**Table 6.1 - Strategic Projects**

Strategic Projects (town wide)	Site Detail	Area (ha)
SP 1	„Major Strategic Destination & Gateway 3’, Harlow Town Park	40.3
SP 2	„New Urban Landscape of distinction 1’, Harlow Rail Station / Town Park	8.98

Strategic Projects (town wide)	Site Detail	Area (ha)
SP 3	„Key Strategic destinations & Gateways 1’, Gibberd’s Garden.	8.79
SP 4	„New Urban Landscape of Distinction 3’, Churchgate Street	1.3
SP 5	„New Urban Landscape of Distinction 3’, improving linkages	2
SP 6	„New Urban Landscape of Distinction 3’, improving linkages	3.6
SP 7	„New Urban Landscape of Distinction 4’, South East Harlow / M11 approach	4.31
SP 8	„Major Strategic Destinations and Gateways 2’, Parndon Wood Nature Reserve	11.48
SP 9	„New Urban Landscapes of Distinction 2’, West Harlow	8.84
SP 10	„Local Green Space Parks & Core Natural Greenspace’, environmental improvements.	3.65
SP 11	„Local Green Space Parks & Core Natural Greenspace’, environmental improvements	7.86
SP 12	BMX dirt track and mountain bike course (location not defined).	na
SP 13	One additional Synthetic Turf Pitch (location not defined/typical STP layout).	0.64
SP 14	13 Outdoor Tennis Courts (location not defined).	8.84

6.6 Table 6.2 lists Recreational Projects by geographical sub-area. Recreational Projects 1-2 are considered to be Site Level Infrastructure that are strategic in their scope. They were defined after site visits based on the Chris Blandford Green Infrastructure Plan (2006). Recreation Projects 3-11 refer to recreation centres which would serve existing and proposed communities within each of the broadly defined geographical sub-groups.

**Table 6.2 - Recreation Projects**

Broad Location of Growth	Recreation Project	Site Detail	Area (ha)
<b>North</b>	RP 1	„Key Strategic Destinations & Gateways’, Eastwick Medieval Settlement Site	7.1
	RP 2	„New Destinations and Gateways’, Gilston Park Area	1.13
	RP 8	Recreation Centre (equivalent to 1 court badminton hall)	0.018
	RP 9	Recreation Centre (equivalent to 1 court badminton hall)	0.018



Broad Location of Growth	Recreation Project	Site Detail	Area (ha)
	RP10	Recreation Centre (equivalent to 1 court badminton hall)	0.018
<b>South</b>	RP7	Recreation Centre (equivalent to 1 court badminton hall)	0.018
<b>East</b>	RP3	Recreation Centre (equivalent to 1 court badminton hall)	0.018
	RP4	Recreation Centre (equivalent to 1 court badminton hall)	0.018
	RP5	Recreation Centre (equivalent to 1 court badminton hall)	0.018
	RP6	Recreation Centre (equivalent to 1 court badminton hall)	0.018
<b>West</b>	RP8	Recreation Centre (equivalent to 1 court badminton hall)	0.018

### What will Infrastructure Cost?

- 6.7 An estimated cost has been applied to each of the Strategic and Recreation Projects previously identified. These are shown on tables 6.3 and 6.4.

**Table 6.3 – Strategic Project Costs**

Strategic Projects	Site Detail	Cost
SP 1	„Major Strategic Destination & Gateway 3’, Harlow Town Park	£2,815,900
SP 2	„New Urban Landscape of distinction 1’, Harlow Rail Station / Town Park	£840,700
SP 3	„Key Strategic destinations & Gateways 1’, Gibberd’s Garden.	£911,800
SP 4	„New Urban Landscape of Distinction 3’, Churchgate Street	£314,300
SP 5	„New Urban Landscape of Distinction 3’, improving linkages	£404,000
SP 6	„New Urban Landscape of Distinction 3’, improving linkages	£617,500
SP 7	„New Urban Landscape of Distinction 4’, South East Harlow / M11 approach	£782,400
SP 8	„Major Strategic Destinations and Gateways 2’, Parndon Wood Nature Reserve	£1,147,300
SP 9	„New Urban Landscapes of Distinction 2’, West Harlow	£801,000
SP 10	„Local Green Space Parks & Core Natural Greenspace’, environmental improvements	£656,000

Strategic Projects	Site Detail	Cost
SP 11	„Local Green Space Parks & Core Natural Greenspace’, environmental improvements	£664,000
SP 12	BMX dirt track and mountain bike course (location not defined).	£650,000
SP 13	1 additional Synthetic Turf Pitch (location not defined/typical STP layout).	£740,000
SP 14	13 Outdoor Tennis Courts	£5,453,400
Total		<b>£16,798,400</b>

6.8 The following assumptions were used when calculating estimated costs for Strategic Projects:

- **Strategic Project 1-11;** The estimated costs are based on assumptions made regarding the size and function of each Strategic Project and sourced from Spons Landscape & External Works price Book 2002 21<sup>st</sup> Edition (adjusted for inflation)
- **Strategic Project 12;** BMX dirt track and Mountain Bike Course (location not defined): Have had an estimated cost applied based on the consultant’s previous experience. The BMX dirt track is the simpler of the two as they are often constructed on flattish open sites however recent prices have varied between £150 - £300k depending on the extent of facilities provided and the level of competition expected. These figures do not include any land costs or fees and assumes suitable existing land to construct onto, i.e. no contamination, drainage or other detrimental issues. Using this range the consultant’s have taken £225k as a median figure. Any indicative cost for a Mountain Bike Course would be variable as it depends on length (between 5 to 9 km for competition), ground conditions, temporary or permanent nature of competition set-up (e.g. for fencing), topography, non-competition use, safety fences for falls, bridges, access routes, rider facilities, car parking etc. In the past costs have ranged from £300k to £1m depending on these factors. Using this range the consultant’s have taken a median of £650k.
- **Strategic Project 13;** one additional Synthetic Turf Pitch (STP): The estimated cost for a single STP is based on the area for a typical Synthetic Pitch Layout as identified in Sport England: A Guide to the Design, Specification and Construction of Multi-Sport Synthetic Turf Pitches (STP)s (Part 1 of 3), providing a typical area of 0.64ha. Sport England Kitbag costs<sup>15</sup> were then used to estimate the cost of each of these facilities.
- **Strategic Project 14;** 13 Outdoor Tennis Courts: The estimated cost for 13 Outdoor Tennis Courts is based on the area of a Typical Type 1,2 or 3 MUGA layout with markings for tennis, mini-tennis and netball (Sport England Design Guidance) providing a typical area of 0.68 Ha to which the cost of £61.69 per square metre has been applied based on the consultants previous experience.

Table 6.4 – Recreation Project Costs

Broad Growth Location	Recreation Project	Site Detail	Cost
North	RP 1	„Key Strategic Destinations & Gateways’, Eastwick Medieval	£1,036,000

<sup>15</sup> Sport Facility Costs Q2 2008

Broad Growth Location	Recreation Project	Site Detail	Cost
		Settlement Site	
	RP 2	'New Destinations and Gateways', Gilston Park Area	£478,600
	RP 8	Recreation Centre (equivalent to 1 court badminton hall)	£969,000
	RP 9	Recreation Centre (equivalent to 1 court badminton hall)	£969,000
	RP10	Recreation Centre (equivalent to 1 court badminton hall)	£969,000
South	RP7	Recreation Centre (equivalent to 1 court badminton hall)	£969,000
East	RP3	Recreation Centre (equivalent to 1 court badminton hall)	£969,000
	RP4	Recreation Centre (equivalent to 1 court badminton hall)	£969,000
	RP5	Recreation Centre (equivalent to 1 court badminton hall)	£969,000
	RP6	Recreation Centre (equivalent to 1 court badminton hall)	£969,000
West	RP8	Recreation Centre (equivalent to 1 court badminton hall)	£969,000

6.9 The following assumptions were used in calculating estimated costs for Recreation Projects:

- **Recreation Projects 1-2;** The estimated costs are based on assumptions made about the size and function of each Recreation Project and sourced from Spons Landscape & External Works price Book 2002 21<sup>st</sup> Edition (adjusted for inflation)
- **Recreation Projects 3-11;** Recreation centre: the costs above are for a recreation centre equivalent to a one court badminton hall plus community facilities with a total area of 570 square metres, as described in Section 5 (Community Facilities ) above. We have considered it clearer to combine the costs in one place rather than have an artificial separation of sport and community elements. Our cost estimate is based on a construction and outfitting cost of £1,700 per square metre, derived from our experience in other areas.

### Funding New Infrastructure

6.10 There are various sources of funding both currently available and planned for in the future. The Open Space SPD (2007) proposes contributions from developers for 10+ units of housing, for offsite provision, of £525.23 per person capital cost and (if not directly funded by the developer) various rates for maintenance depending on the type of space as a 20 year commuted payment, relating to Amenity Greenspace, Provision for Children and Teenagers, Allotments, Green Corridors and Outdoor Sports Facilities. It notes that for Rugby Playing Fields contributions will be put towards the provision of a whole-district facility. Table 6.14 provides a breakdown of provision costs by type.

Table 6.5 – Harlow Open Space Contributions

Type	Sqm per person	Provision cost per sqm (£)	Contribution per person (£)
Playing fields (football and cricket)	10	15.75	157.5
Playing fields (rugby)	1.3	15.75	20.5
LEAPs	1.3	90	122.85
NEAPs	1.3	50	68.25
Allotments	3	10	31.5
Internal Open Space	5	10	52.5
Rights of Way	n/a	n/a	33.5
Town Park	8.22	4.7	38.63
<b>Total</b>			<b>£525.23/person</b>

- 6.11 It is envisaged SPD developer contributions will be accompanied by the new Community Infrastructure Levy (CIL). It is envisaged CIL will provide further additional investment in infrastructure, including open space, sport and recreation.
- 6.12 Other potential sources of funding include proposals by the East of England Development Agency (EEDA) to launch a Regional Infrastructure Fund (RIF) which would provide fresh capital investment to pump-prime infrastructure schemes and, by recycling receipts, allow forward funding. EEDA published Regional Infrastructure Fund: Issues and Options for Consultation which envisages the RIF would enable some schemes to be brought forward much earlier than otherwise might be the case “A RIF would be used to fund projects that would not otherwise be funded as quickly or at all and this would include small infrastructure schemes that unlock growth. Deliverability and economic viability may be as important considerations as scale of impact”.
- 6.13 Sources of currently available funding for open space, sport and recreation include:
- **Harlow and District Sports Trust:** A charitable body responsible for recent developments including the new Mark Hall Sports Complex and athletics track with the aid of funding support from various bodies including Sport England;
  - **Access to Nature:** The programme will fund projects that expect to result in: a greater number and diversity of people with improved opportunities to experience the natural environment; more people having opportunities to learn about the natural environment and gain new skills; more people being able to enjoy the natural environment through investment in access to natural places; and an increase in communities' sense of ownership of local natural places, by establishing strong partnerships between communities, councils, voluntary organisations and others;
  - **Awards for all England:** The aim is to make small grants that make a big difference to people and communities. Projects must extend access to and participation in activities or boost people's skills and creativity with the aim of improving quality of life; and
  - **Changing Spaces:** The aim is to improve local environments, open spaces and countryside, helping projects that are accessible to all and relevant to people's needs.
  - Private companies specialise in providing 5 a side football facilities e.g. Goals Soccer plc and Powerleague plc. Harlow meets their criteria for new locations.

- Sports bodies such as the Lawn Tennis and Football Foundation sometimes fund facilities.

The above list provides an overview, however it should not be viewed as conclusive.

### Issues

- 6.14 The phasing for Strategic and Recreation Projects are outlined in Tables 6.6 and 6.7.
- 6.15 Table 6.6 illustrates the proposed phasing for Strategic Projects. Proposed phasing is based on the perceived impact of a given project. Those projects perceived to be of greater benefit to Harlow as a whole have therefore been prioritised (2011-2021). These include SP 1: Harlow Town Park; SP 2: Harlow Train Station; SP 7: South East Harlow M11 Approach; SP 9: West Harlow; SP 12: BMX & Mountain Bike Facilities; SP 13: One Additional Synthetic Turf Pitch and SP 14: 13 Outdoor Tennis Courts. Those projects considered as having a more localised impact have been phased for 2022-2031.

**Table 6.6 – Strategic Project Phasing**

Strategic Project	2011-2021	2021-2031	2011-2031
SP 1	£2,815,900	-	£2,815,900.00
SP 2	£840,700	-	£840,700
SP 3	-	£911,800	£911,800
SP 4	-	£314,300	£314,300
SP 5	-	£404,000	£404,000
SP 6	-	£617,500	£617,500
SP 7	£782,400	-	£782,400
SP 8	-	£1,147,300	£1,147,300
SP 9	£801,000	-	£801,000
SP 10	-	£656,000	£656,000
SP 11	-	£664,100	£664,100
SP 12	£650,000	-	£650,000
SP 13	£740,000	-	£740,000
SP 14	£5,453,400	-	£5,453,400
<b>Total</b>	<b>£12,083,400</b>	<b>£4,715,000</b>	<b>£16,798,400</b>

- 6.16 Table 6.7 illustrates the proposed phasing for Recreation Projects. RP will be based on the phasing of future dwellings within the broad locations of growth.

**Table 6.7 – Recreation Project Phasing**

Location	Site Detail	2011-21	2021-31	2011-31
<b>North</b>				
RP 1	„Key Strategic Destinations & Gateways’, Eastwick Medieval Settlement Site, Strategic Housing Site 9	-	£1,036,000.00	£1,036,000.00
RP 2	„New Destinations and Gateways’, Gilston Park Area,	-	£478,600.00	£478,600.00

Location	Site Detail	2011-21	2021-31	2011-31
	Strategic Housing Site 10			
RP 8	Recreation Centre (equivalent to 1 court badminton hall)	£969,000	-	£969,000.00
RP 9	Recreation Centre (equivalent to 1 court badminton hall)	£969,000	-	£969,000.00
RP10	Recreation Centre (equivalent to 1 court badminton hall)	£969,000	-	£969,000.00
<b>South</b>				
RP7	Recreation Centre (equivalent to 1 court badminton hall)	£969,000	-	£969,000.00
<b>East</b>				
RP3	Recreation Centre (equivalent to 1 court badminton hall)	£969,000	-	£969,000.00
RP4	Recreation Centre (equivalent to 1 court badminton hall)	£969,000	-	£969,000.00
RP5	Recreation Centre (equivalent to 1 court badminton hall)	£969,000	-	£969,000.00
RP6	Recreation Centre (equivalent to 1 court badminton hall)	-	£969,000	£969,000.00
<b>West</b>				
RP8	Recreation Centre (equivalent to 1 court badminton hall)	-	£969,000	£969,000.00
<b>Total</b>		<b>£6,783,000</b>	<b>£3,452,600</b>	<b>£10,235,600</b>

## Site Level Infrastructure

### What are the infrastructure requirements resulting from proposed growth?

- 6.17 As a result of projected growth there will be a requirement for open-space, sport and recreation infrastructure to meet increased demand due to estimated population growth of some 46,557 people. In order to assess the infrastructure required to meet this increased demand the consultants have referred to the Harlow Open Space SPD (2007) (Table 5.14).
- 6.18 The proposed requirement for open-space, sport and recreation infrastructure is based on the amount of open space required per person for different open space typologies shown in SPD, this includes: playing fields (football and cricket); rugby pitches; children’s play LEAPS; children’s play NEAPs; allotments; and internal open space. The open space standards in the SPD have been applied to projected population growth identified within each of the broad locations for growth providing a total requirement for each infrastructure type.
- 6.19 The site level infrastructure requirements are identified in Tables 6.8 - 6.12. The greatest requirements for new site level open space are in the north and east growth locations where the requirements are for 44.99ha and 32.09ha of open space respectively.

## What will Infrastructure Cost?

6.20 Tables 6.8 – 6.12 provide a breakdown of the cost for each of the broad locations for growth by open space type. The costs are derived by applying the costs identified in the Harlow Open Space SPD (Table 5.14 in the SPD), to the amount of provision identified.

**Table 6.8 – Site level open space needs and costs (North)**

Typology	Area (ha)	Cost
Playing fields (e.g. football, cricket)	21.53	£3,390,660
Rugby	2.80	£440,785
Children’s Playing Space (LEAPS)	2.80	£2,518,776
Children’s Playing Space (NEAPS)	2.80	£1,399,320
Allotments	6.46	£645,840
Internal Open Space	8.61	£861,120
<b>Total</b>	<b>44.99</b>	<b>£9,256,502</b>

**Table 6.9 – Site level open space needs and costs (South)**

Typology	Area (ha)	Cost
Playing fields (e.g. football, cricket)	3.24	£510,300
Rugby	0.42	£66,339
Children’s Playing Space (LEAPS)	0.42	£379,080
Children’s Playing Space (NEAPS)	0.42	£210,600
Allotments	0.97	£97,200
Internal Open Space	1.30	£129,600
<b>Total</b>	<b>6.77</b>	<b>£1,393,119</b>

**Table 6.10 – Site level open space needs and costs (East)**

Typology	Area (ha)	Cost
Playing fields (e.g. football, cricket)	15.74	£2,479,444
Rugby	2.05	£322,328
Children’s Playing Space (LEAPS)	2.05	£1,841,873
Children’s Playing Space (NEAPS)	2.05	£1,023,263
Allotments	4.72	£472,275
Internal Open Space	6.30	£629,700
<b>Total</b>	<b>32.90</b>	<b>£6,768,881</b>

**Table 6.11 – Site level open space needs and costs (West)**

Typology	Area (ha)	Cost
Playing fields (e.g. football, cricket)	3.24	£510,300
Rugby	0.42	£66,339
Children’s Playing Space (LEAPS)	0.42	£379,080
Children’s Playing Space (NEAPS)	0.42	£210,600
Allotments	0.97	£97,200
Internal Open Space	1.30	£129,600
<b>Total</b>	<b>6.77</b>	<b>£1,393,119</b>

**Table 6.12 – Site level open space needs and costs (Harlow Urban Intensification)**

Typology	Area (ha)	Cost
Playing fields (e.g. football, cricket)	1.27	£199,868
Rugby	0.16	£25,983
Children’s Playing Space (LEAPS)	0.16	£148,473
Children’s Playing Space (NEAPS)	0.16	£82,485
Allotments	0.38	£38,070
Internal Open Space	0.51	£50,760
<b>Total</b>	<b>2.65</b>	<b>£545,638</b>

6.21 Table 6.12 provides an overview of the total infrastructure required and the costs by open space type. There is a total requirement for 94.09ha of open space of which the greatest need is for playing fields. The total cost for all the required site level open space will be approximately £19.38m up to 2031.

**Table 6.13 – Site Level Infrastructure Overview**

Typology	Area (ha)	Cost
Playing fields (e.g. football, cricket)	45.02	£7,090,571
Rugby	5.85	£921,774
Children’s Playing Space (LEAPS)	5.85	£5,267,282
Children’s Playing Space (NEAPS)	5.85	£2,926,268
Allotments	13.51	£1,350,585
Internal Open Space	18.01	£1,800,780
<b>Total</b>	<b>94.09</b>	<b>£19,357,260</b>

**Funding New Infrastructure**

6.22 Proposed infrastructure would be funded primarily by Developer Contribution Levels for Harlow as detailed in Table 6.14.



## Issues

- 6.23 Phasing for open space, sport and recreation infrastructure within each of the broad locations of growth has been programmed to coincide with the estimated phasing of dwellings. Table 6.14 outlines the proposed phasing for Site Level Infrastructure.

**Table 6.14 – Site Level Infrastructure Phasing**

	2011 - 2021		2022 - 2031	
	No. Dwellings	Cost	No. Dwellings	Cost
North	2,300	£2,136,116	8,000	£7,120,386
South	1,500	£1,393,119	-	-
East	8,000	£6,768,881	-	-
West	1,500	£1,393,119	-	-
Harlow Urban Intensification	300	£272,819	300	£272,819
<b>Total</b>	<b>5,600</b>	<b>£11,964,054</b>	<b>300</b>	<b>£7,393,205</b>

## Indoor Sports Facilities

### What are the infrastructure requirements resulting from proposed growth?

- 6.24 The consultants completed an indoor facilities assessment for sports halls and swimming Pools with the aim of the assessment being to:
- Identify the provision of indoor sports facilities within the study area and identify issues relating to the accessibility and quality of facilities;
  - Identify the adequacy of existing provision and the extent to which it meets demand and the needs of individual sports within the District both at present and up to 2031;
  - Consider issues relating to latent and future demand; and
  - Identify deficiencies in existing provision and opportunities to improve the range, quality and accessibility of provision within Harlow.
- 6.25 In order to address the above issues the consultants considered indoor sports in Harlow according to the type of facility and by sport in order to enable the identification of specific local needs.
- 6.26 The findings from the indoor facilities assessment suggested that existing provision will be enough to satisfy future demand up to 2031. However, anecdotal evidence suggests local sports facilities are close to capacity. To address the discrepancy two scenarios are identified below. Scenario 1 summarised findings with consideration given to the relationship between supply and demand up to 2031, the conclusions did not reflect any demand from outside of the Harlow District which may utilise facilities in the town. Scenario 2 considered the additional demand between 2001 and 2031 separately and the number of facilities which would relate solely to additional demand.
- 6.27 Scenario 2 identifies the following requirements:
- **Swimming pools:** Additional demand from 2001 to 2031 equates to 1,094 visits. Not counting the potential of existing facilities to meet additional demand generated between 2001 and 2031, 203 square metres of pool space would be needed equating to a single 25m pool.

- **Sports Halls:** Additional demand from 2001 to 2031 equates to 880 visits per week. An additional five court sports hall would be needed.

