

Land North of Harlow: Gilston Area

East Hertfordshire District Council District Plan

Housing Trajectory and Infrastructure Delivery Plan

Prepared on behalf of City and Provincial Properties PLC

July 2014



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1. Introduction

- 1.1 This Housing Trajectory and Infrastructure Delivery Plan (HTIDP) has been prepared and submitted on behalf of City and Provincial Properties (CPP) as part of their evidence base in response to the East Hertfordshire District Council (EHDC) emerging District Plan Delivery Study, in support of a residentially-led allocation in the Gilston Area of up to 5,000 units during the plan period (2011 to 2031). The extent of the site is illustrated at **Appendix 1** on the Site Location Plan. The site (of circa 319 hectares) comprises land owned by CPP and the adjoining landowners Places for People (PforP) as illustrated at **Appendix 1**.
- 1.2 The key purpose of this document is to demonstrate the viability and deliverability of the Gilston Area as a residentially-led allocation, taking account of the necessary infrastructure requirements (physical, social and green). The scope of this document was agreed in advance with Martin Paine at EHDC.
- 1.3 The HTIDP has been prepared by:
- Savills, as appointed planning and development consultants;
 - SpaceCraft Architects (SCA), as the appointed masterplanners;
 - Alan Baxter and Associates (ABA), as the appointed transportation and highways advisers;
 - Churchman Landscape Architects (CLA), as the appointed Green Belt and landscaping consultant;
 - Hoare Lea (HL), as the appointed sustainability and acoustics consultants; and
 - WT Partnership (WTP), as the appointed cost consultants.
- 1.4 SCA have developed an Initial Concept Masterplan (see Section 4) for the Gilston Area which identifies a development capacity figure of circa 4,600 units. This figure is consistent with the planning representations prepared and submitted on behalf of CPP in response to the EHDC Preferred Options District Plan Consultation Document (February 2014).
- 1.5 As requested by EHDC, this HTIDP also addresses the cost of key infrastructure items initially identified in support of the new development at this specific location of the Gilston Area. While in the absence of a detailed masterplan, the costs are indicative and

assumptions have been made, this document does demonstrate the viability and deliverability of circa 4,600 homes within EHDC District Plan period to 2031, with no technical “showstoppers” identified at this stage. The assumptions are made on the basis of the experience of similar schemes and are supported by market development advice and market research from Savills on the present and future residential property market across the UK, the south east and the local area of Harlow.

- 1.6 Due to the sensitivity of information on values, this HTIDP document does not include site or plot specific build costs as it relates to infrastructure only and is not a full Gross Development Value (GDV) Assessment. There is no requirement within the National Planning Policy Framework (NPPF), National Planning Practice Guidance (NPPG) or Royal Institute of Chartered Surveyors (RICS) “Financial Viability in Planning” (2012) guidance for development appraisals to justify policy allocations. The NPPF (paragraph 173) simply states that “...to ensure viability, the costs of any requirements likely to be applied to development, such as requirements for affordable housing, standards, infrastructure contributions or other requirements should, when taking into account the normal cost of development and mitigation, provide competitive returns to a willing landowner and a willing developer to enable the development to be deliverable.”
- 1.7 Savills development have undertaken financial analysis both on a residual basis in relation to individual phases, the sample model being 200 residential units and extrapolated this into a land trading model based on the phasing plan of circa 4,600 units. Savills development have equalised the infrastructure costs across the lifetime of the project and made educated assumptions in regard to S106 and finance costs. This initial analysis would indicate a land value in the region of current market residual values in this area. It is understood that based upon the existing value of the land, this would demonstrate the proposed development to be viable.
- 1.8 Although this analysis is not supplied within this document, CPP could share this information with EHDC, Peter Brett Associates and ATLAS on request.
- 1.9 Moving forward and in the context of EHDC’s District Plan Pre-Submission Consultation Document which is expected in January 2015, CPP are committed to undertaking continued technical work to assist in developing their planning and housing evidence in support of the current proposals, as well as developing the Initial Concept Masterplan during the coming months. This technical work is likely to include but is not limited to: transportation, housing and socio-economic (including population, child yield and education), Green Belt impact and landscape enhancement, energy and sustainability, archaeology, flood risk and utilities and other environmental surveys and assessments. CPP and the consultant team will continue to actively engage with EHDC, ATLAS, Peter Brett Associates, neighbouring local

authorities, other key stakeholder groups and the local community during the more detailed consideration of the current proposals. Land Referencing Services (LRS) have also been instructed to conduct a detailed land referencing search to identify definitive Rights of Way and details of any Restrictive Covenants, easements and wayleaves.

- 1.10 Accordingly, this HTIDP should be treated as a hypothetical exercise and it is provided to EHDC on a without prejudice basis for the purposes of supporting the development of the emerging District Plan. The future development proposals should not therefore be bound by the content of this document for the above reasons.

2. Planning Policy and Delivery / Viability Context

Introduction

- 2.1 In line with the requirements of the brief as set out by EHDC and to assist in demonstrating the viability and deliverability of the Gilston Area through the Delivery Study, this document has been prepared against the requirements of the NPPF (March 2012) and NPPG (as available at July 2014).

National Planning Policy Framework

- 2.2 Adopted in March 2012, the NPPF establishes key priorities for local authorities to “*boost significantly the supply of housing*” (paragraph 47), “*meet the needs of present and future generations*” (paragraph 7) and deliver a “*wide choice of high quality homes*” (paragraph 9).
- 2.3 Furthermore, as a key element of the NPPF’s presumption in favour of sustainable development in plan-making, authorities should allocate sufficient land to meet “*full, objectively assessed needs for market and affordable housing*” (paragraph 47); importantly also indicating that local authorities should “*use their evidence base to ensure that their Local Plan meets the full, objectively assessed needs for market and affordable housing in the housing market area, as far as is consistent with the policies set out in this Framework, including identifying key sites which are critical to the delivery of the housing strategy over the plan period.*”
- 2.4 The NPPF further states that authorities should “*identify and update annually a supply of specific deliverable sites sufficient to provide five years worth of housing against their requirements with an additional buffer of 5% ... where there has been a record of persistent under delivery of housing, local planning authorities should increase the buffer to 20% ... to provide a realistic prospect of achieving the planned supply*” (paragraph 47).
- 2.5 The footnote at NPPF (paragraph 47) states that “*to be considered deliverable, sites should be **available** now, offer a **suitable** location for development now, and be **achievable** with a*

realistic prospect that housing will be delivered on the site within five years and in particular that development of the site is viable”¹.

- 2.6 The NPPF also states that authorities should “*identify a supply of specific, developable sites or broad locations for growth, for years 6-10 and where possible, for years 11-15*” (paragraph 47). The footnote to this paragraph indicates that to be considered developable, “*sites should be in a suitable location for housing development and there should be a reasonable prospect that the site is available and could be viably developed at the point envisaged.*”
- 2.7 With regards to infrastructure and viability, the NPPF states that “*pursuing sustainable development requires careful attention to viability and costs in plan making and decision taking*” (paragraph 173). It further states that “*to ensure viability, the costs of any requirements likely to be applied to development, such as requirements for affordable housing, standards, infrastructure contributions or other requirements, should, when taking account of the normal cost of development and mitigation, provide competitive returns to a willing land owner and willing developer to enable the development to be deliverable*” (paragraph 173).
- 2.8 Plan making should include strategic policies, not only for “*the homes and jobs needed in the area*” but for “*the provision of infrastructure*” (paragraph 156), and that Local Plans should crucially “*plan positively for the development and infrastructure required in the area to meet the objectives, principles and policies*” of the NPPF (paragraph 157).
- 2.9 The NPPF also states that it is “*important to ensure that there is a reasonable prospect that planned infrastructure is deliverable in a timely fashion ... For this reason, infrastructure and development policies should be planned at the same time, in the Local Plan*” (paragraph 177).

