DEVELOPMENT MANAGEMENT COMMITTEE – 16 NOVEMBER 2021

Application Number	East Herts Council Reference: 3/19/1051/FUL Harlow Council Reference: HW/CRB/19/00221
Proposal	Erection of a new road, pedestrian and cycle bridge; replacement of an existing rail bridge at River Way; alterations to the existing local highway network; lighting and landscaping works; listed building works to Fiddlers Brook Bridge; and other associated works.
Location	Land to The South and East of Gilston Village and North of River Stort Gilston Hertfordshire/Harlow
Parish	Eastwick, Gilston and Sawbridgeworth Parishes
Ward	EHDC: Hunsdon, Sawbridgeworth HDC: Mark Hall

Date of Registration of Application	12 June 2019
Target Determination Date	EHDC: 16 November 2021 HDC: 17 November 2021
Reason for Committee Report	Major application
Case Officer	Jenny Pierce

RECOMMENDATION

1. That planning permission be **GRANTED**

   A) subject to the conditions and the reason(s) set out at the end of this report, and

   B) That delegated authority be given to the Head of Planning and Building Control at East Herts Council, in consultation with the Director of Strategic Growth and Regeneration at Harlow District Council and with the Chair/s of their respective Development Management Committees, to finalise the detail of the conditions attached to their respective planning permissions. If any substantive additions or changes to conditions post Development Management Committee/s are necessary the matter would be referred back to them.

2. If the committee resolves to grant planning permission pursuant to recommendation 1, and Harlow District Council decides to defer determination or to consider amendments to the planning application for the part of the Eastern Stort Crossing development in its area, then the Decision Notice will not be released for a minimum period of four weeks, pending progress with the determination of the associated planning application by Harlow District Council.

1.0 Determination Arrangements

1.1 The development proposal relates to the road crossing of the Stort Valley, and as the district boundary follows the natural course of the River Stort, the application site straddles the boundary between East Herts and Harlow Council administrative areas. The proposal forming this application is known as the Eastern Stort Crossing or 'ESC'.

1.2 Duplicate applications were submitted to both Local Planning Authorities, East Herts Council and Harlow District Council, and therefore the application has an East Herts and Harlow planning reference number. This is in accordance with the Planning Practice Guidance which advises "where a site which is the subject of a planning application straddles one or more local planning authority boundaries, the applicant must submit identical applications to each local planning authority." To enable a comprehensive understanding of the proposals as a whole and consistency with regard to the issues to be considered in accordance with Planning Practice Guidance, this single joint report has been prepared which sets out an assessment of the proposal against the Development Plan of both LPAs. The report considers the respective parts of the proposal comprehensively against the relevant Development Plan, as appropriate, for each LPA, and all relevant material considerations. This process was agreed through a Memorandum of Understanding between the two LPAs, which provided that East Herts Council would be the administering authority with both LPAs working collaboratively to support the consultation processes, engagement with the applicant and the preparation of this report.

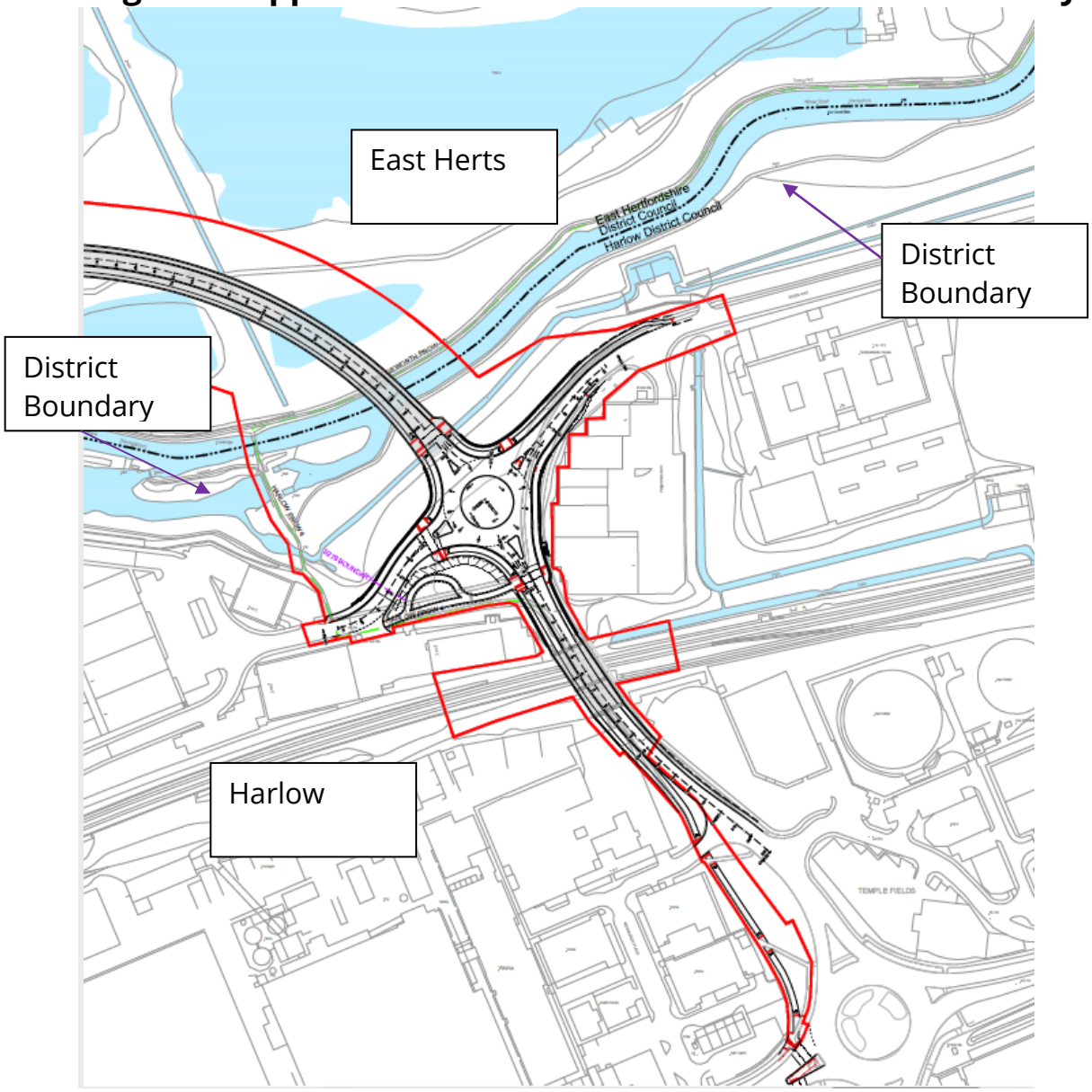
1.3 **However, both Local Planning Authorities are required to reach independent determinations with respect to the proposals only in relation to the part of the site that falls within their respective administrative boundary area, as illustrated at Figure 1 below, which shows an extract of the ESC at River Way with the district boundary marked. The part of the ESC to the south of the boundary line falls within the Harlow administrative area. The remainder of the ESC lies to the north of the boundary and within East Herts District as shown at Figure 3 below. Each Local Planning Authority will determine their part of the proposed application in accordance with its own Development Plan policies and any other material considerations which are relevant to development in its area.**

1.4 The proposal also straddles the two Highway Authority areas of Hertfordshire and Essex County Councils.

1.5 The recommendation set out in this report is that planning permission should be granted by both LPAs. However, in the event that one authority resolves to grant permission and the other resolves to defer the decision, Officers recommend that the approving authority delay issuing the decision notice for a period of not less than four weeks from the date of resolution in order that the deferring authority has sufficient time to consider and determine the application within their authority area. Either authority may, for example, be minded to consider any proposed amendments to the planning application to overcome concerns in the event of inconsistent decisions by the LPAs. However, each LPA is making an independent decision and reserve the right to issue a decision notice as soon as reasonably practicable following consideration by committee.

1.6 This report also includes a Schedule of Conditions, some of which are common to both authorities' areas, and some of which are relevant only to one authority reflecting the issues, mitigation or compensatory measures relevant to the applications in their areas. These are clearly labelled within the condition schedule.

Figure 1: Application Site Extract and the District Boundary



2.0 Context of this Application, the Gilston Area and Harlow and Gilston Garden Town

2.1 The proposed Eastern Stort Crossing (ESC) is a new pedestrian, cycling and vehicular route which runs between the A414/ Eastwick Road/ Fifth Avenue junction to the River Way/ A414 Edinburgh Way junction in Harlow to provide transport infrastructure to facilitate growth within the Harlow area and provide an additional link between the Gilston Area residential development (District Plan allocation Site GA1) and Harlow. The application, as amended, comprises:

- New pedestrian, cycling and vehicular route divided into Road 1, Road 2 and Road 3 linking the Eastwick junction to River Way in Harlow
- A central roundabout connecting the three roads together
- An access for all modes into Village 1 via a new junction which will also provide access to Terlings Park and Burnt Mill Lane (this part of the scheme is also included with the CSC application)
- An access into Pye Corner, Gilston
- A bridge over Fiddlers' Brook with enhancements to the Listed Fiddlers' Brook Bridge
- An access into Village 2 from Eastwick Road, north of Pye Corner, both in interim and final form

2.2 Full details are provided for the accesses, new pedestrian and cycle provision and the new road carriageway. However, details for the design of the area under the carriageway where Road 1 bridges Fiddlers' Brook and where Road 3 bridges the Stort Navigation and its associated towpath will be provided as part of the detailed engineering design stage to follow determination. This is addressed by a planning condition. Each of the elements of the proposal are detailed further in Section 3 in this report.

2.3 The application is submitted along with another full planning application (also submitted in duplicate to both LPAs) proposing the widening to the existing Eastwick (A414)/ Fifth Avenue Crossing over the Stort Valley known as the 'Central Stort Crossing' (see application reference: 3/19/1046/FUL (East Herts Council) and HW/CRB/19/00220 (Harlow Council).

2.4 All the applications have been submitted by the same applicant, Places for People Ltd (PfP) who own the majority of the land which comprises the Gilston Area GA1 allocation. The same applicant has also submitted an application for outline planning permission for the residential-led mixed-use development of 8,500 new homes which constitutes the majority part of the GA1 site allocation. The allocation provides for seven new villages to be developed in total, the PfP outline application (ref 3/19/1045/OUT) comprises six of these, known as Villages 1-6 delivering up to 8,500 homes and is shown at Figure 2

below edged red and described as Gilston Park Estate. In addition, a Listed Building Consent application has been submitted for works to the Grade II listed Fiddlers' Brook footbridge which lies immediately north east of Terlings Park reference 3/19/1049/LBC.

2.5 A separate outline application has been submitted in respect of Village 7 of the Gilston Area initially by Briggens Estate Ltd. However, following the transfer of the land in their ownership, this part of the GA1 site is now owned by Taylor Wimpey North Thames which has taken on the outline Village 7 application. This application proposes 1,500 new homes and associated village development under reference 3/19/2124/OUT and is shown edged black at Figure 2 below. The Village 7 and Villages 1-6 PfP proposals together comprise the whole of the Gilston Area allocation in the East Herts District Plan and together will deliver 10,000 homes. Neither of the two outline applications referred to above are yet ready for determination.

Figure 2: Site Area for Village Development Applications plus Central Stort Crossing and Eastern Stort Crossing

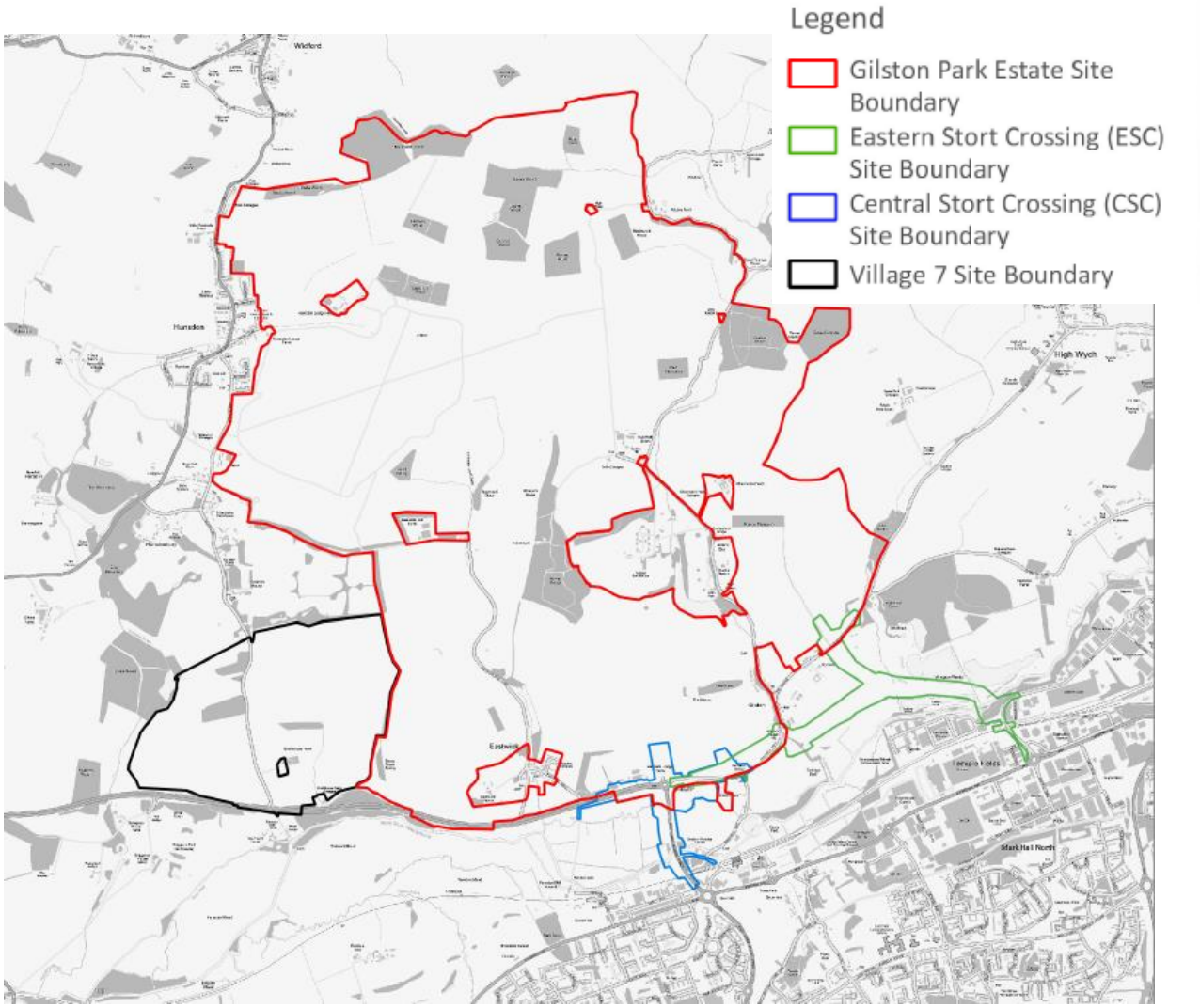
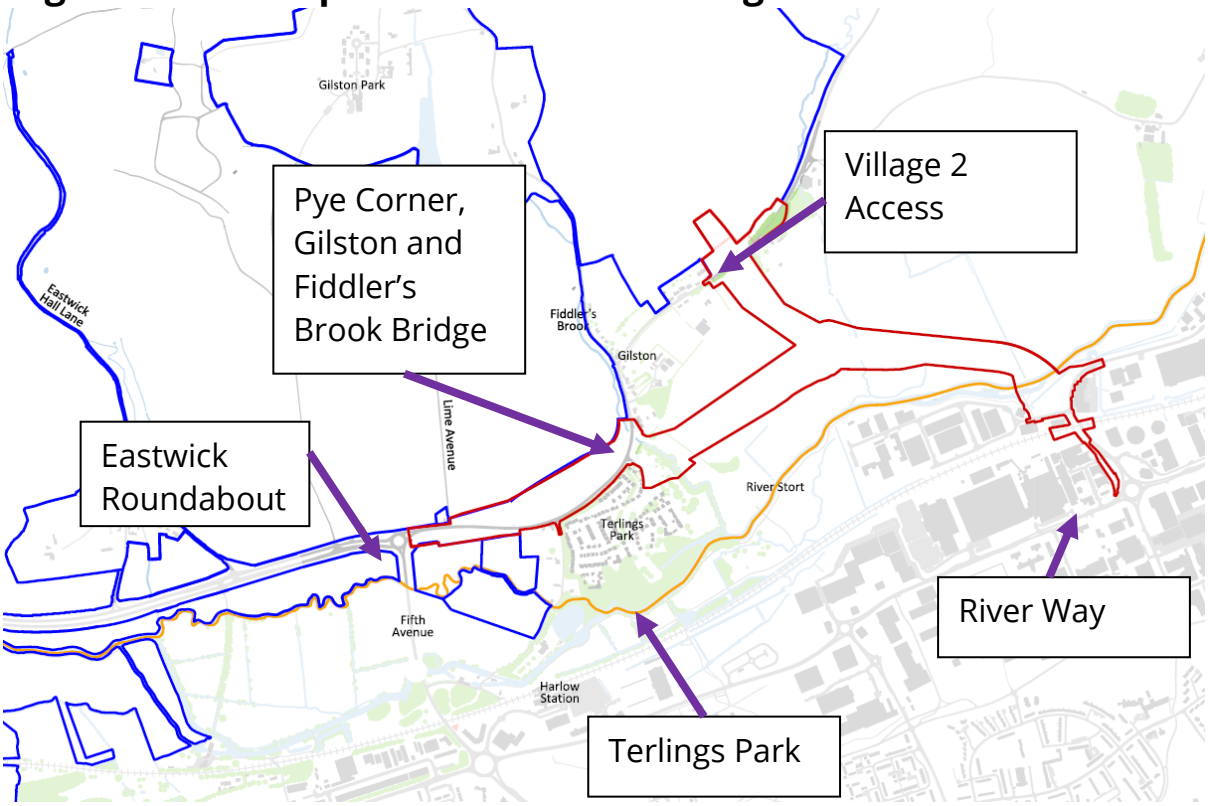


Figure 3: Site Map Eastern Stort Crossing



Key: Red line = application boundary for the Eastern Stort Crossing
Blue line = land within the ownership of PfP
Orange line = district and county boundary

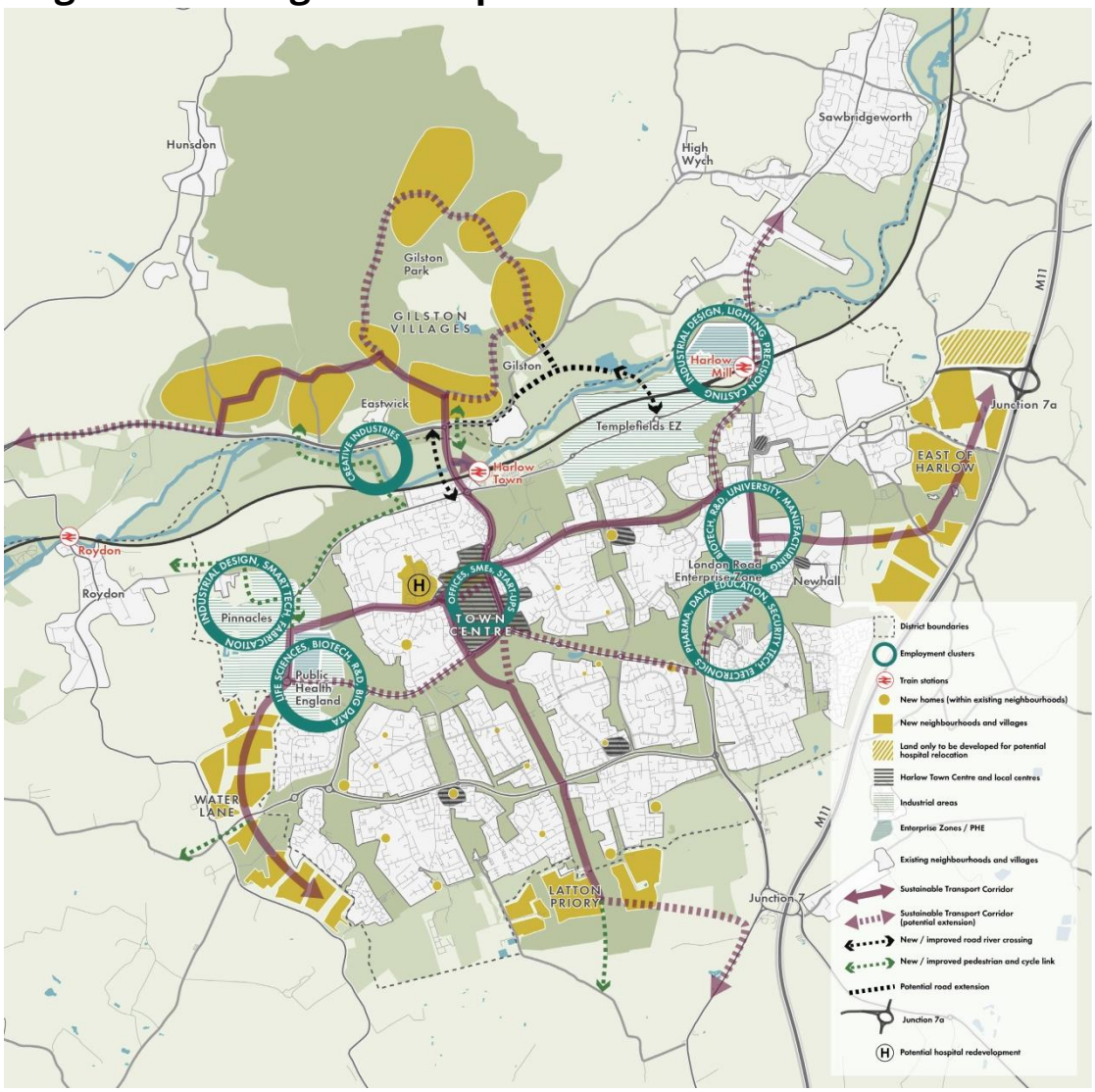
2.6 In January 2017 the Ministry for Homes, Communities and Local Government designated the Harlow and Gilston Area as a Garden Town. The Harlow and Gilston Garden Town (HGGT) involves partnership working between East Herts, Epping Forest and Harlow District Councils (being local planning authorities for land comprised in the Garden Town) and Essex and Hertfordshire County Councils (being the highways and education authorities) to deliver transformational growth in and around Harlow according to Garden City principles, to ensure that growth plans for the Garden Town support sustainable living and a healthy economy, provide a good quality of life for existing and future residents and to respond to local landscape and character.

2.7 The HGGT comprises new and existing communities in and around Harlow which are planned and promoted on Garden City principles. The strategic sites for the HGGT make up 23,000 new homes and includes: East Harlow; Latton Priory (south of Harlow); and the Water

Lane Area (west of Harlow); and the Gilston Area (north of Harlow). Figure 4 below indicates the locations of each of these strategic sites.

2.8 The Eastern Stort Crossing along with the Central Stort Crossing and the Gilston Area outline applications represent the first strategic planning applications to come forward within the HGGT, and the two crossing applications will be the first to be determined.

Figure 4 Strategic Development within the HGGT Vision



(HGGT Vision, 2018)

2.9 Working together the Garden Town partners have published a Garden Town Vision. This sets out that the pioneering New Town of Gibberd and Kao will grow into a Garden Town of enterprise, health and sculpture at the heart of the UK Innovation Corridor. It is to be adaptable, healthy, sustainable and innovative. The partners have also set up a Quality Review Panel (QRP) which can be convened to

consider policy documents and development proposals coming forward in the HGGT area. The QRP has considered the transport infrastructure proposals which the applications comprise as part of the wider overall Gilston Area development proposals. Paragraphs 4.8 to 4.23 below summarise the outputs of the QRP sessions.

2.10 A successful application was made by HCC (acting as accountable body for the HGGT partners) for Government funding via Homes England towards the early delivery of infrastructure required for the Gilston Area development and the wider HGGT. Approximately £171 million is now available ("the Grant"), in principle (subject to detailed contractual requirements and milestones in relation to the proposed development). By forward funding infrastructure such as the crossing schemes and community facilities such as schools, the Homes England Grant will support and accelerate the development of homes within the Gilston Area and the wider HGGT.

2.11 The Grant is made on the basis that it will not be repaid to Homes England provided that equivalent or higher quantums of developer contributions are secured and recovered by the Local Planning Authorities via planning agreements associated with the Outline Villages 1-6 development and other HGGT developments. Such developer contributions (which do not arise in connection with the Crossings but the outline housing applications) would be paid into and ring-fenced into a Rolling Infrastructure Fund (RIF). The RIF can then be used to fund other HGGT infrastructure moving forward in accordance with any planning obligations and relevant policy considerations.

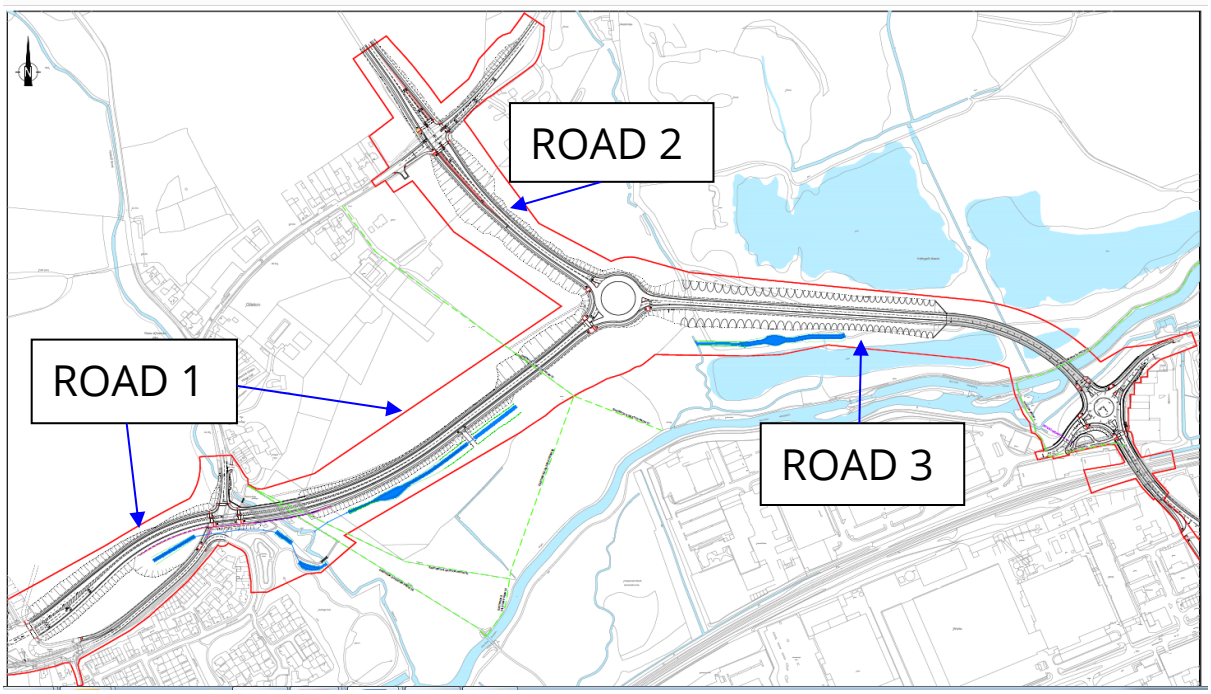
2.12 The HIG fund is time limited and must be drawn down and spent within a strict spending window. As a large proportion of the HIG fund will contribute towards the delivery of the Crossing infrastructure, the Applicant considers that it is important for work on the ESC to commence at the earliest opportunity. This application, and the associated proposals for the CSC are being presented to members now because they are the earliest of the applications which are ready for determination and in order that progress can be made in relation to the developments within the timescales planned for. The HIG

funding presents a unique opportunity to secure the delivery of the essential transport infrastructure in advance of the housing schemes forming part of the GA1 allocation. It is not however, considered to be a local financial consideration in the context of Section 70(2) of the Town and Country Planning Act 1990 (as amended by the Localism Act 2011) nor a material consideration in the context of Section 38(6) of the Planning and Compulsory Purchase Act 2004 for the purposes of determining this application. The Grant is not deemed to serve a planning purpose connected with the character and use of the land or which is fairly and reasonably related to the development comprised in the application. Therefore, it has not been and should not be taken into account.

3.0 Site and Scheme Description

3.1 The site encompasses an area of some 26.9 hectares overall with the proposed Eastern Stort Crossing route beginning at the proposed new Village 1 sustainable modes junction in the west, towards River Way, Harlow to the east. The route of the ESC is broken into three sections as indicated on Figure 5 below.

Figure 5: The ESC proposal



Road 1

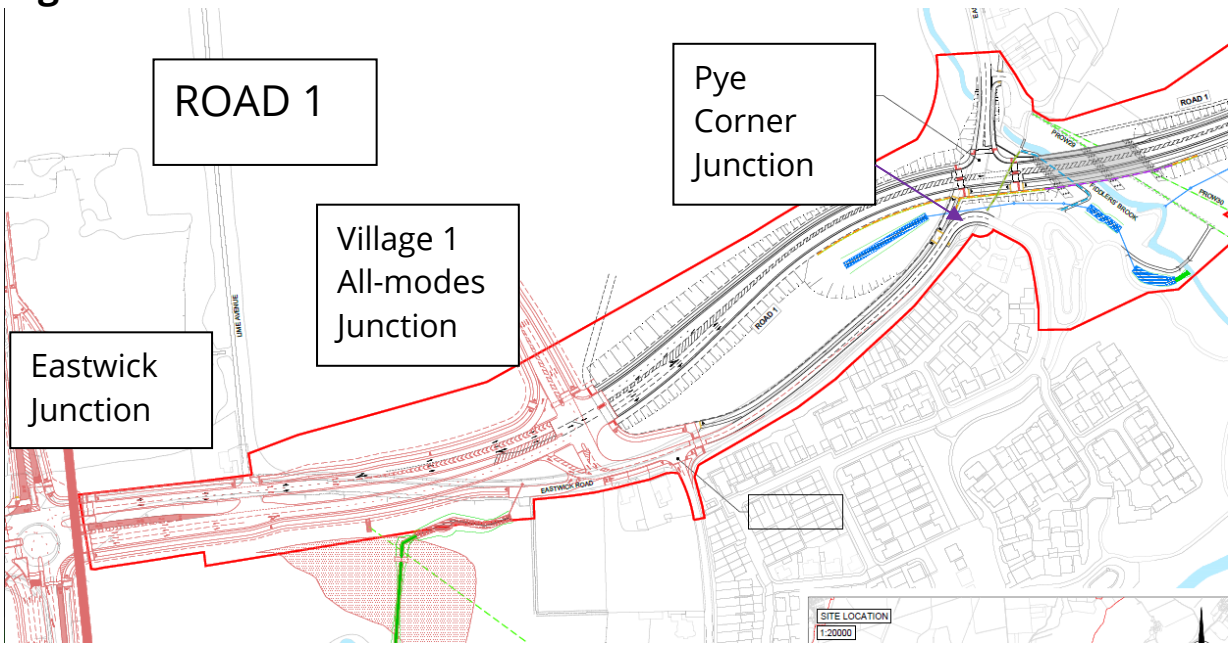
3.2 Road 1 comprises a realignment of the current Eastwick Road between the Fifth Avenue roundabout and Pye Corner and a new traffic signal-controlled junction providing an all-modes access into Village 1 to the north and Terlings Park and Burnt Mill Lane to the south. This western section of the ESC site overlaps with the red line boundary of the Central Stort Crossing application. Where the current Eastwick Road sweeps north eastwards towards and through Pye Corner, a new junction is created to provide access into Pye Corner from the realigned Eastwick Road. Road 1 then takes a new eastward alignment over a new road bridge structure spanning over Fiddlers' Brook between Terlings Park and Pye Corner (see Figures 6 and 7 below.

3.3 Road 1 then runs north-eastwards on a route that runs just beneath the crest of the northern slope of the Stort Valley, partly on land that was a former landfill area, which itself was a former quarry at Pole Hill. The road then joins a new roundabout which connects Road 1 with Roads 2 and 3 (see Figure 7below).

Road 2

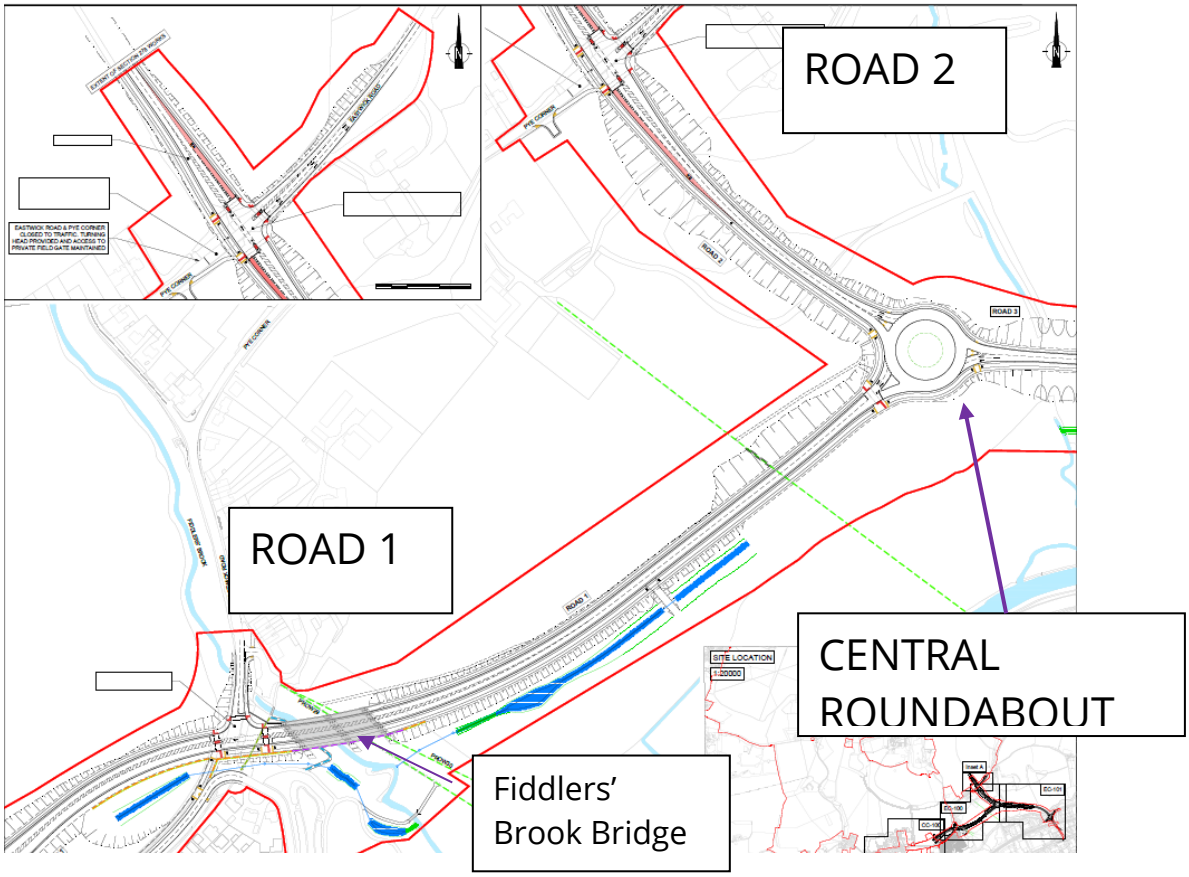
3.4 Road 2 runs northwards from the new roundabout through undulating landscape currently comprising scrubland and arable agricultural land, partly on the former Pole Hill landfill area. There is a requirement to cut in to the land in order to create a vertical alignment that meets highway design standards (for visibility and cycling gradients for example). Road 2 terminates at a new junction on Eastwick Road at the northern end of Pye Corner. This junction provides access into Village 2 to the north, to Eastwick Road to the east towards High Wych, and closes the north-eastern end of Pye Corner to all vehicular traffic, although access will be maintained and enhanced for pedestrians. Road 1 and Road 2, once constructed, will function as a bypass to Pye Corner and enable Eastwick Road traffic to be re-routed away from Pye Corner and the village of Gilston.

Figure 6: Road 1



Key: Red Line = application area for ESC (part)
Red colour road outline = included in CSC proposals

Figure 7: Road 1 Continued and Road 2



Road 3

3.5 Road 3 also starts at the new central roundabout, heading eastwards via a new road on top of an embankment overlying a series of culverts for the purposes of conveyance of flood water and connectivity of wildlife below the new highway. The valley contains several active and former gravel workings. Some of the former gravel pits have since been filled with water creating lakes. The culverted section of the ESC will run between some of these water features.

3.6 Continuing south-eastwards, Road 3 becomes an open span bridge that will pass over the Stort Valley and the River Stort Navigation (see Figure 8 below). Crossing the navigable river, the proposed route passes through dense woodland before reaching River Way and the industrial parks located adjacent to and southwards of the river. The dense tree cover obscures views northwards from the urban area to the Stort Valley. The eastern-most end of Road 3 includes the creation of a new roundabout on River Way connecting the new bridge with the urban edge of Harlow. The area is characterised by industrial buildings with dispersed planting and significant hard surfacing. The proposal, as amended, also includes the full replacement of the current River Way road bridge incorporating the new wider walking and cycling facilities, plus improvements at the River Way and A414 Edinburgh Way junction.

3.7 Within the river valley itself, the proposal includes the replacement of two small bridge decks which connect the canal towpath and river footpath to the Mead Park Industrial Estate in Harlow to the south. This path is currently poorly signposted and is very narrow, with poorly maintained footbridge structures, as such improving the structures will assist in providing an off-road alternative to the road bridge footway/cycleway.

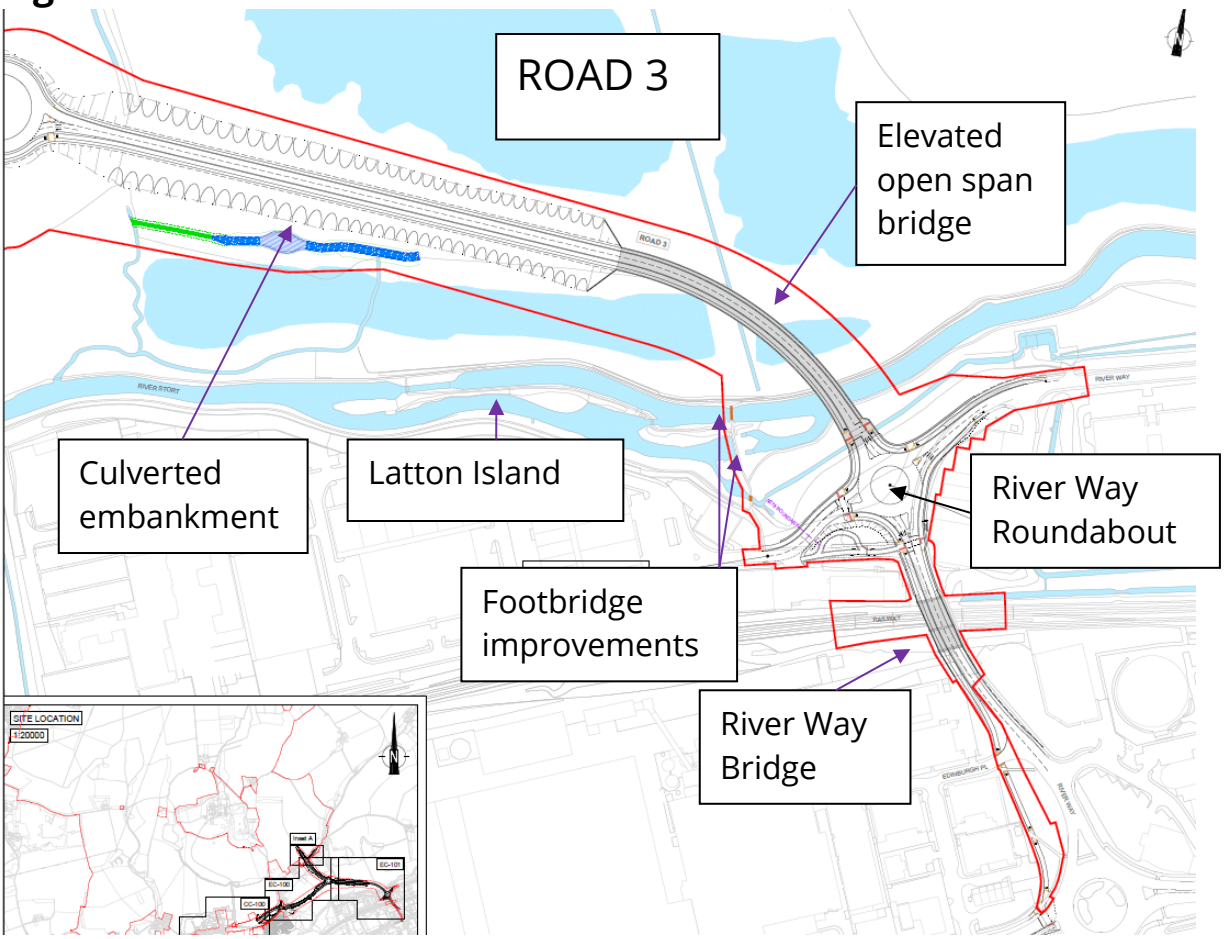
3.8 A segregated 5m useable width footway/ cycleway facility plus buffer zones is provided for the full extent of the ESC between Fifth Avenue/Central Stort Crossing and River Way/ Edinburgh Way junction.

3.9 There are three locations where highway bridge structures are required; Road 1 is required to span Fiddlers' Brook in the locality of

Terlings Park; Road 3 is required to span the Stort Valley and the Stort Navigation to the south east where the road links with the existing highway at River Way; and the River Way Bridge over the railway line, which is reaching the end of its serviceable life, is being replaced to, in part, enable a safe connection to be made that meets current highway safety standards.

3.10 Part of road 1 to the east of Terlings Park and most of road 2 and 3 run through land currently designated as Metropolitan Green Belt (see Figures 36 and 37 in the Green Belt section 12.8 below).

Figure 8: Road 3



3.11 A construction period of circa 2 years has been identified for Roads 1 and 2, and approximately 2 years for the construction of Road 3. It is anticipated that there will be a period of overlap rather than running consecutively.

4.0 Consultation and Amendment of the Application

4.1 The application was first subject to consultation between 14 June 2019 and 9 August 2019. As a result of consultation and engagement on the applications, the ESC has been redesigned. These amendments along with additional environmental information submitted by the Applicant were subject to consultation between 20 November 2020 and 24 January 2021.

4.2 As submitted, the application proposed an offset four-arm junction providing access in to Pye Corner to the north and Terlings Park to the south, involving the reorientation of the gateway into the residential estate. The principal changes include the realignment of Road 1 northwards away from Terlings Park and the provision of an additional access to village 1 via a new junction on the realigned Eastwick Road, enabling the retention of the existing access to Terlings Park along the current Eastwick Road which will be retained in situ and downgraded in function to now serve only the Terlings Park estate. This enabled changes to the proposed new Pye Corner junction comprising the removal of the southern arm into Terlings Park, moving the junction northwards and introducing new noise attenuation measures on the southern side of the junction, and reducing the deck width of the proposed new bridge over Fiddlers Brook. Figures 9 and 10 below show the original and amended proposal.

4.3 This application has an area of overlap with the Central Stort Crossing application, which as amended, now comprises both the main sustainable only access into Village 1 immediately north of the existing Eastwick junction and a new all-modes access into Village 1 to the east off the realigned Eastwick Road. This is to enable the delivery of both Village 1 accesses within the same phase of the Central Stort Crossing scheme. The application area for this ESC application has consequently been amended; it retains the western extent just east of the Eastwick Junction and now includes more land north of the Eastwick Road as shown on General Arrangement Drawing VD17516/EC-100.1-GA Rev: PO5. Figure 6 above also shows the overlap between the two crossing applications.

Figure 9: Original Terlings Park/ Pye Corner Junction

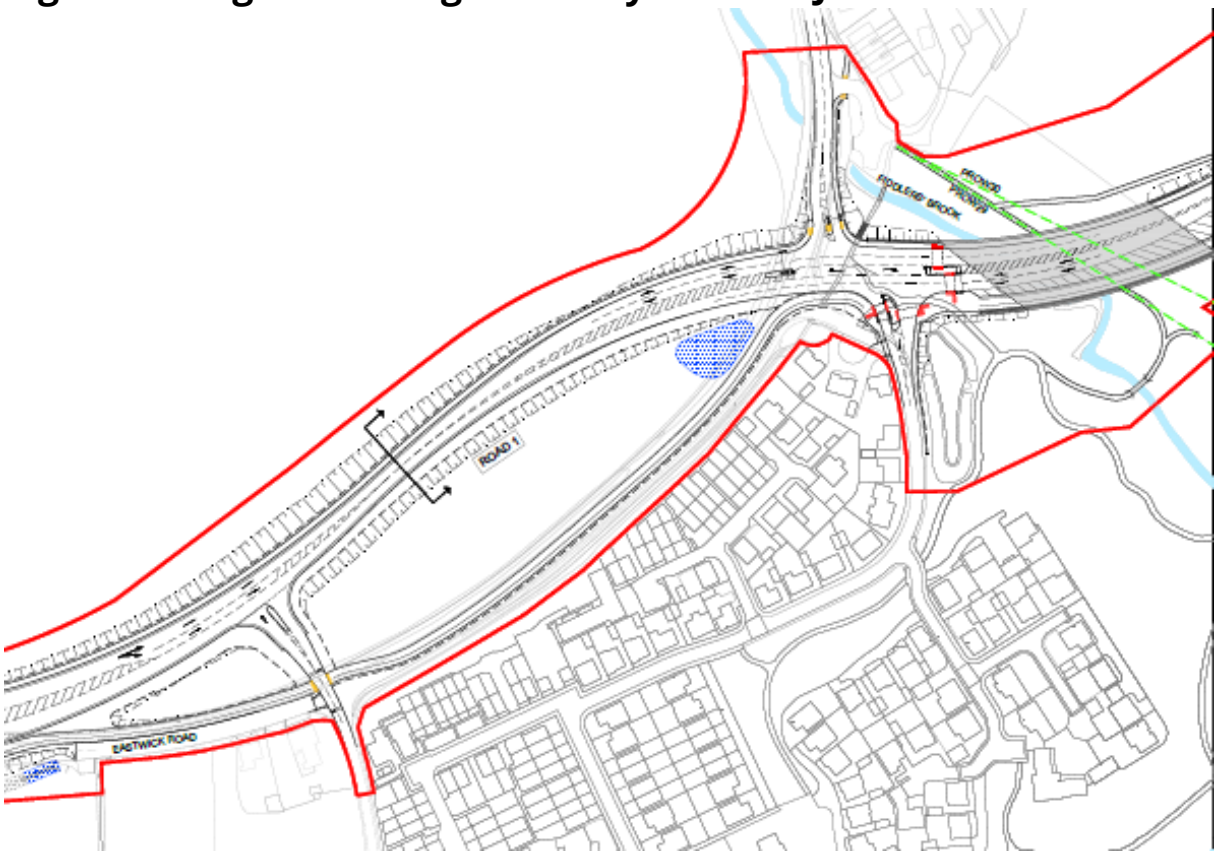
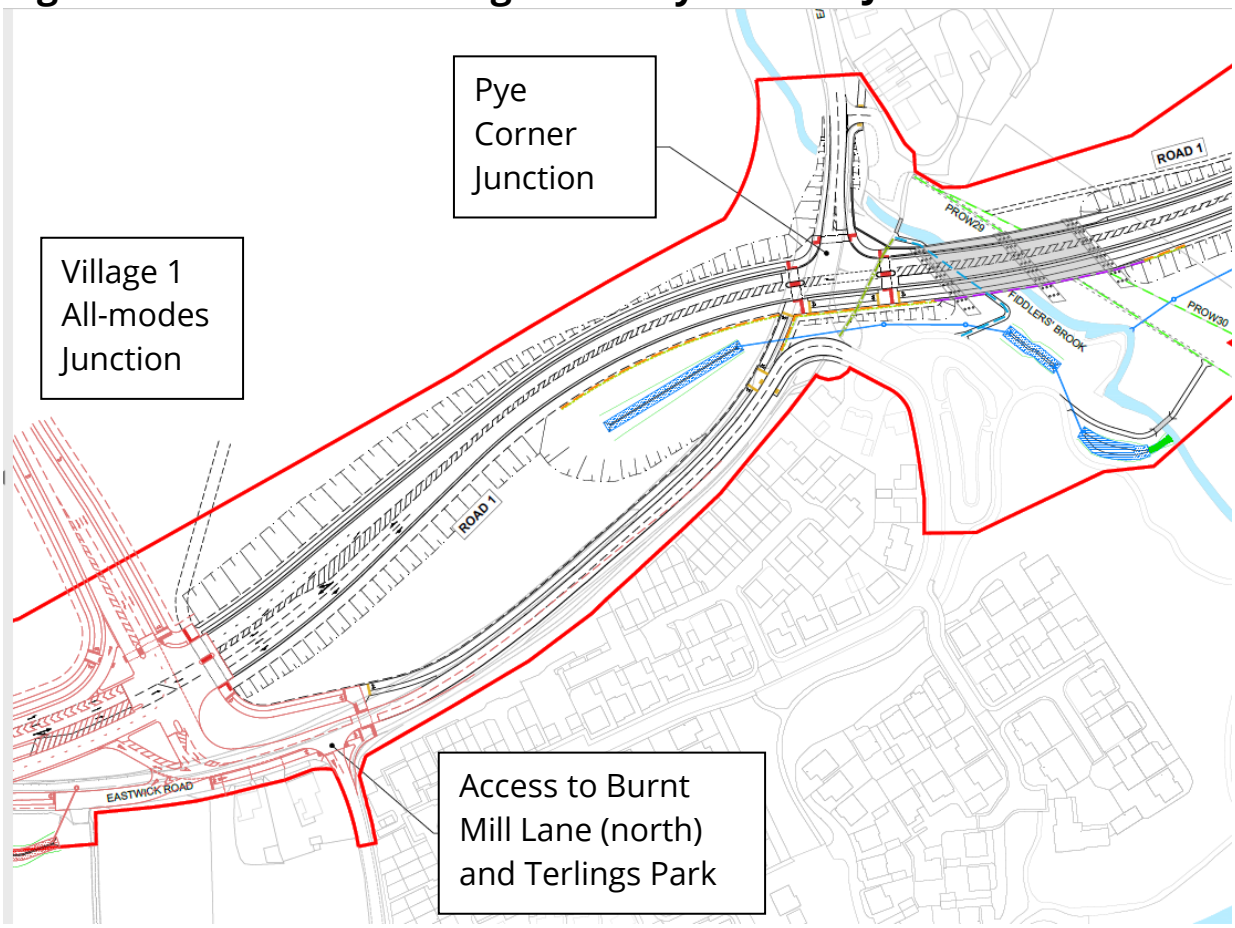


Figure 10: Amended Terlings Park/ Pye Corner Junction



4.4 The Village 2 access proposal has been upgraded from a roundabout to a signalised junction to better enable the management of flows from the village development. Figures 11 and 12 below show the original and amended junction design.

Figure 11: Original Village 2 Access

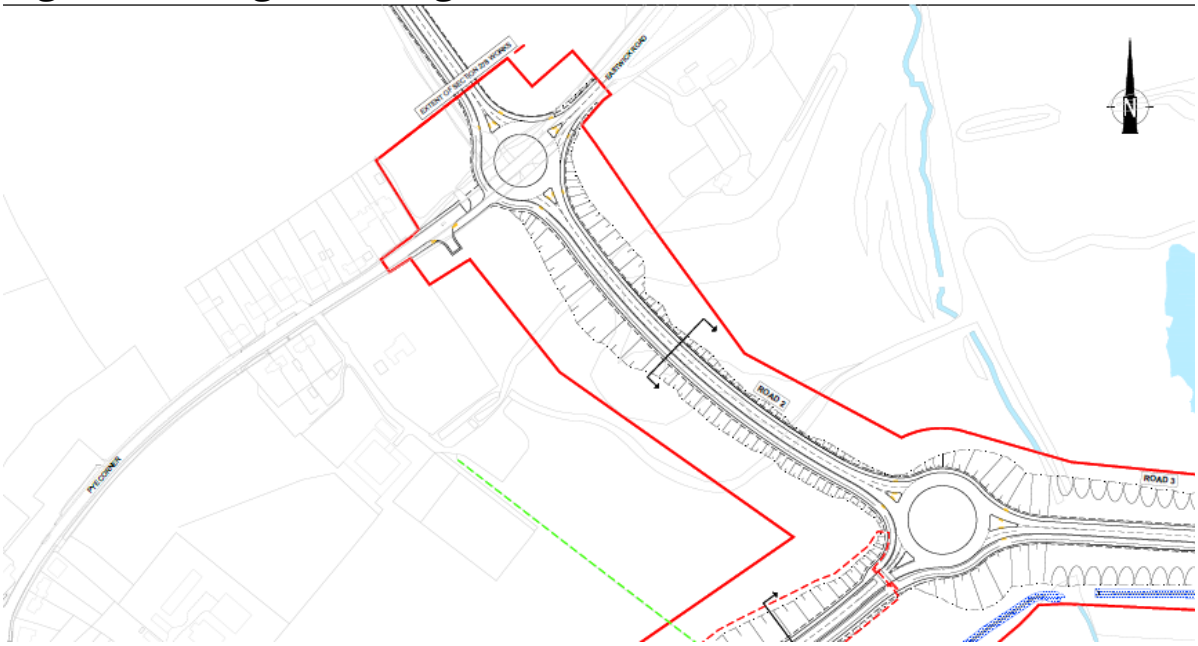
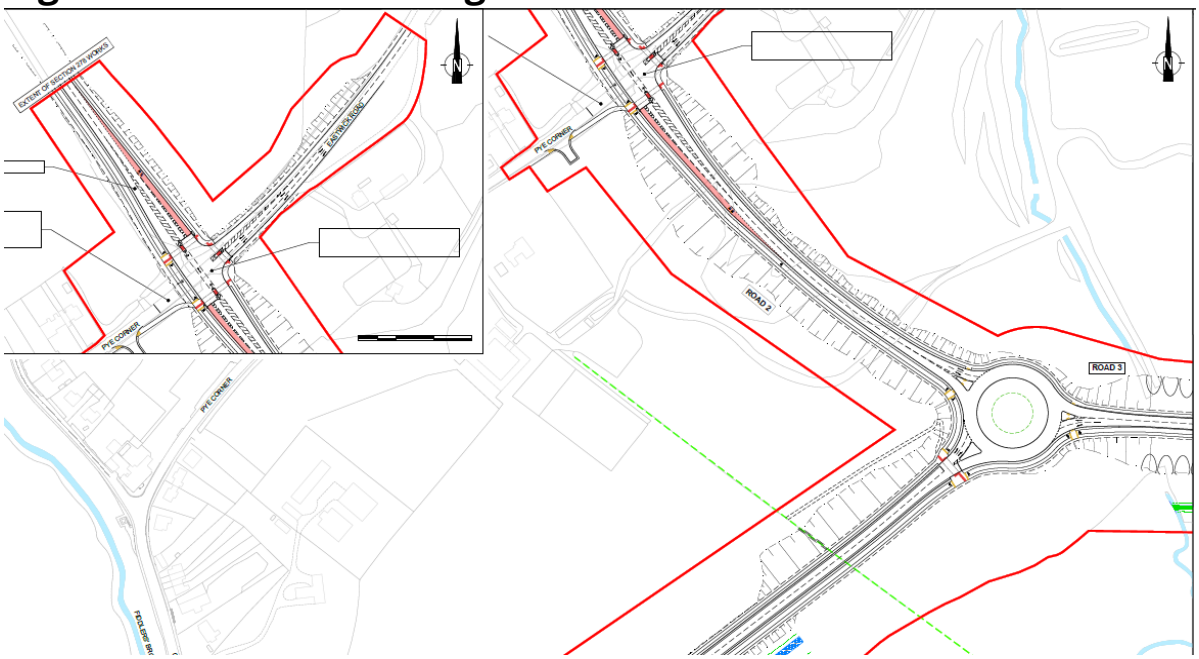


Figure 12: Amended Village 2 Access



4.5 It is also now proposed to replace the existing River Way road bridge in its entirety. Instead of retaining the bridge and creating a separate walking and cycling bridge alongside the existing structure, a single, wider bridge structure will be constructed which integrates the pedestrian and cycle path. Amendments also include associated upgrades to River Way and the proposed River Way junction with Templefields Industrial Estate and the River Way Industrial Estate. Figures 13 and 14 below show the original and amended proposals.