### What will Infrastructure Cost?

- 6.28 Sport England Design Guidance for Sports Halls indicates that a six court sports hall would be approximately 918 sqm. By applying a cost of £4,165 per square metre (Gymnasia, fitness centres including swimming pools – BCIS) the estimated combined cost for six court facility to meet scenario 2 projections would be £3.8m. Sport England Kitbag Costs for a 25m (5 lane pool) are £2.67m. This would mean a combined pool and sports hall facility is likely to be in the region of £6.5m.

### Funding New Infrastructure

- 6.29 Sport England recently published a new funding strategy setting out investment programmes that will be available to organisations delivering grassroots Sport from April 2009. A key component of this funding will be £45 million per year for „open‘ applications, these will be available to local authorities which grow and sustain local sport. Such applications would be judged on their merits against transparent and relevant criteria which will be published when the funds are open for applications.
- 6.30 As part of the above strategy Sport England will invest £10 million per year of capital funding in projects that promote a sustainable approach to sustainable communities. This funding would be in addition to the facilities funding awarded to National Governing Bodies of sport (NGBs).

### Issues

- 6.31 Phasing for these facilities could be later than other recreational facilities as there is no immediate need for additional facilities. The consultants recommend the proposed facilities be constructed in the 2022-2031 time period.

# 7. Transport

## Introduction

7.1 This section identifies the highway infrastructure (Figure 7.1) that is likely to be required to support future development in Harlow and assist in estimating associated costs.

7.2 To identify infrastructure requirements for the broad growth locations in Harlow (set out in section 3) a trip generation exercise was carried out to assess the likely trip patterns and distribution resulting from in AM and PM peak periods. This was undertaken for the residential and employment land uses proposed,

### Residential Trip Assignment

7.3 The residential trip generation and assignment involved the following stages:

- Establish average person trip rates;
- Establish a modal split for vehicles / private car trips; and
- Estimate likely future distribution and assignment of trips.

7.4 The person trip rates were established from the TRICS database using sites in locations that were comparable to the proposed locations in Harlow, in line with good practice guidance. The aim was to derive an average trip rate, bearing in mind the uncertainty over the type of housing and the housing tenure. It has been assumed that the majority of future development will be houses rather than flats. The methodology has also assumed a 60:40 split of private and affordable housing. These assumptions were derived by the Consultants as standard housing assumptions for edge of town developments, and linked broadly to local planning policy and aspirations.

7.5 Trip rates per household were derived for the AM and PM Peak Hour arrivals and departures, which are presented in Table 7.1 below.

**Table 7.1 – AM and PM peak hour arrivals and departures**

AM Peak Hour		PM Peak Hour	
Arrivals	Departures	Arrivals	Departures
0.19	0.617	0.435	0.259

7.6 The AM and PM peak period person trips were then calculated for each broad development area. In terms of establishing a modal split, this was based on the existing mode split data for Harlow without any adjustment for the implementation of travel planning measures. The proportion of total trips made by car drivers was taken from the 2001 Census Travel to Work data. Whilst it is acknowledged that work trips would not be the only trips occurring, it is accepted that this would be the main journey purpose in the peak hours. The proportions were taken for each Harlow ward of residence and applied to the person trips for the development areas located in or near the respective wards. This was to provide a maximum total vehicular trip generation showing the worst case impact on Harlow’s infrastructure.

To establish the likely trip assignment and distribution of the new vehicular trips external to Harlow, the 2001 Census Travel to Work data was again used for district to district commuting. The main destinations of trips were established from this data set and included the following districts:

- Harlow;

- Broxbourne;
- Chelmsford;
- East Hertfordshire;
- Epping Forest;
- Uttlesford; and
- Welwyn Hatfield.

7.7 These new vehicular trips were again assigned the shortest route from the development areas to the main destinations outside of Harlow. The three main routes identified for external vehicular trips were:

- The northernmost, proposed, junction of the M11;
- The southernmost, existing, Junction 7 of the M11 (including trips using the M11; the A414 towards Chelmsford; and, B1393 via Epping); and,
- Towards the A10 via the A414.

7.8 Trips that were internal to Harlow were distributed by ward, based on the ward to ward commuting statistics from the 2001 Census. The internal Harlow trips were assigned to the local road network based on shortest route to each ward from the development areas using the primary highway routes.

### Employment Trip Assignment

7.9 The employment trip generation involved establishing vehicle trip rates from the TRICS database using sites in locations that were comparable to the proposed locations in Harlow, in line with good practice guidance.

7.10 Trip rates per 100 square metres floor area, were derived for the AM and PM Peak Hour arrivals and departures, This was done for the office, manufacturing and distribution employment types separately, The trip rates (per 100 square metres) used were as follows

**Table 7.2 – AM and PM peak hour arrivals and departures (vehicles)**

Type of employment	AM Peak Hour		PM Peak Hour	
	Arrivals	Departures	Arrivals	Departures
Office	1.529	0.179	0.153	1.278
Manufacturing	0.233	0.067	0.038	0.200
Distribution	0.13	0.075	0.079	0.136

7.11 To establish the likely trip assignment and distribution of the new vehicular trips external to Harlow, the 2001 Census Travel to Work data was again used for district to district commuting. The main destinations of trips were established from this data set and included the same districts as used for the distribution of residential trips.

7.12 From the Travel to Work data, the proportion of vehicular employment trips from the various districts was as follows.

- Within Harlow – 59 percent
- Broxbourne – 4 percent
- Chelmsford – 2 percent

- East Hertfordshire – 17 percent
- Epping Forest – 9 percent
- Uttlesford – 6 percent
- Welwyn Hatfield – 1 percent

7.13 These districts were then assigned to their broad direction of travel from Harlow; the resulting travel proportions were as follows;

- Within Harlow – 59 percent
- North East – 7 percent
- South / South East – 11 percent
- North West – 19 percent
- West – 4 percent

7.14 The trips within Harlow were discounted from the assessment as they were considered to be included within the residential trip generation; to include them would be seen as double counting.

7.15 The new vehicular trips entering Harlow were then assigned the shortest route from their residential district to the employment areas using the same key routes as identified for residential trips. The majority of trips were assigned to the Pinnacles and East Herts (north Harlow) employment areas,

### **Link and Junction Operation**

7.16 The theoretical operating capacities of the highway links and typical junctions were based on Design Manual for Roads and Bridges (DMRB) TA 79/99. This gave an idea of the widths that would be required for new links based on the predicted traffic flows.

7.17 However, all new highway links have been assumed to be 7.3 metres in width as standard for a single two-way carriageway.

### **Existing Transport Issues**

7.18 An audit of the existing transport infrastructure and its limitations was undertaken during Stage 1 of the study. The audit identified that there are considerable congestion and delays to traffic in Harlow during the weekday and weekend peak hours. Table 7.3 provides a summary of the key transport problems and the proposed infrastructure solutions. The solutions identified are those that the Consultants consider to be appropriate to deal with the implications of future growth, they include some solutions that have been identified in the LTP.

7.19 This audit was based upon visual observations during site visits, local knowledge and information gleaned from the Policy Review. The commission did not include the review of existing traffic flow data or the collection of new traffic flow data, correspondingly no junction modelling was reviewed or undertaken and no reference has been made to any strategic modelling that may have been undertaken of the road network in Harlow or its vicinity. At the time of the study strategic modelling was not available of the study area. Furthermore, there are no published reports available identifying the amount of through traffic accessing the M11 from the A414. A review of these information sources and the undertaking of further detailed assessment work would provide a much greater depth in understanding of the existing capacity of the road network in and around Harlow than what has been available to this study team.

**Table 7.3 – Key Transport Problems and Proposed Solutions**

Type	Location	Existing Limitations	Impact of New Development	Proposed Solution
Road	M11 Junction 7	Overcapacity during peak hours	Exacerbate existing problems	New M11 Junction to north of Harlow to provide an alternative access to the strategic road network.
	A414 (entire route through Harlow from Eastwick Road to M11 J.7)	Congestion in peak hours	Exacerbate existing problems	New Northern spine road from Eastwick Road to new M11 Junction (north of Harlow)
	A414 Fifth Avenue Allende Avenue	Congestion in peak hours	Exacerbate existing problems	Upgrade to dual carriageway with bus lanes in both directions Increase capacity at A1169/ A1019 / A414 junction
	A1019 Velizy Avenue	Congestion in peak hours	Exacerbate existing problems	Broader Travel Planning measures to reduce demand
	A1025 Second Avenue	Congestion in peak hours	Exacerbate existing problems	Upgrade to continuous bus lanes in both directions
	A1169 Southern Way	Congestion in peak hours	Exacerbate existing problems	Broader Travel Planning measures to reduce demand
Car Parking	Town Centre and main trip attractors and origins	High levels of car parking providing easy access for motor vehicles	Exacerbate existing problems (unless focused strategy to reverse style of development)	Car Parking Standards to ECC guidelines (Option B heavily reduced parking standards)
Bus	Existing network	Services mixing with traffic on a congested network.	Additional demand for travel and delay from traffic congestion.	Bus lanes proposed on main corridors to provide bus priority
Rail	Harlow Town and Harlow Mill rail stations		Additional pressure on existing station accesses and services.	Improve accessibility to the stations by non-car modes and increasing number of parking spaces at stations
Walk	Existing network		Additional demand	Minor localised improvements to crossing points and routes to link up network with cycle routes and public

Type	Location	Existing Limitations	Impact of New Development	Proposed Solution
				transport routes
Cycle	Existing Network	Discontinuous network	Increased demand	Improve network inc. continuous routes through the town
		Limited Cycle Parking	Increased demand	Increase quantity and quality of cycle parking in town centre, railway stations and all destinations. Provide grants to enable cycle parking at other origins and destinations

### Issues Arising from Future Growth

7.20 The work carried out in terms of assessing the trip generation and distribution has highlighted areas that would see significant increases in traffic flows as a result of future development. These are:

- A414 Eastwick Road;
- A414 Fifth Avenue Allende Avenue;
- A414 Edinburgh Way;
- A1019 Fifth Avenue Allende Avenue;
- A1019 Velizy Avenue;
- A1025 Third Avenue;
- A1025 Third Avenue;
- A1169 Third Avenue;
- A1169 Katherine’s Way;
- A1169 Elizabeth Way;
- Fourth Avenue; and
- First Avenue Mandela Avenue.

7.21 With Community Infrastructure Funding (CIF), Essex County Council is pursuing a scheme on First Avenue up to the London Road roundabout to provide westbound bus lanes and a short section of eastbound bus lane as well as a shared cycling facility. The upgrade of the A414 London Road between the Southern Way roundabout and M11 Junction 7 to make it dual carriageway along its entire length is now under construction. This is aimed at reducing the impact of existing congestion at this location.

7.22 There will also be additional demand placed upon both of the railway stations within Harlow during the peak periods with demand for services to London, Stansted and Cambridge. This is both for accessibility to and through the station and on the services that call at each station.

### Infrastructure Requirements Resulting from Proposed Growth

7.23 The proposed new highway infrastructure focuses on the areas of the network that would see significant increases in traffic as a result of the development, which would benefit, and have land

available, for widening. The Proposed Infrastructure plan is shown in Figure 7.1 and is described below.

**Table 7.4 – Infrastructure Requirements**

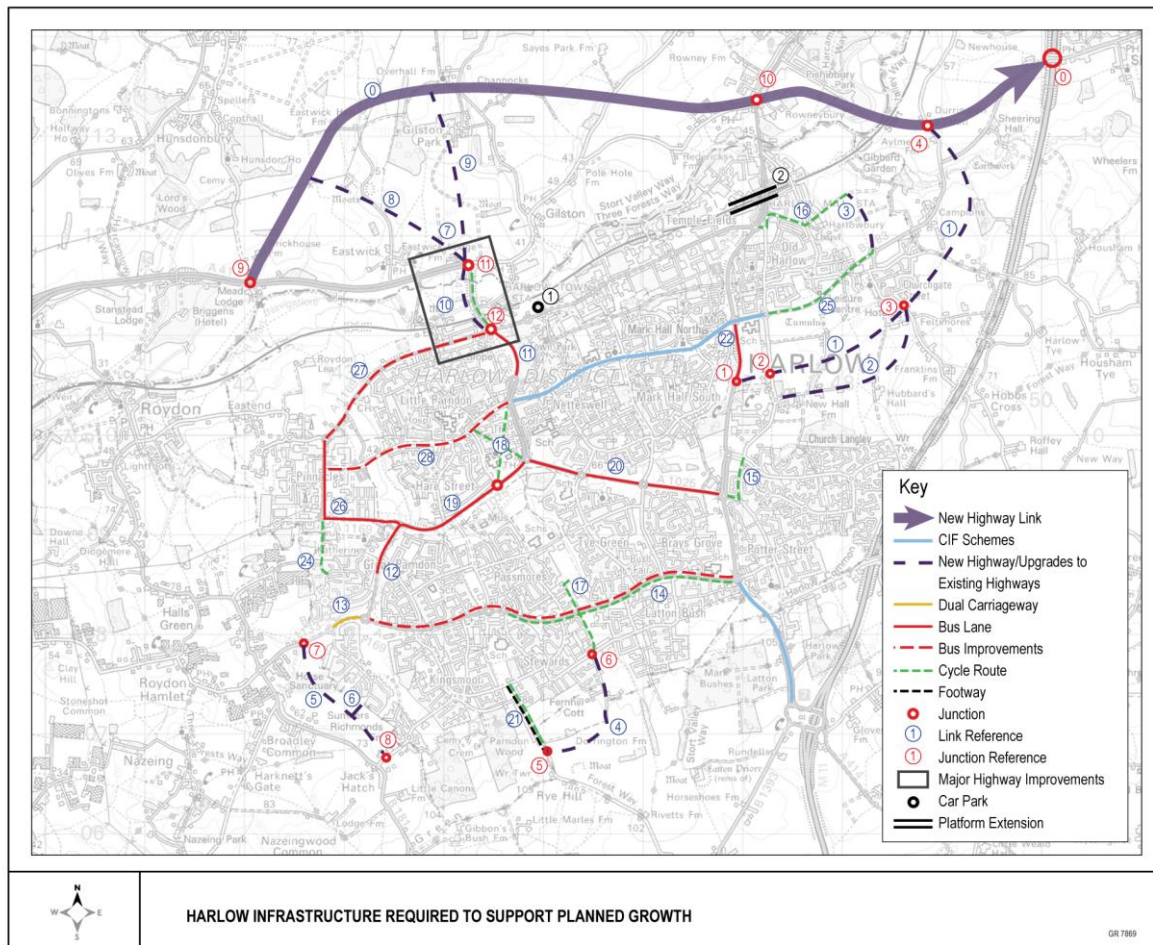
Ref.	Length (metres)	Description	Lead Partners	Cost
<b>TR0</b>	8000	Northern spine road, A414 to M11	ECC/HCC with HA	£150,000,000
<b>TR1</b>	4000 incl. 275m of bus lanes	New link road from A414 to join new northern spine road including bus lanes	Developer	£17,762,500
<b>TR2</b>	1625	From Road 1 joining The Chase	Developer	£6,971,000
<b>TR3</b>	750	New Road to serve development to the north	Developer	£2,542,000
<b>TR4</b>	1560	New road to serve development to the south	Developer	£6,692,000
<b>TR5</b>	1500	New road to serve development to the west	Developer	£6,435,000
<b>TR6</b>	150	New road to serve development to the west	Developer	£643,500
<b>TR7</b>	750	New Road to serve development to the north	Developer	£4,860,000
<b>TR8</b>	750	New Road to serve development to the north	Developer	£4,860,000
<b>TR9</b>	1500	New Road to serve development to the north (phase 3)	Developer	£9,720,000
<b>TR10</b>	750	Carriageway construction to A414 Firth Avenue, Allende Avenue between roundabouts 11 & 12 incl. new road bridge, canal diversion, piling, ground improvement and 450m embankment to create bus lanes, cycle lanes, footways	ECC / Developer	£8,375,000
<b>TR11</b>	600	Bus Lanes on A1019 south of Junction 12	ECC	£657,000
<b>TR12</b>	500	Bus Lanes on A1169 Katherine's Way between A1025 and B1133	ECC	£1,095,00
<b>TR13</b>	275	Bus lanes on B1133 Water Lane west of A1169 for short section between 2 roundabouts	ECC	£602,250
<b>TR14</b>	2300	Cycle route on A1169 Southern Way	Developer	£2,070,000
<b>TR15</b>	925	Continuation of cycle route on London Rd to Potter St and on Second Avenue to A414	Developer	£832,500
<b>TR16</b>	375	Cycle path connecting development in the north to Priory Avenue	Developer	£337,500



Ref.	Length (metres)	Description	Lead Partners	Cost
TR17	750	Cycle route connection from development in the south	Developer	675,000
TR18	1800	Town Centre Cycle Routes	Developer	£1,620,000
TR19	1250	Bus Lanes to A1025 Third Avenue between Katherine's Way and Haydens Road	ECC	£2,737,500
TR20	2000	Bus Lanes to A1025 Second Avenue with continuous bus lanes	ECC	£2,190,000
TR21	800	Cycle Lanes and Footway to Rye Hill Road	Developer	£1,200,000
TR22	375	Bus Lanes to A414 between Road 1 and First Ave Mandela Avenue with bus lane northbound	ECC / Developer	£410,625
TR23	500	Bus Lanes to A1169 Southern Way	ECC	£1,095,000
TR24	500	Upgrade footway to cycleway	ECC	£750,000
TR25	1200	New cycleway on B183 Gilden Way	Developer	£1,080,000
TR26	1610	Upgrade A1169 Elizabeth Way and Third Avenue between Katherine's Way and Royden Road (bus lanes in both directions – 100% of length)	ECC / Developer	£3,525,900
TR27	2000	Upgrade A1169 Elizabeth Way between Royden Road and A414 / A1019 roundabout (bus lanes in both directions - 50% of length)	ECC	£2,190,000
TR28	2500	Upgrade Fourth Avenue between A1169 Elizabeth Way and A1019 Velizy Way (bus lanes in both directions - 50% of length)	ECC	£1,653,450
TJ0	N/A	New Motorway junction on M11	Highways Agency / ECC	£50,000,000
TJ1	N/A	Roundabout Road 1 joins A414	Developer	£233,972
TJ2	N/A	Roundabout Road 1 intersects London Road	Developer	£178,356
TJ3	N/A	Roundabout Road 1 and Road 2 intersect at Hobbs Court Road	Developer	£82,881
TJ4	N/A	Grade separated junction with new link road 1	Developer / ECC	£925,511
TJ5	N/A	Roundabout Road 4 joins Rye Hill Road	Developer / ECC	£82,881
TJ6	N/A	Roundabout Road 4 and Commonside	Developer	£66,151
TJ7	N/A	Roundabout Road 5 joins B1133	Developer	£82,881

Ref.	Length (metres)	Description	Lead Partners	Cost
TJ8	N/A	Road 5 joins Parsloe Road	Developer	£44,589
TJ9	N/A	Road 0 joins A414 at a grade separated junction	ECC / Developer	£30,000,000
TJ10	N/A	Grade separated junction with A1184 and Road 0	ECC / Developer	£925,511
TJ11	N/A	A414 / New junction with access to development to the north	Developer / ECC	£119,434
TJ12	N/A	A414/A1019 to 5 arm roundabout with slip road from West to North	Developer	£120,000
R1	N/A	New car parking at Harlow Town station increase from 390 to 800 spaces	ECC / Harlow / Network Rail / TOC	£5,125,000
R2	N/A	Platform extension at Harlow Mill Station	Network Rail / TOC	£5,000,000

Figure 7.1 – Infrastructure Requirements Resulting from Growth



### Strategic Infrastructure

- 7.24 The required new strategic infrastructure includes the new northern spine road connecting the A414 Eastwick Road to the proposed new M11 junction north of Harlow. A new grade separated junction with the A414 and new link road is proposed to the North West of Harlow, with the alignment of the new link road adjusted to prevent severance between the new developments and Harlow railway station and town centre. There are two further proposed roundabouts intersecting with the new link road and these are the junction with the A1184 (TR 10) and a junction with Road 1 and Sheering Road (TR 4). These are proposed to be provided as grade separated junctions, but following further studies it may be possible to provide them without grade separation, which would have a significant cost saving.
- 7.25 The A414 Fifth Avenue Allende Avenue will be dualled by constructing a new road bridge and embankments adjacent to the existing bridge on the west side. One lane of each carriageway would become a bus lane and improvements made to walking and cycling routes. The roundabout junctions at each end of the dualled section would be upgraded.

### Strategic Infrastructure (Rail)

- 7.26 Both the main Harlow Town railway station and Harlow Mill would need upgrading to accommodate the increased patronage. It is proposed to double the size of the car park at Harlow Town Station to 800 spaces. Pedestrian / mobility improvements are also required at Harlow Town station, but would need to take into account its status as a Grade 2 Listed Building. The platforms at Harlow Mill are staggered and can only accommodate 8 carriages. Depending on land availability it would be preferable to remove the stagger and lengthen the platforms to accommodate 12 carriages.
- 7.27 In addition to the increased capacity at the stations for car parking, consideration should be given to maximising the ability to access the stations by sustainable modes. The provision of high frequency bus services and passenger facilities along with cycling parking and connecting routes should be provided as part of the package of measures to upgrade station facilities and capacity.