National Planning Practice Guidance

- 2.10 The NPPG emphasises that a Local Plan “*should make it clear **what** is intended to happen in the area over the life of the plan, **where** and **when** this will occur and **how** it will be delivered”² (‘What should a Local Plan contain?’). Furthermore, while the content of different*

¹ Bold emphasis from author.

² Bold emphasis from original NPPG text.

Local Plans will vary they “*should concentrate on the critical issues facing the area – including its development needs – and the strategy and opportunities for addressing them, paying careful attention to both deliverability and viability*” (‘How detailed should a Local Plan be?’).

- 2.11 “*The evidence which accompanies an emerging Local Plan should show how the policies in the plan have been tested for their impact on the viability of development, including (where relevant) the impact which the Community Infrastructure Levy is expected to have*” (‘How can the local planning authority show that a Local Plan is capable of being delivered including provision for infrastructure?’).

Deliverability – The Policy and Guidance Rationale

- 2.12 From the excerpts of the NPPF and NPPG above, it is clear that in order to assess whether a site is deliverable, it is necessary to assess whether the site is **available**, **suitable**, and **achievable**.
- 2.13 The NPPF’s definition of site deliverability focuses on viability as a foremost consideration with other issues such as landowner co-operation to follow once the most viable and sustainable solution for meeting housing needs and demands has been identified (examples of where Plan Inspectors’ have taken this approach are cited at paragraph 2.17 of this section below).
- 2.14 The land across the site is **available** for development as it is being promoted by two majority freehold landowners, both of whom are committed to the area coming forward for residentially-led development within the emerging plan period. The Gilston Area is greenfield and does not have any restrictions in terms of existing land uses and occupation to preclude development commencing on the site in the short term.
- 2.15 The key parameters of the proposed development are broadly identified within SCA’s Initial Concept Masterplan (see **Appendix 2**) which is considered to represent the most **suitable** location for significant and sustainable residential growth in this part of the district. The Initial Concept Masterplan demonstrates how circa 4,600 dwellings could be accommodated in the Gilston Area during the plan period, and displays a number of sustainability benefits over alternative proposals, including:
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- better connectivity to the existing town of Harlow in primarily taking a more linear development approach along the valley and the A414 in creating a more sensitively designed and sustainable pattern of new development. This approach also could improve the utilisation of existing public transport facilities to the north of the town, as well as minimising greenfield land take, potential Green Belt impact and coalescence with other settlements within the area.
- potentially a much lesser requirement for new transportation infrastructure, which will have a significant positive impact on the viability of the scheme as a whole by comparison.

2.16 The **achievability** of the site is its viability and certainty that development will be able to take place within 5 years. This document as a whole demonstrates via the costings of the supporting infrastructure (physical, social and green) that the Initial Concept Masterplan is viable and the housing trajectory, which takes account of initial market advice, demonstrates that it is realistic to assume the completion of the first dwellings in the Gilston Area within the first five years following the adoption of the District Plan.

2.17 Although, as noted above, land assembly and cooperative agreements are not part of the NPPF / NPPG definition of deliverability, the presence of two separate majority land ownerships within the Gilston Area should not prevent EHDC, or the Planning Inspectorate, establishing the principle of development via an allocation for the Gilston Area within the emerging District Plan. Examples of other Plans where strategic residential allocations have been found sound in the absence of a single freehold ownership or a cooperative agreement between all landowners include:

- Wokingham Core Strategy³ (January 2010⁴); and
- Teignbridge Local Plan⁵ (May 2014)

³ This was the case for the North Wokingham, South Wokingham and Arborfield Garrison (Strategic Development Locations).

⁴ Although pre-NPPF and NPPG, the considerations on the deliverability of the site would have been subject to the same three tests of availability, suitability and achievability which carried through from PPS3 (paragraph 54).

⁵ This was the case for the residential allocation of Houghton Barton (Policy NA1).

- 2.18 Accordingly, on the basis that the Gilston Area is **available, suitable** and **achievable** as a residential allocation, the principle of its development to provide up to 5,000 new units should be included within the emerging District Plan as a deliverable allocation.

District Plan Position, the Market and Housing Trajectory

- 2.19 The plan period for the emerging District Plan is 2011 to 2031. The housing trajectory (see **Table 6** and **Table 7**) proposed within this HTIDP estimates delivery of circa 4,600 new dwellings over an 11 year span (beginning in 2018/19) which is well within the plan period and would make a significant contribution to the overall housing target for the District during the lifetime of the emerging Plan.
- 2.20 The housing trajectory also assumes that the figure of 4,600 is a circa capacity figure, identified through the development of the Initial Concept Masterplan on the basis of an up to 5,000 unit residential allocation within the emerging EHDC District Plan.
- 2.21 The annual housing completion figures within the housing trajectory are all considered reasonable for the relatively strong housing market within the South East at present, and would make a significant contribution to the first five year housing land supply figure of East Herts from the point of adoption of the District Plan, as emphasised within the NPPF.
- 2.22 The market performance would be predicated on creating a destination location of housing stock beyond that in existence in Harlow. The quality of the development should be beyond price sensitivity in relation to the existing local housing market.
- 2.23 The housing trajectory also indicatively reflects the time required for the examination and adoption of the emerging District Plan process, including key milestones such as the Pre-Submission Consultation and Examination of the Plan by an Independent Inspector. Further consideration of the anticipated trajectory of the Gilston Area can be found later in this document.

Planning Obligations

- 2.24 Potential and purely hypothetical Section 106 contributions have been identified, and are included in this document at **Table 3**. These are included within this document without prejudice and have been derived from the assessment of likely on and off site infrastructure provision.

CIL Regulations

- 2.25 The introduction of the Community Infrastructure Levy (CIL) is intended to provide funding for infrastructure to support the development of an area rather than to make individual schemes acceptable in planning terms.
- 2.26 The CIL Regulations indicate that three tests must apply when considering Section 106 obligations. These state that obligations must be:
- a. Necessary to make development acceptable in planning terms;
 - b. Directly related to development;
 - c. Fairly and reasonably related to the scale and kind of the development.
- 2.27 Furthermore, the CIL Regulations impose a restriction on the pooling of Section 106 contributions by authorities for use towards an infrastructure type or project after 6th April 2014, or following implementation of a Charging Schedule (whichever occurs first). The CIL (Amendment) Regulations 2014, extend this deadline to 6th April 2015.
- 2.28 These restrictions will severely curtail authorities ability to utilise Section 106 contributions as a mechanism for funding strategic, or non-site specific infrastructure post-April 2015.
- 2.29 We understand from EHDC that no decision has yet been made as to whether the authority will pursue the adoption of a CIL Charging Schedule or not. However, if EHDC are to implement a Levy, we understand that this will be brought forward in tandem with the emerging District Plan, with an approximate adoption date of early 2016.
- 2.30 In the absence of any certainty about CIL, it is assumed for the purpose of this HTIDP that given the nature of these strategic proposals and its associated site specific and strategic infrastructure provision, any CIL payments would be nil due to the significant on and off site infrastructure provision and the very specific nature of the Gilston Area proposals as a strategic urban extension.

3. General Market Conditions and Property Sector Analysis

Introduction

- 3.1. This section provides the background to the present market parameters to provide confidence that the development will commence as per the housing trajectory outlined.
- 3.2. A number of core assumptions have been made with regard to the actual and predicted future housing market.
- 3.3. *Market in Minutes: UK Residential Development Land* (February 2014) produced by Savills Market Research Team has therefore been included to provide future market projections (see **Appendix 3**). This is an industry recognised piece of research.

