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Hertfordshire Local Transport Plan (LTP4) Strategy

Habitats Regulations Assessment Report

HRA Report
Prepared by LUC
September 2017

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1 Introduction

- 1.1 Hertfordshire County Council (referred to hereafter as 'the Council') is updating the County's transport planning framework to ensure that the transport network is able to support and enable growth. The new Local Transport Plan (LTP4) will be a strategic plan for transport infrastructure in, through and to Hertfordshire that will set out the priorities for investment in the network in the short, medium and long term.
- 1.2 LUC was appointed by the Council in August 2015 to undertake the Habitats Regulations Assessment (HRA) Screening of its emerging Transport Vision on its behalf. The Transport Vision has since been updated and a summary consultation version of the LTP4 was published for consultation in 2016. This HRA Report is therefore a new assessment, based on the current version of the LTP4, but draws on the previous HRA work undertaken in 2015 and 2016 for the Transport Vision, and the previous Local Transport Plan before that.

Background to the preparation of LTP4

- 1.3 The Council adopted its third Local Transport Plan (LTP3) in 2011. The Local Transport Plan is a statutory document that sets out the County Council's vision and strategy for the long-term development of transport in the County.
- 1.4 There have been significant changes to the national and local planning and economic context since the development and adoption of LTP3. At the national level, enabling and supporting the delivery of economic growth is a more prominent theme now than during the development of LTP3. At the local level, actual and forecast population growth both within and beyond the county boundary means that Hertfordshire's ten constituent districts and boroughs need to accommodate more housing. There is a strong commitment to enabling economic growth in the County through the Hertfordshire Local Economic Partnership (including the Council).
- 1.5 As a result of these changes, the Council is updating the County's transport planning framework. A summary form of the LTP4 was issued for consultation at the end of 2016. Following that consultation, the full strategy has now been developed and the final Draft LTP4 (referred to hereafter as 'the LTP4 Strategy') forms the subject of this assessment and will be consulted on in late 2017.

The requirement to undertake Habitats Regulations Assessment of Local Transport Plans

- 1.6 The requirement for local transport authorities to produce Local Transport Plans was established under the Transport Act 2000, as amended by the Local Transport Act 2008, while the need to undertake HRA of Local Transport Plans (as a 'plan' under the general assessment provisions of Regulation 61) was established by the Department for Transport in 2009¹.
- 1.7 The HRA refers to the assessment of the potential effects of a plan on one or more 'Natura 2000' sites, including Special Protection Areas (SPAs) and Special Areas of Conservation (SACs):
 - SPAs are classified under the European Council Directive 'on the conservation of wild birds' (79/409/EEC; 'Birds Directive') for the protection of wild birds and their habitats (including particularly rare and vulnerable species listed in Annex 1 of the Birds Directive, and migratory species).

¹ Department for Transport (2009) Guidance on Local Transport Plans

- SACs are designated under the Habitats Directive and target particular habitats (Annex 1) and/or species (Annex II) identified as being of European importance.
- 1.8 Potential SPAs (pSPAs)², candidate SACs (cSACs)³, Sites of Community Importance (SCIs)⁴ and Ramsar sites should also be included in the assessment.
- Ramsar sites support internationally important wetland habitats and are listed under the Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar Convention, 1971).
- 1.9 For ease of reference during HRA, these designations can be collectively referred to as European sites⁵ despite Ramsar designations being at the international level.
- 1.10 The overall purpose of the HRA is to conclude whether or not a proposal or policy, or whole plan, would adversely affect the integrity of the site in question either alone or in combination with other plans. This is judged in terms of the implications of the plan for a site's 'qualifying features' (i.e. those Annex I habitats, Annex II species, and Annex I bird populations for which it has been designated). Significantly, HRA is based on the precautionary principle meaning that where uncertainty or doubt remains, an adverse impact should be assumed.

Stages of the Habitats Regulations Assessment

- 1.11 **Table 1.1** below summarises the stages involved in carrying out a full HRA, based on various guidance documents^{6,7}.

Table 1-1 Stages in HRA

Stage	Task	Outcome
Stage 1: Screening (the 'Significance Test')	Description of the plan. Identification of potential effects on Natura 2000 sites. Assessing the effects on Natura 2000 sites (taking into account potential mitigation provided by other policies in the plan).	Where effects are unlikely, prepare a 'finding of no significant effects report'. Where effects judged likely, or lack of information to prove otherwise, proceed to Stage 2.
Stage 2: Appropriate Assessment (the 'Integrity Test')	Gather information (plan and Natura 2000 sites). Impact prediction. Evaluation of impacts in view of conservation objectives. Where impacts considered to affect qualifying features, identify alternative options. Assess alternative options. If no alternatives exist, define and evaluate mitigation measures where necessary.	Appropriate Assessment report describing the plan, Natura 2000 site baseline conditions, the adverse effects of the plan on the Natura 2000 site, how these effects will be avoided through, firstly, avoidance, and secondly, mitigation including the mechanisms and timescale for these mitigation measures. If effects remain after all alternatives and mitigation measures have been considered proceed to Stage 3.

² Potential SPAs are sites that have been approved by Government and are currently in the process of being classified as SPAs.

³ Candidate SACs are sites that have been submitted to the European Commission, but not yet formally adopted.

⁴ SCIs are sites that have been adopted by the European Commission but not yet formally designated as SACs by the Government.

⁵ The term 'European site' is interchangeable with the term 'Natura 2000 site' in the context of HRA.

⁶ *Planning for the Protection of Natura 2000 sites. Guidance for Regional Spatial Strategies and Local Development Documents.* Department for Communities and Local Government (DCLG), August 2006.

⁷ *The HRA Handbook.* David Tyldesley & Associates, a subscription based online guidance document: <https://www.dtapublications.co.uk/handbook/>

Stage	Task	Outcome
Stage 3: Assessment where no alternatives exist and adverse impacts remain taking into account mitigation	Identify and demonstrate 'imperative reasons of overriding public interest' (IROPI). Demonstrate no alternatives exist. Identify potential compensatory measures.	This stage should be avoided if at all possible. The test of IROPI and the requirements for compensation are extremely onerous.

- 1.12 In assessing the effects of the LTP4 Strategy in accordance with Regulation 61 of the Conservation of Habitats and Species Regulations 2010, there are potentially two tests to be applied by the competent authority: a 'Significance Test', followed if necessary by an Appropriate Assessment which will inform the 'Integrity Test'. The relevant sequence of questions is as follows:
- Step 1: Under Reg. 61(1)(b), consider whether the plan is directly connected with or necessary to the management of the sites. If not –
 - Step 2: Under Reg. 61(1)(a) consider whether the plan is likely to have a significant effect on the site, either alone or in combination with other plans or projects (the 'Significance Test'). *[These two steps are undertaken as part of Stage 1: Screening shown in Table 1.1 above.]* If Yes –
 - Step 3: Under Reg. 61(2), make an Appropriate Assessment of the implications for the site in view of its current conservation objectives (the 'Integrity Test'). In so doing, it is mandatory under Reg. 61(3) to consult Natural England, and optional under Reg. 61(4) to take the opinion of the general public. *[This step is undertaken during Stage 2: Appropriate Assessment shown in Table 1.1 above.]*
 - Step 4: In accordance with Reg.102(4), but subject to Reg.103, give effect to the land use plan only after having ascertained that the plan will not adversely affect the integrity of the Natura 2000 site.
- 1.13 It is normally anticipated that an emphasis on Stages 1 and 2 of this process will, through a series of iterations, help ensure that potential adverse effects are identified and eliminated through the inclusion of mitigation measures designed to avoid, reduce or abate effects. The need to consider alternatives could imply more onerous changes to a plan document. It is generally understood that so called 'imperative reasons of overriding public interest' (IROPI) are likely to be justified only very occasionally and would involve engagement with both the Government and European Commission.
- 1.14 The HRA should be undertaken by the 'competent authority' - in this case the Council, and LUC has been commissioned to do this on its behalf. The HRA also requires close working with Natural England as the statutory nature conservation body⁸ in order to obtain the necessary information and agree the process, outcomes and any mitigation proposals. The Environment Agency, while not a statutory consultee for the HRA, is also in a strong position to provide advice and information throughout the process as it is required to undertake HRA for its existing licences and future licensing of activities.

HRA work carried out previously for the Local Transport Plan

- 1.15 LTP3 was adopted in 2011 and was subject to HRA screening by Scott Wilson throughout its development (the Appropriate Assessment stage of the HRA was not undertaken). The most recent HRA Screening Report for the LTP3 was produced in June 2010⁹.

⁸ Regulation 5 of *The Conservation of Habitats and Species Regulations 2010*. HMSO Statutory Instrument 2010 No. 490.

⁹ Available at: <http://www.hertsdirect.org/docs/pdf/I/Ltp3hra.pdf>

- 1.16 HRA Screening of the Transport Vision (an early stage in the development of LTP4) was completed by LUC in September 2015¹⁰ and a further HRA Screening of the Summary Document was completed in September 2016¹¹.
- 1.17 This report draws on this previous HRA work, where relevant.
- 1.18 Natural England's consultation response to the HRA Screening of the Transport Vision in 2015 stated:
- "Natural England agrees with the identification of relevant European designated sites. However, Natural England disagrees with the conclusion of the HRA. If there are uncertainties, due to the precautionary principle of the Habitats Regulations and Directive, it must be concluded that there is a likely significant effect. If a likely significant effect is found, mitigation may be considered, followed by the assessment of in combination effects. We understand that there is not enough data to make this assessment yet, and suggest that the HRA is completed in full at Stage 3 of the Vision's development."*
- 1.19 Natural England's previous comments have been taken into account in preparing this version of the HRA.

Structure of this report

- 1.20 This chapter (**Chapter 1**) has described the background to the production of the LTP4 Strategy and the requirement to undertake HRA. The remainder of the report is structured into the following sections:
- **Chapter 2** summarises the LTP4 Strategy and its potential effects.
 - **Chapter 3** sets out our screening methodology.
 - **Chapter 4** describes the findings of the HRA Screening of the LTP4 Strategy.
 - **Chapter 5** is an Appropriate Assessment of all likely significant effects identified through the screening process.
 - **Chapter 6** summarises the conclusions of the HRA process

¹⁰ *Habitat Regulations Assessment of the Hertfordshire 2050 Transport Vision*, LUC, September 2015

¹¹ *Hertfordshire Local Transport Plan (LTP4) Summary Consultation Document*, LUV, September 2016

2 Local Transport Plan (LTP4)

- 2.1 This new Local Transport Plan outlines how the Council will manage and improve the transport system in Hertfordshire. It has been produced to better support future growth and economic development in the county and address current and forecast transport issues. The LTP4 Strategy covers the period to 2031 which is the time horizon for most of the new housing proposals detailed in district and borough Local Plans, but is guided by a longer term vision for transport in the County.
- 2.2 LTP4 is a departure from previous transport plans for the County. Most notably this is with respect to how it seeks to manage a transition from a historically highway capacity and car focussed approach to transport planning, but also in how it seeks to plan for the potentially revolutionary impact of new transport technology.
- 2.3 The LTP Strategy is framed by the overall vision for Hertfordshire, defined by three overarching themes:
- Prosperity:
 - Better links between towns and cities;
 - Reduced need to travel;
 - Resilient and reliable network;
 - Less car dependent and more integrated, accessible and sustainable transport; and
 - Positioned in the golden triangle (London, Oxford and Cambridge).
 - Place:
 - Limited impacts of climate change;
 - Development and regeneration;
 - Improved local environment and green infrastructure;
 - Heritage and places of character retained; and
 - Adequate, affordable and environmentally sensitive housing.
 - People:
 - Improved quality of life;
 - Vibrant and healthy communities;
 - Active and inclusive transport; and
 - Varied and accessible employment opportunities.
- 2.4 The LTP aims to contribute towards this vision through delivering on nine objectives:
1. Improve access to international gateways and regional centres outside of Hertfordshire
 2. Enhance connectivity between urban centres in Hertfordshire
 3. Improve accessibility between employers and their labour markets
 4. Enhance journey reliability and network resilience
 5. Enhance the quality and vitality of town centres
 6. Preserve the character and quality of the Hertfordshire environment
 7. Reduce carbon emissions
 8. Making journeys and their impact safer and healthier
 9. Improving access and enabling participation in everyday life through transport.
- 2.5 In addition to the themes and objectives, there are four principles which guide the LTP for delivering these objectives:
- Application and adoption of technology;

- Cost effective delivery and maintenance;
- Integration of land use and transport planning; and
- Modal shift and encouraging active travel.

2.6 The LTP4 Strategy which forms the subject of this assessment will also be supplemented by a number of supporting strategies and guidance documents referred to collectively as 'daughter documents' to be produced by the Council over the plan period. The daughter documents will be subservient to the strategy document and will be focussed on specific aspects of transport service delivery or on specific locations where more in depth analysis is required regarding the localised issues and options. Most of the daughter documents will be published by 2019, with the full set of growth and transport plans expected to be in place by 2020. All of these documents are likely to be updated every five years. In some cases the daughter documents will include operational policies, in other cases they will include only guidance, but will set out the Council's approach to implementing and delivering certain aspects of the strategy in more details. The list of proposed daughter documents include:

- Accessibility Strategy;
- Active Travel Strategy;
- Growth and Transport Plans;
- Highway Infrastructure Asset Management Plan;
- Intalink Bus Strategy;
- Network Management Strategy;
- Rail Strategy;
- Rights of Way Improvement Plan;
- Road Safety Strategy;
- Roads in Hertfordshire: A Design Guide;
- Speed Management Strategy;
- Sustainable Modes of Travel to School Strategy.

2.7 LTP Growth and Transport Plans will cover sub-areas of the County and outline packages of interventions that deliver LTP4 objectives and Local Plan growth. The Growth and Transport Plans and other corridor studies may identify additional major schemes to the ones outlined in this strategy and will also further develop detail on them.

2.8 The LTP strategy comprises 23 policies and 35 major schemes, as summarised in **Appendix 1**; policies are summarised in **Table 1**, while proposed major schemes are proposed in **Table 2**. Taken together, the policy options and major schemes are the elements of the LTP4 Strategy that have been assessed in this HRA.

Potential impacts of LTP4

2.9 **Table 2-1** below sets out the range of potential impacts that transport-related development may have on European sites, however, as discussed in the next chapter, the policies and major schemes proposed in the LTP4 Strategy will not necessarily result in all of these types of impacts.

Table 2-1 Potential impacts and activities adversely affecting European sites

Broad categories and examples of potential impacts on European sites	Examples of transport development related activities responsible for impacts
Physical loss <ul style="list-style-type: none"> • Removal (including offsite effects, e.g. foraging habitat) • Smothering • Habitat degradation 	Development (e.g. transport infrastructure)
Physical damage <ul style="list-style-type: none"> • Direct mortality • Sedimentation / silting • Prevention of natural processes • Habitat degradation • Erosion • Trampling • Fragmentation • Severance / barrier effect • Edge effects • Fire 	Flood defences associated with transport infrastructure Mineral extraction associated with transport infrastructure Recreation (e.g. motor cycling, cycling, walking, horse riding, water sports, caving) Development (e.g. transport infrastructure)
Non-physical disturbance <ul style="list-style-type: none"> • Noise • Vibration • Visual presence • Human presence • Light pollution 	Development (e.g. transport infrastructure) Mineral extraction associated with transport infrastructure Navigation Vehicular traffic Artificial lighting (e.g. street lighting)
Water table/availability <ul style="list-style-type: none"> • Drying • Flooding / stormwater • Water level and stability • Water flow (e.g. reduction in velocity of surface water) • Barrier effect (on migratory species) 	Water abstraction Drainage interception (e.g. dam, transport infrastructure) Increased discharge (e.g. drainage, runoff)
Toxic contamination <ul style="list-style-type: none"> • Water pollution • Soil contamination • Air pollution 	Navigation Oil / chemical spills Vehicular traffic
Non-toxic contamination <ul style="list-style-type: none"> • Nutrient enrichment (e.g. of soils and water) • Algal blooms • Changes in salinity • Changes in thermal regime • Changes in turbidity • Air pollution (dust) 	Water abstraction associated with construction of transport infrastructure Flood defences associated with transport infrastructure Navigation Development (e.g. transport infrastructure)
Biological disturbance <ul style="list-style-type: none"> • Direct mortality • Out-competition by non-native species • Selective extraction of species • Introduction of disease • Rapid population fluctuations • Natural succession 	Introduction of non-native species (e.g. from gardens within roundabouts)

3 Screening methodology

- 3.1 This section sets out the approach used for the HRA screening; the first stage of an HRA.
- 3.2 HRA Screening of the LTP4 Strategy has been undertaken in line with current available guidance and seeks to meet the requirements of the Habitats Regulations. The tasks that have been undertaken during the screening stage of the HRA are described in detail below.

Identification of European sites which may be affected by LTP4 and the factors contributing to and defining the integrity of these sites

- 3.3 During the HRA of the LTP3, the approach to identifying European sites to be included in the scope of assessment was to consider:
- All sites within the authority's boundary; and
 - Other sites shown to be linked to development within the authority's boundary through a known 'pathway' (discussed below).
- 3.4 The identification of European sites that might be able to be affected by the LTP3 was therefore carried out via consideration of impact pathways, rather than arbitrary distances from the County boundary. The scope of the HRA was informed by an initial scoping report undertaken by Scott Wilson in consultation with Natural England.
- 3.5 The following European sites lie, wholly or partially, within Hertfordshire:
- Lee Valley SPA and Ramsar site;
 - Wormley Hoddesdonpark Woods SAC; and
 - Chiltern Beechwoods SAC.
- 3.6 The following European sites lie close to the borders of Hertfordshire:
- Epping Forest SAC.
- 3.7 These European sites were all therefore automatically included with the scope of the HRA (at least to Screening stage) and were subject to consideration as to whether they have links with development within Hertfordshire via pathways. This same starting point has been used for the HRA of the LTP4 Strategy, and the location of these European sites is shown on **Figure 3.1**.
- 3.8 The qualifying features of these sites for which they were designated and which contribute to and define their integrity have been described in **Appendix 2**, and summarised below. In doing so, reference was made to the Natura 2000 standard data forms published on the Joint Nature Conservation Committee (JNCC) website¹², the most recent conservation objectives published on the Natural England website (most were published in 2014)¹³, as well as the Site Improvement Plans prepared by Natural England for European sites.
- 3.9 This analysis enabled European site interest features to be identified, along with the features of each site which determine site integrity and the specific sensitivities of the site. This information forms the basis of the analysis of how the potential impacts of the LTP4 Strategy may affect the integrity of each site.

¹² www.jncc.defra.gov.uk

¹³ <http://publications.naturalengland.org.uk/category/6490068894089216>

Lee Valley SPA and Ramsar site

- 3.10 The Lee Valley SPA is located to the north-east of London, made up of four Sites of Special Scientific Interest (SSSIs) spaced along the valley from just downstream of Ware in Hertfordshire to near Finsbury Park in London, a total distance of about 24km. The whole site is contained within the Lee Valley Regional Park. The site comprises embanked water supply reservoirs, sewage treatment lagoons and former gravel pits that support a range of man-made, semi-natural and valley bottom habitats. These wetland habitats support wintering wildfowl, in particular Gadwall and Shoveller, which occur in numbers of European importance. Areas of reedbed within the site also support significant numbers of wintering Bittern *Botaurus stellaris*^{14, 15}.

Wormley Hoddesdonpark Woods SAC

- 3.11 Wormley Hoddesdonpark Woods SAC lies south of Hertford in the south east of Hertfordshire, comprising two SSSIs (North and South). Wormley Hoddesdonpark Woods has large stands of almost pure hornbeam *Carpinus betulus* (former coppice), with sessile oak *Quercus petraea* standards. It is one of only two known examples in England of this type of oak-hornbeam forest, which is mainly found in central Europe.
- 3.12 Areas dominated by bluebell *Hyacinthoides non-scripta* do occur, but elsewhere there are stands of great wood-rush *Luzula sylvatica* with carpets of the mosses *Dicranum majus* and *Leucobryum glaucum*.
- 3.13 Locally, a bryophyte community more typical of continental Europe occurs, including the mosses *Dicranum montanum*, *D. flagellare* and *D. tauricum*^{16 17}.

Chiltern Beechwoods SAC

- 3.14 The Chilterns Beechwoods SAC comprises nine SSSIs spread across the authorities of Buckinghamshire, Hertfordshire, Oxfordshire, Windsor and Maidenhead, with only part of the SAC lying within the west of Hertfordshire. The SAC represents a very extensive tract of ancient semi-natural beech *Fagus sylvatica* forests in the centre of the habitat's UK range. The woodland is an important part of a mosaic with species-rich chalk grassland and scrub. A distinctive feature in the woodland flora is the occurrence of the rare coralroot *Cardamine bulbifera*. Standing and fallen dead timber provide habitat for dead-wood (saproxylic) invertebrates, including stag beetle *Lucanus cervus*^{18 19}.

Epping Forest SAC

- 3.15 Epping Forest is a large ancient wood-pasture to the north of London in Essex. It lies less than 10km to the south east of Hertfordshire. Epping Forest represents Atlantic *acidophilous* beech forests in the north-eastern part of the habitat's UK range. Although the epiphytes at this site have declined, largely as a result of air pollution, it remains important for a range of rare species, including the moss *Zygodon forsteri*. The long history of pollarding, and resultant large number of veteran trees, ensures that the site is also rich in fungi and dead-wood invertebrates. In particular, records of stag beetle *Lucanus cervus* are widespread and frequent. Epping Forest is therefore a very important site for fauna associated with decaying timber, and supports many Red Data Book and Nationally Scarce invertebrate species^{20 21}.

¹⁴ Joint Nature Conservation Committee website: <http://jncc.defra.gov.uk/default.aspx?page=2047>

¹⁵ Site Improvement Plan Lee Valley, Natural England, December 2014
(<http://publications.naturalengland.org.uk/publication/5864999960444928>)

¹⁶ Joint Nature Conservation Committee website: <http://jncc.defra.gov.uk/ProtectedSites/SACselection/sac.asp?EUCode=UK0013696>

¹⁷ Site Improvement Plan Wormley Hoddesdonpark Woods SAC, Natural England, December 2014
(<http://publications.naturalengland.org.uk/publication/6314181103976448?category=4873023563759616>)

¹⁸ Joint Nature Conservation Committee website: <http://jncc.defra.gov.uk/ProtectedSites/SACselection/sac.asp?EUCode=UK0012724>

¹⁹ Site Improvement Plan Chilterns Beechwoods SAC, Natural England, March 2015
(<http://publications.naturalengland.org.uk/publication/6228755680854016>)

²⁰ Joint Nature Conservation Committee website: <http://jncc.defra.gov.uk/ProtectedSites/SACselection/sac.asp?EUCode=UK0012720>

²¹ Site Improvement Plan Epping Forest SAC, Natural England, January 2015
(<http://publications.naturalengland.org.uk/publication/6663446854631424?category=4873023563759616>)

Assessment of 'likely significant effects' of the LTP4 Strategy

- 3.16 As required under Regulation 61 of the Conservation of Habitats and Species Regulations 2010²² an assessment of the 'likely significant effects' of the LTP4 Strategy was undertaken. A screening matrix was prepared in order to assess which policies or major schemes would be likely to have a significant effect on European sites. The findings of the screening assessment are summarised in **Chapter 4** and the detailed matrix can be found in **Table 4.1**. A 'traffic light' approach was used to record the likely impacts of the policies and site allocations on European sites and their qualifying habitats and species, using the colour categories shown below.

Red	There are likely to be significant effects, or it is uncertain due to lack of information (Appropriate Assessment required).
Green	There are unlikely to be significant effects (Appropriate Assessment not required).