### Strategic Infrastructure (Bus)

- 7.28 The Harlow Area Rapid Transit (HART) scheme is no longer being taken forward as Community Infrastructure Funding application was not successful. Essex County Council has advised that the existing bus network will be enhanced instead.
- 7.29 Therefore a key feature of the proposals is that it is recommended that new bus lanes should be provided wherever feasible and appropriate to provide a high quality bus network in Harlow. Bus lanes and bus gates at junctions can be effective in improving the reliability of bus services by enabling services to avoid congestion points on the network.
- 7.30 The proposed new infrastructure is identified in Figure 7.1 and Table 7.1. New, or extensions to existing, bus lanes are proposed on new roads serving the north development areas, and on existing roads A414 / A1019 Fifth Avenue Allende Avenue, A1025 Third Avenue, A1169 Elizabeth Way and A1169 Katherine's Way, A1025 Second Avenue, Fourth Avenue, a short section of the A414 south of First Avenue and small sections along A1169 Southern Way at appropriate locations where localised congestion occurs.
- 7.31 The improvements on the A1169 and Fourth Avenue are specifically targeted at improving access to the Pinnacles business area to mitigate the impact of the additional floorspace proposed. The provision of bus lanes along the A1169 Elizabeth Way between Third Avenue and Royden Road roundabout may mean the loss of the off road cycle lanes. However as the existing cycle paths are of a low standard due to the number of accesses and side roads interrupting the off-road provision it is considered that dedicated bus lanes in both directions would provide a better facility for cyclists. Additional land may be required from third parties and depending on the proposed development and intensification of various sites fronting the A1169 land may potentially be acquired as part of the mitigation of development.

- 7.32 The proposals for Fourth Avenue and the section of the A1169 between Royden Road roundabout and the A414 roundabout would allow bus lanes to be provided along these routes to enable buses to avoid being caught in queuing traffic. It is envisaged that bus lanes would be provided in sections on alternate sides on the approaches to key junctions.

#### **Non Strategic Infrastructure**

- 7.33 The non strategic infrastructure refers to the local site roads. It also includes the remaining upgrades to the existing highways as shown in Figure 7.1.

#### **Cycling Infrastructure**

- 7.34 The additions to the cycle network include providing cycle paths adjacent to the A414 Fifth Avenue Allende Avenue, A1169 Southern Way, B183 Gilden Way, Rye Hill Road and Old London Road (southern section) as well as some off road path connections as illustrated in Figure 7.1. All of the new roads contain provision for new cycle facilities measuring 3 metres in width; hence provision could be made either in the form of off-road paths or on-road lanes whichever was most likely to lead to the highest level of cycling.

#### **Pedestrian Infrastructure**

- 7.35 All of the new roads have been assumed to include 2 metre wide footways on both sides of the carriageway. A new 2 metre wide footway has been allowed for on the east side of Rye Hill Road as there is no current provision.

#### **What will Infrastructure Cost?**

- 7.36 The new link road is proposed to be provided as a dual carriageway and has been costed using the assumption of £30.0m per mile for 5 miles, the grade separated junction with the M11 has been assumed to cost £50.0m, and the other three grade separated junctions located at the A412 Eastwick Road, the A1184 and the new link road 1 all estimated at £30.0m each. These costs have been based on a similar recent scheme in the east of England.

- 7.37 There are two further proposed roundabouts intersecting with the new link road and these are the junction with the A1184 and a connection with Road 1 and Sheering Road. These are proposed to be provided as grade separated junctions at a cost of £30m each as a worst case, but following further studies, as referred to in 7.20, it may be appropriate to implement them as standard roundabouts, which would enable them to be implemented at a much lower cost.

- 7.38 The cost of new highway infrastructure, which includes pedestrian and cycling infrastructure, has been based on the assumption of £300 per square metre. The costs do not take any account of the following:

- Utility costs and diversions;
- Rail network possessions;
- Land acquisition;
- Project Development e.g. planning permissions and all associated work;
- Contractors Preliminaries - circa 10% of total cost;
- Design and Supervision costs - circa 18-20% of total cost;
- No allowance has been made for any cut and fill except in relation to the bridge cost; and,
- No allowance has been made for contingencies.

- 7.39 The majority of new junctions that have been proposed are roundabouts with the cost directly related to their scale. This has been calculated using the established guidance set out in the DMRB technical notes and relates to the width of the entry lanes and the capacity required.

- 7.40 A major infrastructure improvement is suggested between the A414 Eastwick Road roundabout and the A1169 / A414 roundabout. At this stage it has been assumed that a new road will be aligned parallel to the existing A414 Fifth Avenue/Allende Avenue and that one lane of each road (new and existing) will be converted to bus lanes to create a dual carriageway.
- 7.41 The costing for this scheme has been broadly costed at between £6.3m and £8.3m. The cost includes the following assumptions:
- The bridge has been assumed to measure 35 metres in total (25 metre span over the railway line and 10 metre span over the canal) and be 15 metres in width. The cost of the bridge parapet has been assumed to be £2,000 per square metre; and
  - Further allowances have been made for a culvert over River Stort, canal diversion, a length of embankment, piling and ground Improvement costs.
- 7.42 The costings for the lengthening of the platforms at Harlow Mill station are expected to be in the range of £3.0m to £5.0m based upon other similar schemes on the Thameslink network, although it should be noted that every scheme has its own difficulties and no allowance has been made for reconfiguring the staggered platforms as this may involve land acquisition.
- 7.43 The costings for the new car parking spaces at Harlow Town station have been assumed at £12,500 per space as a new multi-storey car park would be required<sup>16</sup>.
- 7.44 All costings in this section are indicative based upon an initial desk top assessment. Costings will be refined as the each scheme is progressed through the design process and should be supported by further feasibility work as they take no account of any localised conditions.

### **Funding New Infrastructure**

- 7.45 The Essex Local Transport Plan covers transport issues to 2011; thus it is not certain whether any of the infrastructure requirements outlined here would be part of the Council's schemes beyond 2011. It is assumed at this stage that funding for the infrastructure outlined in this section would be provided by developers through Section 106 agreements.
- 7.46 Part of the funding for the new link road could be sought through a Major Scheme bid to the Department for Transport. To progress such a bid support would need to be obtained from EEDA and form part of the Regional Funding Allocation. The Highways Agency would need to support the application as the new junction on the M11 could not be built without their support and partnership.
- 7.47 Other appropriate sources would include the Growth Area Fund and the Community Infrastructure levy when this is launched.

### **Issues**

- 7.48 The phasing of the highway infrastructure must be carefully correlated to the phasing of house building across the town and on an area by area basis to ensure the successful implementation of the development sites. The proposed phasing for the development in Harlow to 2031 is shown in Figure 7.2.
- 7.49 Phase 1, from 2001-2011, has included some homes being constructed mainly in the town centre, but also to the east of the town, just east of London Road. No associated infrastructure is included.
- 7.50 Phase 2 would include homes built between 2011 and 2021 at all locations except some areas in the north. The vast majority of the proposed infrastructure would be required to be implemented at this stage. It has been assumed that this will include 50% of the new infrastructure required for

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<sup>16</sup> The Consultants were advised in March 2010 that a multi-storey car park is now under construction

the additional employment growth at Pinnacles. The only infrastructure not required in this phase of development would be the access roads leading to some areas north of the town. Development in the South, West and some to the North would require the relevant site roads and associated access junctions to be improved.

- 7.51 Development proposed to the north of Harlow would require a new northern spine road to connect with the A414, A1184 and the M11. There is already a high level of traffic congestion during the peak periods on the key highway routes throughout Harlow and the approaches to the connections to the strategic highway network i.e. J7 M11 and towards the A10. Additional development will increase the demand for access to the strategic highway network, placing these already pressurised routes and junctions under even greater pressure. Therefore, there is a requirement to increase the opportunities to access the strategic network through a new junction onto the M11 at a location north of the town. This will assist redistributing traffic away from the existing J7 and also provide an alternative access route for commercial traffic to access the expanded employment areas.
- 7.52 Development proposed east of the town, is reliant on the new road connecting the A414 to the new link road. It is therefore also dependent on the link road being in place to provide the new connection to the M11. Without either of these in place, only minimal additional development east of the town could take place as the existing highway network across the town has little or no scope to accommodate significant increases in traffic associated with development.
- 7.53 Phase 3, between 2021 and 2031, would see the remainder of homes built for some sites located north of the town. The associated highway links accessing these sites would be required during this phase. It assumes that all other strategic infrastructure is already in place including the link road north of the town connecting to the M11 and the upgrade to the A414 junction where this link road adjoins it. The remaining bus lane infrastructure to support development at Pinnacles would be built in this phase.

#### Promotion of Smarter Choices

- 7.54 The emerging transportation strategy is built upon the expansion of the town, primarily on its edges, and seeks to accommodate the associated growth in car based traffic within an already constrained highway network. The current economic situation, that has emerged since this study was commissioned, has impacted upon land values and the ability to deliver the entire high cost infrastructure. This factor is also coupled by the rising importance of addressing climate change and our carbon legacy needs means that greater investment in delivering development that is sustainable, both economically and environmentally.
- 7.55 New development should be designed to maximise the use of public transport, walking and cycling through the investment in the physical infrastructure, Travel Planning and Smarter Choices. The new residential and employment areas should be designed to encourage and facilitate low car ownership with restricted opportunities for parking. Opportunities to locate development closer to the centre of Harlow should be considered.
- 7.56 In addition to measures to reduce car dependency of the new residents consideration should be given to a package of measures to encourage the existing drivers to utilise alternative modes. The benefit to new development is that it can „buy-back‘ existing capacity for development traffic potentially minimising the quantum of highway investment or setting back the timing of delivery to later in the phasing programme. This would be achieved through the development of a town-wide package of measures of Smarter Choices and Travel Planning.

## 8. Utilities

### Introduction

- 8.1 This section identifies utilities and waste requirements resulting from growth in Harlow. Public Utility providers for the Harlow region were consulted to determine the existing baseline characteristics and to understand if the existing infrastructure needs to be upgraded to serve the proposed growth. Stage 1 determined that generally the existing infrastructure has little spare capacity and indicative costs of the necessary upgrade have been provided.

The Utility Companies were contacted in December 2008 to determine the possible point of connection to their infrastructure and for indicative costs for the reinforcement needed to serve the developments. This report takes into account the findings of Rye Meads Water Cycle Strategy (October 2009) prepared by consultants (Hyder Consulting) on behalf of Stevenage Borough Council, Harlow District Council and the Environment Agency.

The costs for the Urban Intensification may be reduced if the developments proposed are for small developments over a multitude of locations as the existing utility infrastructure may not require major upgrading.

The Utility Companies have all indicated that there is little spare capacity within their infrastructure network and that an upgrade will be required to their system to enable developments to be connected. However, some of the initial phases of the developments may be permitted with only a minimal infrastructure upgrade costs and this will be determined on an individual site basis.

Utility costs can be broken down into four main elements:-

- Off-site reinforcement and connection works;
- On-site diversions;
- On-site primary infrastructure;
- On-site local infrastructure.

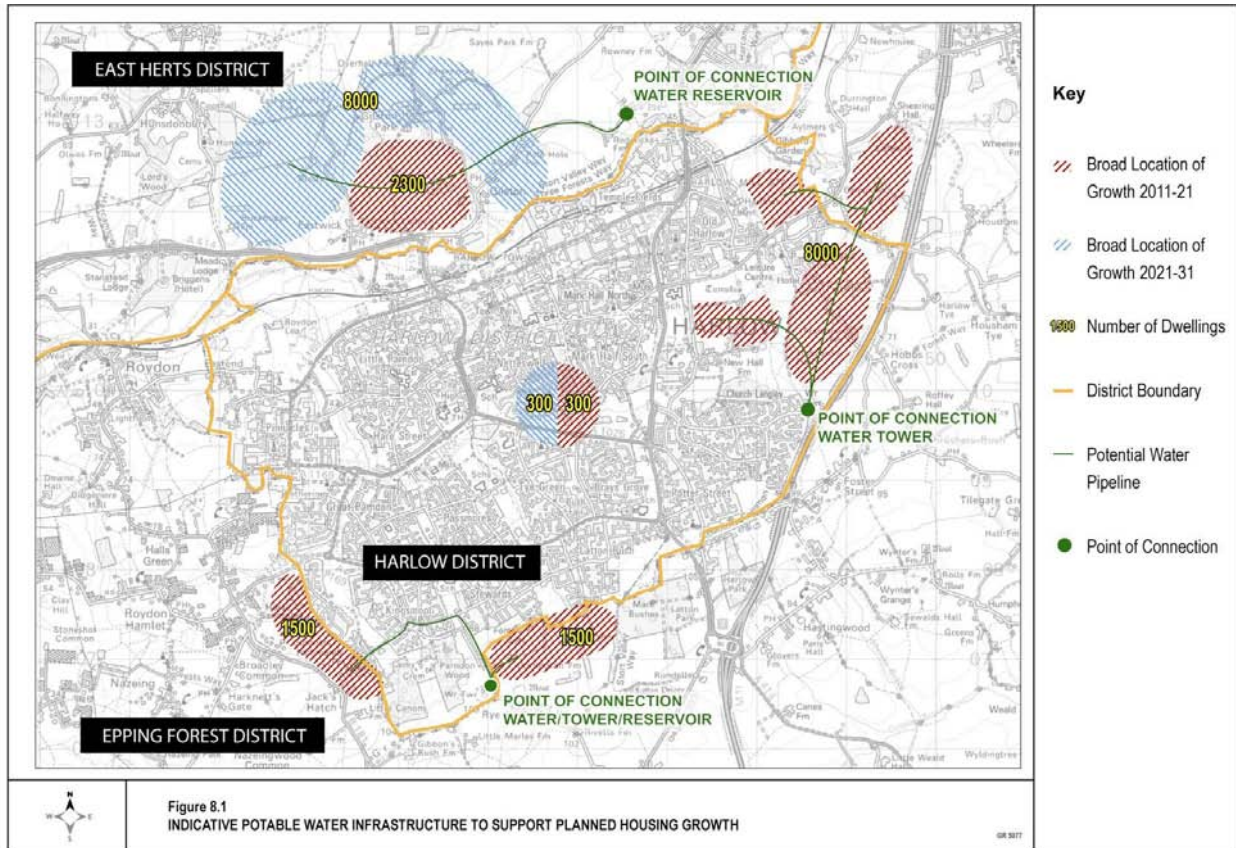
The costs given are for the off-site reinforcement to the boundary of the site to enable the development to be connected.

### Water supply

#### **What are the infrastructure requirements resulting from proposed growth?**

- 8.2 Three Valleys Water have a statutory duty to provide a water supply on request. They have made allowances in their Water Resources Plan for growth commensurate with the levels of growth outlined in the East of England Plan. A „twin-track’ approach of reducing demand and finding new resources has been agreed with the Environment Agency to ensure a sustainable supply. Localised infrastructure upgrade will be required to serve the individual developments. The costs to carry out these upgrades will be borne by the developer.
- 8.3 The likely requirements for new potable water infrastructure to connect development in the broad locations growth to the potable water network are identified in Figure 8.1.

**Figure 8.1 – Indicative Potable water infrastructure required to support growth**



**What will Infrastructure Cost?**

8.4 Three Valleys Water are unable to provide detailed costings to serve the developments until formal development submissions are made. However, based on previous development studies the consultants have provided indicative costs for off-site reinforcement and have been split between the five development locations, this are set out in Table 8.1.

**Table 8.1 – Indicative Costs for potable water Infrastructure**

Broad Development Location	Dwellings	Cost by Phase	
		2011-2021	2021-2031
North	10,300	£2m	£3.5m
East	8,000	£5.5m	
South	1,500	£1.0m	
West	1,500	£1.0m	
Urban	600	£0.3m	£0.3m

8.5 The above figures excludes the existing on-site infrastructure costs and the standard infrastructure charges that the Water Companies impose on new household connections.



## Funding New Infrastructure

- 8.6 The cost of providing the necessary upgrade off-site will be borne by the developer. In addition the Water Company is allowed by the Regulator to levy a standard infrastructure charge for each property connected to the existing water supply system.

### Issues

There is very little spare capacity within the existing system and all the major developments will require an upgrade to the existing network before the Water Company allows a connection to the existing system. While the infrastructure upgrade will not prevent development it could slow down the process while the infrastructure is put in place.

## Wastewater Collection, Treatment and Discharge

### What are the infrastructure requirements resulting from proposed growth?

- 8.7 The existing domestic and industrial wastewater effluent drains by gravity through sewers to Rye Meads Sewage Treatment Works which serves a wide catchment including Harlow, Stevenage and Welwyn Garden City with the treated effluent discharging to the River Lee.
- 8.8 Thames Water provide the wastewater services for the Harlow region. The company aims to have available capacity at the works to accommodate future growth in the area subject to consent limitations that the Environment Agency applies to the works.
- 8.9 Rye Meads STW has operational problems at present and is unable to fully utilise the available capacity under the consent to discharge. Funding is being sought to carry out improvements to provide the necessary hydraulic and biological capacity for the next 5 years. The Rye Meads Water Cycle strategy concludes that the treatment works will need upgrading but waste water treatment will not constrain development before 2031
- 8.10 Thames Water have indicated that there is little capacity within the existing system and parts of which are already overloaded in particular the trunk main between the west of Harlow and Rye Meads STW. The Rye Meads Water Cycle Strategy identifies that there is a new eastern outfall sewer planned (due for completion in 2012) to serve developments at Newhall Farm. It will link to the existing trunk main sewer to Rye Meads via a temporary pumping station. The eastern outfall sewer will then be extended to Rye Meads in a later period (as a new trunk outfall sewer). Any development to the west of Harlow would have to be served by a new western sewer connecting to the new trunk outfall sewer. This will have the benefit of freeing up capacity in the existing trunk sewer for any development to the north of Harlow,

### What will Infrastructure Cost?

- 8.11 The upgrade necessary to provide for the developments will be difficult and expensive to carry out much of the new infrastructure would need to pass through existing developed areas and would therefore require tunnelling. The Rye Meads Water Cycle Strategy does not provide a cost estimate for the infrastructure that is identified. The eastern outfall sewer is already planned and Thames Water have taken account of costs within their current AMP. .

## Funding New Infrastructure

- 8.12 The on-site infrastructure and off-site infrastructure upgrades will be funded by the developer. The necessary upgrade to Rye Meads STW will be funded by Thames Water under their 5 year Asset Management Plan (AMP 5) between 2010 and 2015 which is submitted to the Regulator for approval. Further improvements will be needed in future years and if funding is not approved this has the potential for delaying development.

## Issues

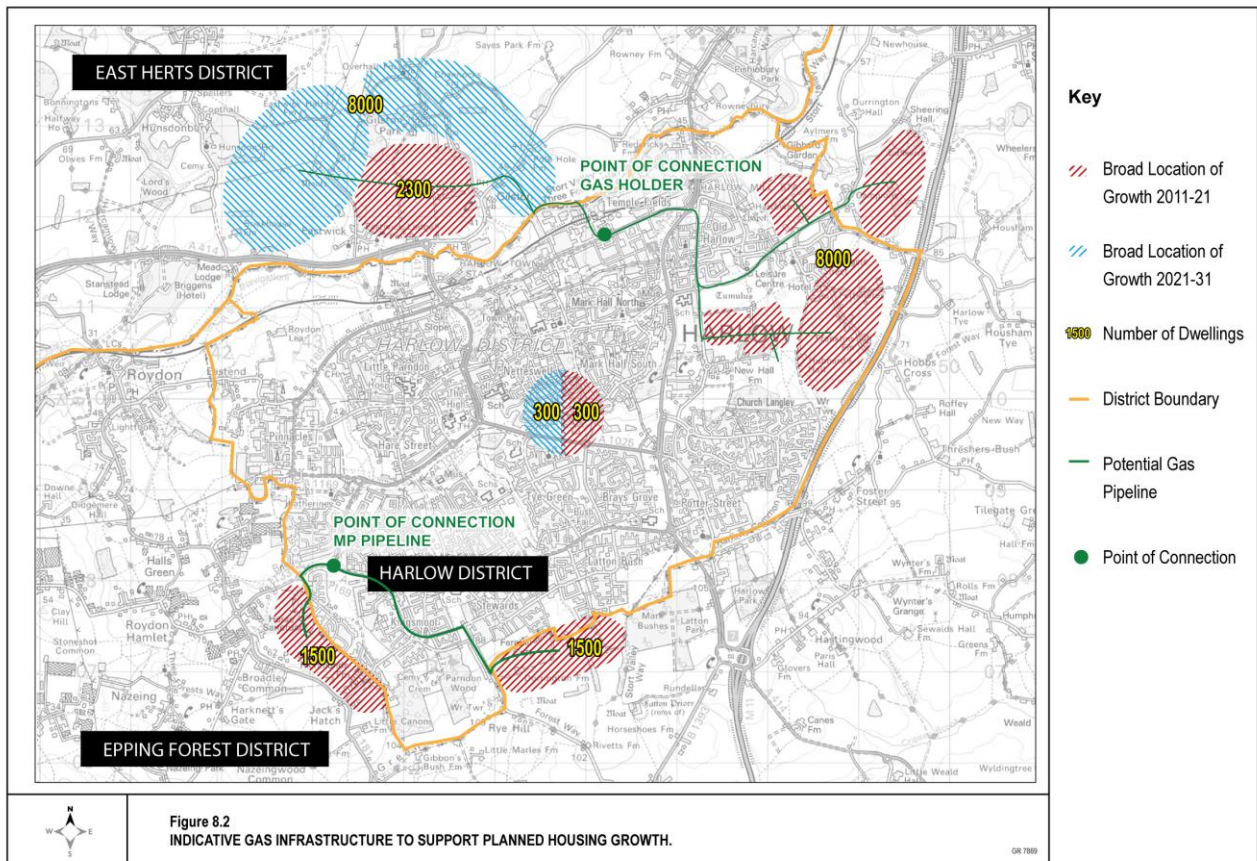
- 8.13 The provision of drainage infrastructure will be expensive and requires a long lead-in time. The Water Companies are not willing to provide the necessary infrastructure until the development is committed.

## Gas

### What are the infrastructure requirements resulting from proposed growth?

- 8.14 Gas is supplied to Harlow from a 42” National Transmission System (NTS) pipeline from the east of Harlow to gas storage facilities in the North. A system of distribution pipelines serves the whole of Harlow. There is little spare available capacity in the distribution system to serve the proposed growth and the supply will need to be reinforced.
- 8.15 The likely requirements for new gas infrastructure to connect development in the broad locations growth to the existing network are identified in Figure 8.2.