4.6 The application site boundary has also consequently been amended: it now includes more land north of the Eastwick Road. The land area around the Gilston Area Village 2 access has also been amended slightly and now includes the River Way road bridge over the railway, with the overall application area increasing from 24ha to 26.9ha.

4.7 In designing the proposed Eastern Stort Crossing engagement has taken place with local, regional and national stakeholders including *inter alia* the Environment Agency, the Canal and Rivers Trust, the Stort Catchment Partnership, HCC, ECC, the Environmental Agency, EHDC, HDC, Network Rail and Natural England. This engagement has resulted in a range of design amendments and enhancements to the proposals.

In addition, the proposed crossing was reviewed by the Garden Town Quality Review Panel in February 2019 and again in April 2020, which resulted in a comprehensive review of the pedestrian and cyclist experience and landscaping proposals.

Figure 13: Original River Way Bridge design

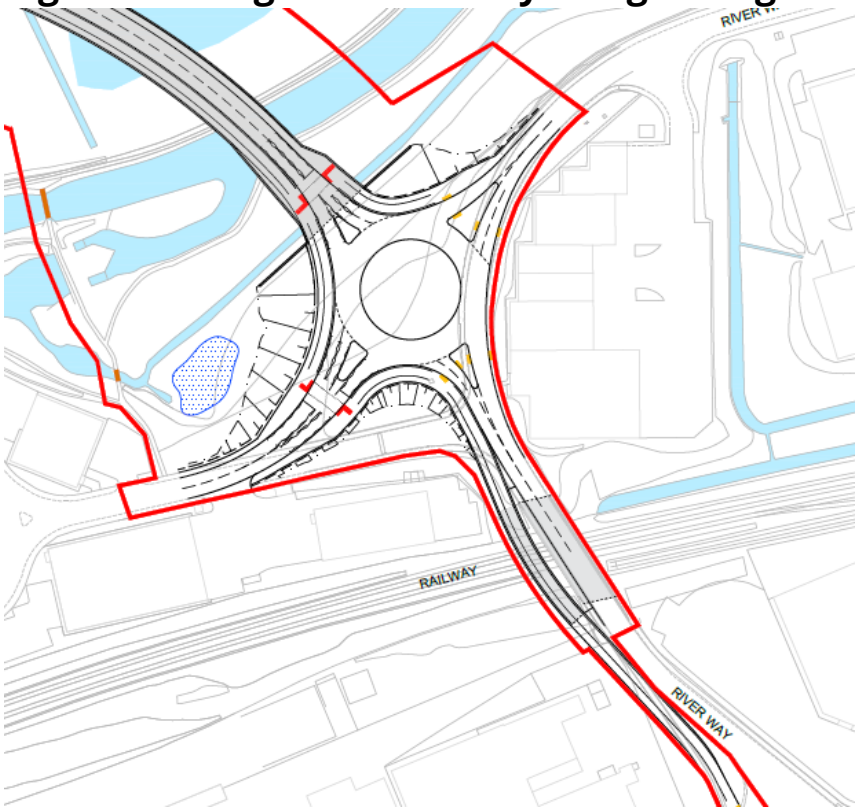
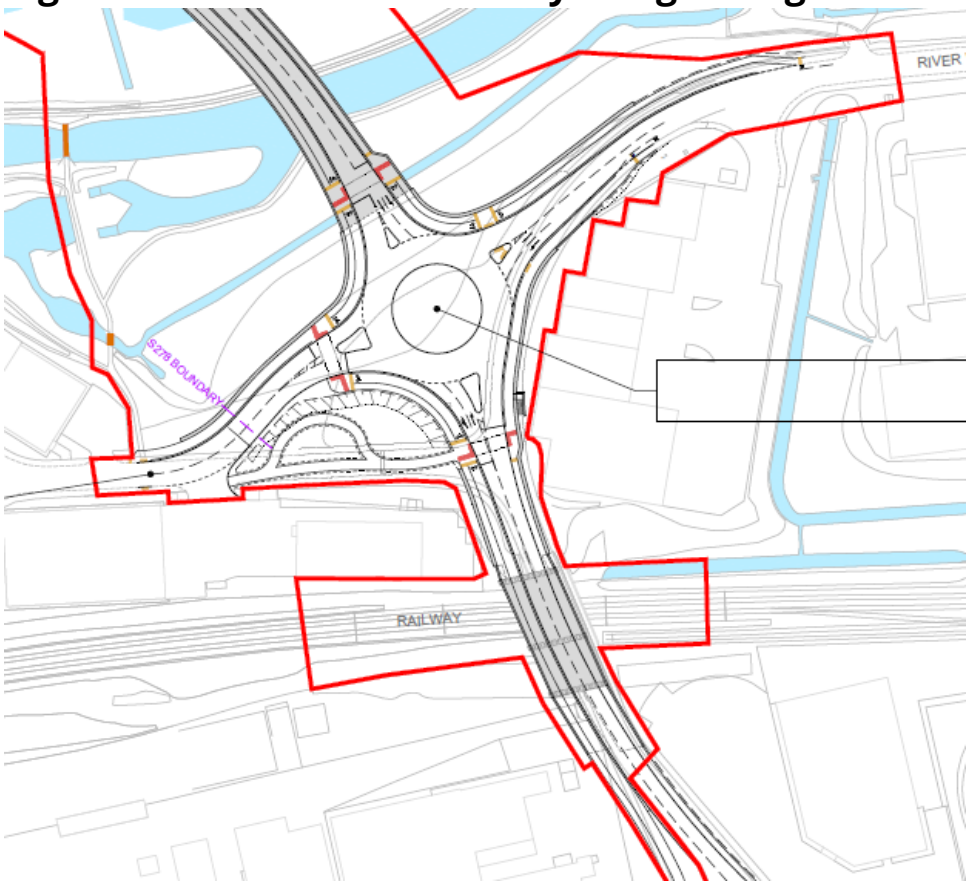


Figure 14: Amended River Way Bridge design



Quality Review Panel – Advice in relation to the Eastern Stort Crossing proposals

4.8 The applicants have presented their proposals for the Crossings as part of the wider Gilston Area development proposals to the HGGT Quality Review Panel on three occasions. At each of the meetings, the Panel's focus has been on different elements of the overall Gilston Area proposals being advanced. The first Panel meeting was held on 19 July 2018 as a joint presentation by the Applicants/owners of the Villages 1-6 sites and the owners of the Village 7 site. This was a strategic overview of the approach to the development of the Gilston Area as a whole which is beyond the scope of the instant application before members. Some specific references were made to the crossing element of the Gilston area proposals and where relevant they are referred to in this report.

4.9 The Applicants returned to the Panel on 22 Feb 2019 and the Panel were asked for their views on the emerging Crossings proposals with regard to:

a. the provision for healthy, active and sustainable transport.
b. the appearance of the Crossings developments in the River Stort valley.

4.10 Those Panel meetings were held prior to the formal submission of the planning applications in May 2019. After submission, a further Panel meeting was held on 17 April 2020. At this meeting the Panel were asked to comment on a narrow range of issues including the Eastern Crossing element of the proposals. The planning application was amended to take into account feedback from the Panel and the local planning authorities (East Herts and Harlow). Amendments were submitted and were subject to public re-consultation in November 2020.

4.11 Given the strategic focus of the first Panel meeting, comments in detail in relation to the crossing elements are limited. Primarily, the Panel set out that achieving the sustainable travel objectives set out by the Garden Town partners and overcoming severance risks (created by the new highway infrastructure, e.g. between the Terlings Park and Pye Corner areas of Gilston) hinged critically on the delivery of strategic infrastructure at an appropriate time and in a sympathetic way. The Panel also set out that good design and creative thinking will be essential to ensure new routes are well integrated and designed to encourage walking and cycling.

4.12 At the second 22 Feb 2019 Panel meeting, where there was more of a specific focus on elements relating to the crossings, the advice of the Panel was that the unique setting of the River Stort Crossings represents an opportunity to enable two critical transport corridors (Central and East) – and that these would play an important role in supporting the Garden Town's sustainable travel ambitions. The Panel did not think, however, that this opportunity had been fully exploited and recommended further work to effectively translate aspirations and prioritise sustainable transport modes.

4.13 The Panel supported the joint work undertaken by the Applicant's team and the Local Planning Authorities in bringing forward the Stort River Crossings, concurrently with the Gilston Area scheme. There was a concern with regard to how the aspirations in relation to the crossings were to be translated and delivered, and a need for a strong design vision that would inspire and delight users of the crossings on foot, cycling and when using buses. There was a feeling that the crossings should be conceived and delivered as urban and landscape interventions that will entice pedestrians and cyclists and become successful places. The Panel felt that the landscape thinking was not fully formed, that this represented a significant gap and it was concerned at the potential loss of vegetation. There was a concern at that early stage that the proposals appeared to prioritise car travel.

4.14 For the Eastern Crossing, a strong landscape vision was considered to be critical, reflecting an understanding of the unique character of the immediate and wider landscape. The architectural quality of both culvert and bridge elements was considered to be critical to the success of the Eastern Stort Crossing. The Panel concluded that there is an opportunity for the Eastern Stort Crossing to become an elegant piece of infrastructure.

4.15 The applicants were able to consider this Panel feedback prior to submission of their planning applications. Delivery of the infrastructure early on in the context of the Gilston Area housing schemes is agreed between the Garden Town partners (i.e. the planning and highways authorities) and the applicants as critical to ensure that the sustainable transport targets can be delivered. The Applicant has supported the early determination of these critical infrastructure applications in advance of the outline residential development proposals for the Gilston Area.

4.16 With regard to attractiveness and attention to place, the Crossings applications have been amended following earlier designs considered by the Panel to ensure direct active travel routes are fit for purpose. Furthermore, the wider development scheme includes proposals for additional routes which are more orientated toward leisure use (as

opposed to travel to work/ commuting journeys) and which will be designed accordingly. These include treatment to Burnt Mill Lane to enhance its use and an improved off road connection via Parndon Mill.

4.17 In response to the landscape concerns raised by the Panel, the Applicants have also reconsidered the landscaping element of the Crossings schemes.

4.18 As indicated, after submission of the applications, the Panel gave further advice following a meeting on 17 April 2020. This was timed after formal consultation feedback on the proposals had been considered by the Applicants and a period of extensive engagement between the Applicants and the Garden Town partners through regular officer meetings and iterative discussions. As a result of such engagement the applicants were requested to consider amendments to the Crossings proposals, which were formally actioned by submission of amended drawings prior to the public re-consultation exercise in November 2020.

4.19 Those amendments were available in an early form for the Panel to advise upon, and included:

a. the reduction in the width of the Eastern Crossing roadway and
b. reconfiguration to the previously proposed junction which accommodated vehicles turning both into Pye Corner and Terlings Park off the Eastern crossing at the same point.
c. Instead, the access to Terlings Park would be created from a retained arm of the current Eastwick Road, joining the new route to the west of the Pye Corner access.

4.20 At the April 2020 meeting the Panel were asked to concentrate on a limited number of specific issues – some of which were not related to the Crossing application proposals. They were however asked to consider the above proposals for revisions to Eastern Crossing.

4.21 The Panel observed that it remained unclear about the degree to which the highway proposals could be barriers to pedestrian and cycle movement and the extent to which they would integrate into the wider

landscape. It considered that options in relation to Pye Corner and Terlings Park accesses showed promise. In relation to the Eastern Crossing, it supported a reduction in the overall width, considering the original proposals to be oversized.

4.22 As indicated, those proposed amendments have been incorporated into the application through the November 2020 amendments. Officers are in agreement with the views of the Panel that the amendments to the Terlings Park and Pye Corner accesses comprise improvements to the Eastern Crossing scheme, by reducing the proposals for road space and enhancing permeability between the Terlings Park area to the south of the realigned Eastwick Road and the existing Gilston village and new development to the north.

5.0 Environmental Impact Assessment

5.1 The proposed development is considered an 'EIA development' as it falls within the description and thresholds in Schedule 2 Category 10 (b) of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (as amended) as an 'urban development project' likely to have significant effects on the environment by virtue of its nature, size or location. A Scoping Report was submitted to the Council in May 2017 for the development of 10,000 homes and two river crossings, submitted jointly by the two landowners Places for People (PfP) and Briggens (also known as City and Provincial Properties (CPP)) encompassing the proposed residential developments by the landowners for Villages 1-6, the two crossings, and as proposed by the landowner for Village 7 respectively. East Herts Council responded to this with a Scoping Opinion in August 2017. PfP also submitted the Scoping Report to Harlow District Council due to the cross-boundary nature of the two crossings. Harlow Council responded in October 2017 with its own Scoping Opinion.

5.2 In September 2018, Places for People advised the Councils that it was now their intention to submit an outline application for 8,500 homes (Villages 1-6) and full applications for the two river crossings. Whereas,

a separate application for 1,500 homes (Village 7) would be submitted by CPP at a later date. As such, PfP produced an EIA Scoping Update to describe how the description of the development and the proposals now differed to those originally scoped. This Scoping Update set out that the Environmental Statement to be submitted with its application would be based on the most up to date Scoping Opinion in line with Regulation 18(4)(a) of the EIA Regulations 2017, as the revised description of development remained materially the same as the previous proposed development. The PfP Scoping Update indicated that following the principles set out in Planning Inspectorate Note 9, the Environmental Statement would be based on worst case scenario assumptions and take account of all planned development, including the separate Village 7 proposal to ensure that there would be sufficient information to enable the 'likely significant' effects on the environment to be assessed. Furthermore, a large number of the baseline studies that had been undertaken for the Villages 1 to 6 and river crossing proposals also included the Village 7 element of the original scheme. This information was considered to be relevant context for the assessment, and would be (and indeed has been) carried through to the Environmental Statement to ensure cumulative impacts of all developments including Village 7 were assessed.

5.3 The Scoping Update confirmed that the methodology used for the EIA process continued to apply. The village development and two crossing applications are interlinked; developments as per the full Gilston Area allocation can only be progressed with the necessary supporting infrastructure provided by the two Stort Valley Crossings. As such, the proposals put forward in the three PfP applications (the CSC, the ESC and the outline residential development for Villages 1-6) are collectively known for the purposes of the EIA process as 'the Development' and the effects of the Development would therefore be considered and reported collectively for EIA purposes. The Development (comprised of three separate applications) has been subject to a single 'project-wide' EIA. The individual effects from each application are not presented separately within the report but addressed collectively (based on the anticipated progress of each element at certain milestones). The effects of Village 7 in combination with the Development are dealt with as cumulative development.

5.4 The Environmental Statement (ES) was submitted by PfP with the applications (3/19/1045/OUT, 3/19/1046/FUL / HW/CRB/19/00220, and 3/19/1051/FUL / HW/CRB/19/00221) in May 2019 and registered in June 2019. In line with the Scoping Opinions issued by the Councils, the ES assessed the effects of the development on the following environmental receptors and matters:

- Socio-Economics and Community Effects
- Human Health
- Transport and Access
- Air Quality
- Noise and Vibration
- Cultural Heritage: Archaeology
- Cultural Heritage: Built Heritage
- Landscape and Visual
- Biodiversity
- Agriculture and Soils
- Ground Conditions
- Water Resource and Flood Risk
- Services and Utilities
- Light
- Climate Change

5.5 On behalf of both LPAs, East Herts Council appointed Barton Wilmore (BW) to assist the Councils in ensuring the reliability of the Environmental Statement (ES), whether the assumptions made are reasonable and correct and to confirm whether it satisfies the requirements of the EIA Regulations 2017.

5.6 The review undertaken by Officers supported by consultants BW identified the requirement for a number of clarifications and potential requests for 'further information' under Regulation 25 of the EIA Regulations. Officers wrote to the applicants with initial feedback on the originally submitted application in February 2020 setting out these requests for clarification and further information. However, as amendments were required to the application, it was agreed that these EIA clarifications and requests for further information would be

addressed through corresponding amendments to the ES. The amended application and supporting information including an ES Addendum were submitted in November 2020 and were subject to consultation as part of the consultation on wider amendments to the application.

5.7 The applicant's ES Addendum was submitted alongside the application amendments and consulted on. Following a further review by Officers and BW, Officers requested 'further information' be sought in relation to the noise assessment for the Village 1-6 development. No further information was requested in relation to the ESC. The applicant submitted the requested further information in April 2021, which was made available for public comment in accordance with Regulation 25 of the EIA Regulations 2017. The ES amendments relating to noise relate to the Outline application within East Herts, therefore East Herts Officers and Harlow Officers are satisfied that the further information together with the ES and ES Addendum provides sufficient information to assess the likely effects of the proposed ESC development in this regard and that the ES is compliant with the requirements of the EIA Regulations.

5.8 The ES has taken into account whether there are any impacts and likely significant effects on the environment from the Development (which includes the effects of the Eastern Stort Crossing, the Central Stort Crossing and the Outline application cumulatively in combination). This is considered the most robust approach given that the schemes are linked and considered in ES terms as one project, titled 'The Development'. Where necessary, the ES highlights impacts that have particular relevance to the ESC proposal, therefore the ES provides a comprehensive assessment of the likely environmental impact to enable a decision to be made on this application on its own as well as taking into account the cumulative impact of other planned developments. The effects of the ESC and CSC are also assessed in the ES having specific regard to:

1) The cumulative trips predicted out of the wider strategic allocations (including the Gilston Area);

2) The effect the crossings are likely to have on the wider transport networks (and therefore on other factors, such as air quality, noise and vibration).

5.9 The ES identifies the likely significant environmental effects (adverse and beneficial) from the construction phase (including demolition and other associated site preparation activities) and operation of the proposed development. The crossings have been designed with embedded mitigation (measures identified and adopted as part of the evolution of the project design) which is reflected in the assessment of effects. Likely effects are considered both with respect to:

5.9.1 'the Development' (Villages 1-6 and the two crossings) as a stand-alone development, and

5.9.2 when taken cumulatively with other consented and planned proposals, including the related Village 7 application as part of the overall GA1 site, and

5.9.3 development allocations within the East Herts District Plan, applications within the Harlow area, development allocations within the Harlow Local Development Plan and within the draft Epping Forest District Plan.

5.10 Appropriate mitigation measures are recommended where adverse effects have been identified. It is for the two LPAs to assess whether the proposed mitigation measures are appropriate and to determine the appropriate way in which such measures are secured such as by way of planning conditions and/or planning obligations as appropriate.

5.11 The ES, along with other relevant documentation submitted with the planning application, consultee responses and representations made by any other persons constitute the 'environmental information' which has been taken into account in this report and is required to be taken into account when arriving at a decision on this planning application.

6.0 Equalities and Human Rights

6.1 Under the Equality Act 2010, planners are required to have due regard to the impacts of planning decisions on equality. The Act provides a legal framework to protect the rights of individuals and advance equality of opportunity for all. As part of the Equality Act, a public sector equality duty applies to all public authorities including those developing planning policies and applying them. The public sector equality duty requires that decisions take account of individuals with protected characteristics that might lead people to experience discrimination and inequality. Under the Act, a public authority must, in the exercise of its functions, have due regard to the need to:

- Eliminate discrimination, harassment and victimisation and any other conduct that is prohibited by or under the Act;
- Advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it;
- Foster good relations between persons who share a relevant protected characteristic and persons who do not share it.

6.2 The duty covers the following eight protected characteristics: age, disability, gender reassignment, pregnancy and maternity, race, religion or belief, sex and sexual orientation. Public authorities also need to have due regard to the need to eliminate unlawful discrimination against someone because of their marriage or civil partnership status.

6.3 Public authorities must also have regard to the requirements of the Human Rights Act 1998, which transposed the European Convention on Human Rights (ECHR) into UK law. The general purpose of the ECHR is to protect human rights and fundamental freedoms and to maintain and promote the ideals and values of a democratic society.

6.4 Section 6 of the Human Rights Act 1998 prohibits public authorities from acting in a manner incompatible with the European Convention on Human Rights. Various convention rights are relevant and potentially engaged in the context of the current applications, namely: -

6.4.1 *Entitlement to a fair and public hearing in the determination of a person's civil and political rights (Convention Article 6).* This can include property rights and opportunities to be heard in the

consultation process. It is noted that ample opportunities for consultation have been afforded to the public in connection with the current proposals, including in respect of the ES information submitted and any material amendments to the proposals. Further, constitutional processes of the LPAs for determination of major applications of this scale afford applicants and objectors the right to be in heard in public by decision makers. Thereafter further rights to be heard are available to both applicants and the public.

6.4.2 *Peaceful enjoyment of possessions (First Protocol Article 1).* This right is subject to the State's right to enforce such laws as it deems necessary to control the use of property in accordance with the general interest. It is noted that land assembly, including by compulsory acquisition, will be required in connection with implementation of the development proposals, and such decisions will be subject to separate decisions and consideration of Human Rights and Equalities implications in the context of any exercise of compulsory purchase powers. The Crossings are vital infrastructure required to enable the delivery of 8,500 homes comprised in the Gilston Area and GA1 allocation. Therefore the general interest in the promotion of planned growth to meet the needs of local communities by providing infrastructure to enable the delivery of homes is a legitimate aim and any interference with Protocol 1 rights would be proportionate to such aims in the public interest.

6.4.3 *Right to respect for, private and family life (Convention Article 8)* in respect of which the likely health impacts of the proposals will need to be taken into account in evaluating the scheme. A very thorough EIA process has been undertaken to consider the likely significant impacts of the Crossings applications in combination with other related developments (as a single project) and cumulatively in respect of human health and noise impacts (among others). Officers are satisfied that sufficient information has been provided, including on relation to the likely significant health impacts of the proposals to conclude that no unlawful interference with Article 8 rights is anticipated. In addition,

enabling the delivery of future homes for local communities in need is likely to promote respect for the private and family life of future residents.

6.5 The courts recognise that "regard must be had to the fair balance that has to be struck between the competing interests of the individual and of the community as a whole". Both public and private interests are to be taken into account in the exercise of the Council's powers to determine these applications in accordance with the recommendation to grant permission. Any interference with a Convention right must be necessary and proportionate. Officers consider that no unlawful interference with convention rights would arise and any interference would be necessary and proportionate in the wider public interest in granting permission for these schemes which would promote housing growth planned for in both LPAs' Development Plans.

6.6 An Equalities Impact Assessment has been carried out by the Councils to consider the impacts of the ESC and it concludes that no conflicts with the requirements of the Equality Act 2010 or the Human Rights Act 1998 are anticipated from this development. Being an application for transport infrastructure, it is noted that by design it will be required to meet relevant industry standards which ensure regard and respect for the rights of those with disabilities. This report incorporates considerations of the above requirements within the body of the report where relevant.

7.0 Planning History

7.1 There is no relevant planning history relating to the site.

8.0 Main Policy Issues

8.1 The relevant policies for the ESC application are comprised in the adopted East Herts District Plan 2018 (EHDC), the adopted Harlow Local Development Plan 2020 (HDC) and the National Planning Policy Framework (NPPF).

8.2 In addition, the Gilston Area Neighbourhood Plan (GANP) went to a referendum on 27th May 2021 and was endorsed by the constituents of the referendum area. The Plan was 'made' at the meeting of the EHDC Council on 28th July) and now forms part of the development plan for the part of the application site that falls within the Neighbourhood Plan Area. The GANP is considered to be in general conformity with the adopted East Herts District Plan.

8.3 The Neighbourhood Plan Area covers the part of the Eastern Stort Crossing route within East Herts, ending approximately half way along the culverted embankment structure of Road 3. The GANP policies relevant to the application are therefore considered below alongside the two District Plan policies and the National Planning Policy Framework (NPPF).

8.4 The Hertfordshire Minerals Local Plan and Waste Local Plan, along with the Essex Minerals Local Plan and Waste Local Plan are also part of the Development Plan relevant to this proposal, particularly in respect of construction activities. Where relevant these are also summarised and considered throughout the report.

8.5 The main issues for consideration with this full application are as follows:

- Principle of Development;
- Design and Layout;
- Impact on the transport network and mitigation;
- Climate Change, flood risk and sustainable drainage;
- Land contamination and pollution;
- Impact on the natural environment;
- Impact on the historic environment;
- Green Belt Issues;

8.6 Members will need to consider the overall planning balance and whether the proposal will result in a sustainable form of development having regard to the above considerations. The application must be determined in accordance with the Development Plan unless material considerations indicate otherwise in accordance with S38(6) of the

Planning and Compulsory Purchase Act 2004 (as amended). Members must also consider the likely significant effects of the development on the environment in accordance with Regulation 3 of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017.

8.7 The table below identifies the relevant applicable policies of the Development Plan (excluding the Waste and Minerals LPs) and the NPPF. The relevant policies are summarised and considered in detail throughout the report with reference to each of the main issues as part of the overall planning balance.

Table 1: Development Plan Policies and the NPPF

EHDC Policy	HDC Policy	GANP Policy	NPPF
Principle of development (Section 12.1)			
• GA1: The Gilston Area • GA2: The River Stort Crossings • INT1: Presumption in Favour of Sustainable Development • DPS1: Housing, Employment and Retail Growth), • DPS2: The Development Strategy 2011-2033 • DPS3: Housing Supply 2011-2033 • DEL1: Infrastructure and Service Delivery	• HGT1: Development and Delivery of Garden Communities in the Harlow and Gilston Garden Town • SD1: Presumption in Favour of Sustainable Development • SIR1: Infrastructure Requirements • SIR2: Enhancing Key Gateway Locations • PR1: Development within Employment Areas	• AG1: Promoting Sustainable Development in the Gilston Area • AG9: Phasing of Infrastructure Delivery • TRA1: Sustainable Mobility	Section 5
Design and layout (Section 12.2)			
• DES2: Landscape Character	• WE1: Strategic Green	• AG5: Respecting Areas of Local	Section 12

• DES3: Landscaping • DES4: Design of Development • CFLR9: Health and Wellbeing	Infrastructure • WE2: Green Belt, Green Wedges and Green Fingers • PL1: Design Principles for Development • PL2: Amenity Principles for Development • PL3: Sustainable Design, Construction and Energy Usage • PL4: Green Belt • SIR2: Enhancing Key Gateway LocationsL4: Health and Wellbeing • IN1: Development and Sustainable Modes of Travel	Significance • AG8: Minimising the Impact of Traffic and New Transport Infrastructure on Existing Communities • EX1: Existing Settlements • TRA1: Sustainable Mobility • TRA2: Access to the Countryside	
Impact on the highway network and mitigation (Section 12.3)			
• TRA1: Sustainable Transport • TRA2: Safe and Suitable Highway Access Arrangements and Mitigation • CFLR3: Public Rights of Way • CFLR9: Health and Wellbeing	• HGT1: Development and Delivery of Garden Communities in the Harlow and Gilston Garden Town • IN1: Development and Sustainable Modes of Travel • IN2: Impact of Development on the Highways Network including	• TRA1: Sustainable Mobility • AG8: Minimising the Impact of Traffic and New Transport Infrastructure on Existing Communities	Section 9

	Access and Servicing • L4: Health and Wellbeing		
Climate change, flood risk and sustainable drainage (Section 12.4)			
• WAT1: Flood Risk Management • WAT3: Water Quality and the Water Environment • WAT5: Sustainable Drainage • CC1: Climate Change Adaptation • CC2: Climate Change Mitigation	• PL11: Water Quality, Water Management, Flooding and Sustainable Drainage Systems • HGT1: Development and Delivery of Garden Communities in the Harlow and Gilston Garden Town • PL3: Sustainable Design, Construction and Energy Usage	• AG1: Promoting Sustainable Development in the Gilston Area • AG2: Creating a Connected Green Infrastructure Network • AG8: Minimising the Impact of Traffic and New Transport Infrastructure on Existing Communities • LA1: Landscape Within the New Village Boundaries	Section 14
Land contamination and pollution (Section 12.5)			
• WAT2: Source Protection Zones • EQ1: Contaminated Land and Land Instability • EQ2: Noise Pollution • EQ3: Light Pollution • EQ4: Air Quality	• SIR3: Waste and Minerals • PL10: Pollution and Contamination • Policy PL11 (Water Quality, Water Management, Flooding and Sustainable Drainage Systems)	• AG3: Protecting and Enhancing the Countryside Setting of New and Existing Villages • AG8: Minimising the Impact of Traffic and New Transport Infrastructure on Existing Communities	Section 15
Impact on the natural environment (Section 12.6)			
• DES2: Landscape	• PL7: Trees and	• AG1: Promoting	Section

Character • DES3: Landscaping • NE1: International, National and Locally Designated Nature Conservation Sites • NE2: Sites or Features of Nature Conservation Interest (Non-Designated) • NE3: Species and Habitats • NE4: Green Infrastructure • CFLR1: Open Space, Sport and Recreation • EQ2: Noise Pollution • EQ3: Light Pollution • EQ4: Air Quality	Hedgerows • PL8: Green Infrastructure and Landscaping • PL9: Biodiversity and Geodiversity Assets • WE1: Strategic Green Infrastructure • WE3: General Strategy for Biodiversity and Geodiversity • WE4: Safeguarding Wildlife Sites Beyond the District Boundary	Sustainable Development in the Gilston Area • AG2: Creating a Connected Green Infrastructure Network • AG3: Protecting and Enhancing the Countryside Setting of New and Existing Villages • AG4: Maintaining the Individuality and Separation of all Villages • AG5: Respecting Areas of Local Significance • LA1: Landscape Within the New Village Boundaries • TRA2: Access to the Countryside	15
Impact on the historic environment (Section 12.7)			
• HA1: Designated Heritage Assets • Policy HA2 (Non-Designated Heritage Assets • HA3: Archaeology	• HGT1: Development and Delivery of Garden Communities in the Harlow and Gilston Garden Town • WE5: Heritage • PL12: Heritage Assets and their Settings	• AG1: Promoting Sustainable Development in the Gilston Area • H1: Celebrating Existing Heritage Assets	Section 16
Green Belt (Section 12.8)			
• GBR1: Green Belt	• WE1: Strategic		Section

	Infrastructure •WE2: Green Belt, Green Wedges and Green Fingers •PL4: Green Belt		13
Infrastructure delivery			
•GA1: The Gilston Area •GA2: The River Stort Crossings •DEL1: Infrastructure and Service Delivery •DEL2: Planning Obligations •DEL3: Monitoring Framework •DEL4: Monitoring of the Gilston Area	•SIR1: Infrastructure Requirements •SIR2: Enhancing Key Gateway Locations •IN1: Development and Sustainable Modes of Travel •IN6: Planning Obligations	AG9: Phasing of Infrastructure Delivery	Section 2 Section 4

8.8 Other relevant planning supplementary documents and guidance are summarised below:

Table 2: Relevant Planning Documents and Guidance

Document	Author	Summary
Gilston Area Charter SPD	East Herts Council	Provides guidance to support the production of Masterplans and Design Codes specific to the Gilston Area that will follow outline planning permission.
Sustainability SPD (2021)	East Herts Council	Supports the implementation of East Herts District Plan policies that seek to improve the environmental sustainability of new development.
Gilston Area Concept Framework and Council	Places for People, in partnership with City and	Produced to demonstrate the deliverability of the proposed site allocation, establish key principles that should underpin the development of

Report (2018)	Provincial Properties and East Herts Council	the Gilston Area and guide the preparation of future detailed proposals. Relevant to this application are the objectives on promoting sustainable travel, protecting and enhancing landscape and a network of green spaces, protecting and enhancing natural assets and ensuring the phased delivery of necessary infrastructure to meet the needs arising from the development. The Concept Framework has been largely assimilated in the Gilston Area Neighbourhood Plan. The Framework indicates that a second crossing of the Stort Valley may be provided, which would also incorporate a combined footway/ cycleway. This will allow direct connections, particularly for cyclists, between the site and employment areas including Temple Fields and the Enterprise Zone.
Hertfordshire's Local Transport Plan, 2018 – 2031 (adopted 2008)	Hertfordshire County Council	Sets out how transport can help deliver a positive future vision for Hertfordshire by having a major input into wider policies such as economic growth, meeting housing needs, improving public health and reducing environmental damage whilst also providing for safe and efficient travel. The plan also considers how future planning decisions and emerging technology might affect the way that transport needs to be provided in the longer term. Of particular relevance to

		Gilston is Local Transport Plan 4.
Essex Transport Strategy, the Local Transport Plan for Essex (adopted 2011)	Essex County Council	Sets out how to achieve five broad outcomes of: • Provide connectivity for Essex communities and international gateways to support sustainable economic growth and regeneration; • Reduce carbon dioxide emissions and improve air quality through lifestyle changes, innovation and technology; • Improve safety on the transport network and enhance and promote a safe travelling environment; • Secure and maintain all transport assets to an appropriate standard and ensure that the network is available for use; • Provide sustainable access and travel choice for Essex residents to help create sustainable communities.

8.9 A series of HGGT documents have been prepared by the partnership that seek to provide guidance for strategic developments within the HGGT. These are summarised in Table 3 below.

Table 3: Relevant HGGT Documents and Guidance

Document	Author	Summary
Harlow and Gilston Garden Town Vision (2018)	On behalf of the Harlow and Gilston Garden Town Partner Councils	Document sets out the vision for the Harlow and Gilston Garden Town and the principles which will inform its growth and management. Of particular relevance to the application are page 4 - the Vision for the Harlow and Gilston Garden Town, pages 12-16 - the principles and indicators relating to landscape and green infrastructure and

		pages 18-21 the principles and indicators relating to sustainable movement which should shape and inform the development. The Vision sets the objective that 50% of all trips originating within the Harlow and Gilston Garden Town should be by sustainable active travel modes, with a target to achieve 60% within new villages and neighbourhoods. This target is continued through to the emerging Harlow and Gilston Transport Strategy.
Harlow and Gilston Garden Town Design Guide (2018)	On behalf of the Harlow and Gilston Garden Town Authorities	Document sets out the expectations and aspirations for the delivery of high quality and sustainable developments. Of particular relevance are pages 24-25 on sustainable movement and pages 39-41 on strategic site guidance for the Gilston Area.
HGGT Infrastructure Delivery Plan (IDP)	On behalf of the Harlow and Gilston Garden Town partner Councils	The IDP draws on previous work undertaken by the HGGT authorities, in particular the District-level IDPs already produced to support the respective Local Plans and compiles, aligns and updates it. The IDP identifies the infrastructure requirements of the HGGT including the Central and Eastern Crossings, classifying them as 'critical infrastructure', which must happen in order for the planned HGGT development to proceed. The IDP identifies how expected developer contributions from various sites will be apportioned and what collection mechanisms can be utilised to assist in funding the infrastructure items which serve more than one site. Through

		the process of producing the IDP, a package of measures and broad estimates of the likely financial contribution for each of the Harlow and Gilston Garden Town sites has been produced. The IDP recognises that all of the strategic sites, at least, should be make contributions to the ESC as it is critical to providing the capacity for these sites and the delivery of the HGGT sustainable mode share target. The IDP has been produced concurrently with the *Strategic Viability Assessment*, to allow these costs to be included in the appraisal. The purpose of the Strategic Viability Assessment is to consider the wider deliverability of the Harlow and Gilston Garden Town, taking into account infrastructure requirements alongside other considerations.
HGGT Transport Strategy 2021	On behalf of the Harlow and Gilston Garden Town Council Partners	Sets out how the HGGT will achieve the challenge of future travel demand linked to planned growth. The Transport Strategy has been subject to consultation and has been endorsed as a material consideration by Harlow Council on the 4th Nov, and will be presented to East Herts Council's Executive on 23rd November.
HGGT Sustainability Guidance and Checklist	On behalf of the Harlow and Gilston Garden Town Council Partners	Provides practical and technical guidance on how relevant sustainability indicators and policies (environmental, social and economic) in the HGGT Vision and partner authorities plans will be applied to new major developments in the HGGT.

9.0 Summary of Consultee Responses

Hertfordshire County Council (HCC)

9.1 HCC previously submitted response to the planning applications in August 2019. This identified a number of outstanding issues. Since then further discussions have taken place with the applicant to address the points raised. This response relates to the revised planning submission submitted by the applicant in November 2020.

9.2 As a statutory consultee the response from HCC includes comments from the Lead local Flood Authority (LLFA), Archaeology, Ecology, Minerals and waste Planning and Highways (including Bridges and Structures).

9.3 HCC Highway Authority – The applications proposed for the Gilston Area are required to demonstrate how 60% of development related travel will be by sustainable/active modes. A key component of this will be through the provision of Sustainable Transport Corridors (STCs). These will provide high quality facilities for pedestrians, cyclists and public transport. In particular, STCs will provide dedicated space to allow buses to move freely by avoiding traffic congestion and giving them priority over other traffic.

9.4 The Transport Strategy envisages two primary STCs, these will run north to south, and east to west connecting the central area of Harlow with the development areas at Gilston (10,000 homes), East of Harlow (3,350 homes), Latton Priory (1,050 homes) and Water Lane (2,100 homes). The Eastern Stort Crossing is a vital component of the highways infrastructure which is needed to support the development of whole Harlow and Gilston Garden Town (HGGT) and achieve the mode share target of 50%.

9.5 The Highway Authority is broadly supportive of the principle of the ESC. A number of points of detail have been identified (as summarised

below) which are considered to be resolvable through the detailed design that will come forward (secured through conditions).

- A woven acoustic barrier has been proposed on the south side of the bridge deck. This is not acceptable as it increases ongoing maintenance and regular inspection and as such a standard acoustic barrier is recommended.
- Intermediate supports on the multi-span bridge should be relocated to avoid the watercourses
- Further details are required in regards to:
- Extent of scour resulting from fiddlers Brook Bridge and associated control measures
- Access arrangements for maintenance of Fiddlers Brook Bridge
- Protection measures for adjacent listed Fiddlers Brook footbridge during construction
- The inspection and access route to the west of the culvert structure
- Access for future inspection and maintenance of the multi-span bridge
- Location of lighting columns
- How contamination from piling will be managed/mitigated
- Confirmation on the speed limit and associated speed measures for Road 3
- Junction model for Terlings Park
- Modelling for the River Way roundabout

9.6 HCC Lead Local Flood Authority – Confirm that they have no objection in principle on flood risk grounds and advise the LPA that the proposed development site can be adequately drained and mitigate any potential existing surface water flood risk if carried out in accordance with the overall drainage strategy principles. Conditions are recommended to ensure that the drainage strategy is implemented and managed effectively. *Officer note for report – a final set of conditions was agreed with ECC's LLFA. These are set out in Recommendation section below.

9.7 HCC Archaeology – Consider that the proposed 'Eastern River Crossing' will have an impact on peat and alluvial deposits within the Stort Valley, and on potentially buried prehistoric deposits. The condition of these

deposits remains untested, but could be of 'medium to high significance'. Conditions are recommended to ensure appropriate investigation is carried out. *Officer note for report – a final set of conditions was agreed with ECC Archaeology. These are set out in Recommendation section below.

9.8 HCC Ecology – Detailed consideration has been given to impacts arising from the new road links on the river floodplain habitats, non-statutory Local Wildlife Site (Fiddlers' Brook Marsh, Hollingsdon Meads) and wood and scrubland adjacent to the River Way. In addition consideration was given to the habitat enhancement proposed which is insufficient.

9.9 Further details (requested by way of conditions) are required to provide confidence that appropriate ecological protection, enhancement, mitigation and future maintenance and management will be undertaken and secured in the long term.

9.10 HCC Landscape and Building Futures – notes that existing landscape in the valley provides valuable screening and therefore should be protected during all works and where possible landscaping should be enhanced. More detail is needed regarding the proposed landscape planting scheme along with landscape management plans which should be submitted by condition. There is a need to ensure that there is cohesion between the proposed plans and the detailed design stage to ensure there is an overarching holistic strategy for wayfinding and amenity. The location of seating should reflect locations of key views within the valley. Similarly planting on verges and in the central reservation may have a maintenance burden and therefore needs careful consideration at the detailed design stage.

9.11 For the ESC in particular, while the creation of orchards are supported in principle care needs to be given to ensuring that fruit does not become a slip and trip hazard where located close to pedestrian and cycle routes (Eastwick Road/ Village 2 junction). The current planting plans for the culverted embankments are insufficient. More information is required to show that the ground conditions can accommodate planting to provide structure, screening and a less

exposed environment for pedestrians and cyclists. Security fencing should not be located along the top of the embankment. The protection of waterbodies should be addressed with details provided in the construction management plan. Any stripping, movement, importing and storage of soil and other material needs to be accounted for in a construction management plan. Planting plans should avoid the sustainable drainage networks associated with the highway unless agreed with the highway authority.

9.12 More visualisations should be provided for the environment around Terlings Park. Overall the amendments to the Terlings Park/ Pye Corner junction are welcomed but acknowledge that fencing will have a visual impact. Opportunities should be taken to integrate art and wayfinding principles into the design of the Fiddlers' Brook bridge.

9.13 The LVIA does not take full account of construction impacts such as storage, compounds and access roads for example. It does not give sufficient weight to the value of the valley and therefore under values the significance of impacts. More structural planting is required to provide screening of the ESC within the valley. *Officer note for report – a final set of conditions was agreed with HCC's Landscape Officer. These are set out in the Recommendation section below.

9.14 <u>HCC Minerals and Waste</u> – Opportunities to re-use materials/ minerals found on site during its preparation as part of the development should be explored and exploited. If this cannot occur, the material should be sent to a nearby, appropriate recycling/reuse facility.

9.15 Detailed consideration has been given to the potential impacts and subsequent management of historic landfill within the boundary of the ESC; HCC as Waste Planning Authority wish to be further engaged on these matters once more in-depth assessment can be carried out.

9.16 Hazardous waste is likely to be present which may need to be removed during construction through appropriate methods in order to dispose of the waste safely and protect the environment. A Site Waste Management Plan to address this will be required (to be secured by condition).

9.17 A separate Construction Environmental Management Plan should also be provided (to be secured by condition) and should include details of how waste at each stage of the development will be managed in line with the waste hierarchy having regard to developing upon a historic landfill.

9.18 Concluding comments from Hertfordshire County Council – The ESC represents a critical element of infrastructure to support the delivery of 'good growth' at Gilston providing highway capacity, enabling the build out Gilston to the full capacity in policy GA1 and meeting the requirements of policy GA2.

9.19 The ESC is therefore a critical component in infilling the vision of HGGT, and in supporting the delivery of the hierarchy of movement in LTP4. Subject to the planning conditions identified, HCC support the granting of planning permission.

Essex County Council (ECC)

9.20 ECC previously submitted a corporate response to the initial planning application and identified a number of issues. Further discussions have since taken place between all the relevant parties to address the points raised. Subject to a comprehensive set of planning conditions, ECC is generally satisfied that this revised planning application is in line with the relevant Local Plan policies. If permission is granted, relevant technical approvals on issues such as detailed highway and engineering designs will need to be obtained from relevant authorities.

9.21 Highway and Transport matters – HCC and ECC are the relevant Highway Authorities (HAs) for the application given its cross boundary nature and both authorities will be adopting the ESC. The design of the scheme has been reviewed and in principle is considered to be acceptable subject to technical approval. Further details should be secured in regards to:

- The speed strategy for the ESC in particular for Road 3 which needs to be agreed with the HAs
- Evidence of the formal agreement with Network Rail to deliver the new rail bridge

9.22 ECC will seek to secure a commuted sum to cover the longer term maintenance costs of the new infrastructure through the appropriate legal mechanisms in the Highways Act 1980.

9.23 ECC Environment and Green Infrastructure – ECC welcome the landscaping measures, delivery of the green movement, the sustainable drainage proposals, and amendments to the junction between Pye Corner and Terlings Park. Further details should be secured regarding the works to PROW31 and Green Bridges should be considered as part of the design components for the new bridges.

9.24 ECC Lead local Flood Authority (LLFA) – Having reviewed the Flood Risk Assessment and associated documents, the LLFA do not object to the granting of planning permission subject to conditions. *Officer note for report – a final set of conditions was agreed with HCC's LLFA. These are set out in the Recommendation section below.

9.25 ECC Archaeology – Within Harlow District, the Essex Historic Environmental Record (HER) shows that the proposed Central and Eastern Stort Crossings will impact on peat and alluvial deposits within the river valet and on potentially buried prehistoric remains. ECC recommends that conditions are imposed to appropriately investigate, preserve and record any findings. *Officer note for report – a final set of conditions was agreed with HCC Archaeology. These are set out in Recommendation section below.

Other Statutory Bodies

9.26 Affinity Water – no comments received to date.

9.27 Cadent Gas – Advise that they have identified operational gas apparatus within the application site boundary. An informative requesting that if any structures are proposed directly above the gas apparatus then development should only take place following a diversion of this apparatus and the applicant to contact Cadent's Plant Protection Team at the earliest opportunity to discuss proposed diversions of apparatus to avoid any unnecessary delay. The response

also assesses impacts on National Grid Electricity Transmission PLC's and National Grid Gas Transmission PLC's apparatus.

9.28 Campaign to Protect Rural England (CPRE) Hertfordshire – CPRE previously submitted a response in 2019 which raised objections to the proposed development. This response submitted in 2021 follows revisions to the proposal.

9.29 CPRE remain concerned at the sprawling nature of the built form concept, the failure to limit excessive encroachment of countryside, a lack of a convincing sustainable transport strategy, no demonstrable carbon pathway that supports the national objective of net zero carbon by 2050 particularly, a lack of detail for emissions by construction and transport which is not planned in the strategic design concept for the proposed development. Most of what is provided is expanding road capacity and traffic. A Garden Town Trust is suggested for long term objectives such as these.

9.30 Canal and Rivers Trust – The Canal and Rivers Trust previously submitted a response in 2019. An additional response was received in 2021 following revision to the proposed development.

9.31 The Canal and Rivers Trust advise that the amended information submitted to support this application has not materially affected the proposal in relation to the Trust's assets or issues raised in the previous response. Therefore, the substantive response, as required by the Town and Country Planning (Development Management Procedure) (England) Order 2015 (as amended), is to advise that suitably worded conditions and a S106 agreement are necessary to address matters relating to the impact on the river and towpath users, impact on the structural integrity of the river wall and impact on the ecology of the waterway corridor.

9.32 EHDC Environmental Health – does not wish to restrict development at the site subject to the imposition of conditions relating to contaminated land and construction management. *Officer note for report – a final set of conditions was agreed with the Environmental Health Advisor. These are set out in Recommendation section below.

9.33 EHDC Strategic Masterplanning, Conservation and Urban Design – raises a number of concerns that officers feel have not yet been fully addressed, but agree that these matters can be resolved through the detailed technical design stage. Comments include:

- A request that placeshaping officers be engaged in the detailed design stage of the proposal;
- Support for the amended road layout to Road 1 away from Terlings Park and introduction of a new area of woodland planting to act as a buffer;
- The downgrading of the current Eastwick Road alignment to provide access for Terlings Park residents is also supported.
- Village 1 all-modes access is designed in a way that gives too much priority to west-bound vehicle movements from Terlings Park and could be redesigned to reduce conflicts with pedestrian and cycle routes and add more landscaping;
- landscaping proposals need to consider maintenance; that consideration be given to enhancing routes along Bunt Mill Lane and at the intersections of junctions to give priority to waking and cycling;
- opportunity to enhance the environment for walking and cycling in Pye Corner as it will provide for access only;
- Illustrations showing how the proposed willow screening around Terlings Park will establish would be welcome;
- Conditions are requested to ensure appropriate design and landscaping measures are put in place for the PRoWs 29 and 30 under the proposed Fiddlers' Brook bridge;
- Cut and fill will change the landscape around Road 1 and Road 2, details of landscaping and construction waste management should be required by condition;
- Details are required on how PRoW 30 is treated given that the direct route is severed by Road 1;
- The central roundabout is much larger (65m diameter) than the River Way roundabout (45m diameter) and should therefore be reduced in size to improve its ability to meet placeshaping and active travel principles;

- The modal filter at the Village 2 access should follow walking and cycling desire lines to allow convenient use of this route through Pye Corner;
- The culverted structure is crossing a highly sensitive and constrained landscape, as such impacts on ecology and floodplain functionality need careful consideration, deferring to experts for this analysis.
  *Officer note for report – a final set of conditions was agreed with the Strategic Masterplanning, Conservation and Urban Design Officers. These are set out in Recommendation section below.

9.34 Environment Agency – Originally raised objection on the grounds of inadequate flood storage compensation and inadequate information to demonstrate protection of water quality. The EA raised no objections on the revised submission subject to conditions to address flood risk and water quality to be imposed should permission be granted.
*Officer note for report – a final set of conditions was agreed with the EA. These are set out in Recommendation section below.

9.35 Essex Police – Having reviewed documents, Essex Police concur with the comments made by Hertfordshire Police CPDO, regarding the lighting uniformity, especially given the heavy use of the proposed crossings. In the same way they are not in a position to support the application but would not be seeking at this stage to object it.

9.36 Health and Safety Executive – Advises that the proposed development does not lay within the consultation distance of a major hazard site or major accident hazard pipeline. HSE therefore has no comments to make.

9.37 Hertfordshire Constabulary – The only concern is in regard to the proposed lighting provision. The examples shown in the Design and Access Statement appear to be bollard style and they also exhibit the 'pooling effect' – this is where you get alternate areas of light and dark. The problem with this is that because the light stops people having a clear view of what is ahead in the dark patches. This can be easily mitigated by using a uniform spread of light (at least 25% uniformity) and using a light source that has a colour rendition index of at least 60

(i.e. – 'white' light). By using column-based lighting together with directional luminaries it is possible to achieve this with a lesser number of columns than bollards.

9.38 In light of the above the Police Crime Prevention Design Service are not in a position to support this application but neither do they object to it.

9.39 Hertfordshire Gardens Trust on behalf of Gardens Trust – The Gardens Trust have authorised Hertfordshire Gardens Trust to comment on planning application 3-19-1051-FUL and subsequent revisions. Having considered the details for determination to any matters regarding the heritage of designated parks and gardens in the area both designated and non-designated, HGT do not wish to make a comment. However, they applaud the provision of dedicated foot and cycle bridges across the River Stort.

9.40 Highways England – In July 2019 Highways England previously advised that they wish to lodge a holding objection to this and the Central crossing application (3/19/1046/FUL) and also the outline application (3/19/1045/OUT) subject a full assessment of the submitted transport data. Subsequently in August 2019 AECOM on behalf of Highways England submitted a detailed response with a list of recommendations considered critical to the acceptability of planning approval and a list of recommendations not critical to the acceptability of planning approval. Highways England subsequently confirmed (February 2021) that they did not wish to object to the application, though they had some concerns over the transport model and its ability to project over a long period of time. In June 2021 Highways England confirmed that they no longer require a holding direction. *Officer note for report – these conditions have informed those that are set out in Recommendation section below.

9.41 Historic England (Archaeology) – Advise that they do not wish to comment and request that consultation be undertaken with local archaeological advisors.

9.42 Ministry of Defence (Defence Infrastructure Organisation) – Advise that the site lies outside any safeguarded areas and therefore raises no objections to the development.

9.43 NATS Safeguarding – NATS advise that the proposed development has been examined from a technical safeguarding aspect and does not conflict with NATS safeguarding criteria. Accordingly, NATS (En Route) Public Limited Company ("NERL") has no safeguarding objections to the proposal. This response relates specifically to this application and only reflects the position of NATS.

9.44 Network Rail – In line with comments submitted regarding application 3/19/1046/FUL Network Rail advise that although the bridge structure is owned by Essex County Council any proposal will be subject to NR approval via business and technical clearance. Therefore, the applicant must consult with them to obtain easement for the proposed works adjacent to the existing Network Rail Bridge re:BGK 1453. Comprehensive design and construction proposals should be submitted to National Rail for review and due consideration should be given to National Rail operational requirements and existing National Rail infrastructure such as overhead electricity lines at this location. Bridge parapet is required to be 1.8m high H4a. Any work to be carried out over the railway must comply with National Rail safe working practices.

9.45 Specifically in relation to the foot bridge adjacent to the existing highway bridge forming part of this application 3/19/1051, Network Rail advise that parapet height requirements have been reviewed following a detailed assessment of railway risks that can be partially mitigated by parapets on overline bridges and footbridges. The research indicates that for new overline structures or parapet upgrades, an increased parapet height will often be appropriate to mitigate the risks so far as is reasonably practicable (SFAIRP). In determining the revised parapet height requirements, consideration has also been given to Network Rail's initiatives to reduce suicide, trespass, electrocution, vandalism and cable theft on the railway, the increased use of overhead electrification on the network in the future and the potential automation of railway operations in the future.