- 3.17 A risk-based approach involving the application of the precautionary principle was adopted in the assessment, such that a conclusion of 'no significant effect' was only reached where it was considered very unlikely, based on current knowledge and the information available, that a policy or site allocation would have a significant effect on the integrity of a European site.

Screening assumptions and information used in reaching conclusions about likely significant effects

- 3.18 The assumptions applied to assess the likely significant effects on European sites that may result from the LTP4 Strategy are set out below (although not repeated here, these draw from the assumptions applied for the HRA of the LTP3 in 2010, and the Hertfordshire Transport Vision in 2015). Based on the information set out in the proposed policy options and major schemes, it is considered that the type of activity that could arise from the LTP4 Strategy could only result in the following types of adverse impact:

- Air pollution – from an increase in vehicles, close to a European site;
- Noise, vibration and light pollution – disturbance or pollution of European sites in close proximity to new infrastructure;
- Water pollution – pollution of European sites in close proximity to new infrastructure;
- Physical loss of habitat – where schemes are within or near to European sites; or
- Severance / barrier effect or direct mortality – where new roads are constructed near to European sites.

Air pollution

- 3.19 Air pollution is most likely to affect European sites where plant, soil and water habitats are the qualifying features, but some qualifying animal species may also be affected, either directly or indirectly, by any deterioration in habitat as a result of air pollution. Deposition of pollutants to the ground and vegetation can alter the characteristics of the soil, affecting the pH and nitrogen availability that can then affect plant health, productivity and species composition.
- 3.20 All combustion processes in air produce oxides of nitrogen (NO_x). Nitrogen dioxide (NO₂) and nitric oxide (NO) are both oxides of nitrogen and together are referred to as NO_x. Road transport is the main source, followed by the electricity supply industry and other industrial and commercial sectors²³. Deposition of nitrogen compounds may lead to both soil and freshwater acidification, and NO_x can cause eutrophication of soils and water.

²² SI No. 2010/490

²³ http://uk-air.defra.gov.uk/assets/documents/What_are_the_causes_of_Air_Pollution.pdf

- 3.21 The most acute impacts of NO_x take place close to where they are emitted, but individual sources of pollution will also contribute to an increase in the general background levels of pollutants at a wider scale, as small amounts of NO_x and other pollutants from the pollution source are dispersed more widely by the prevailing winds.
- 3.22 The following air pollution limit value applies for the protection of vegetation and ecosystems from NO_x:
- World Health Organisation 30 µgm⁻³ annual average.
 - EU Air Quality Framework Directive 30 µgm⁻³ annual average away from areas close to main roads, built up areas or major industrial sites.
 - Natural England policy in agreement with the Environment Agency in their Review of Consents process is that the 30 µgm⁻³ threshold should apply to all designated sites, due to the sensitivity of the habitats within the sites²⁴.
- 3.23 In terms of vehicle traffic, nitrogen oxides are considered to be the key pollutants. Deposition of nitrogen compounds may lead to both soil and freshwater acidification, and NO_x can cause eutrophication of soils and water.
- 3.24 Based on the Highways Agency Design Manual for Road and Bridges (DMRB) Volume 11, Section 3, Part 1²⁵ (which was produced to provide advice regarding the design, assessment and operation of trunk roads (including motorways)), it is assumed that air pollution from roads is unlikely to be significant beyond 200m from the road itself. Where increases in traffic volumes are forecast, this 200m buffer needs to be applied to the relevant roads in order to make a judgement about the likely geographical extent of air pollution impacts.
- 3.25 The DMRB Guidance for the assessment of local air quality in relation to highways developments provides criteria that should be applied at the screening stage of an assessment of a plan or project, to ascertain whether there are likely to be significant impacts associated with routes or corridors. Based on the DMRB guidance, affected roads which should be assessed are those where:
- Daily traffic flows will change by 1,000 AADT (Annual Average Daily Traffic) or more; or
 - Heavy duty vehicle (HDV) flows will change by 200 AADT or more; or
 - Daily average speed will change by 10km/hr or more; or
 - Peak hour speed will change by 20km/hr or more; or
 - Road alignment will change by 5m or more.
- 3.26 The Council's transport model (COMET) shows that increased travel demand generated by population and economic growth in Hertfordshire is forecast to increase peak period car trips by 17-18% by 2031. This will lead to peak spreading (people travelling at different times of day to avoid the worst congestion) and in the AM peak travel times are predicted to increase 50% with a 15% reduction in average speed.
- 3.27 It has been assumed that only those roads forming part of the primary road network (motorways and 'A' roads) might be likely to experience any significant increases in vehicle traffic as a result of the LTP4 (i.e. greater than 1,000 AADT). As such, where a site is within 200m of only minor roads, no significant effect from traffic-related air pollution was considered to be the likely outcome.
- 3.28 The European sites within and around Hertfordshire that are within 200m of strategic roads are:
- Chiltern Beechwoods SAC: A41, A4010 (outside of Hertfordshire);
 - Wormley Hoddesdonpark Woods SAC: A10;

²⁴ Hertfordshire Local Transport Plan Habitats Regulations Assessment – Screening of Likely Significant Effects Report, Scott Wilson, June 2010.

²⁵ *Design Manual for Road and Bridges*. Highways Agency. <http://dft.gov.uk/ha/standards/dmr/index.htm>

- Epping Forest SAC: M25, A12, A104, A110, A112, A113, A114, A121, A406, A503, A1009, A1069, A1199 (all of these roads except the A121 are outside of Hertfordshire); and
- Lee Valley Ramsar / SPA: A414, A503, A1055 (all except the A414 are outside of Hertfordshire).

3.29 Therefore, where the LTP4 Strategy could result in an increase in vehicle traffic in Hertfordshire, the potential for these sites to be affected as a result of increased air pollution was highlighted in the screening matrix.

Disturbance (noise, movement and light pollution)

- 3.30 Some of the proposed major schemes may result in increases in traffic and potentially also an increase in roadside lighting. Any increase in traffic is likely to be accompanied by an increase in noise and movement. With regard to HRA, noise and lighting associated with transport will only be an issue if they affect European sites designated for their animal interest rather than their habitats. Although the Chiltern Beechwoods and Epping Forest SACs include the stag beetle in their qualifying features, the Site Improvement Plans for these two SACs note that disturbance associated with public access to the sites (not traffic) is a key issue affecting the SACs. Therefore, in relation to this HRA of the emerging Hertfordshire LTP4 this only applies to one European site identified above within the scope of the HRA – **the Lee Valley SPA/Ramsar site**.
- 3.31 Disturbance from noise or visual intrusion is likely to be most relevant if the road route is immediately adjacent to an SPA or certain SACs (e.g. those designated for bat species), although impacts have been reported up to 1km away due to more intense sources such as busy highways²⁶.
- 3.32 Lighting is only likely to be an issue if the LTP4 results in the introduction of street lighting to roads within close proximity of European sites (particularly the **Lee Valley SPA/Ramsar site**) which are currently unlit.

Water pollution

- 3.33 Water pollution would only occur where there is hydrological connectivity between new transport infrastructure and European sites, for example via surface water features or groundwater. Chiltern Beechwoods SAC and Epping Forest SAC are not in hydrological connectivity with any of the proposed major schemes.
- 3.34 Good practice by the construction industry during highways and rail improvements/construction should help to mitigate risks of contamination to water from fuels, oils and solvents as well as sediments from construction areas. However, accidental spillages may occur, and there is some potential for water pollution to affect the **Lee Valley SPA and Ramsar site** due to its qualifying wetland habitats. The Site Improvement Plan for the Lee Valley SPA/Ramsar site identifies water pollution as the top key issue affecting this site (see **Appendix 2**), and one of the key issues for the **Epping Forest SAC**. However, the Site Improvement Plans for Wormley Hoddesdonpark Woods SAC and Chiltern Beechwoods SAC do not identify water pollution as a key issue affecting these SACs. Therefore, it is only likely that water pollution effects would relate to the Lee Valley SPA and Ramsar site.

Changes to hydrology (water levels)

- 3.35 Similarly, good practice by the construction industry, as well as the Environmental Permitting regime should help to avoid or mitigate risks of significant changes in water levels due to either water abstraction associated with highways and rail improvements or any displacement of water through excavation into the water table. However, changes in hydrology are identified as the second highest key issue affecting the **Lee Valley SPA/Ramsar site** in its Site Improvement Plan (see **Appendix 2**), therefore, there is some potential for changes in hydrology to affect its qualifying features, particularly for any highway improvements that involve excavation of land in

²⁶ Reijnen, R. Foppen, R & Veebaas G. (1997) Disturbance by traffic of breeding birds: evaluation of the effect and considerations in planning and managing road corridors. *Biodiversity and Conservation* 6, 567-581.

close proximity to the Lee Valley SPA/Ramsar site. The Site Improvement Plans for three SACs do not identify changes to hydrology as a key issue affecting these SACs.

Physical loss of habitat

- 3.36 Direct loss of habitat for European sites will only be likely to significantly affect European sites if any of the schemes in the LTP4 Strategy relate to any road or bus routes within the boundary of the SAC sites or Lee Valley SPA/Ramsar site.
- 3.37 In their 2015 response to the Strategic Environmental Assessment of the LTP4 Strategy Document consultation, Natural England highlighted the proximity of proposed rail track widening to the Lee Valley SPA/Ramsar site:

"The assessment states that the increasing of the track width has the potential to impact on the Lee Valley area, however it doesn't specifically mention that this would in fact impact on the Lee Valley Special Protection Area (SPA), which is afforded protection under European legislation. Any proposal which has the potential to impact on the Lee Valley SPA would require a Habitats Regulations Assessment to be undertaken as well as an Environmental Impact Assessment. This isn't mentioned in the assessment table and needs to be rectified to ensure the assessment is factually correct. We would therefore have to disagree with the conclusion on page 21 which states that there aren't any significant environmental effects. Loss of any European site habitat would be considered a significant environmental effect."

- 3.38 In addition to direct habitat loss within a Natura 2000 site, loss of habitat from outside of the boundaries of a European site, could still affect the site if it occurs in an area used for offsite foraging or roosting by the qualifying species of the site (land in an area used for foraging or roosting by SPA birds for example would be functionally connected to the European site). Therefore, consideration has also been given to whether any road or bus routes affected by schemes in the LTP4 could affect functional land used by the Lee Valley SPA birds. The principle of '**Functionally Linked Land**' is discussed further in **Chapter 5**.

Severance / barrier effect or direct mortality

- 3.39 Wormley Hoddesdonwoods SAC is not designated for any mobile species which would be affected by severance / barrier effect or direct mortality.
- 3.40 None of the other sites are close enough to any of the proposed major schemes to be affected. Therefore severance / barrier effect or direct mortality can be screened out of further assessment.

Interpretation of 'likely significant effect'

- 3.41 Relevant case law helps to interpret when effects should be considered as a likely significant effect, when carrying out HRA of a land use plan.
- 3.42 In the Waddenzee case²⁷, the European Court of Justice ruled on the interpretation of Article 6(3) of the Habitats Directive (translated into Reg. 61 in the Habitats Regulations), including that:
- An effect should be considered 'likely', *"if it cannot be excluded, on the basis of objective information, that it will have a significant effect on the site"* (para 44).
 - An effect should be considered 'significant', *"if it undermines the conservation objectives"* (para 48).
 - Where a plan or project has an effect on a site *"but is not likely to undermine its conservation objectives, it cannot be considered likely to have a significant effect on the site concerned"* (para 47).
- 3.43 A recent opinion delivered to the Court of Justice of the European Union²⁸ commented that:

²⁷ ECJ Case C-127/02 "Waddenzee" Jan 2004.

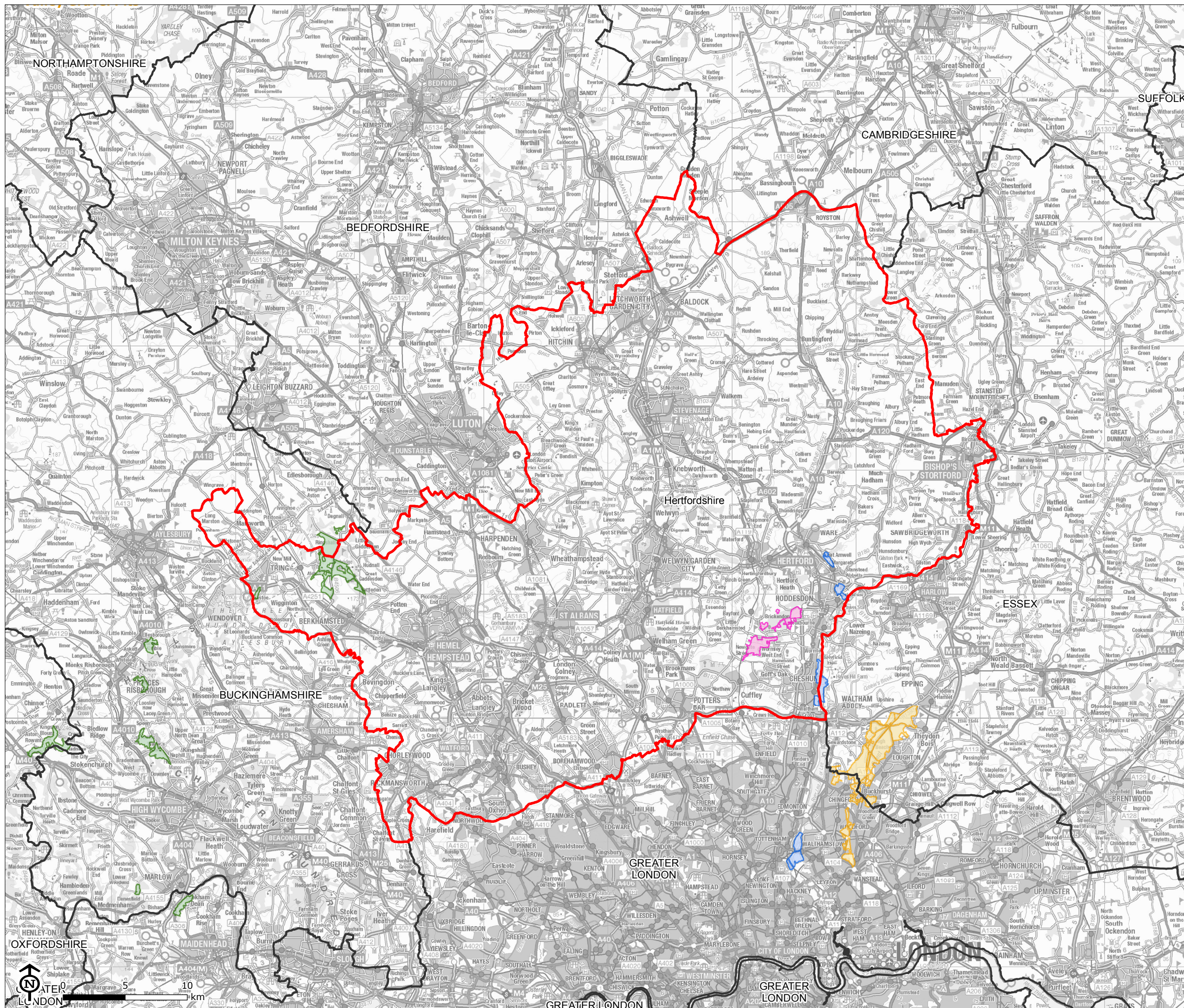
²⁸ Advocate General's Opinion to CJEU in Case C-258/11 Sweetman and others v An Bord Pleanala 22nd Nov 2012.

"The requirement that an effect in question be 'significant' exists in order to lay down a de minimus threshold. Plans or projects that have no appreciable effect on the site are thereby excluded. If all plans or projects capable of having any effect whatsoever on the site were to be caught by Article 6(3), activities on or near the site would risk being impossible by reason of legislative overkill."

- 3.44 This opinion (the 'Sweetman' case) therefore allows for the authorisation of plans and projects whose possible effects, alone or in combination, can be considered 'trivial' or *de minimus*; referring to such cases as those *"that have no appreciable effect on the site"*. In practice such effects could be screened out as having no likely significant effect; they would be 'insignificant'.

Mitigation provided by the policies

- 3.45 Some of the potential effects identified could be mitigated through the implementation of policies in the LTP4 Strategy, for example those which seek to reduce the need to travel and/or switch modes of travel from cars to more sustainable options.
- 3.46 The potentially mitigating effects of these policies have been taken into consideration during the screening process and have influenced the screening conclusions (see **Chapter 4**).
- 3.47 In addition, mitigation may be provided through the implementation of policies and proposals in the Local Plans within the County, for example any policies relating to the provision of improved sustainable transport links (which could help to mitigate potential increases in air pollution associated with increased vehicle traffic) and policies seeking to restrict noise, light and water pollution. The use of good practice construction techniques during any highways or public transport infrastructure improvements may help to mitigate potential noise and light pollution effects.




Hertfordshire LTP4 HRA

Figure 3.1: European sites considered within the HRA of the emerging Hertfordshire Local Transport Plan 4

- ▬ Hertfordshire
- ▬ County boundary
- ▬ Lee Valley SPA and Ramsar Site
- ▬ Chilterns Beechwoods SAC
- ▬ Epping Forest SAC
- ▬ Wormley Hoddesdonpark Woods SAC

Map Scale @ A3: 1:300,000



4 Screening findings

- 4.1 **Appendix 3** sets out the screening findings for the 23 policies and 35 major schemes and the likelihood of significant effects occurring in relation to particular types of effect on the European sites is colour coded red/green as per the key shown in **Chapter 3**. For the most part, significant effects are considered unlikely to occur as a result of the LTP4 Strategy. However, as discussed below, there is some uncertainty regarding significant effects on two of the European sites, meaning that it is not possible to conclude with certainty whether significant effects on these two European sites are likely.

Significant effects unlikely

- 4.2 Significant effects are **unlikely** in relation to of the **20 policies**, and **25 major schemes**.

Significant effects likely

- 4.3 **No policies or major schemes are considered likely to have significant effects** on any of the European sites as currently set out in the LTP4 Strategy. However some significant effects cannot be excluded on a precautionary basis, and will therefore need to be explored through an Appropriate Assessment, as discussed below.

Significant effects uncertain

- 4.4 Significant effects are **uncertain** for **the Wormley Hoddesdonpark Woods SAC and Lee Valley SPA/Ramsar** due to the potential for **air pollution, disturbance or physical loss of habitat** as summarised in **Table 4-1** below:

Table 4-1 – Natura 2000 sites for which likely significant effects cannot be ruled out

Natura 2000 site	Likely significant effect	Policies / major schemes	In-combination plans or projects
Lee Valley SPA / Ramsar	Air pollution	Policies 13 and 16 Major schemes – 2,4,11,19 and 33	Broxbourne Local Plan Harlow Local Plan East Herts District Plan
	Disturbance	Policy 11 Major schemes – 26,27,32 and 35	Crossrail 2
	Physical loss of habitat	Policy 11 Major schemes -26,27,32, and 35	Crossrail 2
Wormley Hoddesdonpark Woods SAC	Air pollution	Policies 13 and 16 Major schemes – 2,4,10 and 33	Broxbourne Local Plan Harlow Local Plan East Herts District Plan Draft Mayor's Transport Strategy

5 Appropriate Assessment

Appropriate Assessment approach

- 5.1 Following the screening stage, if likely significant effects on European sites are unable to be ruled out, the plan-making authority is required under Regulation 61 of the Habitats Regulations 2010 to make an 'Appropriate Assessment' of the implications of the plan for European sites, in view of their conservation objectives. EC Guidance²⁹ states that the Appropriate Assessment should consider the impacts of the plan (either alone or in combination with other projects or plans) on the integrity of European sites with respect to their conservation objectives and to their structure and function.
- 5.2 A site's integrity depends on it being able to sustain its 'qualifying features' (i.e. those Annex 1 habitats, Annex II species, and Annex 1 bird populations for which it has been designated) and to ensure their continued viability. A high degree of integrity is considered to exist where the potential to meet a site's conservation objectives is realised and where the site is capable of self-repair and renewal with a minimum of external management support.
- 5.3 An Appropriate Assessment has therefore been undertaken for all of the European sites in and around Hertfordshire where likely significant effects from the LTP4 Strategy were identified (or were not able to be ruled out) during the screening stage.
- 5.4 As described in **Chapter 1**, a conclusion needs to be reached as to whether or not a policy or site allocation in the Local Plan would adversely affect the integrity of a European site. As stated in the EC Guidance, assessing the effects on the site(s) integrity involves considering whether the predicted impacts of the Local Plan policies (either alone or in combination) have the potential to:
- Cause delays to the achievement of conservation objectives for the site;
 - Interrupt progress towards the achievement of conservation objectives for the site;
 - Disrupt those factors that help to maintain the favourable conditions of the site;
 - Interfere with the balance, distribution and density of key species that are the indicators of the favourable condition of the site;
 - Cause changes to the vital defining aspects (e.g. nutrient balance) that determine how the site functions as a habitat or ecosystem;
 - Change the dynamics of relationships that define the structure or function of the site (e.g. relationships between soil and water, or animals and plants);
 - Interfere with anticipated natural changes to the site;
 - Reduce the extent of key habitats or the population of key species;
 - Reduce the diversity of the site;
 - Result in disturbance that could affect the population, density or balance between key species;
 - Result in fragmentation; and
 - Result in the loss of key features.
- 5.5 The conservation objectives for each European site (listed in **Appendix 2**) are generally to maintain the qualifying features in favourable condition. The Site Improvement Plans for each European site provide a high level overview of the issues (both current and predicted) affecting

²⁹ *Assessment of plans and projects significantly affecting European sites. Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC.* European Commission Environment DG, November 2001.

the condition of the European features on the site(s) and outline the priority measures required to improve the condition of the features. These have been drawn on to help to understand what is needed to maintain the integrity of the European sites.

- 5.6 For each European site where an uncertain likely significant effect was identified at the screening stage in relation to a policy or major scheme (i.e. those listed in **Table 4-1** and shaded red in the screening matrix in **Appendix 3**), the potential impacts have been set out below and judgements made (based on the information available) regarding whether the impact will have an adverse effect on the integrity of the site. Consideration has been given to the potential for mitigation measures to be implemented that could reduce the likelihood or severity of the potential impacts such that there would not be an adverse effect on the integrity of the site.

'Down the line' assessments

- 5.7 Where carrying out strategic level assessments, lower tier HRAs may be relied upon where the following three criteria are met:
- 1 The higher tier plan assessment cannot reasonably predict the effects on a European site in a meaningful way; whereas
 - 2 The HRA of the lower tier plan or project, which will identify more precisely the nature, scale or location of development, and thus its potential effects, will be able to change the proposal if an adverse effect on site integrity cannot be ruled out, because the lower tier plan / project is free to change the nature, scale and/or location of the proposal in order to avoid adverse effects on the integrity of any European site; and
 - 3 The HRA of the plan or project at the lower tier is required as a matter of law or Government policy.
- 5.8 This approach is in line with the principles set out by Advocate General Kokott in her opinion on the UK v Commission³⁰:
- "Many details are regularly not settled until the time of the final permission. It would also hardly be proper to require a greater level of detail in preceding plans or the abolition of multistage planning and approval procedures so that the assessment of implications can be concentrated on one point in the procedure. Rather, adverse effects on areas of conservation must be assessed at every relevant stage of the procedure to the extent possible on the basis of the precision of the plan. This assessment is to be updated with increasing specificity in subsequent stages of the procedure."*
- 5.9 This was also expanded upon by the High Court in the Feeney case³¹:
- "A core strategy is a high level strategic document and the detail falls to be worked out at a later stage. Subsequent appropriate assessment of specific proposals is plainly envisaged by, and indeed necessitated under, the regime. Each appropriate assessment must be commensurate to the relative precision of the plans at any particular stage and no more. There does have to be an appropriate assessment at the Core Strategy stage, but such an assessment cannot do more than the level of detail of the strategy at that stage permits."*
- 5.10 It is therefore clear that a certain level of uncertainty is allowable for a strategic level HRA, however the level of uncertainty should decrease in proportion to the precision of the plan until the final or project level assessment, where no such uncertainty would be admissible, in accordance with the test set out in the Waddenzee judgement³²:
- "The competent national authorities, taking account of the appropriate assessment of the implications of mechanical cockle fishing for the site concerned in the light of the site's conservation objectives, are to authorise such an activity only if they have made certain that it*

³⁰ UK v Commission, Case C-6/04 (Para 49)

³¹ Feeney v Oxford City Council and SSCLG [2011] EWHC 2699 Admin (Para.92)

³² Bescherming van Vogels against Staatssecretaris van Landbouw, Natuurbeheer en Visserij, Coöperatieve Producentenorganisatie van de Nederlandse Kokkelvisserij UA (Case C-127/02) – Judgement of the Court (Para. 61)

will not adversely affect the integrity of that site. That is the case where no reasonable scientific doubt remains as to the absence of such effects."