**Figure 8.2 – Indicative Gas Infrastructure required to support growth**



## What will Infrastructure Cost?

- 8.16 The cost identified in Table 8.3 are for off-site provision.

**Table 8.2 - Indicative Costs for new gas Infrastructure**

Broad Development Location	Dwellings	Cost by Phase	
		2011-2021	2021-2031
North	10,300	£2m	£3.5m

Broad Development Location	Dwellings	Cost by Phase	
		2011-2021	2021-2031
South	1,500	£1.0m	-
East	8,000	£5.5m	-
West	1,500	£1.0m	-
Urban	600	£0.3m	£0.3m

### Funding New Infrastructure

- 8.17 It is unlikely that reinforcement will be needed to the National Transmission System. If reinforcement is required then the investment will be funded by National Grid and not the developers. The costs of infrastructure upgrade to the distribution system will be borne by the developers.

### Issues

- 8.18 The developments close to the gas holders in the North of Harlow will be relatively easy to serve requiring the provision of a distribution pipeline. The developments to the South and West will be more difficult requiring an upgrade to the existing infrastructure to a point of connection to the Medium Pressure main in the west of Harlow.

## Electricity

### What are the infrastructure requirements resulting from proposed growth?

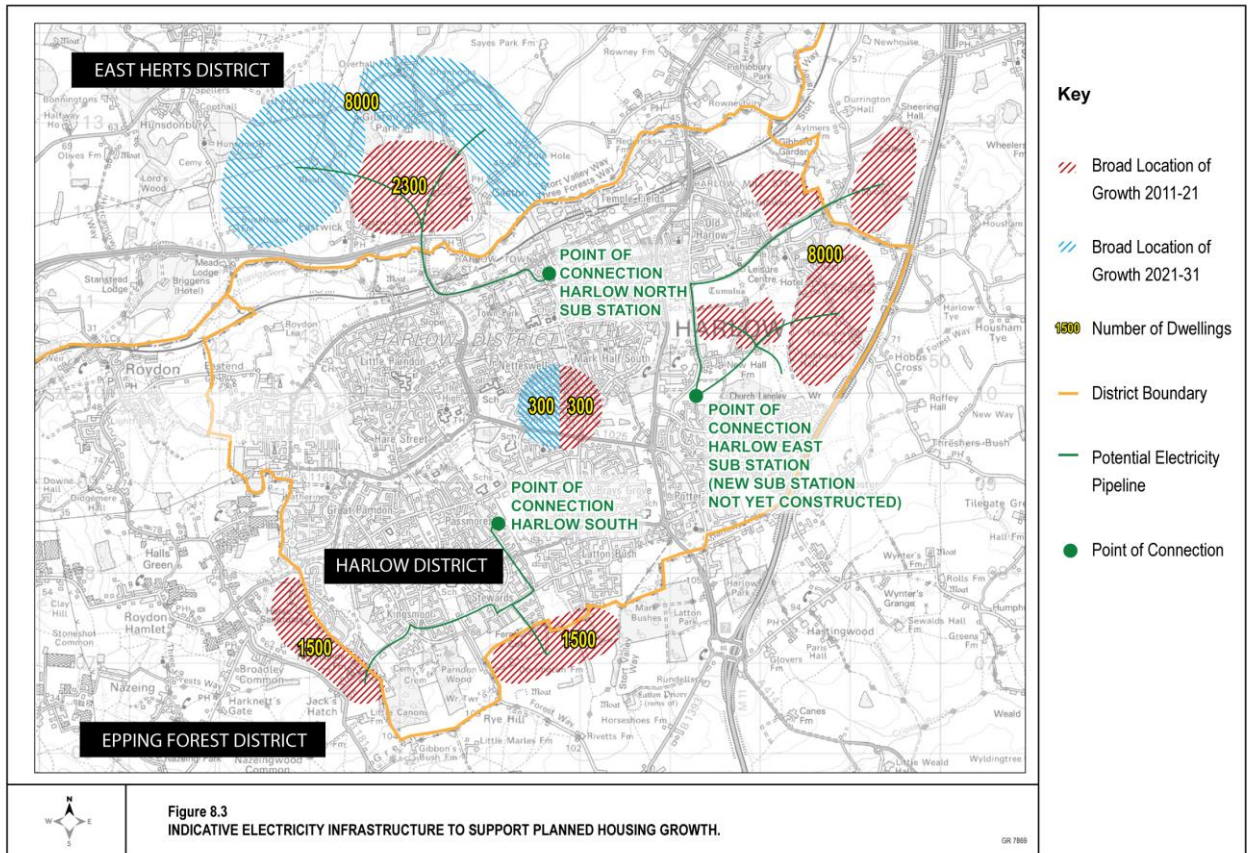
- 8.19 Electricity for the south of Harlow is fed from a transmission line from the Rye Meads Power Station to a primary sub-station to the west of Harlow. The north of Harlow is fed via the Pelham primary sub-station to a sub-station located in the north of Harlow.

EDF have an investment programme to improve the existing supply to secure a level of service to the existing catchment. In addition EDF are looking to install an additional sub-station to the east of Harlow. This will improve the security of supply to the existing system while providing the increased capacity to serve the east of Harlow.

There is little spare capacity available to serve the developments and the developers will be fully charged for the necessary upgrade and supply to their sites.

- 8.20 The likely requirements for new electricity infrastructure to connect development in the broad locations growth to the existing network are identified in Figure 8.3.

**Figure 8.3 - Indicative Electricity Infrastructure required to support growth**



### What will Infrastructure Cost?

8.21 The indicative costs detailed in Table 8.4 are for off-site reinforcement. There is a high voltage overhead cable which crosses the proposed northern development and this will have to be diverted or grounded to enable the development to proceed.

**Table 8.3 – Indicative Costs for new electricity Infrastructure**

Broad Development Location	Dwellings	Cost by Phase	
		2011-2021	2021-2031
North	10,300	£2.5m	£4.0m
South	1,500	£1.0m	-
East	8,000	£5.0m	-
West	1,500	£1.0m	-
Urban	600	£0.35m	£0.35m

### Funding New Infrastructure

8.22 The infrastructure upgrade planned by EDF will be initially funded by them, however, the developer will be charged the proportion of costs that have been allowed to upgrade the system. All costs associated with the laying of cables and sub-stations to serve the developments will be charged to the developers.

## Issues

- 8.23 There may be a long lead-in time (in the region of two to three years) for the new infrastructure to be in place before the development can be connected to the supply.

## Solid Waste Management

### Introduction

- 8.24 The revision to the East of England Regional Spatial Strategy (RSS) 2001– 2021 confirms the role of Harlow as a regionally significant housing and employment growth point and a major sub regional town centre. This section relates to the solid waste management infrastructure requirements for Harlow. It should be noted that waste planning (including water) are dealt with by the County Council and Harlow’s LDF will not be planning for waste. However, it is important to assess all infrastructure needs arising from new development to enable proper planning and to ensure new homes and jobs can be delivered with appropriate supporting infrastructure.
- 8.25 A total of 13,600 dwellings are proposed for Phase 1 and 8,300 for Phase 2. The approach taken in identifying current and future waste generation levels, reviewing the existing waste management infrastructure provision, estimating future requirements and addressing critical gaps is set out below.
- Data collation from DEFRA waste statistics, Environment Agency, Draft Joint Waste Management Strategy for Essex 2007-2032 and Harlow District Council;
  - Calculation of future waste arisings based on the proposed housing growth;
  - Evaluation of the current capacity, future needs with a subsequent gap analysis;
  - Cost of new infrastructure; and
  - Opportunities and synergies.

### Waste Arisings Phase 1 and Phase 2

- 8.26 Data from DEFRA’s WasteDataFlow database, the draft waste strategy for Essex and Harlow District Council has been collated and analysed to estimate the future waste arisings. For the purposes of the report only municipal solid waste (MSW) is considered significant with respect to the growth in the number of dwellings up to 2031. A number of assumptions about the scale and location of growth have been made in order to estimate the future infrastructure requirements and these have been clearly stated in Section 3. Table 8.5 illustrates the MSW growth in Phase 1 and Phase 2.

**Table 8.4 - Baseline waste growth for 2011 – 2021 and 2021 - 2031**

Phase	Actual		2011 - 2021			2021 - 2031		
	2006/07	2007/08	2010/11	2015/16	2020/21	2021/22	2025/26	2030/31
Total MSW (default)	29,298	28,903	29,338	30,079	30,839	30,993	31,617	32,416

Source: Harlow District Council and Waste Strategy for England 2007

- 8.27 Historically the average MSW growth for Harlow District Council from 2000/01 to 2007/08 has been an average of -1.34%. The Waste Strategy for England 2007 predicts future MSW growth to be 0.5%. For this reason and without a better figure to rely on MSW growth from 2008/09 has

been projected at 0.5%. In Table 8.6 the additional MSW arisings due to the proposed dwellings are illustrated.

**Table 8.5 - Additional MSW from proposed housing growth for 2011 – 2021 and 2021 - 2031**

Phase	Actual	2011 - 2021			2021 - 2031		
Year	2006/07	2010/11	2015/16	2020/21	2021/22	2025/26	2030/31
Dwellings	34,506	35,742	41,922	48,102	48,932	52,252	56,402
Baseline MSW	29,298	29,338	30,079	30,839	30,993	31,617	32,416
Additional MSW	-	1,543	6,142	10,721	11,284	13,528	16,316
Additional MSW in phased development	-	67,515			138,047		

- 8.28 Harlow Draft Housing Strategy<sup>17</sup> reports 34,506 dwellings in 2006<sup>18</sup>. The total additional dwellings estimated for Phase 1 are 13,600 and 8,300 for Phase 2. For the purpose of analysis the number of proposed dwellings has been equally distributed across both Phase 1 and Phase 2, as there is no current information on the number of dwellings to be built in each year across both of the Phases. It is assumed that no new dwellings are built from 2007/08 to 2009/10.
- 8.29 To calculate the total MSW as a result of the new housing development the methodology used is as follows:
- Additional MSW = {Number of households x Size of household x tonnes of waste generated per head} - {Baseline MSW}
- 8.30 The estimated size of household for Phase 1 and 2 is 2.16 and the tonnes of waste generated per person<sup>19</sup> is 0.4. The waste generated by person is assumed to remain constant.
- 8.31 The difference between the total MSW in the baseline scenario and the total MSW in the new dwellings scenario will provide the quantity of additional MSW generated by the proposed housing growth in Harlow. The total additional MSW estimated in phase 1 is 67,515 tonnes and 138,047 tonnes in phase 2.

## Current Waste Infrastructure

- 8.32 Harlow District Council is a densely populated urban area with a proliferation of industrial units and warehouses in the north of the district around Harlow Mill rail station. Atkins have utilised the EA Regis database<sup>20</sup> 2007 and filtered in for Harlow District Council and the neighbouring authorities of East Hertfordshire and Epping Forest. The database details all the licensed waste management sites within each authority, including the types of waste accepted and annual licensed tonnage. This information is useful in understanding the types of facilities currently operating in and around Harlow District Council's boundaries. Table 8.7 summarises the waste

<sup>17</sup> [http://www.harlow.gov.uk/pdf/Housing%20Strategy%202008-2013%20\(draft\)-090109.pdf](http://www.harlow.gov.uk/pdf/Housing%20Strategy%202008-2013%20(draft)-090109.pdf)

<sup>18</sup> 2006 mid year estimate, ONS

<sup>19</sup> WasteDataFlow report for Harlow District Council 2006/07

<sup>20</sup> Licensed Waste Management Facilities, Environment Agency December 2007

treatment facilities and their licensed capacity in Harlow District and for its neighbouring authorities of East Hertfordshire and Epping Forest. The complete details are included in Appendix B.

**Table 8.6 - Licensed waste management capacity (Harlow District Council, East Hertfordshire and Epping Forest)**

Facility Type	Harlow District Council	East Hertfordshire & Epping Forest
A5 – Landfill taking non-biodegradable wastes	0	400,000
A6 – Landfill taking other waste	0	225,000
A9 - Special Waste Transfer Station	4,999	0
A10 - In-House Storage Facility	0	499
A11 – Household, C&I waste transfer station	124,997	222,491
A12 – Clinical waste transfer station	572	0
A13 - Household Waste Amenity Site	0	24,999
A14 – Transfer station taking non-biodegradable wastes	21,000	0
A15 – Material recycling treatment facility	75,000	174,052
A16 - Physical Treatment Facility	0	289,998
A18 - Incinerator	0	250
A19 – Metal recycling site (vehicle dismantler)	131	12,499
A20 - Metal Recycling Site (mixed MRS's)	0	121,597
A23 - Biological Treatment Facility	0	94,980
<b>Total licensed capacity</b>	<b>226,699</b>	<b>1,166,365</b>

N.B: East Hertfordshire and Epping Forest have been grouped

8.33 While the licensed tonnages information provides a good indication of waste managed, it does not give the available capacity with any real degree of accuracy. Just because a site is accepting 10,000 tonnes of waste per annum, does not necessarily mean it is operating to its full capacity. Equally a site that is licensed to take 74,999 tonnes of waste per annum is not necessarily operationally able to handle such a large volume of waste. The licensed tonnage applied for is more realistically related to site banding for annual licence subsistence fees, and potential for

future flexibility. In addition, the Environment Agency database does not provide a breakdown of the licensed tonnage by waste type; defaulting to the overall licensed tonnage for each waste type handled. A summation of the licensed tonnages would therefore include a significant amount of double counting, making it highly inaccurate.

- 8.34 In order to establish a realistic capacity for the facilities across Harlow and its neighbouring authorities, it is essential to understand a waste sites operational capacity; the maximum volume of waste that can actually be handled. This is largely unknown, and would involve a comprehensive survey of waste operators to quantify. Unfortunately, this does not fall within the scope of this study, but may prove a worthwhile exercise in the future.
- 8.35 To some extent, SLR Consultants<sup>21</sup> (SLR) have considered operational or theoretical capacity by undertaking telephone survey of 265 priority waste treatment or recovery sites in the West Midlands. The facilities covered by the survey included:
- Material recycling facilities;
  - Physical treatment facilities;
  - Physico-chemical treatment facilities;
  - Metal recycling site;
  - End of Life Vehicles facilities;
  - Chemical treatment facilities;
  - Composting facilities; and
  - Biological treatment facilities.
- 8.36 The survey asked facility operators to provide their actual throughput, maximum licensed tonnage and following on from this the theoretical maximum throughput based on the existing site infrastructure and operations (ignoring the waste management licence conditions). Information from the facilities that responded showed the actual throughput was 59% of both the maximum licensed tonnage and the theoretical operational capacity. It should be noted that there was a limited response to these questions and reflects reluctance from the operator to divulge potentially sensitive commercial information.
- 8.37 In light of the limited information available, the information attained from the SLR report for the West Midlands has been utilised to predict current capacity within Harlow and its neighbouring authorities. Due to the limitations of this information the capacities shown in the following sections should only be considered an indication.

**Table 8.7 - Actual estimated capacity**

Facility Type	Harlow District Council	East Hertfordshire & Epping Forest
A5 – Landfill taking non-biodegradable wastes	0	400,000*
A6 – Landfill taking other waste	0	225,000*
A9 - Special Waste Transfer Station	2,949	0
A10 - In-House Storage	0	294

<sup>21</sup> SLR Waste Treatment Facilities and Capacity Survey, 2007



Facility Type	Harlow District Council	East Hertfordshire & Epping Forest
Facility		
A11 – Household, C&I waste transfer station	73,748	131,270
A12 – Clinical waste transfer station	337	0
A13 - Household Waste Amenity Site	0	14,749
A14 – Transfer station taking non-biodegradable wastes	12,390	0
A15 – Material recycling treatment facility	44,250	102,691
A16 - Physical Treatment Facility	0	171,099
A18 - Incinerator	0	250*
A19 – Metal recycling site (vehicle dismantler)	77	7,374
A20 - Metal Recycling Site (mixed MRS's)	0	71,742
A23 - Biological Treatment Facility	0	56,038
<b>Actual capacity estimated</b>	<b>133,751</b>	<b>1,180,507</b>

\*excluded as the SLR study did not include landfill types and incinerators.

8.38 If we take Harlow in isolation the licensed capacity indicates 226,699 tonnes but a reduction of 59% indicates 92,947 tonnes. The total capacity requirements for Harlow for both phases exceed 200,000 tonnes. This indicates a possible capacity gap of 108,000 over the period.

### Infrastructure Requirements Resulting from Proposed Growth

8.39 The management of the additional MSW from new dwellings would be apportioned between facilities such as transfer stations, civic amenity sites, bring sites, material recycling sites and disposal sites. The estimated total MSW from new dwellings over the development period exceeds 200,000 tonnes. Harlow currently has one civic amenity site and three transfer stations. Two of these are skip hire businesses and the other is recycling fluorescent tubes and lamps. The additional MSW could potentially put pressure on the existing waste infrastructure used by the Council and result in waste being transported over long distances.

8.40 In order to mitigate MSW under capacity in the area, the Council could consider implementing a blend of the following waste management infrastructure;

- A new split level civic amenity site (capacity circa 20,000 tonnes per annum);
- Transfer station for bulking residual MSW and dry recycling from kerbside (capacity circa 30,000 tonnes per annum); and
- New bring recycling sites.

- 8.41 A new split level civic amenity site would relieve pressure from the existing facility and provide much needed capacity to the area improving landfill diversion. The Council can consider utilising existing industrial buildings such as warehouses to provide weather proof facility for the residents and businesses.
- 8.42 Bulking up of residual waste would significantly reduce vehicular emissions prior to treatment at proposed Rivenhall treatment facility. Dry recycling and proposed food waste collection can also be accommodated at the facility improving overall performance. There may be an opportunity here to share the transfer station with Epping Forest District Council and locate it strategically outside Harlow.
- 8.43 Bring sites play an important role in recycling MSW and are well accepted by the general public. The Council can introduce new bring sites in the catchment area of the housing development proposed and upgrade the existing infrastructure with WRAP signage and a relevant of material capture. Modern underground bring sites provide easy access for disabled users, reduce noise and blend aesthetically with the surroundings. The Council should also discuss with its neighbouring authorities to introduce bring sites at the new dwellings outside Harlow to avoid cross migration of MSW.

**What will Infrastructure Cost?**

- 8.44 The Table 8.9 summarises the indicative costs assumptions are based on the Consultants previous work in the waste management sector.

**Table 8.8 - Indicative cost of new infrastructure**

Facility type	Indicative Cost Estimate (£ Million)
Split level civic amenity site in an existing warehouse (20,000 tonnes per annum)	4
Split level civic amenity site on a new site (20,000 tonnes per annum)	6
Transfer Station 30,000 tonnes per annum	3
Bring sites circa 10 new sites	0.1

**Funding New Infrastructure**

- 8.45 Typically bring sites are funded directly. Other more significant infrastructure can be financed as part of integrated contracts such as PFIs or PPPs. A decision on how to finance any capital investment must be a strategic decision and be directly linked to the Council’s waste management strategy.

# 9. Infrastructure Needs and Costs Summary

## Introduction

- 9.1 This section summarises the findings of our work on identifying the requirements of each service area covered in the previous sections. Detailed costs are provided in the spreadsheet that is attached as Appendix A and is discussed further as the source document for Plan-Monitor-Manage in Section 12.

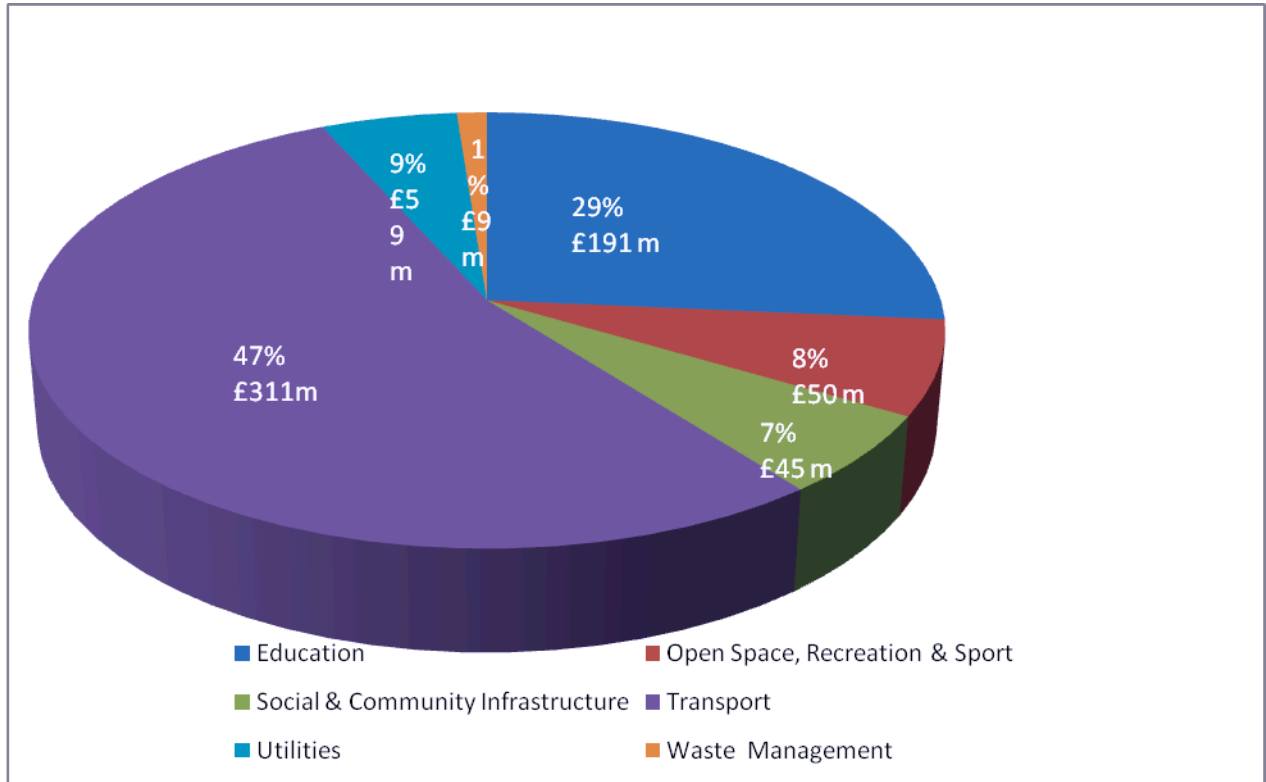
## Total Infrastructure and Service costs

- 9.2 The consultants estimate of the total cost of infrastructure required for the growth of Harlow to 2031 is £753M. Table 9.1 and Figure 9.1 show that of the £753M total infrastructure costs, transport and education are the two largest with 76% of the costs accounted for by Transport (47%) and Education (29%).