9.46 A further meeting has been held with representatives of Network Rail and the applicants and although there are other legal processes and permissions that will necessary should planning permission be granted, none of these are likely to be prohibitive to the development being deliverable.

9.47 Stansted Airport - The Safeguarding Authority for Stansted Airport has assessed this proposal and its potential to conflict aerodrome Safeguarding criteria. They have no aerodrome safeguarding objections to the proposal, however, request a condition requiring the submission of a Bird Hazard Management Plan (BHMP) (included within recommendation).

9.48 Thames Water – advise that if the sequential approach to the disposal of surface water is followed they have no objection. With regards to foul water sewerage network infrastructure capacity, they have no objection. They recommend a condition requiring the submission of a piling method statement to ensure no damage to sub surface sewerage infrastructure. *Officer note for report – this condition is set out in Recommendation section below.

10.0 Town/Parish Council Representations

10.1 Hunsdon Parish Council - comment that they fully endorse the comments of the Hunsdon, Eastwick and Gilston Neighbourhood Plan Group (see below). Concerns expressed over traffic impact of overall development and adequate mitigation to existing villages needs to be demonstrated. Safeguards also need to be in place to ensure the full infrastructure package is provided on time and as promised.

10.2 Eastwick and Gilston Parish Council comment that they fully endorse the comments of the Hunsdon, Eastwick and Gilston Neighbourhood Plan Group (see below).

10.3 High Wych Parish Council – Object to the overall development. Specific concerns over traffic impact, inadequate transport infrastructure, no additional capacity for private cars and significant disruption during construction. Concern about the impact the ESC will have as residents from High Wych and Allens Green rely on the route. Wish to see a vehicle drop off area at the new station access to reduce demand on the Central Stort Crossing. Wish to see a new crossing of the Stort to the west of the current crossing with grade separation of accesses to the A414 to ensure the A414 flows unimpeded. Wish to see all work complete on the ESC before 2,000 occupations. There should be traffic signals on the central roundabout to reduce delays from traffic from the east, enabling more flow from High Wych. Road networks within the Garden Town to be completed prior to first occupation and used for construction traffic in preference to local roads and all construction vehicle movements to occur between 7pm and 7am to avoid daytime.

10.4 Roydon Parish Council – comment that there seems to be little recognition of the risk that if there is insufficient general traffic capacity at the new crossings (excluding the dedicated bus route), roads such as the B181 through Roydon could be used as a cut through making life within the village very challenging. Regarding potential new links to Pinnacles Employment Area and Roydon Station, the clear aim would be to encourage walkers/cyclists from village 6, in particular, to use Roydon station. The Parish Council has concerns that there is an over reliance on cycling/walking and that directing people to Roydon Station is unrealistic with trains running at full capacity and sometimes non-stopping.

10.5 Civic Society, Epping Upland Parish Council - expressed concern regarding volumes of diverted traffic during construction.

10.6 Hunsdon, Eastwick and Gilston Neighbourhood Plan Group – Object to the application on the following grounds:

- The whole network of new roads (primarily the Eastern Stort Crossing) has no justification and do not demonstrate how they will support the delivery of sustainable transport;
- If the route is to perform a strategic role it has too many junctions;

- The use of the ESC and its benefits as a strategic route/ Harlow bypass has never been openly acknowledged;
- Eastwick Junction is designed deliberately to route vehicles along the ESC due to reduced turning lanes from the west into Harlow;
- Alleviates traffic in commercial areas in Harlow at the expense of the residential communities;
- Will result in too many vehicles through High Wych towards the M11
- Will cause severance between two communities (Terlings Park from Gilston) undermining efforts to encourage active and sustainable travel preventing access to open land and playground in Terlings Park estate;
- Loss of designated open space and Local Wildlife Site, including felling of a 100 year old oak, with inadequate mitigation;
- Delivery of infrastructure is too late compared to delivery of homes;
- Will bring more pollution to a tranquil area;
- Cutting into the landscape requires a disproportionate land take;
- Without clear justification the CPO necessary to deliver the ESC will not be successful;
- Not enough information regarding the environment beneath the Fiddlers' Brook bridge – low head height and dark, plants will not survive and environment will encourage anti-social behaviour – will need lighting and CCTV ;
- Bridges and roundabouts are over-sized
- Road designed for high speeds with no heavy load restrictions is unacceptable;
- No details for downgrading Eastwick Road to Terlings park – could change to permeable surfacing, not necessary for a separate cycle land as the road will have less traffic, need to make sure it doesn't become a car park for the station, change to 20mph home zone;
- Visual impact and severance caused by the noise screen around Terlings Park;
- Impact on the Stort valley (noise, pollution, landscape, impact on wildlife);
- Information required about the adoption and maintenance of the willow wall and landscaping area by Terlings Park;
- Impact from the new junction to Village 1 on the social housing in Terlings Park (noise and pollution);

- Improvements needed to Burnt Mill Lane to improve use for pedestrians and cyclists;
- Whole scheme to be redesigned to be landscape-led with less land take, more permeability for pedestrians and cyclists and respect for vegetation and minimises pollution;
- No information regarding site accesses and construction activities
- Suspend or reject approval pending a detailed A414 Strategy for Segment 14 in the context of the design of STCs across Harlow;
- Lack of clarity on when Biodiversity Net Gain and the biodiversity strategy will be achieved, with surveys being out of date for mammals in the Stort Valley.

11.0 Summary of Other Representations

11.1 In total 1753 neighbouring properties were originally consulted. A total of 364 responses were received. Of these, four were neutral representations, one supports the proposal and 356 object to the proposal (number recorded on 01.11.21). The concerns objections and comments raised are summarised as follows:

- Inadequate description of development;
- Red line boundary incorrect (NB: Not specified where);
- Inadequate assessment of delivery timescales;
- Absence of Statement of Delivery;
- Inadequacy of land assembly costs, compensation and lack of viability assessment;
- Inadequate transport assessment;
- Inadequate EIA;
- Inadequate section 106 draft heads of terms;
- Consultation period too short;
- Local residents not consulted prior to application being submitted;
- Inadequate assessment of noise and air quality impacts, adverse health impacts on homes in Terlings park and narrow boats, noise barrier insufficient and ugly;
- Adverse impact on heritage and landscape character;

- Inappropriate design and inadequate provision of properly costed infrastructure;
- Lack of assessment of alternative options – alternative route should be sought;
- Adverse impact on the environment – loss of farming land, loss of trees, harm to species (otters and water voles) and habitats (Hunsdon Meads Site of Special Scientific Interest (SSSI) and Rye Meads SSSI); loss of trees (Terlings Park and elsewhere);
- Concerns over scheme causing flooding.
- The river environment is not looked after already Impact on tranquillity and beauty, impact on walking routes
- Redricks Lake used for swimming and fishing – will be affected by traffic noise, pollution and visual impact
- Loss of Green Belt and countryside, inappropriate development in the Green Belt;
- New bridges will be visually intrusive;
- New entrance to Terlings Park is inappropriate;
- New road will cut Gilston off from the rest of the locality;
- Devaluation of properties in the area;
- Development will create too much disruption;
- A414 already too congested;
- Harlow road network cannot cope with additional traffic;
- Adverse impact of development on quiet country area;
- Plan is flawed as only allows for additional bus movements;
- Adverse impact on rail network;
- Adverse impact on Princess Alexandra Hospital;
- Additional stress on water supply/sewage;
- 60% mode share target unachievable;
- Road has been designed for dualling, bringing more traffic and HGV's into the area;
- Adverse impact on road safety;
- Increased traffic in Roydon and impact on capacity of trains to/from Roydon station;
- Roads in Harlow cannot cope with additional traffic, will worsen existing traffic especially along Edinburgh Way, will not alleviate traffic but will move it to a different part of the A414;
- Construction materials should be delivered by train and transported by crane across the valley;

- Should keep traffic using Edinburgh Way;
- Application should only be determined when outcome of outline application(s) is known;
- Councils have already made HIF bids so suggests support already agreed, therefore, applications should be determined by an independent body;
- Construction traffic should not be allowed through Pye Corner;
- Instead of developing the South East of England, investment should be focussed on the North East;
- The development is welcome if it relieves congestion. Would also have like to have a western crossing to further reduce congestion;
- There is a lack of Options Analysis to support the ESC application, road is in the wrong place, alternative routes should be used, including existing roads;
- There should be a fair distribution of increase in land value to cover infrastructure and sustainability spending;
- Should be no new road infrastructure
- Will encourage more car use.
- Existing infrastructure needs to be better maintained before considering new roads.
- Current Fifth Avenue crossing will be improved so no need for a second crossing
- Need a better and cheaper bus service
- No benefit to existing residents of Harlow, will place more pressure on Harlow services; will cause more harm to an already damaged town;
- Runs counter to fight against climate change
- Covid pandemic means expansion of town is not needed
- Impact on industries in River Way
- Offensive comments against officers and councils

11.2 A petition was submitted containing 5,360 signatures. The petitions states:

"We oppose the central and eastern river crossing for Harlow and Gilston Garden Town.

To Local and National Government:

The proposal put forward by the developers of the Harlow and Gilston Garden Town, runs through wetlands across lakes and will destroy huge areas of woodland. Why is this important? The damage to the habitat of the wildlife in the area will be damaged beyond repair. This area is the home to wildlife such as water voles, bats, rabbits, barn owls, wood peckers, weasels, badgers, cuckoos, kingfishers, deer, raptors, foxes, newts, frogs, bees...the list is endless. The historical importance of this site has not been considered in these plans, neither has the lack of public transport and the visual impact of the project. We will email the signatures to the council and government. Please visit the area and come and experience the beauty."

12.0 Consideration of Issues

12.1 Principle of Development

12.1.1 Policy GA1 (The Gilston Area) of the East Herts District Plan 2018 allocates the Gilston Area for 10,000 new houses. This allocation forms part of the development strategy in the District Plan as detailed in Policies DPS1 (Housing, Employment and Retail Growth), DPS2 (The Development Strategy 2011-2033) and DPS3 (Housing Supply 2011-2033).

12.1.2 EHDP Policy GA2 (The River Stort Crossings) seeks to facilitate the delivery of transport improvements to crossings of the River Stort. This includes the *"widening of the existing A414 crossing to enable a dualling of the northbound and southbound carriageways and provision of a new footway/cycleway, which will form part of a north-south sustainable transport corridor through Harlow."* Plus "*a new vehicular, cycle and pedestrian crossing either to the east of the existing crossing (connecting the A414 to the River Way), or to the west of the existing crossing (connecting the A414 to Elizabeth Way).*" Policy DEL1 (Infrastructure and Service Delivery) at part II(a) requires development to demonstrate that adequate infrastructure capacity can be provided both on and off site

to enable the delivery of sustainable development within the site, the locality and the wider area as appropriate.

12.1.3 The Council worked with the Applicants, the two Highway Authorities (HAs) of Hertfordshire and Essex County Councils and Harlow District Council in order to consider both western and eastern crossing options prior to the submission of the planning application.

12.1.4 The options for the second river crossing have been comprehensively explored and the ES explains the options process (ES Chapter 4, [4.5]). The Plan-making process was informed by representations received on the draft plan being focussed on the options. As outlined at paragraphs 11.3.1 to 11.3.2 of the East Herts District Plan 2018, "*a new crossing to the east or west of the existing A414 crossing would deliver different benefits*" and "*the Eastern option is preferred by ECC as it provides relief to junctions along the western end of the A414 Edinburgh Way in Harlow, and enhances access to the Enterprise Zone and links through, potentially, to the proposed new motorway Junction 7a*". Both options require the infrastructure to be constructed within the Green Belt and comprise bridges over the River Stort, the Stort Navigation and the West Anglia Mainline.

12.1.5 By the time of the East Herts District Plan Examination in Public the eastern crossing was considered the preferred solution, with the East Herts Infrastructure Delivery Plan showing an indicative route for the "*potential eastern stort crossing*" and stating that "*an eastern crossing is the preferred option as it would reduce traffic flows on the western section of Edinburgh Way in Harlow. However, if the land required cannot be secured then a second option is to provide a crossing to the west of the existing*".

12.1.6 Despite the eastern crossing being the preferred and expected location for the second river crossing and evidence concerning the timeframe for its delivery was examined by an independent Planning Inspector at the East Herts District Plan Examination in Public, no modifications were made to the plan (or recommended by the Inspector) to remove the western crossing as a feasible option or to require the eastern

crossing to be delivered alongside or in advance of the Central Stort Crossing.

12.1.7 The Harlow Local Development Plan 2020 (HLDP) sets out the framework to guide and shape development in Harlow to 2033 and beyond. The Plan acknowledges in Policies HGT1 (Development and Delivery of Garden Communities in the Harlow and Gilston Garden Town) and SIR1 (Infrastructure Requirements) that the Spatial Development Strategy will be underpinned by *"the timely provision of infrastructure necessary to support development in the Harlow and Gilston Garden Town"*, with development phased over the Local Plan period to ensure that the correct levels of infrastructure are provided. Policy SIR1 (Infrastructure Requirements) identifies *'infrastructure items which require safeguarding or have a land use implication'* including:

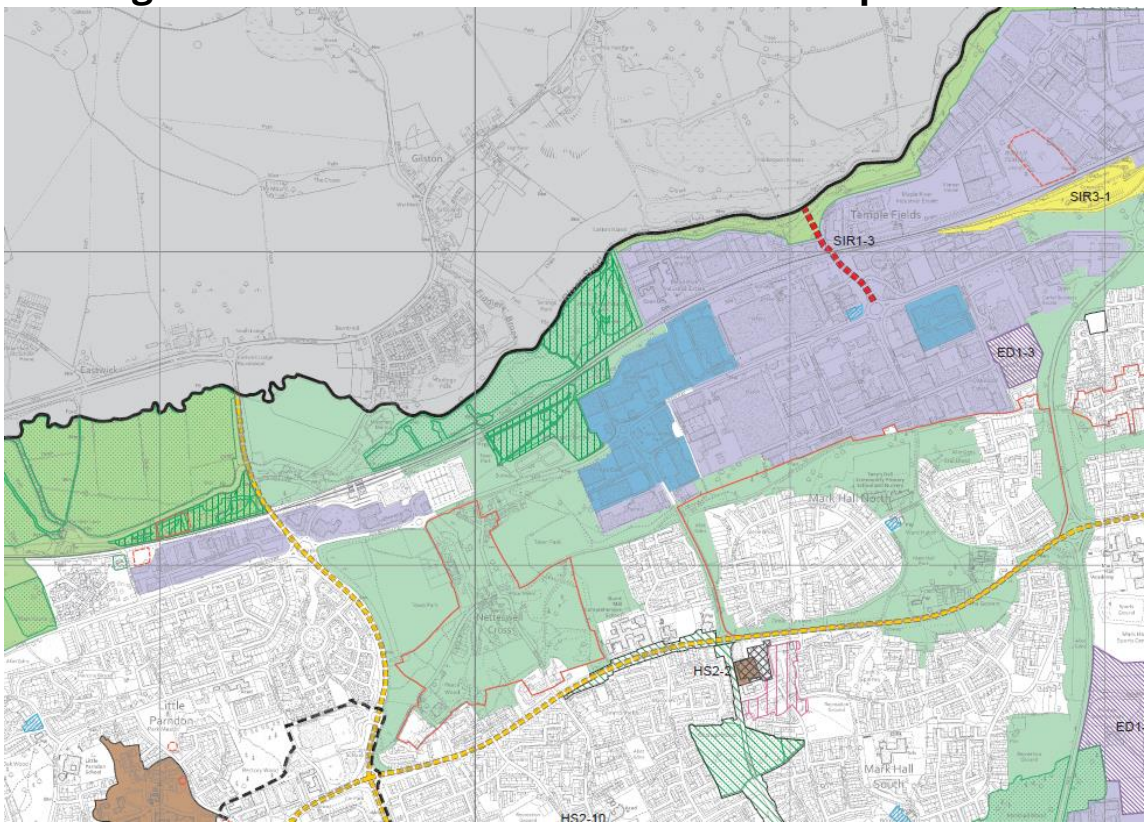
- *SIR1-1 North-South Sustainable Transport Corridor and River Stort Crossing to Eastwick Roundabout;*
- *SIR1-2 East-west Sustainable Transport Corridor;*
- *SIR1-3 Second River Stort Crossing at River Way;*

12.1.8 The HLDP identifies on its Policies Map *Strategic Infrastructure Items* which require safeguarding or have a land use implication. The map includes an indicative line (red dotted line) marking the potential route of the second Stort crossing within the district boundary as indicated on Figure 15 below. Paragraph 11.0 lists the Eastern Stort Crossing in the context of the Infrastructure Delivery Plan as a *New Second Stort Crossing between Eastwick Road in East Hertfordshire District and at River Way in Harlow*.

12.1.9 HLDP Policy SIR2 (Enhancing Key Gateway Locations), identifies gateway locations in the district, which include the *River Stort Crossing where Fifth Avenue enters and exits the Harlow district boundary*, and the *Eastern Stort Crossing, which enters Templefields Employment Area at River Way.* The Policy requires improvements to landscaping and boundary treatments, principles of green wedges, public art and improved signage, pedestrian and cycle networks, security and safety measures.

12.1.10 Policy PR1 (Development within Employment Areas) requires that development provides a complementary benefit to the employment area and would not have an adverse effect on the overall provision of employment land. The ESC within River Way is located on highway land and therefore will have no impact on the overall provision of employment land. The proposed junction improvements and replacement of River Way bridge will provide an enhancement to the transport network by providing a significantly improved pedestrian and cycling connection to the employment areas served by River Way.

Figure 15: Extract of Harlow Local Development Plan Policies Map



Key: Red dotted line – Indicative Second Stort Crossing at River Way
Yellow dotted line – Indicative North-South Sustainable Transport Corridor and River Stort Crossing to Eastwick Roundabout

12.1.11 The Central Stort Crossing proposal (considered in application 3/10/1046/FUL) provides additional carriageway which will be used only as part of a Sustainable Transport Corridor (STC); it does not provide additional highway capacity for other vehicle movements, with the exception of enhancements at the Eastwick Junction and Burnt Mill Roundabout (which is an off-site scheme led by Essex County Council). It is agreed by both Highway Authorities that the Eastern Stort Crossing

is necessary, in conjunction with the Central Stort Crossing STC, to provide the additional highway capacity required for the growth of the HGGT in and around Harlow of which the Gilston Area development forms a part. The STC is intended to operate as a network providing travel choice serving existing residents and businesses as well as new developments in and around the HGGT area. The ESC allows traffic to be diverted away from more central areas of Harlow and in particular the STCs thereby assisting with their operation.

12.1.12 The provision of this essential infrastructure, both the Central and Eastern River Stort crossings, supports the delivery of the Gilston Area allocation which is the largest strategic development allocated in the East Herts District Plan, and also supports the planned growth of the HGGT (23,000 new dwellings, of which 16,000 is to be delivered by 2033) and the sustainable transport objectives of the HGGT.

12.1.13 The principle of the ESC development is established in both the East Herts District Plan and the Harlow Local Development Plan; this carries significant positive weight and the development is considered to be acceptable in principle. The application is supported by comprehensive information demonstrating how alternative routes were considered through the pre-application stage[1] and how the preferred option was refined following the original submission in response to the consultation[2]. In this report the Local Planning Authorities are asked to focus on the planning application for the Eastern Stort Crossing in its current form, drawing upon the expertise of the Highway Authorities.

12.1.14 There are a number of other planning considerations that need to be assessed to determine the acceptability or otherwise of this application which are covered hereafter in the report.

12.2 Design and Layout

[1] Statement of Community Involvement and Eastern Stort Crossing Options Report (April 2019)

[2] Eastern Stort Crossing Options Report Addendum (November 2020) and Eastern Stort Crossing Options Report Addendum (February 2021)

12.2.1 Policies DES2 (Landscape Character), DES3 (Landscaping) and DES4 (Design of Development) of the East Herts District Plan 2018 seek to ensure that all developments throughout the District follow high-quality design and layout principles, while conserving, enhancing or strengthening the character and distinctive features of the District's landscape. Policy CFLR9 (Health and Wellbeing) requires development to provide necessary infrastructure to encourage physical exercise and health, including through safe, well promoted walking and cycling routes.

12.2.2 Policy PL1 (Design Principles for Development) and Policy PL2 (Amenity Principles for Development) of the Harlow Local Development Plan 2020 sets out the design principles to guide development within the town and seeks a high standard of urban and architectural design for all development. These policies sets out the design criteria for all development in Harlow, taking into account the requirements of the adopted Harlow Design Guide SPD. Policy PL3 (Sustainable Design, Construction and Energy Usage) of the HLDP states that "new development will be expected to deliver high standards of sustainable design and construction and efficient energy usage, taking account of predicted changes to heating and cooling requirements as a result of climate change".

12.2.3 HLDP Policy SIR2 (Enhancing Key Gateway Locations) requires improvements to landscaping and boundary treatments, principles of green wedges, public art and improved signage, pedestrian and cycle networks, security and safety measures. HLDP WE1 (Strategic Green Infrastructure) and Policy WE2 (Green Belt, Green Wedges and Green Fingers) require that proposals preserve and enhance the role and setting of green spaces, promote biodiversity and integrate with existing green infrastructure.

12.2.4 HLDP Policy L4 (Health and Wellbeing) require *inter alia* developments to provide infrastructure to encourage physical exercise, including walking and cycling. Policy IN1 (Development and Sustainable Modes of Travel) requires development to reduce the use of the car and promote alternative ways to travel.

12.2.5 Gilston Area Neighbourhood Plan Policies AG1 (Promoting Sustainable Development in the Gilston Area) , AG2 (Creating a Connected Green Infrastructure Network), AG3 (Protecting and Enhancing the Countryside Setting of New and Existing Villages), AG5 (Respecting Areas of Local Significance) and AG8 (Minimising the Impact of Traffic and New Transport Infrastructure on Existing Communities) all have some relevance to the issue of design in the context of the Eastern Stort Crossing, primarily in relation to impacts on views and setting, local green space, landscape and ecology and the Stort Valley environment. Policy AG8 is most relevant for the consideration of the Eastern Stort Crossing in design terms, relating to minimising the impacts arising from essential infrastructure, such as visual and environmental matters plus social impacts from noise and severance for example. Policies TRA1 (Sustainable Mobility) and Policy TRA2 (Access to the Countryside) require developments to provide opportunities for active travel, providing routes that are well connected to the existing Public Rights of Way network.

12.2.6 Paragraphs 130 to 135 (section 12) of the NPPF relate to the consideration of development proposals in the context of achieving well designed places. Key principles include ensuring that developments function well and add to the overall quality of the area, are visually attractive, incorporating effective landscaping, support local facilities and transport networks and create safe inclusive and accessible places that promote health and wellbeing. The NPPF includes a recent addition in paragraph 131 which requires streets to be tree-lined and advises that local planning authorities should work with highways and tree officers to ensure the right trees are planted in the right places and that solutions are found that are compatible with highways standards and needs of different users. Furthermore, the use of design review panel arrangements is encouraged. Paragraph 134 states that significant weight should be given to outstanding or innovative designs which promote high levels of sustainability, or help raise the standard of design more generally in an area so long as they fit in with the overall form and layout of their surroundings.

12.2.7 Original proposals for the application were consulted upon in June 2019. Following the consultation and further engagement with key

stakeholders, amended plans were submitted in November 2020 and again, were subject to consultation. Further minor changes have also been submitted following engagement with technical officers in February 2021. This report therefore assesses the design of the amended scheme.

12.2.8 The proposal for Road 1 includes the realignment of Eastwick Road eastwards of the Eastwick Road/ Fifth Avenue junction. The amended plans move the alignment further north of Terlings Park to create a larger landscape buffer between the road and existing properties. Similarly, where Road 1 passes between Pye Corner and Terlings Park the junction has been reduced in width allowing for a relocation of the road northwards away from Terlings Park properties. The scheme previously proposed a four-arm junction with the entrance to Terlings Park forming the southern arm. Under the amended scheme this southern arm is removed and moved to the west as described below. The proposed realignment of the road northwards enables the retention of the current Terlings Park walled gateway entrance and current alignment of Eastwick Road which will become an access road serving only Terlings Park; its western end being redesigned to joint Burnt Mill Lane and form a four arm junction with the new all-modes access in to the Gilston Area Village 1.

12.2.9 The downgrading of the current Eastwick Road includes a new segregated pedestrian and cycle route which was previously proposed to run along the new Road 1 adjacent to the highway towards the CSC pedestrian and cycle bridge. Due to the anticipated lower volume of traffic that will use the Terlings Park access, the road itself could be used by cyclists, reducing the need for cycle paths that widen the overall width of the highway, but it is considered that the continuation of the segregated cycle lane located adjacent to the road will give a prioritised and safer route for cyclists. Routing the cycle path alongside the downgraded section of Eastwick Road will not only be a more pleasant route compared to being alongside Road 1 where the road will be within a cutting, but it will still connect to the CSC at the Eastwick Junction, and will also link with an alternative pedestrian and cycle route along Burnt Mill Lane (Dusty Miller section).

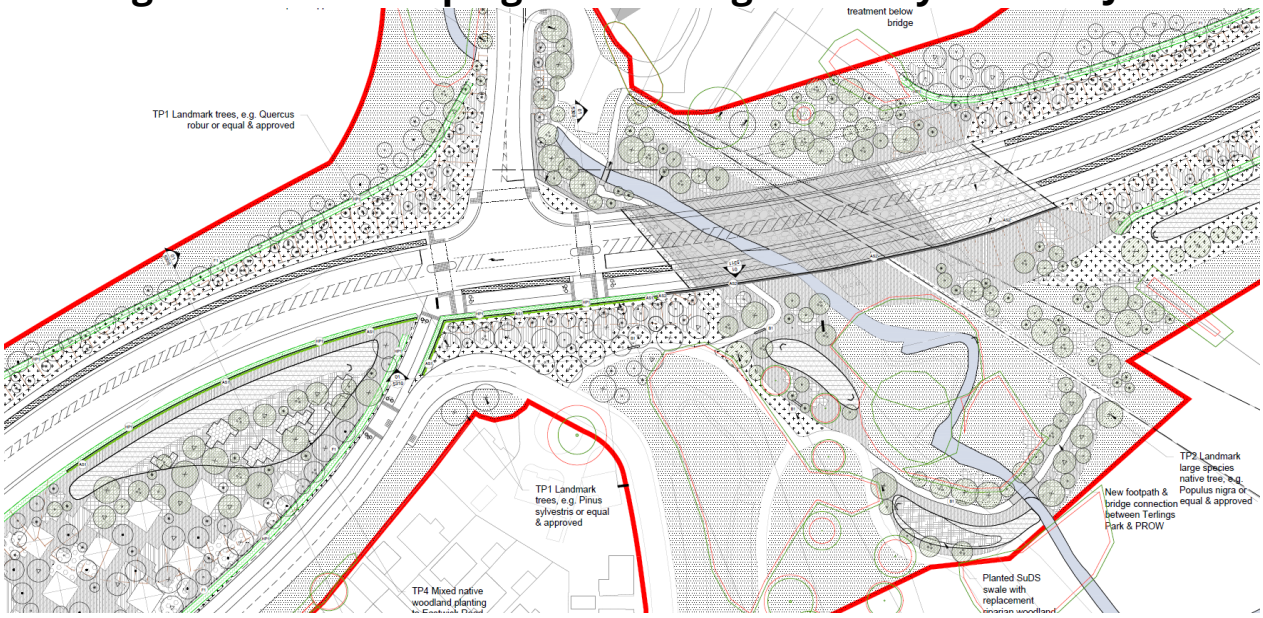
12.2.10 Although not part of this application, Officers and the Applicant are considering opportunities to improve Burnt Mill Lane. These improvements may comprise surfacing, quiet lane and wayfinding treatments as well as improving the layout at the southern end of the lane which is currently blocked by two large concrete blocks. The final specification of the improvements will be agreed with the Highway Authority and will be secured through a highway agreement (Section 278 of the Highways Act 1980) and potentially through the S106 obligation associated with the Villages 1-6 outline application. These off-site improvements will be an important part of encouraging and enabling pedestrian and cycle movements towards Harlow Town Station and the Fifth Avenue crossing and as such the details of the proposals will be required to be submitted via a condition on the Outline Villages 1-6 application, so whilst they are not material to this application this paragraph provides the context of the intended wider package of mitigation associated with the development as a whole. During the construction of the Central Stort Crossing infrastructure this route will provide an alternative to the on-road route across the CSC.

12.2.11 As there will be the need for a phased approach to construction, the western section of Road 1 from the CSC to the Village 1 all-modes access is also included in the CSC application. During this interim phase vehicles will continue to use the current Eastwick Road. As such, the southern part of the Village 1 all-modes access has been designed with a priority slip road at the junction for westbound vehicles. Following completion of the Eastwick Road realignment there will be limited need for this additional lane, therefore consideration will be given at the detailed engineering stage for minor alterations to the design of the junction.

12.2.12 The Pye Corner / Terlings Park junction is the one part of the ESC design that has resulted in the greatest number of representations, with residents concerned about the visual impact of the junction and the impact on properties as a result of increased noise and physical separation between the Pye Corner and Terlings Park properties. Section 12.5 of the report considers noise matters. In terms of the design, there will undoubtedly be different visual impacts arising from the new road alignment. Instead of the Eastwick Road running

alongside the boundary hedge of Terlings Park sweeping northwards away from the estate entrance towards Pye Corner, Eastwick Road becomes an access into Terlings Park only, beyond which there will be a new landscaped area between the estate's access and the new Road 1 and Pye Corner junction before continuing eastwards as shown in Figure 16 below. At this point Road 1 is slightly elevated compared to the current road alignment in order to span Fiddlers' Brook.

Figure 16: Landscaping Plan Terlings Park/ Pye Corner Junction



Extract of Eastern Stort Crossing (Western Spur) Planting Plan Sheet 02 of 03 (HNP496-GRA-X-XX-DR-L-5122 Rev 11)

12.2.14 Concern was raised that this elevated section would mean the new road would be highly visible to properties in Terlings Park in particular. The applicants therefore provided a series of photos taken from different heights and viewpoints from Terlings Park looking northwards, and from Pye Corner looking south. These have been submitted to the application and can be found on the planning portal under the title CGI Views from Terlings Park (dated 15.01.2021). There will be a need to remove two mature trees and one tree group, including an early mature Oak tree and a badly fire damaged mature Oak tree, both of which have a high amenity value, in order to enable the road construction (the report considers this in section 12.6). Replacement planting is proposed which includes 8 semi-mature trees. These will take several years to fully mature, so the photos include a

time-series of images which illustrate the removal of these trees followed by views of the new landscaping at five and ten year growth levels and in summer and winter. In addition to the landscaping for aesthetic purposes, a living willow hedge and solid willow screen is proposed on the northern edge of the landscaped area to act as a noise attenuation feature (discussed further in section 12.5 of this report).

12.2.15 The tops of taller lorries will still be visible from first floor level until the new landscaping reaches maturity. However, this is considered to be a neutral impact, if not an improvement on the current situation given that the new Road 1 is further away from properties compared to the current Eastwick Road alignment, which runs directly adjacent to and in front of Terlings Park properties and is highly visible even with the partial screening afforded by the boundary hedge, walled entrance and landscaping planted during the development of the Terlings Park estate. The introduction of landscaping, willow screen and planting will reduce the visual impact of the realigned road arrangements.

12.2.16 Given the concerns raised in the original representations, it was agreed that the applicant undertake a further options testing exercise to consider a number of routes and junction arrangements. These options were discussed with community representatives at sessions organised by the applicant. Options included closing off access to Pye Corner from the south, with access retained to Pye Corner from the north in the vicinity of the Village 2 access. However, residents identified a preference to retain the southern access to Pye Corner with a closure to vehicular traffic at the north. This preference meant there is still a need for a junction on Road 1 which therefore requires a greater road width in this location in order to accommodate the necessary turns northwards into Pye Corner. Despite this, the amended scheme has been reduced in scale as far as is possible whilst still meeting necessary highway design standards and this enabled the road to be moved 14m further away from homes in Terlings Park than originally proposed.

12.2.17 An Eastern Stort Crossing Options Report Addendum was submitted in November 2020, with minor technical amendments submitted in April

2021. The Options Report explains the changes proposed and the reasons for the amendments in greater detail.

12.2.18 In terms of connectivity and severance concerns, the amended layout and design of the ESC proposal in this particular location is considerably better than originally proposed. The reduction in carriageway width has enabled the creation of much simpler and direct pedestrian and cycle crossing points without the need for staggered crossings with central islands, multiple sets of lights and waiting periods. The crossing locations better align with the relocated pedestrian and cycle path along Eastwick Road and the access to Terlings Park, and to the north of the junction there will be an improved path in to Pye Corner from the junction to the current footpath. With the reduction in vehicle movements resulting from the closure of Pye Corner to through-traffic, on-road cycle movements will be far safer and the walking environment much quieter, making the route from Terlings Park to the Gilston Village Hall or the Plume of Feathers public house much more attractive as a walking route. Officers are currently exploring with the applicant and the Highway Authority what public realm enhancements can be achieved in the Pye Corner part of Gilston Village. These would be secured through the Villages 1-6 outline application so are not material to this decision.

12.2.19 Also by reducing the width of the junction, the road could be located 14m further north away from Terlings Park properties whilst still being able to retain the listed Fiddlers' Brook Bridge in situ, with the brook spanned by a road bridge. The road bridge itself has been designed with sufficient head height to enable the retention of existing Public Rights of Way 29 and 30, which link Pye Corner and Terlings Park to the Stort Valley through Local Wildlife Site Fiddlers' Brook Marsh, Hollingson Meads. The location of the bridge piers avoids the need to divert PRoW 30. The current footpath from the entrance of Terlings Park to the Fiddlers' Brook Bridge is also diverted under the new road bridge as an alternative to the proposed on-road pedestrian crossing. One additional route is proposed which links Terlings Park across Fiddlers' Brook south of the new road bridge to connect to PRoW29, providing another alternative off-road route for residents of Terlings Park.

12.2.20 Concerns have been raised about the environment under the bridge, such as what this looks like, lighting, security and safety of those using the PRoWs among other concerns. Figure 17 below illustrates a cross section of the Fiddlers' Brook road bridge and the space for the paths beneath the bridge deck. Full details of this space is not captured in the application material at this stage as there will be a need for a technical approval process with the Highway Authority and the Environment Agency, and also with Planners to confirm the treatment of this space. This process will be secured by Condition 10, that will require the applicant to demonstrate that a safe and attractive environment is created in this location

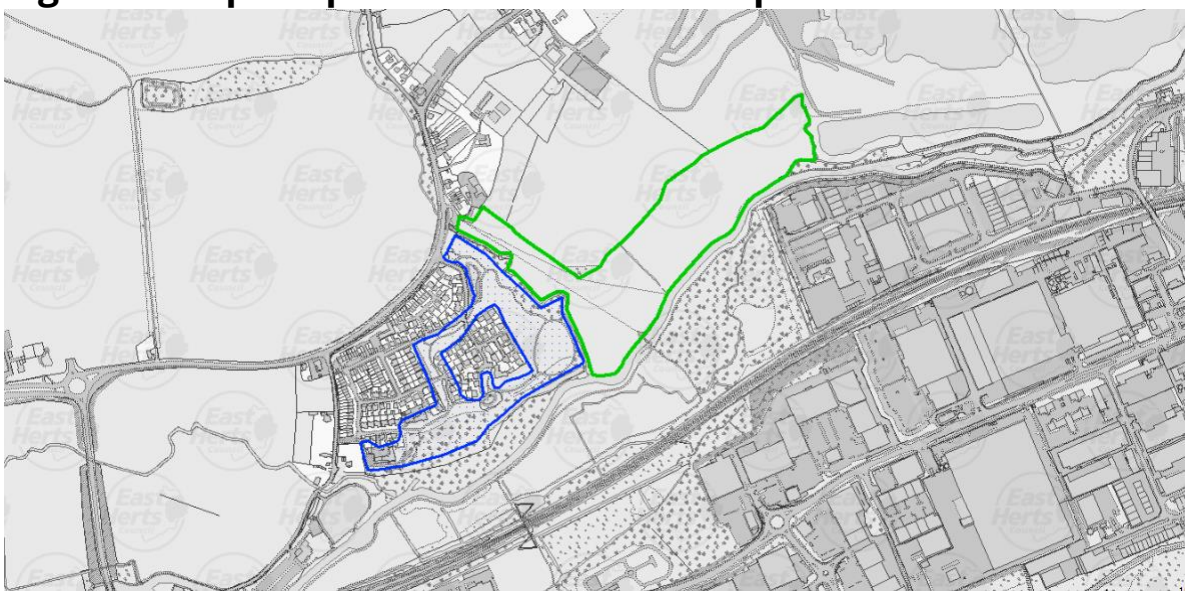
12.2.21 Whilst the new road will physically separate Pye Corner and Terlings Park there are a number of off-road routes plus on-road crossings that enable north-south movement. This provision of new and improved walking and cycling routes combined with the improved road-side environment within Pye Corner is considered a key benefit which outweighs the need to cross the new Road or pass beneath it. The design and layout of this part of the ESC is considered to accord with Development Plan policies.

12.2.22 The Gilston Area Neighbourhood Plan designates land adjacent to Terlings Park, within the Stort Valley as a Local Green Space (LGS) in Policy AG5 (Respecting Areas of Local Significance). The boundary of the LGS area matches the boundary of the designated Local Wildlife Site of Fiddlers' Brook Marsh, Hollingson Meads. The environmental impact on the LWS is discussed in paragraphs 12.6.13 to 12.6.14 of this report.

12.2.23 GANP Policy AG5 is in accordance with EHDP Policy CFLR2 (Local Green Space) (LGS), which states that development will be permitted only if it is consistent with the function, character and use of the LGS to which it relates. However, GANP Policy AG5 also states that any development within a LGS should be tightly constrained and be restricted to works necessary for their maintenance and preservation, and minor ancillary works necessary for enhancement of their appreciation. However, the Policy does on to state that "in exceptional circumstances, development

needed for strategic infrastructure required for the Gilston Area (Policy GA2) may be permitted." It is considered that these exceptional circumstances are indeed met given that the ESC is identified in both the EHDP and HLDP as being essential infrastructure and is acceptable in principle.

Figure 17: Open Space and Local Green Space



Blue = EHDP Open Space (Policy CFLR1)
Green = GANP Local Green Space (Policy AG5) and Fiddlers' Brook Marsh, Hollingson Mead LWS

12.2.24 The East Herts District Plan designates land within the Terlings Park estate as an Open Space under Policy CFLR1 (Open Space, Sport and Recreation) as shown at Figure 17 above. The EHDP Policy requires replacement open space to be provided if there is any loss or reduction of designated spaces. Village 1 of the Villages 1-6 application (3/19/1045/OUT) is located just to the north of Terlings Park and within the Village new parks and open spaces and opportunities for leisure and recreation will be provided. These will be located within walking distance of Terlings Park. It is acknowledged however, that the outline application and the Village 1 masterplan have yet to be determined and therefore no material weight can be given to the mitigation that is proposed. The area of land lost comprises a small landscaped area with a circular path around a vegetated drainage attenuation basin, with a spur leading towards the listed Fiddlers' Brook Bridge. The path will remain, albeit with the spur to the bridge being relocated.

12.2.25 GANP Policy AG5 also references cherished local views from certain locations, the relevant location in this context is the '*open view from the exit of Terlings Park and Fiddlers' Brook*'. As has been mentioned, in order to provide visual and noise screening between Road 1 and properties in Terlings Park, a new landscaped area is proposed around the entrance to Terlings Park as illustrated on Figure 16 above, which will over time enclose the access to Terlings Park, effectively removing the open view from the exit of Terlings Park across the busy carriageway of the Eastwick Road towards the current agricultural fields on which Village 1 of the Gilston Area Villages 1-6 development will be located. It is considered that the benefits to the amenity of residents within Terlings Park from the creation of the new landscaped area which is intended to provide noise and visual screening from the proposed realigned Eastwick Road will outweigh the loss of the current open views in this location.

12.2.26 Figure 14 of the GANP however, illustrates this particular cherished view as looking westwards from the listed Fiddlers Brook Bridge rather than from the exit of Terlings Park. The bridge is set lower than the current road level and is largely screened by trees. This situation will not change as a result of the development, although some scrub will be removed which will be replaced with trees and new landscaping features. Officers have therefore interpreted this viewpoint to be where the footpath rises from the listed bridge to the level of the road north of the bridge heading towards Fiddlers Cottage, Pye Corner as it is at this location that views westwards can be achieved. Looking westwards from this location once the ESC is complete, the viewer will see far less traffic using the road through Pye Corner towards new landscaping proposed to provide a buffer between the current and new road infrastructure and the south eastern corner of the Village 1 development proposed in the Villages 1-6 outline application.

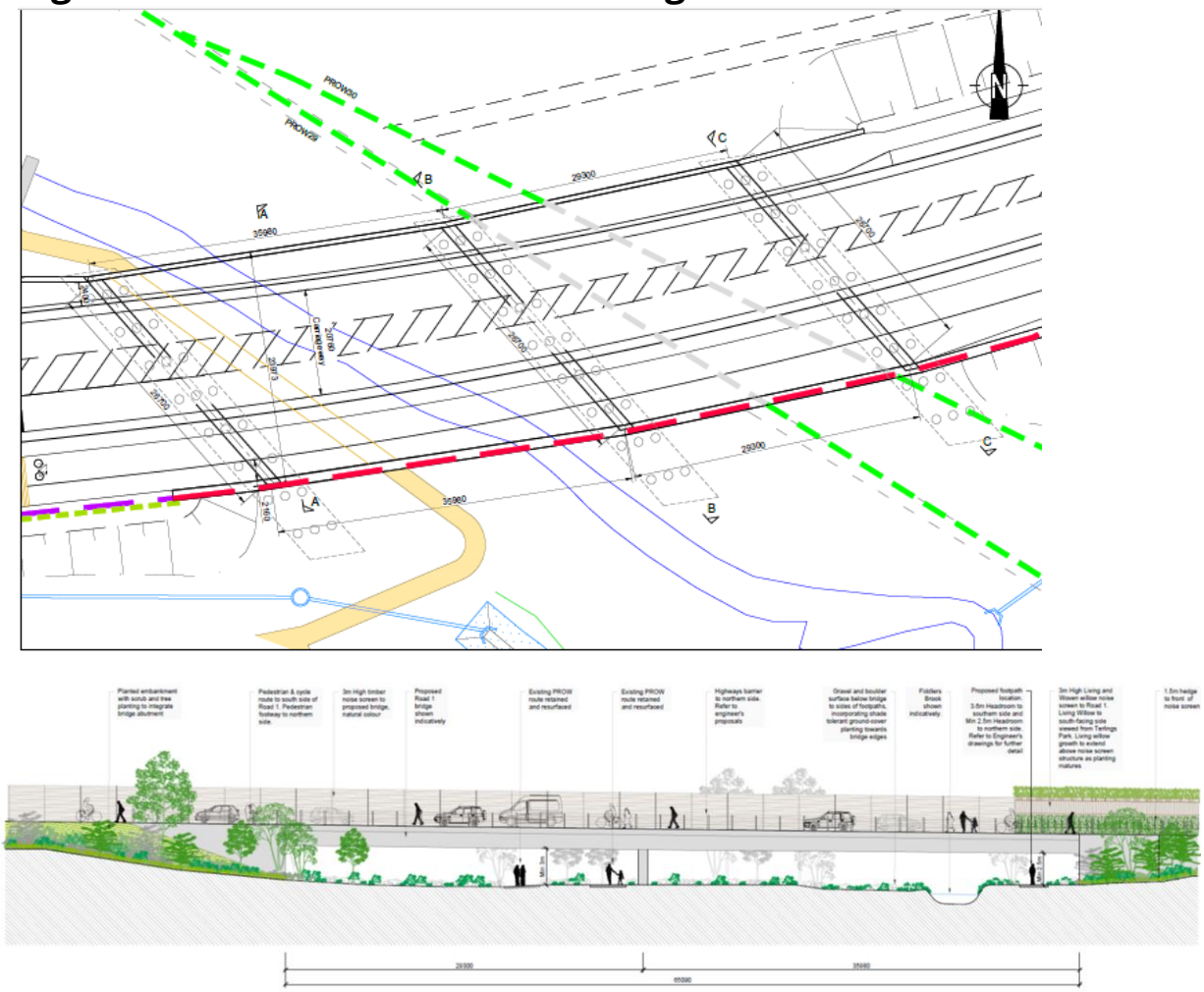
12.2.27 Road 1 passes over rolling hills and countryside east of Fiddlers' Brook rather than following the ridgeline of the former landfill area, which stands proud of the adjacent ground levels. The central roundabout then links Road 1 to Roads 2 and 3 and is also cut slightly into the landscape. Not only does this reduce the visibility of the route from within the surrounding landscape, but it also reduces the latitudinal

variations of the road in engineering terms improving forward visibility for vehicles.

12.2.28 To the north of Road 1 is a 1.5m soft verge then a 2m footway which connects PRoW 30 at Terlings Park to PRoW 31 near the central roundabout. PRoW 31 is dissected by Road 1, so two alternative options are provided for the continuation of this route; a stepped path is provided down the embankment towards the road, at which point pedestrians can cross Road 1 informally; alternatively, the diversion of the PRoW includes the provision of a path along the top of the embankment down a more gradual slope towards a proposed pedestrian controlled formal crossing point where Road 1 meets the central roundabout.

12.2.29 The applicant considered whether there was an opportunity to provide a bridge across Road 1, taking advantage of the change in land levels in this location. In order to provide a bridge with a ramp that meets wheelchair suitable gradients on the south side of Road 1, a long switchback ramp would be required of approximately 160 metres in length. When taking into account the alternative proposed detour from PRoW 31 on the north side, east to the crossing point and then on a diagonal desire line back to PRoW 31 on the south side of Road 1, the detour will be approximately 150 long. Not only would the bridge provide no time or distance advantage compared to the diversion, it would result in a large, visually prominent piece of infrastructure that would be costly to construct because of the nature of the ground at this location, but it would also need to be adopted by the Highway Authority with an ongoing maintenance burden.

Figure 18: Fiddlers' Brook Road Bridge Cross Section

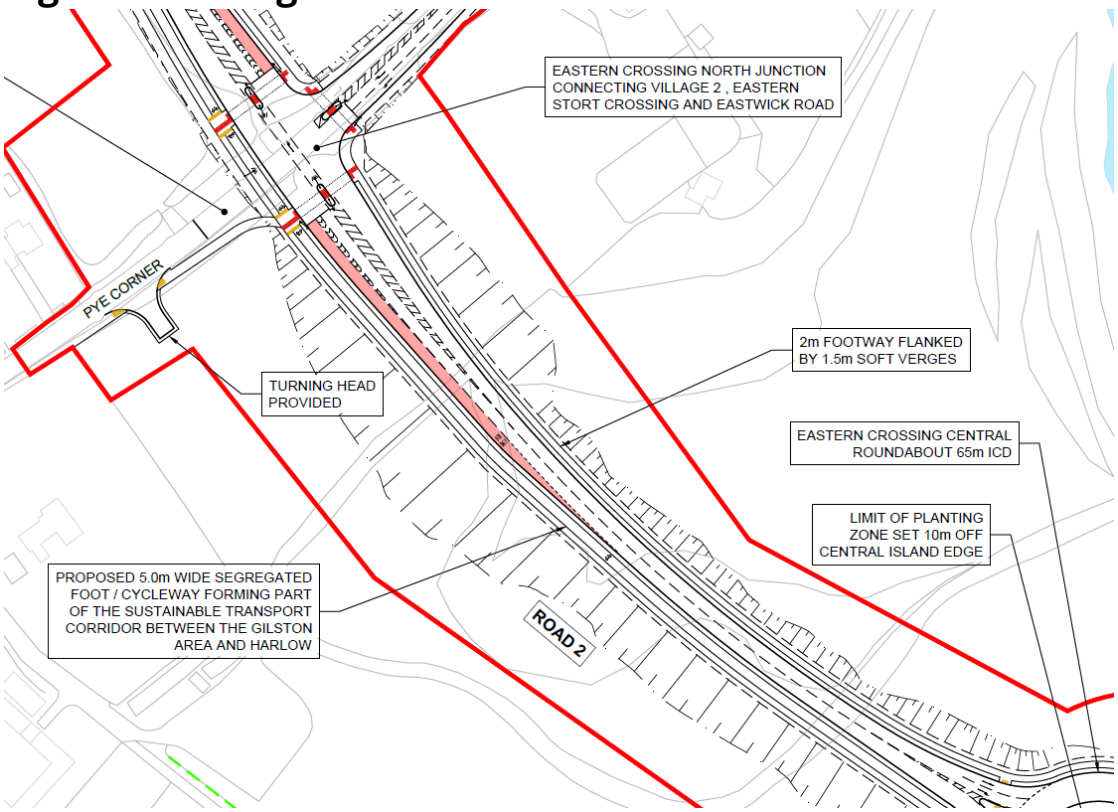


Upon completion and after 10 years

12.2.30 To the southern side of Road 1 is a 1.5m soft verge, a 5m segregated footpath and cycleway and another 1.5m soft verge. This footpath/cycleway runs the entire length of the ESC from the CSC to the River Way Bridge and is intended to function as a commuter route as well as for leisure use. The proposed demand-triggered, signal-controlled crossing point enables the cycle route to cross Road 1 to continue northwards on the western side of Road 2, continuing towards the Village 2 access.

12.2.31 Road 2 runs north-westwards and is cut into the surrounding landscape. The cutting gradients are designed to prevent a canyon effect and to ensure slopes are capable of supporting new landscaping. Approximately half way along the length of Road 2 a bus lane is introduced in order to provide priority at a new junction where Road 2 meets the northern end of Pye Corner/ Eastwick Road before becoming the access to Village 2. A bus lane is also proposed to the north of the junction on the southbound approach leading from Village 2. This junction is designed to close off Pye Corner to vehicles at this point, so vehicles travelling south-west from High Wych towards Hertford for example will turn left at this junction onto Road 2, go around the new central roundabout and travel west along Road 1. This arrangement effectively creates a vehicular bypass to Pye Corner. Pedestrian and cycling crossing points are provided on each of the three arms of the junction providing multiple route options. Even though Pye Corner is closed to traffic, pedestrians and cyclists can still travel along Pye Corner as an alternative to the on-road route on Road 2 and Road 1 (see Figure 19 below).

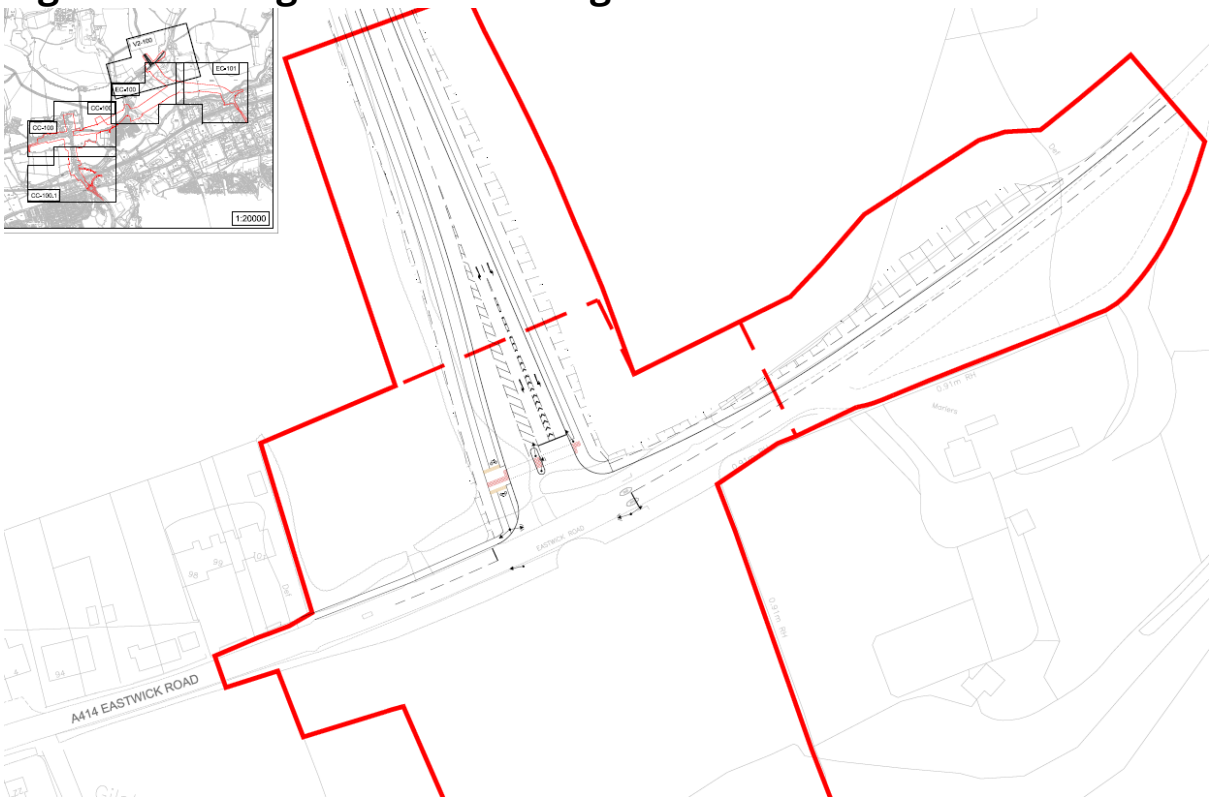
Figure 19: Village 2 Access



12.2.32 As the Villages 1-6 outline application provides the details of the proposed Village accesses at the point that they meet the two crossing infrastructure, there is a crossover between the Outline application and the two crossing applications. As shown on Figure 5 above, the interim and final proposals for the all-modes Village 1 access are included in the CSC application, and the interim and final proposals for the Village 2 access are included in this ESC application. There is also a need to ensure access can be achieved to construct and deliver homes within Villages 1 and 2 whilst the crossing infrastructure is being constructed.

12.2.33 The interim junction layout comprises the creation of a new road to the north of Eastwick Road tied into the current route via a new signal-controlled junction (shown at Figure 20 below). The access will also comprise a segregated walking and cycling route on its western side and a footway on the east side, which corresponds to the final proposed design. Once the Road 2 section of the ESC has been constructed that ties in to Road 1, completing the Pye Corner bypass then the Village 2 access will be amended to close the western side of the junction to through-traffic, preventing access into Pye Corner from the north. In addition, the southbound carriageway on the northern arm of the junction will be converted into a bus lane thereby giving priority at this junction to public transport use.