'Functionally Linked Land'

- 5.11 The term 'functional linkage' can be used to refer to the role or 'function' that land beyond the boundary of a European site might fulfil in terms of supporting the populations for which the site was designated or classified. Such an area is therefore 'linked' to the site in question because it provides a (potentially important) role in maintaining or restoring a protected population at favourable conservation status.
- 5.12 Whilst the boundary of a European site will usually be drawn to include key supporting habitat for a qualifying species, this cannot always be the case where the population for which a site is designated or classified is particularly mobile. Individuals of the population will not necessarily remain in the site all the time. Sometimes, the mobility of qualifying species is considerable and may extend so far from the key habitat that forms the SAC or SPA that it would be entirely impractical to attempt to designate or classify all of the land or sea that may conceivably be used by the species³³.

Lee Valley SPA / Ramsar

Air Pollution

Effects of Plans and Projects

- 5.13 Policies and major schemes identified in the LTP4 Strategy which could feasibly increase traffic flows on the A414 as it crosses the Lee Valley SPA / Ramsar include:
- Policy 13: New Road and Junctions
 - Policy 16: Freight and Logistics
 - Major development at Gilston North of Harlow
 - Major development at Brookfield Development Area / A10 Turnford interchange
 - Harlow A414 multiple junctions
 - M11 J7a new junction.
- 5.14 Several of the policies within the LTP4 Strategy could also have a mitigating effect by reducing traffic flows in the local area including on the A414 over the plan period, particularly:
- Policy 1: Transport User Hierarchy
 - Policy 2: Influencing land use planning
 - Policy 3: Travel Plans and Behaviour Change
 - Policy 4: Demand Management
 - Policy 8: Active Travel – Cycling
 - Policy 9: Buses
 - Policy 10: Rail
 - Policy 19: Emissions reduction
 - Policy 20: Air Quality
 - Policy 21: Environment.

³³ CHAPMAN, C. & TYLDESLEY, D. 2016. Functional linkage: How areas that are functionally linked to European sites have been considered when they may be affected by plans and projects - a review of authoritative decisions. Natural England Commissioned Reports, Number 207

- 5.15 The potential extension to the A414 Bus Rapid Transit major scheme identified in the LTP4 Strategy could also decrease traffic flows on the A414 by providing an attractive alternative to commuting by car along this route.
- 5.16 There are also likely to be in-combination effects from housing growth identified in local plans, particularly Broxbourne Local Plan, East Herts District Plan and Harlow Local Plan.
- 5.17 It is not possible to accurately model the effects of the proposed LTP major schemes on the traffic flows on the A414 due to the conceptual stages of some of these projects. However, the Council's COMET traffic model predicts that total traffic flows on the A414 as it passes the Lee Valley SPA / Ramsar will increase by 4,180AADT by 2031 (based on a base year of 2014) due to planned local growth. It is therefore assumed that the LTP4 Strategy would result in increases in traffic flows of over 1,000AADT on the A414 when considered in-combination with other plans and projects.

Potentially Sensitive Qualifying Features

- 5.18 The qualifying features of the Lee Valley SPA are:
- Bittern *Botaurus stellaris*, 6 individuals representing at least 6.0% of the wintering population in Great Britain
 - Gadwall *Anas strepera*, 515 individuals representing at least 1.7% of the wintering Northwestern Europe population
 - Shoveler *Anas clypeata*, 748 individuals representing at least 1.9% of the wintering Northwestern/Central Europe population.
- 5.19 The Ramsar was also designated for the presence of important gadwall and shoveler populations, in addition to the following notable species:
- Whorled water-milfoil *Myriophyllum verticillatum*, a nationally scarce plant species
 - *Micronecta minutissima* (a water-boatman), a rare or vulnerable invertebrate.
- 5.20 Bittern is identified as being potentially sensitive to nutrient N deposition and NO_x, due to its association with the broad habitat type 'Fen, marsh and swamp'. The recommended Critical Load for nutrient N deposition is 15 – 30 N/ha/yr for this broad habitat type, while the recommended Critical Levels for NO_x are 30 µg NO_x/m³ annual mean and 75 µg NO_x/m³ 24 hour mean. The Site Improvement Plan for the SPA also identifies a potential risk of atmospheric nitrogen on bittern due to its association with this potentially sensitive habitat type.
- 5.21 Average N deposition at the site is understood to currently be 18.66 N/ha/yr, which is well within the Critical Load for this habitat type; road transport is responsible for 20% of this input, with the remainder attributable to agriculture, industry and long-range sources. Average concentrations of NO_x are understood to be 29.05 µg NO_x/m³, which is below both the annual and 24 hour mean Critical Levels for this habitat type.
- 5.22 Gadwall and shoveler are associated with open water habitats, and are not identified as being sensitive to nutrient N deposition or NO_x and there are therefore no recommended Critical Loads / Levels for these habitats, but rather it is advised that such effects are assessed at a site specific level. The Site Improvement Plan for the SPA does identify these species as being at risk of nutrient N deposition or NO_x, therefore for the purposes of this assessment, gadwall and shoveler (and their associated open water habitats) are not considered to be sensitive to nutrient N deposition or NO_x.
- 5.23 None of the SPA qualifying features are understood to be sensitive to acid N deposition.
- 5.24 Priority habitats within the SPA / Ramsar which lie within 200m of the A414 (and might therefore be exposed to atmospheric nitrogen from vehicular emissions), have been mapped as deciduous woodland, semi-improved grassland and floodplain grazing marsh. Bitterns are highly specialised species, and a study of bitterns in the Lee Valley revealed that they remain almost entirely within their reedbeds, moving only short distances to roost and forage³⁴; it is therefore unlikely that this population would utilise the grassland and woodland habitats in this part of the SPA / Ramsar. They are also understood to be very sensitive to disturbance, and indeed the Lee Valley bittern

³⁴ Harris, A. (2006) Roosting behaviour of wintering Eurasian Bitterns in the Lee Valley *British Birds* Vol. 99, p 174–182

study recommended that roost sites need to be disturbance-free; bitterns are therefore also considered to be unlikely to utilise the area of the SPA / Ramsar within 200m of the A414 due to noise disturbance.

- 5.25 The other notified features of the Ramsar (*Myriophyllum verticillatum* and *Micronecta minutissima*), are both species of open water habitats, which (as noted above) are not normally sensitive to N deposition or NO_x; this is generally because freshwater habitats tend to be limited by concentrations of phosphate rather than N, with by far the largest inputs coming from surface water sources. The citation for the Ramsar also describes the nutrient status of the waterbody as 'highly eutrophic'³⁵, and in that respect it is unlikely to be affected by relatively small inputs of N from aerial pollution.

Conclusions on Site integrity

- 5.26 The LTP4 Strategy has the potential to increase traffic flows on the A414 which could cause an exceedance of recommended Critical Loads / Levels for sensitive habitats within the SPA / Ramsar.
- 5.27 The only qualifying feature which is potentially sensitive to aerial pollution is bittern, due to its association with the broad habitat type 'Fen, marsh and swamp', although in reality, this species occurs almost exclusively within reedbed habitat. Other qualifying features are not understood to be sensitive to aerial pollution.
- 5.28 The area of the SPA / Ramsar which could feasibly be affected by air pollution is considered to be highly unlikely to support bittern due to a lack of suitable habitat (reedbed) and high levels of disturbance, and as such **it is possible to conclude that the LTP4 Strategy would not have an adverse effect on the integrity of the SPA / Ramsar, alone or in-combination with other plans and projects.**

Disturbance

Effects of Plans and Projects

- 5.29 Policies and major schemes identified in the LTP4 Strategy which could feasibly cause disturbance at the Lee Valley SPA / Ramsar are:
- Policy 11
 - Crossrail 2
 - West Anglia Main Line 4 Tracking
 - A414 Bus Rapid Transit (extension)
 - New Rail Stations to Investigate (Turnford).
- 5.30 It is important to note that the vast majority of effects would relate to rail improvements and upgrades being promoted by other public bodies, rather than projects to be delivered by the Council as a direct result of the LTP4 Strategy itself. While the LTP4 recognises that these projects may come forward during the plan period, responsibility for their planning and delivery would lie primarily with other competent authorities (Network Rail and Transport for London), who would have a legal duty to carry out their own HRAs.
- 5.31 The proposed rail improvements will be carried out immediately adjacent to the Lee Valley SPA, particularly the Turnford and Cheshunt Pits SSSI component. Potential effects would include noise, light and vibration during the construction phase of development which could disturb the qualifying features present during sensitive wintering / migratory periods. During the operational phase, trains are likely to pass more quickly (and therefore noisily), more regularly, and potentially closer to the SPA / Ramsar along this section of the West Anglia Main Line, which may result in ongoing disturbance effects.
- 5.32 The potential A414 Bus Rapid Transit extension would pass adjacent to the Rye Meads SSSI component of the SPA / Ramsar. Relatively little information is available about this project, as it is still at the concept stage, however the LTP4 Strategy does state that "*The service would be*

³⁵ Joint Nature Conservancy Council (2000) Information Sheet on Ramsar Wetlands: Lee Valley

expected to operate relatively free from the impacts of traffic congestion, with this achieved via bus priority measures and segregation". The A414 runs along the top of an embankment as it passes through the floodplain of the River Lee, therefore if this section of the road needs to be widened to accommodate a dedicated bus lane, this would require significant earth works which could cause disturbance of the qualifying features in the adjacent SPA / Ramsar during the construction phase. Once operational, it is unlikely that the background levels of disturbance would be significantly higher than at present. This operational disturbance could be exacerbated by the removal of woodland habitats which currently screen the railway line from the habitats used by the qualifying features (see below).

Potentially sensitive qualifying features

- 5.33 All three of the qualifying bird species are potentially sensitive to disturbance, although as noted above, parts of the site are already subject to high levels of background noise disturbance from the operation of major road and rail infrastructure. Disturbance events can cause birds to take flight, using valuable energy stores during sensitive wintering / migratory periods. Regular disturbance can also displace birds from area of otherwise suitable habitat, effectively reducing the availability of habitat resources available to them.
- 5.34 The plant and invertebrate features of the Ramsar are not sensitive to disturbance.

Conclusions on site integrity

- 5.35 **It is not possible to rule out a significant adverse effect of disturbance on the integrity of the SPA/Ramsar in relation to construction works associated with upgrades to the West Anglia Main Line.** The effects of those projects will be dependent upon the detailed design and construction of new infrastructure which cannot be specified in this plan; it would therefore be appropriate for those effects to be fully assessed at the project level, and that those **subsequent assessments by the relevant competent authorities may be relied upon by the Council** in line with the principles set out in Paras.5.7 – 5.10 above.
- 5.36 At this stage, there is no reason to believe that an adverse effect upon the SPA / Ramsar could not be avoided or adequately mitigated through detailed design and sensitive construction methods, therefore **no modifications to the LTP4 Strategy are required in respect of those major schemes.**
- 5.37 It is also **not possible to rule out a significant adverse effect of disturbance on the integrity of the SPA / Ramsar in relation to construction works associated with the potential A414 Bus Rapid Transit scheme extension**, however the potential effects of that project will be dependent upon whether that stretch of the route utilises gradual bus priority enhancements within the existing infrastructure or whether physical infrastructure such as road widening will be required. This level of detail cannot be specified in the LTP4 Strategy, and it is understood that this project is unlikely to come forward until post-2031, therefore it is unlikely that any further details will be provide in the LTP daughter documents such as the A414 Corridor Strategy or the South East Hertfordshire Growth and Transport Plan. Given that the project will not be advanced during the current LTP cycle, **it can be concluded that the LTP4 Strategy will not have any adverse effects on the SPA / Ramsar, however this issue will need to be revisited in the HRA of the LTP5.**

Physical Loss of Habitat

Effects of Plans and Projects

- 5.38 Policies and major schemes identified in the LTP4 Strategy which could feasibly result in physical loss of habitat in the Lee Valley SPA / Ramsar include:
- Policy 11
 - Crossrail 2
 - West Anglia Main Line 4 Tracking
 - A414 Bus Rapid Transit extension
 - New Rail Stations to Investigate (Turnford).

- 5.39 As for disturbance related effects (see above), it is important to note that the vast majority of effects would relate to rail projects being promoted by other public bodies immediately adjacent to the Lee Valley SPA / Ramsar. Potential effects would be direct and permanent habitat loss from areas where it is necessary to widen the West Anglia Main Line to accommodate new infrastructure, and temporary habitat loss / damage from the adjacent working widths required during the construction phase of development. For the majority of this length where the line runs adjacent to the SPA / Ramsar, habitat mapping indicates that habitat losses / damage would predominately involve deciduous woodland habitat types which would not be used by the qualifying features, however the line does also come in close proximity to two large waterbodies which could be directly affected.
- 5.40 As noted above, the potential A414 Bus Rapid Transit extension would pass adjacent to the Rye Meads SSSI component of the SPA / Ramsar, although relatively little information is available about the project at this stage. If road widening is required to accommodate a dedicated bus lane(s), this would require significant earthworks that could cause habitat loss / damage either side of the road. Priority habitat mapping indicates that any widening south of the A414 within the SPA / Ramsar would involve woodland and semi-improved grassland habitats. Priority habitats to the north of the A414 include a large waterbody which is not within the boundaries of the SPA / Ramsar but could be affected by widening of the road.

Potentially sensitive qualifying features

- 5.41 Gadwall and shoveler are potentially sensitive to losses / damage of open water habitat. Bittern would be sensitive to loss / damage of reedbed habitat.
- 5.42 The plant and invertebrate features of the Ramsar could be potentially sensitive to loss of open water habitats.

Conclusions on site integrity

- 5.43 The majority of habitat loss / damage within the SPA / Ramsar would involve woodland and grassland habitats, unlikely to be support the qualifying features. However improvements to the West Anglia Main Line have the potential to directly impact upon two large waterbodies (SSSI Units 3 and 9), which could support gadwall, shoveler, and the rare plant / invertebrate species. The area of land required to accommodate these projects is currently unknown, **therefore an adverse effect on the integrity of the SPA / Ramsar cannot be ruled out on the basis of the available information.** As noted above, the effects of those projects will be dependent upon the detailed design and construction of new infrastructure which cannot be specified in this plan; it would therefore be appropriate for those effects to be fully assessed at the project level, and that those **subsequent assessments by the relevant competent authorities may be relied upon by the Council.**
- 5.44 In relation to the potential A414 Bus Rapid Transit extension, the potential habitat loss / damage is unlikely to involve habitats used by the qualifying features within the SPA / Ramsar. A waterbody to the north of the road could be affected by habitat loss / damage if road widening is required to accommodate bus lanes; although this area does not lie within the SPA / Ramsar boundaries, these habitats are broadly suitable for use by the qualifying features, and as such, may constitute '**Functionally Linked Land**'. As noted above, it is expected that the scheme is unlikely to be developed in any more detail during the current LPT cycle. **It may therefore be concluded that the current Plan will not have any adverse effects on the SPA / Ramsar, however this issue will need to be revisited in the HRA of the LTP5 when further details may be available.**

Wormley Hoddesdonpark Woods SAC

Air pollution

Effects of Plans and Projects

- 5.45 Policies and major schemes identified in the LTP4 Strategy which could feasibly increase traffic flows on the A10 at Hoddesdon include:
- Policy 13: New Road and Junctions

- Policy 16: Freight and Logistics
 - Major development at Gilston North of Harlow
 - Major development at Brookfield Development Area / A10 Turnford interchange
 - Hertford By-Pass
 - M25 J25 new junction.
- 5.46 At the same time, two of the major schemes identified in the LTP4 Strategy could feasibly decrease traffic flows on the A10 at Hoddesdon through encouraging a modal shift among communities in the local area:
- Focus for Cycling Improvements
 - Sustainable Travel Towns.
- 5.47 Several of the policies within the LTP4 Strategy could feasibly reduce traffic flows in the local area including the A10 over the plan period, as set out at Para.5.14.
- 5.48 There are also likely to be in-combination effects from housing growth identified in local plans, particularly Broxbourne Local Plan, East Herts District Plan and Harlow Local Plan, and also from the transport improvements in the Draft Mayor's Transport Strategy which may increase commuting to and from London.
- 5.49 It is not possible to accurately model the effects of the LTP major schemes on the traffic flows on the A10 due to the conceptual stages of some of these projects. However the Council's COMET traffic model predicts that total traffic flows on the A10 closest to Wormley Hoddesdonpark Woods SAC will increase by 6,8486AADT by 2031 (based on a base year of 2014) due to planned local growth. The assumed that the LTP4 Strategy would result in increases in traffic flows of over 1,000AADT on the A10 when considered in-combination with other plans and projects.

Potentially Sensitive Qualifying Features

- 5.50 The qualifying feature of the Wormley Hoddesdonpark Woods SAC is the Annex I habitat type 'Sub-Atlantic and medio-European oak or oak-hornbeam forests of the *Carpinion betuli*'. The UK government has identified air pollution as a main threat / pressure to this habitat type nationally as a result of modelling of national N critical load exceedances³⁶.
- 5.51 The nutrient N Critical Load range for Meso- and eutrophic *Quercus* woodland is 15 - 20 Kg N/ha/year. At the SAC, the background level of nutrient N deposition is understood to be 26.2 Kg N/ha/year, therefore the Critical Load exceedance range for nutrient N deposition at the SAC is estimated to be between 11.2 to 6.2 Kg N/ha/year.
- 5.52 The acid N Critical Load range for broadleaved woodland is 1.745 – 8.752keq/ha/yr. At the SAC, the background level of acid N deposition ranges between 1.8 - 2.26 keq/ha/yr with an average of 1.87 keq/ha/yr, therefore the SAC is also understood to be in exceedance of critical loads for acid N deposition.
- 5.53 Road transport is understood to be responsible for 16% of N deposition at the SAC, with the remainder attributed to agricultural, industrial and international transport sources, therefore it is expected that the Critical Load has been exceeded for several years.
- 5.54 It is also worth noting that the predominant wind direction in this West-South-West to South-West, therefore the vast majority of N deposition will occur on the eastern side of the A10 carriageway, away from the Wormley Hoddesdonpark Woods SAC.
- 5.55 While the Site Improvement Plan for the SAC identifies atmospheric nitrogen deposition as a potential threat to the site, this is understood to be due to this known background exceedance, rather than any specific effects of the A10. The Site Improvement Plan identifies the need to investigate the effects of atmospheric nitrogen deposition at a national level, however it does not identify the need for any local or site specific studies required for this SAC.

³⁶ Third Report by the United Kingdom under Article 17 on the implementation of the Directive from January 2007 to December 2012
Conservation status assessment for Habitat: H9160 - Sub-Atlantic and medio-European oak or oak-hornbeam forests of the *Carpinion betuli*

- 5.56 The latest condition assessment for the SSSI unit closest to the road identified this as being in favourable condition in 2012, with the only identified threat being Acute Oak Disease which is known to be present onsite.
- 5.57 At its closest point, the A10 lies within 170m of the Wormley Hoddesdonpark Woods SAC, with approximately 0.1ha of the site falling within 200m of the road, which is a tiny fraction of the total site area. The area of woodland within 200m of the road also partially comprises a metalled track which is likely to be used for the ongoing management of the woodland, therefore the woodland habitat itself is restricted to the form of a tree line rather than a continuous woodland block in this part of the SAC. Natural England typically consider features such as this track to form part of the 'site fabric'; these are areas of the site which do not directly comprise a SAC qualifying feature but have a supporting role for the maintenance of the site's integrity.
- 5.58 Even if it was assumed that all habitats within 200m of the road were to be affected, this area comprises less than 0.1ha of the qualifying feature, which is an extremely small proportion of the total site area of 336ha (<0.0003%).
- 5.59 N deposition is not believed to have a direct, major effect on tree growth, therefore the main species of the 'Sub-Atlantic and medio-European oak or oak-hornbeam forests of the *Carpinion betuli*' community are unlikely to be directly affected to the extent that it would change the structure of this habitat. However other elements of woodland communities may be more sensitive to the effects of N deposition, particularly lower plants such as bryophytes, lichens and fungi which indirectly contribute to the functioning of these woodland ecosystems. Current evidence of potential effects on ground vegetation in Meso- and eutrophic *Quercus* woodland is understood to be based on expert judgement rather than backed by empirical facts, and as such it is not clear where / when such an effect may occur and how significant it may be at any particular woodland site.
- 5.60 The most recent SSSI condition assessment demonstrates that the ongoing exceedance of N Critical Loads at the SAC over a relatively long period of time has not had any discernible significant effects upon the vegetation communities recorded as part of the assessment process. This indicates that the structure and function of woodland habitats at the SAC have not been affected by this level of exceedance and are unlikely to be in the future, provided deposition levels do not further rise significantly. While evidence of longer term trends is not available, this represents the best available scientific evidence at the current time.
- 5.61 Eutrophication and acidification caused by N deposition could feasibly affect processes within woodland habitats, particularly in relation to soil processes and nutrient cycles. Changes in these processes would normally manifest themselves first as changes to the structure and functioning of in the lower plant communities (as described above), rather than as changes to the qualifying features themselves. The SSSI condition assessments for woodland habitats do not normally include biochemical conditions or lower plant communities, therefore these condition assessments cannot be relied upon to identify situations where these supporting processes are already being affected by eutrophication / acidification.