General UK / South East Market Conditions

- 3.4. Savills research indicates that currently the land market sentiment across the UK is positive and supply is tight, with housebuilders acquisitive and seeking to secure pipeline supply, particularly for larger sites and strategic land parcels.
- 3.5. Greenfield development land prices grew by an average of 3% in the final quarter of 2013, which is the highest rate of quarterly growth recorded in the market since 2010. This price growth was led by the south east, which was at growth rate of 5.8%.
- 3.6. This growth demonstrates that as the economic recovery becomes entrenched, confidence in larger and longer term phased developments is growing, particularly in the stronger markets like the south east.
- 3.7. Demand for strategic land in the south east has increased to levels previously unseen. The planning landscape coupled with housing demand and availability of finance has seen the growth in strategic land promotion by specialist development companies, but more significantly by house builders themselves, generate market demand equal to that of consented land.

Market Relevance to the District Plan and Site Selection

- 3.8. As discussed in Section 2, the NPPF sets out various requirements on the identification and planning for suitable levels and locations of housing. Such issues of housing need have been addressed within CPP's planning representations submitted to EHDC in response to their Preferred Options Consultation Document for their District Plan.
- 3.9. Historically, during the last 20 years, the Gilston Area to the north of Harlow has been identified as a suitable and sustainable location for accommodating a significant level of housing-led growth - firstly, in the form of a regional allocation (within the adopted South East Plan) and now within EHDC's emerging District Plan which identifies the Gilston Area as a Broad Location for Development.
- 3.10. There has been a long established recognition that Harlow is in need of regeneration and significant development to encourage inward investment; the delivery of new high quality market and affordable homes in the Gilston Area will help to achieve this.
- 3.11. There is confidence in the local market which will only grow in line with the current and expected market sentiments.
- 3.12. It is not considered that there are any sustainable and reasonable alternatives (i.e. sites or areas capable of similar volumes of residential development) to the Gilston Area in terms of meeting housing needs of this quantum and with a critical mass to deliver new and improved infrastructure to serve the scheme and the wider area. Further, for the reasons set out in CPP's planning representations in response to the Preferred Options Consultation Document, the Initial Concept Masterplan prepared by SCA is considered the most sustainable and suitable location for new development within the identified Broad Location for Development at the Gilston Area.

Level of Detail

- 3.13. Specific market information for East Herts and the Gilston Area is not needed for this level of study within the HTIDP. This is because of the broad and indicative nature of the work, which is not a full economic viability appraisal that would outline full costs (on plot), profit and Gross Development Value (GDV). However, as mentioned above, the development appraisal conducted by Savills Development which incorporates the on and off site infrastructure costs identified within this HTIDP has shown the scheme to be viable.

- 3.14. Notwithstanding this, the local market is thought to be performing well where quality product is available beyond the level of the general stock of which Harlow New Town is comprised. The strength of the market in terms of developer appetite, built out rates and average sales rates is demonstrated through the development at The Edge, Newhall which is a scheme matching exemplar planning and design standards. This scheme is being delivered by a strong consortium of developers.
- 3.15. As discussed earlier in this report, planning policy and guidance, in the form of the NPPF and NPPG do not explicitly require detailed economic appraisals. Whilst infrastructure need, costing, phasing and delivery are all material considerations the evidence required should be proportionate to the stage of the plan process that EHDC are at and CPP are committed to continuing to develop their evidence base, in advance of the Pre-Submission Consultation Document, early next year.
- 3.16. It should also be recognised that the development is greenfield in nature. It is readily accessible from the A414 and is sustainably located within close proximity to the existing town centre where new development will benefit from existing services and facilities within Harlow.
- 3.17. Given the greenfield nature of the site, higher infrastructure costs are to be expected when compared to smaller, infill and already serviced land sites, however at this stage there are no matters for concern that are considered to render the allocation and development of the site for up to 5,000 units unviable or undeliverable.
- 3.18. In summary, the site characteristics and policy position would not necessitate a detailed viability assessment at this stage.

4. Initial Concept Masterplan and Land Use Budgets

Introduction

- 4.1. CPP's vision for the Gilston Area is a sustainable, residentially led urban extension with supporting transport, social and green infrastructure. At present, CPP support the principle of development of up to 5,000 new homes in the Gilston Area up to 2031, to include a wide mix of housing to contribute towards meeting sub regional and local housing needs, including affordable housing⁶.
- 4.2. Whilst CPP and their appointed project team are continuing the process of developing the evidence base work and the Initial Concept Masterplan, the Gilston Area is currently envisaged to deliver circa 4,600 residential units accompanied by a mix of supporting land uses and associated infrastructure. Initial consideration has been given to the following mix of supporting land uses, as laid out in **Table 1** below. Over the coming months, clearly the design will evolve; layout and density levels are likely to be subject to change, however the current Initial Concept Masterplan and Unit and Density Schedule (see **Appendix 2**) reflect the work that has been carried out to date.

⁶ Further housing and viability assessments will be carried out over the coming months to determine a more exact dwelling mix and tenure mix in relation to market and affordable housing products within the scheme.

Table 1: Initial Consideration of Supporting Land Uses

Land Use	Provision
Residential	Circa 4,600 units, including affordable housing
Retail (to be located in neighbourhood centres)	Mix of local retail (circa 3,000sqm) 1 x supermarket (circa 2,000sqm)
Commercial	Flexible workspace (B1) (circa 5,000sqm)
Community, Leisure and Health (to be predominantly located in neighbourhood centres)	2 x community centres (circa 900sqm each) 1 x place of worship (circa 1,500sqm) 1 x library (circa 500sqm) 1 x crèche (circa 200sqm) 1 x healthcare centre (circa 2,500sqm)
Utilities and Energy	3 x energy centres (circa 1,000sqm each) 1 x community waste management facility (circa 1,000sqm) 1 x primary sub-station (circa 1,600sqm)
Education (Primary)	3 x primary schools, to include preschool / nursery (circa 4,000sqm each)
Education (Secondary)	1 x secondary school, including associated sports facilities (circa 13,000sqm)
Open Space, Sport and Recreation	Provision of policy informed mix (circa 140ha)

Overall Masterplan Approach

- 4.3. The Initial Concept Masterplan (at **Appendix 2**) is rooted in a landscape-based approach to design, focusing development on the relatively flat 'plateaus' and leaving valleys and watercourses as open amenity spaces. This approach is very much in keeping with Sir Frederick Gibberd's original design for Harlow New Town, which was embedded in a deep understanding and analysis of the existing landscape. In his own words, "*its foundation is the form of the land – its shape*".
- 4.4. The Initial Concept Masterplan proposes approximately 4,600 homes and generous supporting land uses, developed in a linear zone which follows the Stort River Valley. This linear spatial approach sets up a clear relationship between the proposed strategic urban extension and the existing town, which will be reinforced through a number of carefully designed north-south connections, with an emphasis on sustainable transport links to encourage cycling and walking.
- 4.5. The development has been envisaged as a series of interlinked but distinct walkable neighbourhoods. Three neighbourhood centres will provide education, retail and healthcare facilities as well as community halls and office space. These distinctive, active centres will support the growth of strong, sustainable communities.
- 4.6. Echoing Gibberd's approach, a number of 'green wedges' will create a natural rhythm within the scheme. The green wedges follow existing features of the site's topography and history, such as river valleys, ancient woodlands and hedge lines demarcating historic agricultural ownership. Together with the new links across the River Stort valley, this careful landscape-based approach will benefit the new development and the existing residents of North Harlow.
- 4.7. The linear design of development along the northern edge of the Stort River Valley has a number of benefits in terms of land use and environmental impact, with an overall settlement pattern based on efficient road (and other infrastructure) layouts and limited encroachment into the Green Belt.