Figure 20: Village 2 Interim Design



12.2.34 In terms of design, the Roads and junctions meet necessary engineering standards as well as providing for pedestrian and cyclist safety, comfort and convenience plus ensuring priority is given to public transport at the Village 2 access. However, the interim junction is located along the line of an existing field boundary and requires the removal of an existing mature hedgerow (H194), which is assessed to be in good condition. Alternative arrangements have been considered, including moving the junction slightly westward and eastward of the hedge, but each option caused adverse impacts either resulting in the loss of mature trees or an impact on nearby properties. Therefore, the replacement of this hedge is proposed within the area of the Outline development, which will be secured through a condition on that application.

12.2.35 The central roundabout is partly cut into the landscape and is designed to enable landscaping on the central island in order to reduce the visual impact of the design. The current proposals are acceptable in design terms, but it is anticipated that at the next detailed engineering stage the Highway Authority will explore opportunities to improve permeability and wayfinding for pedestrians and cyclists and to design

tighter radii on each arm and potentially a smaller diameter to create a lower speed environment.

12.2.36 Road 3 runs east of the central roundabout almost entirely elevated on structures, being located within the Stort Valley which functions as a flood plain in this location. East of the central roundabout the road is conveyed on a 370m embankment comprising thin-walled steel section oval culverts, surrounded and overlaid with granular fill. Then the proposed scheme includes the Stort Valley bridge structure with an overall span of approximately 240m, located at the southeast extent of Road 3, spanning the Stort Navigation, River Stort and joining to River Way approximately 7m above the valley floor. As such, Road 3 is the section of the ESC proposal that will have the most significant visual impact.

12.2.37 The initial proposals in respect of Road 3 circulated in 2017 for pre-application purposes with statutory consultees detailed an elevated bridge structure to span the flood plain between River Way and the Central Roundabout. The elevated bridge structure length was approximately 650m long, typically between 6m and 10m high above the valley floor, rising to approximately 12m above valley level at the highest point of the structure.

12.2.38 A review of the ESC provisions by the applicants determined that a 650m long bridge structure was excessive as such a large structure was not necessary to avoid the loss of flood storage in the Stort Valley. Flood modelling was used to assess the impact on flood storage if a shorter bridge structure was used in conjunction with culverts supporting the remainder of Road 3 at an elevated level across the flood plain. The proposed change to a shorter bridge in association with the use of culverts to support the remainder of Road 3 was shown to be immaterial to the capacity of the Stort Valley to accommodate floodplain storage.

12.2.39 As part of the initial 2017 considerations, proposals were drawn up to retain the section of elevated bridge structure sufficient to span the Stort Navigation and River Stort and thereafter to consider the use of 2m high x 5m wide concrete box culverts to carry the highway across

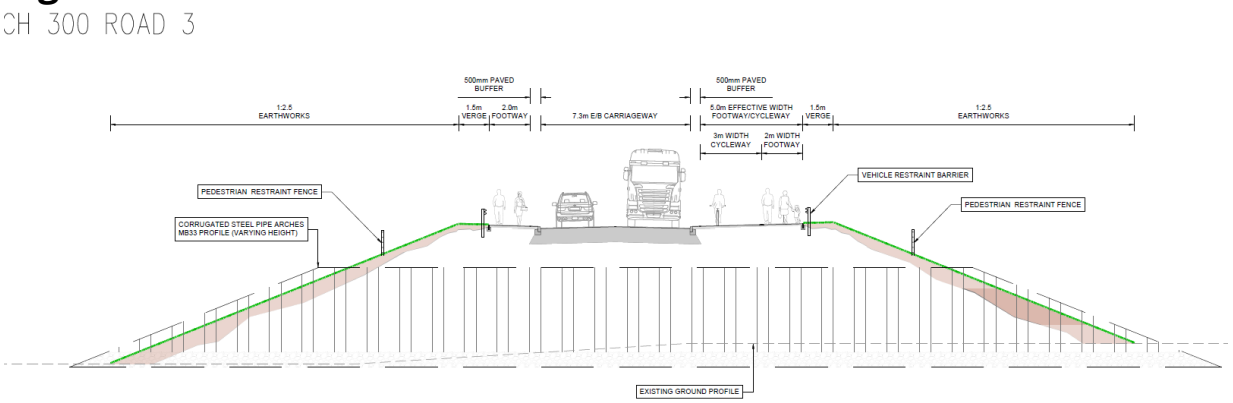
the flood plain. The box culverts would run perpendicular to the road alignment and consist of individual precast concrete box sections, circa 20m long assembled in line below the footprint of the road and supporting earthworks. The proposed road alignment for the road was lowered to minimise the road construction build up above the box culverts and to minimise the "visual presence" of the road crossing within the valley from local and distant views.

12.2.40 Following further consultation, most notably with the Environment Agency (EA), a number of concerns were expressed, in particular relating to impact on the visual intrusiveness in general and the development forming a barrier to longer views in the Stort Valley. In response to these concerns the design was amended prior to submission of the full planning application. These included the use of much larger steel culvert units to replace the previously proposed concrete box culverts. In terms of materials, the semi oval culverts are formed from structural grade corrugated steel (varying thickness), which are pressed, punched and hot-dip galvanised. The corrugated steel panels will be delivered in panels and secured together on site by nuts and bolts, which are also hot-dip galvanised. Fill material is placed below, around and above the culvert arches to support the road construction above.

12.2.41 The steel section culverts offer increased headroom, permits significantly more light to enter, and enables greater views through the culverts than the originally suggested concrete box structures. Public access is not to be facilitated through the culverts except for maintenance purposes, so security gates will be set within the opening. These gates will enable small mammals to move through the culverts unimpeded.

12.2.42 The increased culvert size is accompanied by an increase in width at the base, reducing the number of culverts required and enabling natural ground material to be provided within the culvert for the benefit of mammals and other wildlife passing through the culverts. The use of large oval culverts minimises the volume of fill material required above the culverts to support the road above.

Figure 21: Cross Section of Culvert Embankment Section



12.2.43 On top of the structural fill material, the design includes a layer of topsoil placed on the finished slope faces which will enable grass and low scrub growth which will over time result in a naturalised embankment finish minimising the visible "hard" evidence of the culvert "structure" being present. The image in Figure 22 below taken from the Design and Access Statement illustrates what the culverts would look like after a period of landscaping growth. However, following agreements with the Landscape Officer, a proposed condition requires further detail to be submitted regarding the landscaping and planting to be utilised. Please note that this landscaping is not shown on this illustration as the image pre-dates the agreed approach.

12.2.44 The embankment design of the culverts has the benefit of reducing the impact of artificial lighting on the valley floor as the light spill from luminaries affects only the top part of the embankment, addressing a concern of the EA that light spillage onto the valley floor would affect foraging mammals. A Lighting Assessment has been submitted with the amended plans, which demonstrates that light does not extend beyond the base of the culverts. However, details of lighting design and lux levels will be agreed at the detailed engineering design stage with an objective of reducing light spill and skyglow. This will be controlled through Condition 11, which requires the submission of a lighting strategy. This is discussed further in section 12.6 below.

12.2.45 The vertical alignment of the ESC has been amended to reflect the use of steel section culverts. At the western end of the embankment where it meets the central roundabout at the edge of the valley the highest point of the embankment is 9m dropping along its length to 5m then increasing to 6m where it joins the open span bridge section of Road 3.

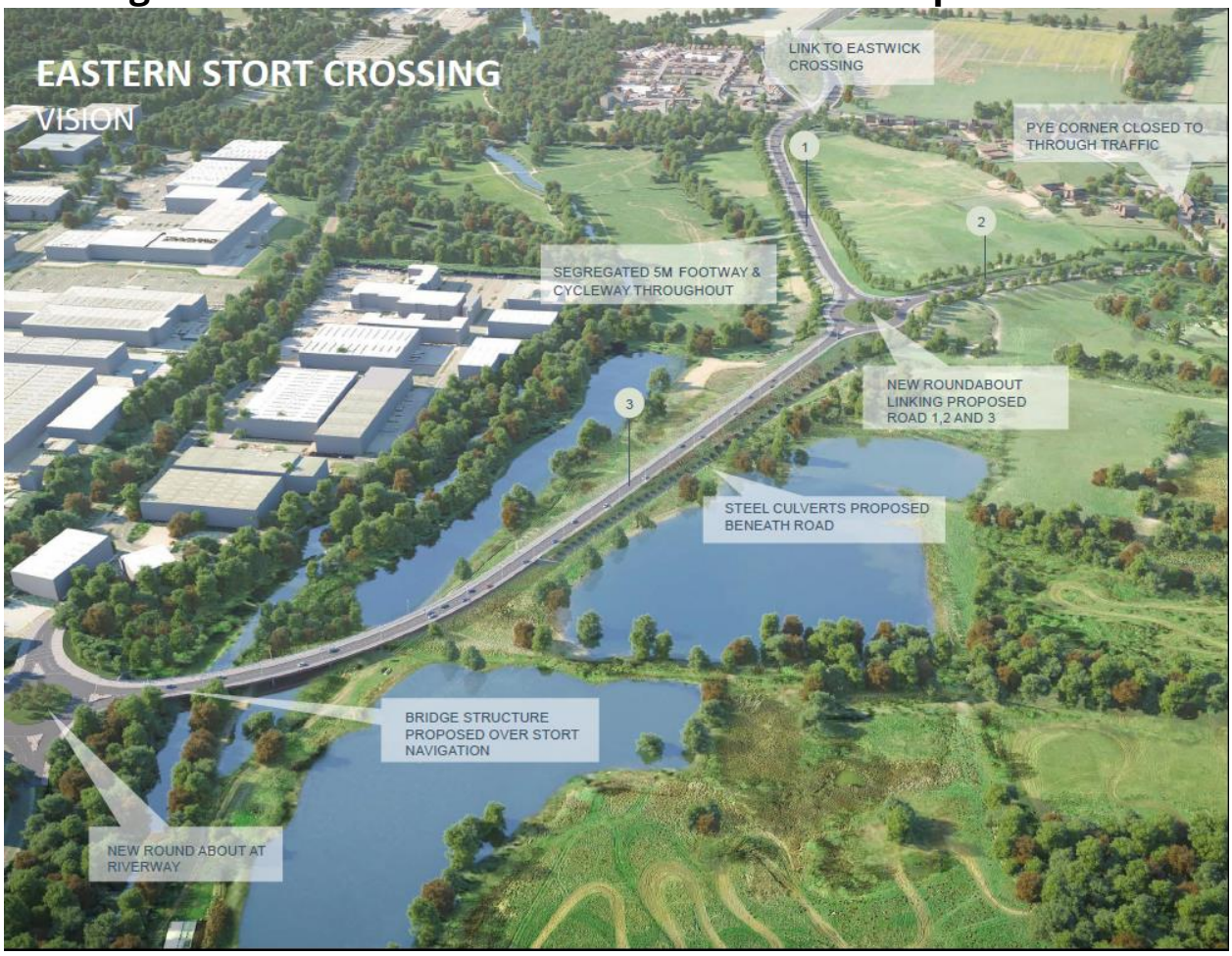
The most significant amendment to the road levels on the open span bridge structure involved reducing the vertical alignment of the bridge from an arch shape peaking at 12m in height to a flatter vertical form, peaking at only 7m in height (see Figure 23 overleaf).

12.2.46 The choice of materials for the new Stort Valley Bridge has been considered to reflect engineering best practice and advice from Canal and Rivers Trust regarding good practice guidance on bridge structures above canals. A condition requiring final details of materials to be agreed is included within recommended Condition 10 of the Schedule.

12.2.47 The Stort Valley in the location of Road 3 is a shallow valley and is one that is very much man-made following historic gravel extraction and restoration activities. Lakes and watercourses have become naturalised in the period since extraction and to all intents and purposes the setting of the ESC now has the appearance of an undisturbed and semi-open landscape interspersed with landscape belts and stands of mature scrub and hedgerow.

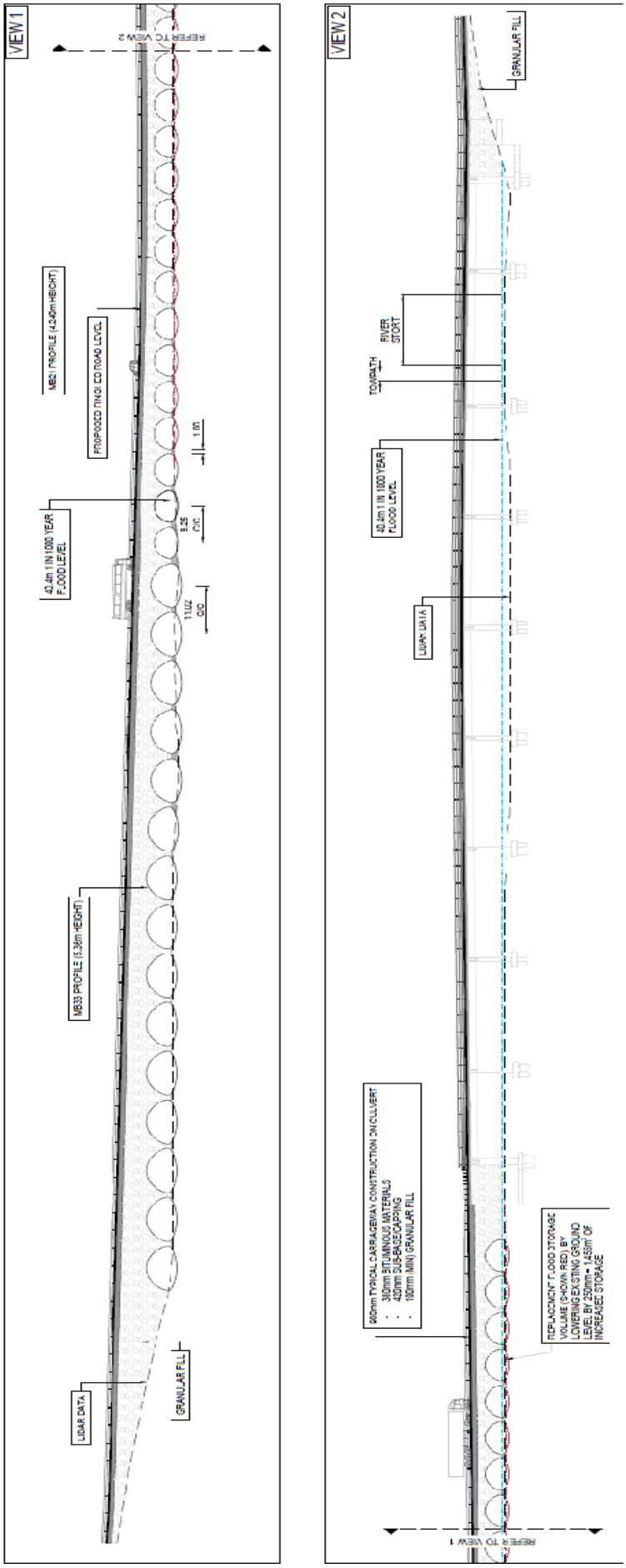
12.2.48 The application is accompanied by a Landscape and Visual Impact Assessment (LVIA) which considers the significance of landscape and visual effects, the sensitivity of the landscape to accommodate impacts and the magnitude of those effects. The LVIA follows a standard methodology considering the impact on of the proposal from key vantage points taking account of terrain features, existing landscaping and buildings. Whilst this does not strictly present a 'worst case' scenario which would assume a 'bare earth' situation, this is considered to be a reasonable approach given that there is no reason to expect changes to occur to these features, being as they are outside the remit of this application and the landownership of the applicant. Notwithstanding this, Officers consider that the submitted LVIA undervalues the landscape and recreational value of the Stort Valley and as such have considered the effects on the landscape according to a higher value of sensitivity.

Figure 22: Illustration of Road 3 in the landscape



12.2.49 The LVIA assesses the impact of the development both during the construction and operational phases. Details relating to the location and extent of temporary works required to enable the construction (such as haul routes, compounds, material storage etc.) are not currently presented, and therefore the submitted LVIA has not considered the impacts associated with these on the landscape. However, given the floodplain environment, materials and plant will not be able to be stored immediately adjacent to the structures, therefore the construction compounds will need to be suitably located and are therefore unlikely to cause additional detrimental effects on the landscape during the construction phase than currently assessed, particularly given that they will be temporary and short term in nature. Notwithstanding this, Officers recommend a number of conditions that require the submission of details for each phase of construction which will include details of site compounds, lighting, noise and tree protection strategies for example, how they will be managed and impacts minimised.

Figure 23: Vertical Alignment of Road 3



12.2.50 It is estimated that once works commence the ESC will take in the region of two to construct Roads 1 and 2, with Road 3 starting slightly later, resulting in a combined construction period in the region of two and a half to three years, including enabling works, being delivered in phases. The final phase of the ESC scheme comprising the replacement of the River Way bridge will be dependent upon the delivery of the Cambridge Road access into Templefields, which is a scheme managed by Essex County Council. In order to construct each bridge structure for example, cranes will be necessary and these will be clearly visible to properties and viewpoints within the vicinity of the structures, and also potentially from taller buildings beyond the site; though clearly the further away the receptor, the less the impact will be. Impacts from disturbance and activity peak during construction with the residents of Terlings Park, users of the Stort Navigation and users of the Stort Valley PRoW network experiencing significant effects. For Terlings Park and Pye Corner residents these impacts will be most experienced during the construction of the road bridge at Fiddlers' Brook. However, construction activities are temporary by their very nature and it is expected that impacts associated with construction will be minimised as far as possible through the application of standard Codes of Construction Practice.

12.2.51 In order to construct the culvert section and the open span bridge of Road 3, areas of land at the base of the structures will be impacted not only through the movement of construction vehicles and activity, but also due to the need to store materials. Concerns were raised by the Landscape Officer about the impact on landscape around the ESC structures as there will need to be some clearance of scrub in order to enable construction. Following further discussions with the Landscape Officer a revised Landscape Strategy was submitted in February 2021 and it is agreed that updated landscaping and planting details will be prepared, which will be secured through the use of planning conditions. This is an important requirement as much of the mitigation for the visual impacts associated with the culverts and the bridge will be through additional planting in the vicinity of and not on the structures themselves or immediately adjacent to them given the

location of SuDs features and the need to keep these clear for operational and maintenance purposes.

12.2.52 Once construction is completed and the scheme moves into the operational phase, the LVIA acknowledges that there will be permanent impacts from the new road and structures in terms of noise, movement and lighting. The amended scheme lowers parts of the road in elevation terms cutting into the landscape below the ridgeline of the adjacent landscape so when viewed from the south the road will be against a backdrop of landscape, and from the north will be largely screened. The open span bridge height has been reduced in height, again with the objective of reducing the overall visual impact of the structures. At the same time, the design has balanced this objective with the need to minimise impacts from noise, disturbance and lighting on the valley floor for the benefit of wildlife species and recreational amenity. The designs were subject to particular discussion with the Environment Agency and Officers to achieve the best balance in this regard.

12.2.53 The open span bridge that runs perpendicular across the valley enables long views under the bridge structure and is designed to be supported via ground piers only rather than as a suspension bridge which would have a greater vertical presence and greater visual impact. The LVIA notes the slim appearance of the bridge structure designed with large spans between supporting triplets of columns in order to maximise views through the valley and that the bridge abutments are set back from the Stort Navigation with new landscaping planted either side in order to minimise the visibility of the supporting structures. At the detailed engineering design stage Officers will work collaboratively with the highway authority and applicant to ensure that the bridge parapet and lighting strategy are designed to be as unobtrusive as possible with the objective of reducing the overall height and bulk of the structure.

12.2.54 The culvert section is designed to enable views through the structure when seen from the valley floor, though in reality, views from publicly accessible locations are already largely screened by intervening vegetation that will all be retained. Furthermore, the proposed landscape strategy has been amended to increase the level of

additional planting within the valley which will over time ensure that views of the structures will be further reduced and will add additional secondary mitigation in the form of noise absorption and improving the functionality of the valley as a wildlife corridor.

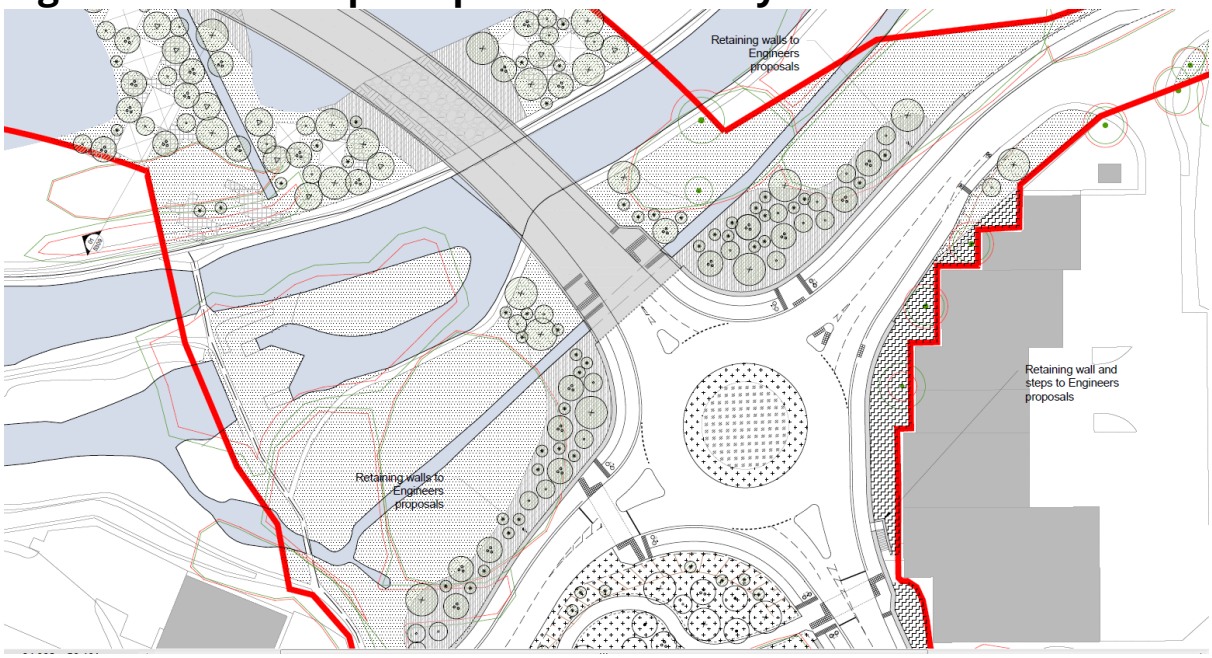
12.2.55 It is important therefore that mitigation through additional landscaping takes the form of new planting and features that are appropriate within the context of the current setting. For example, if a landscape character comprises dense wet woodland, a landscaping scheme that comprises meadow grasslands and scattered trees will not be considered appropriate. In order to ensure that the next stage of detailed engineering design approval is undertaken comprehensively following a landscape-led approach, an updated Landscape Strategy will be required via Condition 32, which will be informed by a finer grain landscape and visual impact appraisal to take account of key views and wayfinding objectives. The updated landscape details will ensure that the landscape scheme will deliver an effective level of visual mitigation and enhancements and comprise planting typologies that conserve and enhance the wet woodland character of the area.

12.2.56 It is considered that the design of the crossing has carefully considered visual impact, natural wildlife habitats, pedestrian and cyclist connectivity and flood mitigation. The use of landscaped embankments and culverts has minimised the extent of bridge structure required. Over time the embankment will become naturalised to appear less like a structure while still retaining the functionality of the floodplain, and as a result will reduce the visual impact of the proposals.

12.2.57 The ES considers the outputs of the LVIA cumulatively with other planned strategic allocations and development proposals, with a comprehensive and updated list provided with the application material. Sites within the urban area of Harlow and beyond are a sufficient distance from the site that there would be no significant cumulative landscape or visual effects arising from the combination of the development of these schemes given the distinct nature of this proposal.

12.2.58 The River Way section of the ESC lies within Harlow where the proposal comprises a new roundabout on River Way forming a junction with Mead Park Industrial Estate and Templefields Industrial Estate. Here the ESC becomes part of the existing urban landscape. However, in order to connect the open span bridge to the proposed junction in River Way a narrow area of woodland (14m – 18m in width) will need to be lost. The ecological implications of this are discussed in Section 12.6 below. In terms of design and layout, the loss of trees in this location will open up views from the urban area into the valley beyond, albeit these views will initially be of the carriageway and planting along the Stort Navigation edge. New planting located either side of the highway on the western, eastern and northern arms of the River Way roundabout will frame these views and result in a greater number and range of species. While a number of the proposed trees are semi-mature in size, a number of trees will be younger specimens and will mature over time to soften the visual appearance of the widened carriageway in this location. As can be seen in Figure 24 below, the new bridge structure will span the existing drainage network ensuring that no changes to the existing systems will occur.

Figure 24: Landscape Impact at River Way



Extract of Drawing HNP495-GRA-X-XX-DR-L-5114

12.2.59 A number of alternative junction designs have been considered in consultation with the two Highway Authorities. These included signal-

controlled junctions and roundabouts of different designs. However, this junction needs to cater for large vehicles accessing the two industrial estates, and when testing the impacts of signal-controlled junctions, it was demonstrated that this increased the potential for vehicles to queue along River Way back to the Edinburgh Way A414 junction at peak times.

12.2.60 The roundabout option progressed had to deal with both changes in land levels to the west of the junction, ensure adequate safety sight lines could be achieved from the River Way rail bridge into this new junction, and achieve acceptable gradients from the side roads within the constrained area. As such, the proposed roundabout also includes a relocated access to the Mead Park Industrial Estate for vehicles as well as a new footpath designed to accommodate all physical abilities via two routes; one of which has a more gradual gradient to ease accessibility. To the east of the roundabout, realigned footpaths are proposed which extend into Templefields Industrial Estate. The proposal as now submitted is therefore considered acceptable.

12.2.61 Further south, the amended proposal now includes the full replacement of the River Way Bridge over the West Anglian Mainline railway. The original application retained the bridge but added a separate bridge alongside it for pedestrian and cycle use. However, detailed investigations into the ability to amend the carriageway established that the current bridge structure was in poor quality, preventing changes to the bridge deck to accommodate a widened carriageway. With the bridge now being replaced in its entirety, it enables the creation of a single structure with an integrated pedestrian and cycle route along the western side of River Way, will provide a new structure with a 120 year service life, and will also enable other carriageway realignments to meet current design standards. This pedestrian and cycle route is also extended southwards towards the River Way/Edinburgh Way A414 junction, which is an improvement upon the current footpath which varies in width and surface treatment. During the construction of the new bridge, in order to maintain pedestrian and cycle (dismounted) access, a temporary structure will be erected over the railway line. This will be subject to a separate planning application for temporary works to Harlow District Council.

12.2.62 Although not part of this application, improvements are proposed to the River Way/ Edinburgh Way A414 junction that will be secured through a S278 highways agreement with the Highway Authority (Essex County Council). These works are designed to assist in not only improving the flow of vehicles but also to improve crossing facilities for pedestrians and cyclists to connect into the existing network.

12.2.63 Lastly, the proposal includes the replacement to the decks and parapets of two foot bridges over the River Stort. These structures provide vital connections between the urban area of Harlow and the canal towpath. There are also some residential moorings along the river that will benefit from these improvements. Where these bridges are accessed via steps the proposal will make provision for bike wheel channels to enable cyclists to walk their bikes across the decks.

12.2.64 As this application deals with roads and bridge structures it is also necessary to consider the design of the proposal in the context of highway design standards. As such, East Herts and Harlow Council Officers and the Applicants have worked closely with the two Highway Authorities in Hertfordshire and Essex County Councils to ensure that the proposed designs meet the necessary engineering standards. These include consideration of gradients, curvature of the road, elevation, sight lines, highway safety and speed management. In some cases it has been necessary to depart from normal standards applied by the Highway Authorities; this process is undertaken under Highway legislation rather than through Planning regulations, but are included as part of the application for completion. Where departures are necessary the designs have been assessed through first stage Road Safety Audits and have been agreed in principle by the Highway Authorities.

12.2.65 The detailed design, technical approval, delivery and adoption of the Eastern Stort Crossing will be secured pursuant to powers within the Highway Act 1980. The two Highway Authorities will determine the most appropriate section of the act to use to ensure safe and timely delivery of the proposal whilst minimising the liabilities and risk to the local authorities, including the maintenance of the new infrastructure

through commuted sums (a payment by a developer to the highway authority as a contribution towards the future capital maintenance of specific or non-standard features of that development) to be secured via Section 278 or 38 Agreements as some of the detailed design specification and technical approvals will emerge post planning decision. Details of the process are set out for ECC in the Essex Highways Development Construction Manual (April 2020) and for HCC in the Roads in Hertfordshire: A Design Guide (2011) (or as amended).

12.2.66 In conclusion, in terms of the design and layout of the proposed Eastern Stort Crossing and its various parts, the scheme meets relevant highway standards and where departures from standards are required these have been discussed and agreed in principle with the Highway Authorities. Amendments have been proposed which seek to address design concerns raised relating to visual impacts and severance issues (e.g. around Terlings Park) and to minimise impacts as far as is possible given the nature of the proposals. Notwithstanding this, the proposal introduces new road structures into an otherwise undeveloped landscape within the Stort Valley.

12.2.67 While there will be residual impacts, mitigation measures are proposed to minimise such impacts in line with the Development Plan policies. It is considered that temporary visual harms arising through construction and the residual harms arising from the scheme once operational are outweighed by the beneficial impacts arising from the scheme in terms of providing additional highway capacity required for the Gilston Area development (comprising 10,000 homes) and to support wider growth in the Harlow and Gilston Garden Town.

12.3 Highway Impact and Mitigation

12.3.1 Policies GA1 (The Gilston Area) of the East Herts District Plan 2018 requires the development to follow Garden Town Principles, namely the creation of an integrated and accessible sustainable transport system, with walking, cycling and public transport designed to be the most attractive forms of travel. Policy GA2 (The River Stort Crossings) seeks the delivery of transport improvements to crossings of the River

Stort, including the provision of a new vehicular, cycle and pedestrian crossing of the Stort Valley.

12.3.2 EHDP Policy TRA1 (Sustainable Transport) seeks the provision and prioritisation of sustainable and active forms of travel and seeks contributions towards the provision of strategic transportation schemes. Policy TRA2 (Safe and Suitable Highway Access Arrangements and Mitigation) requires development proposals to provide safe and suitable access for all users, and that proposals should not have a significant detrimental effect on the character of the environment.

12.3.3 Policies HGT1 (Development and Delivery of Garden Communities in the Harlow and Gilston Garden Town) and IN1 (Development and Sustainable Modes of Travel) of the Harlow Local Development Plan 2020 require development to create a step change in modal shift by contributing to the delivery of sustainable transport corridors and establishing an integrated, accessible and safe transport system which reduces car use and maximises active and sustainable travel, to promote healthy lifestyles, and to provide linkages between communities. Policy SIR2 (Enhancing Key Gateway Locations) identifies the Eastern Stort Crossing where it enters Templefields Employment Area as a key gateway location which should be seamlessly integrated within the wider transport and green infrastructure network of Harlow. Policy IN2 (Impact of Development on the Highways Network Including Access and Servicing) states that development must not cause severe residual impacts on highway congestion and movement, and should not cause a detrimental impact on the safety of all highway users.

12.3.4 Policy AG8 (Minimising the Impact of Traffic and New Transport Infrastructure on Existing Communities) of the Gilston Area Neighbourhood Plan 2021 is the principal policy related to transport infrastructure. Objectives relate to minimising the impact of new transport infrastructure on existing communities, including from impacts such as air quality and noise. Proposals are expected to minimise impacts on heritage assets and the natural environment, including through the prevention of pollution. Construction and Environmental Management Plans are to be prepared along with a

monitoring and management regime to address issues that may arise through the construction or operation of the development.

12.3.5 GANP Policy TRA2 (Access to the Countryside) seeks to ensure that PRoW networks are enhanced where possible and that development is to provide an extended network of safe and where possible, separated footpaths, cycleways and bridleways integrated with the existing wider Public Right of Way network. Policy TRA2 also states that 'routes' should consider the tranquillity of the Green Infrastructure Network and other natural green spaces, and the need to minimise environmental impacts such as noise and light pollution. The preamble to Policy TRA2 includes specific reference to the river crossings, and so while not explicitly included in the Policy, Officers have interpreted the Policy as if the term 'routes' in Part 2 iii also includes the river crossing routes.

12.3.6 Paragraphs 110 to 113 (section 9) of the NPPF 2021 relate to the consideration of development proposals in the context of promoting sustainable transport. Key principles include ensuring opportunities to promote sustainable transport modes are taken, safe and suitable access can be achieved, significant impacts on the transport network in terms of capacity and congestion can be acceptably mitigated, priority is firstly given to pedestrian and cycle movements and secondly to public transport use.

12.3.7 The impact of the proposed village development on the highway network will be considered in due course in the report accompanying the Outline housing application 3/19/1045/OUT. This ESC application report does not consider in detail the highway and transport impacts arising from the Outline residential development save for where this is directly relevant to the ESC proposal. This is because the crossing proposal itself does not create additional journeys; the impacts in terms of additional vehicle movements occur as a result of the growth within the Gilston Area as well as background growth and the planned development of other strategic sites within and around Harlow as allocated in both the Harlow Local Development Plan and the emerging Epping Forest District Plan.

12.3.8 However, the ESC proposal will have some impacts on the existing highway network in its own right during construction, but is expected to have beneficial impacts once operational. These impacts arise as a result of the distribution of trips across the network as a whole once the ESC is operational. Therefore, relevant information is provided regarding the modelling and assessments undertaken in order to inform the consideration of how the ESC proposal will impact the local highway and transport network. The Environmental Statement considers the highway impacts of the development as a whole and also considers the effects of the ESC in regard to cumulative trips predicted from the wider growth from strategic allocations in the HGGT area and the effects they are likely to have on wider transport networks (and therefore on other factors such as air quality, noise and vibration and on where impacts are likely to occur to habitats as a result of the construction of the ESC.

12.3.9 The impacts of the overall Gilston development (including Villages 1-6 and Village 7) on the surrounding highway network have been assessed using an area wide traffic model known as Paramics modelling. The model contains a cumulative assessment which takes account of all other planned growth within the HGGT and beyond. Following the initial submission of the application, a number of modelling updates, scenario testing and sensitivity testing (to take account of amended plans and proposals within the Villages 1-6 development) have occurred iteratively following discussions with both Essex County Council and Hertfordshire County Council, being the two Highway Authorities. The modelling compares future year scenarios with:

a. no development in the Gilston Area but with traffic growth forecast to arise from other planned developments at the end of the current Plan periods (2033), including the Village 7 development,
b. against the scenarios which include planned development to 2033 but with 8,500 homes occupied within Villages 1-6. The results from this modelling are contained in the submitted Transport Assessment (TA) Addendum.

12.3.10 As is discussed above the principal objectives of the Eastern Stort Crossing are:

a. to free up capacity on the existing Fifth Avenue Crossing and to enable the Central Stort Crossing proposal to function as part of the STC into Harlow town centre;
b. to similarly remove traffic from other central areas of Harlow to facilitate introduction of the STCs;
c. to mitigate the additional vehicle movements associated with the proposed development of 10,000 homes in the Gilston Area;
d. to provide critical infrastructure to support the strategic growth across the wider Garden Town of which the Gilston Area forms a part;
e. to act as a more direct traffic route from the A414 and the Gilston Area toward Junction 7a of the M11, to provide links to the Enterprise Zone and other employment and facilities in the east of Harlow, which will now include the planned relocated hospital; and
f. to provide for active and sustainable travel choices for walking, cycling and buses to these destinations.

12.3.11 By providing an alternative east-west connection the ESC will change the dynamics of vehicle movements on existing routes. This will facilitate changes to the existing transport network within Harlow through the creation of an east-west and north-south STC connecting new Garden Communities and existing communities to existing and new employment areas. Combined with the Central Stort Crossing, the two routes provide critical infrastructure for the entire existing and future HGGT communities which are necessary to achieve a significant and ambitious mode shift towards active and sustainable travel based on a mode share target of 60% of all journeys within the new HGGT communities and 50% of all journeys originating or ending within the HGGT being undertaken by active or sustainable means.

12.3.12 The main impact of the ESC will be the inevitable diversion of some vehicles choosing to route along the ESC instead of through the urban area of Harlow in order to reach destinations to the north and east of the town, including the M11, or those that wish to travel north-easterly towards Sawbridgeworth or Bishop's Stortford. The modelling demonstrates that additional journeys arising from the Gilston development in combination with background growth plus journeys

associated with the planned strategic growth within the HGGT will result in increasing demands at key junctions in the network which will result in minor and imperceptible delays to journey times along some or all of the ESC routes at am and pm peak periods at the end of the forecast period, i.e. when all homes are occupied by 2040 compared to a 'no development' scenario by the same period in 2040. This includes the current Eastwick Road link between Pye Corner and Eastwick Junction initially, and once fully operational, includes the whole ESC route from River Way to the Eastwick Junction.

12.3.13 As the Gilston Area and HGGT developments grow and traffic levels increase as a result of all the developments within and around Harlow, the benefits arising from the provision of sustainable transport measures will increase as those choosing to walk, cycle or use public transport will experience greater convenience and travel journey savings compared to those using other modes. This will also be achieved by designing junctions to give greater priority to sustainable modes, recognising that increases in journey times for those travelling by private vehicle is considered to be an acceptable outcome of encouraging drivers to shift to alternative means of travel. It is for this reason that bus priority measures are provided at key junctions, such as the Village 2 Access, where the previously proposed roundabout is now a signalised junction, in order for drivers to see the advantages of using the bus when they are held back by signals with a bus driving past them. The signalised junction allows for flows from the village development to be more easily managed, and vehicles exiting the development to travel south or west will be disadvantaged in both distance and journey time compared to using the bus network within the site or by travelling by active means towards Harlow.

12.3.14 The ESC provides for a continuous pedestrian and cycle route along the southern and western side of the carriageway. The route is segregated and will be designed primarily for commuter use connecting the Gilston Area communities directly into the employment areas in the east of Harlow. Being on the southern side of the carriageway, views will be afforded across the valley, making the route a pleasant and scenic option. Buffers are provided between the carriageway and the cycle route and the proposed vehicle restraint system along the outer edge

of each elevated section of road will provide safety for pedestrians and cyclists. Vertical alignment of the route has been designed to meet standards for cycling and wheelchair use, and safe crossing points are proposed across the ESC through user-controlled signalised crossing points meaning that there will be no disadvantage to those who are disabled.

12.3.15 When testing the highway impacts associated with construction activities themselves, the modelling considers the impacts arising from the construction for the proposed crossing in combination with the construction of the village development. Following industry standard methodologies for appraising the significance of increased vehicle movements, the ESC is considered to have moderate adverse effects on nearby or adjoining locations to the crossing where construction vehicles are anticipated to travel i.e. on Eastwick Road (to construct the ESC) and River Way.

12.3.16 As such, it is necessary to ensure that the phasing of delivery of the ESC is programmed to ensure that impacts on the existing highway network are managed throughout different phases of construction. Using worst case scenario assumptions it is estimated that there could be 154 worker movements per day and 170 HGV movements a day for the construction of the ESC. It should be noted that due to shift working and 'just-in-time' delivery strategies, these movements would be distributed between 6am and 10am and 2pm to 7pm and deliveries will be timed to avoid peak hours where possible. It is also worth noting that given the size of the site, not all these movements would be focussed on the same area as there will likely be a number of compounds dealing with different parts of construction. Such details will be set out in the Construction Traffic Management Plan required by condition. Officers also recommend that conditions require the submission of Construction Environment Management Plans for each phase of construction. These, along with approved Codes of Construction Practice will ensure impacts on properties in the vicinity of the works are minimised as far as possible, with monitoring and reporting processes in place to rapidly respond to any issues that arise during construction.

12.3.17 Highway impacts can also occur for pedestrians and cyclists, particularly during construction periods. There are a number of routes available that will remain useable during construction of the ESC for pedestrians and cyclists to travel between homes in Pye Corner and Terlings Park through the Terlings Park estate towards key destinations such as the Harlow Town Station, and are therefore not expected to be significantly inconvenienced. It is normal practice to retain access to Public Rights of Way throughout construction, but if temporary closures are necessary, such as during the replacement of the River Way road bridge over the railway line, alternatives need to be made available for those living and working in the area. Therefore, a temporary pedestrian and cyclist bridge will be constructed over the railway line (subject to a separate application to be submitted to Harlow District Council). The CEMP required through this condition will require details to be provided prior to the removal of the current River Way bridge. By way of background context, though it is not material to this application, Essex County Council are leading on a project to deliver a vehicular access to Templefields Industrial Estate from Cambridge Road, Harlow.

12.3.18 It is proposed that initially, temporary 'at-grade' pedestrian and cycle crossing facilities will be provided across Road 1 just west of the new Pye Corner junction. This will provide a safe crossing facility for the public outside of the working zone for the junction and for the construction of the proposed Fiddlers' Brook Bridge. Following the bridge construction, permanent crossing facilities will be provided as per the submitted drawings, after which the temporary facility will be removed. The existing PRoWs that will then run beneath the proposed new bridge need to be temporarily stopped up in order to construct the bridge deck and to carry out the essential works to the Grade II Listed Fiddlers' Brook Bridge, however, north-south access will be provided through the temporary crossing facility. Any proposed changes to PRoW will require formal processes for temporarily stopping up and diverting the route.

12.3.19 The key benefit arising from the ESC proposal is that it creates a bypass of Pye Corner, and through the realignment of Eastwick Road and other design measures, reduces noise and disturbance impacts on the majority of properties in Terlings Park. The ESC will provide direct

access towards key destinations in the east of Harlow and delivers the full replacement of a bridge to meet safety standards and provide longer term resilience to this part of the network. Furthermore, the ESC proposal has been designed so that structural elements will be constructed using resilient and robust materials that have minimal maintenance requirements (roads and embankments) or can be easily accessed for maintenance purposes, such as from below the surface of the open span bridge, thereby reducing the need for road closures and delays associated with the longer term operational phase of the development.

12.3.20 The Environmental Statement (ES) assesses the impact on each part (link) of the highway network directly and indirectly affected by the proposed ESC development, and as such there are different levels of impact depending upon which part (link) of the road network one focuses on, and also what time period scenario is considered. The ES also considers the highway impacts for the proposed developments as a whole (Outline housing proposals for Villages 1-6 plus the two river crossing proposals) in addition to cumulative development considerations, including Village 7. These judgements are formed using standard assessment tools. During construction the following effects were reported:

a. slight adverse effects for driver delay, severance and cyclist amenity;
b. neutral effect for pedestrian delay, cyclist delay, and accidents and road safety;
c. slight beneficial effects for public transport.

12.3.21 Put simply, there will be anticipated delays to all forms of movement during the construction period due to the need for temporary road/ lane closures or diversions, but impacts are anticipated to be less on those walking and cycling, either because routes will remain unaffected, or because suitable alternatives are available. Once the ESC is operational and strategic growth is being delivered within the HGGT, there are likely to be slight adverse effects from severance, on pedestrian delay and amenity and cycling delay and amenity due to the introduction of junctions, and some delays to drivers as a consequence of measures designed into the wider transport network to prioritise

movements by public transport. However, these slight adverse effects are considered to be outweighed by the wider benefits arising from the proposal by virtue of enabling a prioritisation for active and sustainable modes within the wider transport network and the provision of dedicated, segregated cycle lanes and footpaths along the entire ESC route.

12.3.22 The ESC proposal embraces the principles of promoting active and sustainable modes of travel in a bid towards achieving the ambitious target of 60% of trips being by active and sustainable mean. This is achieved by ensuring that movements by pedestrians and cyclists are direct and safe at all junctions. The design retains existing Public Rights of Way (PRoWs) through the Stort Valley and provides new opportunities for active movement, especially through the provision of dedicated walking and cycling routes, including a new 5m wide footway and cycleway adjacent to the carriageway which will increase connectivity across the valley without introducing new routes along the valley floor. In addition, improvements along the retained Pye Corner, Eastwick Road and Terlings Park access lane routes plus the two towpath bridges near River Way will provide safe and convenient routes, both for commuter and leisure purposes. Therefore, the design of the ESC will enable the residential developments in the Gilston Area and the HGGT in achieving sustainable mobility targets.

12.3.23 Officers acknowledge that the ESC is first and foremost a new road which will convey substantial numbers of vehicles. However, the ESC has to be considered in the context of the wider development proposals including the CSC and Outline housing proposals in the Gilston Area for a total of 10,000 homes and other Sustainable Transport Corridors to be delivered within the HGGT network. Taking the proposal in the context of the overall design and wider package of mitigation measures, the ESC scheme is in line with the principles of the HGGT vision and objectives of each authority in terms of focusing on active and sustainable travel followed by buses then private vehicles. Overall, the proposed highways provision and mitigation measures are considered to meet policy requirements and will provide key essential infrastructure to support the objectives of the Gilston Area allocation

and the wider HGGT growth objectives. This is in accordance with Policies as summarised above and carries positive weight.

12.4 Climate Change, flood risk and Sustainable Drainage

12.4.1 Policies WAT1 (Flood Risk Management), WAT3 (Water Quality and the Water Environment) and WAT5 (Sustainable Drainage) of the of the East Herts District Plan 2018 require that development proposals should neither increase the likelihood or intensity of any form of flooding, nor the risk to people property, crops or livestock, both on site and to neighbouring land or further downstream. Furthermore, development should account for impacts of climate change and should build in long term resilience against increased water levels. Additionally, development proposals are required to preserve or enhance the water environment by ensuring improvements in surface water quality and the ecological value of watercourses. Opportunities for the removal of culverts, river restoration and naturalisation should be considered as part of any development adjacent to a watercourse.

12.4.2 EHDP Policies CC1 (Climate Change Adaptation) and CC2 (Climate Change Mitigation) require development to make provision for climate change, integrating green infrastructure into the design, demonstrating how carbon dioxide emissions will be minimised through design, and that the energy embodied in construction materials should be reduced through re-use and recycling, where possible of existing materials and the sustainable materials and local sourcing.

12.4.3 Policy PL11 (Water Quality, Water Management, Flooding and Sustainable Drainage Systems) of the Harlow Local Development Plan 2020 states that all development proposals will be considered against national policies (including application of the sequential test and, if necessary, the exception test) and against the European Water Framework Directive (or any subsequent equivalent). Development must follow a risk-based and sequential approach, so that it is located in the lowest flood risk area. If this cannot be achieved, the exception test must be applied and the appropriate mitigation measures must be undertaken which meets a list of detailed criteria, including that

development within Flood Zone 3b must be 'essential' development, that measures should not have an undue impact on nature conservation, landscape character and recreation *inter alia*, and that no net loss of flood storage on-site should occur.

12.4.4 HLDP Policy HGT1 (Development and Delivery of Garden Communities in the Harlow and Gilston Garden Town) requires development associated with the Harlow and Gilston Garden Town to ensure mitigation from and adaptation to climate change is secured through design and construction methods. Policy PL3 (Sustainable Design, Construction and Energy Usage) requires that new development will be expected to deliver high standards of sustainable design and construction and efficient energy usage, taking account of predicted changes to heating and cooling requirements as a result of climate change.

12.4.5 Policies AG1 (Promoting Sustainable Development in the Gilston Area) and AG2 (Creating a Connected Green Infrastructure Network) of the Gilston Area Neighbourhood Plan promote sustainable development that among other issues, should protect existing and new communities from the impacts of flood risk and climate change through a landscape-led approach.

12.4.6 Policy 3 (Sites for sand and gravel extraction and the working of preferred areas), Policy 5 (Mineral Sterilisation) and Policy 7 (Secondary and recycled materials)of the Hertfordshire Minerals Local Plan 2007, and Policy S4 (Reducing the use of mineral resources) and Policy S8 (Safeguarding mineral resources and mineral reserves) of the Essex Minerals Local Plan 2014 encourage the opportunistic extraction of minerals for use on site to reduce the need to transport sand and gravel to the site and to make sustainable use of these resources. Appendix 5 of the Hertfordshire Minerals Local Plan and the Mineral Consultation Area SPD also identified Pole Hole Quarry as a specific site for sand and gravel extraction (under Policy 3) as it had permission for extraction at the time of the Plan production. These Policies 3, 5 and 7 are relevant as part of the ESC proposal site falls within a Mineral Safeguarding Area (MSA) identified in both the Essex Minerals Local Plan and Hertfordshire Minerals Local Plan.

12.4.7 Paragraphs 152 to 158 (section 14) of the NPPF relate to the consideration of development proposals in the context of planning for climate change. Key principles include ensuring that development is designed to be resilient to changes and risks associated with climate change. Paragraphs 159 to 169 relate to planning for flood risk, directing development away from locations that are at highest risk of flooding, ensuring that proposals do not cause risks from flooding.

Flood Risk and Sustainable Drainage

12.4.8 Paragraph 159 of the NPPF 2021 states that inappropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest risk and where development is necessary, the development should be made safe for its lifetime without increasing the risk of flooding elsewhere. In order to determine this, Paragraph 161 states that a sequential test should be applied and then, if necessary, an exception test should be carried out.

12.4.9 While the East Herts District Plan and Harlow Local Development Plan both support in policy terms the principle of providing an additional crossing of the River Stort, neither Plan defines the location of this crossing. Therefore at the Plan-making stage the Strategic Flood Risk Assessments identified the need for detailed site-specific Flood Risk Assessments to be submitted with applications relating to the Gilston Area.

12.4.10 Paragraph 162 of the NPPF 20-21 describes the aim of the Sequential Test as being to keep development out of medium and high flood risk areas (Flood Zones 2 and 3) and other areas affected by other sources of flooding where possible.

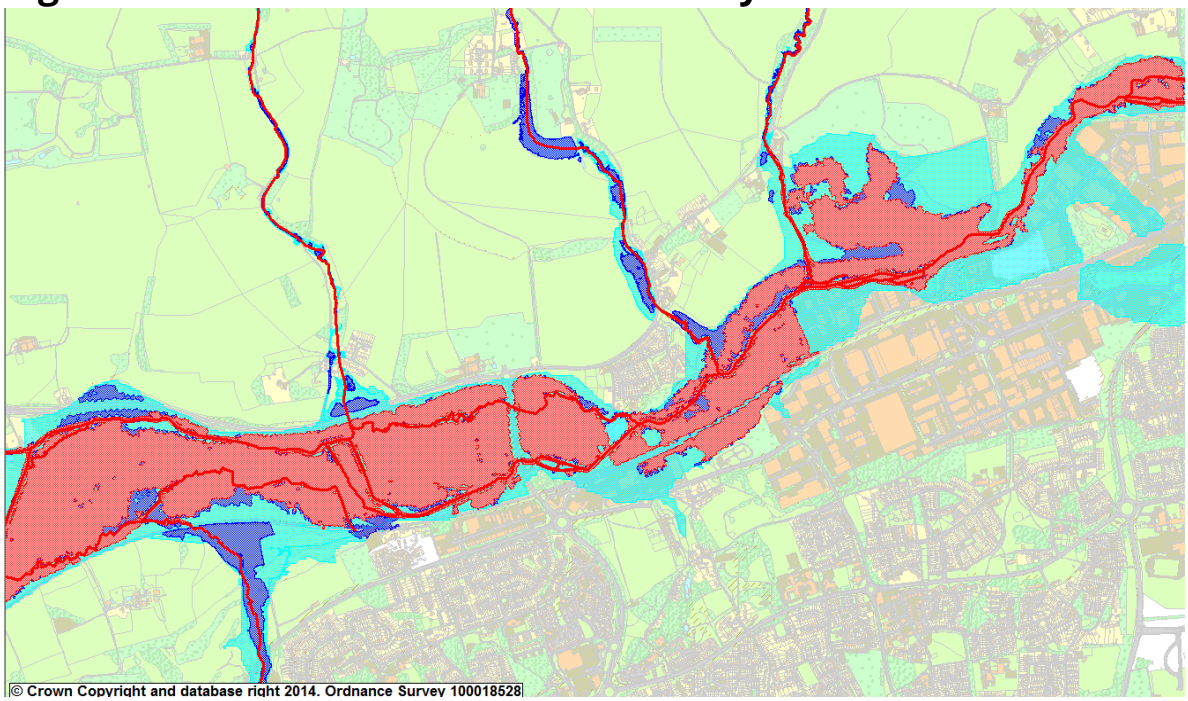
12.4.11 The entire Stort Valley in this location is classified as Flood Zones 2, 3a and 3b (functional floodplain) on the Environment Agency's Flood Zone Map. Figure 25 below shows the extent of the Flood Zones within the Stort Valley, which indicates that the site area for the ESC proposals fall within Flood Zone 3b. In order to perform its function as a bridge connecting the Gilston Area development to the urban area of Harlow the ESC is designed to cross the natural watercourse of the River Stort

and the Stort Navigation, and is therefore located in the floodplain. When applying the sequential test to this development the, conclusion is that it is not possible to locate the development in an area of lower flood risk.

12.4.12 NPPF Paragraph 163 states that where it is not possible for development to be located in areas with a lower risk of flooding (taking into account wider sustainable development objectives), the exception test may have to be applied. The need for the exception test will depend upon the vulnerability of the site and the development proposed considered against the Flood Risk Vulnerability Classification set out in Annex 3 of the NPPF. The river crossings are considered as "essential transport infrastructure which has to cross the area at risk" under Annex 3 of the NPPF 2021. The Planning Practice Guidance expands upon Annex 3 and advises that within Flood Zone 3a 'essential infrastructure' requires an exception test to be undertaken, and to be designed and constructed to remain operational and safe in times of flood. In Flood Zone 3b (functional floodplain) essential infrastructure that has to be located in the functional floodplain must pass the Exception Test in that it must be designed to:

- Remain operational and safe for users in times of flood;
- Result in no net loss of floodplain storage; and
- Not impede water flows and not increase flood risk elsewhere

Figure 25: Flood Zones in the Stort Valley



12.4.13 The Exception Test as set out in paragraph 163 and 164 of the NPPF, state that in order to pass the exception test a Flood Risk Assessment should be submitted to demonstrate that the development will:

(1) provide wider sustainable benefits to the community that outweigh flood risk, and
(2) that it will be safe for its lifetime taking account of the flood risk vulnerability classification, without increasing flood risk elsewhere, and where possible to reduce flood risk overall.