Conclusions on site integrity

- 5.62 While traffic flows along the nearby A10 are likely to increase by over 1,000 AADT, given the prevailing winds and the distance between the road and the SAC, it is expected that any resultant deposition would be relatively small, particularly in the context of other sources of N deposition at this site.
- 5.63 It is generally difficult to rule out the potential for N induced eutrophication / acidification to result in changes in soil processes and nutrient cycles, as these changes are not well understood and very difficult to detect. However in this particular circumstance it should be noted that only an extremely small area of the site could potentially be affected in this manner, and it is already unlikely to have natural soil processes due to edge effects and previous physical modifications (tracks). Even assuming the worst case scenario, the effects of aerial pollution on the SAC are considered to be *de minimis* and **it is concluded that the LTP4 Strategy would not have an adverse effect upon the Wormley Hoddesdonpark Woods SAC through air pollution, either alone or in combination with other plans and projects.**

6 Conclusions

- 6.1 This HRA for the Hertfordshire LTP4 Strategy (July 2017) has been undertaken in accordance with currently available guidance and is based on a precautionary approach as required under the Habitats Regulations.
- 6.2 The updated screening assessment ruled out likely significant effects of the Hertford bypass scheme on the basis that although this involve major significant new infrastructure, the project would not be close enough to any of the Natura 2000 sites to have any direct effects through habitat loss or disturbance (regardless of whether a northern or southern option was chosen). The land around Hertford is also considered to be unlikely to be functionally linked to the Lee Valley SPA / Ramsar as it does not support the relevant supporting habitats for the qualifying features i.e. open water / reed beds. Water pollution is unlikely in light of normal best practice in road construction and maintenance and given the scale of the waterbodies which comprise the SPA/Ramsar.
- 6.3 The screening assessment did identified the following likely significant effects due to rail improvements on the West Anglia Mainline, the potential A414 Rapid Bus Transit extension, and increases in traffic flows as a result of highway improvements and local growth:
- Lee Valley SPA / Ramsar
 - Air pollution
 - Disturbance
 - Physical loss of habitat
 - Wormley Hoddesdonpark Woods SAC
 - Air Pollution.
- 6.4 These effects have all been subject to Appropriate Assessment, which has concluded that **the LPT4 Strategy would not have an adverse effect on the integrity of the Natura 2000 network, either alone or in-combination with other plans and projects**. However that conclusion is subject to a number of assumptions / recommendations:
- **It is not possible to rule out an adverse effect on the Lee Valley SPA / Ramsar as a result of the proposed rail improvements on the West Anglia Mainline;** these improvements are expected to include a new station at Turnford and the 4-tracking of mainline itself, however insufficient information is available about these projects to carry out a full assessment at the current time. These projects will all require project level HRA by the relevant competent authorities (Transport for London and Network Rail). At this stage, there is no evidence to suggest that those projects would not pass a HRA (subject to detailed survey and design, and sensitive implementation). In the current circumstance **down the line assessments may be relied upon**, and given that the relevant competent authorities for these assessments do not include the Council itself, **no modifications to the Council's LPT4 Strategy are recommended in relation to these effects.**
 - **It is not possible to rule out an adverse effect on the Lee Valley SPA / Ramsar as a result of the potential A414 Rapid Bus Transit extension;** insufficient information is available about this project to carry out a full assessment at the current time. It is recommended that **the Council should carry out further detailed assessments of these effects in lower level plans** which specify relevant details of the project; these plans are expected to include the A414 Corridor Strategy and the South Eastern Growth and Transport Plan. It is also recommended that **text should be incorporated into the LTP4 Strategy recognising the potential effects of this project, and the need for further assessment.**

Appendix 1

Policies and major schemes in the LTP4 Strategy

Table 1 - Policies in the LTP4 Strategy

Policy	Summary	What is planned
Policy 1: Transport User Hierarchy	Changing the priority afforded to various modes in the design of urban areas and the transport system.	Implementation of the following hierarchy (highest priority at the top): <ul style="list-style-type: none"> • Opportunities to reduce travel demand and the need to travel • Vulnerable road user needs (such as pedestrians and cyclists) • Passenger transport user needs • Powered two wheeler (mopeds and motorbikes) user needs • Other motor vehicle user needs
Policy 2: Influencing land use planning	Locating development to encourage use of public transport, walking and cycling.	New development to be located in areas served by or with potential for public transport. New development to be located in areas where key services can be accessed by walking and cycling.
Policy 3: Travel Plans and Behaviour Change	Travel plans to be adopted.	Travel plans to be adopted through: <ul style="list-style-type: none"> • Working in partnership with large employers, businesses and other organisations to develop travel plans and implement Smarter Choices measures; • Seeking the development, implementation and monitoring of travel plans for new developments; • Supporting school travel plans, and work closely with parents, pupils, teachers and local residents to deliver a network of more sustainable transport links to school;
Policy 4: Demand Management	Development of strategies including parking restrictions to provide greater traffic demand management.	Greater traffic demand management to be achieved through: <ul style="list-style-type: none"> • Parking restrictions • Charges applied to parking • Development of locally appropriate strategies

Policy	Summary	What is planned
Policy 5: Development Management	Management of development to improve transport.	<p>Council will management development to:</p> <ul style="list-style-type: none"> • Locate development appropriately • Ensure safe and suitable accessibility • Consider adoption of access and internal roads • Secure development contributions to transport network and restrict development where residual cumulative impact of development is considered to be severe • Require travel plans • Consider access to primary and main distributor roads only where special circumstances demonstrated • Resist development that would affect road or right of way character or road safety • Ensure new developments provide facilities for electric vehicle and low emission charge points
Policy 6: Accessibility	Strategies to increase access to services.	<p>Strategies to increase access to services including:</p> <ul style="list-style-type: none"> • Working in partnership with key stakeholders • Supporting transport services which could include providing resource for bus and other transport services • Addressing the barriers to accessibility • Promoting travel options and facilitating accessible travel information provision • Improving travel choices and options
Policy 7: Active Travel - Walking	Strategies to encourage and promote walking.	<p>Strategies to encourage and promote walking including:</p> <ul style="list-style-type: none"> • Implementing measures to increase the priority of pedestrians relative to motor vehicles and creating walking friendly centres • Delivering infrastructure to provide safer access to key services, and enable and encourage walking • Identifying and promoting networks of pedestrian priority routes in Growth and Transport Plans • Promoting walking as a mode of travel and for recreational enjoyment • Supporting the implementation of the Rights of Way Improvement Plan
Policy 8: Active Travel - Cycling	Strategies to encourage and promote cycling.	<p>Strategies to encourage and promote cycling including:</p> <ul style="list-style-type: none"> • Infrastructure improvements to enable and encourage more cycling • Implementing measures to increase the priority of cyclists relative to motor vehicles • Improved safety for users • Supporting promotion campaigns to inform, educate, reassure and encourage cycling provision and education • Facilitating provision of secure cycle parking

Policy	Summary	What is planned
Policy 9: Buses	Promotion and support of bus services.	<p>Promotion and support of bus services including:</p> <ul style="list-style-type: none"> Supporting the delivery of infrastructure Providing and maintaining all bus stops and other bus related highway infrastructure Utilising new powers afforded to Local Authorities through the Bus Services Act as appropriate Procure and support cost effective and efficient bus services to improve accessibility and respond to existing and potential passenger needs Working with a wide range of partners through the Intalink Quality Partnership to achieve improvements in facilities and services to improve multi modal interchange, accessibility and the journey experience Work with partners to develop appropriate passenger fares, encourage the development of smart ticketing and to improve the provision and accuracy of passenger information Working with partners to promote bus services as an option for work and school journeys, and promote and publicise the passenger transport network through the Intalink Quality Partnership using a variety of media
Policy 10: Rail	Strategies to support and promote rail use.	<p>Strategies to support and promote rail use including:</p> <ul style="list-style-type: none"> Seek improvements to trains services in regards to capacity, journey times, frequency and range of destinations served Make rail travel more attractive through improved fares and ticketing, upgraded station facilities and better access and interchange by sustainable modes of transport Support Community Rail Partnerships Publish a Rail Strategy
Policy 11: Airports	Targets to improve access to airports and promote sustainable access.	Promote and facilitate a modal shift of airport passengers and employees towards sustainable modes.
Policy 12: Network Management	Strategies to manager and reduce traffic congestion.	<p>Strategies to manager and reduce traffic congestion including:</p> <ul style="list-style-type: none"> Use of Intelligent Transport Systems and small scale traffic management interventions Maintaining a Network Management Strategy Reducing levels of single occupancy car use and encouraging sustainable travel Sharing data (open data) and supporting the use of technology to provide up to date and accessible information for all network users Control of on-street vehicle parking in line with the Network Management Strategy Managing street works and minimising network disruption

Policy	Summary	What is planned
Policy 13: New Road and Junctions	Council to design new transport infrastructure.	Council to design new transport infrastructure to accommodate existing and planned development demand.
Policy 14: Climate Change Network Resilience	Management of infrastructure in light of risk from climate change.	Council and other organisations providing infrastructure will design, construct, maintain and operate all infrastructure in light of risk of climate change.
Policy 15: Speed Management	Speed Management Strategy to be used to manage speeds.	Speed Management Strategy to be used to manage speeds in the interest of safety, other road users and the environment.
Policy 16: Freight and Logistics	Strategies to manage freight and logistics traffic.	<p>Strategies to manage freight and logistics traffic including:</p> <ul style="list-style-type: none"> • Encouraging HGV's to use the primary route network • Providing clear advice to local planning authorities in respect of highways and freight implications of new development • Encourage a shift from road-borne freight to less environmentally damaging modes • Support the formation of Quality Partnerships between interested parties • Monitor changes in HGV and LGV activity to inform possible solutions which reconcile the need of access for goods and services with local environment and social concerns • Supporting improvements in HGV provision in the county • Utilising traffic management powers to manage access and egress from specific locations
Policy 17: Road Safety	Strategies to improve road safety.	<p>Strategies to improve road safety including:</p> <ul style="list-style-type: none"> • Working with partners, in particular through the Hertfordshire Road Safety Partnership to deliver targeted and effective appropriate road safety measures • The development of a 'Safe Systems' approach • Using latest data analysis and intelligence led techniques to target and evaluate measures
Policy 18: Transport Safety and Security	Council will seek improvements to the perception of safety and security.	The council will seek to improve the perception of safety and security on the transport system where this could deter people from travelling, particularly by active modes and public transport.
Policy 19: Emissions reduction	Strategies to reduce harmful emissions.	<p>Strategies to reduce harmful emissions including:</p> <ul style="list-style-type: none"> • Promoting a change in behaviour to encourage a modal shift from cars to sustainable transport • Addressing any barriers to and supporting the uptake of ULEVs in the county • Reducing emissions from council operations

Policy	Summary	What is planned
Policy 20: Air Quality	Strategies to reduce the impacts of poor air quality on human health.	<p>Strategies to reduce the impacts of poor air quality on human health including:</p> <ul style="list-style-type: none"> Investigating the use of Clean Air Zones Work with District/Borough Councils to monitor and assess air pollution levels, and work in partnership with them to deliver any declared AQMA joint action plans Implement, monitor and review the county council's Air Quality Strategic Plan
Policy 21: Environment	Strategies to protect the environment.	<p>Strategies to protect the environment:</p> <ul style="list-style-type: none"> Ensure the impacts of traffic and transport infrastructure on the natural, built and historic environment are minimised Protect and enhance the quality of public spaces both in urban and rural areas Minimise the visual intrusion of highway signage and number of signs in order to reduce clutter Minimise light pollution and conserve energy from street lighting and signage illumination Minimise noise issues arising from transport where practical to do so Minimise and or mitigate the adverse physical impact on the landscape and environment and will try to secure significant and demonstrable environmental gains
Policy 22: Asset Management	Strategies to manage assets.	<p>Strategies to manage assets including:</p> <ul style="list-style-type: none"> Ensure the Highway Infrastructure Asset Management Plan fully considers how it can support delivery of the LTP objectives & policies Identify and apply industry-leading good practice to the management of all transport assets Maximise the opportunity for investment to maintain and improve the condition of the transport network Seek value for money for all transport assets and minimise future maintenance liabilities as far as possible
Policy 23: Growth and Transport Plans	Council to produce Growth and Transport Plans.	The county council will produce and maintain a series of Growth and Transport Plans (GTPs) covering different sub areas of Hertfordshire. Each plan will consider current and future challenges and identify interventions aligned to LTP objectives. The GTPs will also be informed by and in turn help to inform Local Plans and Infrastructure Delivery Plans which are prepared by the district/borough authorities in Hertfordshire.

Table 2 Major schemes in the LTP4 Strategy

Major scheme	Summary	What is planned	Timescale
1. Radlett Aerodrome Site	Transport Improvements to support new development		Short-Medium Medium-Long

Major scheme	Summary	What is planned	Timescale
2. Gilston North of Harlow	Transport Improvements to support new development		Medium
3. Baldock	Transport Improvements to support new development		Medium
4. Brookfield Development Area / A10 Turnford interchange	Transport Improvements to support new development		Medium
5. North Bishop's Stortford	Transport Improvements to support new development		Medium
6. East Hemel Hempstead	Transport Improvements to support new development	Includes upgraded A414/Green Lanes junction, M1 Junction 8 enhancements and new spine road linking the A414 and B487.	Medium
7. A414 / A1081	Junction Upgrades	A414 Corridor Strategy to investigate.	Medium
8. A414 Colney Heath / Smallford Lane Longabout	Junction Upgrades	Road safety scheme.	Short-Medium
9. A1(M) J4, A414 / A1001, A414 / Great North Road	Junction Upgrades	A414 Corridor Strategy to investigate.	Medium
10. M25 J25	Junction Upgrades	Options consulted on in early 2017.	Short
11. Harlow A414 multiple junctions	Junction Upgrades	Various A414 junction upgrades to support new development in Harlow.	Short
12. M11 J7	Junction Upgrades	Junction upgrade scheme included in Highways England Road Investment Strategy 2015-2020.	Short
13. M11 J8	Junction Upgrades	Junction upgrade.	Short
14. Buntingford A10	Junction Upgrades	Hertfordshire LEP Growth Funding secured for this junction upgrade.	Short
15. M1-A6 Road Link	Highway Improvements	South East Midlands LEP Growth Funding secured to supplement developer funding for this new link road serving development north of Luton. Luton Borough and Central Bedfordshire have aspirations for a continuation of this link to the A505 in the long term to complete a Luton northern bypass.	Short
16. A1(M) Junction 6 - 8 smart motorway	Highway Improvements	Planned for delivery in 2020.	Short
17. A602 Improvements	Highway Improvements	Being implemented in three stages with full delivery by 2019.	Short
18. A120 bypass	Highway Improvements	Planned for delivery in 2019.	Short
19. New M11 Junction 7A	Highway Improvements	New junction on the M11 to improve connections between Harlow and the M11, reduce congestion and provide development opportunities.	Short - Medium
20. Essex Road Hoddeson	Highway Improvements	Bridge and highway improvements to enhance multimodal access to large employment area. LEP Growth Funding secured.	Short

Major scheme	Summary	What is planned	Timescale
21. Watford junction	Station Upgrades	Enhanced rail station and transport interchange in combination with mixed use development. Watford Borough Council Development Brief consulted on in 2016. Delivery will be via multiple planning applications.	Medium
22. Stevenage	Station Upgrades	Redevelopment of station including provision of a fifth platform. Acts as a catalyst for the wider town centre redevelopment.	Medium
23. Stevenage	Town Centre Redevelopment	First stage of Stevenage town centre regeneration has received Growth Deal 3 funding in 2017. Full regeneration project will be delivered via a mix of private and public funding and includes closure and reconfiguration of Lytton Way, new relocated bus station, enhanced public realm, car park consolidation and development.	Short-Medium
24. Luton Airport Parkway	Luton Airport Parkway	Light rail transit link between Luton Parkway Station and Luton Airport. Potentially opening as early as 2021.	Short
25. Metropolitan Line Extension	Metropolitan Line Extension	Extension and diversion of Metropolitan Line trains to serve Watford Junction and Watford High Street Stations, with two new stations at Cassiobridge and Vicarage Road. The existing Watford Station would be closed. Funding yet to be fully secured.	Short
26. Crossrail 2	Crossrail 2	New rail link connecting Broxbourne, Cheshunt and Waltham Cross stations to Surrey via an underground tunnel through London.	Medium
27. West Anglia Main Line 4 Tracking	West Anglia Main Line 4 Tracking	Four tracking of existing two track stretch between Coppermill Junction (just south of Tottenham Hale) and Broxbourne Junction. Would be required as part of Crossrail 2 but could be delivered independently in advance.	Medium
28. Watford North Curve	Rail Improvement to Investigate	Reinstatement of track east of Rickmansworth to link Chiltern Line services to the Metropolitan Line Extension at Watford, enabling services between Aylesbury and Watford.	Long
29. Focus for Cycling Improvements	Focus for Cycling Improvements	<p>Towns that the Propensity to Cycle Tool scenarios identify as likely to result in the highest rates of cycling:</p> <ul style="list-style-type: none"> • Baldock • Berkhamsted • Bishops Cleeve • Borehamwood • Cheshunt • Harpenden • Hatfield • Hemel Hempstead • Hertford • Hitchin • Hoddesdon • Letchworth Garden City • Potters Bar • Rickmansworth • Royston • St. Albans 	

Major scheme	Summary	What is planned	Timescale
		<ul style="list-style-type: none"> • Stevenage • Tring • Ware • Watford • Welwyn Garden City 	
30. Sustainable Travel Towns	Sustainable Travel Towns	<p>Comprehensive packages of schemes and behaviour change initiatives aimed at achieving a significant modal shift to non-car modes and reduction in single occupancy car use in the following towns:</p> <ul style="list-style-type: none"> • Bishops Cleeve • Chesham • Hatfield • Hemel Hempstead • Hertford • St. Albans • Stevenage • Watford • Welwyn Garden City 	
31. Passenger Transport Hub / Coachway to Investigate: M1 J8 and A1(M) J8	Passenger Transport Hub / Coachway to Investigate: M1 J8 and A1(M) J8	These hubs could link local passenger transport services and long distance coach services to improve public transport connectivity and achieve modal shift. An alternative A1(M) scheme could be considered in the vicinity of Junction 7 if deemed preferable to one near Junction 8.	
32. A414 Bus Rapid Transit	A414 Bus Rapid Transit	A passenger transit link offering greater speeds and reliability than traditional bus services, linking Hemel Hempstead Rail Station in the west to Welwyn Garden City in the east, with potential future extensions to Hertford and Harlow.	
33. Hertford By-Pass	Hertford By-Pass	Highway bypass north or south of Hertford to reroute the A414 and connect with the A10 east of the town.	
34. M1 Junction 8a (additional junction)	M1 Junction 8a (additional junction)	A new junction to address lack of capacity and constrain issues and provide options for long term growth of the town.	
35. New Rail Stations to Investigate	New Rail Stations to Investigate	<p>Potential new stations at:</p> <ul style="list-style-type: none"> • Turnford • Park Lane in Waltham Cross • South Stevenage on the Hertford Loop 	

Appendix 2

Attributes of European sites within Hertfordshire (+ 10km)

Site name	Area (ha)	Location	Qualifying features	Key vulnerabilities and environmental conditions to support site integrity	Natural England Conservation Objectives
European Sites within (or partly within) Hertfordshire					
Chiltern Beechwoods SAC	1,276.48	Fragmented site to the west and south west outside of the county boundary and the west and north west within the county boundary.	<p><i>Asperulo-Fagetum</i> beech forests</p> <p>Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites)</p> <p>Stag beetle <i>Lucanus cervus</i></p>	Significant changes to the structural and species diversity of these woods are required in order to promote a more natural composition. Beech woodland in the Chilterns is currently facing a decline due to very low market value for timber and damage to young trees by grey squirrels. The long-term sustainability of the juniper populations is uncertain due to the lack of natural regeneration and a poor ability to compete with other scrub species. Means of improving the prospects for juniper in the Chilterns are currently being investigated; a joint initiative between English Nature, local authorities and the local wildlife trust is in place.	<p>Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;</p> <ul style="list-style-type: none"> • The extent and distribution of qualifying natural habitats and habitats of qualifying species • The structure and function (including typical species) of qualifying natural habitats • The structure and function of the habitats of qualifying species • The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely • The populations of qualifying species, and, • The distribution of qualifying species within the site.
Wormley Hoddesdonpark Woods SAC	335.53	Fragmented site lying to the south of the county.	Sub-Atlantic and medio-European oak or oak-hornbeam forests of the <i>Carpinion betuli</i>	The majority of the woods in the complex are in sympathetic ownership, with no direct threat. There is some pressure from informal recreation but this is concentrated on well-established paths. Various past management neglect has resulted in small areas being planted with conifers	<p>Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;</p> <ul style="list-style-type: none"> • The extent and distribution of qualifying natural habitats

Site name	Area (ha)	Location	Qualifying features	Key vulnerabilities and environmental conditions to support site integrity	Natural England Conservation Objectives
				<p>or other inappropriate species, distortion of the age structure, and the storage of coppice. Present management ranges from benign neglect to active forestry, including management specifically for nature conservation. Approximately 70% (237.5 ha) of the site is a National Nature Reserve.</p>	<ul style="list-style-type: none"> The structure and function (including typical species) of qualifying natural habitats, and The supporting processes on which qualifying natural habitats rely
Lee Valley SPA	447.87	Fragmented site both beyond the county boundary to the south within Essex and Greater London and to the south of Hertfordshire.	<p><i>Botaurus stellaris</i> Great bittern (non-breeding)</p> <p><i>Anas clypeata</i> Northern shoveler (Non-breeding)</p> <p><i>Anas strepera</i> Gadwall (Non-breeding)</p>	<p>The whole area is affected by rather eutrophic water quality; but this is to be addressed via AMP3 funding under the Urban Waste Water Treatment Directive. The other main threat is that of human recreational pressure, but this is already well regulated through zoning of water bodies within the Lee Valley Regional Park. The majority of the site is already managed in accordance with agreed management plans in which nature conservation is a high or sole priority. There is also a potential problem from over-abstraction of surface water for public supply, particularly during periods of drought. This will be addressed through the Environment Agency review of consents. The threat from potential development</p>	<p>Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;</p> <ul style="list-style-type: none"> The extent and distribution of the habitats of the qualifying features The structure and function of the habitats of the qualifying features The supporting processes on which the habitats of the qualifying features rely The population of each of the qualifying features, and, The distribution of the qualifying features within the site.

Site name	Area (ha)	Location	Qualifying features	Key vulnerabilities and environmental conditions to support site integrity	Natural England Conservation Objectives
				<p>pressures in this urbanised and urban-fringe area is largely covered by the relevant provisions of the Conservation Regulations (1994).</p> <p>Natural England's Site Improvement Plan for the SPA identifies the main threats facing the site to be the loss of suitable habitats and food sources through water pollution; hydrological changes in water bodies as a result of water abstraction and climatic change habitat; changes in fish populations; the invasive species of the <i>azolla</i> and/or invasive aquatic blanket; and the risk of atmospheric nitrogen deposition which exceeds site relevant critical loads.</p>	
Lee Valley Ramsar site	447.87	Fragmented site both beyond the county boundary to the south within Essex and Greater London and to the south of Hertfordshire.	<p>Whorled water-milfoil <i>Myriophyllum verticillatum</i></p> <p><i>Micronecta minutissima</i> (a water-boatman)</p> <p>Northern Shoveler</p> <p>Gadwall</p>	<p>The whole site supports high levels of visitor pressure; principally for purposes of angling, walking, cycling and bird watching; with boating on the adjacent canal. These activities are mostly well regulated and at current levels are not considered to threaten the interest.</p> <p>Natural England's Site Improvement Plan for the Ramsar site identifies the main threats</p>	No conservation objectives published for the Ramsar site.