Relationship to Landscape

- 4.8. Sandwiched between Harlow and the Stort Valley to the south with the rural landscape and villages to the north, the site's location should inform the shape, form and extent of future development. Sensitive planning will allow Harlow to grow northward while achieving a more positive use of the Stort Valley and protecting the countryside north of Gilston Park and Hunsdonbury.
- 4.9. The existing northern edge of Harlow has a weak connection with the surrounding countryside, in part because this side of the town accommodates the major employment zones which tend to act as a barrier to south-north movement by pedestrians. However, the town has a well defined green infrastructure established as part of Gibberd's new town plan, specifically the generous green wedges, one of which emerges between Pinnacles and Little Pandon while the Town Park is also to be found on the north side of town.
- 4.10. The Stort Valley has the potential to act as the spine to a major piece of green infrastructure accessed by Harlow and new residential development to the north. However, currently it is almost devoid of activity, the navigation towpath is heavily used for leisure walking but the designated cross valley footpaths have ceased to exist through lack of use. This must be due to the severance generated by the railway, the wet conditions, winter flooding and the lack of access points into the valley. Lack of activity and the adoption of historic management practices make this an ecologically rich resource with several rare species being present which will place restrictions on any proposals to open it up fully, however it should be accessed more freely than it is at present.
- 4.11. The south facing valley slopes stretching from Stanstead Lodge across to Gilston can accommodate development without fundamentally changing the character of the Stort to the south or the wider rural plateau to the north. This open valley sides are clearly visible from the south but there are few publically accessible vantage points to the north of Harlow from which views across the valley are enjoyed. The northern edge of the potential development zone stretching from Lord's Wood in the west to Gilston Park in the east is defined by a line of tree belts which cumulatively form an almost continuous zone of woodland and a clearly definable visual edge to the valley top. The presence of the power lines running adjacent to this line of woodland means that the tree belt will almost certainly be strengthened if development does proceed. The potential need for a noise bund, or alternative acoustic measures alongside the A414 will provide opportunities for further planting which will screen out most views of the new communities. An Initial Green Infrastructure Concept Plan has been included at **Appendix 2**, which shows the layout of key open space within the Initial Concept Masterplan.

- 4.12. To the north of Hunsdonbury and Gilston Park is an open plateau landscape occupied by the airfield and the open arable fields. Views of 2 kilometres or more over open fields are common which means that this area is more susceptible to change through development. However, if the tree belt along the valley ridge can be strengthened then the open landscape and the communities that inhabit it will be largely unaffected.
- 4.13. With regard to ecology, CSa Environmental are instructed as the ecological and arboricultural consultants. During the coming months, they will be carrying out comprehensive habitat and species surveys as part of the preparation of a biodiversity strategy to maximise the opportunities for biodiversity and ecological conservation and enhancement in the Gilston Area. Additionally, an Appropriate Assessment of the Lea Valley Special Protection Area (SPA) will be carried out (in accordance with EU Habitats Directive) to ensure the proposed development does not result in any development impact.

Transportation

- 4.14. ABA have prepared an Interim Transport Strategy (see **Appendix 4**) to support the preparation of the Initial Concept Masterplan. The objective of the transport strategy for the site is make strong connections and linkages with existing Harlow town, particularly by sustainable modes, as well provide vehicular access to and from the A414.
- 4.15. A series of new roundabout junctions will be required on the A414 in order to provide access to the neighbourhoods/villages that will be created on the site. The existing Fifth Avenue Stort River Crossing is already accommodating traffic flows of nearly 30,000 vehicles per day and will need to be upgraded to a dual carriageway before circa 2,000⁷ units in the Gilston Area become occupied. There is also the opportunity for a new crossing of the Stort Valley to the west with this connecting the A414 to the Pinnacles Industrial Estate. Further information on the proposed transport and highways infrastructure is within the Interim Transport Strategy at **Appendix 4**, which includes (at its Appendices B to D) the proposed internal spine road layout, key off site junction improvements, and the proposed alignment of the new Stort Crossing.

⁷ Trigger to be more accurately determined through ongoing further technical work.

- 4.16. This new crossing would be of benefit for the Gilston Area in better connecting new communities to the existing Harlow town centre but would have wider benefits in providing a more direct access to/from the west into the Pinnacles Industrial Estate, relieving pressure on the Fifth Avenue crossing. In addition, this second crossing at the location proposed would also have benefits in more broadly dispersing traffic across the road network in the town, relieving pressure on the A414 as it passes through the eastern part of the town. This second crossing could be provided as early in the phasing of the development as possible but certainly before the occupation of circa 4,000 units⁸.
- 4.17. To encourage sustainable movement patterns from the site a bus service would need to be provided from the occupation of circa 100 units. Initially it is envisaged that the bus route would be a shuttle running through the Gilston Area and connecting to the rail station and Harlow town centre, probably at a frequency 2 buses per hour between 7am and 7pm. As the site is built out the bus service would extend deeper into the site running on the central spine route. A subsidy will need to be provided during the early years of the development. There is a balance to be achieved between the level of subsidy provided and the frequency of the service. Frequency affects the attractiveness of the service to potential users and therefore the revenue that is likely to be received.
- 4.18. The construction of second crossing of the Stort Valley will transform how buses are able to serve the site. Two road crossings of the Stort Valley also opens up the opportunity for flexible use of this highway capacity. A tidal flow system could be used on the existing Fifth Avenue crossing to provide bus priority into the rail station and Harlow town centre in the morning peak and priority toward the Gilston Area in the evening peak.
- 4.19. The encouragement of sustainable movement patterns would also extend to creating attractive and coherent cycle connections between the site and Harlow town. The Stort Valley has the potential to accommodate a number of north south connections which could connect in with the existing east west route along the Stort Valley. The challenges to be addressed are the means by which the A414, the River Stort and railway line can be crossed to provide routes that are accessible, direct and comfortable. It is proposed that cycling infrastructure could be provided progressively as the Gilston Area is built out.

⁸ Trigger to be more accurately determined through ongoing further technical work.

- 4.20. As part of the emerging evidence base work over the coming months, a number of options for the improvement of pedestrian and cycle traffic will be considered, to ensure the opportunities for sustainable movement between the Gilston Area and Harlow town centre are maximised, as well as providing greater opportunities for access to network within the Stort Valley.
- 4.21. The Interim Transport Strategy that has been produced to inform this Delivery Plan (see **Appendix 4**) will be developed over the coming months to support the on-going development of the Initial Concept Masterplan, towards the District Plan Pre-Submission Consultation.

Energy Considerations

- 4.22. As far as energy infrastructure strategy is concerned, the Initial Concept Masterplan provides the opportunity to explore the potential to supply energy centrally or connect to any existing or planned district energy network where this is available and deemed feasible. In line with the energy hierarchy promoted by the draft EHDC District Plan, the following steps describe the strategic approach that could be adopted towards carbon reduction for the development:
- 4.23. *Step 1: Be Lean (use less energy):* Controlling demand presents the most effective way of reducing energy consumption and resultant carbon emissions from the development. Therefore, the strategic approach for the Initial Concept Masterplan development would be to reduce the need to condition buildings by considering in the first instance, an appropriate suite of passive design measures prior to the consideration of integrating low and zero carbon (LZC) technologies.
- 4.24. *Step 2: Be Clean (supply energy efficiently):* There's an opportunity to achieve additional reductions in the development's overall carbon emissions through the specification of high-efficiency building services in order to limit losses in energy supply, storage and distribution.
- 4.25. *Step 3: Be Green (assess LZC energy sources):* Subsequent to the inclusion of passive design and energy efficiency measures, there is an opportunity to further reduce the development's carbon emissions through integration of appropriate renewables and/or LZC technologies. The technologies considered could potentially displace grid supplied gas and/or electricity.