Table 9.1 – Total Infrastructure Costs

Infrastructure Type	Sum of Phase 1 2011- 2021 (£)	Sum of Phase 2 2021-2031 (£)	Total (£)
Education	126,220,000	72,740,000	198,960,000
Open Space, Recreation & Sport	37,330,454	15,560,805	52,891,260
Social and Community Infrastructure	20,489,000	24,796,000	45,285,000
Transport	311,449,620	94,076,200	405,525,820
Utilities	29,450,000	11,950,000	41,400,000
Waste Management	9,050,000	50,000	9,100,000
<b>Grand Total</b>	<b>533,989,074</b>	<b>219,173,005</b>	<b>753,162,080</b>

**Figure 9.1 – Proportion of Total Infrastructure Costs**



## Phasing

9.3 Three quarters of the infrastructure will be required in Phase 1 (2011 – 2021). Of the total costs of £753million, our current findings are that £533million (71%) will be required in Phase 1 – by 2021.

## Funding sources

9.4 Of the total costs, our current findings are that developers are expected to meet 81% (£602 million) of the costs. The balance will be met from a variety of sources, which we have collectively called ‘Mainstream Funding’.

**Table 9.2 – Funding Sources**

Infrastructure Type	Mainstream Funding (£)	Developers’ Costs	Total
Education	0	198,960,000	198,960,000
Open Space, Recreation & Sport	0	52,891,260	52,891,260
Social and Community Infrastructure	8,545,000	38,528,000	47,073,000
Transport	134,562,500	270,963,320	405,525,820
Utilities	0	41,400,000	41,400,000
Waste Management	9,000,000	100,000	9,100,000
<b>Grand Total</b>	<b>122,107,500</b>	<b>602,842,580</b>	<b>754,950,080</b>

- 9.5 It should be noted that the £602 million is shown as „developers’ costs’ rather than developer contributions. This is because it is assumed that the developers’ payments for utilities strengthening will be treated as part of their capital costs of development, as the utility companies will be seeking them under their own powers and not as a contribution to infrastructure costs under Section 106.
- 9.6 It should also be noted that the total in the sources of funding table above, at £754 million, is £1.8 million higher than the total costs identified. The difference is accounted for by our assumption that the PCTs will seek developer contributions to cover the costs of GPs rental payments on new/expanded health centres provided by Third Parties for three years before their capitation payments rise to cover the rents.
- 9.7 Developers costs, at £602m, average £27,527 per dwelling. Excluding utilities costs of £41.4m gives a figure of £487m for developer contributions, which equates to £25,637 per dwelling. This is a challenging figure and we discuss it further in the next two sections on Phasing and Funding and Delivery Issues. However, it is worth noting at this point that some of the transport costs serve development for employment, and at least some of the costs of this should be met by contributions from commercial development.

# 10. Phasing and Funding

## Introduction

- 10.1 This section assess the phasing and funding issues. Phasing of development is vital to minimising funding requirements and for optimising the cashflow demands of funding.

## Phasing makes better use of existing infrastructure

- 10.2 This study has had to take a very broad-brush view. When detailed work is undertaken on planning the growth areas around Harlow it will be possible to ensure that this makes maximum use of existing infrastructure before large-scale new provision is required.
- 10.3 The two types of infrastructure where this is most important are the largest, transport and education. In the case of the former, development should be phased so as to maximise the use of the existing network, and add-ons to it, before major items such as the Link Road become necessary. With schools there is the possibility of short-term expansion through measures such as the use of temporary classrooms to absorb some growth in demand from new development until the scale justifies an additional school.
- 10.4 The benefits of careful phasing are threefold:
- Careful phasing of development, linked to detailed planning of the growth areas, can result in a lower overall requirement for infrastructure as compared to the broad-brush, top-down approach of a study such as this;
  - Where the level of development before the need for new infrastructure provision is maximised there is an opportunity to build up funding towards infrastructure costs from developer contributions to a strategic tariff or CIL, assuming that one of these will be in place;
  - An approach which puts off the requirement for major new infrastructure as long as possible eases the cashflow demands of growth in the short-term, reducing to need to seek upfront funding from sources such as a Regional Infrastructure Fund (RIF); and gives time for the growth area partnership to seek funding from a wider range of sources than developers.
- 10.5 As part of the same planning process potential areas of saving and efficient service delivery such as co-location should be considered. This is considered further in Section 11 below.

## Other funding is needed to reduce the requirement from developers

- 10.6 The benefits of careful phasing on funding have been summarised above. There remains the issue of identifying the sources of funding. This study's identification of developers as the source of 81% of funding for infrastructure to meet the needs of growth in Harlow is a reflection of the top-down nature of the study. Detailed planning of the growth areas in and around Harlow will include detailed examination (with providers) of the range of potential funding sources in order to arrive at a more realistic balance between developers and the other sources. These include:
- For transport, the Regional Funding Allocation, GAF, and CIF;
  - For Education, BSF and a range of other funds identified in Section 5 above, none of which could be identified as a source of funding at present, but which are likely to have potential over the life of the programme – for example, if the Government does re-orientate BSF towards new-build for growth; A range of funds which can be bid against for Sport, Recreation and Youth facilities
  - HCA funding is mostly available for affordable housing (and associated secondary infrastructure - see Section 1 above), but the HCA also has a potential role as a banker for

holding and disbursing developer contributions in growth areas. Ashford and Milton Keynes are ones where this role was taken on, initially by EP. It also has a potential role for funding infrastructure more directly with in the context of the „Single Conversation’ – see para 11.28 below.

- 10.7 The credibility of funding bids is improved where they are based on a delivery plan which clearly identifies and unifies the levels and phasing of development and infrastructure.

# 11. Delivery Issues

## Introduction

- 11.1 This section builds on the findings of our work discussed in section 10 by discussing wider delivery issues. It then makes recommendations for local authorities and partners to consider.
- 11.2 It is important to take into account the impact of the current economic downturn. The economic downturn provides the inescapable backdrop for delivery of infrastructure in and around Harlow to 2031. Notwithstanding that there are forecasters predicting a rapid rise in house prices in a few years time brought on by a shortage of supply arising from the current collapse in starts, the Consultants suggest that it is only sensible to plan on the basis that the economic downturn will have a significant impact on the delivery of planning targets over the medium term. This affects the requirements for infrastructure. More significantly, even where housing developments do take place, the economic downturn will have a longer-term effect on the ability of the development process to fund the desired infrastructure.
- 11.3 The findings of our report, and the study context, suggest a number of adjustments might be required to management structures, strategy and policy for managing the growth of Harlow. These are dealt with in turn.

## The challenges

- 11.4 Private housing development has slowed dramatically. The private new-build housing development process has slowed to a crawl. Clearly, this will have a considerable impact on the development industry's ability to hit housing targets. The critical factor for the delivery of housing targets will be the length of time that the market remains depressed.
- 11.5 Even if the housing market recovers quickly, the worth of land will probably be negatively affected for a much longer period. Often, this reduces the ability of the development process to fund infrastructure.
- 11.6 Development land acquired before the economic downturn did so in a climate of rising house prices. Land values also rose to reflect an assumption this trend would continue in the future, or at least were relatively high on the basis that house prices would maintain those levels. As developers were actively buying land, land was transacted at these high prices.
- 11.7 Land values have now fallen to reflect the new economic and development conditions, but it is by no means clear that they have bottomed out. The problem for developers who acquired land at a higher (fixed) price than current land values (i.e. no account is taken of any future falls in house prices), is that it is currently unprofitable to undertake development on those sites (or they may even make a loss); the land cost was fixed before the economic downturn, but the value they currently expect to generate from development on the site in the short-medium term has fallen significantly.
- 11.8 It is expected that these effects will last some time. DCLG and Valuation Office Agency evidence from the 1990s shows that the percentage fall in housing land values greatly exceeded the percentage fall in house prices.<sup>22</sup> Land values did not recover to their previous levels for around a

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<sup>22</sup> The steeper fall is because land values are the result of subtracting the anticipated costs of development from the anticipated receipts. So therefore if, say, the price of land absorbs roughly one quarter of receipts from house sales, and if those receipts fall while costs stay the same, the value of land might be expected to fall four times as fast as house prices. In reality it doesn't quite play out that way 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.



decade. Even if house prices return to previous levels prior to the economic downturn, assuming other variables remain relatively constant (e.g. build costs), development will largely take place first on sites already acquired by developers. Developers generally won't be seeking to acquire new land until these 'land banks' have been used.

- 11.9 Where this is the case, a developer will look to improve other variables to try and make a profit from this land. The developer may be willing to accept a lower profit level to at least make some form of return on the land but there is a limit to this as there are inherent risks in development that need to be reflected; and at present developers are constrained by the high cost of capital, reflecting its scarcity. The developer may look to change the type, mix or density of development. This may improve overall development values but as there is lower demand across all sectors this still may not achieve an acceptable level of return. Costs are highly unlikely to fall in line with house prices so the only remaining variable that could make a significant difference is developer contribution requirements.
- 11.10 Developers are already seeking to negotiate (or renegotiate) S106 agreements at much reduced contribution levels (including affordable housing requirements) in order to undertake development. Where development land in an area has not been acquired, reasonable developer contribution levels can still in theory be secured to fund infrastructure where the landowner is willing to sell at a lower land value than it would have received before the economic downturn, and (arguably more importantly) what it might receive in the future. The landowner's calculations here will depend on his or her views on the likely future direction of land values.
- 11.11 Understanding the ownership and acquisition prices/structures (e.g. option agreement structure) is critical to understanding how much development land can contribute to funding infrastructure.
- 11.12 An important question in the longer term is whether landowners will accept lower prices when selling their land. The Consultants work in Hertfordshire on the Hertfordshire Infrastructure and Investment Study uses residual values of £1.5m and £1m per hectare after CIL, district charges and provision on land for open space etc, on the assumption that these are minima that developers and landowners will accept as a reasonable return plus a margin against barriers to development. However, even the lower figure is around 20 times higher than agricultural values. If and when it becomes clear that land values have sunk and will stay low for some time, it might rationally be expected that many landowners will be prepared to sell for less. But it is difficult to be certain that this "rational" response will take place. However, if a landowner will accept £1m per hectare instead of £1.5m that reduces the cost per house by around £12,500 per unit, a useful increase in the surplus for spending on infrastructure delivery.
- 11.13 The challenge is to get housing, economic restructuring and infrastructure growth moving – to deliver important social and economic benefits
- 11.14 There are two fundamental reasons why stakeholders would want to see the housing development industry back up and running.
- Housing delivery has important economic and social benefits. These have been discussed in detail elsewhere.<sup>23</sup> New housing has wider area regeneration and economic restructuring effects.
  - The construction industry is a big employer: it employed around 40,000 people in Essex and 38,000 in Hertfordshire in 2007.<sup>24</sup>

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<sup>23</sup> See, for example, the Barker Report, which discusses the specifically social benefits of housing growth alongside the economic rationale for an expansion in housing supply.

- 11.15 At the moment, there is a risk that, instead of increased public sector expenditure off-setting flagging private sector investment, the cancellation or postponement of private sector schemes such as housing will weaken the rationale for the construction of associated infrastructure including schools or health centres. This could create a downward spiral.

## Strategic responses

- 11.16 Strategy is the overall process of deciding where we want to get to and how we are going to get there. The following recommendations suggest a number of ways in which stakeholders might respond to the economic context and the findings of our report by adapting their strategies.

### **Recommendation: review strategy to respond to the credit crunch**

- 11.17 The discussion above shows that the central determinants of the financial viability of the scheme are land values and house prices. The higher the house prices and the lower the land values are, the more financially viable the scheme becomes.
- 11.18 Particularly in cases where land is already bought or optioned, the economic downturn represents a profound shift in the ability of the private sector to deliver housing outcomes previously expected.
- 11.19 This may require some uncomfortable prioritisation decisions to be made. There are real policy choices to be made between aspirations. For example, there is a real tension between competing policy demands - for example, between affordable housing, Code for Sustainable Homes standards, and the provision of infrastructure.

### **Recommendation: focus strategy on key sites in succession**

- 11.20 The rates of house-building implied by the target numbers set out in Section 3 above are not realistic. To deliver 8,000 dwellings in the growth area to the East of Harlow between the 2011 and 2021 equates to an average rate of starts of 800 per year, which is highly unlikely from a single growth area on the basis of recent experience. While rates approaching this may have been achieved during the heyday of Harlow's growth as a New Town, this was in the context of a development corporation being responsible for housebuilding. Private developers, in our experience, are unlikely to sell more than two dwellings per week off a site and will not build significantly ahead of sales to conserve cashflow and avoid eroding values. In practice, sites will also be delivering affordable housing, so sale of two dwellings per week equates to delivery of about three.
- 11.21 At its peak, Cambourne was selling at a rate of six dwellings per week, or 300 per year. By contrast, over the last few years, delivery rates in Harlow have averaged about 160 dwellings per year. It will require a step change in Harlow delivery rates to achieve even 300 dpa, requiring both a transformation in the market and a start to building on several sites spread across the proposed directions of growth.
- 11.22 The rates of growth in the other proposed growth areas are similarly challenging. The economic downturn makes it even clearer that these rates of development are not possible, certainly in the short to medium term. The implication of this for infrastructure provision is that Harlow and its partners can plan on the basis of more realistic rates of housing delivery. One advantage of this is that there will be more time for identifying alternative funding sources for infrastructure.
- 11.23 It is assumed that lower housing delivery rates will not change the total numbers of dwellings proposed for Harlow, and that therefore the eventual infrastructure requirements will remain the

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<sup>24</sup> NOMIS shows that 34,000 people were employed in construction in Essex in 2007. This excludes self employed people. An economy-wide basis, an additional 15% can be added to these figures. However, construction is known to have a significantly higher rate of self employment.

same. Within the context of these overall requirements Harlow DC and its partners will be able to focus on the funding and provision of the infrastructure requirements of the sites prioritized by the LDF process at a more realistic rate. For example, since TWU is constructing a new sewer to serve growth to the east of Harlow, a focus on growth in this direction, within the limits of interim transport solutions, appears a logical approach while the major projects to carry growth further forward are worked up and their funding assembled.

11.24 Some measures to help achieve this are recommended below.

**Recommendation: keep this study up to date**

11.25 The Consultants suggest that the assumptions used in this Infrastructure Study will need to be revisited and updated relatively frequently, particularly at times of rapid housing market change. In fact, since the spreadsheet (attached as Appendix A) has the facility to allow this to happen relatively straightforwardly, we consider that a rolling process of revision is preferable. For example, once the options for development have been selected it will be possible to amend the spreadsheet to reflect the greater level of detail that will be available on the scale and location of growth, and identify funding and other delivery issues more precisely. This can be done by adding an additional column containing more specific areas or sites, enabling infrastructure items to be linked to them.

## Policy responses

11.26 Policy provides the means of delivering strategy. The overall theme of the measures outlined below is to stimulate development by reducing up-front costs (principally land and infrastructure) to developers.

**Recommendation: develop policies to stimulate the development process**

11.27 Developers are highly cashflow sensitive. This is a particular problem on sites where there are significant up-front works required such as highways and utilities. In these instances, developer partners will be discouraged by a requirement to pay for major works in advance of housing sales.

11.28 The public sector has a possible role in funding and/or financing this work. There are a number of possible approaches here.

- HCA funding and financing. The Consultants are not advising that stakeholders start looking for HCA grant funding in the traditional manner. Instead, within the context of the „Single Conversation’, there are financial processes which may be more attractive to developers, and which operate at less overall cost. HCA may wish to fund up front infrastructure development in return to rights for land in the future. This would be particularly attractive to developers because, from a developers’ point of view, it subsidises their costs of capital: in effect, their capital is being substituted by the HCA’s capital funding, which is available to the HCA at Treasury base rate. The developer crystallises a land sale and the process provides the developer with a route to profit by effectively swapping the promise of a future £5m for a £5m receipt now. In the current climate, developers are likely to be keen on such a deal. HCA chairman Robert Napier is reported to be interested in such approaches.<sup>25</sup>
- GAF funding is unusually flexible. By the time bids are invited for GAF4 Harlow and its partners should have identified the major development sites and an outline programme for bringing them forward through the LDF process. With identification of the sites will come identification of their infrastructure requirements, and of any blockages to provision of that infrastructure. There will be some difficult choices to be made between housing delivery, regeneration, economic development and place making; and the Consultants consider that in

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<sup>25</sup> Soc Invest Newsletter Friday 7th November 2008

Phase 1, GAF funding will have to be prioritized on schemes that unlock the largest amount of development: that „deliver the biggest bang for the buck’.

- 11.29 As noted above, the role of the HCA will be particularly important with regard to the financing possibilities it brings to developers. Close links with HCA will be particularly critical in implementation.
- 11.30 It will be important to understand the HCA’s new strategic approach. The HCA through its 'single conversation' is looking to invest on an area basis to support increasing housing choice and affordability across all tenures. The 'single conversation' will look to see there is a coherent community strategy and implementation plans for an area that deals with local social and economic problems and issues and makes best use of brownfield land and current housing stock across all tenures, alongside any planned greenfield growth. The plans will need to include the employment and leisure offer for an area, the 'place making' and community involvement strategy and demonstrate how housing choice and affordability will be improved. The plan will need to show how empty homes will be brought back into use, how local partnerships are engaging with private landlords, how local authority and Registered Social Landlord (RSL) stock will be improved/renewed and initiatives to support owner occupiers to improve their properties. It will need to deal with low demand, where appropriate, and identify how regeneration and growth in a given area allows a move towards more balanced housing markets.
- 11.31 A Regional Infrastructure Fund (RIF) for the East of England is under development. The purpose of a RIF is to facilitate the timely provision of regionally or sub-regionally significant infrastructure that supports the planned growth and development through priorities to be determined by new regional or sub regional governance arrangements.
- 11.32 RIFs are a relatively new concept, but could be formed from a range of different funding sources, for example by pooling section 106 contributions, and it could potentially be established as a sub-fund within the Regional Funding Allocation (RFA). A RIF is likely to comprise only a small proportion of the resources needed to deliver the infrastructure required. The East of England RIF is looking at securitising an increase in the Supplementary Business Rate in order to release a cash sum. However, this is likely to be highly unpopular with the business community, and seems to be politically difficult.
- 11.33 The RIF has particular potential for unlocking the „big ticket’ transport schemes, such as the proposed new M11 junction and A414 link road by providing an element of forward funding which could later be repaid from contributions or mainstream funding „catching up’. The RIF could play a similar role in forward funding schools, particularly secondary schools, where spending on provision will be required before new dwellings so that new schools are phased in with the arrival of their potential pupils.

### **Recommendation: Emphasise the role of mainstream funding**

- 11.34 It is becoming increasingly apparent that the “pre-crunch” approach of giving away development rights with a planning contributions price ticket attached is profoundly damaged. The Consultants do not expect it to revive any time soon.
- 11.35 The biggest single contribution that the public sector can make to improving the viability of development and the social, economic and environmental sustainability of the finished product is to ensure that maximum use is made of mainstream funding sources.
- 11.36 One element of this will be lobbying the Government to recognise the needs of service providers in growth areas through such measures as increasing capitation funding in response to planned rather than lagged actual population changes; and removing restrictions on supported borrowing for floor authorities with growth areas. From discussions with some service providers it is clear that there will also need to be a matching change in their view of developer contributions, from being the funding source of first resort to being a scarce resource.

## Recommendation: Prioritise infrastructure to maximise the impact of scarce resources

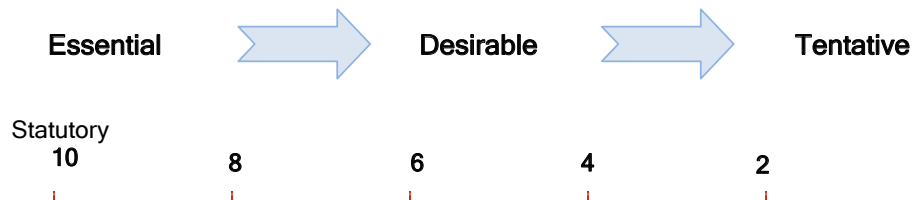
- 11.37 There must be a mechanism that will allow the prioritisation of public investment in infrastructure if the infrastructure assessment is to arrive at intelligent and reasoned choices about scarce infrastructure spending. Ultimately, it will be necessary to prioritise both within theme areas (say, prioritising the most important road projects) and also *between* theme areas (say, deciding to invest in open space, rather than road space).
- 11.38 There is no definitively “right” answer here. These are normative questions, which concern the most desirable course of action given a certain budget. External consultants have little business in prescribing priorities to these differing courses of action. Properly, these decisions rest with elected representatives and their officers, in order to allow different areas and interests to express their different priorities.
- 11.39 However, it is our role to assist the process of making these decisions. We have therefore given indications of our view as to the level of priority to be assigned to social and community categories of infrastructure, and we set out below a broad priority categorization which can be applied to infrastructure items as the infrastructure requirements of growth areas are worked up. This is based on categories developed by Leicester City Council which we adopted when carrying out the Leicestershire infrastructure study. They have the merit of being simple and effective.
- 11.40 Categories are as follows.
- **Essential requirements:** this would apply to infrastructure which would be required by statute or regulation, and would enable the development to go ahead. Education is in this category. Other infrastructure spending – such as water, gas and electricity connections - are clearly essential to housing and jobs development, but because they are generally privately funded, they fall outside our prioritisation categories.
  - **Desirable:** There are a range of other infrastructure investments that could be considered. For example library provision is needed in the long term but might be considered as desirable rather than essential, since development could go ahead without it. Some areas are likely to have different needs: for example the requirement for a new school may not be essential at one site, education demand being initially covered by spare capacity and temporary classrooms, and only become essential as the next site in the area comes forward.
  - **Tentative:** These might be long term ideas or more speculative concepts. Given competing demands, these projects are highly unlikely to get done, but it will be important to show that they have been logged. Possible examples include public art and adult learning on the scales indicated in Section 5.