12.4.14 In terms of remaining operation and safe for users in times of flood, the part of the ESC within the floodplain is designed as an elevated structure, designed to convey water beneath it in the case of the open span elevated bridge, or through it in the case of the culverted embankment section. The bridge columns are located beyond areas of standing water and will be designed to withstand corrosion and to operate effectively for at least 120 years, and the surface of the bridges will be well beyond one in a thousand year flood event water levels. It is therefore considered that the ESC will remain operational and safe for users in times of flood.

12.4.15 In terms of floodplain storage, water flows and increased flood risk, the ESC proposal has been modelled to determine its impact on the existing flood plain. The Environmental Statement that supports this application assesses the potential effects of the Eastern Stort Crossing on the surface water environment, including an assessment of the potential effects on surface water quality, hydrology, river morphology, flood risk and drainage.

12.4.16 The Lead Local Flood Authorities (LLFA) collectively raised a number of concerns as part of the initial consultation. These included the requirement to submit a detailed drainage strategy identifying appropriate discharge locations and measures to limit discharge to greenfield run off rates, the provision of detailed surface water calculations to ensure that the proposed drainage system can cater for the required volumes and flows and a drainage plan demonstrating an appropriate SuDs management treatment train. Additional details have been provided via the November 2020 revisions and reassessed. Subsequent to this further assessment, minor alterations to a number of technical drawings have been made which provide clarity on SuDS locations, areas and storage volumes to the satisfaction of the LLFA.

12.4.17 In respect of Sustainable Drainage Systems (SuDS) and flood compensation, the applicants have liaised with both Lead Local Flood Authorities (ECC and HCC) and, as has been agreed with both LLFAs, all SuDS features are designed to be in themselves capable of functioning independently of the functional floodplain of the Stort Valley. This is because all roads must be designed with appropriate drainage networks and this network must ensure that surface water runoff from the highway passes through an adequate number of treatment components (cleansing processes) to ensure appropriate removal of pollutants prior to water being discharged into the watercourse.

12.4.18 Land to the east of the central roundabout is part of the functional floodplain; as such, the ESC design must ensure the floodplain continues to operate effectively and that where structures are introduced (road on culvert embankments and open span bridge on piers) that compensatory floodplain volume is created within the vicinity of the structures. This is the principal purpose for the use of

the culvert structure compared to a traditional raised embankment design. The use of piped culvert through an embankment enables the ground to be lowered, essentially laying the culvert in to a depression in the ground rather than sitting on top of the current ground level to ensure flood water can travel unimpeded if necessary to cater for storm events. As such, the flood compensation for the culverts is delivered within the footprint of the structure itself, ensuring that the development has built in resilience to cater for climate change and extreme events in line with policy requirements.

12.4.19 The embankment structure results in the loss of wetland habitat which needs to be compensated for. Mitigation is proposed through the conversion of arable grassland to species rich wetland environments, the detail of which is discussed more in section 12.6 below.

12.4.20 All roads must be designed with appropriate drainage networks and this network must ensure that surface water runoff from the highway passes through an adequate number of treatment components (cleansing processes) to ensure appropriate removal of pollutants prior to water being discharged into local water networks. Given that part of the ESC lies within the functional floodplain of a main watercourse this is particularly important. As such the applicants have worked with the LLFA within both County Councils to ensure that appropriate Flood Risk Assessments, Water Quality Risk Assessments, hydraulic modelling and micro-drainage calculations were undertaken using approved methodologies, and that the drainage strategy and technical plans demonstrate a suitable approach to managing surface water runoff.

12.4.21 The submitted AECOM Flood Assessment, detailed in the Environmental Statement describes how the assessment uses both the Highways England's HAWRAT (Highways Agency Water Risk Assessment Tool) and the LLFA preferred Simple Index Approach to assess the impact of the proposed highway development on water quality. These tools determine that highways surfaces must have at least two forms of treatment of surface water before they are discharged to the ordinary watercourse.

12.4.22 Therefore, a number of options are proposed in the submitted Drainage Strategy. These include the use of materials and surface treatments that reduce runoff to greenfield runoff rates, and the attenuation and treatment of highways runoff using a combination of grass conveyance swales with check dams followed by vegetated ditches to provide the necessary level of treatment before being discharged to the River Stort. In addition, prior to reaching the swales, the SuDS themselves must also provide for the storage of surface water that runs off the surface of the highway in order that the flow into the rest of the SuDS network is controlled. Surface water runoff from the highways is therefore stored in underground features beneath the highway surface and accommodate for flows during a 1 in 30 year storm event. Towards River Way where the urban area is more constrained, the new roundabout surface water will be attenuated and treated via conveyance through a vortex flow separator to remove fine pollutants and particles, a permavoid biomat (or equivalent) to remove any oils missed by the separator followed by a drainage channel to add a filtration stage before discharge into the River Stort.

12.4.23 Storage volume assessments were based on 1 in 30 year storm events. Further revised assessments considered a 1 in 100 year storm event plus a 70% uplift plus 1 in 1,000 year storm events to account for anticipated changes in guidance and to ensure the assessments remain a robust basis for the lifespan of the development. Any drainage network that is introduced into this environment must be capable of mitigating the development in isolation from the operation of the functional floodplain. This is so they can continue to operate independently of the wider river floodplain even when water levels within the floodplain are raised after a storm event. Therefore SuDS features are designed to sit above the flood levels within the Stort Valley floodplain during a 1 in 30 year storm event level plus a 70% uplift to account for climate change.

12.4.24 In order to account for anticipated changes in guidance and to ensure the assessments remain a robust basis for the lifespan of the development changes may be made to the proposed SuDS strategy to accommodate further storage to accommodate flows for up to and including a 1 in 100 year storm event including an allowance for climate

change. Such changes will be determined following further detailed modelling undertaken iteratively with the detailed highway engineering design stage, and as such details will be required to confirm the final drainage strategy by Conditions 27 and 28.

12.4.25 In addition, the addition of structures within the floodplain have to be designed to ensure that they do not cause flooding upstream of the structures, that they enable movement of water that does not affect the river channel from changes in water flow, and that no impacts arise downstream through flooding or changes to water quality. This is pertinent given that downstream of the development the River Stort contains a number of environments that are designated for their riparian habitat which supports flora and fauna of European importance. Maintaining water quantity and quality is therefore crucial to not harming and indeed improving the River Stort in line with objectives of the Water Framework Directive Regulations.

12.4.26 A detailed analysis of potential water quality impacts of run-off from the two river crossings has been undertaken (in the submitted ES) which also considered accidental spillages. An assessment of the impacts during construction has also been undertaken. Overall there would be negligible to minor adverse effects with mitigation on the water environment which includes the River Stort and Stort Navigation, Fiddlers' Brook, Pole Hole Brook and groundwater. An assessment has been undertaken to establish whether the development as a whole would cause deterioration or prevent future improvement of waterbodies and this concludes that this will not be the case with mitigation in place. Overall, the residual effects of the ESC and Development as a whole are considered to range between minor adverse effects during construction to neutral (not significant) during the operation of the crossing. No significant cumulative effects are predicted during the construction or operational phase as each development site will be required to address its own drainage and flood prevention requirements.

12.4.27 In terms of preventing flood risk and integrating sustainable drainage through design, the ESC proposal meets the requirements of the Environment Agency and LLFA. The preliminary Drainage Strategy is

agreed in principle at this stage and subsequent engineering design stages will refine details of the proposed attenuation features, which will be controlled by a series of conditions. In terms of the Exception Test, the application demonstrates that the development will result in no net loss of floodplain storage, will be safe for its lifetime by virtue of its design, including provision for compensatory volume, will not impede water flows and will not increase flood risk elsewhere through its integrated sustainable drainage solutions as detailed above. Furthermore, the ESC comprises essential transport infrastructure that has to cross the area at risk as defined in Annex 3 of the NPPF and will provide wider sustainability benefits to the community through enabling the delivery of the allocated 10,000 home Gilston Area site and wider growth within the HGGT, enabling the CSC to operate as a Sustainable Transport Corridor and connecting new and existing communities to key destinations within Harlow, namely the Enterprise Zone and employment locations to the east of the town. The ESC is therefore considered to meet both parts of the Exception Test in accordance with the NPPF. Furthermore, the proposal is considered to meet the requirements of Development Plan policies and as such, these elements of the proposals may be given considerable weight by members..

Re-use of Mineral Resources

12.4.28 Part of the ESC proposal site falls within a Mineral Safeguarding Area (MSA) as identified in both the Essex Minerals Local Plan and Hertfordshire Minerals Local Plan.

12.4.29 Policy S4 (Reducing the use of mineral resources) of the Essex Minerals Local Plan 2014 seeks to ensure that mineral waste is minimised and minerals won are re-used and recycled, reducing not only waste but also demands on the transportation of minerals. Policy S8 (Safeguarding mineral resources and mineral reserves) requires consideration to be given to the opportunistic extraction of existing minerals.

12.4.30 Policy 5 (Mineral Sterilisation) of the Hertfordshire Minerals Local Plan encourages the opportunistic extraction of minerals for use on site

prior to non-mineral development, where the development may result in the sterilisation of any significant mineral resource. HCC will object to proposals which would prevent or prejudice mineral extraction unless the proposal can demonstrate that the land does not contain workable mineral deposits, that there is an over-riding need for the development and that the mineral cannot be practically extracted in advance. Policy 8 (Mineral Safeguarding) of the Proposed Submission document relates to the full consideration of using raised sand and gravel material on site in construction projects to reduce the need to import material and to make sustainable use of these valuable resources.

12.4.31 Given that the ESC proposal is located within land that has previously had extensive extraction of sand and gravel and has been subsequently filled, a large part of Road 1 and Road 2 does not contain minerals. Road 3 lies within the floodplain, where again, extraction of sand and gravel has already occurred. The ES demonstrates that the section of Road 1 not in the flood plain would not meet the minimum criteria set by the two mineral local plan policies in terms of identifying economically valuable resources. As such, the opportunity to 'win' material from the ground for use within the scheme will be limited and no sterilisation of mineral reserves will occur.

12.4.32 The ESC proposal therefore needs to demonstrate how a sustainable approach will be taken to mineral sourcing, construction techniques and waste minimisation, and also how impacts on proximal authorities are minimised. One way of achieving this is to undertake mineral supply audits which should consider the approximate volume of aggregates required to facilitate the development on a phased basis, where such aggregate will or could be supplied from, implications for that demand on local aggregate supply and the impact on any proximal infrastructure that may potentially arise as a consequence of the need to import that aggregate. Such information will be required by condition.

Climate Change and Sustainable Construction

12.4.33 Paragraph 152 of the NPPF states that "the planning system should support the transition to a low carbon future in a changing climate, taking full account of flood risk and coastal change". Paragraph 153 advises that "plans should take a proactive approach to mitigating and adapting to climate change", and in doing so retains the link between planning policy and the provisions in the Climate Change Act 2008. Paragraph 154 requires new development to be planned in ways that avoid increased vulnerability to the range of impacts arising from climate change. Where development is brought forward in areas which are vulnerable care should be taken to ensure that risks can be managed through suitable adaptation measures, including through the planning of green infrastructure. Paragraph 154 also requires development to help reduce greenhouse gas emissions, such as through its location, orientation or design. The NPPF expects local planning authorities when setting requirements for sustainability in buildings to do so in a way that is consistent with the Government's zero-carbon buildings policy and adopt nationally described standards, however, no such policies are in place for infrastructure schemes.

12.4.34 In the context of a development that comprises the construction of new roads and bridge structures, consideration of the proposal against policies that relate to climate change takes on a different emphasis. It is not just about whether a design is resilient to flooding or heating and cooling of the environment. Transport infrastructure has an impact through its construction and yet also has a role in increasing active and sustainable travel, thereby reducing impacts associated with the movement of vehicles.

12.4.35 The Government's Clean Growth Strategy, 2017 includes a key policy to accelerate the shift to low carbon transport, focussing on a transition to low emission vehicles and promoting walking and cycling. The Government's Road to Zero Strategy, 2018 set out steps and policy interventions to decarbonise and electrify road transport, focussing on supporting modal shift, reducing emissions and investing in electric vehicle infrastructure. The Government's policy paper Decarbonising Transport, 2021 states the steps to be taken to develop a transport decarbonisation plan. Alongside the paper, the Department for Transport has initiated a Carbon Management Programme to embed

an integrated system for managing whole life carbon of infrastructure projects at a portfolio level. The framework will include capital carbon i.e. emissions associated with the creation or major modification of an infrastructure asset and be guided by the principles of PAS 2080, which is the leading industry-wide global standard for carbon management[3]. The application embraces carbon management principles which will be considered further at the technical detailed design stage.

12.4.36 All new infrastructure development will have an impact in terms of carbon emissions both during construction and when the new road is operational. Accounting for carbon emissions in construction is still a relatively new field and as such there are currently few recognised methods for quantifying carbon emissions beyond the UK Greenhouse Gas (GHG) Inventory[4] and the PAS 2080 Standard. However, the ES takes a pragmatic approach and has drawn upon a wide number of published sources and has created a bespoke methodology. This approach takes account not only of carbon in construction and operation, but also carbon within soils, trees and waterbodies. In this way, a full account can be taken of the impacts of development.

12.4.37 The assessment considers how embodied carbon and operational carbon emissions from the proposed development would be partly reduced by proposed blue and green infrastructure. The assessment considers carbon emission from the following sources:

- Natural capital – green and blue infrastructure (soft landscaping, water bodies and SuDS);
- Direct carbon (energy) – operational energy from on-site fuel consumption (e.g. gas);
- Indirect carbon (energy) – operational energy from off-site generation (e.g. grid electricity);
- Embodied/ Indirect carbon (construction) – embodied carbon associated with construction; and
- Water – used within buildings.

[3] PAS 2080: Carbon Management in Infrastructure, 2016 developed by the Construction Leadership Council's Green Construction Board with the British Standards Institute (BSI)

[4] https://www.gov.uk/government/publications/uk-greenhouse-gas-emissions-statistics-user-guidance

12.4.38 The assessment calculates carbon from the above sources and then evaluates a 'carbon balance'. The carbon balance is determined by subtracting carbon emissions from construction and operational sources from carbon which could be available through likely 'gains' such as carbon sequestration absorption from the proposed green infrastructure (landscaping) and blue infrastructure (drainage features). These carbon emissions are then proposed to be mitigated through a series of measures to reduce operational carbon, to create new carbon sinks and to create resilience against changes from climate change such as: hotter, drier summers; warmer and wetter winters; and increased frequency of extreme weather events. For the crossing proposal this includes the following measures:

- Blue infrastructure including swales and ponds to absorb carbon emissions and to accommodate storm event rainfall;
- Use of renewable energy sources where necessary;
- Green infrastructure including landscaping and tree planting to provide shade, reduce 'urban heat island' effects and to absorb carbon dioxide emissions,
- Protect existing soil resources for re-use across the site;
- Construction management and site waste management to reduce vehicle movements;
- Construction materials and energy and water efficient construction techniques
- Resilient design and construction techniques to reduce ongoing maintenance;
- Energy efficient lighting.

12.4.39 Carbon emissions associated with the construction and operation of the development have been determined based on published benchmark data which were available at the time of the assessment. For the crossings, carbon factors were applied based on the area of the length and width of the proposed infrastructure schemes (with carbon factors derived from the UK GHG Inventory). The ESC scheme is 2.437km long, including the provision of a 7.3m wide carriageway along three separate road corridors, two new roundabouts and a traffic signal-controlled junction. Furthermore, the ESC comprises a total of six bridges, construction through a former landfill site, culvert

embankment and the demolition and replacement of an existing bridge over the railway in River Way. The assessment indicates that circa 1.3 million kilograms of CO_2 will be generated by concrete used and circa 18.2 million kilograms of CO_2 by hot asphalt used during construction for the whole of the CSC and the ESC combined (total circa 19.5 million kilograms of CO2). This is a one-off impact and not a per year calculation.

12.4.40 This calculation is based on initial designs, but it is worth noting that at this stage the detailed specification is yet to be fixed. However, it is recognised that the largest magnitude of emissions during construction are likely to arise from the products and materials used in construction (extraction of raw materials, transportation to manufacturing plant, manufacturing and fabrication), followed by the transportation of construction products and materials to the site and then the installation process. The emissions related to the construction of the ESC are likely to be broadly comparable with other road schemes on a per km basis. However, as each road scheme is unique, no other comparable will be appropriate and is not required by the EIA Regulations governing the Environmental Statement.

12.4.41 The ES describes how the current proposed embankment culvert design will result in considerably less carbon impact compared to an open span bridge design for the whole of Road 3. It should also be noted that by the time the ESC is complete, based on the timetable for delivery without HIG funding, petrol and diesel vehicles will be phased out, so the majority of vehicles using the ESC will be electric vehicles. It is considered that the carbon impact associated with the construction of the ESC is acceptable in the context of the role it plays in facilitating the creation of a sustainable transport corridor and priority given to active and sustainable travel which will assist in meeting the ambitious mode share targets established for the HGGT communities.

12.4.42 This report considers the proposal in terms of how the design has minimised the embodied carbon used in its choice of material and in construction methods, which also includes the long term maintenance of the structures and even the supply chain of materials via a Sustainable Procurement Policy as set out in the submitted

Sustainability Strategy. Additional considerations include how green infrastructure has been incorporated in to the design and the direct benefits in terms of the scheme's contribution to achieving sustainable transport objectives thus reducing the use of private vehicles and reducing congestion.

12.4.43 The application is supported by a Carbon Footprint Assessment which considers the carbon footprint associated with each part of the road and structures. This assessment shows that the carbon footprint of the ESC is, not unexpectedly, high, but it should be noted that the assessment accounts for the whole-life capital and maintenance requirements in addition to materials and construction methods. Calculations taken following the 'Inventory of Carbon and Energy' format demonstrate that the culverted structure enables more than 30% less embodied carbon and energy compared to the initially proposed open span bridge for the whole length of Road 3.

12.4.44 This calculation assumes all materials are 'new', however in the case of the culverts the applicant is committed to utilising materials won from the site where materials are suitable and it is practicable. This re-use of materials on-site further reduces the impact of the construction in terms of importing and exporting material. This is in line the Hertfordshire Minerals Local Plan, Waste Local Plan, the Essex Minerals Local Plan and the waste hierarchy.

12.4.45 The remaining open span bridge has been designed with steel beams being the primary form of construction with reinforced concrete kept to a minimum for the deck of the structure. Not only is the use of steel lower in carbon footprint compared to pre-cast or on-site moulded reinforced concrete, but it also enables the supporting columns of the bridge to be much slimmer in their visual appearance, which is particularly important when seeking to reduce the visual impact of the bridge as it crosses over the valley.

12.4.46 The construction industry is responding to the UK Government's carbon reduction target by investing in processes that recycle scrap steel, thereby further reducing the embodied energy needed to manufacture steel. Officers recommend Condition 6 which requires

the submission of design details that demonstrate that energy and sustainability has been considered in every stage of construction, including the procurement stages. This will need to set out how the choice of materials and construction methods proposed follow the energy hierarchy.

12.4.47 As has been described above the construction of the ESC proposal will result in the loss of some mature trees and landscaping. However, the proposal includes a programme of mitigation which includes not only new planting but the enhancement of habitat from arable to floodplain grassland and incorporates SuDS features that in themselves act as carbon sinks. Planting a greater number of trees and hedgerows as part of the overall ESC scheme will compensate for the trees and scrub lost due to the construction of the bridge abutments. Incorporating landscape in the design helps to reduce the overall impact of the proposal.

12.4.48 The ES indicates that as individual developments are required to attenuate impacts to surface water and to take account of climate change resilient measures, no significant cumulative effects are predicted during the construction or operational phase of the development. The application makes appropriate allowances for climate change when assessing flood risk and planning for suitable SuDS solutions. The assessment has identified no significant climate change risk effects to the Development which could not be effectively managed through current or future stages of design. However, periodic reviews would be required to ensure the latest published predictions on climate change effects and risks are taken into account. Officers therefore recommend this approach is secured via Condition 6.

12.4.49 As has been described above, the construction of the ESC proposal will result in the loss of some mature trees and landscaping. However, the proposal includes a variety of measures to mitigate such losses and changes to the landscape, which includes not only new planting but also the enhancement of land within the Fiddlers' Brook corridor as well as creating new SuDS features that in themselves act as carbon sinks. Planting a greater number of trees and hedgerows as part of the crossing design will compensate for the trees and scrub lost due to the

construction of the bridge abutments. Incorporating landscape in the design helps to reduce the overall impact of the proposal.

12.4.50 The primary objective of the ESC is to provide for the additional highway capacity required to serve the Gilston Area developments and to enable the creation of a sustainable transport corridor through the Central Stort Crossing proposal. The CSC and ESC together will connect the Gilston Area developments with Harlow's Town Centre and Station and beyond and provide priority to active forms of travel, contributing to the overall target of achieving 60% of trips associated with the Gilston Area developments and 50% of all trips originating within the HGGT being by active and sustainable modes of travel. The resultant reduction in vehicle movements (when compared against an extrapolation of movements based on existing mode share), congestion and fuel consumption is also a benefit of this proposal. This is in line with the 2021 policy paper Decarbonising Transport, which notes on page 29 that "*As well as decarbonising private and commercial road vehicles, therefore, we must increase the share of trips taken by public transport, cycling and walking. We want to make these modes the natural first choice for all who can take them. We want less motor traffic in urban areas. Improvements to public transport, walking and cycling, along with the changes in commuting, shopping and business travel accelerated by the pandemic, also offer the opportunity for a reduction, or at least a stabilisation, in traffic more widely. Increasing car occupancy and encouraging public transport use are two measures that can immediately cut transport's carbon emissions. They will help tackle chronic road congestion, freeing up road space for those with no alternative but to drive.*" In the case of Harlow, this will also free up the road space required to facilitate the creation of a STC network that will serve the existing and new communities.

12.4.51 The application acknowledges the climate emergency and the Government's and local authority's commitments to reducing carbon emissions. The 2008 Climate Change Act brought in Carbon Budgets which set limits on the greenhouse gas (GHG) emissions emitted between now and 2050 in five year periods. The ESC is proposed to start in 2030 and be open to traffic in 2033, although with funding identified through the Housing Investment Grant, it is anticipated that

the ESC could be delivered earlier, potentially by 2027. This would fall within the fifth or potentially the fourth carbon budget. Based on the available information, and given the magnitude of the UK's carbon budget, it is not considered that the ESC proposal will have a material impact on the ability of the UK Government to meet its carbon budgets.

12.4.52 Inevitably when constructing new bridges and highway structures of this scale and nature there will be impacts in terms of carbon footprint. However, new technologies are evolving which seek to reduce the embodied energy and energy used in creating concrete, recycling both steel and concrete and in the construction of roads and bridges. The road construction industry is already exploring innovative ways to reduce the carbon impact of road surfacing material, moving from hot rolled asphalt to cold rolled and using recycled material in surface treatments for example. The Design Manual for Roads and Bridges includes guidance on sustainable construction, and the emerging Roads in Hertfordshire Design Guide encapsulates these principles.

12.4.53 As technology and techniques are changing rapidly, Officers recommend Condition 6 which requires the submission of an Energy and Sustainability Strategy for each part phase of the proposal. This will need to set out how the choice of materials and construction methods proposed follow the energy hierarchy and that materials are processed and sourced locally where possible. This will also require demonstration that the procurement processes and decisions ensure that carbon emissions have been reduced across the whole supply chain.

12.4.54 The Strategy for Sustainability and Development Specification associated with the Outline Villages 1-6 application commits to ensuring that sustainability principles are embedded at all stages of decision-making, from design, procurement, implementation, operation and stewardship. Officers consider that these principles should run through the entire Development as submitted (the CSC, ESC and Villages 1-6 proposals) and therefore the ESC application will be required to demonstrate through condition that the detailed engineering and technical approval process has delivered on these

principles, and as such is considered to meet the provisions of the development plan policies and therefore is afforded positive weight.

12.5 Land Contamination and pollution

12.5.1 Policies WAT2 (Source Protection Zones), EQ1 (Contaminated Land and Land Instability), EQ2 (Noise Pollution), EQ3 (Light Pollution) and EQ4 (Air Quality) of the East Herts District Plan 2018 require developments to prevent and where necessary to mitigate impacts arising from development from contaminated land and land stability issues, noise and light pollution and from air quality related impacts.

12.5.2 Policy PL10 (Pollution and Contamination) of the Harlow Local Development Plan requires development to minimise and where possible to reduce all forms of pollution and contamination, and where it can be demonstrated that pollution and/or contamination is unavoidable, appropriate measures must be used to mitigate the negative effects of the development. Policy PL11 (Water Quality, Water Management, Flooding and Sustainable Drainage Systems) requires development to not cause deterioration to water quality, including quality of waterways and identified Source Protection Zones, aquifers and all other groundwater, improving water quality where possible. Policy SIR3 simply cross references to the Essex County Council Waste and Minerals Development Plan Documents.

12.5.3 Policies AG3 (Protecting and Enhancing the Countryside Setting of New and Existing Villages) and AG8 (Minimising the Impact of Traffic and New Transport Infrastructure on Existing Communities) of the Gilston Area Neighbourhood Plan require appropriate measures to be implemented to minimise effects on existing communities, including through noise and severance; to mitigate the impacts of development proposals on the Stort Valley, including noise and light pollution, particularly arising from traffic and transport infrastructure. Policy AG8, Parts 2 and 3 specifically refer to proper management of construction traffic and monitoring to deal with any issues which may arise during construction.

12.5.4 The Hertfordshire Waste Core Strategy and Development Policies document and the Essex and Southend-on-Sea Waste Local Plan 2017 seeks to minimise the creation of waste through construction and to manage any potentially harmful waste arising safely and appropriately.

12.5.5 The National Planning Policy for Waste 2014, to be read alongside the NPPF, states that when determining non-waste applications consideration should be given to the likely impact on existing waste management facilities and the waste hierarchy, ensuring that the handling of waste arising from the construction and operation of development maximises re-use and recovery operations and minimises off-site disposal. Paragraphs 183 to 188 (section 15) of the NPPF 2021 relate to the consideration of development proposals in the context of ground conditions and pollution. Key principles include ensuring adequate assessments are undertaken to inform proposals to ensure land is suitable for the development and that development mitigates and reduces to a minimum potential adverse impacts arising from noise and light pollution, and that proposals contribute towards compliance with relevant air quality limits and objectives.

Waste Matters

12.5.6 Part of the development site as a whole (Outline Village 1-6 application area and two crossings) is within a Waste Consultation Area (WCA) associated with a recycling facility at Elizabeth Way in Harlow, identified in the Essex and Southend-on-Sea Waste Local Plan 2017 (Policy 2). The policy seeks to ensure that existing and allocated waste sites and infrastructure are protected from inappropriate neighbouring developments that may prejudice their continuing efficient operation. ECC consider that the application will not compromise the operation of this facility and made no objection to the proposal in this regard.

12.5.7 Similarly, Policy 12 of the Hertfordshire Waste Local Plan requires that a Site Waste Management Plan (SWMP) be submitted and kept up to date as a live document. The SWMP will record the actual waste to arise from demolition and construction phases, waste management actions for each type of waste including whether it is re-used, recycled, recovered or disposed of, and where disposal will occur and how. It

should be noted that Hertfordshire does not accept hazardous waste so alternative provisions must be made for the safe recovery and disposal of hazardous waste by the applicant during the construction process.

Contaminated land and land stability

12.5.8 Road 1 east of Pye Corner and Road 2 cross land that was formerly used as a quarry and landfill site at Pole Hole. As such, it is necessary to consider the potential impacts that could result from the mobilisation of contamination during construction. The presence of a Secondary A aquifer underlying the site means that it is important to ensure that the development manages risks posed to controlled waters.

12.5.9 In order to ensure no unnecessary risks are created during the investigative stages of the proposal and due to restrictions over access required to undertake intrusive surveys, the application is supported by a Phase 1 Geotechnical and Ge-environmental Desk Study Report and an Eastern Stort Crossing: Environmental Risk Mitigation Report which assesses the ground conditions for the ESC. This assessment used existing borehole data and other available geotechnical information. This information was supplemented following the original submission by information supplied by the Council in relation to ground gas assessments related to the landfill site.

12.5.10 Following several technical discussions with Environmental Health Officers a number of updates were made to the Ground Conditions chapter of the Environmental Statement to ensure that a 'worst case' approach had been tested. While this was predominantly an issue for the ESC, the approach applied to the ES as a whole. This is in line with advice from the Planning Inspectorate: "*in assessing the 'likely' effects, it is entirely consistent with the [EIA Regulations] to adopt a cautious 'worst case' approach.* The application is supported by a Phase 1 Geotechnical and Geo-environmental Desk Study Report – River Stort Crossing Options document which assesses the ground conditions for the identified crossing options.

12.5.11 Concern was initially raised that any environmental risks associated with the construction and maintenance of the roads and structures might not be able to be mitigated within the red line boundary of the application. As such, the applicant submitted an ESC Environmental Risk Mitigation Report with the amended plans in November 2020. This reports sets out the options available to avoid potential construction impacts and to mitigate them should they occur. Options included passive ventilation, fully lined drainage ditches and attenuation ponds as examples. The assessments also consider how material arising during ground preparation works for the section of Road 1 and 2 within the former landfill area will be managed. The landfill area already benefits from a long period of continual monitoring for ground gas and this monitoring has informed the proposed construction methods and preventative mitigation measures. A series of conditions will require further site-based assessments to be submitted to and approved by the planning authority comprising a detailed quantitative human health and environmental risk assessment, remediation schemes based upon the detailed assessments plus validation reports demonstrating works have been carried out as agreed prior to the development being brought into use.

12.5.12 Given the presence of the former landfill area there is a need to consider how contaminated land may be removed during construction if necessary. With any construction there will need to be movement of material within, to and from the site. The Hertfordshire Minerals and Waste Team therefore recommend that a Site Waste Management Plan be produced prior to the commencement of development, in order to ensure that waste is identified, reduced and managed in accordance with the waste hierarchy. This will therefore be sought via Condition 23.

12.5.13 The Further intrusive geotechnical investigations will need to be undertaken at the detailed engineering design stage in order to inform the foundation design process. Structural foundations for the open span bridge are currently expected to include abutments located on piles designed to withstand loading requirements of structures as defined by the Design Manual for Roads and Bridges and other relevant construction standards. Given the nature of the riparian valley

geography, foundations will take account of ground stability and ground water levels. Where piles are proposed additional information will need to be submitted and approved by the planning authority, the LLFA, the Environment Agency, Affinity Water and Thames Water. These are normal requirements and will be managed via a series of technical conditions and informatives.

12.5.14 Construction operations will be undertaken following all relevant codes of practice, which require frequent monitoring of ground stability, contaminant exposure and groundwater and ground gas monitoring where necessary. This monitoring enables rapid detection, mitigation and remediation to occur, which is vital given the site's location within the Stort Valley upstream of SSSIs. These processes will be required via a comprehensive Construction Environment Management Plan and Code of Construction Practice, and as such no adverse effects are considered likely during construction as a result of the ESC proposal.

Noise

12.5.15 This section considers the noise in relation to its impact on residential occupants and human receptors. Section 12.6 below considers noise in relation to its impact on the environment, in particular on sensitive species.

12.5.16 The issue raised most often by the community during the original consultation was that of the impact of noise arising from the new road alignment where it passes in proximity to homes in Pye Corner and Terlings Park. Noise from construction activities also needs to be considered, albeit that these noise impacts are more temporary in their nature. In addition to residential properties, the impact of noise on users of the Stort Valley also needs to be considered.

12.5.17 In order to consider the impact of construction noise and vibration on sensitive receptors and buildings a comprehensive noise assessment has been undertaken. Properties nearest to the construction will clearly be those most affected, and the magnitude of that effect will depend upon how long the construction continues. For example, where Road 2 becomes the Village 2 access, the assessment suggests

that there will be moderate adverse effects during construction due to the need to create a turning head for vehicles and to close the Pye Corner access. The length of time that this impact will occur will be considerably less than the construction of the bridge structures. In the vicinity of the Terlings Park and Pye Corner junction construction noise is considered to have a minor to moderate adverse effect, but this effect will last for a longer period of time. This assessment assumes a worst case scenario of all plant being operational at the same time in the same work site, whereas in reality, it is likely that the worst case noise level increase will occur for limited periods of time when plant are operational at the closest point to sensitive receptors.

12.5.18 As is discussed above, there will likely be a need to construct foundations on piles. Recent technological advances have improved piling methods considerably and the applicant proposes to use the same type of equipment that is used in heavily urbanised locations. Continuous Flight Augers will be used to minimise vibration and disturbance as this allows for the combination of multiple construction activities in one process. The nearest property is approximately 40 metres away from the closest piles, which would make the impact from vibration neutral (in both disturbance and building damage terms) and therefore the assessment indicates that satisfactory noise and vibration levels can be achieved through construction activities. Regardless of this, assessment methodologies indicate that vibration levels of moderate impact can be tolerated if prior warning and explanation is given to those potentially affected. Therefore the applicant will be required to submit construction management plans, within which will be an agreement to regularly inform residents of particular construction events such as piling.

12.5.19 The development must be carried out in accordance with strict guidelines and standards as well as following arrangements agreed with the planning and highway authorities controlled through condition. As a result, it is considered that noise associated with construction can be managed through standard techniques in addition to specific measures such as siting material and plant away from sensitive receptors to minimise impacts from loading and manoeuvring vehicles.

12.5.20 In terms of the longer term impact from noise when the ESC is fully operational, as has been discussed above, the applicant has undertaken a number of option testing exercises to consider different road and junction alignments for Road 1 in relation to Terlings Park. Noise modelling was carried out on the shortlisted options to ensure that this was taken into consideration when selecting the final scheme proposal.

12.5.21 In addition to alignment and junction design, the noise modelling tested different types of noise barrier and also barriers of differing lengths and locations to define the most appropriate form of noise mitigation. It was necessary to ensure that the type and location of the barrier did not worsen the noise level experienced on the northern side of Road 1 as a result of noise reflection. Officers were also keen to ensure that the type of barrier used was not going to cause visual harm, both in terms of appearance, but also in terms of the view from residents towards this screen.

12.5.22 'Hard' options like brick walls and fences were considered, however in keeping with a landscape-led approach a living and woven willow screen with a high performance acoustic core located along the road edge landscaping, combined with a solid timber acoustic barrier on the deck of the Fiddlers' Brook road bridge, were demonstrated to achieve the same level of technical acoustic specification as the hard options. Figure 26 below illustrates a living willow screen when first planted, when growing and when well established. Similar to the fourth image, the screen will be planted with a woven screen facing the carriageway and the living woven willow facing residents in Terlings Park. In front of the woven screen there will also be hedgerow planted to soften its appearance. Between Terlings Park and the living woven willow screen further landscaping will be planted.

12.5.23 In ES assessment terms, an increase of 5dB or more is considered to be a large adverse effect, when considering a combination of receptor sensitivity and magnitude of impact. 50dB is considered in guidance to be the lowest level above which noise can be considered as having an Observed Adverse Effect (LOAEL). Noise exceeding 63dB is considered

as having a Significant Observed Adverse Effect Level (SOAEL). For comparison, a human whisper is about 30dB while normal conversation is around 60dB. How one experiences noise as an adverse effect is not a straight line trajectory; the greater the current noise level the more noticeable small increases in noise are and the longer a loud noise occurs the more significant is its impact. Similarly, at night time, a lower level of noise (45dB) is considered suitable to enable undisturbed sleep, while in outside amenity areas, higher noise levels can be considered acceptable. East Herts requires that internal noise levels are no greater than 35dB $L_{Aeq,16hr}$[5] for internal relaxation areas during the day, and 30dB $L_{Aeq,8hr}$[6] for night time sleeping areas. Outdoor amenity areas (i.e. gardens) should look to achieve no greater than 50dB $L_{Aeq,16hr}$.

Figure 26: Examples of a living willow screen

[5] LAeq 16 hr means the ambient sound level experienced over a 16 hour period during the day
[6] LAeq 8 hr means the ambient sound level experienced over an 8 hour period during the night

12.5.24 The amended scheme relocates Road 1 approximately 14 metres further north from Terlings Park properties and includes measures to mitigate the impact of road noise to an extent where properties in the vicinity of the proposed new junction are modelled to experience a 4 dB to 5 dB increase to average noise levels once the road is operational.

12.5.25 In order to undertake a more detailed assessment of noise on properties in this location, 220 individual receptors (properties) were tested. The assessment considered a scenario which included no development in the Gilston Area at 2040, which indicated that a number of properties would exceed the SOAEL. Comparing the without and with development scenarios, the assessment compared an un-mitigated scheme and a mitigated scheme at completion of development in 2040. The un-mitigated scheme (daytime) resulted in 28 receptors exceeding the SOAEL, 142 receptors between SOAEL and LOAEL and 50 below LOAEL. For the mitigated scenarios which included relocating the Eastwick Road and Pye Corner junction northwards and stopping up Pye Corner to vehicular through-traffic, resulted in only one receptor exceeding SOAEL, 169 receptors between SOAEL and LOAEL and 50 below LOAEL. Adding the noise barrier and the low noise road surface results in zero properties exceeding SOAEL, 126 between SOAEL and LOAEL, and 94 below LOAEL. Overall, 58 properties are modelled to benefit from lower levels of noise as a result of the proposed mitigation compared to the scenario with no mitigation (Table 11.26 of the noise assessment). This demonstrates a clear benefit arising from the amendments to design and proposed mitigation.

12.5.26 However, while the number of residential receptors experiencing significant adverse effects has reduced, the models indicate that there will still be large adverse and moderate adverse noise impacts on 27 properties in Terlings Park and Pye Corner during the day time and 41 properties during the night time as a result of different parts of the ESC proposal after mitigation measures are taken. Of these 41, 12 properties are modelled to experience an increase in noise of 5dB or more and 29 experience an increase in noise of between 3dB and 5dB. It should be noted however, that the baseline measurements indicate

that the majority of these receptors already experience noise levels above 50dB, i.e. the level at which noise is considered as having an observed adverse effect, and other facades of these buildings may experience significant beneficial reductions in noise. Notwithstanding this, these properties may be eligible for compensation under the Noise Insulation Regulations.

12.5.27 In terms of the impact from noise during construction and once the ESC is complete, the majority of the proposal has been designed to minimise noise impacts. For example, the section of Road 1 west of Pye Corner is sited within a cutting and is located away from properties in Terlings Park with intervening landscaping; both factors will reduce noise levels experienced by residents within Terlings Park compared to the current situation.

12.5.28 East of Pye Corner there are very few sensitive receptors that would be impacted by construction noise and disturbance. Sensitive receptors are defined as buildings whose occupants may be disturbed by adverse noise and vibration levels and structures that are sensitive to vibration. There are a handful of houseboats within the Stort Valley; some with permanent and some with temporary moorings. Works associated with the construction of the culverts and open span bridge are a considerable distance from the river towpath and Navigation, and with the intervening landscaping and land form providing screening it is considered that impacts on residential amenity for those properties will be negligible. Similarly, for those walking and cycling along the towpath their experience of construction will be minimal and temporary.

12.5.29 In terms of noise from road traffic during the construction phase of the ESC i.e. when some development will be complete within the Gilston Area and other strategic HGGT sites, the ES demonstrates that until the ESC is complete, which is expected to take approximately two and a half to three years from the commencement of the works, increases in traffic associated with these developments may increase noise from road traffic along Redricks Lane as drivers seek diversions, however, once the ESC is operational traffic through Redricks Lane is shown to decrease, resulting in less road traffic noise.

12.5.30 Concerns have been raised about the impact on the tranquillity of the Stort Valley as a result of the ESC proposal. National Planning Policy states that when planning for new development, proposals should identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason. However, guidance is primarily focussed on effects on sensitive receptors and less guidance exists on what level of noise is acceptable in outdoor amenity areas such as open spaces like the Stort Valley. British Standard BS8233 gives guidelines for outdoor amenity areas, such as gardens. However, there is no national planning policy requirement to design outdoor amenity spaces to the levels specified in BS8233. As such, the levels are not thresholds for outdoor amenity noise, rather they are an indication of the community response to noise. When planning for residential development, East Herts applies the lower level guideline value of 50dB $_{LAeq,T}$[7], however the BS8233 also includes an upper guideline value of 55dB $_{LAeq,T}$ as being acceptable in a higher noise environment, such as near strategic transport links.

12.5.31 Using these guidelines, this report considers the impact of the ESC on the surrounding environment against the principle that 50 dB is considered an acceptable noise level in outdoor amenity spaces. This is in line with the Design manual for Roads and Bridges 2019, which states that the LOAEL for a free-field environment is 50 dB and a SOAEL is 63 dB for the 16 hour day time period. Figure 27 below illustrates that along the proposed ESC route without mitigation, taking account of all developments completed by 2040 (all HGGT sites and 10,000 homes in the Gilston Area), the carriageway itself will experience noise of between 63 dB and 80 dB ($_{LAeq, 16h}$). However, this noise level decreases significantly almost immediately beyond the carriageway itself. All land around the proposed route will experience noise of between the LOAEL of 50 dB and SOAEL of 63 dB ($_{LAeq, 16h}$), this is against the background noise level experienced within the environs of the valley of 51 dB ($_{LAeq, 16h}$). This is considered an acceptable noise level for outdoor amenity areas; nonetheless, Officers recommend that at the detailed design stage details of the noise attenuation properties of the proposed

[7] LAeq,T means the ambient sound level over a given time interval

vehicle restraint system be required through Condition 12. Figure 28 overleaf shows the output of the noise modelling once mitigation is in place in the form of a noise barrier and low noise road surfacing in the vicinity of Terlings Park. The proposed mitigation considerably reduces the extent of land south of the noise barrier that exceeds the SOAEL, demonstrating an improvement against the background, without Gilston Area development scenario.

12.5.32 Where the open span bridge crosses the river and Navigation the proposal will need to ensure that the bridge parapets are designed to not only prevent noise from the road disturbing the relative tranquillity of the path below, but that visual disturbance from vehicles passing overhead is also prevented. It is currently proposed that a solid parapet is used, which with additional planting on either side of the Navigation to screen the abutments and columns of the bridge, will have the appearance of the bridge floating overhead. Figure 29 below extracted from the LVIA illustrates the visual appearance of the bridge over the towpath. There is a need to balance the visual impact of a solid structure with the need to prevent noise and disturbance to those passing under the bridges in the valley. Officers therefore recommend that further details are provided at the detailed engineering design stage which include a parapet and structure design that addresses these conflicting matters while ensuring that relevant structural standards are met for the safety of highway users of the bridge itself.

12.5.33 While there are a small number of properties in which the noise assessment identifies as properties that will experience an increase in noise which cannot be fully mitigated, the proposal does create some beneficial impacts through a reduction in noise for some locations and sensitive receptors. It is also noted that that the majority of these receptors already experience noise levels above 50dB, i.e. the level at which noise is considered as having an observed adverse effect, and other facades of these buildings may experience significant beneficial reductions in noise. It is noted that although none of these properties will exceed noise levels that are considered significant, they may be eligible for compensation under the Noise Insulation Regulations. These impacts arise as a result of the development of essential infrastructure that will serve a wider benefit in terms of enabling the

creation of new sustainable travel corridors linking the Gilston Area to the town centre and station, and also within Harlow itself. This would result in reduced congestion and changes in travel behaviour. This contribution towards enabling a shift to more active and sustainable forms of travel is considered to be a health and wellbeing and sustainability benefit that would outweigh the adverse effect arising from noise on a number of residential receptors.

Figure 27: Ambient road traffic noise level 2040

Noise receptors are marked in red

Figure 28: Effect of noise barrier and low noise surfacing at Terlings Park

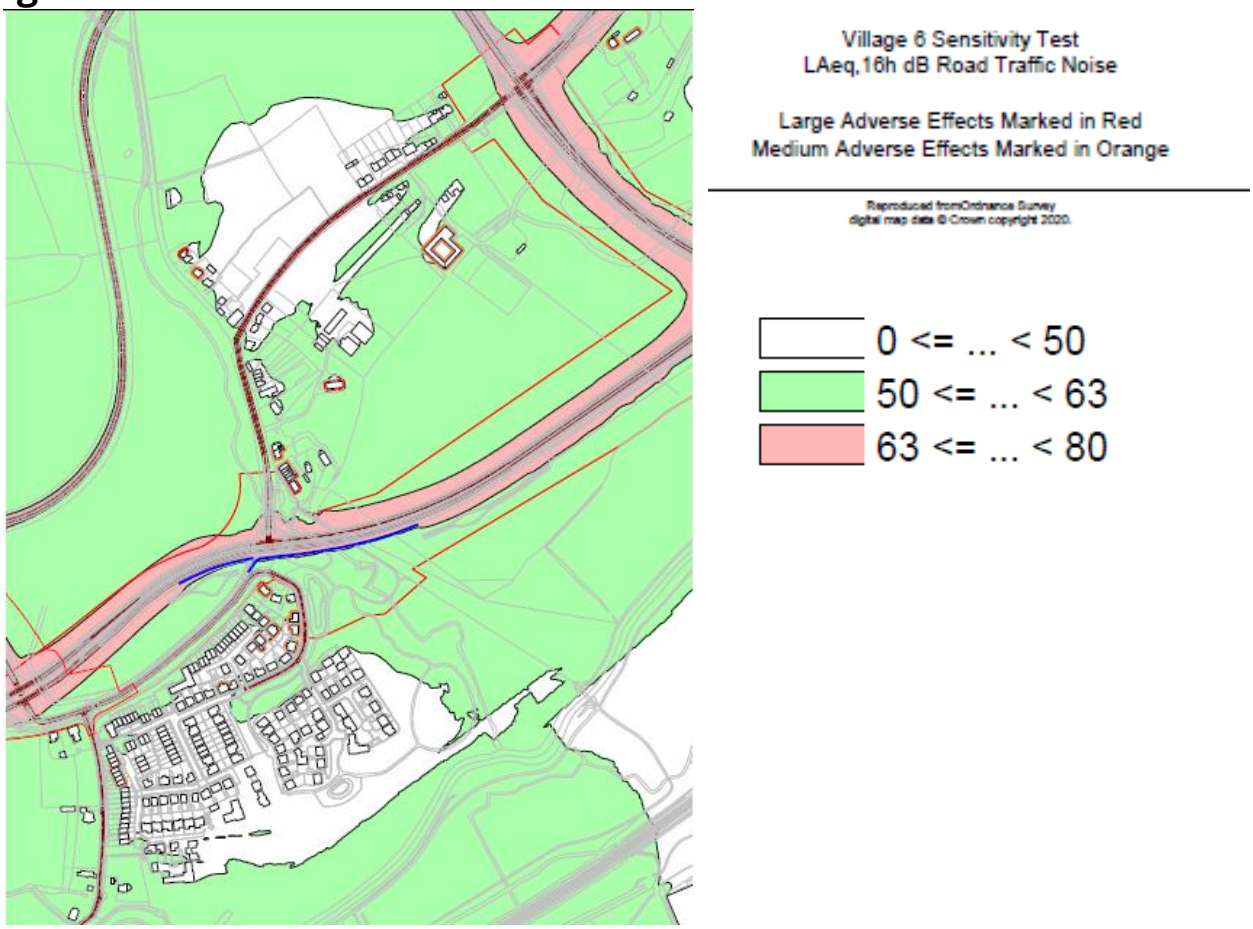


Figure 29: Illustration of view towards the ESC open span bridge

Air Quality

12.5.34 The ES indicates that the ESC proposal will not result in increases in pollution, and when considered cumulatively with the residential development within and around the area no significant air quality impacts were predicted. The crossing infrastructure, with other highway interventions will change the distribution of vehicle movements and will therefore change where pollution is likely to occur, but are not in themselves the source of the pollution. 78 receptor locations have been assessed for air quality through the use of dispersion modelling. These receptor locations are representative of existing and proposed properties where the effects from the development are likely to be greatest. The pollutants assessed were nitrogen dioxide (NO_2) and particulate matter (PM_{10} and $PM_{2.5}$). The years assessed were the current situation (2019), construction year, intermediate year 1 (2027), intermediate years 2A and 2B (2033) and completion year (2040). The with and without development scenarios were assessed in each of the future years where the development includes the Eastern Stort Crossing, Central Stort Crossing and Gilston Park Estate Village development. As such, the 2027 intermediate year does not include the ESC and only a small number of homes within the Gilston Area Villages 1-6 development.

12.5.35 The assessments undertaken for air quality take a conservative approach to modelling so that the predicted concentrations in the future are likely to be an overestimate of what will actually occur. Conservative assumptions were made in relation to the background concentrations which were assumed to remain at 2019 levels in the future and in relation to the vehicle emission rates in the construction year, intermediate year 2 of 2033 and completion year of 2040. In reality, with the latest Government announcements around the ban on sales of new diesel and petrol cars from 2030, the expected improvements in vehicle emissions should occur earlier and more quickly than previously projected by the Emission Factors Toolkit (the emissions guidance for undertaking air quality assessments), this is subject of course to Government investments in infrastructure to support this shift. The modelling takes full account of all known and planned developments within the area including Village 7, to address cumulative increases in traffic and other sources of emissions as well

as to consider the locations of new sensitive receptors such as residential properties.

12.5.36 In the baseline year of 2019, annual mean nitrogen dioxide concentrations exceeded the air quality criteria at The Hides, Velizy Avenue, Harlow, which is likely due to bus movements associated with the bus station. Velizy Avenue lies directly south of the CSC, providing the most direct route to the town centre of Harlow and is the route of the proposed North to Centre Sustainable Transport Corridor. One other location also currently exceeds air quality criteria in London Road, Sawbridgeworth which is already designated as an Air Quality Management Area. Concentrations at these locations and also all other receptor locations are predicted to be within the air quality criteria for nitrogen dioxide and particulate matter (PM_{10} and $PM_{2.5}$) in the intermediate year of 2033 and completion year of 2040, both with and without the development in operation. The improvements in air quality are mainly due to a cleaner vehicle fleet in future years.

12.5.37 The majority of receptor locations are predicted to have negligible impacts when the development is in operation in 2033 and 2040. Receptors where the impact is not negligible include a commercial property in Printers Way, Harlow, a receptor location in Sawbridgeworth AQMA, one property in Eastwick Road and The Hides in Velizy Avenue, Harlow. These receptor locations represent areas with the greatest impacts. However, concentrations at all of these locations will be within the air quality criteria for all pollutants. No significant effects are predicted due to the development being in operation.

12.5.38 During the construction stage, The Hides, Velizy Avenue receptor location is predicted to experience a small increase in NO_2 levels and because of existing NO_2 levels this is recorded as a major adverse effect. In order to mitigate this as far as possible, the Construction Traffic Management Plan will be required to set routes for construction vehicles that avoid this location; this will be secured by planning condition. All other receptor locations saw negligible changes for NO_2, PM_{10} and $PM_{2.5}$ projections during construction. No significant impacts are expected.

12.5.39 Hertfordshire County Council is in the process of preparing a Growth and Travel Plan for Sawbridgeworth and this plan recommends a number of schemes to improve vehicle flow and sustainable transport through the town. These schemes have not been modelled in the assessment accompanying the applications as this is a newly emerging strategy from the County Council. However, the objective of the strategy is to reduce congestion on London Road, thereby reducing air quality impacts arising from queueing and idling vehicles. Whilst this Plan is not yet material to this application, that there are emerging proposals being developed, is relevant when considering the wider transport network and the implications of the ESC within its wider geographical context.

12.5.40 The assessments use appropriate modelling tools and assumptions taking a precautionary approach. The models account for all known Local Plan development including Village 7, thereby ensuring the assessment is cumulative and comprehensive. Overall the Gilston Area applications (Outline, Central Stort Crossing and Eastern Stort Crossing) are expected to have no significant impacts on air quality.

12.5.41 During construction, there are a range of measures that can be employed to control dust and emissions generated thereby lessening the nuisance and human health impacts associated with dust and particulate matter that may arise from construction activities. Effective site management is necessary to successful prevention and mitigation. All potential dust-generating activities will be identified prior to the commencement of each phase of construction and will be managed at source through appropriate handling techniques, good maintenance and good housekeeping. Given the distance of residential properties from the site, the development will be expected to follow strict site management techniques included in the Code of Construction Practice submitted with the application. Conditions relating to construction environment management will ensure that appropriate standards are applied. It is considered that potential risks are identified and can be mitigated appropriately.

Light

12.5.42 This section considers the impact of light on human receptors and in terms of its design on the safe movement of vehicles, pedestrians and cyclists along the route of the ESC. The impact of lighting on the natural environment (habitats and species) is considered in paragraphs 12.6.28 to 12.6.31 below.

12.5.43 Lighting columns by their very nature will stand proud of any structure upon which they are placed. They will therefore be visible from a wider number of vantage points and the light they create will draw attention to the road and structure during darker hours. Towards the western end of the ESC, the current Eastwick Lodge roundabout is well lit in order to retain the safe operation of the roundabout. The proposed conversion of this roundabout to a four-arm signalised junction will create significantly more light than the roundabout. Not only will there need to be street lighting but also traffic signals and pedestrian signals. Similarly, at the Road 1/ Pye Corner junction new traffic signals will be installed and lighting columns needed to ensure the safe operation of the junction.

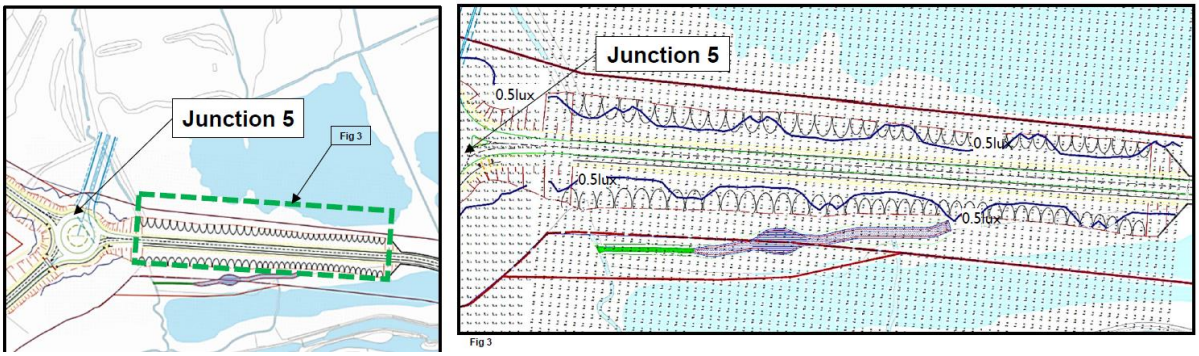
12.5.44 A Central and Eastern Stort Crossings Glare Assessment of the Central and Eastern Stort Crossing has been submitted with the amended proposal, which takes topography of the site into consideration. This assessment shows that with appropriate design the light spill beyond the edge of the carriageway will be minimal, and the distance from the Pye Corner junction to the residential properties combined with intervening landscaping ensures that there will be no direct impact on residential amenity as a result of the proposed lighting associated with Road 1.