- 4.26. *Step 4: Allowable Solutions (offset residual carbon off-site):* Any residual carbon emissions from the development after the implementation of the first three steps of the energy hierarchy could be dealt with via an agreed allowable solution(s); that is, offsetting through:
- Investment into local energy schemes;
 - Retrofitting existing buildings elsewhere; and
 - Payment into an offset fund held by the local authority.
- 4.27. The draft EHDC District Plan seeks to promote the implementation of centralised energy generation; hence, the proposed energy strategy for the Initial Concept Masterplan development would mainly comprise the use of on-site energy generation centres. It is envisaged that the energy centre could be powered with a combined heat and power (CHP) system due to the high efficiency and potential savings (carbon and cost) that could be realised from the technology (typically around 20% – 30%). However, further studies would be required to determine appropriate fuel type (gas, biomass, fuel cell, bio methane, etc.), sizing requirements and flue implications.
- 4.28. It is worthwhile to note that as part of the UK's low carbon transition programme, the national grid is expected to become progressively decarbonised especially with the prospective launch of new nuclear facilities and offshore wind generation. This could potentially diminish the anticipated carbon savings from any low zero carbon technology such as CHP – these savings would become significantly reduced as grid energy supply becomes cleaner. However, until when these systems go live on the grid, the use of onsite-CHP presents the main energy and carbon saving option for the proposed Land North of Harlow development, but would be subject to periodic reviews.
- 4.29. Based on the estimated peak loads and energy demand from the Initial Concept Masterplan, a notional energy centre of circa 1,000sqm would be required at each phase of the development (a total of three); that is, 'phase by phase' installation. However, it may become apparent from further studies that a single energy centre might be the preferred solution for this development at a time when greater certainty regarding both the quantum and phasing of the development is finalised.

Sustainability Considerations

- 4.30. The Gilston Area was given a regional allocation within the adopted South East Plan as a suitable location for accommodating a significant level of housing growth. This is further affirmed by inclusion in the emerging EHDC's District Plan as a location for development. More so, the four major settlements within East Herts are all within the Green Belt; hence, Green Belt release is considered a logical consequence for future building. However, these sites come with their constraints and challenges while also presenting vast opportunities for EHDC, the Gilston Area and neighbouring communities. A Green Belt review suggests that the Land North of Harlow makes a limited contribution towards the four main purposes of Green Belt – the fifth, assisting urban regeneration was not considered locally relevant. That being said, sustainability will be ingrained in the Initial Concept Masterplan for the Gilston Area and would inform CPP's response to the challenges that characterise the site – some of the key issues are highlighted below.
- 4.31. **Local landscape character:** The challenge of enhancing a landscape character particularly with respect to large scale developments is being addressed by adopting Sir Frederick Gibbert's original design for Harlow Town which has informed the Masterplan response to the site.
- 4.32. **Infrastructure:** A study carried out by others and discussion with relevant utility service providers indicated at this stage that there is sufficient capacity to service the Gilston Area. This technical review also demonstrates the viability of delivering the required infrastructure for the proposed Initial Concept Masterplan while also implementing improvements to the existing infrastructure including the following:
- *Energy:* Provide onsite energy generation centres with possible integration with renewable;
 - *Utility services:* Provide enhancement to existing wastewater services via onsite treatment facilities;
 - *Transport:* Provide improvement to current transport links and nodes;
 - *Green:* Protect and conserve existing landscape and aspire to enhance where feasible;
 - *Water:* Promote onsite demand management and reduce consumption at development level;
 - *Social:* Provide adequate platforms for social inclusion and community participation.

- 4.33. **Noise and visual interference:** A Green Belt review has shown that the A414 running north of the flood plain presents the most disruptive element to the River Stort corridor. Appropriate onsite noise attenuation measures are currently being explored for dealing with this issue.
- 4.34. **Sustainable transport:** The Gilston Area presents an opportunity for a paradigm shift with respect to transportation and emphasis would be given to creating sustainable alternative modes of connection with neighbouring communities. As noted above cycling and walking would be highly promoted especially taking into account the significant recreational amenity provided by the river valley.
- 4.35. **Biodiversity and climate change adaptation:** In addition to the need to protect and conserve the intrinsic biodiversity of the Gilson Area and neighbouring Stort Valley, developing and implementing a Green Infrastructure Management Plan (GIMP) could provide an opportunity for the Gilston Area to incorporate resilience to the potential adverse effects of changing climate. Some of the measures that could be promoted by the GIMP include the following:
- Protection and retention of local biodiversity and possible enhancement where feasible;
 - Integration of green roofs / walls, appropriate tree planting and landscaping into the development;
 - Implementation of the local Biodiversity Action Plan and a long-term maintenance strategy;
 - Integration of an appropriately scaled Sustainable Urban Drainage System (SUDs).
- 4.36. **Waste management:** An appropriate development-wide waste management strategy would be agreed with the Council; however, the development would aim to minimise the burden on existing waste infrastructure and reduce waste to landfill – hence, the overall waste strategy could potentially incorporate either of these which could be provided within the development site:
- A traditional but integrated sustainable waste management service with a focus on at source waste segregation and use of communal waste collection/storage, on-site composting vessels and compactors;
 - A fully automated underground waste management service (modern unobtrusive waste collection system – includes onsite composting vessels and compactors).

5. Infrastructure Requirement and Costs

Infrastructure Requirements

- 5.1 The infrastructure requirements identified within this HTIDP have been informed by a range of high level technical work and information provided by EHDC, Hertfordshire County Council (HCC) and Essex County Council (ECC).
- 5.2 Infrastructure delivery would be the responsibility of a range of both public and private sector stakeholders / agencies, and the broad requirements identified by CPP's technical team are indicated at **Table 2**.
- 5.3 Some of the facilities included in this HTIDP may not be required as their need is dependent on further consultation with the relevant stakeholders.
- 5.4 Given the relatively early stage in the development of the District Plan, the infrastructure information is provided by CPP on a without prejudice basis and should be understood as a hypothetical illustration. Whilst the HTIDP is considered a robust illustration, CPP and their project team will be developing their technical evidence base and Initial Concept Masterplan over the coming months, and this may necessitate revisions to the required infrastructure. Accordingly, CPP should not be bound by the content of this document in respect of future development plan documents or planning applications.
- 5.5 At the appropriate stage of the development, the opportunity of delivering the required energy services for the development could be explored in collaboration with energy services providers; that is, either an energy servicing company (ESCO) or a multi-utility serving company (MUSCO). The ESCO or MUSCO in partnership with the developers could provide the required capital funding for the full extent of the design, installation, operation, metering and billing, and capital financing of an energy centre and heat network. In turn, the ESCO or MUSCO would recoup their initial investment by direct billing of customers over an agreed contract term.

Table 2: Estimate of Broad Infrastructure Requirements and Delivery Responsibility

Infrastructure Items			Need	Source of Funding / Delivery	Ongoing Responsibility / Delivery Partners
Physical	Transport	Adoption Allowance	Road construction / maintenance	Developer / HCC	HCC
		Sustainable Transport	Impact mitigation	Developer	HCC
		Water	Servicing	Developer	Utility infrastructure provider
		Sewerage	Servicing	Developer	Utility infrastructure provider
		Electricity	Servicing	Developer	Utility infrastructure provider
		Gas	Servicing	Developer	Utility infrastructure provider
	Other	Noise Attenuation Bund	On site noise attenuation work	Developer	EHDC
Social	Education	Primary Education	Population impact: circa 3 x 3FE	Developer (land and some construction cost contribution if viable) / HCC	HCC
		Secondary Education	Population impact: circa 1 x 8/9 FE	Developer (land and construction cost contribution if viable) / HCC	HCC
	Supporting Land Uses	Mixed use neighbourhood centres including mix of retail, commercial, health and	Population impact	Developer / EHDC	Developer / EHDC/ co-operative trust

		community uses			
Green	Open / Green Space, including Playing Fields		Population impact based on policy requirements	Developer	EHDC
	SUDs / Flood Attenuation		On site works	Developer	Environment Agency
	Environmental Infrastructure Area(s)		On site sustainability works, to include CHP / energy centres	Developer / energy provider	Energy services companies (ESCO OR MUSCO)
	Community Waste Management Facility		Construction and maintenance	Developer	Utility infrastructure provider
	Landscape Treatment		Masterplanning on site works	Developer	EHDC

Physical

Transport

5.6 Based on the technical work carried out by HCC, ECC and ABA to consider the impact of a significant residentially led urban extension in the Gilston Area, a range of on and off site highways modifications, as well as sustainable transport enhancements and demand management measures, are anticipated to be required at various stages of residential development.