## Recommended points system to cope with “grey areas” between these categories

- 11.41 There is inevitably a grey area between the categories of “desirable” and “tentative”. As we pointed out above, much depends on the choices of elected representatives, and the amount of money that there is available to purchase infrastructure. (Tight budgets would mean that only statutory requirements were met; more funding might mean that the “desirable” projects were funded; and still more funding would see the projects classed as “tentative” funded).
- 11.42 To allow for these grey areas, we recommend a points system for prioritising items of infrastructure. Statutory requirements (in the “essential” category) are awarded 10 points. Effectively, these projects are outside the points system: they have to be implemented if the growth is to go ahead. Clearly, high priority demands should be first in the queue for funding from whatever source.

- 11.43 For the desirable and tentative projects, we suggest a sliding scale. Highly desirable projects might be awarded a maximum of 8 points. Very tentative projects, which would not be particularly realistic now, might be awarded 1 point.

Figure 11.1 Prioritisation scale



Source: Consultants

### How the prioritisation “points” system can be used

- 11.44 The system may be used to calculate the rough costs of growth at a particular point. If there were a large number of infrastructure projects with high points score attached to a growth at a particular site, it would tend to suggest that developing this site was likely to be expensive. Further analysis of the spreadsheet can be undertaken by users in order to calculate, for example, how much essential infrastructure at a given site might cost, in comparison with other sites. Note that this process would need to be undertaken carefully. The costs of area-wide infrastructure projects would need to be taken into account if this calculation was to be done successfully. Priorities can be built into the spreadsheet by adding a column in which the ratings can be filled in against each item.
- 11.45 This prioritisation system is a blunt instrument. Ideally, prioritisation should not solely depend on the extent to which whatever is proposed is regarded as critical, but also what is needed at any particular point in time. We recognise that it might be better to fund a level 5 facility now than to save money for a Level 8 priority that isn't needed for a decade. For example, while the A414-M11 Link Road and new M11 junction are probably essential (rating 8-9) for the growth programme as a whole, the immediate priority is to build as much housing as possible to the east of Harlow, with the local roads proposed to serve the area, while working up the funding package for major road projects.
- 11.46 As we suggested above, our work here is meant to start debate. Prioritisation categories should not be viewed as being fixed. Infrastructure in different sites and different financial circumstances may need to shift categories in future. In the likely financial circumstance of the next few years, the need to prioritise will come to the fore. There are many possible ways of setting priorities, and the IDeA website<sup>26</sup> has information on examples from local authorities. As an example, an alternative prioritisation scale is „Moscow’:
- **Must have;**
  - **Should have;**
  - **Could have; and**
  - **Won't be able to do now but maybe in the future.**

<sup>26</sup> <http://www.idea.gov.uk/idk/core/page.do?pagelId=4446257>.

## Management responses

- 11.47 Here the consultants suggest a number of ways in which stakeholders might respond to the economic context and the findings of the report by adapting their management approach.

### **Recommendation: create a cultural shift within management**

- 11.48 The scale of development proposed at Harlow, extending as it does past 2031, leads us to suggest that one of the most important challenges facing management (within Harlow Renaissance, and the local authorities and the major service providers) is the creation of a new culture of delivery. Very simply, it will be important to stop thinking in land use planning, grant funding and policy terms. Instead, a more task focused approach needs to be adopted, such as that at the Olympic Development Agency (ODA) – or even the now defunct London Docklands Development Corporation (LDDC). The ODA's starting point is a very clear business planning approach, with a full analysis of what tasks lie on the critical path, which tasks need public sector intervention to unlock progress, the order in which those public sector interventions need to be made, and the value arising from those interventions. The skillset of officers reflects those requirements.
- 11.49 This approach would have an important impact on such factors as Growth Area Funding. The need for a tight focus on delivery is discussed above, but an accompanying management approach is also necessary. GAF needs to be refocused around funding small but important elements on the critical path that will open up development in future.
- 11.50 This focus on delivery puts the spotlight on the need for co-ordinated working. . Achieving the proposed growth for Harlow will require this between the two county councils, the three districts and the other service providers, both public and private. A particular issue is that of dealing with the cross-boundary issues that arise from the growth area to the north of Harlow being located within Hertfordshire, so that, within the growth area, key services such as education and highways are the responsibility of two authorities. We consider that partnership arrangements will be needed to achieve the degree of co-ordination required to drive the growth programme forward. The membership and structure of a delivery body and vehicle has not yet been agreed. The options for this are explored in Section 12 below

### **Recommendation: use this Infrastructure Plan to catalyse relationships between wider public funding and agencies**

- 11.51 Use the Infrastructure study to get cross-agency co-ordination, sustaining it through the Harlow Renaissance. This Infrastructure Study may be helpful in getting greater service provider „buy in’ to channel investment decisions on infrastructure along the same range of priorities. A shared ownership of the development programme should lead to better planning of provision and better places to live.
- 11.52 Use cross-agency co-ordination to deliver multi-user buildings. There appears to be some potential for both quality enhancements and cost efficiencies in the provision of multi-user buildings. Research suggests that some of the possible benefits include<sup>27</sup>
- Joined up service delivery to deliver more customer focused services;
  - Economies of scale through co-location and integration, and introducing cost savings in capital and revenue streams; and

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<sup>27</sup>NHS London (2006) *The Case for Social Infrastructure Planning*

[http://www.healthyrbandevelopment.nhs.uk/documents/int\\_social\\_infrastructure/The\\_Case\\_For\\_Social\\_Infrastructure\\_02\\_06\\_06.pdf](http://www.healthyrbandevelopment.nhs.uk/documents/int_social_infrastructure/The_Case_For_Social_Infrastructure_02_06_06.pdf)

- Making the most efficient use of land across the public sector estate.

- 11.53 The findings of this research would need to be confirmed (for example, we understand that the cost efficiencies generated as a result of co-location can be relatively limited) but consultation with service providers has supported co-location of facilities and multi-user provision: for children, young people and families, for example. The scale of development proposed to the east and north of Harlow is such that there is scope for local centres with a wide range of facilities. The rejuvenations along the Southern Corridor local centre being undertaken through GAF2 are examples of what is possible.
- 11.54 Cross-boundary issues need to be resolved. If the possibilities of growth beyond 2031 are taken into consideration, over half the growth proposed for Harlow will be in Hertfordshire. Other things being equal, one would not plan a major urban expansion, on the scale of a stand-alone settlement, with different authorities being responsible for planning, transport, education, social services and health in different parts of the town. Ideally they should be the responsibility of a single authority. The Consultants have no indication that there are any proposals to change local authority and PCT boundaries to reflect the growth proposals. If boundaries are not going to change urgent consideration needs to be given to joint planning arrangements to ensure that the Harlow is developed a one place and to consistent standards. As discussed above, this appears to be a co-ordination role for Harlow Renaissance.

### **Recommendation: improve contingency planning**

- 11.55 Any strategic body needs to have thought through, and be able to cope with, the implications of rapidly changing circumstances. The collapse of house prices and of a development model that relied on increases in land values to deliver infrastructure over the last few years illustrates the point perfectly.
- 11.56 PPS12 makes it plain that a Local Development Framework Core Strategy should make proper provision for uncertainty and not place reliance on critical elements of infrastructure whose funding is unknown.<sup>28</sup> This commonsense approach is now reflected in planning requirements. PPS12 says that "A strategy is unlikely to be effective if it cannot deal with changing circumstances....Plans should be able to show how they will handle contingencies: it may not always be possible to have maximum certainty about the deliverability of the strategy. In these cases the core strategy should show what alternative strategies have been prepared to handle this uncertainty and what would trigger their use."<sup>29</sup>
- 11.57 The spreadsheet provided (as Appendix A) with this Study can help with this effort. The spreadsheet can be altered to explore different levels and locations of growth, changing costs, and different sources of funding, so different scenarios can be explored. This and other work should be used to 'stress test' different planning scenarios, with worked out strategic planning responses on each. The new governance structures mentioned above will provide an ideal arena through which these discussions can be managed.

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<sup>28</sup> See PPS12 paragraph 4.10

<sup>29</sup> See PPS12 paragraph 4.46



# 12. Management and Monitoring Strategy

## Introduction

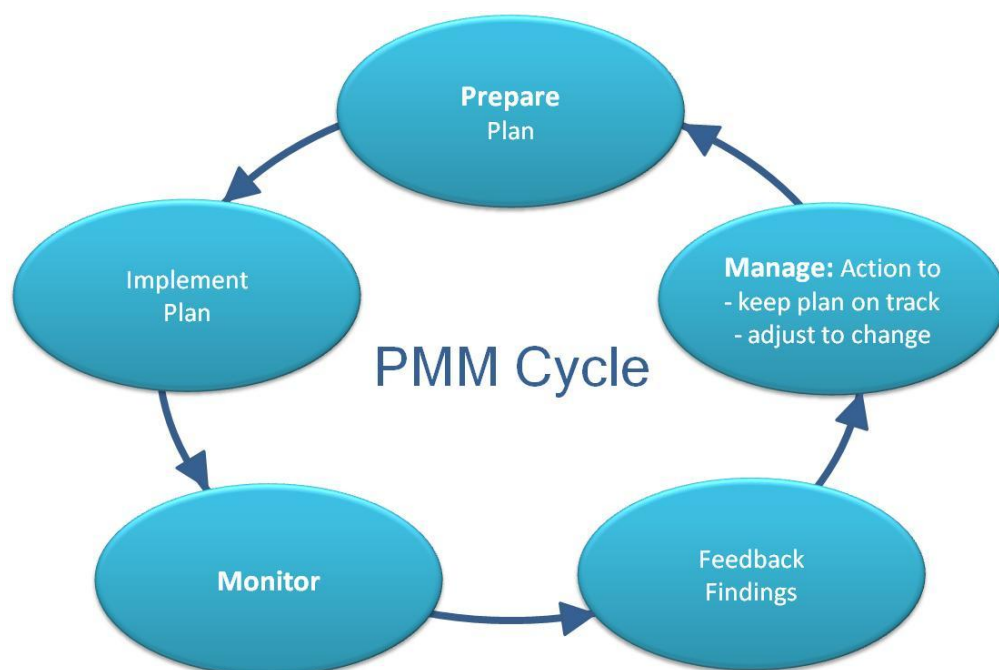
12.1 This section of the report shows how this study, and the attached spreadsheet, will form the basis for a Plan-Monitor-Manage (PMM) framework for the provision of infrastructure to meet the growth of Harlow. What follows picks up several of the points made in the Delivery Section above.

## PMM Framework

12.2 These proposals must be set in the context of the Harlow Options Appraisal. Before setting out the PMM framework it is important to be clear about the context of these proposals. In parallel with this Study the Harlow Options Appraisal is examining the housing, transport and infrastructure options for delivering growth in Harlow. That study includes a PMM framework to assist all the agencies involved with delivery. The driver for the phasing of infrastructure will be the phasing of housing and employment development, so the Infrastructure Study will feed into that wider PMM framework. It is considered that it would not be helpful to produce a detailed framework which might differ considerably from that being prepared as part of the Harlow Options Appraisal. The proposals which follow have been kept relatively simple so that they can be amended to fit into the more comprehensive structure that the consultants are preparing for the spatial options work.

12.3 Properly managed, a PMM framework is a powerful tool for facilitating delivery of growth proposals. Its essence lies in presenting the programme in a format that allows the feedback from monitoring to be used both to show how growth is progressing against targets; and also to as management information to identify and inform the actions required to respond to the problems giving rise to slippage. Figure 12.1 below summarises the processes.

Figure 12.1 – PMM Cycle



12.4 The programme is presented in a comprehensive spreadsheet covering each service area, the projects within them, their costs, phasing and funding. It is therefore possible to follow through the implications of changes, such as funding for a school ceasing to be available, for the education

elements of the programme and the housing which it serves, and consider alternatives, such a temporary classrooms at another school.

## The Spreadsheet is a key management document in the PMM framework

- 12.5 The Consultants have prepared a spreadsheet setting out the study findings under the headings described above, which is attached as Appendix A. It will form the basic information source from which various versions will be prepared for: planning more precise requirements, monitoring, bidding and reporting. Additional columns can be added to show projected and actual spending over years or phases, with space for notes summarising funding sources and explanations of variances. These have not yet been inserted as the information on phasing and funding is not yet available to populate them. As discussed in section 11, a column can be added for priorities. When this is combined with a new column for a more detailed breakdown of growth locations, it will be possible to present a more detailed identification of the infrastructure requirements of specific locations and their priority requirements.
- 12.6 One role that the delivery team – discussed below - must have is that of controlling the Spreadsheet. The consultants consider that in order to ensure that there is a defined channel for making amendments this should be the responsibility of a „spreadsheet master’ who will be the only person with access to the spreadsheet – via a password - to make changes to the content of the spreadsheet and extract information in the form of pivot tables, such as have been used to show the summary findings of this study in Section 9.
- 12.7 The consultants will provide instructions on how to use the Spreadsheet, and will be able to deal with queries while the delivery team are building up familiarity with it.
- 12.8 The spreadsheet is designed to be used to produce information organised in a variety of ways in the form of pivot tables. The Findings section earlier in the report illustrates some of these.
- 12.9 If the key document of the framework is the spreadsheet, it is only of value to the extent that it is used effectively as a management tool. There are several elements to this.
- 12.10 The spreadsheet must be treated as a living, dynamic document, to be continually kept up to date. There are three potential phases to updating;
- Phase 1**
- 12.11 The list prepared is very much an initial, strategic, assessment of requirements. As the preferred option for the pattern of development emerges from the options and appraisal stage of the LDF process the more detailed picture of housing and other development will make it possible to amend the spreadsheet to show the refined scale and phasing of infrastructure provision.
- Phase 2**
- 12.12 Further refinement of the spreadsheet will become possible when the masterplanning of individual development areas is undertaken, and more detail becomes available on the level of provision needed, its costs and phasing.
- Phase 3**
- 12.13 Phase 3 will be monitoring delivery. Inevitably at this stage there will be problems threatening slippage to elements of the programme, and the spreadsheet will become a tool for identifying and comparing options for minimising disruption to the programme.

## Programme Management Activities

- 12.14 The spreadsheet is potentially an aid to three major programme management activities

- Obtaining agreement to the programme and its infrastructure requirements with the service providers who will be meeting those requirements. This will be a process of increased refinement through the three phases, culminating in a Business Plan for delivery. Clearly, obtaining partner buy-in to their contributions to the programme is crucial. Issues which we have already described include cross-agency co-ordination to deliver joint facilities and dealing with cross-boundary matters.
- Lobbying for funding. A programme which clearly sets out the links between delivery of housing and development for employment is a powerful tool for making the case for funding which has to be bid for, or for seeking additional funds to fill gaps. This will be a developing process from Phase 2 onwards.
- Management of the programme to ensure that potential problems are identified early and remedial action to keep it on track initiated with the relevant partners, which largely follows from Phase 3 above.

12.15 For these activities to be undertaken successfully an appropriate programme management structure will be required, which brings all the major partners together.

### **There are several models for a partnership management structure**

12.16 The requirement for management of the programme is to have a programme co-ordination and management body which brings together the key organisations delivering infrastructure in a forum which can oversee the activities outlined above. The consultants consider that the scale of growth in Harlow and the proposed rate of delivery requires:

- A partnership body including all major stakeholders and service providers, including those from Hertfordshire
- A delivery body (beneath the partnership body) staffed those with the skills and experience to drive development forward.

12.17 There are now several models on which to base a growth partnership for Harlow, including Ashford Futures, Cambridgeshire Horizons and the Milton Keynes Partnership. Harlow's growth area has a feature which none of these has: it not only spans district boundaries, but also the county one. Clearly boundary issues are highly political ones, but we cannot avoid commenting that to create a major urban area covered by two authorities responsible for major services involves a level of complication which it would be highly desirable to avoid. At the least, the consultants consider that Essex and Hertfordshire should agree to treat the Harlow Growth Area as a single area for service planning and delivery, with joint planning and, if possible, single agency delivery of key services.

### **The Cambridge Horizons model fits Harlow's multi-authority growth area**

12.18 Because the Harlow growth area covers more than one authority, the Cambridgeshire Horizons<sup>30</sup> model is one that fits Harlow's situation. Cambridgeshire Horizons is a company limited by guarantee, its structure comprising:

- A board, made up of major stakeholders
- A Joint Strategic Growth Implementation Committee (JSGIC), which is a sub-committee of the board, made up of representatives of the authorities where the majority of the growth will take place: the County, City and South Cambridgeshire. It has specific responsibilities for driving forward the growth agenda.
- A delivery team of about 20.

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<sup>30</sup> <http://www.cambridgeshirehorizons.co.uk/>

- 12.19 As the scale of growth in Harlow is only about a third that of Cambridgeshire a much smaller delivery team would be required, although the complexities of delivering 22,000 dwellings in such a small area on a tight timescale should not be underestimated. Indeed, as noted earlier in this report, the consultants query whether the growth is deliverable within the planned timescale. The key feature of a delivery body for Harlow will be its ability to reach agreement on the delivery programme and achieve co-ordinated working to realise it.

### **Consider whether the HCA can take a leading role**

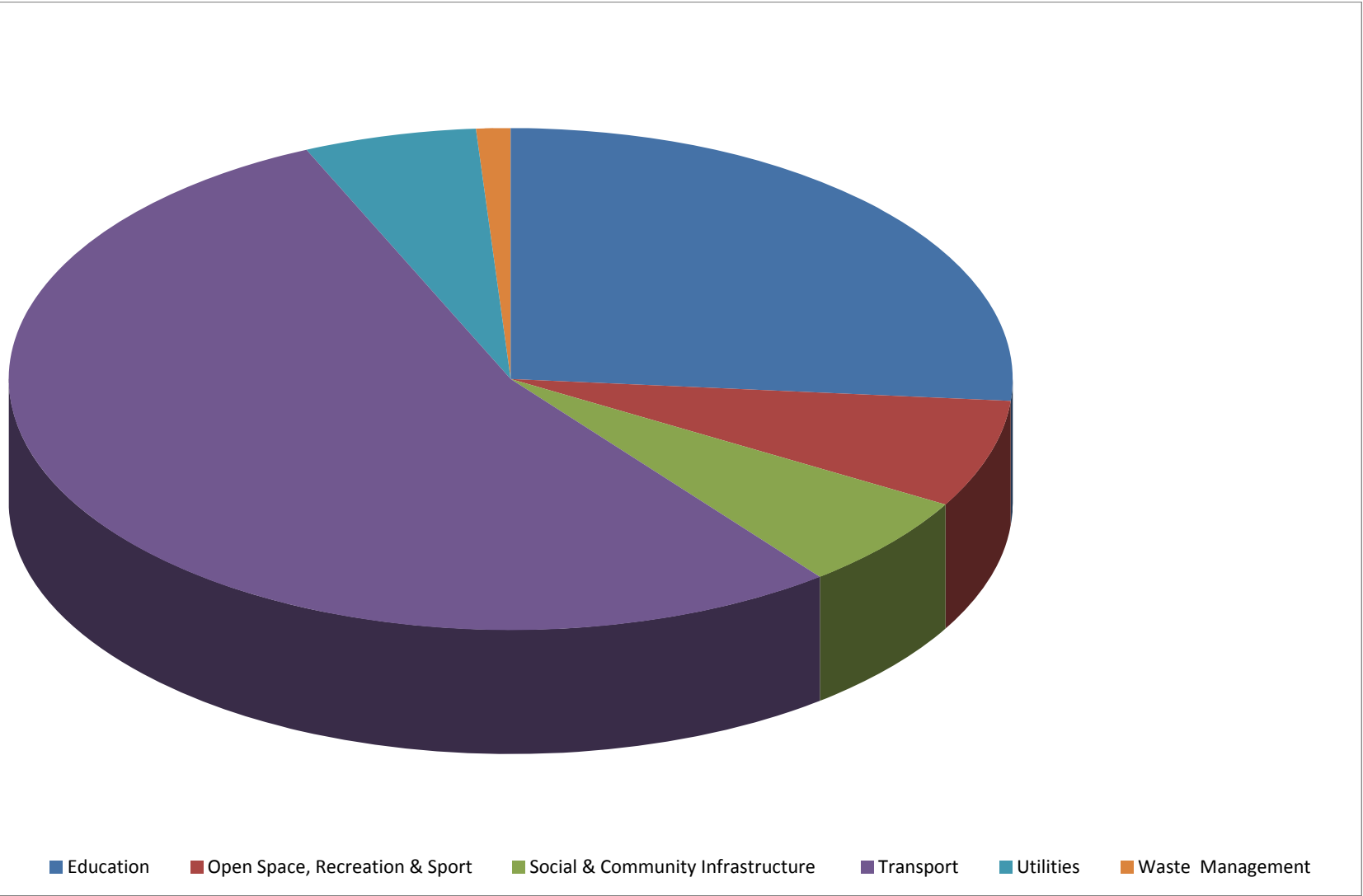
- 12.20 A relevant feature of the Milton Keynes Partnership (MKP)<sup>31</sup> is the leadership role taken by the HCA: technically MKP is a committee of the HCA. As Harlow is a former New Town, it may be worth exploring with the HCA whether it wishes to take a similar leading role in Harlow. It has the advantages of some degree of neutrality between the authorities involved and as discussed earlier in this report, it has a potential funding role as well.