12.5.45 The application commits to providing street lighting along Roads 2 and 3, including the culverted embankment and the open span bridge in the form of modern LED lanterns on new lighting columns with new low voltage electricity cabling throughout. LED lighting is considered to be ‘bat friendly’ as it can provide for directional lighting with a lower voltage, is low in energy consumption and has significantly extended periods between maintenance. All street lighting infrastructure will be compliant with the adopting authority’s specifications and will be

located for convenient access for maintenance purposes. All lighting units which illuminate road signs will be provided with LED lighting.

12.5.46 The lighting assessment describes how a lux level of 0.5 lux is the lighting level at which effects on ecology can occur. The assessment demonstrates through a series of plans showing the extent of the 0.5lux isoline from the potential light spill from the lighting columns (see Figure 30 below for an example). These plans demonstrate that minimal light spill can be achieved from all roads, including the culverted embankment, such that Hollingson Meads falls outside this extent and will not have adverse impacts from light spill. However, for the open span bridge section, in order to comply with new guidance, additional mitigation would be needed such as through the fitting of shields, louvres or baffles in order to contain light spill only within the carriageway.

Figure 30: 0.5lux Isoline on the culverted embankment of Road 3



12.5.47 High level lighting design principles are included within the Development Specification which commits to lighting strategies that will be designed with high efficiency luminaries to be directionally and energy efficient, to minimise adverse impacts on road users, the amenity of residents, neighbouring uses and the wider landscape through good design, which minimises potential glare, light spill/trespass and sky glow. The Development Specification applies to the Outline Village Development only and as such, Officers recommend that Condition 11 is applied that requires a lighting strategy to be submitted to inform the detailed engineering design stage in line with these principles.

12.5.48 In terms of construction, during winter months when daylight hours are reduced there will be a need for lighting to provide a safe working environment. The applicants will be required to submit detailed plans setting out how construction activity will be managed, which will include details of site lighting. The same principles as set out in the Development Specification will apply to site lighting during the period of construction, the details of which will be set out in the Construction Environment Management Plan required by condition.

12.5.49 The Environmental Statement submitted with the application demonstrates that adequate appraisals have been undertaken on the likely effects of the ESC proposal in terms of impacts associated with land contamination and pollution from air quality, noise and light during construction and when the crossing is operational. With appropriate codes of construction practice, monitoring and mitigation no likely significant effects are anticipated. A series of detailed conditions are proposed to ensure that details are submitted at the appropriate stages. The ESC is therefore considered to comply with the policies summarised above. However, as these mitigations will be secured by condition they are considered to have neutral weight.

12.6 Impact on the Natural Environment

12.6.1 Policies GA1 (The Gilston Area) and GA2 (The River Stort Crossings) of the East Herts District Plan 2018 support developments that enhance the natural environment, provide a comprehensive green infrastructure network and net biodiversity gains. Policy DES2 (Landscape Character) requires proposals to demonstrate how they conserve, enhance or strengthen the landscape character and be supported by a Landscape and Visual Impact Appraisal. Policy DES3 (Landscaping) requires proposals retain, protect and enhance existing landscape features, ensuring no net loss, and where losses are unavoidable and justified should be compensated for appropriately.

12.6.2 EHDP Policy NE1 (International, National and Locally Designated Nature Conservation Sites) states that development that adversely affects the integrity of a designated site will not be permitted unless it can be

demonstrated that there are material considerations that outweigh the harm. Policy NE2 (Sites or Features of Nature Conservation Interest (Non-Designated) recognises the importance of all non-designated assets and states that proposals should achieve a net gain to biodiversity. Policy NE3 (Species and Habitats) requires development to enhance biodiversity and to create opportunities for wildlife, protecting and enhancing habitats and avoiding impacts on species and habitats of principal importance for the purpose of conserving biodiversity as defined under section 41 of the Natural Environment and Rural Communities Act 2006 (or as amended). Policy NE4 (Green Infrastructure) states that proposals should avoid the loss, fragmentation or functionality of the green infrastructure network and to maximise opportunities for its enhancement, and should demonstrate how lighting will not adversely impact on green infrastructure that functions as nocturnal wildlife movement and foraging corridors. Policy CFLR1 (Open Space, Sport and Recreation) requires the loss of open spaces to be replaced with a suitable alternative.

12.6.3 EHDP Policy EQ2 (Noise Pollution) and EQ3 (Light Pollution) seek to avoid and minimise impacts on the environment from noise generating activities and from glare and light spillage. Policy EQ4 (Air Quality) states that all developments are to include measures to minimise then mitigate impacts on air quality during construction and operation.

12.6.4 Policy HGT1 (Development and Delivery of Garden Communities in the Harlow and Gilston Garden Town) of the Harlow Local Development Plan 2020 requires strategic development within the HGGT to protect or enhance natural and historic environments, green infrastructure and biodiversity. Policy WE1 (Strategic Green Infrastructure) requires the protection and enhancement of strategic green infrastructure, particularly relevant is reference to the intended future creation of a new linear 'Stort Riverpark.' Policy WE3 (General Strategy for Biodiversity and Geodiversity) sets the approach to development which may have an adverse impact on any internationally, nationally or locally designated sites of wildlife value similar to the East Herts policies. Policy PL7 (Trees and Hedgerows) sets the approach to protecting and replacing trees affected by development; minimising impacts and

mitigating where necessary. Policy PL8 (Green Infrastructure and Landscaping), Policy PL9 (Biodiversity and Geodiversity Assets), Policy WE1 (Strategic Green Infrastructure), Policy WE3 (General Strategy for Biodiversity and Geodiversity) and WE4 (Safeguarding Wildlife Sites Beyond the District Boundary) require development to contribute to and enhance biodiversity assets.

12.6.5 Gilston Area Neighbourhood Plan Policies AG1 (Promoting Sustainable Development in the Gilston Area) and AG2 (Creating a Connected Green Infrastructure Network) state that development should protect and enhance areas of ecological importance, minimising direct and indirect effects on natural landscape assets, to ensure suitable connections are created for wildlife, walking and cycling and to create new green spaces and habitats to achieve a net gain in biodiversity. Policy AG3 requires development in the Stort Valley to protect the rural setting and wetland environment and open views of the valley. Policy AG5 (Respecting Areas of Local Significance) acknowledges and permits in exceptional circumstances development needed for strategic infrastructure required for the Gilston Area. Policy AG8 (Minimising the Impact of Traffic and New Transport Infrastructure on Existing Communities) specifically seeks that the new bridge infrastructure proposals must minimise impacts on the character and environment of the River Stort, including potential noise, visual and pollution impacts. Policy TRA2 (Access to the Countryside) requires that connections to strategic green infrastructure such as the River Stort should minimise environmental impacts such as noise and light pollution.

12.6.6 Paragraphs 174 to 182 of the NPPF 2021 relate to the consideration of development proposals in the context of conserving and enhancing the natural environment. Key principles include protecting and enhancing sites of nature conservation importance in a manner commensurate to its designation, avoiding harm, mitigating impacts and as a last resort, compensating for harmful impacts.

The Stort Valley Habitats

12.6.7 The River Stort and its functional floodplain is one of the best and most extensive functioning floodplains in Hertfordshire and the floodplain

itself has high habitat value. The proposal crosses two branches of the River Stort, where the river has been diverted to form the Stort Navigation and the main river into which multiple tributaries flow. The site's sensitivity also relates to its connections to a variety of local wildlife sites and the Hunsdon Mead, Amwell Quarry and Rye Meads SSSIs downstream of the site. There is a series of statutory designated sites and undesignated sites of ecological value along the River Stort, including Rye Meads SSSI, Fiddlers' Brook Marsh, Maymead Marsh/ Honeymead Marsh, Harlow Marsh and Pishiobury Park LNRs. North of Sawbridgeworth to Bishop's Stortford are a further three river corridor SSSIs.

12.6.8 The River Stort runs into the River Lea where there are a number of sites designated for their international importance. The Lee Valley Special Protection Area is comprised of four separate SSSIs (Amwell Quarry, Rye Meads, Turnford and Cheshunt Pits and Walthamstow reservoirs). The SSSIs closest to the site are Amwell Quarry and Rye Meads, 2.5km downstream of the River Stort. As such, at the pre-app stage impacts on the SPA were not considered likely due to the distance and lack of likely impact pathways between the application site and the SPAs.

Habitat Regulations Assessment

12.6.9 Following recent case law, Natural England required the submission of a Habitat Regulations Assessment to ensure the proposal has been appropriately assessed for its potential impacts on internationally designated sites for nature conservation beyond the site (namely Epping Forest SPA, Lea Valley SPA and Wormley and Hoddesdon Park Woods SAC and Epping Forest SAC) in terms of air quality, recreational impacts, water quality and water abstraction effects.

12.6.10 The Habitats Regulations (2010 and 2017) originally implemented appropriate assessment requirements under Article 6(3) of the Habitats Directive (92/43/EEC) for development (plans or projects) that are likely to significantly affect EU protected habitats and species implemented. The regulations have become part of retained EU law with limited amendments to recognise the UK has left the EU whilst ensuring that

they remain legally operative. The Regulations do not set out a specific methodology; rather they place obligations on the competent authority (i.e. a local planning authority) and the developer which are fulfilled by a four stage process involving:

a. *Stage 1: Screening* – to identify the likely impacts of a project on a relevant protected European site, either alone or in combination with other plans and projects. Case law has determined that at this stage mitigation measures should not be considered in determining whether it is necessary to carry out an appropriate assessment of the impact of a proposed plan or project on a protected site.

b. *Stage 2: Appropriate Assessment* – The authority considers the impacts on the integrity of a protected site, either alone or in combination with other plans and projects, with regard to the site's structure, function and its conservation objectives. Where there are adverse impacts, an assessment of mitigation options is undertaken to determine the adverse effect on the integrity of the site. If at this stage adverse effects cannot be mitigated, then the third stage follows.

c. *Stage 3: Assessment of alternative solutions* - the authority is required to assess alternative ways of achieving the objectives of the project to establish whether there are solutions that would avoid, or have a lesser effect on protected European site.

d. *Stage 4: Imperative reasons of overriding public interest (IROPI)* - If the authority assesses that no alternative solution exists and adverse impacts remain an IROPI assessment must be undertaken.

12.6.11 The Habitat Regulations Assessment considered the effects of the Development as a whole (including the outline Villages 1-6 application and the two river crossing proposals) in the absence of mitigation and identified that the development would have the potential, during its operational phase, to cause the following biophysical changes, which could result in ecological effects on international sites (Lee Valley SPA and Ramsar site, Wormley-Hoddesdon Park SAC and Epping Forest SAC:

- recreational pressure arising from increased visitation of publicly accessible sites;
- air quality changes arising from traffic generated by the proposed development; and
- changes in water quality or quantity.

12.6.12 The Habitat Regulations Assessment considered the effects of the Development as a whole against these potential impacts both in the absence of mitigation and once the proposed mitigation is in place, and demonstrated that no likely significant effects were anticipated on these sites of international importance due to distance and absence of viable impact pathways even without mitigation, and due to the range of mitigation to be delivered on site (replacement habitats, floodplain and accessible natural greenspace).

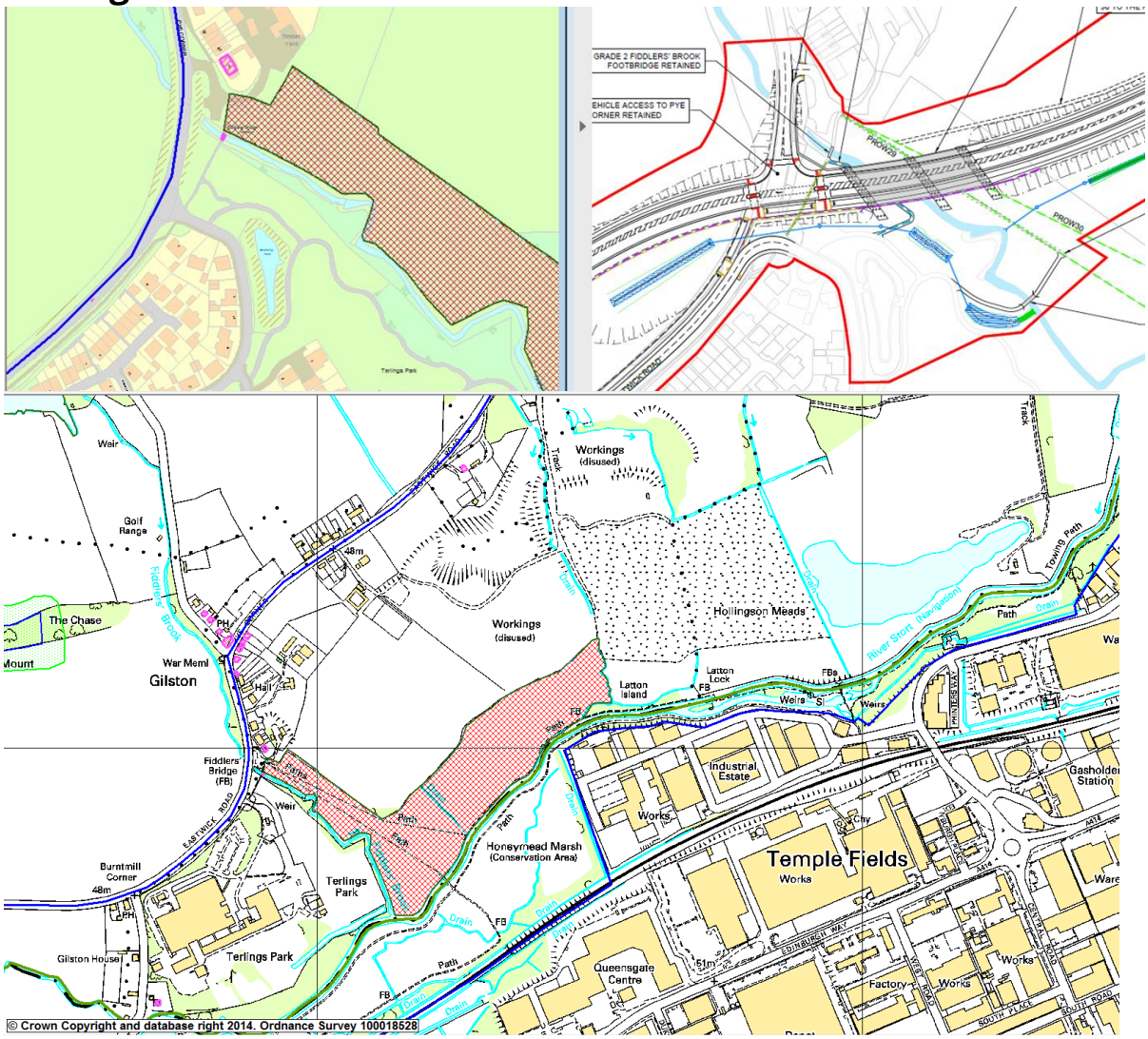
Ecology and Biodiversity

12.6.13 Despite the proximity of Harlow to the immediate south of the Stort Valley, the northern edge of which is predominantly industrial in nature, the valley largely retains its integrity as a continuous feature, at least on its northern side. The recent redevelopment of the Terlings Park estate has somewhat compromised the undeveloped integrity of the wider river valley north of the river and Stort Navigation, disrupting the east-west corridor. The presence of the ESC combined with the Terlings Park estate will have the effect of narrowing the riparian part of the valley, albeit that the floodplain functionality of the valley will be retained through the culverted design of part of Road 3.

12.6.14 The section of Road 1 west of Pye Corner crosses a strip of arable land of limited ecological value. The proposed new landscaped area between the newly aligned road and the existing Eastwick Road will have some ecological benefit locally and will assist in providing a continual east-west corridor within the wider valley, the extent of which will be determined by the final details of the landscaping and its management which will be secured via Condition 34.

12.6.15 The route of the ESC Road 1 east of Terlings Park crosses the Fiddlers' Brook Marsh, Hollingson Mead LWS, partly as a bridge structure and partly on a raised embankment as shown in Figure 31 below. Hertfordshire County Council's Environmental Resource and Protection Team and Essex County Council were consulted on the proposals. The LWS comprises grassland seeded as part of the landfill restoration programme and is therefore considered to have relatively low ecological value.

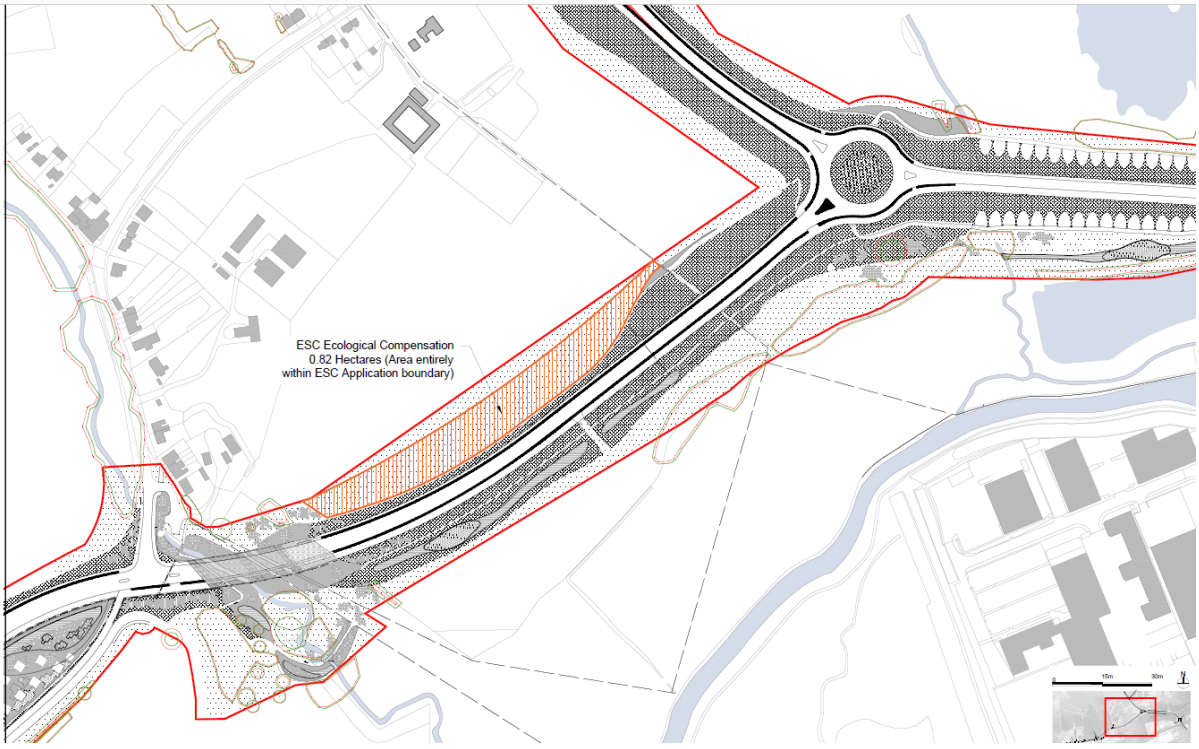
Figure 31: Eastern Stort Crossing over Fiddlers' Brook Marsh, Hollingson Meads Local Wildlife Site



12.6.16 There are material considerations that require the road alignment in this location which makes the complete avoidance of impact on the LWS impossible. However, the scale of the impact has been reduced as far as possible, and suitable compensatory features are proposed in

order to off-set the impacts of the bridge and road structure as well as part of Road 3. The ES states: 'To compensate for the loss of approximately 0.82 ha of rank, species-poor grassland and nettle/thistle patches of the Fiddlers' Brook Marsh LWS associated with construction of the Eastern Stort Crossing, an area of species-rich grassland will be created as part of the floodplain grassland restoration/creation proposals' (see Figure 32 below). This mitigation will achieve a positive score of 6.68 Biodiversity Units, which represents a net gain of 9.3%.

Figure 32: ESC Ecological Compensation Area for Fiddlers' Brook Marsh/ Hollingson Meads LWS



12.6.17 East of Pye Corner the ESC proposal affects a small section of the former Terlings Parkland associated with its former use, now an open space associated with the residential development. As has already been considered in paragraph 12.2.23 this area is designated as an open space under Policy CFLR1 (Open Space, Sport and Recreation) in the East Herts District Plan. The extent of the adjacent LWS is also

designated as a Local Green Space in the Gilston Area Neighbourhood Plan Policy AG5 (Respecting Areas of Local Significance). This Policy acknowledges, and permits in exceptional circumstances, development needed for strategic infrastructure required for the Gilston Area. In order to construct the Fiddlers' Brook road bridge a number of trees of amenity and ecological value are to be removed. However, the proposed landscape strategy for this location proposes to replace the lost trees with a greater number of specimens than removed, which over time will have a greater ecological benefit than the trees removed, particularly when considering that one of these mature oaks proposed to be lost is already badly fire damaged with a significantly reduced crown as a result.

12.6.18 Road 1 east of Pye Corner, Road 2 and the central roundabout are located within restored grassland habitat. Due to its history, restoration and subsequent management, this open dry grassland area is considered to be of more limited habitat significance, and being raised from the former level of the valley is no longer a contiguous part of the floodplain corridor from an ecological perspective, though it is capable of supporting some bird species.

12.6.19 Continuing eastwards, the ESC runs through an area comprising a more ecologically valuable habitat mosaic of scrub, swamp, poor semi-improved grassland and standing water, all of which are associated with the former Hollingson Meads gravel quarry workings and restoration. Road 3 effectively runs through the middle of Hollingson Meads, largely between two water bodies. This is the section that comprises the culverted embankment which is circa 25 metres in width at its widest part. The culvert design is essentially a pseudo-viaduct which will allow physical ecological and hydrological permeability through the structure.

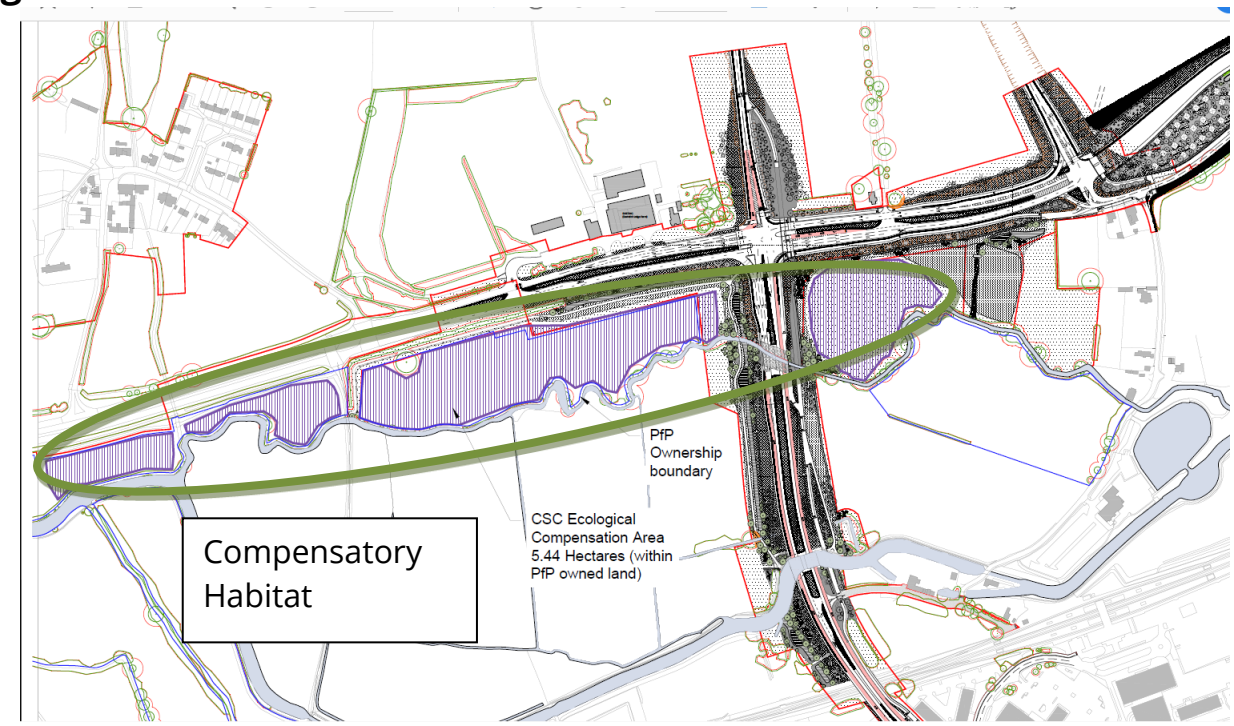
12.6.20 However, despite the design intention of enabling naturalisation on the embankment, the structure results in the loss of riparian habitat that should be compensated for, particularly where this impacts on land for ground nesting birds. To compensate for this loss an area of land (5.44Ha) is identified to the west of the CSC where the current grassland will be converted into a semi-improved neutral grassland/

swamp and wetland habitat (see Figure 33 below). This land has been combined with the compensatory habitat required to mitigate the CSC proposal, as one contiguous area of land will have a better functionality than a number of fragmented pockets of habitat improvements within the valley environment. This land will be subject to a management plan (secured by condition) to ensure that the land is maintained in a way that is compatible with any 'riverside park' proposals that may come forward in the future.

12.6.21 Similarly, the open span bridge section of the ESC crosses two open waterbodies, the River Stort and Stort Navigation. Here the bridge has minimal impact on the habitats beneath except during construction when there will be temporary works to enable the construction of the pier foundations. Inevitably the bridge structure will create a level of shading on the valley floor that does not currently exist, but the orientation and height of the bridge will reduce some of this impact.

12.6.22 In terms of the impact on trees, a detailed Arboricultural Impact Assessment (AIA) was submitted with the application to determine the impact on these trees. The AIA surveyed 152 trees, woodland groups and hedgerows, classifying them against standard categories to determine their relative retentive worth. Category A trees are of high quality that are particularly good examples of their species, with particular visual, conservation or historical importance; Category B trees are of moderate quality that have an impaired condition, that have a higher collective rating as part of a group rather than individual or have material conservation or other cultural value; Category C trees are of low quality with a low life expectancy or are young, being unremarkable or with impaired condition, offering low or temporary landscape merits or with no material conservation or other cultural value; and Category U trees are unsuitable for retention such that they cannot realistically be retained as living trees, often with a serious, irremediable structural defect, are dead or dying or with infections that may harm the health and or safety of other trees nearby.

Figure 33: Habitat Compensation Area Combined with CSC Mitigation



12.6.23 24 trees and 26 groups have been identified for complete removal and 13 groups, one woodland and two hedgerows are identified for partial removal to facilitate the development of the ESC. None of the standalone trees are category A, 3 trees are category B and 21 trees are category C. Within the groups of trees identified for complete or partial removal, there are an estimated 163 individual and one group of moderate quality trees, and 264 individual and seven groups of low quality trees. A further 748 specimens either standalone trees, or within groups or hedgerows are to be retained. Please note that due to limitations on survey methods available at the time these figures represent upper estimates rather than an accurate count. The majority of category B trees in groups have been scored as moderate quality for their landscape contribution value in their role of screening views of the road rather than because of the individual arboricultural merits of the trees.

12.6.24 Where trees are able to be retained they will be protected during construction using approved methods in line with British Standards. To compensate for the trees and scrub that are unavoidably lost to accommodate the works these will be replaced with suitable species,

with an overall increase in the number of trees. Opportunities will be taken to remove invasive species and replace them with more suitable plant species to introduce diversity which will support mammals like Otter and Water Vole (discussed further below). A comprehensive, but preliminary landscape strategy has been submitted, setting out proposals for informal groups of replacement trees adjacent to the highway, together with riparian woodland trees and scrub adjacent to the River Stort and around the new carriageway, with large species at specific locations. Planting is designed to be incorporated with existing retained trees. The landscape strategy indicates that approximately 1,840 trees (semi-mature to feathered trees) will be planted along with approximately 3,540 linear metres of hedgerow (mixed native hedge planting). Further details of specific species and the planting regime will be required through condition. The proposed mitigation is considered suitable and sufficient to ensure that there is no overall harm to the nature conservation of the Stort Valley habitats. Figures 34, 35 and 36 below, show only the proposed tree and hedgerow planting proposed. They are not intended to show the whole detail, but to give an indication of the extent of planting proposed for the purpose of this report.

Figure 34: Tree and Hedgerow Planting Road 1

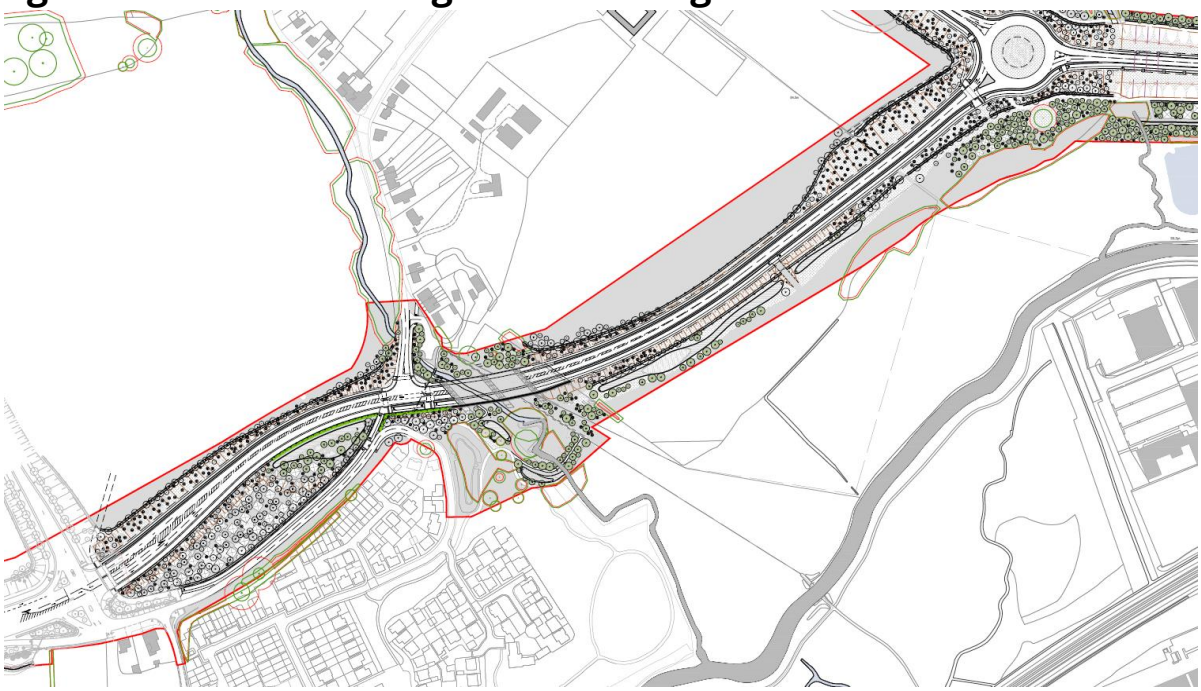


Figure 35: Tree and Hedgerow Planting Road 2 and 3

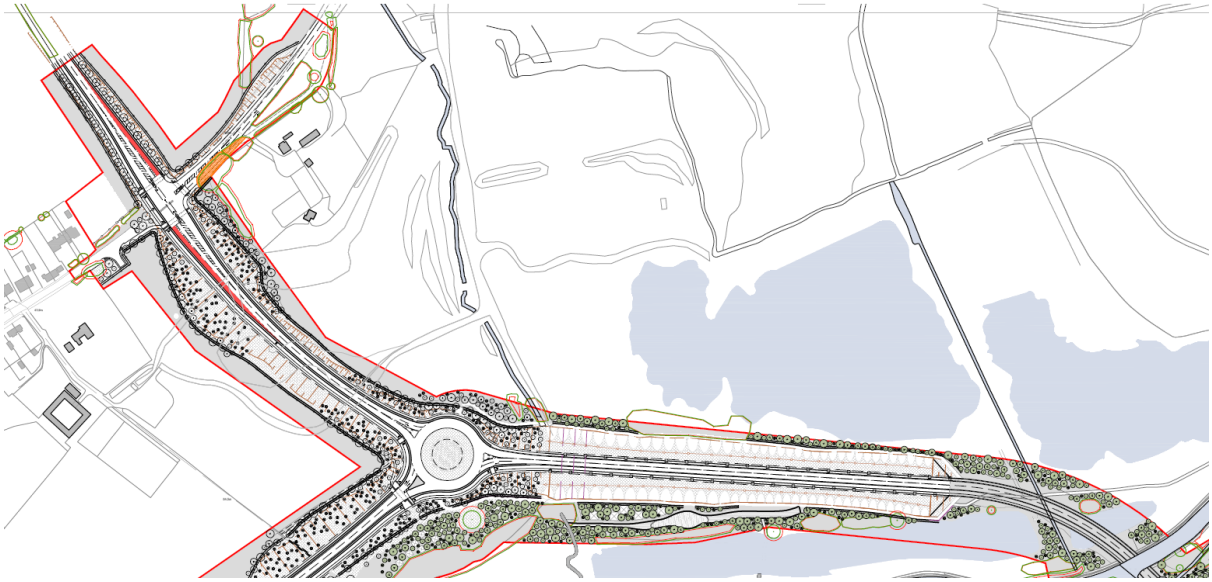
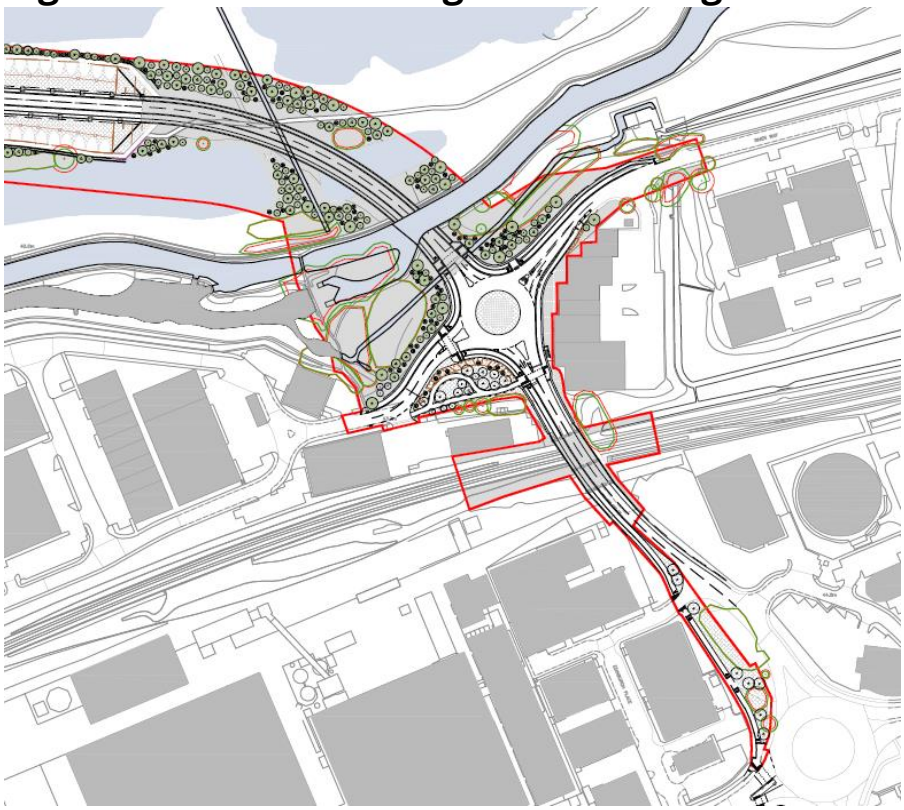


Figure 36: Tree and Hedgerow Planting Road 3 and River Way



12.6.25 Where the eastern-most end of the crossing joins the urban area of River Way, the route cuts through a narrow area of semi-natural broadleaved woodland and scrub of varying maturity and requires the removal of a number of trees to enable the widening of the highway to create the new roundabout. While the number of trees lost will be small, because of the size of their crowns, this represents a significant

proportion of tree cover locally. This is considered to fragment the fringe of river habitat corridor, creating a break in ecological continuity and introducing artificial lighting into an area that has previously been largely screened from the urban area by virtue of the trees.

12.6.26 However, to mitigate the loss of the landscaping and in order to lessen the visual and physical impact of the River Way roundabout, the landscape strategy proposes the planting of a large number of small trees and shrubs as well as large landmark species on the northern, western and eastern arms of the roundabout. As shown in the Figure 36 above, the majority of tree groups are retained and protected in the vicinity of the bridge structure, both within the urban fringe and in the valley beyond. The south-eastern edge of the carriageway is currently, and will remain, close to the existing buildings, which prevents the planting of large species; so instead new ornamental shrub planting and groundcover plants are proposed. Over time the new planting will soften this gateway into Harlow as will new landscaping along the western side of River Way as part of the creation of a widened segregated cycleway and footpath.

Species Impacts

12.6.27 Comprehensive surveys were undertaken prior to the submission of the application which assessed the types of habitats and species likely to be affected by the proposal; the results of which are summarised below. However, due to constraints over access to land in the Hollingson Meads area, detailed site surveys were not possible. Instead, the Applicant undertook visual surveys from accessible areas of land combined with desk-top evaluations using the Hertfordshire Biodiversity Records Centre and Essex Ecological Service Ltd. to establish the type of habitats and species that are likely to be present, and the ES assesses the impact and describes the types of mitigation that will be required assuming that such species are indeed present. Up to date surveys will be required via Condition 33 prior to the commencement of each phase of the development to confirm the presence of notable species and habitats and to agree appropriate mitigation as required.

12.6.28 Where Road 1 moves eastwards over Fiddlers' Brook and beyond, the ESC will introduce new lighting into areas currently devoid of artificial light. While there will be limited adverse effects on residential amenity given the distance of the lighting from properties there will be some impacts on the natural environment. The Stort Valley corridor is home to a number of bats (Serotine, Pipistrelle, Noctules, Barbastelle and Daubenton's Bats) for whom the valley is an important commuting and foraging route. The ESC is likely to disrupt these commuting and foraging routes where the open span bridge crosses the valley.

12.6.29 Artificial lighting at night has a range of impacts on some mammal species and in particular on bats of different types. For example, lighting may repel light-averse bats restricting their use of commuting or feeding space by forming visual barriers; for smaller more manoeuvrable bats, street lamps may attract insects which they feed on, changing their natural foraging behaviour. Artificial lighting at night can also have negative impacts on the natural behaviour of other nocturnal mammals like badgers.

12.6.30 It is therefore important that when determining the approach to lighting that all opportunities are taken to reduce light spill and sky glow. In the case of the ESC proposal, the approach to lighting will be a matter controlled via Condition 11 in consultation with the planning and highway authorities. However, as has been previously set out (paragraphs 12.5.42 to 12.5.46] the lighting assessment describes how a lux level of 0.5 lux is the lighting level at which effects on ecology can occur. The assessment demonstrates through a series of plans showing the extent of the 0.5 lux isoline from the lighting columns. These plans demonstrate that minimal light spill can be achieved from all roads, including the culverted embankment, thereby preventing any detrimental impacts on species within Hollingson Meads. However, for the open span bridge section, in order to comply with new guidance, additional mitigation would be needed such as through the fitting of shields, louvres or baffles in order to contain light spill only within the carriageway.

12.6.31 Principles are contained in the Development Specification (that will be applied through condition on this application) that seek to ensure that future lighting for the development will reduce impacts on biodiversity as well as to ensure the safety and amenity of all users and properties and these principles are supported. However, the lighting assessment undertaken to inform the Environmental Impact Assessment demonstrates that whilst the impact of introducing new lighting into this environment can be minimised through innovative design, it still introduces new lighting into an area currently devoid of light. This therefore carries negative weight in the planning balance, the actual weight to be given being a matter for the committee.

12.6.32 In terms of mammals, no Dormice have been recorded and no Badger sett has been identified in the vicinity of the application area. However, because mammals are mobile in nature, it will be necessary to undertake up to date surveys prior to commencement of construction and enabling works, and if necessary, further appropriate mitigation measures will be determined in consultation with the Local Planning Authority to ensure that not only are no offences committed but that changes to construction management plans can be made if required.

12.6.33 The River Stort has the potential to support otters and water voles, though the species surveys undertaken showed no evidence of their presence in the areas affected by the ESC. Otters are a reasonably sensitive species that require appropriate habitat to enable a population to be sustained. There have been a number of otter reintroduction programmes in the Stort Valley in recent years, so the absence of them within the surveys does not mean that they and water voles are not present in the valley, just that evidence was not identified during the surveys, and therefore, opportunities to enhance their habitat within the valley should be taken where possible, particularly given that the introduction of the road network with its lighting and general disturbance are considered to have a negative impact on the habitats and particular mammal species.

12.6.34 In respect of birds, the Stort floodplain is considered to be a habitat of local importance for supporting breeding, foraging and over-wintering of birds. The route of the ESC passes through part of Hollingson Meads

where the gravel pits currently support Lapwing assemblages. Not only does the culvert embankment section of Road 3 remove habitat area, the addition of this structure will have a further detrimental impact on Lapwing as they require a large field of view to detect predators. However, the application identifies an area within which habitat enhancements will be made that will provide alternative wetland environments to support these species (as shown in Figure 27 above). This provision along with an Ecological Management Plan will be secured via Condition 35. Officers also recommend Condition 33 which provides for further mitigation for birds and bat species in the form of roosts and boxes to be provided as part of the design for the open span bridge section of Road 3.

12.6.35 Due to restrictions over access there has been a limit on the extent of species and habitat surveys within Hollingson Mead, which will undoubtedly experience the most physical impacts. In terms of reptiles, low populations of three reptiles have been recorded, including grass snake. In terms of invertebrates, assemblages of dragonflies associated with the Stort are considered to be of local importance while Desmoulins whorl snail is present in the valley which is of regional importance, but has been recorded only within the Maymead Marsh LNR to the south of the river and Parndon Moat Marsh LNR further downstream.

12.6.36 Aquatic Invertebrate Surveys and fish surveys undertaken of the river within the site indicate little or no invertebrate conservation interest despite water quality being generally good, suggesting that habitat diversity may be a limiting factor, therefore proposed enhancements which include diversifying bankside habitats are supported. Fish surveys identified limited species, reflecting the limited invertebrate variety, but did identify the presence of Bullhead which is a species cited in the Habitats Directive for protection. Proposed Codes of Construction Practice will ensure that no impacts to water quality will occur, so no impacts are anticipated on the protected Bullhead.

12.6.37 The absence of surveys on the habitat likely to be most suitable for reptiles and invertebrates (i.e. the wetland and open water bodies) means it is not yet fully clear what type of management will be required

during construction and what type of mitigation may be needed, if any, over and above what is proposed. This is not to say that the proposed mitigation is not considered suitable, but there may be some species-specific measures that could be applied to make the mitigation more effective or to provide enhancements. Therefore, there is a need to update all habitat and species surveys prior to works commencing on the ESC in order to ensure that the proposed mitigation remains relevant or needs to be refined for any particular location of species. This will also need to inform the proposed management strategy of habitats created within the valley.

Human Disturbance Impacts

12.6.38 The ES assessments consider that traffic noise associated with the ESC proposal will not cause any effect on birds and mammals. However, during the period of construction, noise, vibration and lighting has the potential to negatively affect ground nesting birds, mammals and bats, dissuading roosting, foraging and commuting in habitats close to construction areas. The probability and magnitude of any effects will vary on the particular activity, time of year and time at which the work is completed. Such activities are likely to be short term in localised areas, and construction related disturbance would be expected to predominantly occur during daylight hours when bats and nocturnal mammals would not be foraging or commuting. However, due to the need for security lighting and the occasional period of night time works there is the potential for lighting and noise to disturb sensitive species albeit with measures taken to minimise such impacts through Codes of Construction Practice required through the Construction Environment Management Plan condition.

12.6.39 The use of larger section steel culverts has enabled the culverted embankment to achieve a sufficient height above the valley floor resulting in reduced noise impacts on species within the valley below. Mammal species typically impacted by human disturbance tend to be nocturnal, and as levels of vehicle movements will be considerably lower at night, disturbance should be minimised. However, Officers recommend that at the detailed engineering design stage, proposals are submitted for parapets and vehicle restraint systems that provide

noise attenuation whilst retaining an open appearance affording long views over the valley.

12.6.40 There are no additional footpaths proposed through the Stort Valley as a result of the ESC east of Terlings Park. However, the roads themselves will increase the presence of humans using the footpath and cycleway along the road overlooking the site, which in addition to the movement of vehicles, will introduce disturbance through the site. A key objective of the crossing proposal is to facilitate pedestrian and cycle movements, and as such a five metre segregated cycle and footway is provided along the entire southern edge of Road 3, facing the valley. It is therefore anticipated that there will be more walkers using the footpaths for commuting and leisure purposes and some of these my use the PRoWs heading south across the valley. It is therefore necessary that the Ecological Management Plan submitted through conditions and any future Riverside Park proposal will need to demonstrate that recreational use of the area is managed to avoid conflict with the objective of providing replacement habitat for ground nesting birds.

12.6.41 The greatest impacts arising from the development will occur during construction. Species surveys will need to be updated prior to commencement on site, to identify any species-specific measures required so they can be factored in to phasing and construction plans. Officers recommend a number of conditions relating to the provision of updated ecological surveys in order to inform construction management strategies.

12.6.42 The Habitats Regulations prohibit the deliberate capture, killing or disturbance of European Protected Species (EPS), which include *inter alia* Dormouse *Muscardinus avellanarius,* Great Crested Newt *Triturus cristatus,* Otter *Lutra lutra* and all native species of bat, and make it an offence to destroy or damage either the nesting or breeding sites of these species. Where the prohibitions in the Habitat Regulations will be offended against, for example where bats that are European Protected Species will be disturbed by the development, the Local Planning Authority is obliged to consider the Habitat Regulation tests and the likelihood of a licence being issued by Natural England and the “three

tests" under the Regulations being satisfied. Therefore, certain impacts can in certain circumstances be made lawful through the granting of licenses, provided that Natural England is satisfied that the following three tests are satisfied before issuing licenses covering a European Protected Species:

- The proposal is necessary to preserve public health or public safety, or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment;
- There is no satisfactory alternative; and
- The proposal will have no detrimental effect to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.

12.6.43 These three tests provide a legal benchmark for consideration in the determination of the application. As has been discussed in this report, the ESC is an item of essential transport infrastructure identified in two development plans, in a location for which there is no satisfactory alternative. The proposed ESC is considered to provide imperative reasons of overriding public interest being overriding public benefits of a social and economic nature in terms of unlocking the delivery of the Gilston Area strategic allocation of 10,000 homes and enabling the creation of a sustainable transport corridor which supports the growth and sustainable transport objectives of the HGGT. This report has throughout detailed the overriding public interest in providing a substantial number of homes in accordance with policy allocations and the growth to be enabled by sustainable transport corridors which will be enabled by the ESC scheme.

12.6.44 EHDP Policy NE3 (VI) states that where adverse impacts are unavoidable, appropriate mitigation and compensation measures must be employed, commensurate to the importance, legal protection or other status of the species or habitat. The submitted surveys indicate that no evidence of protected species have been found in the areas of land directly affected by the ESC proposal, but the proposal does include design measures to address and minimise impacts on bats within the valley. Nonetheless, a number of conditions are

recommended that will require that updated habitat and species surveys be undertaken prior to the commencement of the ESC development, which will inform updated habitat protection and enhancement strategies that will be expected to outline updated mitigation measures where necessary. This may include seeking licenses to relocate species if found along with measures to minimise disturbance from human activities, such as ensuring that walkers are directed to, or even restricted to, routes that prevent disturbance to flora and fauna within the valley that are sensitive to disturbance of this kind.

12.6.45 Given that compensatory habitats are to be created to replace habitats lost or impacted by the proposal and that mitigation measures are proposed that will be secured via Conditions 34 and 35, the ES considers there will be no likely significant effects on locally or statutory habitat designations within or adjacent to the application site. Officers are content that compensatory measures have been applied as a last resort, with the design of the scheme having achieved avoidance and mitigation in preference where feasible. With an agreed approach to mitigation the loss of habitat will be replaced with suitable compensatory habitat in line with the provisions of policies as summarised above and therefore this is considered to be of neutral weight.

Biodiversity Net Gain

12.6.46 EHDP Policy NE3 (Species and Habitats) requires the use of a locally approved Biodiversity Impact Assessment Calculator, or Metric, in order to assess the impact of a proposal. When the assessment was undertaken DEFRA's own metric 2 had been withdrawn and the DEFRA metric 3 was not yet available. As such the applicants used a model developed by Warwickshire, Coventry and Solihul Councils. The Warwickshire model is a nationally recognised and DEFRA approved calculator. Essentially, the model is available for experts to use and was considered an appropriate calculator for assigning a score to a type of habitat and its quality. Once you assess the baseline score, i.e. the current situation, the ecologist looks at the proposed landscaping strategy or biodiversity strategy and works out the score of the

proposed new environment. The difference between the current and the proposed is the Biodiversity Net Gain or Net Loss.

12.6.47 When using a biodiversity metric, replacing one highly scoring habitat with another adds little benefit in terms of the calculator. However, replacing a poorly scoring habitat with a highly scoring one is clearly going to achieve a greater gain in biodiversity metric units. As much of the Stort Valley is already subject to designations of local or national importance, the enhancements achieved within the valley itself are limited in terms of their ability to contribute towards a biodiversity net gain that needs to be achieved across the site as a whole, including the Outline and Central Stort Crossing applications. Notwithstanding this, the proposed ecological mitigation provided as part of the ESC proposal as shown at Figure 31 above provides 6.68 Biodiversity Units which represents a 9.93% increase above the existing metric score. Furthermore, the additional 5.44Ha to be provided alongside the CSC mitigation (as shown in Figure 32) will provide yet more ecological benefit within the valley environment. However, as this is beyond the red line area of the application and will be secured via Condition 35 it is not included within the application area as a net gain.

12.6.48 There is no current policy or legal requirement that requires a 10% net gain. This is an objective of the emerging Environment Bill, but this is not expected to be on the statute book until late 2023 at current estimates. Notwithstanding this, in terms of the overall development (the two river crossings and the residential Villages 1-6 proposal), the submitted ecological strategy proposes to collectively deliver a Biodiversity Net Gain of between 25 and 30% and a biodiversity net gain is achieved within the river valley itself associated with the ESC proposal. This complies with policies as summarised above and is given positive weight. Biodiversity mitigation in line with existing relevant policies and any net gain offered by the applicants in connection with this scheme is to be secured via Conditions 34 and 35.

12.7 Impact on the Historic Environment

12.7.1 Policy HA1 (Designated Heritage Assets) of the East Herts District Plan seeks the preservation and enhancement where possible of designated heritage assets; harm should be avoided or where unavoidable the proposal must demonstrate that substantial benefits outweigh that harm or loss. Policy HA2 (Non-Designated Heritage Assets) considers the impacts on non-designated assets on a proportionate basis commensurate to the significance of the asset. Policy HA3 (Archaeology) requires appropriate assessments to be undertaken to assess the potential for archaeological assets and to undertake appropriate excavation and recording in advance of development.

12.7.2 Policy HGT1 (Development and Delivery of Garden Communities in the Harlow and Gilston Garden Town) of the Harlow Local Development Plan requires the submission of information relating to heritage assets in the form of a Heritage Impact Assessment; applications are to be designed to avoid any harm and to mitigate impacts when they are unavoidable. Policy WE5 (Heritage) seeks the conservation or enhancement of heritage assets. Policy PL12 (Heritage Assets and their Settings) considers proposals against their impact on heritage assets and their setting, requires the submission of a Heritage Statement and for areas of archaeological interest requires desk-based or field evaluation to be undertaken and submitted.

12.7.3 Policy AG1 (Promoting Sustainable Development in the Gilston Area) of the Gilston Area Neighbourhood Plan seeks the protection and, where possible, the enhancement of heritage assets. Policy H1 (Celebrating Heritage Assets) seeks the conservation and celebration of heritage assets, primarily related to designated and non-designated buildings, memorials, scheduled monuments and landscape features and boundaries associated with former uses. The policy seeks to ensure that public appreciation and understanding of heritage assets are promoted through development.

12.7.4 Paragraphs 194 to 208 (section 16) of the NPPF 2021 relate to the consideration of development proposals in the context of conserving and enhancing the historic environment. Key principles relevant to the ESC proposal include the requirement to assess the significance of any heritage assets affected, any harm to the significance of those assets,

and whether those harms are substantial or less than substantial. Where harm is less than substantial, this harm should be weighed against the public benefit of the proposal.

12.7.5 Fiddlers' Brook Footbridge is a Grade II Listed Building. A separate application for Listed Building Consent has been applied for (3/19/1049/LBC) to replace the balustrade with a design akin to the description of the listing as well as to undertake repairs to the pointing. The bridge will remain in situ as a result of the redesign of the ESC proposal. The current footpath that runs southwards towards Terlings Park will be re-routed under the new road bridge.

12.7.6 Consultation with the Council's Conservation Team has taken place which has informed the proposed works. It is considered that the setting of the bridge has been diminished over time due to the creation and multiple realignments of Eastwick Road. Despite this, the erection of the bridge over Fiddlers' Brook will negatively impact on the setting of the Grade II listed footbridge, and this impact will result in harm to the significance of this designated heritage asset. However, this harm to significance is considered to be less than substantial, and whilst the setting of the footbridge will change, the bridge will be retained in use and will still be able to be appreciated in its original location. There are clearly significant public benefits associated with the ESC application, but it is important that the significance of the listed footbridge is respected through the planning balance. Less than suitable repairs over the years have also negatively impacted the structure, so the proposal to refurbish and repair the footbridge is welcomed. These repairs and the replacement balustrade cannot be conditioned with this application but will be secured through the Listed Building Consent application recommended for approval alongside this ESC application.