5.7 Based on the Initial Masterplan Concept of circa 4,600 units, the primary on and off site highways modifications (both new and improved) are envisaged to be:

- Eastwick roundabout improvements;
- Widening of the existing Fifth Avenue Stort Crossing to provide two traffic lanes in each direction;
- Burnt Mill roundabout capacity upgrade;
- A414 / Church Lane junction improvements;

- New junction along A414 approximately 1km east of Church Lane, or a new junction slight to the east;
- A secondary Stort Crossing;
- Fifth Avenue Crossing potentially to be adapted for tidal flow system with bus priority post completion of Secondary Stort Crossing; and
- East-West spine link road through the Gilston Area.

5.8 The broad triggers for these key pieces of transport infrastructure are included within **Table 7**.

5.9 Over the coming months the Interim Transport Strategy that has informed this HTIDP will be developed further. This developed Strategy will contain detailed information on baseline conditions, current traffic survey information (if not provided by ECC), multi-modal trip assessment and distribution exercise, detailed traffic modelling to establish capacity of improved / new junctions and associated trigger points, modelling of bus services to identify viability and subsidy levels, and broad travel planning measures; for example, personal travel planning, discounted bus passes, a cycling workshop, car-sharing scheme, car club spaces and electrical vehicle charging points.

5.10 Off-site measures will be funded in part or in whole from Section 106 contributions.

Utilities, Waste and Energy

5.11 Utilities, waste and energy infrastructure improvements will be required in order to accommodate future development in the Gilston Area.

5.12 Data collection on utilities as part of the evidence base is thus far is at an early stage. A Preliminary Utility Services Appraisal (PUSA) will need to be carried out to support these proposals. However, from the useful information provided by Places for People for the Gilston Area, it appears that in considering the existing and forecasted capacity across the utility network and on the basis of an Initial Concept Masterplan providing for up to 5,000 residential units, improvements / upgrade / diversions of the existing networks could be sufficient, with the possibility for providing one primary sub-station.

5.13 In terms of waste facilities, there could also be the opportunity for a waste treatment plant on site. This could potentially link into the overarching energy strategy for the Initial Concept Masterplan via the connection of the waste treatment plant with an energy from waste (EfW) facility; thus creating a closed loop system and to a large extent further reducing the carbon intensity of the development. All of these provisions need to be reviewed as part of CPP's

PUSA however these land use assumptions are a useful starting point for the purposes of this document.

5.14 In terms of energy infrastructure, the Initial Concept Masterplan incorporates three energy centres, as discussed under the energy considerations and infrastructure requirements sections of this document.

5.15 SUDs Strategy and Noise Attenuation Bund

5.16 CPP have yet to undertake a Flood Risk Assessment (FRA), however, the area is not within a flood risk zone and initial consideration has been given in developing the Initial Concept Masterplan on a preliminary SUDs strategy which could be delivered as part of the development of the Gilston Area. These measures could include:

- Green/blue roofs;
- Permeable paving;
- Attenuation tanks;
- Garden (design and materials); and
- Swales, retention ponds and use of the nearby Meads as flood meadows.

5.17 The above items have been considered as part of the initial costing exercise.

5.18 Through the development of the Initial Concept Masterplan, the potential need for a noise control scheme in the south west of the Gilston Area has also been considered due to the noise from the adjacent A414.

5.19 Hoare Lea have undertaken detailed noise measurement and acoustic modelling to determine the extent of the noise control measures required. It is expected that with the use of a 5m high earth bund⁹, noise levels external to future dwellings can be controlled to levels within World Health Organisation's (WHO) guidelines for the larger part of the development area.

⁹ While we have assumed a bund within this document, a similar effect could be achieved with other solid screening methods, e.g. living walls, fencing, glazed screens, or a combination of measures, using similar heights and locations.

- 5.20 Use of a bund of this size is expected to control noise levels to within WHO guidelines for properties located within approximately 100m north of the roadside to the west of the development site, and approximately 200m north of the roadside to the east of the site.
- 5.21 Provision of land take or width of the roadside bund at this stage is suggested to be a minimum of 20m with the attached Earth Bund Acoustics Note prepared by Hoare Lea (see **Appendix 5**) considering a 30m bund. The actual land take of any bund will need to be considered further in conjunction with a structural engineer to determine the final form of the bund and the resulting structural requirements.
- 5.22 It should be noted that the modelling of an earth bund and subsequent commentary has been made using existing topographical data; modelling would need to be carried out once again with proposed levels when known.
- 5.23 Additional noise control measures could also include the careful orientation of properties so noise sensitive areas are less exposed to noise sources, and enhanced glazing and ventilation systems.
- 5.24 It is anticipated that the fill for any bund construction could be sourced from general excavations during the early stages of construction in the Gilston Area; potentially from the spine link road and from the construction of the SUDs.

Social

Neighbourhood Centres / Social and Community Infrastructure

- 5.25 The development of the Gilston Area will generate a significant requirement for a varied range of non-residential land uses to support the new community, including education facilities, community halls, healthcare facilities and supporting retail and commercial floorspace.
- 5.26 Alongside other community infrastructure, these uses will help to physically and socially form the neighbourhood centres within the Gilston Area, of which the Initial Concept Masterplan proposes three. These uses would be a mixture of A1 to A5 units of a small scale (on average circa 200 square metres GIA).
- 5.27 The proposed location and distribution of the neighbourhood centres and community uses can be seen within the Initial Concept Masterplan (at **Appendix 2**).

5.28 At this stage of the emerging proposals, it is anticipated that the neighbourhood centres would be provided at cost, however through lettings and/or sales, a return could be generated for the developers.

Green

Open Space and Recreation

5.29 Given the sites adjacency to the Stort River Valley with its floodable meadows, management of surface water drainage will need to be addressed in a positive manner in order to mitigate flood risk. The appropriate SUDs features will be integrated and enhanced within the Gilston Area to appropriately accommodate the requirements of up to 5,000 new homes.

5.30 Furthermore, the Initial Concept Masterplan and the accompanying Initial Green Infrastructure Concept Plan (see **Appendix 2**) includes the provision of significant volumes of linked open space, of circa 140 hectares, as part of the development of the Gilston Area. This provision (a more specific breakdown is included at **Table 2**) could comprise a range of open space including:

- Natural and semi-natural green space;
- Parks and public gardens;
- Outdoor sports facilities;
- Amenity green spaces;
- LEAPS and NEAPS; and
- Allotments.

5.31 The objective would be to create a network of greenways and spaces using the existing green assets in the form of woodlands, copses and hedgerows as ecological stepping stones, linked by new planting. By establishing new belts of trees it will be possible to connect Pogden's Wood and Lord's Wood in the west with the existing tree belts either side of Eastwick Road, then follow the route of the pylons across to Home Wood and Gilston Park to Rectory Plantation and High Wych Road. The tree and woodland lined streams running down the valley slopes at Hunsdon Brook, Brickhouse Farm, Eastwick Hall lane and Fiddlers Brook Gilston should also be retained and reinforced. This will establish a network of green wedges which reflect those created by Gibberd as part of his plan for Harlow.