### **Should a Harlow delivery body have planning powers**

- 12.21 A more contentious issue is whether a Harlow delivery body should have planning powers. Cambridgeshire Horizons does not, MKP does. This is an intensely political decision and, the consultants, while seeing the advantages of the individual authorities ceding some of their planning powers in the growth areas, do not feel able to make a recommendation.

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<sup>31</sup> [http://www.miltonkeynespartnership.info/about\\_MKP/index.php](http://www.miltonkeynespartnership.info/about_MKP/index.php)



	Sum of Phase 1 2011-2031	Sum of Phase 2 2021-2031	Total	
Education	126,220,000	72,740,000	198,960,000	26%
Open Space, Recreation & Sport	37,330,454	15,560,805	52,891,260	7%
Social & Community Infrastructure	20,489,000	24,796,000	45,285,000	6%
Transport	311,449,620	94,076,200	405,525,820	54%
Utilities	29,450,000	11,950,000	41,400,000	5%
Waste Management	9,050,000	50,000	9,100,000	1%
<b>Grand Total</b>	<b>533,989,074</b>	<b>219,173,005</b>	<b>753,162,080</b>	0.2910

	Phase 1 2011-2021	Phase 2 2021-2031	Total	
East	211,317,281	0	211,317,281	
North	36,990,550	182,602,386	219,592,936	
South	12,685,651	0	12,685,651	
Strategic	205,850,400	31,668,600	237,519,000	
Urban	22,717,353	4,902,019	27,619,372	
West	44,427,839	0	44,427,839	
<b>Total</b>	<b>533,989,074</b>	<b>219,173,005</b>	<b>753,162,080</b>	71%

	Phase 1 2011-2021	Phase 2 2021-2031	Total
<b>East</b>	<b>211,317,281</b>	<b>0</b>	<b>211,317,281</b>
Education	70,000,000	0	70,000,000
Open Space, Recreation & Space	6,768,881	0	6,768,881
Social & Community Infrastructure	3,855,000	0	3,855,000
Transport	114,643,400	0	114,643,400
Utilities	16,000,000	0	16,000,000
Waste Management	50,000	0	50,000
<b>North</b>	<b>36,990,550</b>	<b>182,602,386</b>	<b>219,592,936</b>
Education	15,000,000	72,000,000	87,000,000
Open Space, Recreation & Space	2,136,116	7,120,386	9,256,502
Social & Community Infrastructure	0	7,160,000	7,160,000
Transport	13,354,434	85,272,000	98,626,434
Utilities	6,500,000	11,000,000	17,500,000
Waste Management	0	50,000	50,000
<b>South</b>	<b>12,685,651</b>	<b>0</b>	<b>12,685,651</b>

Education	7,500,000	0	7,500,000
Open Space, Recreation & Space	1,393,119	0	1,393,119
Transport	792,532	0	792,532
Utilities	3,000,000	0	3,000,000
<b>Strategic</b>	<b>205,850,400</b>	<b>31,668,600</b>	<b>237,519,000</b>
Education	1,220,000	740,000	1,960,000
Open Space, Recreation & Space	25,366,400	8,167,600	33,534,000
Social & Community Infrastructure	16,264,000	17,636,000	33,900,000
Transport	154,000,000	5,125,000	159,125,000
Waste Management	9,000,000	0	9,000,000
<b>Urban</b>	<b>22,717,353</b>	<b>4,902,019</b>	<b>27,619,372</b>
Open Space, Recreation & Space	272,819	272,819	545,638
Transport	21,494,534	3,679,200	25,173,734
Utilities	950,000	950,000	1,900,000
<b>West</b>	<b>44,427,839</b>	<b>0</b>	<b>44,427,839</b>
Education	32,500,000	0	32,500,000
Open Space, Recreation & Space	1,393,119	0	1,393,119
Social & Community Infrastructure	370,000	0	370,000
Transport	7,164,720	0	7,164,720
Utilities	3,000,000	0	3,000,000
<b>Grand Total</b>	<b>533,989,074</b>	<b>219,173,005</b>	<b>753,162,080</b>

	Mainstream amount	Developers Contribution	Total
Education	0	198,960,000	198,960,000
Open Space, Recreation & Space	0	52,891,260	52,891,260
Social & Community Infrastructure	8,545,000	38,528,000	47,073,000
Transport	134,562,500	270,963,320	405,525,820
Utilities	0	41,400,000	41,400,000
Waste Management	9,000,000	100,000	9,100,000
<b>Total</b>	<b>152,107,500</b>	<b>602,842,580</b>	<b>754,950,080</b>

561,442,580  
21,900 1,788,000  
27,527  
25,637

0.7985

Row Labels	Values	
	Sum of M'stream amount	Sum of developer contributions/ payments
Education	0	198,960,000
Open Space, Recreation & Space	0	52,891,260
Social & Community Infrastructure	8,545,000	38,528,000
Transport	134,562,500	270,963,320
Utilities	0	41,400,000
Waste Management	9,000,000	100,000
Grand Total	152,107,500	602,842,580



	Phase 1 2011-2021	Phase 2 2021-2031	Total
Education	126,220,000	65,240,000	191,460,000
Open Space, Recreation & Sport	29,958,780	14,235,618	44,194,398
Social & Community Infrastructure	22,715,000	21,777,000	44,122,000
Transport			401,662,606
Utilities	43,950,000	15,450,000	59,400,000
Waste Management	9,050,000	50,000	9,100,000
<b>Total</b>	<b>231,893,780</b>	<b>116,752,618</b>	<b>749,939,004</b>

	Phase 1 2011-2021	Phase 2 2021-2031	Total
East	105,673,881		241,096,445
North	25,636,116	91,758,386	157,861,958
South	13,393,119		14,185,651
Strategic	46,704,726	23,271,412	269,976,138
Urban	1,722,819	1,722,819	21,260,972
West	38,763,119		45,557,839
<b>Total</b>	<b>231,893,780</b>	<b>116,752,618</b>	<b>749,939,004</b>

dwellings  
 21,900    34,244    31,507

	Phase 1 2011-2021	Phase 2 2021-2031	Total Cost
<b>East</b>	<b>105,673,881</b>		<b>241,096,445</b>
Education	70,000,000		70,000,000
Open Space, Recreation & Sport	6,768,881		6,768,881
Social & Community Infrastructure	3,855,000		3,855,000
Transport			135,422,564
Utilities	25,000,000		25,000,000
Waste Management	50,000		50,000
<b>North</b>	<b>25,636,116</b>	<b>91,758,386</b>	<b>157,861,958</b>
Education	15,000,000	64,500,000	79,500,000
Open Space, Recreation & Sport	2,136,116	7,120,386	9,256,502
Social & Community Infrastructure		6,088,000	6,088,000
Transport			40,467,456
Utilities	8,500,000	14,000,000	22,500,000
Waste Management		50,000	50,000
<b>South</b>	<b>13,393,119</b>		<b>14,185,651</b>
Education	7,500,000		7,500,000
Open Space, Recreation & Sport	1,393,119		1,393,119
Transport			792,532
Utilities	4,500,000		4,500,000

<b>Strategic</b>	<b>46,704,726</b>	<b>23,271,412</b>	<b>269,976,138</b>
Education	1,220,000	740,000	1,960,000
Open Space, Recreation & Sport	17,994,726	6,842,412	24,837,138
Social & Community Infrastructure	18,490,000	15,689,000	34,179,000
Transport			200,000,000
Waste Management	9,000,000		9,000,000
<b>Urban</b>	<b>1,722,819</b>	<b>1,722,819</b>	<b>21,260,972</b>
Open Space, Recreation & Sport	272,819	272,819	545,638
Transport			17,815,334
Utilities	1,450,000	1,450,000	2,900,000
<b>West</b>	<b>38,763,119</b>		<b>45,557,839</b>
Education	32,500,000		32,500,000
Open Space, Recreation & Sport	1,393,119		1,393,119
Social & Community Infrastructure	370,000		
Transport			7,164,720
Utilities	4,500,000		4,500,000
<b>Grand Total</b>	<b>231,893,780</b>	<b>116,752,618</b>	<b>749,939,004</b>

Category	Area	Infrastructure Item	Ref	Description	Lead Partner	Cost			Funding				
Category	Area	Infrastructure Item	Ref	Description	Lead Partner	Phase 1 2011-2031	Phase 2 2021-2031	Total Cost	Mainstream Source	M'steam amount	developer contributions/payments		
Transport	Strategic	New Road	TR0	Link Road, A414 to M11	HA	150,000,000	0	150,000,000	RFA	50,000,000	100,000,000	150,000,000	0
Transport	East	New Road	TR1	New Link road from A414 to join new link road	Developer	17,160,000	0	17,160,000	0	0	17,160,000	17,160,000	0
Transport	East			Bus lane on road 1 between A414 and London Rd	Essex CC	602,250	0	602,250	LA Mainstream etc	0	602,250	602,250	0
Transport	East	New Road	TR2	Connecting road 1 to The Chase to the south	Developer	6,971,250	0	6,971,250	0	0	6,971,250	6,971,250	0
Transport	East	New Road	TR3	New road to serve development to the north	Developer	3,217,500	0	3,217,500	0	0	3,217,500	3,217,500	0
Transport	East	New Road	TR4	New road to serve development to the south	Developer	6,692,400	0	6,692,400	0	0	6,692,400	6,692,400	0
Transport	West	New Road	TR5	New road to serve development to the west	Developer	6,435,000	0	6,435,000	0	0	6,435,000	6,435,000	0
Transport	South	New Road	TR6	Link road from Road 5 to existing roundabout	Developer	643,500	0	643,500	0	0	643,500	643,500	0
Transport	North	New Road	TR7	New road to serve development to the north	Developer	4,860,000	0	4,860,000	0	0	4,860,000	4,860,000	0
Transport	North	New Road	TR8	Extension of road 7	Developer	0	4,860,000	4,860,000	0	0	4,860,000	4,860,000	0
Transport	North	New Road	TR9	Loop road to serve development to the north	Developer	0	20,412,000	20,412,000	0	0	20,412,000	20,412,000	0
Transport	North	New Road	TR10	Diversion, piling, ground improvement and 450m embankment	Developer	5,000,000	0	5,000,000	0	0	5,000,000	5,000,000	0
Transport	North	New Road	TR10	Carriageway construction to A414 Firth Ave, Allende Ave between roundabouts 11 & 12	Developer	3,375,000	0	3,375,000	0	0	3,375,000	3,375,000	0
Transport	Urban	Upgrade Existing Road	TR11	A1019 south of Junction 12	Essex CC	657,000	0	657,000	LA Mainstream etc	0	657,000	657,000	0
Transport	Urban	Upgrade Existing Road	TR12	A1169 Katherine's Way between A1025 and B1133	Essex CC	1,095,000	0	1,095,000	LA Mainstream etc	0	1,095,000	1,095,000	0
Transport	West	Upgrade Existing Road	TR13	B1133 Water Lane west of A1169 for short section between 2 roundabouts	Developer	602,250	0	602,250	0	0	602,250	602,250	0
Transport	Urban	Upgrade Existing Road	TR14	Cycle route on A1169	Developer	2,520,000	0	2,520,000	0	0	2,520,000	2,520,000	0
Transport	Urban	Upgrade Existing Road	TR15	Cont of cycle route on London Rd to Potter St and on Second Ave to A414	Developer	832,500	0	832,500	0	0	832,500	832,500	0
Transport	Urban	Upgrade Existing Road	TR16	Cycle path connecting development in the north to Priory Ave	Developer	337,500	0	337,500	0	0	337,500	337,500	0
Transport	Urban	Upgrade Existing Road	TR17	Cycle route connection from development in the south	Developer	675,000	0	675,000	0	0	675,000	675,000	0
Transport	Urban	Upgrade Existing Road	TR18	Town Centre cycle routes	Developer	1,620,000	0	1,620,000	0	0	1,620,000	1,620,000	0
Transport	Urban	Upgrade Existing Road	TR19	A1025 Third Ave between Katherine's Way and Haydens Rd	Essex CC	2,737,500	0	2,737,500	LA Mainstream etc	0	2,737,500	2,737,500	0
Transport	Urban	Upgrade Existing Road	TR20	A1025 second Ave with continuous bus lanes	Essex CC	2,190,000	0	2,190,000	LA Mainstream etc	0	2,190,000	2,190,000	0
Transport	Urban	Upgrade Existing Road	TR21	Rye Hill Road	Developer	1,200,000	0	1,200,000	0	0	1,200,000	1,200,000	0
Transport	Urban	Upgrade Existing Road	TR22	A414 between site road 1 and First Ave Mandela Ave with bus lane northbound	Essex CC	410,625	0	410,625	LA Mainstream etc	0	410,625	410,625	0
Transport	Urban	Upgrade Existing Road	TR23	A1169 Southern way with bus lane improvements	Essex CC	1,095,000	0	1,095,000	LA Mainstream etc	0	1,095,000	1,095,000	0
Transport	Urban	Upgrade Existing Road	TR24	Upgrade footpath to cycleway	Developer	750,000	0	750,000	0	0	750,000	750,000	0
Transport	Urban	Upgrade Existing Road	TR25	B183 Gilden Way with new cycleway	Developer	1,080,000	0	1,080,000	0	0	1,080,000	1,080,000	0
Transport	Urban	Upgrade Existing Road	TR26	Upgrade A1169 Elizabeth Way and Third Avenue between Katherine's Way and Royden Road	Essex CC / Developer	£1,762,950	1,762,950	3,525,900	0	0	3,525,900		0
Transport	Urban	Upgrade Existing Road	TR27	Upgrade A1169 Elizabeth Way between Royden Road and A414 / A1019 roundabout	Essex CC	£1,095,000	1,095,000	2,190,000	0	0	2,190,000		0
Transport	Urban	Upgrade Existing Road	TR28	Upgrade Fourth Avenue between A1169 Elizabeth Way and A1019 Velizy Avenue	Essex CC	£821,250	821,250	1,642,500	0	0	1,642,500		0
Transport	East	New Junction	TJ0	M11 north of J7	HA	50,000,000	0	50,000,000	RFA	50,000,000	0	50,000,000	0
Transport	Urban	New Junction	TJ1	Roundabout Road 1 joins A414	Developer	233,972	0	233,972	0	0	233,972	233,972	0
Transport	Urban	New Junction	TJ2	Roundabout Road 1 intersects London Rd	Developer	178,356	0	178,356	0	0	178,356	178,356	0
Transport	Urban	New Junction	TJ3	Roundabout Road 1 and Road 2 intersect at Hobbs Court Road	Developer	82,881	0	82,881	0	0	82,881	82,881	0
Transport	East	New Junction	TJ4	Roundabout Road 0 intersects with road 1 and Sheering Rd	Developer	30,000,000	0	30,000,000	0	0	30,000,000	30,000,000	0
Transport	South	New Junction	TJ5	Roundabout Road 4 joins Rye Hill Road	Developer	82,881	0	82,881	0	0	82,881	82,881	0
Transport	South	New Junction	TJ6	Roundabout Road 4 and Commonside	Developer	66,151	0	66,151	0	0	66,151	66,151	0
Transport	West	New Junction	TJ7	Roundabout Road 5 joins B1133	Developer	82,881	0	82,881	0	0	82,881	82,881	0
Transport	West	New Junction	TJ8	Road 5 joins Parsloe Rd	Developer	44,589	0	44,589	0	0	44,589	44,589	0
Transport	North	New Junction	TJ9	Roundabout where Road 0 joins A414	Developer	0	30,000,000	30,000,000	0	30,000,000	0	30,000,000	0
Transport	North	New Junction	TJ10	Roundabout where Road 0 intersects with A1184	Developer	0	30,000,000	30,000,000	0	0	30,000,000	30,000,000	0
Transport	North	Upgrade Junction	TJ11	A414 / New link road junction with access to development to the north	Developer	119,434	0	119,434	0	0	119,434	119,434	0