12.7.7 Number 44 Pye Corner also known as Fiddlers Cottage is a Grade II Listed Building that lies immediately to the north of the ESC where Road 1 passes between Terlings Park and Pye Corner, and north of the Fiddlers' Brook Footbridge which was once part of a verdant rural setting to the cottage. However, the cottage's current setting is already dominated by the existing busy Eastwick Road, which will be downgraded as a result of the ESC proposal and the current logging

and wood processing works that operates on land immediately adjacent to the east of the listed building. It is therefore considered that while the new ESC Fiddlers' Brook road bridge will result in some harm to the significance of the listed Fiddlers Cottage the harm is considered to be less than substantial given the current context.

12.7.8 Great weight and importance is attached to the harm to the significance of these heritage assets and to their conservation. A clear and convincing justification is required for any harm to the significance of a heritage asset. In the context of this application and the purpose of the planning balance, it is considered that the harm to the significance of both these listed buildings is outweighed by the public benefits of the ESC, as described elsewhere in this report. Moreover, and separately, the repairs and the replacement balustrade to Fiddlers' Brook Footbridge are considered to be positive in heritage terms.

12.7.9 Within Harlow District the Harlow Roman Temple which is designated as a scheduled monument lies to the west of the eastern-most part of the ESC. However, it is not considered that the ESC proposals will result in any harm to the setting or thereby to the significance of the Harlow Roman Temple due to a lack of direct visual impact due to the current setting of the scheduled moment which consists of a railway line and various light industrial units along River Way.

12.7.10 In terms of the Stort Valley landscape itself, the valley has a long history of early industry with a number of mills as well as parks associated with aristocratic leisure. Relatively little survives of any of these parks except at Briggens and Stanstead Bury. The Stort was partially canalised in the late eighteenth century and there are a series of surviving locks for the Navigation. The older course of the river still survives. The Navigation was an important transport link in to the early nineteenth century for moving products from maltings and mills at Bishop's Stortford south to the river Lee, but was later replaced by the railway line. The canal is now a popular leisure route. The A414 and the northern edge to Harlow now give the valley a more urbanised character, with the most recent addition being the redevelopment of the Terlings Park Research Centre as a residential estate on the north side of the river.

12.7.11 In terms of 'below ground assets', the ESC will have an impact on peat and alluvial deposits within the Stort Valley, and potentially on buried prehistoric deposits. The application is supported by an Assessment of Archaeological Potential which is informed by a number of technical archaeological assessments, including geo-archaeological modelling of existing borehole data. This modelling demonstrates that there is a potential for peat deposits of at least regional importance to be present, and for evidence of Mesolithic to Late Bronze Age settlement to be present within and beneath the peat sealed by alluvium. This is not uncommon along the length of the River Stort.

12.7.12 Hertfordshire County Council's Environmental Resource Protection Team considers that more detailed investigations are necessary in order to explore the full potential significance of these assets and to preserve them in situ. Furthermore, the Council for British Archaeology, whilst they have only responded to the Outline application, request that any investigations that are undertaken are carried out in a way that enables public engagement in the process, particularly in the dissemination of information. Such investigations are important in understanding the history of human settlement and therefore the detailed conditions attached to this report clearly set out the requirements for pre-commencement investigations.

12.7.13 The ESC proposal is considered to result in less than substantial harm to the significance of known heritage assets (Fiddlers Cottage and Fiddlers' Brook Footbridge Grade II listed buildings). These harms are acknowledged, however, they are considered to be outweighed by the significant public benefits arising from the ESC proposal. An approach for investigating below ground assets prior to the commencement of development has been agreed and will be secured via conditions 37, 38 and 39. The proposal is therefore considered to comply with the relevant Development Plan policies.

12.8 Green Belt Issues

12.8.1 The section of Road 1 between the Eastwick Junction and Pye Corner is outside the Green Belt within the area allocated for development under Policy GA1 of the EHDP. However, Road 1 east of Pye Corner, Road 2 and Road 3 is located within the Metropolitan Green Belt. Figures 37 and 38 below contain extracts from the two Policies Maps from the adopted East Herts District Plan and Harlow Local Development Plan.

12.8.2 Policy GBR1 (Green Belt) of the East Herts District Plan 2018 states that planning application within the Green Belt will be considered in line with the provisions of the NPPF.

12.8.3 Policy WE1 (Strategic Infrastructure), Policy WE2 (Green Belt, Green Wedges and Green Fingers) of the Harlow Local Development Plan relate to development within the Green Belt reflecting the purposes of the designations. Policy PL4 (Green Belt) reflects provisions within the NPPF.

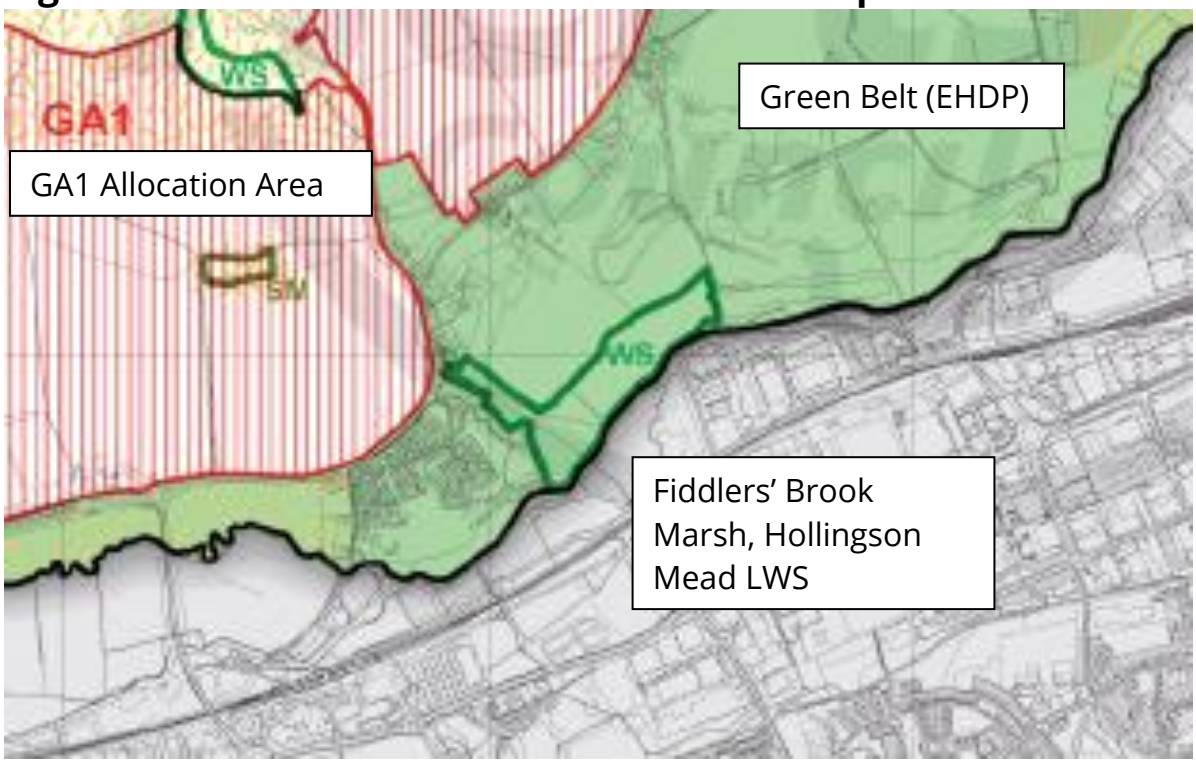
12.8.4 Paragraphs 137 and 139 (section 13) of the NPPF 2021 describe the importance of Green Belt and the five purposes that Green Belt serves. Paragraphs 147 to 151 relate to proposals affecting the Green Belt, describing the circumstances in which development is or may be acceptable in the Green Belt.

12.8.5 Paragraph 147 of the NPPF provides that 'inappropriate development' is, by definition, harmful to the Green Belt and should not be approved except in very special circumstances. Paragraph 148 of the NPPF requires that local planning authorities "should ensure that substantial weight is given to any harm to the Green Belt. 'Very special circumstances' will not exist unless the potential harm to the Green Belt by reason of inappropriateness, and any other harm resulting from the proposal, is clearly outweighed by other considerations."

12.8.6 Paragraph 150 of the NPPF states that the identified forms of development are not inappropriate in the Green Belt <u>provided</u> (Officer highlight) they "preserve its openness and do not conflict with the purposes of including land within it." These forms are limited, but include 'engineering operations' and 'local transport infrastructure which can demonstrate a requirement for a Green Belt location'. For

the proposed Eastern Stort Crossing the starting point to consider is whether it is 'local transport infrastructure' which may not be inappropriate development within the terms of paragraph 150 of the NPPF.

Figure 37: Green Belt in East Herts Policies Map



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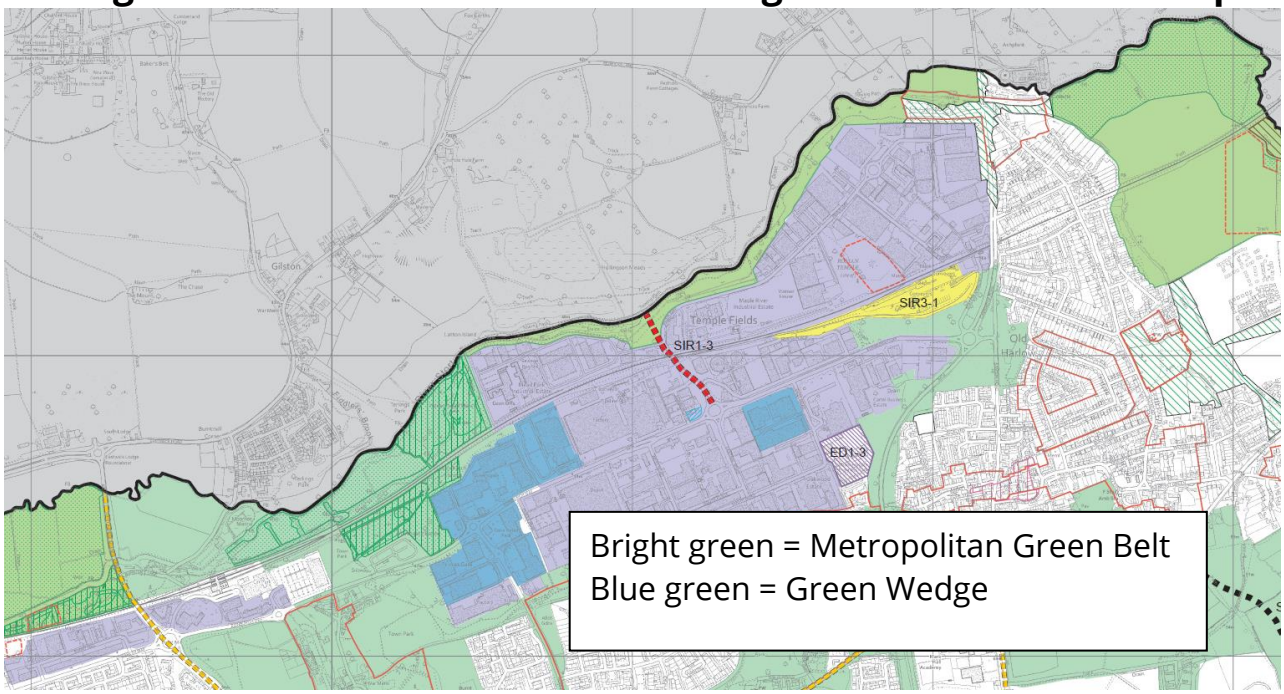
Assessment of Proposals Against Green Belt Policies

12.8.7 East Herts District Plan Policy GA2 identified that a second crossing of the River Stort would be required but at the time of examination both a western and an eastern option were being considered, both of which would have required a Green Belt location. The EHDP therefore acknowledges that a Green Belt location will be required for the provision of an additional crossing of the River Stort. By the time the Harlow Local Development Plan was being examined, parties had concluded that the eastern option was preferred and the supporting HLDP Policies Map provides an indicative location of where the eastern option of the second Stort crossing will meet the Harlow urban area at River Way, as shown by the dashed red line in Figure 38 below. But as the HLDP cannot include specific policies for sites outside its boundaries, the Policy map only identifies the 'Indicative Second River

Stort Crossing at River Way' element of the crossing. Nonetheless, Policy SIR1 lists the Second River Stort Crossing at River Way as being required to support development. The indicative alignment of this crossing was not however removed from the Green Belt. Thus, Green Belt policies continue to apply.

12.8.8 Therefore, whilst neither plan specifies the precise location of the second Stort crossing, both development plans identify the need for the second crossing of the River Stort and as such it is confirmed that a Green Belt location is necessary. The proposal for the Eastern Stort Crossing clearly represents a 'local transport infrastructure' item within the terms of paragraph 150 of the NPPF.

Figure 38: Green Belt and Green Wedge in Harlow Policies Map



12.8.9 However, the proviso in Paragraph 150 of the NPPF states that "certain other forms of development are also not inappropriate in the Green Belt provided (officer highlight) "they preserve its openness and do not conflict with the purposes of including land within it." Turning to the matter openness, the Planning Practice Guidance (Impacts on Openness and Compensatory Improvements: July 2019) provides further advice on the likely effects of development on physical and visual openness. The Planning Practice Guidance (PPG) states that

when assessing the impact of a proposal on openness, a judgement is required based on the circumstances of the case. The courts have identified a number of matters which may need to be taken into account in making this assessment. These include, but are not limited to:

- openness is capable of having both spatial and visual aspects – in other words, the visual impact of the proposal may be relevant, as could its volume;
- the duration of the development, and its remediability – taking into account any provisions to return land to its original state or to an equivalent (or improved) state of openness; and
- the degree of activity likely to be generated, such as traffic generation.

12.8.9 Consideration needs to be given to the existing context. In this instance, land eastwards of Terlings Park and Pye Corner within the Stort Valley is devoid of development. The East Herts Landscape Character Assessment 2007 (Area 82) describes the character of the valley as being "an enclosed landscape, focused on the Stort Navigation with its locks and the more natural original river with its side loops. The landform is dominant, although the watercourses within it are relatively insignificant visually. The valley is predominantly rural with significant localised urban impact, varying with the degree to which industry is water related."

12.8.10 The assessment notes that there is a lack of panoramic views along the valley, with discontinuous and variable field patterns of grazing meadows but interrupted by mineral extraction. Furthermore, the assessment notes that views of the area from outside are concealed by intervening vegetation and buildings, not landform, while views within the area are limited by vegetation with a significant sense of enclosure, and that this is a coherent but discordant area, with noise from the railway, road traffic and planes and as such, although the valley lies outside the urban envelope it is heavily influenced visually by it.

12.8.11 The assessment also highlights that in terms of transport patterns, the valley "is a busy area, with a dual carriageway (A414) on the northern

edge of the lower reaches of the floodplain, a railway snaking to either side of it and the B181, A1184, B1004, A414 and other minor lanes crossing it." The crossing of the valley by transport infrastructure is therefore not an uncommon feature of the valley.

12.8.12 Despite the fact that views from many public vantage points into the valley towards the proposed roads are interrupted by landform and vegetation, the reality remains that the proposal introduces new road structures into the landscape that run both through, and across the valley. The road comprises a mixture of at-grade road, raised road on a culverted embankment and an elevated open span bridge structure. The at-grade road is considered to have a minimal impact on openness as much of the route within the Green Belt is cut into the side of the valley, however, while the road itself may be largely screened, the movement of vehicles will be visible as will any lighting columns and road signs. Over time the elevated culverted embankment will become naturalised by vegetation and will appear as raised ground albeit with some visible gaps through the culverts from ground level.

12.8.13 The open span bridge will be the more visible feature as it is clearly elevated above the valley. The bridge is designed to have long spans (19, 24 and 29 metres) between triplets of slim columns as opposed to much bulkier single piers, along with a narrow abutment at the urban edge of the elevated section. The bridge deck is also designed to be as thin in profile as possible (1.2m beam, 0.6m deck and 1.5m parapet) in order to reduce the visual impact of the structure both in terms of vertical and horizontal design, enabling long views through the valley beneath the structure. Nonetheless the proposal still comprises a 220m long bridge in a sweeping curve through and across the valley.

12.8.14 In addition to the road structures themselves, additional physical features, such as coffer dams to enable the construction of the pier foundations will be necessary, but these are temporary in nature after which the landscape will be restored and additional landscaping such as structural planting will become established. However, the roads will be permanent features in the landscape and will not preserve the current level of openness nor improve it.

12.8.15 The roads will also introduce activity into the landscape by virtue of their very function as a means of conveying vehicles, pedestrians and cyclists. In order to reduce the depth of the deck and parapets, the parapets will be a visually light railing except over the Stort Navigation where the parapet will be more solid in nature in order to provide noise attenuation for those travelling along the towpath and navigation below. Vehicles travelling over the bridge and culverted embankment will therefore be visible beyond the vehicle restraint parapet.

12.8.16 Taking into account the matters identified in the Planning Practice Guidance above, Officers consider that the Eastern Stort Crossing will have an adverse impact on the openness of the Green Belt, however, given the design measures employed to minimise the visual impact of the elevated structures, this harm to the openness of the Green Belt is not considered significant. At the location where the elevated open span bridge becomes most noticeable within the landscape, the environment is already negatively impacted by the industrial uses within Mead Park and Templefields Industrial Estates in Harlow to the south of the Stort Navigation. Notwithstanding this, for the purpose of paragraph 150 of the NPPF and generally, the proposals will cause some degree of harm to and will not therefore "preserve" openness.

12.8.17 In addition to a consideration of harm to openness, paragraph 150 of the NPPF also requires that such essential infrastructure does not conflict with the purposes of including land within the Green Belt. The five purposes of Green Belt include:

- To check the unrestricted sprawl of large built-up areas;
- To prevent neighbouring towns from merging into one another;
- To assist in safeguarding the countryside from encroachment;
- To preserve the setting and special character of historic towns; and
- To assist in urban regeneration, by encouraging the recycling of derelict and other urban land.

Check unrestricted sprawl of built-up areas

12.8.18 It is accepted that the Green Belt designation in this area fulfils a role in checking the unrestricted sprawl of Harlow and Sawbridgeworth, albeit

that other constraints such as the presence of the Stort Navigation and the railway line along the northern edge of Harlow, along with the River Stort floodplain serve as great a constraint to the northwards extension of the built up area of Harlow as the presence of Green Belt. Harlow is tightly bound by Green Belt and as such, the urban edge of Harlow has been built right up to Green Belt edge, but towards the east, the northern part of the Templefields industrial area has breached the railway line with development, where undoubtedly the Green Belt designation has been the key factor in checking urban growth in this area.

12.8.19 The proposals in this instance comprise an item of essential transport infrastructure which links the A414 at Eastwick Road/Fifth Avenue to River Way, providing the link between the existing urban area of Harlow and the planned development of the Gilston Area. The East Herts District Plan allocated the Gilston Area for the development of 10,000 homes and upon adoption in 2018, the Gilston Area allocation released land from the Green Belt. As shown in Figures 19 and 20 above only the land allocated for the development of the residential development was removed from the Green Belt, with land between the Gilston Area and Harlow being retained as Green Belt. As a planned development with clearly defined boundaries, the Green Belt will continue to check the unrestricted growth of what is planned to be a built-up area. The surrounding land will continue to form part of the Green Belt, as well as the flood plain, and therefore the introduction of the Eastern Stort Crossing is not considered to have an adverse impact on the Green Belt's role in checking the unrestricted sprawl of Harlow, Sawbridgeworth or the Gilston Area.

Prevent neighbouring towns merging into one another

12.8.20 This purpose seeks to maintain existing settlement patterns and is focused on towns rather than other settlement types. The Green Belt to the north of Harlow has a paramount importance in preventing the merging of the towns of Harlow and Sawbridgeworth, which at its closest point is only 0.4km apart. However, the presence of the Stort Valley floodplain itself acts as constraint to development preventing the merging of settlements to the north of the floodplain within the Gilston

Area with Harlow. Officers consider that the proposed site of the Eastern Stort Crossing will not result in a merger of settlements with Harlow and will not undermine this Green Belt purpose. This is underscored by the nature of the proposals which seek permission for a transport infrastructure scheme rather than residential or commercial buildings, which would be expected to have more of an impact on this purpose for the Green Belt designation.

Assist in safeguarding the countryside from encroachment

12.8.21 This purpose seeks to safeguard the countryside, which is enjoyed for openness, including the extent that the Green Belt has resisted encroachment from past development. Openness refers to the extent to which Green Belt land could be considered open from an absence of built development rather than from a landscape character perspective, where openness might be characterised through topography and presence or otherwise of woodland and hedgerow cover.

12.8.22 The urban area to the south of the route comprises the commercial and industrial areas of Edinburgh Way and increasingly by new residential development up to six stories in height and as such the landscape is defined by the presence of the urban area to the south. North of the Navigation towpath the land has long been marked by human activity including extensive gravel extraction and landfill which has now been restored to open grassland and water bodies. Within the restored landscape a very small number of uses conducive to a countryside setting now operate on land just beyond the ESC site area, but these are either seasonal in nature (water park and campsite) or have a minimal built impact (shooting range with indoor 25m range). However, each use brings with it an increased number of vehicles driving to each use as they are largely inaccessible through other modes. Despite these activities, the land in which the ESC is located is devoid of built development.

12.8.23 The proposals for Road 1 and Road 2 have been carefully designed to work with the topography and to respond to the existing site context to try to ensure that the scale of impact is minimised. The section of Road 1 east of Pye Corner is proposed to be located at-grade or cut into the

gradual slope of the topography toward the Stort Valley. This, combined with the proposed landscape strategy, will assist in minimising visual harm as views from within the northern part of the valley of Roads 1 and 2 will be largely obscured by the landform. However, road and vehicle lighting and the movement of vehicles will be noticeable from within the valley, particularly for the Road 3 section of the ESC where the road becomes elevated within a part of the landscape that is subject to more open views and where the open span bridge runs perpendicular to rather than along the valley. Acknowledging that the second Stort crossing is identified as being necessary infrastructure within the EHDP and HLDP, neither Plan specified the location or design of the crossing. The ESC proposal introduces a form of built development into the countryside in the shape of a new road and bridge structures (including static lighting) and with it an intensity of urban activity (vehicle, pedestrian and cycle movements) that does not currently exist in this particular location. The proposal is therefore considered to conflict with this purpose of the Green Belt.

Preserve the setting and special character of historic towns

12.8.24 The fourth purpose relates to retaining open land surrounding historic settlements. The Heritage Statement submitted with the planning application for the ESC provides a full identification and assessment of the proposal's impact on heritage. While Harlow is not a historic town in the same way that Oxford is for example, but it has a unique heritage in terms of its New Town origin, including the network of Green Wedges that were planned from the start. It is therefore considered that the existing Green Belt fulfils a role in protecting the setting and special character of Harlow. However, it is not considered that the ESC results in any conflict with this purpose.

Assist in urban regeneration, by encouraging the recycling of derelict and other urban land

12.8.25 The Green Belt fulfils some role in encouraging the use of brownfield land within the urban area of Harlow. However, the flood plain and Stort Valley characteristics of the area mean that other planning

constraints exist that would limit the development potential in this location.

12.8.26 Undoubtedly, part of the case for the release of Green Belt land at the Gilston Area as part of the East Herts District Plan was specifically to assist and facilitate the economic and social regeneration of Harlow, notwithstanding that it comprises largely greenfield land. The ESC proposal facilitates the delivery of planned growth in the Gilston Area, including 10,000 homes and supports the wider growth and regeneration objectives of the HGGT Vision. The ESC scheme, which facilitates delivery of a local plan allocation has a neutral effect on and would cause no harm to this Green Belt purpose.

12.8.27 Despite being considered 'local transport infrastructure which can demonstrate a requirement for a Green Belt location' in the context of paragraph 150 of the NPPF, the elevated sections of Road 3 (the culverted embankment and open span bridge) of the ESC proposal are considered to have a degree of harm to the openness of the Green Belt in this location, and are considered to conflict with the purpose of including land within the Green Belt in terms of safeguarding the countryside from encroachment. Therefore, based on the proviso in paragraph 150 of the NPPF, the ESC is considered, on balance, to represent inappropriate development within the Green Belt.

Very Special Circumstances

12.8.28 Inappropriate development is by definition, harmful to the Green Belt and should not be approved except in very special circumstances. Paragraph 148 of the NPPF requires decision makers to attach substantial weight to any harm to the Green Belt. Paragraph 148 of the NPPF also states that "'very special circumstances' will not exist unless the potential harm to the Green Belt by reason of inappropriateness, and any other harm resulting from the proposal, is clearly outweighed by other considerations."

12.8.29 The ESC is considered to be inappropriate development in the Green Belt. This is of itself and by definition to be regarded as harmful to the Green Belt. Moreover, the development is considered to cause some

limited harm to the openness of the Green Belt and conflicts to some degree with the Green Belt purpose of assisting in safeguarding the countryside from encroachment as set out in the preceding paragraphs 12.8.7 to 12.8.27. Therefore, in accordance with paragraph 148 of the NPPF it is necessary to give substantial weight to these elements of harm to the Green Belt.

12.8.30 With regard to other non-Green Belt harm, the Environmental Statement (ES) (as amended) submitted with the application assesses the impact and effects of the Eastern Stort Crossing development. Officers have summarised the adverse construction effects of the Eastern Stort Crossing reported in the ES and considered throughout this report as follows:

- Archaeology – adverse effects were reported on peat deposits and also potentially on areas of archaeological sensitivity, subject to confirmation through additional surveys; and

- Landscape and visual – introduction of the structure through construction would give rise to adverse effects on the landscape character areas and visual receptors as the structure rises out of the ground.

- Loss of land of nature conservation interest – while the ESC results in the loss of a small area of land of nature conservation interest, the proposal will mitigate this impact with the addition of significant habitat and ecological enhancements to the Stort Valley through its proposed on-site and off-site mitigation, providing a net gain to biodiversity within the valley. In addition, the landscaping proposals will also deliver a net gain in hedgerow and tree planting.

12.8.31 A number of non-significant adverse temporary effects during construction are anticipated in relation the loss of breeding and wintering bird habitat, noise and vibration on nearby receptors, changes in flood risk and pollution site runoff and from embankment loading on the former landfill at Pole Hole.

12.8.32 Officers have summarised the adverse effects of the operation of the Eastern Stort Crossing reported in the ES and considered throughout this report as follows:

- Noise – introduction of a new noise source (i.e., road traffic noise) into a relatively quiet noise environment, i.e., the Stort Valley, represents a large change. Reported significant effects within the ES (as amended) on specific receptors include three receptors experiencing a large adverse effect and 41 receptors around Terlings Park and Pye Corner experiencing a moderate adverse effect.

- Built Heritage – indirect effects were reported on the setting of some built heritage assets, e.g., Grade II listed buildings at Gilston / Pye Corner (although it should be noted these were reported collectively with the overall effect of the development of the Gilston Area Villages 1-6 application).

- Landscape and visual – introduction of the structure would give rise to adverse effects on the landscape character areas and visual receptors.

12.8.33 A number of non-significant adverse effects during operation of the Eastern Stort Crossing are expected in relation to transport effects (such as severance and driver delay), noise disturbance on the breeding and wintering birds, changes to flood risk, water quality and hydraulic processes.

12.8.34 The elements of harm, namely harm by reason of inappropriateness, harm to openness and to Green Belt purposes and other non-Green Belt harm (as described above) should all be given substantial weight. Very special circumstances so as to justify the grant of planning permission will only arise if other considerations clearly outweigh this harm, considered as a whole. This is the policy test required to be applied by para.148 of the NPPF.

12.8.35 Officers have considered various circumstances pertaining to this case and considered whether these alone, or in combination with other

circumstances are sufficient to constitute very special circumstances that clearly outweigh the harm to the Green Belt and other harm as referred to above.

12.8.36 Firstly, both EHDC and HDC respectively have policies (EHDP Policy GA2 and HLDP Policy SIR1) that support the provision of both the crossings, although policy GA2 of the East Herts District Plan does not specifically set out a route for the second crossing, the Harlow Local Development Plan Map shows an approximate route for the section of the Eastern Stort Crossing within the Green Belt in Harlow, which is very small in comparison with the overall route. However, the route of the crossing remains within the Green Belt. It is considered that whilst this policy recognition which supports a Green Belt location is a relevant consideration which contributes to very special circumstances, it does not, and of itself, clearly outweigh the overall harm caused.

12.8.37 The ESC is necessary to bring forward the Gilston Area allocation, which makes a substantial contribution to meeting identified development needs in the East Herts District Plan, but it also facilitates wider growth within the HGGT. However, the contribution to facilitating wider growth is not, of itself, a consideration that clearly outweighs harm.

12.8.38 The Villages 1-6 development Outline application alone forms the majority part (8,500 homes) of the overall Gilston Area allocation of 10,000 homes in the East Herts District Plan and is the single largest allocation in the HGGT. It is considered that the delivery of the Villages 1-6 outline application, and with it the directly associated social, economic and environmental infrastructure and other measures, such as: new schools, healthcare, community and leisure facilities and an appropriate section 106 legal agreement associated with the outline Villages 1-6 scheme delivering a wide range of affordable housing, sustainable transport initiatives and other regeneration and transformative benefits, is a consideration of significant weight which, of itself, clearly outweigh Green Belt and other harm, so as to give rise to very special circumstances which justify the ESC proposal for the purposes of NPPF paragraph 147 and 148 and development plan Green Belt policy.

12.8.39 The other considerations identified above - the policy recognition of the need for a Green Belt location for the ESC proposal, and wider benefits in terms of contributing to the delivery of schemes as part of planned growth reinforce this conclusion, as does the fact that the ESC will also support the wider Gilston Area development, including Village 7 (comprising 1,500 homes, education, community and sports facilities), along with other planned growth within the wider HGGT. Officers consider that very special circumstances arise which are such that planning permission may be granted for the ESC proposals consistent with paragraphs 147 and 148 of the NPPF and the relevant development plan policies concerning the development in the Green Belt which have been detailed above and are in turn consistent with the NPPF.

12.8.40 The provision of this essential transport infrastructure supports not only the delivery of the Gilston Area strategic housing allocation but also supports the growth and sustainable transport objectives of the HGGT Vision. The Central Stort Crossing proposal provides the ability to deliver a sustainable transport corridor (STC), but it does not provide additional highway capacity for other vehicle movements generated by the Gilston Area development; it is therefore agreed by both Highway Authorities that the Eastern Stort Crossing is necessary to provide the additional highway capacity required for the Gilston Area development as well as to support the mode share aspirations of the wider HGGT growth in and around Harlow. Without the ESC, traffic generated by the Gilston Area developments would impact on the existing A414 and other key links within the Harlow urban area, which would undermine the provision of proposed STCs that will serve existing residents and businesses as well as new developments in and around Harlow. The delivery of a network of STCs is a key objective of the HGGT Vision. The provision of essential transport infrastructure carries significant positive weight which is also considered to contribute to the very special circumstances that outweigh the harm to the openness of the Green Belt and other harms arising from the proposal.

12.8.41 The Town and Country Planning (Consultation) (England) Direction 2009[8] requires under paragraph 4b that development that consists of inappropriate development in the Green Belt, which by reason of its scale or nature or location, would have a significant impact on the openness of the Green Belt, the Council is obliged to consult with the Secretary of State, regardless of whether the authority is minded to refuse or grant permission. As the ESC proposal is not considered to have a significant impact on the openness of the Green Belt, this obligation does not apply. As the application is considered to be an EIA application, in accordance with Part 5, Regulation 19 of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017, the Councils notified the Secretary of State of the application and subsequent amendments. Notwithstanding this, if the Committee is minded to approve the application, each Council will notify the Secretary of State for Levelling Up, Housing and Communities that it has determined the application and intends to issue the decision, providing a reasonable time to enable the Secretary of State to respond, before issuing the decision notice.

12.8.42 While the Outline application for Villages 1-6 has yet to be determined, given the harm to the Green Belt and other harms arising from this ESC proposal, there is a need to ensure that these harms do not occur unless the Gilston Area Villages 1-6 outline application is granted. It is the benefits that will arise as a result of this outline residential development that give rise to the very special circumstances that justify the development of this Crossing in the Green Belt, as explained above. It is therefore considered necessary to use a condition to prevent the ESC development from commencing unless permission has also been granted for the Villages 1-6 outline application. It is submitted that the grant of planning permission for Villages 1-6 will give sufficient confidence that the residential development will proceed such that the development of the ESC scheme in the Green Belt can proceed. Given that the planning application for Villages 1-6 has been submitted by the same Applicant as the application for the ESC, such Condition 4 is considered to be reasonable.

[8] The 2009 Direction was updated and replaced on 21 April 2021, which applies to planning applications received after this date. Therefore the 2009 Direction still applies to this application.

13.0 Infrastructure Delivery

13.1. The application contains indicative phasing plans which show the anticipated order in which the crossing and associated works are expected to be carried out. However, as these are indicative and could change as development progresses Officers recommend requiring through Condition 5 the submission of up to date phasing plans as part of the Construction Environment Management Plan in order that these changes can be taken into account and managed accordingly, particularly if construction activities are occurring in multiple locations.

13.2. A number of conditions were requested by statutory bodies in their consultation responses. Officers have consulted with these bodies as necessary in order to develop a suite of conditions that have been identified as necessary to make the development acceptable in planning terms. As a result, it is not necessary, to require a Section 106 legal agreement for this application. However, it is expected that the legal agreement associated with the outline residential application for Villages 1-6 will contain a limit to the number of homes that can be occupied until the ESC scheme is complete. Additionally, a condition will be imposed that prevents the commencement of the Eastern Stort Crossing proposal with the exception of enabling works (to be defined and agreed with the LPA), until the outline application for the Villages 1-6 development is granted.

13.3. As the ESC proposal comprises highway infrastructure, a process of technical approval is necessary and the applicant will be required to enter in to a legal agreement under Section 278 of the Highway Act 1980 to enable the works to the public highway to take place to the satisfaction of the Highway Authorities. Furthermore, the applicants will be required to enter in to a legal agreement under Section 38 of the Highways Act 1980 in respect of any land to be dedicated or adopted as public highway.

14.0 Planning Balance and Conclusion

14.1 This proposal is for the delivery of a major piece of infrastructure, comprising new bridges, new highway and new pedestrian and cycle infrastructure. The provision of essential infrastructure carries significant positive weight and the development is considered to be acceptable in principle.

14.2 The design and layout of the proposal has been designed to minimise visual impacts, noise and disturbance, and severance between communities. Additional landscaping, planting and screening is proposed to protect key views from visual harm as far as possible, additional pedestrian and cycle routes and connections are provided where the ESC introduces new roads, and consideration has been taken to reduce the visual impact of elevated structures. Notwithstanding this, the proposal introduces new road and bridge structures into an otherwise undeveloped landscape within the Stort Valley.

14.3 It is considered that temporary visual harms to the landscape arising through construction and the residual harms arising from the scheme once operational are outweighed by the beneficial impacts arising from the scheme in terms of providing additional transport capacity required for the Gilston Area outline housing developments (comprising a total of 10,000 homes in Villages 1-6 and Village 7) and to support wider growth and sustainable transport objectives in the Harlow and Gilston Garden Town. As such, it is considered that the beneficial impacts arising from the scheme outweigh the visual harms identified.

14.4 It is considered that noise and disturbance associated with construction can be managed through appropriate site management techniques. While there are a number of properties that in noise assessment terms will experience an increase in noise that cannot be fully mitigated, the proposal does create some significant beneficial impacts through a reduction in noise for some locations and sensitive receptors. These impacts arise as a result of the development of essential infrastructure that will serve a wider benefit in terms of

enabling the creation of new sustainable travel corridors linking the Gilston Area to Harlow town centre and station, and also within Harlow itself as a result of reduced congestion and changes in travel behaviour. This contribution towards enabling a shift towards more active and sustainable forms of travel is considered to be a benefit that outweighs the adverse effects arising from noise in a limited part of the site.

14.5 The preliminary structural designs have been agreed with the two highway authorities and are considered to meet relevant standards. A number of minor departures from standard are required and these have been discussed and agreed in principle with the highway authorities. Detailed engineering stages that follow will confirm these details in collaboration with the planning authorities.

14.6 In terms of preventing flood risk and integrating sustainable drainage through design the ESC proposal meets the requirements of the Environment Agency and LLFA. The Preliminary Drainage Strategy is agreed in principle at this stage and subsequent engineering design stages will refine details about the proposed attenuation features, which will be controlled by a series of conditions. The proposal is therefore considered to meet the requirements of development plan Policies.

14.7 The application is supported by a Carbon Footprint Assessment which considers the carbon footprint associated with each part of the road and structures. The ESC comprises the construction of new roads and bridge structures and will inevitably have an impact in terms of carbon footprint as a result of its construction. However, these impacts are considered to be outweighed by the significant contribution the proposal would make to achieving active and sustainable travel from the allocated Gilston Area development of 10,000 homes and within the wider HGGT by enabling the creation of new sustainable travel corridors linking the Gilston Area to the town centre and station, and also within Harlow itself as a result of reduced congestion and changes in travel behaviour. Commitments are made using materials and construction methods that minimise the impact of the proposal in sustainability terms and such details will be controlled by condition.

14.8 Construction operations will be undertaken following all relevant codes of practice, which require frequent monitoring of dust, air quality, water quality, ground stability, contaminant exposure and groundwater and ground gas monitoring where necessary. These processes will be required via a comprehensive Construction Environment Management Plan and Code of Construction Practice, and as such no adverse effects are considered likely as a result of the ESC proposal.

14.9 There will be harms that arise from the development due to the loss of habitats that will temporarily impact land for ground nesting birds. There will also be some residual harm arising from the introduction of artificial lighting into an area otherwise devoid of light. However, it is considered that suitable mitigation measures are proposed, which in terms of habitat creation represent an overall benefit to the environment of the Stort Valley. The application, with mitigation to be secured via condition, will deliver a 9.33% net gain to biodiversity.

14.10 Overall, the proposed highways provision and mitigation measures are considered to meet policy requirements and will provide key essential infrastructure to support the objectives of the Gilston Area allocation and the wider HGGT Vision objectives. This is in accordance with development plan Policies.

14.11 In term of heritage impacts, it is considered that the new Fiddlers' Brook road bridge will result in a less than substantial harm to the significance of Fiddlers Cottage and the Fiddlers' Brook Bridge. Although great weight and importance is attached to this harm (as required in law), in the planning balance, it is considered that the less than substantial harm to the significance of both these listed buildings is outweighed by the public benefits of the ESC. Moreover, and separately, repairs are proposed to Fiddlers' Brook Bridge to remove unsympathetic and incongruous balustrade treatment. This is considered to be positive in heritage terms.

14.12 In terms of 'below ground assets', the ESC will have an impact on peat and alluvial deposits within the Stort Valley, and potentially on buried

prehistoric deposits though this is anticipated given the river valley environment. Therefore, more detailed investigations are necessary in order to explore the full potential significance of these assets in understanding the history of human settlement and therefore the detailed conditions attached to this report clearly set out the requirements for pre-commencement investigations. The conditions will require analysis, recording, dissemination and deposition of investigation analysis and findings.

14.13 Officers consider that the Eastern Stort Crossing will impact visually, spatially, environmentally and will introduce traffic and an urban form of development into this section of the Metropolitan Green Belt. While the scheme has been designed to minimise its visual impact, there is some unavoidable impact on openness, albeit that this harm is not considered significant. It is also considered that the proposal conflicts with the purpose of the Green Belt in safeguarding the countryside from encroachment, and as such, the proposal constitutes inappropriate development in accordance with Paragraphs 147, 148 and 150 of the NPPF 2021. The harm to the Green Belt and the other harms identified above must be given substantial weight. However, it is considered that, the delivery of the Villages 1-6 application, which represents the bulk of the Gilston Area strategic allocation, and with it the directly associated social, economic and environmental benefits that will accrue as a result of the Villages 1-6 development. The outline Villages 1-6 application will include an appropriate section 106 legal agreement delivering a wide range of affordable housing and sustainable transport initiatives along with a range of regeneration and transformative benefits. The benefits collectively give rise to the very special circumstances that clearly outweigh the Green Belt harm identified from the Eastern Stort Crossing proposal and any other harm. In addition, the benefits arising from the proposal in terms of enabling the growth and sustainable transport objectives of the HGGT Vision are considered to contribute to the very special circumstances that outweigh these harms, in accordance with paragraph 148 of the NPPF 2021.

14.14 Section 38(6) of the Planning and Compulsory Purchase Act 2004 requires that, “if regard is to be had to the development plan for the

purpose of any determination to be made under the Planning Acts, the determination shall be made in accordance with the plan unless material consideration indicate otherwise". Section 70(2) of the Town and Country Planning Act 1990 requires regard to be had to the development (and other material considerations). The development plan includes the East Herts District Plan 2018, the Harlow Local Development Plan 2020, the Gilston Area Neighbourhood Plan 2021. The National Planning Policy Framework (updated 2021), is one of the other material considerations to which regard must be had.

14.15 Considering the Eastern Stort Crossing proposal on its own merits, it is considered to comply with the development plan viewed as a whole; is in accordance with the NPPF; and other material considerations support the recommendation for approving it. The benefits arising from the proposals in terms of facilitating the delivery of planned growth in the Gilston Area, including 10,000 homes and supporting the growth and sustainable transport objectives of the Harlow and Gilston Garden Town, are considered to outweigh temporary and permanent impacts arising from the proposal, including harm to the Green Belt by reason of very special circumstances and therefore provide an acceptable form of development.

15.0 RECOMMENDATIONS

1. That planning permission be **GRANTED**

a. subject to the conditions and the reason(s) set out at the end of this report, and

b. That delegated authority be given to the Head of Planning and Building Control at East Herts Council, in consultation with the Director of Strategic Growth and Regeneration at Harlow District Council and with the Chair/s of their respective Development Management Committees, to finalise the detail of the conditions attached to their respective planning permissions. If any substantive additions or changes to conditions post Development Management

Committee/s are necessary the matter would be referred back to them.

2. If the committee resolves to grant planning permission pursuant to recommendation 1, and Harlow District Council decides to defer determination or to consider amendments to the planning application for the part of the Eastern Stort Crossing development in its area, then the Decision Notice will not be released for a minimum of four weeks, pending progress with the determination of the associated planning application by Harlow District Council.

16.0 Schedule of Conditions

In this permission **'Enabling Works'** means site clearance and demolition; tree/vegetation removal (in accordance with the approved plans in Condition 2); soil investigations (including soakage testing, window sampling, boreholes, CBR's and gas monitoring); ecology surveys; archaeology surveys (including geo physical surveys, window simples and trenching); slip trenches to investigate existing services; drainage surveys (such as CCTV and jetting); river modelling; and topographical surveys"

'Local Planning Authority' means either East Herts Council and/or Harlow District Council. Both Councils will consult the other when providing agreement in writing on applications to discharge conditions.

'Highway Authority' means either Essex County Council and/or Hertfordshire County Council. The Local Planning Authorities will consult with the Highway Authorities when providing agreement in writing on applications to discharge conditions.

<u>Procedural</u>

1. Consistent implementation of permissions across Local Planning Authority boundaries

No development shall commence until planning permissions are granted for the development as a whole, as detailed in planning applications reference

3/19/1051/ FULL (East Herts District) and HW/CRB/19/00221 (Harlow District).

Reason: To ensure, in circumstances where, for the development to perform its function, sections of the new roads and bridges must be constructed as a whole across local authority boundaries, that the relevant phases of the development are capable of being built on both sides of the local authority boundary.

2. Approved Drawings and Documents
Subject to any contrary details, drawings and timetables approved under any condition, the development shall be carried out in accordance with the approved drawings listed in Appendix A.

Reason: To restrict the development to that applied for and for which the environmental, transport and infrastructure impacts have been assessed, and to ensure that the development meets the policy standards required by the development plan and any other material considerations including national and local policy guidance.

3. Time limit for Commencement
The development hereby approved shall be begun within a period of five years commencing on the date of this notice.

Reason: To comply with the requirements of Section 91 of the Town and Country Planning Act 1990 and to ensure the timely implementation of the development.

4. Condition linking implementation to the outline
The development hereby permitted shall not be commenced (save for Enabling Works) unless and until planning permission has been granted for the development pursuant to planning application no. 3/19/1045/OUT (Gilston Area Villages 1-6).

Reason: The harm to the Green Belt and other harms arising from the development are outweighed by the significant public benefit arising from its contribution towards a shift towards active and sustainable travel associated

with strategic growth in the Gilston Area and the wider Harlow and Gilston Garden Town in accordance with Policies GA1 'The Gilston Area' and GA2 'The River Stort Crossings' of the East Herts District Plan (2018) and Policies HGT1 'Development and Delivery of Garden Communities in the Harlow and Gilston Garden Town' and SIR1 'Infrastructure Requirements' of the Harlow Local Development Plan (2020).

5. Submission and approval of phasing plans and documents
Prior to the commencement of the development hereby approved (save for Enabling Works), a Phasing Plan shall be submitted to and approved in writing by the Local Planning Authority. The Phasing Plan shall set out the details of the proposed sequence of development and the extent and location of individual development phases or sub-phases.

Once approved, the development shall be implemented in accordance with the approved Phasing Plan (or any subsequent revision thereof approved in writing by the Local Planning Authority).

Reason: To ensure proper management of the phasing of the development, compliance with essential pre-commencement conditions on the development and the provision of relevant mitigation at appropriate times throughout the development, in a way that does not prevent or unneccessarily hinder practical implementation, and in the interests of the amenity of occupiers and users of the site and in accordance with the requirements of Policies DEL1 'Infrastructure and Service Delivery' and DEL4 'Monitoring of the Gilston Area' of the East Herts District Plan (2018), and Policy IN2 'Impact of Developemnt on the Highways Network Including Access and Servicing' of the Harlow Local Development Plan (2020).

Design Matters

6. Energy and Sustainability Strategy
Prior to the commencement of any construction works (save for Enabling Works) for each phase or sub-phase of the development (as defined in plans and documents approved pursuant to Condition 5) an Energy and Sustainability Strategy for that phase or sub-phase shall be submitted to and approved in writing by the by the Local Planning Authority.

The Strategy will include details of the measures to be implemented to minimise climate impacts arising from the development taking account of all levels of the energy hierarchy and consideration of the East Herts Sustainability Supplementary Planning Document and Harlow and Gilston Garden Town Sustainability Guidance.

The Energy and Sustainability Strategy will specifically address the following:

a) How green infrastructure, urban greening and water management have been integrated;
b) Reducing energy and carbon embodied in construction materials through re-use and recycling of existing materials where possible, and the use of sustainable materials and local sourcing where possible;
c) Considering high quality innovative design, new technologies and construction techniques, including zero or low carbon energy/energy generation and water efficient, design and sustainable construction methods;
d) Demonstration that energy and carbon reduction and sustainability has been considered in all stages of the commissioning, procurement, transportation and construction processes.

The phase or sub-phase of the development shall thereafter be implemented in accordance with the relevant approved Energy and Sustainability Strategy.

Reason: In order that the development appropriately mitigates and adapts to the impact of climate change, minimises the impact of pollution and reduces pressure on natural resources in accordance in accordance with Policy CC2 'Climate Change Mitigation' of the East Herts District Plan (2018) and Policy PL3 'Sustainable Design, Construction and Energy Usage' of the Harlow Local Development Plan (2020).

7. Materials

Prior to the commencement of any above ground construction works (save for Enabling Works) on any phase or sub-phase of the site (as defined in plans and documents approved pursuant to Condition 5), the external materials of construction for the structures on that phase or sub-phase shall

submitted to and approved in writing by the Local Planning Authority. The development shall thereafter be carried out only using the approved materials.

Reason: In the interests of amenity and good design in accordance with Policy DES4 'Design of Development' of the East Herts District Plan (2018) and Policies PL1 'Design Principles for Development' and 2 'Amenity Principles for Development' of the Harlow Local Development Plan (2020).

8. Levels

Prior to the commencement of construction works (save for Enabling Works) for each phase or sub-phase of the development (as defined in plans and documents approved pursuant to Condition 5) detailed plans showing the existing and proposed ground levels for that phase or sub-phase of the site relative to adjoining land, shall be submitted to, and approved in writing by the Local Planning Authority and the development shall be carried out in accordance with the approved details.

Reason: To ensure that the development is properly related to the levels of adjoining development in the interests of neighbour amenity and good design in accordance with Policy DES4 'Design of Development' of the East Herts District Plan (2018) and Policies PL1 'Design Principles for Development' and 2 'Amenity Principles for Development' of the Harlow Local Development Plan (2020).

9. Details of river / canal crossings and related structures (in respect of management of water course related environmental issues)

Prior to the commencement of construction works (save for Enabling Works) for each relevant phase or sub-phase of the development (as defined in plans and documents approved pursuant to Condition 5), full details of any vehicular or pedestrian river crossings or underpasses on main rivers, or other relevant works (e.g. realignment of a watercourse), informed by a detailed Water Framework Directive assessment, for that phase or sub-phase shall be submitted to, and approved in writing by, the Local Planning Authority.

This should include (as relevant to that phase of the development):

a) Detailed plans, long-sections and cross-sections of the road or pedestrian crossing/ underpass structure or other relevant works, and its relationship to the main river channel and corridor, with specific provision for the diversion of Pole Hole Brook, potential realignment of Fiddlers Brook at Fiddlers Bridge and the new pedestrian bridge between Pye Corner and Terlings Park;
b) A minimum of an 8 metre unobstructed buffer zone is maintained around main rivers for access and biodiversity, except adjacent to structures (as shown on the approved plans in Condition 2). Any reduction must demonstrate how any impacts on flood risk, water quality or biodiversity are to be mitigated or compensated for, taking into account the Water Framework Directive and be agreed in writing with the Local Planning Authority.

The development shall be fully implemented and subsequently maintained, in accordance with the details approved or with any amendments as may subsequently be agreed, in writing, by the Local Planning Authority.

Reason: To ensure compliance with the Water Framework Directive and the protection of wildlife and supporting habitat and to secure opportunities for enhancing the site's nature conservation value. This approach is supported by paragraphs 174 and 180 of the NPPF 2021 and Policy WAT3 'Water Quality and Water Environment' of the East Herts District Plan 2018, and Policy PL11 'Water Quality, Water Management, Flooding and Sustainable Drainage Systems' of the Harlow Local Development Plan (2020).

10. Details of Stort Navigation (canal) crossing and related structures (in respect of management of the navigable water way and its amenities)

Prior to the commencement of any phase or sub-phase of the development (save for Enabling Works) related to the Stort Navigation canal road bridge (as defined in plans and documents approved pursuant to Condition 5), full details of the following shall be submitted to and approved in writing by the local planning authorty;

a) Details of materials and finishes to be used in the construction of the canal road bridge abutments, beams, deck and parapets;
b) Details of vehicle and pedestrian restraint systems;

c) A lighting strategy for the towpath tunnel which demonstrates how a balance can be achieved between ensuring safety for vehicles, pedestrians, cyclists and users of the highway whilst also ensuring that the proposals would not cause an unacceptable impact on amenity, biodiversity or landscape and visual effects;
d) A maintenance strategy in relation to the above.

The canal road bridge shall thereafter be implemented in accordance with the approved details prior to its first use.

Reason: To ensure the proposals have no adverse impact on highway safety, amenity or the character, appearance and biodiversity of the Stort Navigation (canal) or the use of its towpath and in accordance with policies TRA2 'Safe and Suitable Highway Access Arrangements and Mitigation', NE3 'Species and Habitats', EQ3 'Light Pollution', CFLR3 'Public Rights of Way', CFLR4 'Water Based Recreation' and WAT3 'Water Quality and the Water Environment' of the East Herts District Plan (2018) and Policies WE1 'Strategic Green Infrastructure', WE3 'General Strategy for Biodiversity and Geodiversity'PL11 'Water Quality, Water Management, Flooding and Sustainable Drainage Systems', PL1 'Design Principles for Development', PL2 'Amenity Principles for Development' PL8 'Green Infrastructure and Landscaping', PL9 'Biodiversity and Geodiversity Assets', PL10 'Pollution and Contamination', and IN2 'Impact of Development on the Highways Network including Access and Servicing' of the Harlow Local Development Plan (2020).

11. Lighting Strategy

Prior to the commencement of construction works (save for Enabling Works) for each phase or sub-phase of the development (as defined in plans and documents approved pursuant to Condition 5), a Lighting Strategy for that phase or sub-phase shall be submitted to and approved in writing by the Local Planning Authority.

The Strategy shall include the following details as a minimum:

a) Details of the proposed location(s) of all lighting to be installed.
b) Details of the make and model of the proposed lighting.
c) A LUX plan demonstrating the light spill from the proposed lighting.
d) A timetable for provision.

e) An operation and maintenance plan.

The strategy shall demonstrate how a balance can be achieved between ensuring safety for pedestrians, cyclists and users of the highway whilst also ensuring that the lighting proposals would not cause an unacceptable impact on amenity, biodiversity or landscape and visual effects.

The strategy shall demonstrate how consideration has been given to new and alternative technologies and innovative approaches to securing appropriate levels of light and reduction of energy consumption.

The approved lighting strategy shall thereafter be implemented in accordance with the approved details.

Reason: In the interests of highway safety, the river environment, its users and its biodiversity and in accordance with policies TRA2 'Safe and Suitable Highway Access Arrangements and Mitigation', NE3 'Species and Habitats', EQ3 'Light Pollution', CFLR3 'Public Rights of Way', CFLR4 'Water Based Recreation' CC2 'Climate Change Mitigation', CC3 'Renewable and Low Carbon Energy' and WAT3 'Water Quality and the Water Environment' of the East Herts District Plan (2018) and Policies WE1 'Strategic Green Infrastructure', WE3 'General Strategy for Biodiversity and Geodiversity'PL11 'Water Quality, Water Management, Flooding and Sustainable Drainage Systems', PL1 'Design Principles for Development', PL2 'Amenity Principles for Development', 'PL3 Sustainable Design, Construction and Energy Usage', PL8 'Green Infrastructure and Landscaping', PL9 'Biodiversity and Geodiversity Assets', PL10 'Pollution and Contamination', and IN2 'Impact of Development on the Highways Network including Access and Servicing' of the Harlow Local Development Plan (2020).

12. Terlings Park and Stort Valley Noise Mitigation – East Herts Council only

Prior to the commencement of construction works (save for Enabling Works) on Road 1 of the development (as defined in plans and documents approved pursuant to Condition 5), full details of the following shall be submitted to and approved in writing by the local planning authorty in consultation with the local highway authority;

a) For Road 1, a detailed noise attenuation scheme based on Drawings HNP495-GRA-X-XX- DR-L-5122 Rev 11 (Eastern Stort Crossing (Western Spur) Planting Plan 2/3); and HNP495-GRA-X-XX- DR-L-5309 Rev 04 (Eastern Stort Crossing Planting Section)
b) For Road 3, demonstration that the proposed vehicle restraint barrier will be of a specification suitable for achieving noise attenuation within the Stort Valley

The approved scheme noise attenuation scheme shall thereafter be implemented in accordance with the approved scheme prior to first public use of the relevant phase of the development.