Site name	Area (ha)	Location	Qualifying features	Key vulnerabilities and environmental conditions to support site integrity	Natural England Conservation Objectives
				facing the site to be the loss of suitable habitats and food sources through water pollution ; hydrological changes in water bodies as a result of water abstraction and climatic change habitat; changes in fish populations; the invasive species of the <i>azolla</i> and/or invasive aquatic blanket; and the risk of atmospheric nitrogen deposition which exceeds site relevant critical loads.	
European Sites outside of Hertfordshire but within 10km					
Epping Forest SAC	1,604.95	Fragmented site beyond the county boundary to the south within Great London and Essex.	<p>Atlantic acidophilous beech forests with <i>Ilex</i> and sometimes also <i>Taxus</i> in the shrublayer (<i>Quercion robur-petraeae</i> or <i>Ilici-Fagenion</i>)</p> <p>Northern Atlantic wet heaths with <i>Erica tetralix</i></p> <p>European dry heaths</p> <p>Stag beetle <i>Lucanus cervus</i></p>	<p>The forest's epiphytic bryophyte population had been declining due to the death of pollards, shading and pollution from acid rain. The reintroduction of pollarding and wood pasture management is helping to reverse the decline. There is an active policy to leave felled timber on the ground to increase the habitat for stag beetle and other saproxylic insects. In 1988, the Corporation of London, who own and manage the forest, agreed a management strategy with (then) English Nature to take forward the management outlined above. A comprehensive management plan</p>	<p>Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;</p> <ul style="list-style-type: none"> • The extent and distribution of qualifying natural habitats and habitats of qualifying species • The structure and function (including typical species) of qualifying natural habitats • The structure and function of the habitats of qualifying species • The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely

Site name	Area (ha)	Location	Qualifying features	Key vulnerabilities and environmental conditions to support site integrity	Natural England Conservation Objectives
				<p>was completed and consented in 1998. The site is subject to the provisions of the Epping Forest Act of 1878.</p> <p>Natural England's Site Improvement Plan for the SAC identifies the main threats facing the site to be the risk of atmospheric nitrogen deposition and resultant reduction of overall lichen diversity; habitat fragmentation which risks isolating the site from the surrounding countryside; the declining number of veteran trees; and the invasive species of the oak processionary moth and Rhododendron.</p>	<ul style="list-style-type: none"> • The populations of qualifying species, and, • The distribution of qualifying species within the site.
Burnham Beeches SAC	382.76	Outside of the county boundary to the south west within Buckinghamshire.	Atlantic acidophilous beech forests with <i>Ilex</i> and sometimes also <i>Taxus</i> in the shrublayer (<i>Quercion robur-petraeae</i> or <i>Ilici-Fagenion</i>)	Most of Burnham Beeches is in sympathetic ownership and managed for the benefit of nature conservation. A large proportion of the site is designated as a National Nature Reserve and is managed to restore grazed pasture woodland and heathland. The National Trust also owns part of the site. The largest of two private landowners manage the woodland with the aid of Woodland Grant Scheme funding.	<p>Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;</p> <ul style="list-style-type: none"> • The extent and distribution of qualifying natural habitats • The structure and function (including typical species) of qualifying natural habitats, and

Site name	Area (ha)	Location	Qualifying features	Key vulnerabilities and environmental conditions to support site integrity	Natural England Conservation Objectives
				<p>Measures are in place to reduce possible damaging influences from adjacent mineral workings, such as dust and hydrological changes. Ambient levels of sulphur and nitrogen oxides in the Burnham Beeches area may indicate that Environment Agency criteria levels for sensitive vegetation are being exceeded. This is under active investigation.</p> <p>Natural England's Site Improvement Plan for the SAC identifies the main threats facing the site to be the risk of atmospheric nitrogen deposition and resultant reduction of overall lichen diversity; habitat fragmentation which risks isolating the site from the surrounding countryside; the declining number of veteran trees; and the invasive species of the oak processionary moth and Rhododendron.</p>	<ul style="list-style-type: none"> The supporting processes on which qualifying natural habitats rely
Eversden and Wimpole Woods SAC	66.48	Outside of the County boundary to the north within Cambridgeshire.	Barbastelle bat <i>Barbastella barbastellus</i>	Wimpole Woods is owned and managed by the National Trust and their management is aimed at maintaining, and where possible, enhancing the	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation

Site name	Area (ha)	Location	Qualifying features	Key vulnerabilities and environmental conditions to support site integrity	Natural England Conservation Objectives
				<p>barbastelle population. The current use of the wood, including public access, is considered compatible with the barbastelle interest and should not affect the barbastelle population or their roosts. Eversden Wood is privately-owned and the current management is considered compatible with the use of this wood as a foraging area/flight path by barbastelles.</p> <p>Natural England's Site Improvement Plan for the SAC identifies the main threats facing the site to be the risk of atmospheric nitrogen deposition; offsite habitat availability and management as research is required to identify the areas and habitats used by the bats off the SAC, and secure suitable management in order to maintain, enhance and increase the supporting habitat.</p>	<p>Status of its Qualifying Features, by maintaining or restoring;</p> <ul style="list-style-type: none"> • The extent and distribution of the habitats of qualifying species • The structure and function of the habitats of qualifying species • The supporting processes on which the habitats of qualifying species rely • The populations of qualifying species, and, • The distribution of qualifying species within the site.

Appendix 3

Screening Assessment

Table 6-1

Policy/major scheme	Likely activities (operations) to result as a consequence of the policy/major schemes	Likely effects if policy/site allocation is implemented	European site(s) potentially affected	Potential mitigation measures – if implemented could help to avoid likely significant effect	Could the policy/major scheme have likely significant effects on European sites (taking mitigation into account)?
Policies in the LTP4 Strategy					
Policy 1: Transport User Hierarchy	None	n/a	n/a	n/a	No – this policy alone will not result in physical change. It aims to ensure that more sustainable forms of transport are given priority over car travel, which could help to decrease county-wide traffic emissions.
Policy 2: Influencing land use planning	None	n/a	n/a	n/a	No – this policy alone will not result in physical change. It will facilitate more sustainable forms of transport instead of car travel, which could help to decrease county-wide traffic emissions.
Policy 3: Travel Plans and Behaviour Change	None	n/a	n/a	n/a	No – this policy alone will not result in physical change. It will incentivise more sustainable forms of transport instead of car travel, which could help to decrease county-wide traffic emissions.
Policy 4: Demand Management	Small-scale new infrastructure such as parking meters	n/a	n/a	n/a	No – any new infrastructure associated with this policy will be small scale within the existing urban areas. This policy also aims to discourage travel by car, which could help to decrease county-wide traffic emissions.
Policy 5: Development Management	None	n/a	n/a	n/a	No – this policy alone will not result in physical change. It will facilitate more sustainable forms of transport instead of car travel, which could help to decrease county-wide traffic emissions.
Policy 6: Accessibility	Improvements to public transport and	n/a	n/a	n/a	No –any new infrastructure associated with this policy will be small scale within the existing urban areas. This policy

Policy/major scheme	Likely activities (operations) to result as a consequence of the policy/major schemes	Likely effects if policy/site allocation is implemented	European site(s) potentially affected	Potential mitigation measures – if implemented could help to avoid likely significant effect	Could the policy/major scheme have likely significant effects on European sites (taking mitigation into account)?
	pedestrian/cycle links to services				also aims to improve accessibility of disadvantaged groups and those with impaired mobility.
Policy 7: Active Travel - Walking	New and improves walking routes	n/a	n/a	n/a	No – any new infrastructure associated with this policy will be small scale within the existing urban areas. This policy also aims to discourage travel by car, which could help to decrease county-wide traffic emissions.
Policy 8: Active Travel - Cycling	New and improved cycle routes	n/a	n/a	n/a	No – any new infrastructure associated with this policy will be small scale within the existing urban areas. This policy also aims to discourage travel by car, which could help to decrease county-wide traffic emissions.
Policy 9: Buses	Improved bus transport	n/a	n/a	n/a	No – any new infrastructure associated with this policy will be within the existing urban areas and / or on the highways estate. This policy also aims to discourage travel by car, which could help to decrease county-wide traffic emissions.
Policy 10: Rail	Improved rail transport	n/a	n/a	n/a	No – any new infrastructure associated with this policy will be associated with upgrades to stations. This policy also aims to discourage travel by car, which could help to decrease county-wide traffic emissions.
Policy 11: Airports	Improved access and sustainable transport links to airports	Habitat Loss Disturbance	Lee Valley SPA / Ramsar	Ensitibve engineering design / construction methods	Uncertain – this policy would support the development of new infrastructure associated with the main arterial routes to Stanstead and Luton airports, which include West Anglia Mainline that runs adjacent to the Lee Valley Ramsar / SPA. While effects alone are unlikely,

Policy/major scheme	Likely activities (operations) to result as a consequence of the policy/major schemes	Likely effects if policy/site allocation is implemented	European site(s) potentially affected	Potential mitigation measures – if implemented could help to avoid likely significant effect	Could the policy/major scheme have likely significant effects on European sites (taking mitigation into account)?
					potential in-combination effects with some of the proposed Major schemes in the LTP4 Strategy (see below). The policy could also reduce travel by car, which could help to decrease county-wide traffic emissions.
Policy 12: Network Management	Small-scale infrastructure such as cameras and parking meters	n/a	n/a	n/a	No – any new infrastructure associated with this policy will be small scale within the existing urban areas and / or the highway estate. This policy also aims to discourage travel by car, which could help to decrease county-wide traffic emissions.
Policy 13: New Road and Junctions	New roads and junctions	Air pollution	<ul style="list-style-type: none"> Wormley Hoddesdonpark Woods SAC Lee Valley Ramsar / SPA 	Design of new roads	<p>Uncertain – new roads and junctions could increase traffic flows on sensitive stretches of road within 200m of these sites. In-combination effects are likely in relation some of the proposed Major schemes in the LTP4 Strategy (see below).</p> <p>Based on the new roads and junctions identified as Major schemes in this plan (see below), the associated changes in flows would be unlikely to have significant effects on Epping Forest SAC or Chiltern Beechwoods SAC. While it is possible that roads and junctions might be identified through other plans and projects, at the current time it is not possible to assess the effects of such future schemes.</p>
Policy 14: Climate Change Network Resilience	None	n/a	n/a	n/a	No – any this policy will affect the detailed design and maintenance of new / existing infrastructure, but would not itself result in any new infrastructure.

Policy/major scheme	Likely activities (operations) to result as a consequence of the policy/major schemes	Likely effects if policy/site allocation is implemented	European site(s) potentially affected	Potential mitigation measures – if implemented could help to avoid likely significant effect	Could the policy/major scheme have likely significant effects on European sites (taking mitigation into account)?
Policy 15: Speed Management	None	n/a	n/a	n/a	No – the policy is unlikely to result in any new infrastructure. Changes to speed limits can affect aerial deposition, however these measures would most likely be targeted in urban areas.
Policy 16: Freight and Logistics	Small-scale infrastructure such as cameras	n/a	n/a	n/a	No – the policy would largely aim to manage access to the final destinations of HGVs, which would be predominately within urban areas. The policy is unlikely to change the main routes used by HGVs with regards to any sensitive stretches of road passing close to Natura 2000 sites.
Policy 17: Road Safety	None	n/a	n/a	n/a	No – the policy is unlikely to result in any new infrastructure. Changes to speed limits can affect aerial deposition, however these measures would most likely be targeted in urban areas.
Policy 18: Transport Safety and Security	None	n/a	n/a	n/a	No – the policy is unlikely to result in any new infrastructure. The policy aims to support modal shift, away from car use.
Policy 19: Emissions reduction	Small-scale infrastructure such as charging points	n/a	n/a	n/a	No – this policy is likely to result in a reduction in vehicular emissions, which may have a positive effect on sensitive sites which are within 200m of a road.
Policy 20: Air Quality	Small-scale infrastructure such as monitoring points	n/a	n/a	n/a	No – this policy is likely to result in a reduction in vehicular emissions, which may have a positive effect on sensitive sites which are within 200m of a road.
Policy 21: Environment	Mitigation infrastructure	n/a	n/a	n/a	No – the policy is unlikely to result in any physical infrastructure and should

Policy/major scheme	Likely activities (operations) to result as a consequence of the policy/major schemes	Likely effects if policy/site allocation is implemented	European site(s) potentially affected	Potential mitigation measures – if implemented could help to avoid likely significant effect	Could the policy/major scheme have likely significant effects on European sites (taking mitigation into account)?
					ensure that negative environmental effects of other policies are avoided.
Policy 22: Asset Management	None	n/a	n/a	n/a	No – the policy is unlikely to result in any new infrastructure, but rather it concerns the maintenance of existing assets.
Policy 23: Growth and Transport Plans	None	n/a	n/a	n/a	No – the policy simply requires the preparation and implementation of lower level plans, which would themselves be subject to HRA were necessary.
Major schemes proposed in the LTP4 Strategy					
1. Radlett Aerodrome Site	Infrastructure improvements	n/a	n/a	n/a	No – while this policy will result in new infrastructure (e.g. junction improvements), these will alter existing transport corridors and will not take place in close proximity to sensitive stretches of road.
2. Gilston North of Harlow	Infrastructure improvements	Air pollution	<ul style="list-style-type: none"> Wormley Hoddesdonpark Woods SAC Lee Valley Ramsar / SPA 	Sustainable transport links	Uncertain – major new development in this location has the potential to result in significant increases traffic flows on the A414 and A10, particularly in combination with some of the other proposed Major schemes in the LTP4 Strategy.
3. Baldock	Infrastructure improvements	n/a	n/a	n/a	No – while this policy will result in new infrastructure (e.g. junction improvements), these will alter existing transport corridors and will not take place in close proximity to sensitive stretches of road.
4. Brookfield Development Area / A10	Infrastructure improvements	Air pollution	<ul style="list-style-type: none"> Wormley Hoddesdonpark Woods SAC 	Sustainable transport links	Uncertain – major new development in this location has the potential to result in significant increases traffic flows on the

Policy/major scheme	Likely activities (operations) to result as a consequence of the policy/major schemes	Likely effects if policy/site allocation is implemented	European site(s) potentially affected	Potential mitigation measures – if implemented could help to avoid likely significant effect	Could the policy/major scheme have likely significant effects on European sites (taking mitigation into account)?
Turnford interchange			<ul style="list-style-type: none"> Lee Valley Ramsar / SPA 		A414 and A10, particularly in combination with some of the other proposed Major schemes in the LTP4 Strategy.
5. North Bishop's Stortford	Infrastructure improvements	n/a	n/a	n/a	No – while this policy will result in new infrastructure (e.g. junction improvements), these will alter existing transport corridors and will not take place in close proximity to sensitive stretches of road.
6. East Hemel Hempstead	Infrastructure improvements	n/a	n/a	n/a	No – while this policy will result in new infrastructure (e.g. junction improvements), these will alter existing transport corridors and will not take place in close proximity to sensitive stretches of road.
7. A414 / A1081	Junction upgrades	n/a	<ul style="list-style-type: none"> n/a 	n/a	No – while this policy will result in new infrastructure (e.g. junction improvements), these will alter existing transport corridors and will not take place in close proximity to sensitive stretches of road.
8. A414 Colney Heath / Smallford Lane Longabout	Junction upgrades	n/a	n/a	n/a	No – while this policy will result in new infrastructure (e.g. junction improvements), these will alter existing transport corridors and will not take place in close proximity to sensitive stretches of road.
9. A1(M) J4, A414 / A1001, A414 / Great North Road	Junction upgrades	n/a	n/a	n/a	No – while this policy will result in new infrastructure (e.g. junction improvements), these will alter existing transport corridors and will not take place in close proximity to sensitive stretches of road.

Policy/major scheme	Likely activities (operations) to result as a consequence of the policy/major schemes	Likely effects if policy/site allocation is implemented	European site(s) potentially affected	Potential mitigation measures – if implemented could help to avoid likely significant effect	Could the policy/major scheme have likely significant effects on European sites (taking mitigation into account)?
10. M25 J25	Junction upgrades	Air pollution	<ul style="list-style-type: none"> Wormley Hoddesdonpark Woods SAC 	Sustainable transport links	Uncertain – major new development in this location has the potential to result in significant increases traffic flows on the A10, particularly in combination with some of the other proposed Major schemes in the LTP4 Strategy.
11. Harlow A414 multiple junctions	Junction upgrades	Air pollution	<ul style="list-style-type: none"> Lee Valley Ramsar / SPA 	Sustainable transport links	Uncertain – major new development in this location has the potential to result in significant increases traffic flows on the A414 as it passes through the Lee Valley Ramsar / SPA, particularly in combination with some of the other proposed Major schemes in the LTP4 Strategy.
12. M11 J7	Junction upgrades	n/a	n/a	n/a	No – while this policy will result in new infrastructure (e.g. junction improvements), these will alter existing transport corridors and will not take place in close proximity to sensitive stretches of road.
13. M11 J8	Junction upgrades	n/a	n/a	n/a	No – while this policy will result in new infrastructure (e.g. junction improvements), these will alter existing transport corridors and will not take place in close proximity to sensitive stretches of road.
14. Buntingford A10	Junction upgrades	n/a	n/a	n/a	No – while this policy will result in new infrastructure (e.g. junction improvements), these will alter existing transport corridors and will not take place in close proximity to sensitive stretches of road.
15. M1-A6 Road Link	New road	n/a	n/a	n/a	No – while this policy will result in major new infrastructure, this is sufficiently

Policy/major scheme	Likely activities (operations) to result as a consequence of the policy/major schemes	Likely effects if policy/site allocation is implemented	European site(s) potentially affected	Potential mitigation measures – if implemented could help to avoid likely significant effect	Could the policy/major scheme have likely significant effects on European sites (taking mitigation into account)?
					distance from designated sites as to avoid any effects.
16. A1(M) Junction 6 - 8 smart motorway	Highway improvements	n/a	n/a	n/a	No – while this policy will result in increased flows between Stevenage and Welwyn, these effects are unlikely to extend to sensitive stretches of road close to Natura 2000 sites.
17. A602 Improvements	Highway improvements	n/a	n/a	n/a	No – while this policy may result in increased flows between Stevenage and Ware, these effects are unlikely to extend to sensitive stretches of road close to Natura 2000 sites.
18. A120 bypass	New road	n/a	n/a	n/a	No – while this policy will result in increased flows on the A120 and around Bishop's Stortford, these effects are unlikely to extend to sensitive stretches of road close to Natura 2000 sites.
19. New M11 Junction 7A	New junction	Air pollution	Lee Valley Ramsar / SPA	Sustainable transport links	Uncertain – a new motorway junction at Harlow has the potential to result in significant increases traffic flows on the A414 as it passes through the Lee Valley Ramsar / SPA, particularly in combination with some of the other proposed Major Schemes in the LTP4 Strategy.
20. Essex Road Hoddeson	Bridge and highway improvements	n/a	n/a	n/a	No – while this policy will result in new infrastructure close to the Lee Valley, it is sufficiently distance from the SPA/Ramsar to avoid any direct effects. The scheme may increase flows in between the employment site and the town, however effects are expected to be very localised and unlikely to extend

Policy/major scheme	Likely activities (operations) to result as a consequence of the policy/major schemes	Likely effects if policy/site allocation is implemented	European site(s) potentially affected	Potential mitigation measures – if implemented could help to avoid likely significant effect	Could the policy/major scheme have likely significant effects on European sites (taking mitigation into account)?
					to sensitive stretches of road close to Natura 2000 sites.
21. Watford junction	Station upgrade	n/a	n/a	n/a	No – while this policy will result in new infrastructure, this is sufficiently distance from designated sites as to avoid any effects. This scheme may also help to reduce traffic and associated air pollution on the local network.
22. Stevenage	Station upgrade including additional platform	n/a	n/a	n/a	No – while this policy will result in new infrastructure, this is sufficiently distance from designated sites as to avoid any effects. This scheme may also help to reduce traffic and associated air pollution on the local network.
23. Stevenage	Town Centre regeneration including closure and reconfiguration of Lytton Way, new relocated bus station, enhanced public realm, car park consolidation and development	n/a	n/a	n/a	No – while this policy will result in new infrastructure, this is sufficiently distance from designated sites as to avoid any effects. This scheme may also help to reduce traffic and associated air pollution on the local network.
24. Luton Airport Parkway	Light rail transit link between Luton Parkway Station and Luton Airport	n/a	n/a	n/a	No – while this policy will result in new infrastructure, this is sufficiently distance from designated sites as to avoid any effects. This scheme may also help to reduce traffic and associated air pollution on the local network.
25. Metropolitan Line Extension	Extension and diversion of Metropolitan Line trains to serve Watford Junction	n/a	n/a	n/a	No – while this policy will result in new infrastructure, this is sufficiently distance from designated sites as to avoid any effects. This scheme may also

Policy/major scheme	Likely activities (operations) to result as a consequence of the policy/major schemes	Likely effects if policy/site allocation is implemented	European site(s) potentially affected	Potential mitigation measures – if implemented could help to avoid likely significant effect	Could the policy/major scheme have likely significant effects on European sites (taking mitigation into account)?
	and Watford High Street Stations, with two new stations at Cassiobridge and Vicarage Road				help to reduce traffic and associated air pollution on the local network.
26. Crossrail 2	New rail link connecting Broxbourne, Cheshunt and Waltham Cross stations to Surrey via an underground tunnel through London	Physical loss of habitat Disturbance	Lee Valley SPA / Ramsar	Detailed design Construction methods	Uncertain – this scheme will require new infrastructure close to the Lee Valley SPA / Ramsar. It is unclear what infrastructure is needed in this area or how close it would come to the SPA / Ramsar and a project level HRA has not been carried out yet. There are also potential in-combination effects with the proposed 'West Anglia Main Line 4 Tracking' Major Scheme.
27. West Anglia Main Line 4 Tracking	Four tracking of existing two track stretch between Coppermill Junction (just south of Tottenham Hale) and Broxbourne Junction	Physical loss of habitat Disturbance	Lee Valley SPA / Ramsar	Detailed design Construction methods	Uncertain – this scheme will require new infrastructure close to the Lee Valley SPA / Ramsar. It is unclear what infrastructure is needed in this area or how close it would come to the SPA / Ramsar. here are also potetnail in-combination effects with the proposed 'Crossrail 2' Major Scheme.
28. Watford North Curve	Reinstatement of track east of Rickmansworth to link Chiltern Line services to the Metropolitan Line Extension at Watford, enabling services between Aylesbury and Watford	n/a	n/a	n/a	No – while this policy will result in new infrastructure, this is sufficiently distance from designated sites as to avoid any effects. This scheme may also help to reduce traffic and associated air pollution on the local network.

Policy/major scheme	Likely activities (operations) to result as a consequence of the policy/major schemes	Likely effects if policy/site allocation is implemented	European site(s) potentially affected	Potential mitigation measures – if implemented could help to avoid likely significant effect	Could the policy/major scheme have likely significant effects on European sites (taking mitigation into account)?
29. Focus for Cycling Improvements	Cycling improvements in selected towns	n/a	n/a	n/a	No – any new infrastructure associated with this policy will be small scale within the existing urban areas. This policy also aims to discourage travel by car, which could help to decrease county-wide traffic emissions.
30. Sustainable Travel Towns	Schemes and behaviour change initiatives aimed at achieving a significant modal shift to non-car modes and reduction in single occupancy car use in selected towns	n/a	n/a	n/a	No – any new infrastructure associated with this policy will be small scale within the existing urban areas. This policy also aims to discourage travel by car, which could help to decrease county-wide traffic emissions.
31. Passenger Transport Hub / Coachway to Investigate: M1 J8 and A1(M) J8	Passenger transport hubs linking passenger transport services and long distance coach services	n/a	n/a	n/a	No – any new infrastructure associated with this policy will sufficiently distance from any Natura 2000 sites as to avoid effects. This policy also aims to discourage travel by car, which could help to decrease county-wide traffic emissions.
32. A414 Bus Rapid Transit	A passenger transit link, linking Hemel Hempstead Rail Station in the west to Welwyn Garden City in the east, with potential future extensions to Hertford and Harlow	Physical loss of habitat Disturbance	Lee Valley SPA / Ramsar	Detailed design Construction methods	Uncertain – this scheme could require physical upgrades to the A414 as it passes through the Lee Valley SPA / Ramsar if this potential to the route requires segregation. There are also potential in-combination effects with other Major Schemes identified in this plan. The scheme should also help reduce traffic flows on this stretch of the A414, and in that respect it may have a positive effect by reducing air pollution.