- 5.32 Other landscaping works, such as the treatment of the noise attenuation bund (as discussed above), could include improvements to existing hedgerows and trees through additional planting. This work would ideally to be associated with delivery of offsite landscape enhancements, particularly the provision of new crossing points across the A414 the Stort Navigation and the railway line.
- 5.33 Indicative phasing of the green infrastructure has been included within **Table 7**.

Infrastructure Costs

- 5.34 In order to demonstrate the deliverability and viability of the Gilston Area as a residentially led urban extension, WTP, the appointed cost consultant, have reviewed the infrastructure inputs identified by the project team above and advised on the likely costs of their delivery.
- 5.35 These indicative costs, outlined below in **Tables 3** and **4** are considered to be fair and reasonable and draw on traditional provision within developments that the project team have previously been involved in, and reflect both abnormal costs and assumed Section 106 / 278 costs. These figures assume no inflation to any costs or revenues and are based on 2014 prices.
- 5.36 The costings do not factor any affordable housing provision as the HTIDP relates only to abnormal infrastructure only. The need for the affordable housing requirement to be flexible and appreciative of the infrastructure requirements has been outlined in previous submissions to EHDC. The aim would be to deliver in the region of 35% affordable housing (circa 1,610 units of 4,600) subject to planning and viability negotiations at the time of a strategic planning application.
- 5.37 A number of the potential Section 106 requirements will be provided on-site through the development itself and as such will not be subject to any further financial obligation. It is obviously a theoretical exercise at this stage in advance of a more exact masterplan or any planning application. No input has been received from EHDC or HCC at this stage.
- 5.38 The lack of detailed discussion or agreement over planning contributions at this stage, highlights the need for flexibility within the District Plan and approaches to the development. This HTIDP should be considered as an initial steer only.
- 5.39 The below costings assume normal ground conditions. The costings are for construction works only and do not include allowance for professional fees or VAT.

5.40 The below costings are also exclusive of any CIL payments on the basis that EHDC have not as yet drafted or adopted any CIL evidence or charging schedule. Furthermore, given the infrastructure rich “payment in kind” within the Initial Concept Masterplan, EHDC are urged to consider a nil or nominal levy within the area.

Table 3: Social Infrastructure Developer Contributions (Indicative)

Infrastructure Category	Indicative Requirement (Assumed)	Developer Contribution
Primary Education	On basis of impact - circa 3 x 3FE	Serviced land and financial contribution toward construction, as included within Masterplan (Costs in Table 4)
Secondary Education	On basis of impact - circa 12 x 8/9FE	Serviced land and financial contribution toward construction, as included within Masterplan (Costs in Table 4)
Open Space, Sport and Recreation	Circa 140ha within Masterplan	On site provision
Community Facilities	On basis of population impact (see Table 1)	On site provision
Travel Plan	On occupation of first dwelling, to serve the development of a period of 3 years after completion	£2,500,000 (based on £500 per dwelling)
Bus Subsidy	New bus loop. Initial	£3,000,000 (based on £500

	developer subsidy.	per dwelling
Fire / Rescue	£100 per dwelling	£460,000 (based on 4,600 dwellings)
Recycling Services	£100 per dwelling	£460,000 (based on 4,600 dwellings)
TOTAL		Circa £1,200 per dwelling (based on 4,600 units)

Site Abnormal Costs

- 5.41 These separate cost heads are for individual on site infrastructure. They are unique to the development.
- 5.42 **Table 4** below outlines these costs and includes likely off-site highways contributions.
- 5.43 The cost summary includes hypothetical estimates at this stage.
- 5.44 Site abnormalities do not include those costs applicable to the building of residential properties and relevant services. These have not been outlined as the HTIDP is not a full economic appraisal. Other costs which have not been factored in include:
- Secondary and tertiary infrastructure;
 - On plot infrastructure and external works/public realm;
 - The fitting out of buildings generally; and
 - The provision of energy centre plant, equipment and distribution pipework.

Table 4: Indicative Total Site Enabling Costs and Abnormals (£)

Items	Indicative Cost
Education (Primary)	£21m
Education (Secondary)	£20.8m
Flexible Workspace	£6.25m
Local Retail Units	£34.9m
Community Centres	£2.7m
Place of Worship	£3m
Library	£1.25m
Crèche	£0.4m
Healthcare Centre	£5.5m
Noise Attenuation Bund	£0.5m
SUDs	£2m
Energy Centres	Provision of serviced land and construction cost of £2.7m
Community Waste Management Facility	Provision of land only assumed
Water Treatment Plant	Provision of land only assumed

Utilities (Electricity, Gas, Telecom, Water) ¹⁰	£6.9m
On-site Highways Works	£12m
Section 278 Works	£45.1m
Open Space, Sport and Recreation	£11.3m
TOTAL	£176.3m
TOTAL + Contingency @ 10%	£193.9m
Cost Per Unit¹¹	£42,169 per unit

5.45 The full costings report prepared by WTP is provided at **Appendix 6**.

¹⁰ Excluding any diversion costs.

¹¹ On basis of 4,600 units.

6. Gilston Area Housing Trajectory

Planning Period

- 6.1 It is estimated that the planning period would result in the delivery of the first residential completions in the Gilston Area in 2018/2019.
- 6.2 **Table 5** outlines the initial planning timescales. This reflects EHDC's timescales¹² for the adoption of the District Plan, however it excludes the potential production of a Broad Locations DPD, in line with the representations submitted in response to EHDC's Preferred Options Consultation Document.

Table 5: Estimated Planning Period (Up to On Site Commencement)

Stage of Progress	Estimated Date
EHDC District Plan Pre-Submission Consultation	February to March 2015
Examination in Public	July and August 2015
Adoption of EHDC District Plan (and CIL if pursued)	February 2016
Outline and Detailed Phase 1 Planning Application Determination by EHDC	Circa Q1 2017
Pre-Phasing Works Commence on Site	Circa Q3 2017

¹² As taken from EHDC's 'Local Development Scheme (LDS) Version 5' (December 2013), which was the latest version at time of writing.

Housing Trajectory

- 6.3 **Table 6** outlines the expected housing trajectory for circa 4,600 units within the Gilston Area. This trajectory should be considered as a broad estimate only at this stage as it is based on current and anticipated future market conditions of the area as well as typical build out rates for similar urban extension schemes within the South East, and assumes no market decline during this period. It assumes a number of developers would be procured to develop the entire site which would involve multiple sales outlets at any one time, subject to planning and site constraints on phasing. Build out rates also depend on marketability and sales which in turn is dependent on product which is at this stage undetermined.
- 6.4 Whilst the latest Initial Concept Masterplan indicates a residential capacity of circa 4,600, our representations in response to the EHDC's Preferred Options Consultation Document note that we favour the principle of an allocation for up to 5,000 up to 2031. This allows for an element of flexibility as the Initial Concept Masterplan and supporting technical evidence evolves.