Reason: To protect residential amenities in this location in accordance with policy EQ2 'Noise Pollution' of the East Herts District Plan (2018).

Construction Management Matters

13. Construction Environment Management (CEMP)
Prior to the commencement of construction works (save for Enabling Works, but excluding site clearance, demolition and tree removal) for each phase or sub-phase of the development (as defined in plans and documents approved pursuant to Condition 5), a detailed Construction Environmental Management Plan (CEMP) for that phase or sub-phase of the development shall be submitted to and approved in writing by the Local Planning Authority.

CEMPs shall include the following as a minimum:

a) Updated Code of Construction Practice;
b) The construction programme and phasing;
c) Hours of operation and delivery of materials;
d) Details of any highway works necessary to enable construction to take place, including access;
e) Parking and loading arrangements;
f) Emergency planning response including fire prevention and control and worker welfare

g) Bird Hazard Management Plan to mitigate risks to highway and aerodrome safety caused by the hazard from birds attracted to the site during construction;
h) Details of site compound: location relative to the CSC site, lighting, hoarding, security, parking, material storage areas, and utilities, including measures taken to utilise renewable energy sources and to reduce energy consumption;
i) Control of dust and dirt on the public highway including siting and details of wheel washing facilities, cleaning of site entrances, site tracks and the adjacent public highway;
j) Details of consultation and complaint management with local businesses and neighbours including contact details;
k) Waste management proposals;
l) Mechanisms to deal with environmental and heritage impacts such as noise and vibration, air quality and dust, light and odour, including pollution incident response processes; and
m) Surface water management plan during construction;
n) Demonstrate how the CEMP for that phase has been cognisant of the CEMP(s) for prior phases.

All works shall be carried out in accordance with the approved relevant CEMP thereafter, or with any amendments as may subsequently be agreed, in writing, by the Local Planning Authority.

Reason: In the interests of amenity and to limit and control environmental impacts in accordance with policies TRA2 'Safe and Suitable Highway Access Arrangements and Mitigation', DES4, 'Design of Development', EQ2 'Noise Pollution', EQ4 'Air Quality', WAT1 'Flood Risk Management', WAT2' Source Protection Zones' and WAT3 'Water Quality and the Water Environment' of the adopted East of the East Herts District Plan (2018) and Policies PL2 'Amenity Principles for Development', PL10 'Pollution and Contamination', PL11 'Water Quality, Water Management, Flooding and Sustainable Drainage Systems' and IN2 'Impact of Development on the Highways Network including Access and Servicing' of the Harlow Local Development Plan (2020).

14. Construction Traffic Management (CTMP)

Prior to the commencement of construction works (save for Enabling Works, but excluding site clearance, demolition and tree/ vegetation removal) for each phase or sub-phase of the development (as defined in plans and documents approved pursuant to Condition 5), a Construction Traffic Management Plan (CTMP) for that phase or sub-phase shall be submitted to and approved in writing by the Local Planning Authority.

CTMPs shall include the following details as a minimum:

a) Construction vehicle numbers, type, routing;
b) Access arrangements to the site;
c) Traffic management requirements;
d) Delivery and unloading arrangements;
e) A construction travel plan to include site operatives and other on-site personnel
f) Timing of construction activities (including delivery times and removal of waste) and to avoid school pick up/drop off times;
g) Provision of sufficient on-site/ compound parking prior to commencement of construction activities;
h) Post construction restoration/reinstatement of the working areas and temporary access to the public highway;
i) Where works cannot be contained wholly within the site a plan should be submitted showing the site layout on the highway including extent of hoarding, pedestrian routes and remaining road width for vehicle movements.
j) Measures to be taken to seek approval from the highway authority that the highway extent has been marked out accurately prior to construction.
k) Demonstrate how the CTMP for that phase has been cognisant of the CTMP(s) for prior phases.

Thereafter, the construction of the development shall only be carried out in accordance with the approved CTMP, or with any amendments as may subsequently be agreed, in writing, by the Local Planning Authority.

Reason: To protect highway safety and the amenity of users of the public highway and rights of way in accordance with policies TRA2 ‘Safe and

Suitable Highway Access Arrangements and Mitigation', DES4 'Design of Development', EQ2 'Noise Pollution', EQ4 'Air Quality', WAT1 'Flood Risk Management', WAT2 'Source Protection Zones' and WAT3 'Water Quality and the Water Environment' of the adopted East of the East Herts District Plan 2018 and Policies PL1 'Design Principles for Development', PL2 'Amenity Principles for Development', PL10 'Pollution and Contamination', PL11 'Water Quality, Water Management, Flooding and Sustainable Drainage Systems' and IN2 'Impact of Development on the Highways Network including Access and Servicing' of the Harlow Local Development Plan 2020, as well as relevant Highway Authority policies.

15. Construction Landscape and Ecological Management (CLEMP)
Prior to the commencement of any construction works (save for Enabling Works, but excluding site clearance, demolition and tree/vegetation removal) for each phase or sub-phase of the development (as defined in plans and documents approved pursuant to Condition 5), a Construction Landscape and Ecological Management Plan (CLEMP) for that phase or sub-phase of the development shall be submitted to and approved in writing by the Local Planning Authority.

CLEMPs shall include the following details as a minimum:

a) Measures taken to minimise impacts on the landscape and landscape character during construction
b) Description and evaluation of features to be managed, including bat commuting routes and other ecologically sensitive areas or species, trees, hedgerows, woodlands, watercourses and other existing environmental features on-site and off-site
c) Measures to be taken to protect and manage the features identified above during the construction process, including pre-construction checks, construction methodology, and watching briefs/Ecological Clerk of Works
d) Details of the body or organisation responsible for implementation of the CLEMP and timetables for implementation
e) Details of ongoing monitoring (including timetables) and details of how and when any remedial action will be identified, agreed and implemented

f) Demonstrate how the CLEMP for that phase has been cognisant of the CLEMP(s) for prior phases.

Thereafter, the construction of the development shall only be carried out in accordance with the approved CLEMP, or with any amendments as may subsequently be agreed, in writing, by the Local Planning Authority.

Reason: To secure the protection of existing landscape features and habitats of ecological interest and protected species in accordance with Policies NE1 'International, National and Locally Designated Nature Conservation Sites', and NE3 'Species and Habitats' of the East Herts District Plan (2018) and Policies WE3 'General Strategy for Biodiversity and PL9 'Biodiversity and Geodiversity Assets', of the Harlow Local Development Plan (2020).

Environmental Protection Matters

16. Implementation of Floodplain Compensation Measures

The development hereby permitted shall be carried out in complete accordance with the submitted Highways Drainage Strategy and Drawing VD17516-EC-107-BE and the following measures they detail:

a) Compensatory storage shall be provided by lowering the existing ground below the footprint of the Eastern Crossing culverts in accordance with drawing VD17516-EC-107-BE and the Highways Drainage Strategy Technical Note (Chapter 8, bullet point 5). A compensation area of 1,455m3 will be provided. These measures shall be fully implemented in accordance with the scheme's timing/phasing arrangements.

The measures detailed above shall be retained thereafter throughout the lifetime of the development.

Reason: To reduce the risk of flooding to the proposed development and future occupants and prevent flooding elsewhere by ensuring that compensatory storage of flood water is provided in accordance with Policy WAT1 'Flood Risk Management' of the East Herts District Plan (2018) and Policy PL11 'Water Quality, Water Management, Flooding and Sustainable Drainage Systems' of the Harlow Local Development Plan (2020).

17. Water Framework Directive Mitigation and Enhancement Strategy
No phase or sub-phase of the development (as defined in plans and documents approved pursuant to Condition 5), shall take place until a Water Framework Directive Mitigation and Enhancement Strategy for that phase or sub-phase has been submitted to, and approved in writing by, the Local Planning Authority.

The strategy for that phase or sub-phase shall be carried out as approved and any subsequent variations shall be agreed in writing by the Local Planning Authority.

The scheme shall include the following elements as relevant to that phase or sub-phase:

a) Evidence that the development will cause no deterioration of waterbody status, nor prevent future improvement to the waterbody, nor contribute to cumulative deterioration of the River Stort and Stort Navigation, Fiddlers' Brook and their associated tributaries (e.g. Pole Hole Brook) using up to date Water Framework Directive classification data;
b) Long-term objectives, management responsibilities and maintenance schedules;
c) Update the existing scour assessment in the current Water Framework Directive assessment to confirm impacts and mitigation requirements (if additional mitigation needed) for the final design;
d) Details of any proposed enhancements to watercourses and their corridors to support improving overall Water Framework Directive status (with reference to the approved Species and Habitat Protection and Enhancement Plan);
e) Consider the options and feasibility of modifications to the existing Fiddlers Brook culvert under Eastwick Road at Pye Corner, and the potential to increase its diameter for environmental benefit, taking into account flood risk impacts, other environmental constraints, as well as the cost implication and engineering constraints.

Reason: To ensure compliance with the Water Framework Directive and the protection and enhancement of biodiversity in accordance with Policy WAT3

'Water Quality and Water Environment' of the East Herts District Plan (2018) and Policy PL11 'Water Quality, Water Management, Flooding and Sustainable Drainage Systems' of the Harlow Local Development Plan (2020).

18. Risk Assessment and Method Statement

Prior to the commencement of any construction works (save for Enabling Works) for each phase or sub-phase of the development that involves works adjacent to the Stort Navigation (canal) (as defined in plans and documents approved Pursuant to Condition 5), a risk assessment and method statement outlining all works to be carried out adjacent to or affecting (directly or indirectly) the Stort Navigation (canal) in that phase or sub-phase must be submitted to, and approved in writing, by the Local Planning Authority.

The submitted details will include an assessment of any works to the banks of the River Stort Navigation and any works that may increase loading on the canal infrastructure.

Development shall thereafter be carried out in accordance with the approved risk assessment and method statements relevant to that phase or sub-phase.

Reason: To ensure that the works have no adverse impact on the structural integrity of the river walls and towpath. Information should be provided prior to commencement as impacts on the canal corridor may occur during the initial demolition and construction phases. In the interests of users of the Stort Navigation and the water environment in accordance with WAT3 'Water Quality and the Water Environment' of the East Herts District Plan (2018) and Policy PL11 'Water Quality, Water Management, Flooding and Sustainable Drainage Systems', of the Harlow Local Development Plan (2020).

19. Land, Air and Water Contamination Investigation and Remediation

Prior to the commencement of any construction works (save for Enabling Works) for each phase or sub-phase of the development (as defined in plans and documents approved pursuant to Condition 5), an Investigation and Remediation Strategy to deal with the risks associated with the contamination of land, air and water relevant to that phase or sub-phase

shall be submitted to, and approved in writing by, the Local Planning Authority.

The investigation and remediation strategy shall include the following elements:

a) A site investigation scheme, based on the preliminary risk assessment/desk studies, to provide information for a detailed assessment of the risk to all receptors that may be affected, including those off-site;
b) The results of the site investigation and the detailed risk assessment referred to in a) and, based on these, an options appraisal and remediation strategy giving full details of the remediation measures required and how and when they are to be undertaken;
c) A verification plan providing details of the data that will be collected in order to demonstrate that the works set out in the remediation strategy in b) are complete and identifying any requirements for longer-term monitoring of pollutant linkages, maintenance and arrangements for contingency action.

The Remediation Strategies shall thereafter be implemented in complete accordance with the approved details.

Reason: To ensure that the development does not contribute to and is not put at unacceptable risk from, or adversely affected by, unacceptable levels of land, air or water pollution in accordance with Policies EQ1 'Contaminated Land and Land Instability' and WAT3 'Water Quality and Water Environment' of the East Herts District Plan (2018) and Policies PL10 'Pollution and Contamination' and PL11 'Water Quality, Water Management, Flooding and Sustainable Drainage Systems' of the Harlow Local Development Plan (2020).

20. Land, Air and Water Contamination Verification Report

Prior to the completion of each phase or sub-phase of the development (as defined in plans and documents approved pursuant to Condition 5), a Verification Report demonstrating the completion of works set out in the approved remediation strategy and the effectiveness of the remediation for that phase or sub-phase shall be submitted to, and approved in writing, by the Local Planning Authority.

The report shall include results of sampling and monitoring carried out in accordance with the approved verification plan to demonstrate that the site remediation criteria have been met.

Reason: To ensure that the site does not pose any further risk to human health or the water environment by demonstrating that the requirements of the approved investigation and remediation strategy and its remediation criteria have been met and that remediation of the site is complete in accordance with Policies EQ1 'Contaminated Land and Land Instability' and WAT3 'Water Quality and Water Environment' of the East Herts District Plan (2018) and Policies PL10 'Pollution and Contamination' and PL11 'Water Quality, Water Management, Flooding and Sustainable Drainage Systems' of the Harlow Local Development Plan (2020).

21. Contamination Monitoring and Maintenance Plan

Prior to the commencement of any construction works (save for Enabling Works) for each phase or sub-phase of the development (as defined in plans and documents approved pursuant to Condition 5), a Monitoring and Maintenance plan for that phase or sub-phase in respect of land, air and water contamination, including a timetable of monitoring and submission of reports to the Local Planning Authority has been submitted to and approved in writing by, the Local Planning Authority.

The Monitoring and Maintenance Plan shall cover the period of construction of that phase or sub-phase plus a period of six months, and shall be cognisant of prior phases or sub-phases.

The Monitoring and Maintenance Plan shall thereafter be fully implemented and complied with in accordance with the approved details.

Reason: To ensure that the site does not pose any further risk to human health or the water environment by demonstrating that the requirements of the approved monitoring and maintenance plan have been met in accordance with Policies EQ1 'Contaminated Land and Land Instability' and WAT3 'Water Quality and Water Environment' of the East Herts District Plan (2018) and Policies PL10 'Pollution and Contamination' and PL11 'Water

Quality, Water Management, Flooding and Sustainable Drainage Systems' of the Harlow Local Development Plan (2020).

22. Unsuspected Contamination

If, during site investigation works and/or development, contamination not previously identified is found to be present at the site then all works in that phase or sub-phase must immediately cease and no further development shall be carried out in that phase or sub-phase until a remediation strategy detailing how this contamination will be dealt with has been submitted to, and approved in writing by, the Local Planning Authority without delay.

The remediation strategy shall thereafter be implemented in accordance with the approved details.

Reason: To ensure that the development does not contribute to and is not put at unacceptable risk from or adversely affected by unacceptable levels of land or water pollution from previously unidentified contamination sources at the development site. No site investigation can fully characterise a site. This approach is in accordance with Policies EQ1 'Contaminated Land and Land Instability' and WAT3 'Water Quality and Water Environment' of the East Herts District Plan (2018) and Policies PL10 'Pollution and Contamination' and PL11 'Water Quality, Water Management, Flooding and Sustainable Drainage Systems' of the Harlow Local Development Plan (2020).

23. Site Waste Management Plan

Prior to the commencement of any demolition or construction works (save for Enabling Works, but excluding demolition), for each phase or sub-phase of the development (as defined in plans and documents approved pursuant to Condition 5), a Site Waste Management Plan (SWMP) for that phase or sub-phase shall be submitted to and approved in writing by the Local Planning Authority.

The Site Waste Management Plan shall set out the following:

a) Details of waste arising during both the site preparation, demolition and construction phases- type and estimated volume;

b) Confirmation that opportunities to reuse waste generated by the site are maximised;
c) where residual waste is to be disposed from the site, details shall be provided as to the volumes, type and timing of waste disposal from the site;
d) Where waste is being transported to, together with details of the waste carrier;

Demolition and construction shall take place in accordance with the relevant approved Site Waste Management Plan for that phase or sub-phase.

Reason: In order to minimise waste and ensure most sustainable disposal in accordance with Policy CC2 'Climate Change Mitigation' of the East Herts District Plan (2018) and Policy PL3 'Sustainable Design, Construction and Energy Usage' of the Harlow Local Development Plan (2020).

24. Infiltration Drainage

No drainage systems for the infiltration of surface water to the ground are permitted other than with the written consent of the Local Planning Authority. Any proposals for such systems must be supported by an assessment of the risks to controlled waters.
The development shall be carried out in accordance with the approved details.

Reason: This condition relates to where contamination is present and may be mobilised due to the infiltration of surface water or where contaminated surface water may result in an input of contaminants to groundwater. To ensure that the development does not contribute to, and is not put at unacceptable risk from or adversely affected by, unacceptable levels of water pollution caused by mobilised contaminants. This approach is in accordance with Policies EQ1 'Contaminated Land and Land Instability' and WAT3 'Water Quality and Water Environment' of the East Herts District Plan (2018) and Policies PL10 'Pollution and Contamination' and PL11 'Water Quality, Water Management, Flooding and Sustainable Drainage Systems' of the Harlow Local Development Plan (2020).

25. Piling/Deep Foundations Method Statement

No piling, deep foundations or other intrusive groundworks (investigation boreholes/tunnel shafts/ground source heating and cooling systems) using penetrative methods shall be undertaken until a Piling/ Deep Foundation Method Statement has first been submitted to and approved in writing by the Local Planning Authority in consultation with potentially affected parties responsible for sub-surface infrastructure.

The Statement shall include an assessment of impacts on noise, vibration, land stability, ground water levels, underground pipes and other infrastructure as well as details of the measures to be taken to mitigate any adverse effects.

The groundworks shall thereafter be carried out in accordance with the approved details.

Reason: To ensure that the proposed Piling, deep foundations or other intrusive groundworks (investigation boreholes/tunnel shafts/ground source heating and cooling systems) do not harm groundwater resources, damage essential infrastructure and do not have an adverse impact on the local amenity in accordance with Policies EQ1 'Contaminated Land and Land Instability', EQ2 'Noise Pollution' and WAT3 'Water Quality and Water Environment' of the East Herts District Plan (2018) and Policies PL10 'Pollution and Contamination' and PL11 'Water Quality, Water Management, Flooding and Sustainable Drainage Systems' of the Harlow Local Development Plan (2020).

26. Scheme for Managing Borehole Investigation

Prior to commencement of any phase or sub-phase of the development (as defined in plans and documents approved pursuant to Condition 5), that involves the installation of, or use of, existing boreholes, a scheme for managing any borehole installed for the investigation of soils, groundwater or geotechnical purposes shall be submitted to and approved in writing by the Local Planning Authority.

The scheme shall provide details of how redundant boreholes are to be decommissioned and how any boreholes that need to be retained, post-

development, for monitoring purposes will be secured, protected and inspected.

The scheme as approved shall be implemented prior to the operational use of each phase or sub-phase of development and no boreholes should be decommissioned until it has been agreed in writing that they are no longer required.

Reason: To ensure that a sufficient monitoring network is maintained to allow for the completion of any monitoring required and to ensure that redundant boreholes are safe and secure, and do not cause groundwater pollution or loss of water supplies in accordance with Policy WAT3 'Water Quality and Water Environment' of East Herts District Plan (2018) and Policies PL10 'Pollution and Contamination' and PL11 'Water Quality, Water Management, Flooding and Sustainable Drainage Systems' of the Harlow Local Development Plan (2020).

27. Implementation of Drainage Strategy

The development hereby approved shall be carried out in accordance with the principles of the approved Drainage Strategy (Reference number: EHUK-VEC-1XX-XX—TN-D-9001 B) and shall include and follow the mitigation details identified for each drainage catchment including:

a) Specification to demonstrate and follow an appropriate Sustainable Drainage System (SuDS) management and treatment train.
b) Prioritise on-surface conveyance features.
c) Provision of biodiversity enhancement within SuDS provision.
d) Provision of drainage catchments as per the agreed characteristic below – or such discharge rates and storage volumes agreed with the Local Planning Authority following detailed design:

- **Catchment E1 –** limiting the surface water runoff generated by the critical storm events to the maximum of 11.5 l/s for the 1 in 30 year event providing a minimum of 610m^3 of storage.
- **Catchment E2 –** limiting the surface water runoff generated by the critical storm events to the maximum of 7.9 l/s for the 1 in 30 year event providing a minimum of 416m^3 of storage.

- **Catchment E3 –** limiting the surface water runoff generated by the critical storm events to the maximum of 10.6 l/s for the 1 in 30 year event providing a minimum of 556m^3 of storage.
- **Catchment E4 –** limiting the surface water runoff generated by the critical storm events to the maximum of 8.7 l/s for the 1 in 30 year event providing a minimum of 412m^3 of storage.
- **Catchment E5 –** limiting the surface water runoff generated by the critical storm events to the maximum of 5 l/s for the 1 in 30 year event providing a minimum of 230m^3 of storage.
- **Catchment Road 2 –** limiting the surface water runoff generated by the critical storm events to the maximum of 14.2 l/s for the 1 in 30 year event providing a minimum of 749m^3 of storage.
- **Catchment Eastwick Road –** limiting the surface water runoff generated by the critical storm events to the maximum of 5 l/s for the 1 in 30 year event providing a minimum of 25m^3 of storage.

The mitigation measures shall be fully implemented prior to operational use of the development and subsequently in accordance with the timing / phasing arrangements embodied within the scheme, or within any other period as may subsequently be agreed, in writing, by the Local Planning Authority.

Reason: To ensure the development appropriately addresses climate change and the risk of flooding, to ensure satisfactory storage of and disposal of surface water from the entire strategic drainage network, to improve and protect water quality and to protect natural habitats in accordance with Policy WAT3 'Water Quality and Water Environment' of East Herts District Plan (2018) and Policy PL11 'Water Quality, Water Management, Flooding and Sustainable Drainage Systems' of the Harlow Local Development Plan (2020).

28. Detailed Surface Water Drainage Scheme

Prior to the commencement of each phase or sub-phase of the development (save for Enabling Works) (as defined in plans and documents approved pursuant to Condition 5), a Detailed Surface Water Drainage Scheme for that phase or sub-phase, or for the whole affected catchment based on the approved Drainage Strategy and sustainable drainage principles, shall be submitted to and approved in writing by the Local Planning Authority in

consultation with Hertfordshire County Council/ Essex County Council as Lead Local Flood Authorities.

The Scheme shall accord with the approved SuDS principles and shall include the following details as relevant to that phase or sub-phase:

a) Demonstration of an appropriate, final and detailed SuDS management and treatment train for each outfall.
b) Information on ground conditions, including desk-based assessment, exploratory hole logs, in-situ test data, including infiltration tests undertaken in accordance with the BRE 365 testing procedure and, records of groundwater level monitoring, undertaken for a minimum period of 6 months over the autumn/winter period. .
c) Verification of the suitability of infiltration of surface water for the development.
d) Any existing drainage network within the extents of the planning application boundary, into which new highway runoff is being discharged, shall be checked to be functional/operational and the highway authority to be advised of existing blockages which need maintenance to repair. Additional attenuation storage shall be provided if identified as required, to reflect any net increases in runoff quantities being discharged into the existing networks, to avoid downstream flooding.
e) Detailed plan showing the finalised drainage catchment areas.
f) Full, detailed modelling for the strategic network to demonstrate how the system operates during up to and including the 1 in 1 year, the 1 in 30 year and the 1 in 100 year rainfall event including 40% allowance for climate change. Primarily surface water storage to be provided for up to and including the 1 in 30 year rainfall event.
g) Full detailed engineering drawings of any SuDS, surface water storage or conveyance feature including cross and long sections, location, size, volume, depth and any inlet and outlet features. This should be supported by a clearly labelled, detailed drainage layout plan showing any SuDS and pipe networks. The plan should show any pipe 'node numbers' that have been referred to in network calculations and it should also show invert and cover levels of manholes. Total storage volumes provided within each catchment should be identified.

h) Identification of opportunities to address existing surface water flooding in the immediate vicinity of the development site, within the extents of the red line planning application boundary.

i) Detailed topographical surveys of the site and any existing watercourses.

j) A Catchment Walkover of receiving watercourses shall be undertaken including topographical survey, details of water levels, and the location of existing structures that may constrain flows along watercourses receiving surface water runoff from the development, to ensure that there is sufficient capacity to accommodate future changes in flows.

k) Full condition survey of all existing structures on all watercourse networks impacted by the proposed development or located within the development site.

l) Full details of connection points to ordinary watercourses and main rivers, including cross sections and long sections drawings of any new proposed structures.

m) Details of final exceedance routes above the designed 1 in 30 year return period, also including those for an event which exceeds to 1:100 rainfall event including climate change event.

n) A management and maintenance plan including maintenance and operational activities. This should include land ownership plans with identified operators responsible for any future maintenance for the lifetime of the development.

o) Phasing plan for the provision of SuDS and drainage infrastructure within each drainage catchment.

p) Final, detailed planting plans for all proposed SuDS features and its surrounding area.

q) Assessment of all works impacting on any existing ordinary watercourses and identification with acknowledgement of any needed ordinary watercourse consents.

r) Demonstrate that all storage features can half empty within 24 hours for the 1 in 30 year plus 40% climate change critical storm event.

s) The appropriate level of treatment for all runoff leaving the site, in line with the Simple Index Approach in chapter 26 of the CIRIA SuDS Manual C753 and Highways England Water Risk Assessment Tool (HEWRAT).

t) A written report summarising the final strategy and highlighting any minor changes to the approved strategy.

The surface water drainage network shall be designed and fully implemented in accordance with the details and phasing plan thus approved.

Reason: To prevent flooding by ensuring the satisfactory storage of / disposal of surface water from the site; to ensure the effective operation of SuDS features over the lifetime of the development; and to provide mitigation of any environmental harm which may be caused to the local water environment. Failure to provide the above required information before commencement of works may result in a system being installed that is not sufficient to deal with surface water occurring during rainfall events and may lead to increased risk and pollution hazard from the site. This is in accordance with Policy WAT3 'Water Quality and Water Environment' of East Herts District Plan (2018) and Policy PL11 'Water Quality, Water Management, Flooding and Sustainable Drainage Systems' of the Harlow Local Development Plan (2020).

29. SuDS Completion and Verification Report

Within three months of completion of SuDS works for each phase or sub-phase (as defined in plans and documents approved pursuant to Condition 5), or for a defined catchment relevant to the development, a final Completion and Verification Report for that phase or sub-phase or catchment shall be submitted to, and approved in writing by the Local Planning Authority in consultation with Hertfordshire County Council/ Essex County Council as Lead Local Flood Authorities.

The Completion and Verification Report shall include the following details:

a) Provision of a Completion and Verification Report appended with substantiating evidence demonstrating the approved construction details and specifications for the SuDS features and drainage network have been implemented in accordance with the surface water drainage scheme. The verification report shall include photographs of excavations and soil profiles/horizons, installation of any surface

water structure, during construction and final make up, and the control mechanism.

b) Provision of a complete set of as built drawings for site drainage.

c) Post-construction surveys including a CCTV survey for any underground features and piped networks.

d) A management and maintenance plan for the SuDS features and drainage network, which should include details of the maintenance activities/ frequencies for each feature.

e) Final arrangements for adoption with identified operators responsible for future maintenance and any other measures to secure the operation of the scheme throughout its lifetime.

Reason: To ensure approved drainage measures are fully implemented and appropriate maintenance arrangements are put in place to enable the surface water drainage system to function as intended to ensure mitigation against flood risk. Failure to provide the above required information prior to occupation may result in the installation of a system that is incomplete and / or not properly maintained and may increase flood risk or pollution hazard from the site. This is in accordance with Policy WAT3 'Water Quality and Water Environment' of East Herts District Plan (2018) and Policy PL11 'Water Quality, Water Management, Flooding and Sustainable Drainage Systems' of the Harlow Local Development Plan (2020).

Landscape and Biodiversity Matters

30. Tree and Hedge Removal

Until the end of five years following completion of each phase of the development (as defined in plans and documents approved pursuant to Condition 5), all existing trees and hedges which are shown on the approved drawings as being retained, shall be retained and shall not be damaged, cut down, uprooted or destroyed without the prior consent of the Local Planning Authority.

Reason: To ensure the continuity of amenity afforded by existing trees and hedges, in accordance with Policy DES3 'Landscaping' of the East Herts District Plan (2018) and Policy PL7 'Trees and Hedgerows' of the Harlow Local Development Plan (2020).

31. Tree and Hedge Protection Measures

No phase or sub-phase of development (as defined in plans and documents approved pursuant to Condition 5) shall commence until full details of the tree and hedge protection measures in respect of that phase or sub-phase have been submitted to, and approved in writing by, the Local Planning Authority and until the approved protection has been erected on site.

Protection measures shall be in accordance with BS5837: 2012 Trees in Relation to Design, Demolition and Construction, and be in place for the duration of the works on site. In the event that trees or hedging die, become damaged or otherwise defective within five years of completetion of development within that phase or sub-phase, the Local Planning Authority shall be notified as soon as reasonably practicable, and remedial action agreed and implemented. The agreed remediation strategy and associated planting shall be undertaken during the first available planting season.

Reason: To ensure the continuity of amenity afforded by existing trees and hedges, in accordance with Policy DES3 'Landscaping' of the East Herts District Plan (2018) and Policy PL7 'Trees and Hedgerows' of the Harlow Local Development Plan (2020).

32. Landscaping Strategy and Management and Maintenance Plan

Prior to the first public use of any phase or sub-phase of the development (as defined in plans and documents approved pursuant to Condition 5), a detailed hard and soft Landscaping Strategy for that phase or sub-phase shall be submitted to and approved by the Local Planning Authority, in consultation with the Highway Authority.

The Landscaping Strategy shall include as a minimum the following details:

a) Planting schedule to show species, sizes, number and densities;
b) Planting plans to show the location of proposed planting, based on the approved landscaping drawings but informed by a consideration of the screening properties of the proposed planting;
c) Written specifications to demonstrate cultivation and other operations associated with the establishment of grassland and planting;

d) Details of hard landscaping proposals including surface treatment of SuDS maintenance access routes, fencing, gates, benches, lighting, bins and other structures;
e) Details of signage and wayfinding;
f) Implementation timetables;
g) Landscape Management and Maintenance Plan;
h) Demonstration how the Landscape Strategy for that phase or sub-phase has been cognisant of the Landscape Strategies for prior phases.

The development shall be carried out in accordance with the approved Landscaping Scheme and the approved timetable and Landscape Management and Maintenance Plan.

Any trees or plants that, within a period of five years after planting, are removed, die or become, in the opinion of the Local Planning Authority, in consultation with the Highway Authority, seriously damaged or defective, shall be replaced as soon as is reasonably practicable with others of species, size and number as originally approved, unless the Local Planning Authority gives its written consent to any variation

Reason: In order to provide green infrastructure and landscaping in accordance with Policies NE4 'Green Infrastructure' and DES3 'Landscaping' of the East Herts District Plan (2018) and Policy 'PL8 Green Infrastructure and Landscaping' of the Harlow Local Development Plan (2020).

33. Legally Protected Species and Habitat Protection and Enhancement Plan

No phase or sub-phase of the development (as defined in plans and documents approved pursuant to Condition 5) shall commence (save for Enabling Works, but excluding site clearance, demolition and tree/ vegetation removal), until a Species and Habitat Protection and Enhancement Plan for that phase or sub-phase has been submitted to and approved in writing by the Local Planning Authority.

The Species and Habitat Protection and Enhancement Plan shall detail measures to mitigate and/or compensate damages to protected and notable

species (under The Wildlife and Countryside Act 1981) and their associated habitat.

The Species and Habitat Protection and Enhancement Plan must be based on up-to-date surveys and consider the whole duration of that phase or sub-phase of the development, from the construction phase through to completion.

The plan shall include the following (as far as is relevant to that phase or sub-phase):

a) Up-to-date ecological surveys conducted by a suitably qualified ecologist, at the appropriate time of year;
b) Details and drawings of the road crossings and culverts, including how they will interact with the watercourses (e.g. abutments, buffer zones, shading, lighting);
c) Details of how the development will mitigate and compensate for any impacts it may have on protected species and their associated habitats and habitat corridors including floodplain restoration and how it will enhance habitats and corridors;
d) Details of improvements to watercourse riparian corridors and river channels;
e) Measures to be taken to ensure the safe movement of terrestrial mammals through/ beneath the structures;
f) Measures to be taken to provide bird and bat nesting and roosting sites on or around elevated structures;
g) Measures to be taken to avoid disturbance to landscaping and habitats adjacent to pedestrian/cycle routes;
h) Demonstration of how the above measures contribute towards biodiversity gain based on an up to date biodiversity net gain metric or alternative methodology as agreed by the Local Planning Authority;
i) Description and evaluation of any features to be managed;
j) Any specific ecological trends and constraints on the site that might influence management;
k) Aims, objectives, actions and methods to ensure effective management;
l) Preparation of a works schedule including an annual work plan capable of being rolled forward every 5 years;

m) Details of ongoing management, maintenance, monitoring and remedial measures;
n) A programme for implementation;
o) Details of the body or organisation responsible for implementation and management of the plan;
p) A scheme for the long-term funding and management mechanisms by which implementation, long term management and protection of these species and habitats will be secured.

The development shall be carried out in accordance with the approved details and the plan shall be implemented and the site managed in accordance with the approved details.

Reason: In order to provide an up to date baseline of biodiversity information and to ensure biodiversity is protected as far as possible and habitats are created and enhanced in accordance with Policies NE3 'Species and Habitats' and WAT3 'Water Quality and the Water Environment' of the East Herts District Plan (2018) and Policies WE3 'General Strategy for Biodiversity and Geodiversity' PL11 'Water Quality, Water Management, Flooding and Sustainable Drainage Systems', and PL9 'Biodiversity and Geodiversity Assets' of the Harlow Local Development Plan (2020).

34. Habitat Compensation Ecological Management Plan – On-Site
Prior to the commencement of any phase of the development (as defined in plans and documents approved pursuant to Condition 5) that results in the loss of habitat in the Fiddlers' Brook Marsh/Hollingson Meads Local Wildlife Site, and the Hollingson Meads area, a Habitat Compensation Ecological Management Plan shall be submitted to and approved in writing by the Local Planning Authority setting out how 0.82 Ha of compensatory habitat will be provided within the area of land identified on Drawing HNP495-GRA-SK-0010 – ESC Ecological Compensation.

The Plan shall include the following:

a) Details of how the development will mitigate and compensate for any impacts it may have on protected species and their associated habitats and habitat corridors including floodplain restoration and how it will enhance habitats and corridors;

b) Demonstration of how the above measures contribute towards achieving a biodiversity net gain of a minimum of 9.3% based on an up to date biodiversity metric or alternative methodology as agreed by the Local Planning Authority;
c) Description and evaluation of any features to be managed;
d) Any specific ecological trends and constraints on the site that might influence management;
e) Aims, objectives, actions and methods to ensure effective management;
f) Preparation of a works schedule including an annual work plan capable of being rolled forward every 5 years;
g) Details of ongoing management, maintenance, monitoring and remedial measures;
h) A programme for implementation;
i) Details of the body or organisation responsible for implementation and management of the plan;
j) A scheme for the long-term funding and management mechanisms by which implementation, long term management and protection of these species and habitats will be secured.

Thereafter, the Plan shall be implemented in accordance with the approved details and programme.

Reason: To ensure that the development compensates for the loss of designated sites of nature conservation interest in accordance with Policy NE1 and NE3 of the East Herts District Plan (2018) and Policy PL8 and PL9 of the Harlow Local Development Plan (2020).

35. Habitat Compensation Ecological Management Plan – Off-Site
Prior to the commencement of any phase of the development (as defined in plans and documents approved pursuant to Condition 5) that results in the loss of habitat in the Hollingson Meads area, a Habitat Compensation Ecological Management Plan shall be submitted to and approved in writing by the Local Planning Authority setting out how 4.11Ha of compensatory habitat will be provided within the area of land identified on Drawing HNP495-GRA-SK-0011 Rev 02 – CSC Ecological Compensation.

The Plan must include the following:

a) Details of how the development will mitigate and compensate for any impacts it may have on protected species and their associated habitats and habitat corridors including floodplain restoration and how it will enhance habitats and corridors;
b) Demonstration of how the above measures contribute towards achieving a biodiversity net gain based on an up to date biodiversity metric or alternative methodology as agreed by the Local Planning Authority;
c) Description and evaluation of any features to be managed;
d) Any specific ecological trends and constraints on the site that might influence management;
e) Aims, objectives, actions and methods to ensure effective management;
f) Preparation of a works schedule including an annual work plan capable of being rolled forward every 5 years;
g) Details of ongoing management, maintenance, monitoring and remedial measures;
h) A programme for implementation;
i) Details of the body or organisation responsible for implementation and management of the plan;
j) A scheme for the long-term funding and management mechanisms by which implementation, long term management and protection of these species and habitats will be secured.

Thereafter, the Plan shall be implemented in accordance with the approved details and programme.

Reason: To ensure that the development compensates for the loss of designated sites of nature conservation interest in accordance with Policy NE1 and NE3 of the East Herts District Plan (2018) and Policy PL8 and PL9 of the Harlow Local Development Plan (2020).

36. Biodiversity Monitoring and Verification Plan

Five years following completion of the development hereby approved (plus every five years thereafter for a period of 30 years) a Biodiversity Monitoring and Verification Report and Action Plan shall be submitted to the Local Planning Authority for approval.

The Report shall confirm the effectiveness or otherwise of the Landscape Management and Maintenance Plan (Condition 32), Species and Habitat Protection and Enhancement Plan (Condition 33), Habitat Compensation Ecological Management Plan On-Site (Condition 34) and Habitat Compensation Ecological Management Plan – Off-site (Condition 35). The submission must be made by a suitably qualified professional.

As a minimum the report shall include a suite of quantitative and qualitative indicators using methods such as annual site walkovers, surveys and fixed-point photography, to monitor the implementation and effectiveness of mitigation/ management measures. The report shall include any remediation works required in order to address where measures may not be functioning and/or meeting net gain targets expected. The details of all survey findings shall be shared with Herts Ecological Record database. Any remediation works identified shall thereafter be implemented in accordance with the approved details.

Reason: To ensure that the development maintains, enhances and contributes appropriately to biodiversity in accordance with Policies NE3 'Species and Habitats' and WAT3 'Water Quality and the Water Environment' of the East Herts District Plan (2018) and Policies WE3 'General Strategy for Biodiversity and Geodiversity' PL11 'Water Quality, Water Management, Flooding and Sustainable Drainage Systems', and PL9 'Biodiversity and Geodiversity Assets' of the Harlow Local Development Plan 2020.

Archaeology Matters

37. Archaeological Written Scheme of Investigation

No demolition shall be carried out nor shall any development commence (save for Enabling Works) in any phase or sub-phase of the site (as defined in plans and documents approved pursuant to Condition 5), until an Archaeological Written Scheme of Investigation covering that phase or sub-phase of the site has been submitted to and approved in writing by the Local Planning Authority.

The Written Scheme of Investigation shall include an assessment of archaeological significance and research questions; and details of:

a) The programme and methodology of site investigation and recording as suggested by the evaluation
b) The programme for post investigation assessment
c) Provision to be made for analysis of the site investigation and recording
d) Provision to be made for publication and dissemination of the analysis and records of the site investigation
e) Provision to be made for archive deposition of the analysis and records of the site investigation
f) Nomination of a competent person or person/organisation to undertake the works set out within the Archaeological Written Scheme of Investigation.

Reason: To ensure the appropriate investigation for presence / recording of heritage assets in accordance with Policy HA3 'Archaeology' of the East Herts District Plan (2018) and Policy PL12 'Heritage Assets and their Settings' of the Harlow Local Development Plan (2020).

38. Implementation of Archaeological Investigation

No development shall take place in any phase or sub-phase of the development (as defined in plans and documents approved pursuant to Condition 5) other than in complete accordance with the programme of archaeological investigation and works set out in the Written Scheme of Investigation for that phase approved pursuant to Condition 37.

Reason: to ensure the appropriate investigation for presence / recording of heritage assets and to comply with the requirements of Policy GA1 of the East Herts District Plan 2018, Policy PL12 of the Harlow Local Development Plan and paragraph 211 of the NPPF.

39. Post Archaeological investigation Assessment

No phase or sub-phase of the development (as defined in plans and documents approved pursuant to Condition 5), shall be brought into use until the site investigation and post investigation assessment has been completed for that phase or sub-phase in accordance with the programme set out in the Written Scheme of Investigation approved pursuant to

Condition 37and the provision made for analysis and publication where appropriate.

Reason: To ensure the appropriate investigation for presence / recording of heritage assets in accordance with Policy HA3 'Archaeology' of the East Herts District Plan (2018) and Policy PL12 'Heritage Assets and their Settings' of the Harlow Local Development Plan (2020).

Informatives

All parties involved in implementation of this planning permission are informed that:

A) The permission does not convey any consent which may be required under any legislation other than the Town and Country Planning Acts. Any permission required under the Highways Act, Building Regulations or under any other form of law, must be obtained from the relevant authority or body e.g. Fire Officer, Health and Safety Executive, Environment Agency etc. Neither does this permission negate or override any private covenants which may affect the land.

B) The permission is for construction of new public highway infrastructure. As a result the permission cannot be implemented without the prior approval of the local highway authorities (Hertfordshire County Council and Essex County Council). Before works commence the applicant will need to apply to the Highway Authority to obtain their permission and meet their requirements. In order to implement this permission it will be necessary for the developer of the site to enter into agreements with the County Councils as Highway Authorities under Section 278 and Section 38 of the Highways Act to ensure satisfactory completion of the road improvements. The construction must be undertaken to the Highway Authorities' detailed design / specification and to their satisfaction. Construction must be undertaken by a contractor who is authorised to work in the public highway.

C) A structural reassessment of the deck and associated bearings of Burnt Mill Station Bridge (Essex) is required to be carried out to the latest standards; CS454 for normal traffic loading and CS458 for special type vehicles, prior to the detailed design stage. The results of the reassessment should be submitted to Essex County Council for approval.

D) Implementation also requires:

I. that necessary property rights for use and access to all land required for the extended / enlarged and new highways (including drainage features and drainage rights and connections to existing water courses) have been legally secured in the public interest.

II. that the agreements under Section 38 of Highways Act for the highways authorities to adopt the newly constructed public highway (and any related features that are required for its operation) on its satisfactory completion include financial provision for future maintenance. Highways Development Management teams should be consulted on any drainage features that are proposed for adoption by Hertfordshire County Council/ Essex County Council. Any drainage features to be adopted shall be designed and built to accommodate the Highway Authorities adoption requirements and an appropriate commuted sum, based on the approved feature maintenance plan must be agreed.

E) The highway authorities also advise that, to ensure any works as part of this development are carried out in accordance with other the provisions of the Highways Act 1980 and other relevant processes, the following advice is considered:

I. <u>Public Rights of Way:</u>
Public Rights of Way should remain unobstructed by vehicles, machinery, materials, tools and any other aspects of the construction during works. The safety of the public using the route and any other routes to be used by construction traffic should be a paramount concern during works. Safe passage past the site should be maintained at all times. The condition of the route should not

deteriorate as a result of these works. Any adverse effects to the surface from traffic, machinery or materials (especially overspills of cement and concrete) should be made good to the satisfaction of this Authority. All materials should be removed at the end of the construction and not left on the Highway or Highway verges. If the above conditions cannot reasonably be achieved, then a Temporary Traffic Regulation Order would be required to close the affected route and divert users for any periods necessary to allow works to proceed. A fee would be payable to the relevant County Council for such an order. Further information should be sought in relation to the works that are required along the route including any permissions that may be needed to carry out the works.

II. Obstruction of public highway land:
It is an offence under Section 137 of the Highways Act 1980 for any person, without lawful authority or excuse, in any way to wilfully obstruct the free passage along a highway or public right of way. If this development is likely to result in the public highway or public right of way network becoming routinely blocked (fully or partly) the applicant must contact the Highway Authority to obtain their permission and requirements before construction works commence.

III. Storage of materials:
The applicant is advised that the storage of materials associated with the construction of this development should be provided within the site on land which is not public highway, and the use of such areas must not interfere with the public highway. If this is not possible, authorisation should be sought from the Highway Authority before construction works commence.

IV. Road Deposits:
It is an offence under Section 148 of the Highways Act 1980 to deposit mud or other debris on the public highway, and Section 149 of the same Act gives the Highway Authority powers to remove such material at the expense of the party responsible. Therefore, best practical means shall be taken at all times to ensure that all vehicles leaving the site during construction of the development are in a condition such as

not to emit dust or deposit mud, slurry or other debris on the highway.

F) Other legal procedures providing wider public and private interest safeguards must be satisfied before implementation. These include:

I. Procedural Orders for any changes to existing public highway that affect pubic and / or private interests.

II. Procedural Orders for bridging the navigable waterway.

III. Land drainage procedures, rights and legal requirements taking account of Environment Agency and Lead Local Flood Authority (LLFA) requirements and advice. All works to ordinary watercourses, including widening of the channel to include additional storage will require ordinary watercourse consent from the LLFAs. It is the applicant's responsibility to check that they are complying with common law if the drainage scheme proposes to discharge into an off-site ditch/pipe. The applicant should seek consent where appropriate from other downstream riparian landowners. Any works proposed to be carried out that may affect the flow within an ordinary watercourse will also require the prior written consent from the LLFA under Section 23 of the Land Drainage Act 1991. This includes any permanent and or temporary works regardless of planning permission. The LLFAs have a duty to maintain an asset register and records of assets which have a significant impact on the risk of flooding. In order to capture proposed Sustainable Urban Drainage (SuDS) features which may form part of the future register, details of and location of the SuDS assets created or modified through the development should be provided in a GIS layer on completion of the development.

G) Additional regulatory consideration may be required on some of specialist matters relevant to this permission as follows:

I. Archaeological requirments (Hertfordshire and Essex County Councils)

II. Local Land and Property Gazetteer Custodian requirements (District Councils); the development may involve the naming of new streets and numbering of properties)

III. Sewer protection requirements; the site has public sewers running across or close to it which may be affected by the proposed building works. It may be necessary to divert the sewer and water course and carry out other works to protect it and the proposed building works before any site works are commenced (Thames Water Development Planning, Asset Investment Unit, Maple Lodge, Denham Way, Rickmansworth, WD3 9SQ Telephone: 01923 898072)

IV. Ground water pollution risk; parts of the site are located within the groundwater protection zone of Sawbridgeworth Pumping Station. The construction works and operation of the proposed development should be in accordance with the relevant British Standards and Best Management Practices, thereby significantly reducing the polution risk. Construction works may exacerbate any existing pollution. Please refer to CIRIA Publication C532 'Control of water pollution from construction- guidance for consultants and contractors'

V. Protected species including bats / reptiles / great crested newts; if found during development, works must stop immediately and professional ecological advice must be sought on how to proceed. A licence may be required from Natural England who can be contacted on 01206 796666. Nesting birds are protected under the Wildlife and Countryside Act 1981 and care should be taken in vegetation clearance works between 1st March and 30th September.

These informatives are not intended to be comprehensive. The parties involved in implementing the planning permission are advised to take appropriate legal and technical advice on the other than planning procedures they must follow.

Condition Schedule Appendix A: List of Approved Plans – Eastern Stort Crossing

- VD17516-EC-100-GA (1 of 3) P05 General Arrangement (1 of 3)
- VD17516-EC-100.1 GA (2 of 3) P05 General Arrangement (2 of 3)
- VD17516-EC-101-GA (3 of 3) P04 General Arrangement (3 of 3)
- VD17516-EC-102- LS P03 Road 1 Longitudinal Section Sheet 1 of 3
- VD17516-EC-103- LS P02 Road 2 Longitudinal Section (Sheet 2 of 3)
- VD17516-EC-104-LS P03 Road 3 Longitudinal Section (Sheet 3 of 3)
- VD17516/EC-104.1- LS P01 River Way Longitudinal Section
- VD17516-EC-108- RL P03 Red Line Boundary
- VD17516-EC-110- XS P02 Eastern Stort Crossing Typical Cross Sections Sheet 1 of 2
- VD17516-EC-111-XS P03 Eastern Stort Crossing Typical Cross Sections Sheet 2 of 2
- VD17516-EC-112- TR P01 Village 1 / Terlings Park Access Swept Path Analysis Max Articulated / Refuse Vehicle
- VD17516-EC-113- TR P03 ESC/Pye Corner Junction Swept Path Analysis Max Articulated/10m Rigid Goods Vehicle
- VD17516-EC-114- TR P02 Village 2 Access Swept Path Analysis Max Articulated Goods Vehicle
- VD17516-EC-115- TR P02 Village 2 Access Swept Path Analysis 10m Rigid Goods Vehicle
- VD17516-EC-116- TR P02 Central Roundabout Swept Path Analysis Max Articulated Goods Vehicle
- VD17516-EC-117- TR P02 Central Roundabout Swept Path Analysis 10m Rigid Goods Vehicle
- VD17516-EC-118- TR P02 River Way Roundabout Swept Path Analysis Max Articulated Goods Vehicle

- VD17516-EC-119- TR P02 River Way Roundabout Swept Path Analysis 10m Rigid Goods/Lights Goods Vehicle
- VD17516-EC-119.1- TR P02 River Way Roundabout Swept Path Analysis 10m Rigid Goods Vehicle/Private Car
- VD17516-EC-120- VS P03 Road 1 - Fiddlers' Brook Junction Proposed Design Visibility
- VD17516-EC-120.1- VS P01 Road 1 Village 1 Resi Access Proposed Design Visibility
- VD17516-EC-121- VS P02 Road 2 - Eastwick Road Proposed Design Visibility
- VD17516-EC-122- VS P02 Road 1, 2, 3 - Central Roundabout Proposed Design Visibility
- VD17516-EC-123- VS P02 Road 3 - River Way Roundabout Proposed Design Visibility
- VD17516-EC-123.1- VS River Way Roundabout Vertical Visibility
- VD17516-EC-109- EX P02 Existing Layout Plan
- VD17516-EC-133- TR P01 Burnt Mill Lane – Ghost Island Junction Vehicle Swept Path
- VD17516-EC-140 P03 Proposed Speed Strategy Plan
- VD17516-EC-D141 P01 Existing Speed Limit Plan
- VD17516-EC-142- SURF P02 Proposed vs Existing Levels
- VD17516-EC-151- GEO P02 Roundabout Geometry River Way Roundabout
- VD17516-EC-150- GEO P02 Central Roundabout Geometry Road 1, 2, 3 Roundabout
- VD17516/EC-155- DfS P02 Road 1 Proposed Departure from Standard
- VD17516-RW--RBT- 120-DfS P06 River Way Roundabout Proposed Departure from Standard
- VD17516-EC-170-AP P02 Preliminary Adoption Plan Sheet 1 of 3
- VD17516-EC-171-AP P02 Preliminary Adoption Plan Sheet 2 of 3

- VD17516-EC-172-AP P02 Preliminary Adoption Plan Sheet 3 of 3
- VD17516-EC-180- ST P03 Structures Location Plan
- VD17516-EC-400- VRS P02 Proposed Vehicle Restraint Systems
- VD17516-EC-401-VRS P03 Proposed Vehicle Restraint Systems
- VD17516-V2i-100- GA P01 Village 2 Interim Phase General Arrangement
- VD17516-EC-STR-030 P03 Fiddler's Brook Bridge – Preliminary Design GA Drawings
- VD17516-EC-STR- 040 P02 Stort Valley Flood Crossing - Preliminary Design GA drawings - Sheet 1 of 2
- VD17516-EC-STR- 041 P01 Stort Valley Flood Crossing - Preliminary Design GA drawings - Sheet 2 of 2
- VD17516-EC-STR- 045 P02 Eastern Crossing Road 3 Proposed Structure Stort Valley - Sheet 1 of 2
- VD17516-EC-STR- 046 P01 Eastern Crossing Road 3 Proposed Structure Stort Valley - Sheet 2 of 2
- VD17516-RW-STR- 060 P02 River Way Bridge Preliminary Design General Arrangements
- 18303-FB-6-008 Rev A Fiddlers Bridge – Proposed Structural Repairs
- 1774-01-CIVIC-S-SK01-P04 Fiddlers Bridge, Gilston, Proposed Balustrade
- 200928-3.6-GPA- EC-TPP-MM Tree Protection Plan Eastern Stort Crossing
- HNP495-GRA-X-XX- DR-L-5111 Rev 08 Eastern Stort Crossing Planting Plan 1/5
- HNP495-GRA-X-XX- DR-L-5112 Rev 08 Eastern Stort Crossing Planting Plan 2/5
- HNP495-GRA-X-XX- DR-L-5113 Rev 08 Eastern Stort Crossing Planting Plan 3/5
- HNP495-GRA-X-XX- DR-L-5114 Rev 10 Eastern Stort Crossing Planting Plan 4/5

- HNP495-GRA-X-XX- DR-L-5115 Rev 03 Eastern Stort Crossing Planting Plan 5/5
- HNP495-GRA-X-XX- DR-L-5121 Rev 07 Eastern Stort Crossing (Western Spur) Planting Plan 1/3
- HNP495-GRA-X-XX- DR-L-5122 Rev 11 Eastern Stort Crossing (Western Spur) Planting Plan 2/3
- HNP495-GRA-X-XX- DR-L-5123 Rev 09 Eastern Stort Crossing (Western Spur) Planting Plan 3/3
- HNP495-GRA-X-XX- DR-L-5221 Rev 06 Eastern Stort Crossing (Western Spur) Detailed Planting Plan
- HNP495-GRA-X-XX- DR-L-5309 Rev 04 Eastern Stort Crossing Planting Section
- HNP495-GRA-X-XX- DR-L-5310 Rev 03 Eastern Stort Crossing Planting Elevation 1/2
- HNP495-GRA-X-XX- DR-L-5311 Rev 03 Eastern Stort Crossing Planting Elevation 2/2
- HNP495-GRA-SC- 001_Rev 03 Gilston River Crossings and Village Development Accesses Planting Schedule
- HNP495-GRA-SK-0010_Rev 01 ESC Ecological Compensation
- HNP495-GRA-SK-0011_Rev 02 CSC Ecological Compensation
- Drainage Strategy (Reference number: EHUK-VEC-1XX-XX—TN-D-9001 B)

17.0 Summary of Reasons for Decision

East Herts Council and Harlow Council have considered the applicant's proposal in a positive and proactive manner with regard to the policies of the Development Plan and any relevant material considerations. The balance of the considerations is that permission should be granted for the reasons set out in the above report.