Transport	Urban	Upgrade Junction	TJ12	A414/A1019 5 am roundabout with slip road from W to N	Developer	120,000	0	120,000	0	0	120,000	120,000	0
Transport	Strategic	Rail Improvements	TT1	Double car parking at Harlow Town station to 800 places	Network Rail	0	5,125,000	5,125,000	GAF/CIL	2,562,500	2,562,500	5,125,000	0
Transport	Strategic	Rail Improvements	TT2	Lengthen platforms at Harlow Mill station to 12-car	Network Rail	4,000,000	0	4,000,000	GAF/CIL	2,000,000	2,000,000	4,000,000	0
Open Space, Recreation & Space	Strategic	Strategic Recreation Projects	SP 1	'Major Strategic Destination & Gateway 3', Harlow Town Park	Harlow DC	2,815,900	0	2,815,900	LA Mainstream etc	0	2,815,900	2,815,900	0
Open Space, Recreation & Space	Strategic	Strategic Recreation Projects	SP 2	'New Urban Landscape of distinction 1', Harlow Rail Station / Town Park	Harlow DC	840,700	0	840,700	LA Mainstream etc	0	840,700	840,700	0
Open Space, Recreation & Space	Strategic	Strategic Recreation Projects	SP 3	'Key Strategic destinations & Gateways 1', Gibberd's	Harlow DC	0	911,800	911,800	LA Mainstream	0	911,800	911,800	0
Open Space, Recreation & Space	Strategic	Strategic Recreation Projects	SP 4	'New Urban Landscape of Distinction 3', Church Street	Harlow DC	0	314,300	314,300	LA Mainstream	0	314,300	314,300	0
Open Space, Recreation & Space	Strategic	Strategic Recreation Projects	SP 5	'New Urban Landscape of Distinction 3', improving linkages	Harlow DC	0	404,000	404,000	LA Mainstream	0	404,000	404,000	0
Open Space, Recreation & Space	Strategic	Strategic Recreation Projects	SP 6	'New Urban Landscape of Distinction 3', improving linkages	Harlow DC	0	617,500	617,500	LA Mainstream	0	617,500	617,500	0
Open Space, Recreation & Space	Strategic	Strategic Recreation Projects	SP 7	'New Urban Landscape of Distinction 4', South East Harlow	Harlow DC	782,400	0	782,400	LA Mainstream	0	782,400	782,400	0
Open Space, Recreation & Space	Strategic	Strategic Recreation Projects	SP 8	'Major Strategic Destinations and Gateways 2', Parndon	Harlow DC	0	1,147,300	1,147,300	LA Mainstream	0	1,147,300	1,147,300	0
Open Space, Recreation & Space	Strategic	Strategic Recreation Projects	SP 9	'New Urban Landscapes of Distinction 2', West Harlow	Harlow DC	801,000	0	801,000	LA Mainstream	0	801,000	801,000	0
Open Space, Recreation & Space	Strategic	Strategic Recreation Projects	SP 10	'Local Green Space Parks & Core Natural Greenspace',	Harlow DC	0	656,000	656,000	LA Mainstream	0	656,000	656,000	0
Open Space, Recreation & Space	Strategic	Strategic Recreation Projects	SP 11	'Local Green Space Parks & Core Natural Greenspace',	Harlow DC	0	664,100	664,100	LA Mainstream	0	664,100	664,100	0
Open Space, Recreation & Space	Strategic	Strategic Recreation Projects	SP 12	BMX dirt track and mountain bike course (location not	Harlow DC	650,000	0	650,000	LA Mainstream	0	650,000	650,000	0
Open Space, Recreation & Space	Strategic	Strategic Recreation Projects	SP 13	1 additional Synthetic Turf Pitch (location not	Harlow DC	740,000	0	740,000	LA Mainstream	0	740,000	740,000	0
Open Space, Recreation & Space	Strategic	Strategic Recreation Projects	SP 14	13 Outdoor Tennis Courts	Harlow DC	5,453,400	0	5,453,400	LA Mainstream	0	5,453,400	5,453,400	0
Open Space, Recreation & Space	North	Internal Open Space	A 1	Internal Open Space/North	Harlow DC	198,720	662,400	861,120	LA Mainstream	0	861,120	861,120	0
Open Space, Recreation & Space	South	Internal Open Space	A 2	Internal Open Space/South	Harlow DC	129,600	0	129,600	LA Mainstream	0	129,600	129,600	0
Open Space, Recreation & Space	East	Internal Open Space	A 3	Internal Open Space/East	Harlow DC	629,700	0	629,700	LA Mainstream	0	629,700	629,700	0
Open Space, Recreation & Space	West	Internal Open Space	A 4	Internal Open Space/West	Harlow DC	129,600	0	129,600	LA Mainstream	0	129,600	129,600	0
Open Space, Recreation & Space	Urban	Internal Open Space	A 5	Internal Open Space/Urban	Harlow DC	25,380	25,380	50,760	LA Mainstream	0	50,760	50,760	0
Open Space, Recreation & Space	North	Playing Fields (Football & Cricket)	B 1	Playing Fields (Football & Cricket)/ North	Harlow DC	782,460	2,608,200	3,390,660	LA Mainstream	0	3,390,660	3,390,660	0
Open Space, Recreation & Space	South	Playing Fields (Football & Cricket)	B 2	Playing Fields (Football & Cricket)/ South	Harlow DC	510,300	0	510,300	LA Mainstream	0	510,300	510,300	0
Open Space, Recreation & Space	East	Playing Fields (Football & Cricket)	B 3	Playing Fields (Football & Cricket)/ East	Harlow DC	2,479,444	0	2,479,444	LA Mainstream	0	2,479,444	2,479,444	0
Open Space, Recreation & Space	West	Playing Fields (Football & Cricket)	B 4	Playing Fields (Football & Cricket)/ West	Harlow DC	510,300	0	510,300	LA Mainstream	0	510,300	510,300	0
Open Space, Recreation & Space	Urban	Playing Fields (Football & Cricket)	B 5	Playing Fields (Football & Cricket)/ Urban	Harlow DC	99,934	99,934	199,868	LA Mainstream	0	199,868	199,868	0
Open Space, Recreation & Space	North	Playing Fields (Rugby)	C 1	Playing Fields (Rugby)/North	Harlow DC	101,720	339,066	440,786	LA Mainstream	0	440,786	440,786	0
Open Space, Recreation & Space	South	Playing Fields (Rugby)	C 2	Playing Fields (Rugby)/South	Harlow DC	66,339	0	66,339	LA Mainstream	0	66,339	66,339	0
Open Space, Recreation & Space	East	Playing Fields (Rugby)	C 3	Playing Fields (Rugby)/East	Harlow DC	322,328	0	322,328	LA Mainstream	0	322,328	322,328	0
Open Space, Recreation & Space	West	Playing Fields (Rugby)	C 4	Playing Fields (Rugby)/West	Harlow DC	66,339	0	66,339	LA Mainstream	0	66,339	66,339	0
Open Space, Recreation & Space	Urban	Playing Fields (Rugby)	C 5	Playing Fields (Rugby)/Urban	Harlow DC	12,991	12,991	25,983	LA Mainstream	0	25,983	25,983	0
Open Space, Recreation & Space	North	Childrens Play (NEAPs)	D 1	Childrens Play (NEAPs)/North	Harlow DC	322,920	1,076,400	1,399,320	LA Mainstream	0	1,399,320	1,399,320	0
Open Space, Recreation & Space	South	Childrens Play (NEAPs)	D 2	Childrens Play (NEAPs)/South	Harlow DC	210,600	0	210,600	LA Mainstream	0	210,600	210,600	0
Open Space, Recreation & Space	East	Childrens Play (NEAPs)	D 3	Childrens Play (NEAPs)/East	Harlow DC	1,023,263	0	1,023,263	LA Mainstream	0	1,023,263	1,023,263	0
Open Space, Recreation & Space	West	Childrens Play (NEAPs)	D 4	Childrens Play (NEAPs)/West	Harlow DC	210,600	0	210,600	LA Mainstream	0	210,600	210,600	0
Open Space, Recreation & Space	Urban	Childrens Play (NEAPs)	D 5	Childrens Play (NEAPs)/Urban	Harlow DC	41,243	41,243	82,485	LA Mainstream	0	82,485	82,485	0
Open Space, Recreation & Space	North	Childrens Play (LEAPs)	E 1	Childrens Play (LEAPs)/North	Harlow DC	581,256	1,937,520	2,518,776	LA Mainstream	0	2,518,776	2,518,776	0
Open Space, Recreation & Space	South	Childrens Play (LEAPs)	E 2	Childrens Play (LEAPs)/South	Harlow DC	379,080	0	379,080	LA Mainstream	0	379,080	379,080	0
Open Space, Recreation & Space	East	Childrens Play (LEAPs)	E 3	Childrens Play (LEAPs)/East	Harlow DC	1,841,873	0	1,841,873	LA Mainstream	0	1,841,873	1,841,873	0
Open Space, Recreation & Space	West	Childrens Play (LEAPs)	E 4	Childrens Play (LEAPs)/West	Harlow DC	379,080	0	379,080	LA Mainstream	0	379,080	379,080	0
Open Space, Recreation & Space	Urban	Childrens Play (LEAPs)	E 5	Childrens Play (LEAPs)/Urban	Harlow DC	74,237	74,237	148,473	LA Mainstream	0	148,473	148,473	0
Open Space, Recreation & Space	North	Allotments	F 1	Allotments/North	Harlow DC	149,040	496,800	645,840	LA Mainstream	0	645,840	645,840	0
Open Space, Recreation & Space	South	Allotments	F 2	Allotments/South	Harlow DC	97,200	0	97,200	LA Mainstream	0	97,200	97,200	0
Open Space, Recreation & Space	East	Allotments	F 3	Allotments/East	Harlow DC	472,275	0	472,275	LA Mainstream	0	472,275	472,275	0
Open Space, Recreation & Space	West	Allotments	F 4	Allotments/West	Harlow DC	97,200	0	97,200	LA Mainstream	0	97,200	97,200	0
Open Space, Recreation & Space	Urban	Allotments	F 5	Allotments/Urban	Harlow DC	19,035	19,035	38,070	LA Mainstream	0	38,070	38,070	0
Open Space, Recreation & Space	Strategic	Other Recreation Projects	RP 1	'Key Strategic Destinations & Gateways', Eastwick	Harlow DC	0	1,036,000	1,036,000	LA Mainstream	0	1,036,000	1,036,000	0
Open Space, Recreation & Space	Strategic	Other Recreation Projects	RP 2	'New Destinations and Gateways', Gilston Park Area,	Harlow DC	0	478,600	478,600	LA Mainstream	0	478,600	478,600	0
Open Space, Recreation & Space	Strategic	Other Recreation Projects	RP 3	Recreation Centre (equivalent to 1 court badminton hall)	Harlow DC	969,000	0	969,000	LA Mainstream	0	969,000	969,000	0
Open Space, Recreation & Space	Strategic	Other Recreation Projects	RP 4	Recreation Centre (equivalent to 1 court badminton hall)	Harlow DC	969,000	0	969,000	LA Mainstream	0	969,000	969,000	0
Open Space, Recreation & Space	Strategic	Other Recreation Projects	RP 5	Recreation Centre (equivalent to 1 court badminton hall)	Harlow DC	969,000	0	969,000	LA Mainstream	0	969,000	969,000	0
Open Space, Recreation & Space	Strategic	Other Recreation Projects	RP 6	Recreation Centre (equivalent to 1 court badminton hall)	Harlow DC	969,000	0	969,000	LA Mainstream	0	969,000	969,000	0
Open Space, Recreation & Space	Strategic	Other Recreation Projects	RP 7	Recreation Centre (equivalent to 1 court badminton hall)	Harlow DC	969,000	0	969,000	LA Mainstream	0	969,000	969,000	0
Open Space, Recreation & Space	Strategic	Other Recreation Projects	RP 8	Recreation Centre (equivalent to 1 court badminton hall)	Harlow DC	969,000	0	969,000	LA Mainstream	0	969,000	969,000	0
Open Space, Recreation & Space	Strategic	Other Recreation Projects	RP 9	Recreation Centre (equivalent to 1 court badminton hall)	Harlow DC	969,000	0	969,000	LA Mainstream	0	969,000	969,000	0
Open Space, Recreation & Space	Strategic	Other Recreation Projects	RP 10	Recreation Centre (equivalent to 1 court badminton hall)	Harlow DC	0	969,000	969,000	LA Mainstream	0	969,000	969,000	0
Open Space, Recreation & Space	Strategic	Other Recreation Projects	RP 11	Recreation Centre (equivalent to 1 court badminton hall)	Harlow DC	0	969,000	969,000	LA Mainstream	0	969,000	969,000	0
Open Space, Recreation & Space	Strategic	Other Recreation Projects		Swimming Pool and Sports Facility	Harlow DC	6,500,000	0	6,500,000	LA Mainstream	0	6,500,000	6,500,000	0
Social & Community Infrastructure	Strategic	Public Art	AR1	Per Cent Funding for Public Art	Harlow DC	12,214,000	7,486,000	19,700,000	0	0	19,700,000	19,700,000	0
Social & Community Infrastructure	Strategic	Adult Social Services	SS1	No requirement	Essex CC	0	0	0	0	0	0	0	0
Social & Community Infrastructure	East	Children's Services	CH1	Children's Centre	Harlow DC	1,200,000	0	1,200,000	DCSF	300,000	900,000	1,200,000	0
Social & Community Infrastructure	North	Children's Services	CH2	Children's Centre	Herts CC	0	1,200,000	1,200,000	DCSF	300,000	900,000	1,200,000	0
Education	East	Primary school with nursery	EP1	Two form entry primary school with nursery	Essex CC	7,500,000	0	7,500,000	LA Mainstream etc	0	7,500,000	7,500,000	0
Education	East	Primary school with nursery	EP2	Two form entry primary school with nursery	Essex CC	7,500,000	0	7,500,000	LA Mainstream etc	0	7,500,000	7,500,000	0

Education	East	Primary school with nursery	EP4	Two form entry primary school with nursery	Essex CC	7,500,000	0	7,500,000	LA Mainstream etc	0	7,500,000	7,500,000	0
Education	East	Primary school with nursery	EP5	Two form entry primary school with nursery	Essex CC	7,500,000	0	7,500,000	LA Mainstream etc	0	7,500,000	7,500,000	0
Education	East	Primary school with nursery	EP6	Two form entry primary school with nursery	Essex CC	7,500,000	0	7,500,000	LA Mainstream etc	0	7,500,000	7,500,000	0
Education	East	Primary school with nursery	EP7	Two form entry primary school with nursery	Essex CC	7,500,000	0	7,500,000	LA Mainstream etc	0	7,500,000	7,500,000	0
Education	South	Primary school with nursery	EP8	Two form entry primary school with nursery	Essex CC	7,500,000	0	7,500,000	LA Mainstream etc	0	7,500,000	7,500,000	0
Education	West	Primary school with nursery	EP9	Two form entry primary school with nursery	Essex CC	7,500,000	0	7,500,000	LA Mainstream etc	0	7,500,000	7,500,000	0
Education	North	Primary school with nursery	EP10	Two form entry primary school with nursery	Herts CC	7,500,000	0	7,500,000	LA Mainstream etc	0	7,500,000	7,500,000	0
Education	North	Primary school with nursery	EP11	Two form entry primary school with nursery	Herts CC	7,500,000	0	7,500,000	LA Mainstream etc	0	7,500,000	7,500,000	0
Education	North	Primary school with nursery	EP12	Two form entry primary school with nursery	Herts CC	0	7,500,000	7,500,000	LA Mainstream etc	0	7,500,000	7,500,000	0
Education	North	Primary school with nursery	EP13	Two form entry primary school with nursery	Herts CC	0	7,500,000	7,500,000	LA Mainstream etc	0	7,500,000	7,500,000	0
Education	North	Primary school with nursery	EP14	Two form entry primary school with nursery	Herts CC	0	7,500,000	7,500,000	LA Mainstream etc	0	7,500,000	7,500,000	0
Education	North	Primary school with nursery	EP14	Two form entry primary school with nursery	Herts CC	0	7,500,000	7,500,000	LA Mainstream etc	0	7,500,000	7,500,000	0
Education	East	Secondary school	EP15	Eight form entry secondary school	Essex CC	25,000,000	0	25,000,000	LA Mainstream etc	0	25,000,000	25,000,000	0
Education	West	Secondary school	EP16	Eight form entry secondary school	Essex CC	25,000,000	0	25,000,000	LA Mainstream etc	0	25,000,000	25,000,000	0
Education	North	Secondary school	EP17	Six form entry secondary school	Herts CC	0	21,000,000	21,000,000	LA Mainstream etc	0	21,000,000	21,000,000	0
Education	North	Secondary school	EP18	Six form entry secondary school	Herts CC	0	21,000,000	21,000,000	LA Mainstream etc	0	21,000,000	21,000,000	0
Education	Strategic	Post 16	EP19	6th Form and Vocational Provision at Harlow College	Harlow College	0	0	0	N/A	0	0	0	0
Education	Strategic	Adult Community Education	EP20	Provision for increased population	Essex CC	1,220,000	740,000	1,960,000	LA Mainstream etc	0	1,960,000	1,960,000	0
Social & Community Infrastructure	Strategic	Police	PO 1	Provision for increased population	Essex CC	3,350,000	0	3,350,000	Police budgets	0	3,350,000	3,350,000	0
Social & Community Infrastructure	Strategic	Police	PO 2	Provision for increased population	Herts CC	0	3,350,000	3,350,000	Police budgets	0	3,350,000	3,350,000	0
Social & Community Infrastructure	Strategic	Fire	FI1	Provision for increased population	Essex CC	0	0	0	0	0	0	0	0
Social & Community Infrastructure	Strategic	Fire	FI2	Provision for increased population	Herts F&R	0	2,000,000	2,000,000	LA Mainstream	0	2,000,000	2,000,000	0
Social & Community Infrastructure	Strategic	Ambulance	AM1	Provision for increased population	Amb Trust	0	4,800,000	4,800,000	PCTs	4,800,000	1,080,000	5,880,000	1,080,000
Social & Community Infrastructure	West	Health	H1	Expansion of Barbara Castle HC	W Essex PCT	370,000	0	370,000	3rd Party	370,000	83,000	453,000	83,000
Social & Community Infrastructure	East	Health	H2	Expansion of Jenner House HC	W Essex PCT	555,000	0	555,000	3rd Party	555,000	125,000	680,000	125,000
Social & Community Infrastructure	North	Health	H3	New Health Centre	N&E Herts PCT	0	2,220,000	2,220,000	3rd Party	2,220,000	500,000	2,720,000	500,000
Social & Community Infrastructure	East	Libraries, Culture & Community Facilities	LIB1	New Library to East of Harlow	Essex CC	1,600,000	0	1,600,000	LA Mainstream	0	1,600,000	1,600,000	0
Social & Community Infrastructure	North	Libraries, Culture & Community Facilities	LIB2	New Library to North of Harlow	Herts CC	0	3,240,000	3,240,000	LA Mainstream	0	3,240,000	3,240,000	0
Social & Community Infrastructure	Strategic	Libraries, Culture & Community Facilities	LIB3	Improvements to existing to cover growth in rest of Harlow	Essex CC	700,000	0	700,000	LA Mainstream	0	700,000	700,000	0
Social & Community Infrastructure	East	Youth Services	Y1	Youth Centre	Essex CC	500,000	0	500,000	LA Mainstream	0	500,000	500,000	0
Social & Community Infrastructure	North	Youth Services	Y2	Youth Centre	Herts CC	0	500,000	500,000	LA Mainstream	0	500,000	500,000	0
Utilities	North	Water Supply	UWS1	New main to be laid to point of connection near Water Reservoir in North.	Three Valleys	2,000,000	3,500,000	5,500,000	None	0	5,500,000	5,500,000	0
Utilities	East	Water Supply	UWS2	New main to be laid to point of connection near Water Tower in East.	Three Valleys	5,500,000	0	5,500,000	None	0	5,500,000	5,500,000	0
Utilities	South	Water Supply	UWS3	New main to be laid to point of connection near Water Tower/Reservoir in South.	Three Valleys	1,000,000	0	1,000,000	None	0	1,000,000	1,000,000	0
Utilities	West	Water Supply	UWS4	New main to be laid to point of connection near Water Tower/Reservoir in South.	Three Valleys	1,000,000	0	1,000,000	None	0	1,000,000	1,000,000	0
Utilities	Urban	Water Supply	UWS5	Possible water main upgrades needed to some of the larger sites.	Three Valleys	300,000	300,000	600,000	None	0	600,000	600,000	0
Utilities	North	Gas	UG1	New off site gas main and connect to existing gas holders.	National Grid	2,000,000	3,500,000	5,500,000	None	0	5,500,000	5,500,000	0
Utilities	East	Gas	UG2	New off site gas main and connect to existing gas holders.	National Grid	5,500,000	0	5,500,000	None	0	5,500,000	5,500,000	0



# Appendix B – Licensed Waste Management Facilities

## B.1.1 Table B.1 shows the Licensed capacity in Harlow District Council

**Table B.1 – Licensed waste management capacity in Harlow District Council**

Facility Type	Address	Licensed Capacity
A9 – Special waste transfer station	Kier Harlow , Mead Park Depot, Riverway, Harlow, Essex, CM20 2SE	4,999
A11 – Household, C&I waste transfer station	Civic Amenity Site, Temple Bank, Harlow, Essex, CM20 2DY	24,999
	Gillet Recycling , 10 Burnt Mill, Elizabeth Way, Harlow, Essex, CM20 2HT	24,999
	Hill Demolition & Skip Hire, 1-3 Edinburgh Place, Edinburgh Way, Harlow, Essex, CM20 2DJ	74,999
A12 – Clinical waste transfer station	Clinovia Ltd., Unit 7, Coldharbour Pinnacles Est, Lovet Road, Harlow, Essex, CM19 5JL	572
A14 – Transfer station taking non-biodegradable wastes	Lampcare (UK) Recycling , Unit C, Mead Park Industrial Estate, Riverway, Harlow, Essex, CM20 2SE	21,000
A15 – Material recycling treatment facility	Biffa, Key Glass Works, Edinburgh Way, Harlow, Essex, CM20 2DB	75,000
A19 – Metal recycling site (vehicle dismantler)	B M Spares, 16-17 Horsecroft Place, The Pinnacles, Harlow, Essex, CM19 5BU	131

## B.1.2 Table B.2 shows the Licensed capacity in East Hertfordshire and Epping Forest District Councils.

**Table B.2 – Licensed waste management capacity in East Herts and Epping Forest**

Facility Type	Address	Licensed Capacity
A5 – Landfill taking non-biodegradable wastes	Water Hall (England) Ltd, Bunkers Hill Quarry, Lower Hatfield Road, Hertford, Herts, SG13 8LF	50,000
	Lyons Landfill Ltd, Pole Hole Farm, Eastwick Road, Pye Corner, Gilston, Nr Harlow, Essex, CM20 2RP	300,000
	Anstey Chalk Quarry, Anstey, Buntingford, Herts, SG9 0BU	50,000
A6 – Landfill taking other waste	Waterhall Quarry, Lower Hatfield Road, Hertford, Herts, SG13 8LF	225,000
A10 - In-House Storage Facility	Glaxo Operations (UK), Priory Street, Ware, Herts, SG12 0DJ	499
A11 – Household, C&I waste transfer station	Epping Forest District Council Depot, Langston Road Depot, Loughton, Essex, IG10 3UE	4,999
	"Threshers", Hastingwood Road, Hastingwood, Harlow, Essex, CM17 9JT	74,999



Facility Type	Address	Licensed Capacity
	Rosedene, Magdalen Laver, Ongar, Essex, CM5 0ES	4,999
	Mill Lane Civic Amenity Site, High Ongar, CM5 9RH	5,000
	Barnfield Transfer Station, Tylers Cross, Roydon, Essex, CM19 5DP	24,999
	Town Mead Civic Amenity Site, Brooker Road, Waltham Abbey, Essex, EN9 1JH	7,499
	Household Waste Recycling Centre, Woodside, Bishop's Stortford, Herts, CM23 5RG	24,999
	Mead Lane, Hertford, Herts, SG13 7AX	24,999
	Household Waste Recycling Centre, Westmill Road, Ware, Herts, SG12 0EL	24,999
	Household Waste Recycling Centre, Aspenden Road, Buntingford, Herts, SG9 9PA	24,999
A13 - Household Waste Amenity Site	Luxborough Lane, Chigwell, Essex, IG7 5AA	24,999
A15 – Material recycling treatment facility	Recycle Telecom Ltd, 153 - 155 Brooker Road, Waltham Abbey, Essex, EN9 1JH	52
	Waterhall Quarry, Lower Hatfield Road, Hertford, Herts, SG13 8LF	74,000
	Anstey Chalk Quarry, Anstey, Buntingford, Herts, SG9 0BU	100,000
A16 - Physical Treatment Facility	Marlow, High Road, Thornwood Common, Epping, Essex, CM16 6LU	74,999
	Eco Aggregates Cole Green, Birchall Lane, Cole Green, Nr Welwyn Garden City, Herts, SG14 2NR	200,000
	Unit 10a Caxton Hill, Hertford Industrial Est, Hertford, Herts, SG13 7NE	10,000
	Ettridge Farm Depot, Pembridge Lane, Broxbourne, Herts, EN10 7QP	4,999
A18 - Incinerator	Resting Pets, Wood Farm, Moreton Road, Moreton, Ongar, Essex, CM5 0EY	250
A19 – Metal recycling site (vehicle dismantler)	B & B Auto Dismantlers, Dunmow Road, Nr Bishop's Stortford, Herts, CM22 6SJ	5,000
	Temple Motors, Warehams Lane, Hertford, Herts, SG14 1LA	5,000
	Upshire Car Breakers, Galley Hill, Waltham Abbey, Essex, EN9 2AJ	2,499
A20 - Metal Recycling Site (mixed MRS's)	Alchemist Works, Whempstead Road, Benington, Nr Stevenage, Herts, SG2 7BX	10,000

Facility Type	Address	Licensed Capacity
	Unit 10, Mead Ind. Park, Templefields, Riverway, Harlow, Essex, CM20 2SE	4,999
	Units 7 & 8 Mead Industrial Park, Riverway, Templefields, Harlow, Essex, CM20 2SE	5,000
	Dog Kennel Farm, Lilley, Near Luton, Bedfordshire, LU2 8LQ	1,600
	Thele, Woolmongers Lane, High Ongar, Ingatestone, Essex, CM4 0JX	74,999
	Randalls Works, Woodside, Thornwood Common, Epping, Essex, CM16 6L	24,999
A23 - Biological Treatment Facility	Rye Meads Sewage Treatment Works, Stanstead Abbots, Ware, Herts, SG12 8JY	74,000
	The Vineries, Green Tye, Much Hadham, Herts, SG10 9JJ	10,000
	Moreton Bridge, Moreton, Near Ongar, Essex	10,980