Table 6: Indicative Housing Trajectory

District Plan Period	Year	Housing Completions	Cumulative Completions
District Plan Period 1	2011 / 12	Preparation and drafting of EHDC District Plan	
	2012 / 13		
	2013 / 14		
	2014 / 15		
	2015 / 16		
District Plan Period 2	2016 / 17	Securing of outline and detailed Phase 1 planning permission, and start on site	
	2017 / 18		
	2018 / 19	150	150
	2019 / 20	200	350
	2020 / 21	300	650
District Plan Period 3	2021 / 22	350	1,000
	2022 / 23	350	1,350

	2023 / 24	650	2,000
	2024 / 25	650	2,650
	2025 / 26	650	3,300
District Plan Period 4	2026 / 27	500	3,800
	2027 / 28	400	4,200
	2028 / 29	400	4,600
	2029 / 30	0	4,600
	2030 / 31	0	4,600

6.5 On the basis of this trajectory (and a total deliver of circa 4,600), housing completions would span three 5 year periods of the emerging District Plan, as follows:

- District Plan Period 2 (2016/17 to 2020/21) – Circa 650 units
- District Plan Period 3 (2021/22 to 2025/26) – Circa 2,650 units
- District Plan Period 4 (2026/27 to 2030/31) – Circa 1,300 units

Housing and Infrastructure Trajectory Plan

6.6 **Table 7** serves the purpose of linking the key triggers for the commencement or delivery (as appropriate) of infrastructure (physical, social and green) against the delivery of housing across the plan period.

6.7 CPP consider that this initial housing and infrastructure phasing strategy is commensurate with sustainably delivering the Gilston Area as a whole, whilst also ensuring that the sense of community and place is developed right from the start of development.

6.8 Clearly this is based on the Initial Concept Masterplan and the technical work that has been done up to this point to support its development. As the evidence base is further developed, this trajectory will be subject to change.

6.9 An Indicative Phasing Diagram is attached at **Appendix 7**.

Table 7: Indicative Housing and Infrastructure Trajectory Plan

District Plan Period	Year	Gilston Area Development		
		Indicative Phasing (as indicated on Appendix 7 – Illustrative Phasing Diagram)	Cumulative Residential Total	Key Infrastructure Triggers
District Plan Period 1	2011/12	Preparation and drafting of District Plan	0	N/A
	2012/13		0	N/A
	2013/14		0	N/A
	2014/15		0	N/A
	2015/16	Adoption of District Plan with Gilston Area Allocation	0	N/A
District Plan Period 2	2016/17	Securing Planning permission	0	N/A
	2017/18	Pre-Phasing Works	0	Start of preliminary energy, utilities and access infrastructure works Start of SUDs Start of advanced landscaping and acoustic bund Start of primary (and secondary) access roads Improvement to Eastwick Roundabout (site access) Improvement to Burnt Mill Roundabout Cycle Infrastructure Improvements (adjacent to Fifth Avenue Crossing)
	2018/19	Indicative Phase 1 (P1/P2/P3/P4)	150	FIRST RESIDENTIAL COMPLETIONS
	2019/20		350	1 st primary school (inc preschool/nursery)
	2020/21		650	Public realm enhancement
	2021/22		1,000	1 st neighbourhood centre (to include community hall, health centre, crèche, place of worship, library, retail and commercial)
	District Plan Period 3	2022/23		1,350

	2023/24	Indicative Phase 2 (P5/P6/P7/P8/P9/P10)	2,000	Improvements to existing Stort crossing (trigger – completion before occupation of 2,000 units tbc)) Further improvements to Eastwick and Burnt Mill Roundabouts are also needed to accommodate second carriageway
	2024/25		2,650	2 nd primary school (inc preschool / nursery)
	2025/26		3,300	2 nd neighbourhood centre (to include retail and commercial) Open space / greenspace New junction on A414 Extension of east west spine road Cycle infrastructure improvements into and across the Stort Valley. Potential cycle/walking bridge across A414 Secondary school (inc sports facilities)
District Plan Period 4	2026/27	Indicative Phase 3 (P11/P12/P13/P14/P15/P16/ P17)	3,800	Continued delivery of noise bund Landscaping and SUDs
	2027/28		4,200	3 rd neighbourhood centre (to include community hall, retail and commercial) Open space / greenspace to include playing fields/ recreational New junction on A414 at or adjacent to Church Lane Second crossing of Stort Valley (trigger occupation of 4,000 units (tbc)) Cycle infrastructure improvements into and across the Stort Valley (partially adjacent to new road crossing). Potential cycle/walking bridge across A414 Potential adaptation of Fifth Avenue Stort Crossing to accommodate tidal flow system
	2028/29		4,600	3rd primary school (inc preschool / nursery) Additional small scale supporting uses (subject to requirement) Landscaping and public realm COMPLETION OF RESIDENTIAL DEVELOPMENT

	2029/30		4,600	N/A
	2030/31		4,600	N/A

7. Conclusions – Deliverability and Viability

7.1 This HTIDP and Initial Concept Masterplan have been prepared to assist in the preparation of EHDC's Delivery Study linked to the emerging District Plan, which should be considered as an evolving document as the emerging Plan progresses towards Pre-Submission Consultation.

7.2 Taking into account the stage of the plan process EHDC are currently at, this document has demonstrated that:

- The Gilston Area is a **deliverable** and **viable** option, in terms of the NPPF and NPPG, for providing a residentially led development of up to 5,000 units, which would deliver significant regeneration benefits to the existing town of Harlow.
- The Gilston Area provides the only opportunity within the administrative area of East Hertfordshire capable of sustainably delivering this volume of housing (within the plan period of up to 2031), which is critical to meeting the overall housing needs of the District and its neighbours.
- The Gilston Area Initial Concept Masterplan for circa 4,600 units and the infrastructure requirements it generates have been initially costed by WTP and appraised by Savills Development. Although not provided in full as part of this submission due to sensitivity, this work demonstrates that the physical, social and green infrastructure required as part of the Gilston Area is viable.
- The design of the Initial Concept Masterplan has a number of key benefits in comparison to alternative plans for the area; namely, that it locates new development closer to the existing settlement of Harlow in the most sustainable location whilst minimising Green Belt and landscape impact and potentially requiring less transportation infrastructure to ensure the scheme is viable and deliverable in NPPF terms.
- The Gilston Area Initial Concept Masterplan is achievable in terms of the anticipated phasing of infrastructure delivery, where requirements and trajectories have been considered within this document.
- The Gilston Area can now be investigated further by EHDC, HCC and ECC (in their capacity as local and county authorities) on the basis of the content of this HTIDP to

further refine the anticipated requirements for physical, social and green infrastructure within the Gilston Area. CPP, alongside other landowners in the Gilston Area, will continue to develop the technical evidence base and Initial Concept Masterplan for the area leading up to the District Plan Pre-Submission Consultation.

- 7.3 On the basis of the evidence within this document, the Gilston Area should be included within the Pre-Submission Consultation Document as a viable and deliverable allocation for up to 5,000 dwellings based on CPP's Initial Concept Masterplan and which can be delivered within this plan period (up to 2031).
- 7.4 This HTIDP should be read in conjunction with the other suite of documents prepared on behalf of CPP with respect to the Gilston Area.
- 7.5 As previously stated, this document should be read as a hypothetical exercise and its circulation to EHDC is on a without prejudice basis for the purposes of supporting the development of the emerging District Plan Delivery Study. Future development in the Gilston Area is not bound by the content of this document.

Appendices

1. Site Location Plan, prepared by SpaceCraft Architects
2. A - Initial Concept Masterplan, prepared by SpaceCraft Architects
B - Unit and Density Schedule, prepared by SpaceCraft Architects
C - Initial Green Infrastructure Concept Plan, prepared by SpaceCraft Architects and Churchman Landscape Architects
D - Opportunities and Constraints Diagrams, prepared by SpaceCraft Architects
3. *Market in Minutes: UK Residential Development Land* (February 2014), by Savills Market Research
4. Interim Transport Strategy, prepared by Alan Baxter Associates
5. Earth Bund Acoustics Note, prepared by Hoare Lea
6. Gilston Area Infrastructure Cost Schedule, prepared by WT Partnership
7. Illustrative Phasing Diagram, prepared by Savills and SpaceCraft Architects