Policy/major scheme	Likely activities (operations) to result as a consequence of the policy/major schemes	Likely effects if policy/site allocation is implemented	European site(s) potentially affected	Potential mitigation measures – if implemented could help to avoid likely significant effect	Could the policy/major scheme have likely significant effects on European sites (taking mitigation into account)?
33. Hertford By-Pass	New road	n/a	n/a	n/a	No – although this policy would involve major significant new infrastructure, this would not be close enough to any of the Natura 2000 sites to have any direct effects through habitat loss or disturbance. The land around Hertford is unlikely to be functionally linked to the SPA / Ramsar as it does not support the relevant supporting habitats for the qualifying features i.e. open water / reed beds. Water pollution is unlikely in light of normal best practice in road construction and maintenance and the scale of the waterbodies in the SPA/Ramsar.
34. M1 Junction 8a (additional junction)	New junction	n/a	n/a	n/a	No – while this policy will result in increased flows on the local network, these effects are unlikely to extend to sensitive stretches of road close to Natura 2000 sites.
35. New Rail Stations to Investigate	New railway stations	Physical loss of habitat Disturbance	Lee Valley SPA and Ramsar site	Detailed design Construction methods	Uncertain – potential locations for new stations include Turnford on the West Midlands Anglia Mainline, where the Lee Valley SPA and Ramsar site is adjacent to the line. Effects could be more significant due to in-combination effects with other Major Schemes identified in this plan.

Appendix 4

Plans, Policies and Programmes with the Potential for In-Combination Effects

National Plans and Strategies

HS2 Phase 1: Volume 2.1 Colne Valley - Quainton³⁷

Status

In Parliament - Session 2013-14.

Proposed development

The HS2 route is planned to cross the south of Hertfordshire to the west of West Hyde. Approximately 2km of railway is proposed, crossing the County from south to northwest. The route enters the County in the south as a viaduct, crosses the County through cuttings, fills and land at grade, and leaves the county through a tunnel to the northwest.

HRA

Two HRA Screening Reports³⁸ for Phase One of HS2 were undertaken in November 2013; one considering the effects of the development on the Chilterns Beechwoods SAC and one considering the effects on the South West London Waterbodies SPA. Both reports determined that, as long as proposed mitigation measures were implemented, the proposed development would not be likely to have significant effects, either alone or in combination, upon the European Sites.

Therefore there are no likely in-combination effects of the proposed HS2 Phase One development with the Hertfordshire LTP4.

Crossrail 2³⁹

Status

NIC Supplementary Submission submitted in February 2016.

Proposed development

The Crossrail 2 route is proposed to enter the far east of the County from the south, extending 7.4km northwards along the existing railway line with stations at Waltham Cross, Cheshunt and Broxbourne.

HRA

A Habitat Regulations Assessment has not yet been undertaken for this scheme.

Therefore at this stage it is not possible to rule out effects in-combination of the proposed Crossrail 2 development with the Hertfordshire LTP4.

Adjacent County Transport Plans and Strategies

Central Bedfordshire Local Transport Plan 3 2011-2016⁴⁰

Status

Adopted in January 2011.

Development quantum

Major schemes under construction:

- Luton – Dunstable Busway

³⁷ HS2 Phase 1: Volume 2.1 Colne Valley - Quainton: <https://www.gov.uk/government/publications/hs2-phase-one-plans-and-sections>

³⁸ Habitat Regulations Assessment (HRA) screening for the South West London Waterbodies Special Protection Area: Colne Valley, Habitat Regulations Assessment (HRA) screening for the Chilterns Beechwood Special Area of Conservation: Stoke Mandeville and Aylesbury: <https://www.gov.uk/government/publications/hs2-phase-one-environmental-statement-volume-5-ecology/hs2-phase-one-environmental-statement-volume-5-ecology>

³⁹ Crossrail 2: <http://crossrail2.co.uk/>

⁴⁰ Central Bedfordshire MyJourney: Local Transport Plan 3: <http://www.centralbedfordshire.gov.uk/transport/strategy/overview.aspx>

- M1 Hard Shoulder Running (Junctions 10-13)

Major schemes proposed:

- A5-M1 Link (Dunstable Northern Bypass)
- Woodside Connection
- M1 Junction 10a improvements
- Luton Northern Bypass
- East of Leighton Distributor Road
- Park & Ride – A5/A505 to the north of
- New parkway station in the vicinity of M1 Junction 11a
- Biggleswade Eastern Relief Road
- Flitwick –Westoning bypass
- Dunstable & the A6 north of Luton
- Luton North Station
- East-West Rail and the Marston Vale Line
- Thameslink programme
- The Wixams Station
- Midland Mainline Electrification
- Bedford to Milton Keynes Waterway

Likely effects of Major Schemes:

- Additional railway infrastructure including new stations
- Additional road infrastructure including junctions
- Improved and additional public transport infrastructure
- Improved green infrastructure including walking and cycling route as well as improved waterway

HRA findings

The 2011 HRA Screening Report⁴¹ determines that Central Bedfordshire Local Transport Plan 3 is unlikely to have significant effects on the European Sites considered either alone or in combination with other plans and policies identified.

Therefore there are no likely in-combination effects of the Central Bedfordshire Local Transport Plan 3 2011-2016 with the Hertfordshire LTP4.

Buckinghamshire's Local Transport Plan 4 2016-2036⁴²

Status

Adopted in April 2016.

Development quantum

Likely effects of policies:

- Improved railway infrastructure and access – including stations, public transport, cycling and walking access to stations

⁴¹ Myjourney: Central Bedfordshire Habitat Regulations Assessment Screening Report (January 2011): <http://www.centralbedfordshire.gov.uk/transport/strategy/overview.aspx>

⁴² Buckinghamshire's Local Transport Plan 4: <http://www.buckscc.gov.uk/services/council-and-democracy/our-plans/local-transport-plan-4/>

- Improve airport access – including improving public transport infrastructure access and road infrastructure for access
- Improved road infrastructure – including use of technology to increase highways capacity, maintenance of existing road infrastructure
- Improving walking infrastructure – particularly for access from new developments, within town centres, and in connecting with other sustainable transport links e.g. buses and train stations
- Improve cycling infrastructure – including developing the cycling network further
- Improve taxi infrastructure – incorporate into new developments where appropriate

Major Schemes:

- North – South Connectivity
 - Improving the A355 between Amersham and Beaconsfield, to reduce congestion and improve journey times on this connection to the M40
 - East West Rail – the Western Section will provide train services between Milton Keynes and London Marylebone, via Aylesbury
 - Improving north – south road links
 - Improving the A404 / A404 (M) between High Wycombe and Maidenhead
 - Improving the A413 to enhance connections within the County and to growth areas beyond
- East – West Connectivity
 - Create an Expressway between Oxford, Milton Keynes and Cambridge through Buckinghamshire. Highways England is undertaking a study
 - East West Rail – the Western Section will provide train services between Oxford and Milton Keynes, via Aylesbury and Princes Risborough, with an ambition to connect with Cambridge in the future
 - Improving access to the M40 at High Wycombe and Bicester
- Connectivity to Heathrow Airport
 - Crossrail – will provide Buckinghamshire residents rail links to Heathrow from Iver, Langley and Taplow
 - Western Rail Access to Heathrow – will reduce journey times between the UK's hub airport, the Thames Valley and all points west
 - Possible expansion of Heathrow – improving onward connections
- Connectivity to Luton Airport
- Connectivity to London
 - Improving road conditions on the south west section of the M25 and enhancing access to Heathrow
 - Crossrail – will create direct rail links to (and through) London from Iver, Langley and Taplow
 - Improving the A404/A404(M) between High Wycombe and Maidenhead
 - Including connections with future development like Old Oak Common and Crossrail 2
- Buckingham Link - providing link to Silverstone and North
- HS2/East West Rail / A421 Interchange
- A41 Upgrade
- A418 Eastern Access / A5 to M1
- Improved access to Luton Airport

- Chiltern Line upgrade
- A35 Improvement Project
- Access to CrossRail
- M25 SW Quadrant Study
- Mitigation of proposed major infrastructure around Iver
- Princes Risborough Link

HRA findings

The Screening Report (2016)⁴³ determined it was not possible to conclude no likely significant effects for particular policies and schemes due to insufficient detail at the time.

Therefore at this stage it is not possible to rule out effects in-combination of Buckinghamshire's Local Transport Plan 4 2016-2036 with the Hertfordshire LTP4.

Cambridgeshire Local Transport Plan 2011-2031⁴⁴

Status

Adopted in July 2015.

Development quantum

Committed major schemes in the period to 2020:

- A14 Cambridge to Huntingdon improvement scheme
- A428 Black Cat to Caxton Gibbet improvement
- A47 / A141 Guyhirn junction improvement
- Cambridge Science Park Station
- Cambridge Science Park Station busway access
- A142 Ely Southern Bypass
- Whittlesey Access Phase 1: A605 Kings Dyke level crossing
- A10 Foxton level crossing
- Soham Station
- Chisholm Trail cycle route, Cambridge
- Potential for additional schemes to be delivered from Growth Deal funding
- Elements of Greater Cambridge city deal programme

Long term major schemes beyond 2020:

- Cambridge Science Park Station and Busway access
- A142 Ely Southern Bypass
- Whittlesey Access Phase 1: A605 Kings Dyke level crossing
- A10 Foxton level crossing
- Soham Station
- Chisholm Trail cycle route, Cambridge

⁴³ Buckinghamshire Local Transport Plan 4 Habitats Regulations Assessment Screening Report: <http://www.buckscc.gov.uk/services/council-and-democracy/our-plans/local-transport-plan-4/>

⁴⁴ Cambridgeshire Local Transport Plan 2011-2031: <https://www.cambridgeshire.gov.uk/residents/travel-roads-and-parking/transport-plans-and-policies/local-transport-plan/>

Likely effects of major schemes:

- Additional infrastructure improving road, rail, walking and cycling routes
- Additional railway stations – including car and cycle parking and additional public transport access
- Additional road infrastructure – including junction creation, infrastructure improvements
- Improved sustainable transport infrastructure links

HRA findings

The HRA Screening (2014)⁴⁵ found that none of the schemes, interventions or strategies contained within the LTP3 will result in likely significant effects on any of the international sites included within this assessment. Where interventions by other parties (particularly Network Rail, the Highways Agency and neighbouring councils) have been considered for in combination effects, the conclusions of this Screening assessment does not preclude the need for the competent authorities to undertake their own screening assessment if this has not yet been undertaken. No likely significant effects on international sites as a result of the Plan are predicted as long as the recommendations made within the report are implemented.

Therefore there are no likely in-combination effects of the Cambridgeshire Local Transport Plan 2011-2031 with the Hertfordshire LTP4.

Essex Transport Strategy: The Local Transport Plan for Essex⁴⁶

Status

Adopted in 2011.

Development quantum

Likely effects of the policies:

- Infrastructure improvements to improve the public transport network
- Infrastructure improvements on main routes
- Infrastructure improvements for sustainable transports, including provision of electric vehicle charging points at new developments, improvements to cycling facilities, developing a cycling network in towns without one, integrating cycling and walking routes to form continuous routes,

Major schemes include:

- A13 Basildon to Hadleigh Passenger Transport Improvements, due to be completed in spring 2012
- Including infrastructure such as bus shelters, electronic information facilities, bus lanes and minor junction improvements
- A13/A130 Sadlers Farm junction scheme due in 2012
- Infrastructure to link the A13 and A130 (thereby reducing the impacts of congestion)

HRA findings

The HRA is not in the public domain, however the Transport plan states that the Local Transport Plan has undergone a Habitat Regulation Assessment Screening.

Therefore at this stage it is not possible to rule out effects in-combination of the Essex Transport Strategy: The Local Transport Plan for Essex with the Hertfordshire LTP4.

Luton Local Transport Plan 3 2011-2026⁴⁷

⁴⁵ Cambridgeshire County Council LTP3: Habitats Regulations Assessment: <https://www.cambridgeshire.gov.uk/residents/travel-roads-and-parking/transport-plans-and-policies/local-transport-plan/>

⁴⁶ Essex Transport Strategy: The Local Transport Plan for Essex: <http://www.essexhighways.org/Transport-and-Roads/Highway-Schemes-and-Developments/Local-Transport-Plan.aspx>

⁴⁷ Luton Local Transport Plan 3 2011-2026: https://www.luton.gov.uk/Transport_and_streets/Transport_planning/Local%20transport%20plan/Pages/Local%20Transport%20Plan%203%202011-2026.aspx

Status

Adopted in March 2011.

Development quantum

Likely effects of policies:

- Improved public transport infrastructure – improvements to bus and railway stations and their links, bus stops
- Improved road infrastructure – including modernised traffic signals, expansion of the traffic control centre
- Improve motorcycle and cycling parking infrastructure
- Increase P&R infrastructure – including additional parking sites
- Increase electric vehicle infrastructure – charging points
- Improve walking and cycling infrastructure – including additional lighting, improved crossings, expand the walking and cycling network

Strategic transport schemes:

- M1 Jct 10-13 Capacity Improvement
- Luton Dunstable Busway
- Northern Entrance to Luton Airport
- Parkway Station
- M1 Jct 10a Improvement
- Luton Town Centre Transport Scheme
- Access to Century Park Employment Area
- A5-M1 Link (Dunstable Northern Bypass, including M1 Junction 11a)
- Woodside Connection
- Public Transport Improvements North of Luton – Dunstable
- Luton Northern Bypass

HRA findings

The HRA is not in the public domain. However the Sustainability Appraisal⁴⁸ for the Local Plan states that the nearest European site is 7 miles away and therefore the plan is unlikely to cause significant effects.

Therefore at this stage it is not possible to rule out effects in-combination of the Luton Local Transport Plan 3 2011-2026 with the Hertfordshire LTP4.

The Mayor's Transport Strategy 2010⁴⁹

Status

Published in May 2010.

This will be replaced by the new Mayor's Transport Strategy which is currently undergoing public consultation⁵⁰.

⁴⁸ Sustainability Appraisal of the Luton Local Plan 2016:

<http://www.luton.gov.uk/Environment/Planning/Regional%20and%20local%20planning/local-plan-exam/Pages/default.aspx>

⁴⁹ The Mayor's Transport Strategy: <https://www.london.gov.uk/what-we-do/transport/transport-publications/mayors-transport-strategy>

⁵⁰ Draft Mayor's Transport Strategy 2017: <https://www.london.gov.uk/what-we-do/transport/our-vision-transport/draft-mayors-transport-strategy-2017>

Development quantum

Summary of proposals:

- Implementing Crossrail
- Improving suburban and National Rail links
- Carrying out major upgrades to the Underground and potential extensions
- Keeping the bus network under review
- Improving interchange between bus, Underground, rail and other forms of transport
- Promoting strategic interchange between Inner and Outer London rail to facilitate more orbital movement
- Smoothing traffic flow with new traffic control systems, better coordinated roadworks, management of unplanned events and asset management
- Providing new links to support development – both rail and road including new east Thames river crossings
- Making more use of the river for transporting people and goods
- Improving the accessibility of the transport network
- Bringing about a revolution in cycling in London
- Making walking count
- Creating better, more attractive streets
- Promoting and encouraging new, cleaner technologies such as electric vehicles
- Improving the management of freight and servicing
- Providing Londoners with better information to help them plan their journeys
- Removal of Western Extension zone and continuation of central London Congestion Charging scheme

HRA findings

The 2009 Transport Strategy Integrated Impact Assessment⁵¹ that's that an Appropriate Assessment screening exercise was undertaken in relation to the requirements of the Habitats Regulations, and policy provided in the Transport Strategy to address the requirements of the HRA and protect the European sites.

Therefore there are no likely in-combination effects of the Mayor's Transport Strategy 2010 with the Hertfordshire LTP4.

The Mayor's Transport Strategy Draft for public consultation June 2017⁵²

Status

Draft; published for consultation in June 2017.

Development quantum

The following schemes are proposed under the themes of 'Healthy Streets and healthy people', 'A good public transport experience' and 'New homes and jobs':

- **Healthy Streets and healthy people**
 - Bus
 - Retrofit and procure cleaner buses
 - Freight

⁵¹ Draft Revised Mayor's Transport Strategy: Integrated Impact Assessment: Appendix D: Assessment Framework: <https://www.london.gov.uk/what-we-do/transport/transport-publications/transport-strategy-integrated-impact-assessment>

⁵² Draft Mayor's Transport Strategy 2017: <https://www.london.gov.uk/what-we-do/transport/our-vision-transport/draft-mayors-transport-strategy-2017>

- Encourage more freight consolidation
 - Reduce, re-time and re-mode deliveries
 - Reduce emissions from the freight fleet
- Streets
 - Improve local walking routes, including routes to schools
 - Transform Oxford Street and investigate options for Parliament Square
 - Deliver a London-wide cycle network
 - Protect, improve and promote the Walk London Network
 - Develop and support Cycle Hire
 - Support and encourage cycling and walking to school
 - Promote and support cycling and walking to work and in local communities
 - Deliver Vision Zero by encouraging safer road user behaviours with a programme of education, engagement and enforcement initiatives
 - Deliver Vision Zero by improving vehicle safety (includes banning most dangerous HGVs/HGV Direct Vision)
 - Improve personal safety and security on London's streets
 - Work with boroughs to develop traffic reduction strategies, including workplace parking levies
 - Improve provision for car clubs as an alternative to private car ownership
- Taxi Cost
 - Deliver cleaner taxis
- Customer & Technology
 - Improve customer communication for road users
 - Develop framework to ensure connected, autonomous and shared vehicles contribute to achieving the vision of the transport strategy
 - Improve wayfinding for walking and cycling
 - Improve walking and cycling information in TfL Journey Planner
- Environment
 - Introduce T-charge (emissions surcharge)
 - Introduce ULEZ in central London
 - Introduce ULEZ in inner London
 - Introduce ULEZ London-wide for buses, coaches and HGVs
 - Provide incentives to support the transition to ULEVs
 - Optimise rail energy efficiency
 - Improve sustainable drainage systems on streets
 - Increase number of street trees
- **A good public transport experience**
 - Rail
 - Deliver the Elizabeth line
 - Deliver Thameslink Programme
 - Deliver Brighton Mainline Upgrade (higher frequencies)
 - Devolve suburban rail services to Mayoral control
 - Deliver London suburban metro
 - Increase rail capacity (other lines)
 - Deliver Crossrail 2 (scheme includes delivery of West Anglia Main Line 4-tracking)
 - Investigate feasibility of Crossrail 2 eastern spur
 - Provide more 12-car HS1 domestic services
 - Deliver HS2 and associated National Rail changes, including mitigation of impacts at street level
 - Deliver Heathrow Airport Western Access (required for airport expansion)
 - Deliver Heathrow Airport Southern Access (required for airport expansion)
 - Upgrade National Rail stations to step-free
 - Deliver National Rail station capacity upgrades
 - Lobby for upgraded rail freight routes
- London Underground
 - Deliver Four-Line Modernisation programme – Metropolitan,
 - District, Hammersmith & City and Circle
 - Deliver World-Class Capacity programme – Jubilee, Northern, Victoria

- Deliver Deep Tube programme – Piccadilly, Central, Bakerloo and Waterloo & City
 - Deliver Bakerloo line extension to Lewisham and beyond
 - Deliver step-free Tube stations and more accessible vehicles
 - Extend Night Tube services
 - Deliver station capacity programme
 - Manage the impacts of air quality on the Underground
- Bus Cost
 - Develop bus network to meet existing and future demand
 - Deliver wheelchair-accessible bus stops
 - Deliver bus priority network
 - Deliver Low Emissions Bus Zones (including bus priority)
- London Overground
 - Deliver London Overground frequency upgrades (network-wide)
 - Deliver strategic interchanges at Clapham Junction, Lewisham, Stratford and Old Oak Common and improved accessible interchange facilities across inner and outer London
 - Deliver station upgrade programme (London Overground)
 - Introduce night-time services on London Overground
- Tram
 - Deliver Tram upgrades
- DLR
 - Deliver DLR upgrades
 - Deliver station upgrade programme (DLR)
 - Introduce night-time services on DLR
- River
 - Publish a joint Port of London Authority/TfL pier strategy for London
 - Investigate extended river services to the east
 - Investigate feasibility of pedestrian/cycle ferry between North Greenwich and Canary Wharf
 - Encourage the use of the river for freight
- Taxi
 - Improve accessibility of taxi ranks for wheelchairs
- Customer & Technology
 - Implement social needs transport review
 - Improve provision of accessible information and communication
 - Embed accessibility and inclusivity in planning and design of healthy streets
 - Provide better information to help customers plan their journeys to avoid crowding
 - Improve information provision and use of technology
 - Ensure safety and security on the public transport network
- Environment
 - Lobby for increased low-carbon energy generation
 - Develop climate change mitigation schemes
 - Improve sustainable drainage on railway land
 - Include resilience measures in maintenance and upgrade programmes (ongoing)
 - Reduce noise and vibration impacts from rail
 - Reduce emissions from non-road mobile machinery
 - Reduce emissions from transport construction and operations
 - Reduce river-based emissions
- Coach
 - Deliver new coach hub(s)
- **New homes and jobs**
 - Rail
 - Introduce Stratford–Angel Road service
 - Deliver Elizabeth line extension east of Abbey Wood
 - Deliver Crossrail 2 (scheme includes delivery of West Anglia Main Line 4-tracking) (see also A good public transport experience)
 - London Underground
 - Deliver Northern Line extension

- Bakerloo line extension to Lewisham and beyond (see also
 - A good public transport experience)
- Bus
 - Pilot bus transit networks in Opportunity Areas
- London Overground
 - Deliver Barking Riverside Extension
 - Investigate feasibility of other London Overground extensions (including Hounslow–Cricklewood)
- Tram
 - Investigate extension to Sutton
- DLR
 - Investigate feasibility for DLR extension from Gallions Reach to Thamesmead
- Streets
 - Deliver Silvertown Tunnel and associated bus services
 - Investigate new river crossing at Gallion's Reach and/or Belvedere
 - Explore the potential of decking over highways
- Growth schemes
 - Investigate feasibility of transport improvements to enable growth
 - Investigate feasibility for other new public transport river crossings in East London
 - Deliver a new pedestrian and cycle bridge between Rotherhithe and Canary Wharf
 - Deliver Nine Elms–Pimlico pedestrian and cycle bridge
 - Deliver Cremorne pedestrian and cycle bridge between Battersea and Fulham
 - Continue TfL Growth Fund to deliver small-scale schemes
- Environment
 - Ensure the electric charging infrastructure is in place to support the transition to ULEVs
- Customer & Technology
 - Investigate feasibility of demand-responsive bus services

HRA findings

The 2017 HRA Screening assessment⁵³ found that for the majority of the policies and proposals within the Consultation Draft Transport Strategy, it can be concluded there would be no likely significant effects on Sites of Importance for Nature Conservation in the Greater London area. However, for 19 policies and proposals, it cannot be concluded at this stage that these elements of the plan will have no likely significant effects on these sites and that these policies and proposals should be subject to a lower tier HRA assessment.

The 19 Policies and proposals and their potential effects are as follows:

Policy or proposal	Element(s) requiring lower tier assessment
Chapter 3 Healthy Streets and healthy people Proposal 16: The Mayor, through TfL, will work with Network Rail and the Port of London Authority to move, where practicable, freight off London's streets and on to the rail network and the river Thames.	Freight and river transport increases on the river Thames: <ul style="list-style-type: none"> • Potential river-side operational impacts; and • increased vessels and associated facilities.
Chapter 4 A good public transport experience - Proposal 62: The Mayor, through TfL, will work to encourage the development and integration of rail services and multi-modal interchange hubs to create 'mini-radial' links to town centres and to also provide improved 'orbital' public transport connectivity.	Rail extensions in the GLA area: <ul style="list-style-type: none"> • construction and operational impacts; and • increased visitor numbers and fragmentation.
Chapter 4 A good public transport experience - Proposal 66: The Mayor, through TfL, will seek to upgrade the tram system to improve reliability and to increase capacity by 85 per cent to / from Croydon by 2030.	New tram track in GLA area: <ul style="list-style-type: none"> • construction and operational impacts; and • increased visitor numbers and fragmentation.
Chapter 4 A good public transport experience -- Proposal 59: The Mayor, through TfL, will work to encourage the DfT increase the capacity of the National Rail network in London to manage crowding on both local services and longer-distance services.	New rail track and electrification of network in GLA area: <ul style="list-style-type: none"> • construction and operational impacts; and • increased visitor numbers and fragmentation.

⁵³ Habitats Regulations Assessment of the Consultation Draft Mayor's Transport Strategy 3 (June 2017): <https://consultations.tfl.gov.uk/policy/19e4ca4f/>

Chapter 4 A good public transport experience -- Proposal 68: The Mayor, through TfL, will work with the Port of London Authority to produce a London Passenger Pier Strategy which will promote new piers and additional capacity at strategic piers. TfL will also investigate the feasibility of new cross-river ferry services, including services between the Isle of Dogs and North Greenwich to enhance resilience in the busy Jubilee line corridor.	The London Passenger Pier Strategy would need to be subject to a Plan HRA. Any project related to a new cross –river ferry between the Isle of Dogs and North Greenwich would need a project level HRA to consider construction and operational impacts.
Chapter 4 A good public transport experience -- Proposal 69: The Mayor, through TfL, will work with host boroughs and river service operators to investigate the potential for an extension of river services to Barking Riverside by the early 2020s to connect key growth areas with Canary Wharf and other new developments in east London.	New piers: • construction and operational impacts.
Chapter 4 Public Transport Proposal 70: The Mayor, through the GLA and TfL, will work with relevant stakeholders to seek to ensure that transport investment on corridors in the Wider South East supports the realisation of any associated economic and housing growth potential.	Associated housing growth in GLA area: • construction and operational impacts; • and increased visitor numbers and fragmentation.
Chapter 5 New homes and jobs - Proposal 81: The Mayor, through TfL the relevant boroughs and Network Rail, will seek to extend the Bakerloo line to Lewisham and beyond in order to improve public transport connectivity in this part of London and support the provision of new homes and jobs. The extension will be designed to enable the creation of attractive, dense area in inner London, with sustainable travel behaviours and a mix of uses.	Proposed line extension and new station and associated housing growth in GLA area: • construction and operational impacts; and • increased visitor numbers and fragmentation.
Chapter 5 New homes and jobs - Proposal 83: The Mayor, through TfL and relevant boroughs, will examine the feasibility of delivering a new Overground link between Hounslow and Old Oak Common and assess options for an extension towards Cricklewood.	Overground rail extensions, new stations and housing and employment growth in the GLA area: • construction and operational impacts; and • increased visitor numbers and fragmentation.
Chapter 5 New homes and Jobs Proposal 84: The Mayor, through TfL and the boroughs, will make the most of the transport network in London by identifying opportunities for new rail stations that will unlock the potential for significant numbers of homes and jobs to be created.	Associated housing growth in GLA area: • construction and operational impacts; • and increased visitor numbers and fragmentation.
Chapter 5 New homes and jobs - Proposal 86: The Mayor, through TfL and the boroughs, will pilot bus transit networks in outer London Opportunity Areas with the aim of bringing forward development, either ahead of rail investment or to support growth in places without planned rail access.	Infrastructure works and housing growth in the GLA area: • construction and operational impacts; and • increased visitor numbers and fragmentation.
Chapter 5 New homes and jobs - Proposal 87: The Mayor, through TfL and the boroughs, will explore the role for demand-responsive bus services to enable further sustainable housing development, particularly in otherwise difficult to serve areas of outer London.	Housing growth in the GLA area: • construction and operational impacts; and • increased visitor numbers and fragmentation.
Chapter 5 New homes and jobs - Proposal 88: The Mayor, through TfL, will continue to promote the construction and operation of the Silvertown Tunnel, together with the introduction of user charges on the Blackwall and Silvertown tunnels (once the latter is opened), to address the problems of traffic congestion and associated air pollution, frequent closures and consequential delays, and lack of network resilience and reliability at the Blackwall Crossing.	Building of the Silvertown tunnel: • construction and operational impacts.
Chapter 5 New homes and jobs – Proposal 89: The Mayor, through TfL, will promote new walking, cycling and public transport river crossings where such infrastructure would accord with the policies and proposals of this strategy.	Building of new road tunnel: • construction and operational impacts.
Chapter 5 New homes and jobs – Proposal 90: Following the delivery of the Silvertown Tunnel, the Government's Lower Thames Crossing and the Docklands Light Railway (DLR) extension to Thamesmead, the Mayor will give consideration to the case for further road crossings of the river in east London where the following criteria are met: (Subject to specific listed criteria, see Appendix A)	Building of new road crossing: • construction and operational impacts.

Chapter 5 New homes and jobs - Proposal 84: The Mayor, through TfL and the boroughs, will make the most of the transport network in London by identifying opportunities for new stations that will unlock the potential for significant numbers of homes and jobs to be created.	Housing and infrastructure development in the GLA area; <ul style="list-style-type: none"> • construction and operational impacts; and • increased visitor numbers and fragmentation.
Chapter 5 New homes and jobs - Proposal 93: The Mayor, through TfL and working with the relevant boroughs, will examine the feasibility of decking over the A13 at Barking and assess the case for its potential to provide sustainable housing, jobs, and improve the character of the surrounding environment for the benefit of existing communities.	Decking over the A13: <ul style="list-style-type: none"> • construction and operational impacts.
Chapter 5 New homes and Jobs - Proposal 95: The Mayor will promote the improvement of surface links to London's airports, with airport operators contributing a fair share of the funding required.	Infrastructure development in the GLA area; <ul style="list-style-type: none"> • construction and operational impacts; and • increased visitor numbers and fragmentation.
Proposal 96: The Mayor will seek a commitment from Government to fund and deliver within an appropriate timescale the extensive transport measures required to support the expansion of Heathrow.	New infrastructure development in the GLA area; <ul style="list-style-type: none"> • construction and operational impacts; and • increased visitor numbers and fragmentation.

Lower Tier assessments required:

Element requiring assessment (From above Table)	Sites of Importance for Nature Conservation identified	Likely effects
Development/enhancement of the existing road transport network and infrastructure and associated housing.	All-dependent upon locations	Increased visitor pressure resulting in disturbance to habitats and species. Construction impacts resulting in noise/visual disturbance to habitats and species. Increased traffic resulting in air pollution and noise/visual disturbance to habitats and species. Fragmentation of supporting habitat.
Rail network extensions and new stations	All - dependent upon locations	Increased visitor pressure resulting in disturbance to habitats and species. Construction and operational impacts resulting in noise/visual disturbance to habitats and species. Fragmentation of supporting habitat.
Tramlink system upgrades.	Wimbledon Common and Richmond Park SACs	Increased visitor pressure resulting in disturbance to habitats and species.
New piers and new and extended cross-river ferry services.	Thames Estuary and Marshes SPA/Ramsar	Increased recreational pressure and potential for pollution/water quality effects downstream.
Development within London Opportunity Areas.	All – dependent upon location	Increased traffic resulting in air pollution and noise/visual disturbance to habitats and species.
New river crossings (for walkers, cyclists and other public transport)	All – dependent upon location but Thames Estuary and Marshes SPA/Ramsar for down-river effects	Increased recreational pressure and potential for pollution/water quality effects downstream Construction impacts resulting in noise/visual disturbance to habitats and species.
Extensive transport measures required to support proposed expansion of Heathrow.	Southwest London waterbodies SPA/ Ramsar are nearby, but potential for all sites to be affected	Increased visitor pressure resulting in disturbance to bird populations and supporting habitat. Construction and operational impacts such as traffic and construction noise, human presence and visual disturbance and traffic pollution along access roads and aircraft noise and pollution in proximity to Sites of Importance for Nature Conservation.

Therefore it is not possible to rule out effects in-combination of the Mayor's Transport Strategy with the Hertfordshire LTP4.

Hertfordshire County Plans and Strategies

Hertfordshire Waste Development Framework: Waste Core Strategy & Development Management Policies - Development Plan Document 2011-2026 and Waste Site Allocations 2011-2026⁵⁴

Status

Waste Core Strategy & Development Management Policies - Development Plan Document 2011-2026 adopted in November 2012.

Waste Site Allocations 2011-2026 adopted in July 2014.

Development quantum

Provision for new Local Authority Collected waste management facilities within 5 Broad Areas of Search focuses mainly around:

- Letchworth, Hitchin and Stevenage
- Ware
- Welwyn Garden City, Hertford, Were and Hoddesdon
- Hatfield
- Hemel Hempstead, Watford and Bushey

Provision of a mixture of new small, medium and large non-Local Authority Collected waste management facilities within a total of 17 sites:

- 5 existing strategic sites
- 4 Employment Land Areas of Search
- 8 allocated sites

HRA findings

The HRA Screening report (2010)⁵⁵ highlights that none of the objectives or policies are likely to result in significant adverse effects on any of the six European Sites in and around Hertfordshire, either alone or in combination with existing trends or other plans or projects. Although the HRA indicated the likelihood for significant effects to occur on any of the six European sites is uncertain in relation to implementation of certain policies and objectives, significant effects are considered unlikely as any planning application that comes forward will also need to be assessed against the other Development Management Policies in the DPD, and will be subject to the Environmental Permitting regime regulated by the Environment Agency, and the Areas of Search are sufficiently large that waste sites could be located greater than 10km of specific European sites.

Therefore there are no likely in-combination effects of the Hertfordshire Waste Development Framework: Waste Core Strategy & Development Management Policies - Development Plan Document 2011-2026 and Waste Site Allocations 2011-2026 with the Hertfordshire LTP4.

Hertfordshire District and Borough Plans

The Broxbourne Local Plan 2016-2031: A Framework For The Future Development Of The Borough - Regulation 18 Draft Local Plan Consultation Document⁵⁶

Status

In Draft; the public consultation on the draft Local Plan, including the Call for Sites, has now closed.

⁵⁴ Waste Planning: <https://www.hertfordshire.gov.uk/services/recycling-waste-and-environment/planning/planning-in-hertfordshire/minerals-and-waste-planning/waste-planning/waste-planning.aspx>

⁵⁵ Hertfordshire Waste Development Framework - HRA Screening Report: <https://www.hertfordshire.gov.uk/services/recycling-waste-and-environment/planning/planning-in-hertfordshire/minerals-and-waste-planning/waste-planning/waste-planning.aspx>

⁵⁶ Broxbourne Local Plan Consultation: <http://www.broxbourne.gov.uk/resident-planning-and-building-planning-policy-development-plan-conservation/local-plan-consultation>

This is replacing the Borough of Broxbourne Local Plan Second Review 2001-2011⁵⁷ which was adopted in December 2005. This was originally due to be replaced by the Core Strategy⁵⁸, however when this strategy was submitted to the Government in 2010 many of its policies were found to be unsound. Therefore, the Council decided to not adopt the Core Strategy and instead decided to prepare a new-style Local Plan that combines strategic policies and site allocations.

Development quantum

Housing

Provision will be made for at least 7,123 homes in the plan period at strategic development locations:

- Brookfield Garden Village - 1,250 homes
- Cheshunt Lakeside - mixed-use urban village including 1,000 homes as well as businesses and a primary school
- Rosedale Park - 700 homes and a primary school at linked developments
- The remainder of homes to be provided at smaller sites

Employment Land Provision

Provision will be made for in excess of 6,500 net additional jobs, focusing on three key employment locations:

- Brookfield – 3,000 jobs
- Park Plaza – 4,500 new office jobs
- Cheshunt Lakeside – will accommodate the relocation of businesses from regeneration sites including those in Waltham Cross, Brookfield, and Delamare Road
- Also focus on provision within town centres

Top Tier Settlements

Borough Centre: Brookfield Riverside.

Town Centres: Hoddesdon Town Centre, Waltham Cross Town Centre.

Transport Policies

Transport strategy to ensure development accommodates by roads and encourages sustainable transport options.

Transport infrastructure policies including:

- Improvements to road infrastructure
- Support of Crossrail 2/four tracking
- Examining feasibility of new railway stations
- Identifying reasonable alternatives to level crossings
- Improvements to bus transport
- Production of a walking and cycling strategy
- Proportion of North-South paths

Transport policies including:

- Sustainable transport initiatives
- Requirements for new developments to not impact the transport network

⁵⁷ Broxbourne Local Plan 2005: <http://www.broxbourne.gov.uk/localplan2005>

⁵⁸ Broxbourne Core Strategy Process: <http://www.broxbourne.gov.uk/resident-planning-and-building-planning-policy-development-plan/core-strategy-process>

- Requirements for new developments to provide adequate access and servicing, including electric charging points
- Parking standards
- Requirements for vehicle cross-overs and dropped kerbs

Sustainable Construction Policies

The Sustainable Construction policy requires development to make the use of sustainable construction methods, as well as utilise elements flexible for future adaption, long-term resilient materials, and re-use and recycling.

Additional policies regarding environmental quality as a result of development, regarding air quality, lighting, noise, land contamination and instability, waste and recycling, and minerals.

HRA findings

The 2016 HRA Screening Report⁵⁹ of the emerging Local Plan determines that a likely significant effect upon the Lee Valley SPA by the Broxbourne Local Plan cannot be ruled out. A total of 7,408 dwellings are proposed for Broxbourne which would result in approximately 17,780 new residents within 5km of Lee Valley SPA & Ramsar. A likely significant effect of the subsequent increase in public access and associated disturbances at the SPA cannot be objectively ruled out based on the information currently available.

Therefore it is not possible to rule out effects in-combination of the Broxbourne Local Plan 2016-2031 with the Hertfordshire LTP4.

Dacorum Borough Council Core Strategy 2006-2031⁶⁰

Status

Adopted in September 2013.

Due to be replaced by the Dacorum Borough Council New Single Local Plan⁶¹ which has yet to be drafted.

Prior to this was the Dacorum Borough Council Local Plan 1991-2011⁶². The Core Strategy does not replace all of the policies contained within the Local Plan 1991-2011. Many of the policies within the Local Plan have been 'saved' and will continue to inform planning policy until they are formally superseded or cancelled. However, the policies regarding the housing and employment land supply and allocations have been superseded by the Core Strategy.

Development quantum

Housing

Total of at least 10,750 new dwellings required from 2006-2031, including those at strategic sites and local allocations.

Strategic Sites:

- Berkhamsted
- Durrants Land / Shootersway – 180 homes
- Markyate
- Hicks Road – 90 homes

Local Allocations:

⁵⁹ Habitats Regulations Assessment of the Broxbourne Emerging Local Plan: <http://www.broxbourne.gov.uk/resident-planning-and-building-planning-policy-development-plan/core-strategy-process>

⁶⁰ Dacorum Core Strategy: <http://www.dacorum.gov.uk/home/planning-development/planning-strategic-planning/local-planning-framework/core-strategy>

⁶¹ Dacorum New Single Local Plan: <http://www.dacorum.gov.uk/home/planning-development/planning-strategic-planning/new-single-local-plan>

⁶² Dacorum Borough Council Local Plan 1991-2011: <http://www.dacorum.gov.uk/home/planning-development/planning-strategic-planning/local-plan-1991-2011>

- Hemel Hempstead
- Marchmont Farm – 300 homes
- Old Town – 80 homes
- West Hemel Hempstead – up to 900 homes
- Berkhamsted
- Hanburys, Shootersway – 60 homes
- Tring
- Icknield Way, west of Tring – 150 homes
- Bovingdon
- Chesham Road / Molyneux Avenue – 60 homes

Employment Land Provision

Sufficient land to be allocated to provide approximately 10,000 new jobs between 2006-2031, including a target of an additional 131,000sq m office floorspace.

Top Tier Settlements

Main Centre for Development and Chance: Hemel Hempstead

Market Towns: Berkhamsted, Tring.

Transport Policies

A Sustainable Transport policy requires the contribution of new development to the transport system, including prioritising sustainable transport users, providing disabled access, ensuring integration of passenger transport, improving footpath and cycle networks, improving rural rights of way, improving safety and air quality, improving links between facilities, and providing adequate parking.

An Infrastructure and Developer Contributions policy requires development to contribute to on-site, local and strategic infrastructure.

Sustainable Construction Policies

A Sustainable Design and Construction policy requires development to comply to standards of construction and design, including using sustainable materials, minimising construction water consumption, recycling and reducing construction waste, providing water supply and drainage, plan to limit residential water consumption, plan to minimise carbon emissions, maximise building energy efficiency, incorporate tree planting, enhance biodiversity, minimise impermeable surfaces, incorporate permeable and lighter coloured surfaces, provide on-site recycling facilities, design buildings to have long life and adaptable internal layout.

An Air, Soil and Water Quality policy also requires development to improve air quality in AQMAs, maintain soil quality and remediate contaminated land, and improve water quality. Any development proposals which would cause harm from a significant increase in pollution (into the air, soil or any water body) by virtue of the emissions of fumes, particles, effluent, radiation, smell, heat, light, noise or noxious substances, are not to be permitted.

HRA findings

The Core Strategy HRA Summary Report (2011)⁶³ concludes that the strategy only impacts one Natura 2000 site: Chilterns Beechwoods Special Area of Conservation (SAC). It highlights that since the 2008 version of the Core Strategy, many of the key developments that were considered as possibilities for development in the borough have been removed. This reduction in the scale of new housing development should effectively reduce the risk of air pollution and recreation disturbance, the principal impacts identified in the 2008 HRA, on Chilterns Beechwoods SAC. The assessment matrices found no significant effects on Chilterns Beechwoods SAC from individual developments as a result of either air pollution or recreation disturbance. Furthermore,

⁶³ Dacorum Core Strategy Habitats Regulations Assessment: Summary Report: <https://dacorum.gov.uk/home/planning-development/planning-strategic-planning/local-planning-framework/core-strategy/core-strategy-examination-2012/submission-documents>

policies and sites making up the core strategy were found to have no significant effects alone or in combination with one another or other plans or projects. However, updated avoidance and mitigation measures for both impacts have been provided in order to ensure that there are no cumulative significant impacts on the SAC due to development proposed around Hemel Hempstead and other nearby urban centres in Hertfordshire, Buckinghamshire and Bedfordshire.

The Dacorum Core Strategy Post-Examination Stage Sustainability Appraisal Report Addendum⁶⁴, which was produced after the HRA following modifications to the strategy, and advises none of the modifications to the strategy will impact the original findings of the HRA.

Therefore there are no likely in-combination effects of the Dacorum Borough Council Core Strategy 2006-2031 with the Hertfordshire LTP4.

East Herts District Plan 2016: Pre-Submission Consultation 2016⁶⁵

Status

Drafted and submitted to the Secretary of State, examination is ongoing.

This will replace the East Herts Council Local Plan Second Review 2007⁶⁶ in which the development quantum has expired.

Development quantum

Housing

Over the period of 2011-2033 a total of 16,390 new homes will be delivered.

In the first five years of the Plan after adoption (2017-2022), the housing requirement will total at least 6,041 homes, comprising:

- 3,725 based on projected housing needs for 5 years
- 1,309 to address the shortfall from the period 2011-2017
- 1,007 to allow a 20% buffer for choice and flexibility, brought forward from later in the plan period

The overall housing supply will meet projected housing need over the plan period 2011 to 2033. Supply Sources will total 18,040 homes including through completions, commitments, villages, within urban areas, windfall sites and at 18 identified sites:

- Bishop's Stortford Goods Yard - 400 dwellings
- Land at Old River Lane, Bishop's Stortford - 100 dwellings
- Hadham Road Reserve Secondary School Site, Bishop's Stortford - 163 dwellings
- Bishop's Stortford High School Site, London Road - 150 dwellings
- North of Bishop's Stortford - 2,529 dwellings
- South of Bishop's Stortford - 750 dwellings
- Bishop's Stortford- East of Manor Links - 50 dwellings
- Hertford- Mead Lane Area - 200 dwellings
- North of Hertford - 150 dwellings
- South of Hertford - 50 dwellings
- West of Hertford - 550 dwellings

⁶⁴ Dacorum Core Strategy Post-Examination Stage Sustainability Appraisal Report Addendum:
<http://www.dacorum.gov.uk/home/planning-development/planning-strategic-planning/local-planning-framework/core-strategy/core-strategy-examination-2012/core-strategy-documents>

⁶⁵ The East Herts District Plan: <http://www.eastherts.gov.uk/districtplan>

⁶⁶ Current Adopted Local Plan, 2007: <http://www.eastherts.gov.uk/localplan>

- Sawbridgeworth - North of West Road - 125 dwellings
- Sawbridgeworth - South of West Road - 175 dwellings
- North of Sawbridgeworth - 200 dwellings
- North and East of Ware - 1,000 (with a further 500 homes beyond 2033, subject to suitable mitigation) dwellings
- East of Stevenage - 600 dwellings
- Gilston Area - 3,050 (with a further 6,950 homes beyond 2033) dwellings
- East of Welwyn Garden City - 1,350 dwellings

Employment Land Provision

Aim to achieve a minimum of 435 - 505 additional jobs in East Herts each year. This will include making provision for 10-11 hectares of new employment land for B1/B2/B8 uses in the following locations:

- 3 hectares to the north of Buntingford Business Park
- 4-5 hectares within the development at South of Bishop's Stortford
- 3 hectares within the development at North and East of Ware

In addition, 3,000 square metres of additional B1 employment floorspace will be provided at Mead Lane, Hertford.

Designates Employment Areas:

- 0.23 hectares at Millside Industrial Estate, Bishop's Stortford
- 0.36 hectares at Southmill Trading Estate, Bishop's Stortford
- 7.71 hectares at Pegs Lane/Hale Road, Hertford
- 0.43 hectares at Leaside Works, Stanstead Abbots
- 0.59 hectares at Riverside Works, Amwell End, St Margarets

Top Tier Settlements

District Centre: The Thorley Centre, Bishop's Stortford

Neighbourhood Centres: Bishop's Park, Bishop's Stortford; Birchall Garden Suburb, East of Welwyn Garden City; Gresley Park, East of Stevenage; North and East of Ware; The Gilston Area; Whittington Way at Bishop's Stortford South.

Transport Policies

Transport policies including:

- Sustainable transport initiatives
- Safe and suitable highway access arrangements and mitigation requirements
- Vehicle parking permission requirements

An Infrastructure and Service Delivery policy requires the council to produce an Infrastructure Delivery Plan (IDP), requires developments to provide adequate infrastructure, and requires developments to deliver additional infrastructure or service capacity as set out in the IDP.

Sustainable Construction Policies

Environmental Quality policies require development to remediate contaminated land, minimise noise pollution, minimise light pollution and minimise air pollution. Policies explicitly require construction methods to limit the impact of noise and air pollution.

HRA findings

The HRA (2016)⁶⁷ concludes that, provided the recommendations made in the HRA are incorporated into the Local Plan, the Local Plan will not result in a likely significant effect, either alone or in combination, upon any European sites. This conclusion is contingent upon the signature, adoption and implementation of the Epping Forest SAC Memorandum of Understanding between the HMA authorities, Hertfordshire County Council, Essex County Council, Natural England and the Corporation of London. This will ensure that any issues that may arise regarding air quality or recreational pressure on Epping Forest SAC can be identified and addressed before they result in a likely significant effect.

Therefore there are no likely in-combination effects of the East Herts Local Plan 2016 with the Hertfordshire LTP4.

Hertsmere Local Plan (2012-2027): Core Strategy, Elstree Way Corridor Area Action Plan and Site Allocations and Development Management Policies Plan⁶⁸

Status

Core Strategy: Adopted in January 2013.

Elstree Way Corridor Area Action Plan: Adopted in July 2015

Site Allocations and Development Management Policies Plan: Adopted in November 2016

This replaces the Hertsmere Local Plan 2003⁶⁹ which was adopted in 2003.

This will be replaced by the Hertsmere New Local Plan⁷⁰ which is not yet drafted.

Development quantum

Housing

Provision of at least 3,990 additional dwellings between 2012-2027.

Priority will be given to locating the majority of residential development within the main settlements of:

- Borehamwood
- Potters Bar
- Bushey

Windfall developments will be supported on appropriate sites in all towns, subject to local environmental constraints, the relationship with the surrounding pattern of development and the requirements of planning policies. Within rural locations and in particular, Shenley, Elstree and South Mimms limited, small scale infilling on suitable sites will be supported. At least 1,000 residential units will be provided across the Elstree Way Corridor, with the potential for 1,500 units to be provided within the plan period. The main focus for development will be within the 'identified opportunity area', which has the potential to accommodate up to 800 residential units in total

This will be replaced by the Hertsmere New Local Plan⁷¹ which is not yet drafted but suggests around 9,000 new homes will require provision over the next 15 years.

Employment Land Provision

Employment growth during the plan period, equates to approximately 2,700 new office jobs and 240 new warehousing jobs and 660 fewer industrial jobs over 15 years; it is anticipated that this level of growth would be accommodated within existing town centres and through new provision on larger sites currently planned in adjoining Boroughs.

⁶⁷ East Hertfordshire Local Plan Habitats Regulations Assessment: <https://www.eastherts.gov.uk/evidencebase>

⁶⁸ Hertsmere Local Plan (2012-2027): <https://www.hertsmere.gov.uk/Planning--Building-Control/Planning-Policy/Local-Plan/Local-Plan-12-27.aspx>

⁶⁹ Hertsmere Local Plan 2003 - SUPERCEDED: <https://www.hertsmere.gov.uk/Planning--Building-Control/Planning-Policy/Local-Plan/2003-Local-Plan.aspx>

⁷⁰ A new Local Plan for Hertsmere: <https://www.hertsmere.gov.uk/Planning--Building-Control/Planning-Policy/Local-Plan/New-Local-Plan-Planning-for-Growth.aspx>

⁷¹ A new Local Plan for Hertsmere: <https://www.hertsmere.gov.uk/Planning--Building-Control/Planning-Policy/Local-Plan/New-Local-Plan-Planning-for-Growth.aspx>

Provision will be made for the supply of at least 110 ha of designated employment land for B-class development within the Borough up to 2027, focused on the following locations:

- Employment Areas
- Elstree Way, Borehamwood
- Stirling Way, Borehamwood
- Cranborne Road, Potters Bar
- Station Close, Potters Bar
- Otterspool Way, Bushey Key
- Employment Site
- Centennial Park, Elstree

Designated local significant employment sites which are focused on employment generating uses are located at:

- Wrotham Business Park
- Borehamwood Enterprise Centre and adjoining sites
- Theobald Court and adjoining site, Borehamwood
- Lismirrane Industrial Park, Elstree
- Hollies Way Business Park, Potters Bar
- Beaumont Gate, Radlett
- Farm Close sites, Shenley

This will be replaced by the Hertsmere New Local Plan⁷² which is not yet drafted but suggests around 9,000 new jobs will require provision over the next 15 years.

Top Tier Settlements

Borehamwood, Potters Bar and Bushey.

Transport Policies

Transport policies including:

- Requirements for major developments to provide Travel Plans, contribute to transport infrastructure and mitigate impacts
- Requirements for the provision of off-street parking to allow access to services
- Sustainable transport initiatives

Sustainable Construction Policies

Environmental impact of development and Energy and CO₂ Reductions policies require sustainable construction by use of sustainable materials and provision of waste minimisation and recycling. Also requires development related pollutants, including emissions to air, water, soil, light and noise, to be minimised.

HRA findings

The Core Strategy inspectors report⁷³ concludes that on the basis of a screening report in 2006 and in the light of the RCS proposals, Natural England has agreed with the Council that detailed Appropriate Assessment under the Habitats Regulations is not necessary.

⁷² A new Local Plan for Hertsmere: <https://www.hertsmere.gov.uk/Planning--Building-Control/Planning-Policy/Local-Plan/New-Local-Plan-Planning-for-Growth.aspx>

⁷³ Core Strategy Inspectors report: <https://www.hertsmere.gov.uk/Planning--Building-Control/Planning-Policy/Local-Plan/Local-Plan-2012-27-Core-Strategy.aspx>

The Elstree Way Corridor Area Action Plan Sustainability Appraisal⁷⁴ and Site Allocations and Development Management Policies Plan Sustainability Appraisal⁷⁵ also concludes that as the circumstances have not changed since the Core Strategy was produced, new individual HRAs are not considered necessary.

Therefore there are no likely in-combination effects of the Hertsmere Local Plan (2012-2027) with the Hertfordshire LTP4.

North Hertfordshire Local Plan 2011 – 2031: Proposed Submission October 2016⁷⁶

Status

Draft plan and consultation completed.

Council reviewing responses prior to sending to the Government for examination.

This follows the North Hertfordshire District Local Plan No.2 With Alterations⁷⁷ which was adopted in 1996 and in which the development quantum has now expired.

Development quantum

Housing

A total of at least 15,950 homes will be delivered within North Hertfordshire over the period 2011-2031.

Of these, a total of 14,000 homes will be for North Hertfordshire's own needs:

- Around 13,800 of these within the Stevenage Housing Market Area
- Around 200 of these within the Luton Housing Market Area

And 1,950 homes will be for the unmet housing needs arising from Luton.

Employment Land Provision

Provide an adequate supply and range of employment land to meet the requirements of the local economy over the plan period to 2031, including land in:

- Hitchin
- Letchworth Garden City
- Baldock
- Royston

Existing employment areas within the main settlements will also be designated.

New employment land will be provided through designations at:

- The former Power Station
- Letchworth Garden City (1.5ha)
- East of Baldock (19.6ha)
- West of Royston (10.9ha)

Top Tier Settlements

Towns: Baldock, Hitchin, Letchworth Garden City, Royston, Stevenage (including Great Ashby)*, and Luton.*

* These settlements are (substantively) located outside of North Hertfordshire's administrative area, but the urban areas adjoin, or already lie partially within, the District.

⁷⁴ Elstree Way Corridor Area Action Plan Sustainability Appraisal: <https://www.hertsmere.gov.uk/Planning--Building-Control/Planning-Policy/Local-Plan/Elstree-Way-Corridor/Local-Plan-2012-27-Elstree-Way-Corridor-AAP.aspx>

⁷⁵ Site Allocations and Development Management Policies Plan Sustainability Appraisal: <https://www.hertsmere.gov.uk/Planning--Building-Control/Planning-Policy/Local-Plan/Local-Plan-2012-27-SADM-main-page.aspx>

⁷⁶ Proposed Submission Local Plan 2011-2031: <http://www.north-herts.gov.uk/home/planning/planning-policy/local-plan/proposed-submission-local-plan-2011-2031>

⁷⁷ District Local Plan No.2 With Alterations: <http://www.north-herts.gov.uk/planning/planning-policy/local-plan/local-plan-current-policy/district-local-plan-no2-alterations>

Transport Policies

A Sustainable transport policy requires compliance with Local Transport Plan, encourages developments to be located to enable sustainable journeys, provides for sustainable transport options, seeks to implement sustainable travel infrastructure early and Travel Plans on Strategic Housing Sites, requires assessments of developments against parking standards, requires developments to demonstrate their safety and sustainability, and requires protection and replacement of rights of way.

An Infrastructure requirements and developer contributions requires development to contribute to infrastructure.

Sustainable Construction Policies

A Strategic Objective encourages the use of sustainable construction techniques to mitigate the effects of climate change.

An Air Quality policy requires consideration of air quality impacts during demolition, construction and occupation and requires the appropriate use of mitigation and air quality assessments. Multiple housing allocation policies require mitigation measures for noise associated with transport.

HRA findings

The HRA Screening Report (2016)⁷⁸ determined that either individually or in combination with any other plans or projects, the Local Plan is not likely to have significant effects on any European Sites. Therefore, the council concluded that no appropriate assessment under the Habitats Directive is required.

Therefore there are no likely in-combination effects of the North Hertfordshire Local Plan 2011 – 2031 with the Hertfordshire LTP4.

St Albans City and District Council District Strategic Local Plan and the Detailed Local Plan 2011-2031⁷⁹

Status

Strategic Local Plan: In draft, due to be adopted in May 2017.

Detailed Local Plan: In draft, due to be adopted in March 2018.

This follows the St Albans City and District Council District: District Local Plan Review, 1994⁸⁰ in which the development quantum has now expired.

Development quantum

Housing

Provision of 8,720 additional homes between 2011-2031.

Sites currently permitted or available for development together with the Development Strategy will deliver the land required to meet this Local Housing Requirement / Target in general accordance with the Spatial Strategy.

Further policies and detailed site allocations to support delivery of the Housing Target will be set out in the Detailed Local Plan. Within designated Primarily Residential Areas, priority will be given to residential use.

Employment Land Provision

Provision for significant new employment development will be made within the East Hemel Hempstead Broad Locations.

Existing employment sites should be retained in employment use.

⁷⁸ North Hertfordshire District Council Habitat Regulation Assessment Screening Report: <https://www.north-herts.gov.uk/planning/planning-policy/local-plan/local-plan-supporting-evidence/environmental-appraisal>

⁷⁹ Spatial Planning & Design (Planning Policy): <http://www.stalbans.gov.uk/planning/Planningpolicy/>

⁸⁰ St Albans City and District Council District - District Local Plan Review: <http://www.stalbans.gov.uk/planning/Planningpolicy/currentadoptedlocalplan.aspx>

Development, redevelopment and possible expansion by the following Special Employment locations to also provide employment land:

- Building Research Establishment (BRE) in Bricket Wood
- Rothamsted Research in Harpenden

Top Tier Settlements

No settlement hierarchy stated. Retail hierarchy top tier centres as follows:

Major town centre: St Albans C

Town centre - Harpenden

Transport Policies

The Transport Strategy policy includes:

- Requirements for new developments to be located in accessible locations, encourage sustainable transport, improve existing transport infrastructure
 - Specific highway improvements required to facilitate large-scale development at East Hemel Hempstead
- Improvements to sustainable transport, including railway improvements, bus service frequency increase and improvements, and the introduction of hybrid and low emission busses
- Initiatives to increase and enhance walking and cycling
- Addition of public recharge facilities
- Road infrastructure improvements including:
 - Key junction improvements on the main roads into St Albans and in Harpenden town centre
 - Completion of the Hemel Hempstead North-East Relief Road/Maylands Growth Corridor, partly through St Albans District
- Initiatives to discourage HGVs from town centres and rural roads
- Car parking standards
- Requirements for Travel Plans for new developments
- Initiatives to improve air quality

Sustainable Construction Policies

An Environmental Performance of New Development Including Sustainable Design and Construction requires the sustainable construction of new development, including through reduction of waste generation, reuse and recycling of materials, and production of an environmental performance and sustainability statement for major developments.

HRA findings

The Appropriate Assessment Screening Report (2008)⁸¹ concluded that any likely potential impacts of the St Albans Issues and Options either alone or in combination with other plans and programmes, are not considered to be significant. Mitigation measures were nevertheless recommended as being necessary if these options were pursued. These would need to be agreed with Natural England and could also be used as best practice to limit recreational pressure on Chilterns Beechwoods SAC even if the options were not pursued. In light of the assessment it was concluded that it would not be necessary to undertake a full Appropriate Assessment on the St Albans Core Strategy Issues and Options DPDs. It is also considered that this AA screening report will suffice for any future Site Allocations produced by St Albans City and District Council, providing the Allocations are within the spatial boundaries set by the St Albans Core Strategy.

However, it is also determined that any future plans that are likely to cause an increase in key impacts (i.e. recreation, air pollution) or other impacts that might adversely affect the conservation objectives of the SAC

⁸¹ Core Strategy Issues and Options Papers - Study to Inform Appropriate Assessment:
<http://www.stalbans.gov.uk/planning/Planningpolicy/library/Environment.aspx>

(for example, significant impacts within 5km of the SAC) may need to be examined as either an addendum to this screening report or as part of a full Appropriate Assessment.

No impacts on Chilterns Beechwoods SAC (the only site affected by the St Albans plan) have been identified in the screening of the new Hertfordshire Minerals Local Plan, therefore in-combination effects can be ruled out.

Stevenage Borough Local Plan 2011- 2031⁸²

Status

In draft, submitted to the Secretary of State in July 2016 for examination.

This follows the Stevenage District Plan, Second Review (2004)⁸³ in which the development quantum has now expired.

Development quantum

Housing

Provision of 7,600 homes between 2011-2031, 2,350 homes already built or have planning permission.

Therefore provision will also be made at 18 sites, within town centres, at urban extensions and at windfall sites for a total of 5,804 homes.

Employment Land Provision

Allocated 7 sites for employment development, totalling 143,500 m² floorspace.

Top Tier Settlements

No settlement hierarchy stated. Retail hierarchy top tier centres as follows:

Town Centre: Stevenage town centre.

Major Centre: High Street.

Transport Policies

Transport and infrastructure policies include:

- Requirements for new developments to utilise preferred vehicular access points:
 - To land west of Stevenage via the existing road network at Bessemer Drive and Meadway
 - To land north of Stevenage from B197 North Road approximately 250 metres north of the junction with Granby Road
 - To land south-east of Stevenage from a new roundabout on the A602 approximately 200 metres east of the junction with Bragbury Lane
 - To Stevenage Leisure Park from Argyle Way and Six Hills Way
 - To Stevenage town centre from reconfigured junctions between Fairlands Way and Lytton Way; and Six Hills Way, Lytton Way and London Road
- Safeguarding of corridors for development
- Requirements for new developments to demonstrate their infrastructure needs will be met
- Requirements for larger schemes to undertake transport assessment and produce Travel Plans
- Requirements for developments to comply with parking standards and provide access
- Sustainable transport initiatives new developments should contribute to, including:
 - Provision of a 5th platform at Stevenage station

⁸² Stevenage Borough Emerging Local Plan: <http://www.stevenage.gov.uk/149690/planning-policy/90175/>

⁸³ The Stevenage Adopted Local Plan: <http://www.stevenage.gov.uk/149690/planning-policy/90238/>

- Improvement of the station building
- Provision of a new town centre bus station
- Provision of public transport
- Enhancement of inter-urban bus provision including
- Provision of new or improved services and facilities within 400 metres of major developments
- Requirements for new developments to enhance pedestrian and cycle routes, including:
 - From Town Square to the Leisure Park via Stevenage Station
 - From The Forum to Town Centre Gardens via a new surface-level crossing of St George's Way
 - Along St Georges Way between the junctions with Fairlands Way and Six Hills Way
 - From Ditchmore Lane to the town centre via an improved crossing over Fairlands Way
 - From the junctions of Gunnels Wood Road and Bessemer Drive and / or Gunnels Wood Road and Six Hills Way to the new development west of Stevenage
 - From Gunnels Wood Road via Meadway Ancient Lane to the new development west of Stevenage
 - Along Gresley Way from Six Hills Way to Martins Way including a spur to Fairlands Way
 - From the junction of Coreys Mill Lane and North Road and / or following the route of Bridleway 103 from Corey's Mill to new developments north of Stevenage
 - From the junction of Broadhall Way and Bragbury Lane to new development south-east of Stevenage
 - Along the principal interior roads of the strategic developments west, north and south-east of Stevenage
- Requirements for developments to maintain public parking provision

Sustainable Construction Policies - to do - go back to previous and find noise etc

A Climate change, flooding and pollution policy requires new developments to consider sustainable construction techniques. Pollution policies require minimisation of air, light and noise pollution and require measures to be in place to mitigate developments from existing pollution in sensitive areas. Some housing allocations also require noise mitigation to be included for new developments in relation to existing transport infrastructure.

HRA findings

The Appropriate Assessment Scoping Report (2016)⁸⁴ highlights that although there are no SPAs or SACs either within or close to Stevenage's Borough boundaries, much of Stevenage's waste is currently treated at Rye Meads sewerage treatment works. This works is located immediately in and adjacent to the Rye Meads SSSI, one of four geographically separate SSSIs which collectively form the Lee Valley SPA. The assessment concluded, however, that the Local Plan is not likely to have a significant effect on the Lee Valley SPA either by itself, or in combination with other relevant plans or programmes.

Therefore there are no likely in-combination effects of the Stevenage Borough Local Plan 2011-2031 with the Hertfordshire LTP4.

Three Rivers District Council Local Plan: Core Strategy (2011) and Site Allocations Development Plan (2014)⁸⁵

Status

Core Strategy: Adopted in 2011.

⁸⁴ SBLP Appropriate Assessment Scoping Report: <http://www.stevenage.gov.uk/149690/planning-policy/90175/90178/90188/>

⁸⁵ Three Rivers Local Plan: <http://www.threerivers.gov.uk/egcl-page/development-plan>

Site Allocations Development Plan: Adopted 2014.

Development quantum

Housing

Provision of 4,500 dwellings between 2001-2026 located:

- Approximately 15% should be provided in the principal town (Rickmansworth)
- Approximately 60% should be provided in the Key Centres (South Oxhey, Croxley Green, Abbots Langley, Chorleywood, Leavesden and Garston and Mill End)
- Approximately 24% should be provided in the Secondary Centres (Kings Langley, Carpenders Park, Eastbury, Maple Cross, Moor Park and Oxhey Hall)
- Approximately 1% in the Villages (Bedmond and Sarratt).

34 housing sites allocated.

Employment Land Provision

Provision for 2,378 additional jobs between 2006-2026, including:

- Business class activities - 1,268 jobs
 - Offices
 - Factories and warehousing
 -
- Non-Business Class activities – 810 jobs
 - Hotels and catering
 - Transport and communications
 - Trailing
- Education and health

Deal with floorspace surplus and demand. It is predicted that by 2026 there may be:

- There is a slight under supply of industrial and warehousing space amounting to 3.5ha. Industrial and warehousing space should generally be retained in employment use.
- There is an oversupply of office floorspace in the District, in particular as a result of land at Leavesden. Office space may be released from employment use where it is expected to be surplus to employment needs across the plan period.

There will be a continuing focus of employment use within the key employment areas within the District:

- Leavesden Aerodrome
- Croxley Business Park
- Tolpits Lane
- Maple Cross/Maple Lodge
- Kings Langley Employment Area
- Carpenders Park West
- Rickmansworth Town Centre

5 employment are also sites allocated.

Top Tier Settlements

Principle Town: Rickmansworth

Key Centres: South Oxhey, Croxley Green, Abbots Langley, Chorleywood, Leavesden and Garston, and Mill End.

Transport Policies

The Transport and Travel policy includes:

- Requirements for developments to contribute to the delivery of transport and travel measures including:
 - Secure cycle parking
 - A safe network for pedestrians
 - Taxi ranks
 - A layout to enable convenient access for buses
 - Provision of covered waiting facilities
 - Improvements to transport hubs within and including the provision of Mobi-Hubs where appropriate
 - Links to and from the Grand Union Canal towpath
 - Links to and from railway stations.
- Requirements for developments to minimise impacts by motor vehicles and be located in accessible locations
- Defines the transport user hierarchy
- Requires developments to demonstrate provision of access, they are within transport infrastructure capacity, integration with the transport network, provision for all transport users, provision of public transport, assessment of transport, and provision of a Green Travel Plan.

Sustainable Construction Policies

An Overarching Policy on Sustainable Development requires developments to demonstrate which sustainability principles have been incorporated into the construction of the development. This also requires the reduction of risk from pollution in relation to quality of land, air and water and dealing with land contamination.

HRA findings

The January 2014 Sustainability Report⁸⁶ states that the HRA screening report, in agreement with Natural England, concluded that the Core Strategy would not result in any significant effects on any Natura 2000 sites, either alone or in combination with other plans and programmes. It was therefore considered, in consultation with Natural England, the statutory consultee, that a full Appropriate Assessment was not necessary.

Therefore there are no likely in-combination effects of the Three Rivers District Council Local Plan with the Hertfordshire LTP4.

Watford's Local Plan 2006-2031: Part 1 - Core Strategy and Part 2 - Site Allocations and Development Management Policies⁸⁷

Status

Part 1 – Core Strategy: adopted in January 2013.

Part 2 – Site Allocations and Development Management Policies: in draft, under consultation.

This will be superseded by the Watford Local Plan 2016-2036⁸⁸ once produced.

Development quantum

⁸⁶ Three Rivers District Council, Three Rivers Site Allocations LDD: Sustainability Appraisal Report Addendum January 2014: <http://www.threerivers.gov.uk/egcl-page/sustainability-appraisal>

⁸⁷ Watford Local Plan 2006-2031: https://www.watford.gov.uk/info/20012/planning_and_building_control/135/planning_policy/3

⁸⁸ Watford Local Plan 2016-2036: https://www.watford.gov.uk/info/20012/planning_and_building_control/135/planning_policy/4

Housing

Provision of a minimum total target of 6,500 homes from 2006-2031.

In allocating sites for residential development, priority will be given to sites which will best contribute to building sustainable communities and support the town's regeneration initiatives taking into account the Special Policy Areas of the spatial strategy.

The Site Allocations Development Management Policies list 11 housing site allocations and seven mixed use site allocations for dwellings.

Employment Land Provision

Provision of at least 7,000 additional jobs between 2006-2031.

- Half of all additional jobs (3,300-4,200) to be provided within the wider town centre
- Most of the remainder of the additional jobs will be provided within mixed use areas at:
- The Health Campus Special Policy Area (around 1,000-1,900 jobs)
- Watford Junction Special Policy Area (around 1,350-2,350 jobs)
- Western Gateway Special Policy Area (around 700-2,000 jobs at Watford Business Park and around 150 retail jobs at Ascot Road)
- Around 500 additional jobs are expected to be delivered through the reoccupation or redevelopment of vacant space in allocated employment areas outside of the Special Policy Areas

Provision of around 80,000sqm of additional B class employment floorspace by 2031.

Four designated Employment Areas:

- E1 Watford Business Park
- E2 Imperial Way/Colonial Way
- E3 Fishers
- E4 Greycaine Road/Odhams/Sandown Road E1 Watford Business Park

Top Tier Settlements

No settlement hierarchy stated. Retail hierarchy top tier centres as follows:

Town Centre: Watford Town Centre.

District Centres: North Watford/St Albans Road.

Transport Policies

Transport policies include:

- Enhancements to the Croxley Rail Link
- Enhancements to the Watford Junction Interchange
- Conversion of Abbey Flyer from Heavy Rail to Light Rail
- Requirements for new developments to be located in accessible locations by sustainable transport
- Requirements for new developments to provide access for people with disabilities and sustainable transport
- Requirements for new developments to undertake transport assessments and undertake works to provide access
- Requirements for developments to contribute to transport infrastructure, including the Croxley Rail Link, Watford Junction Interchange and Abbey Flyer from Heavy Rail to Light Rail

Sustainable Construction Policies

A Sustainable Design policy and Delivering High Quality Design policy require developments to seek designs which utilise sustainable construction technologies and requires developments to seek to reduce air, light, soil

and noise pollution as well as remediate contaminated land. A waste policy encourages construction to minimise waste generation and reuse and recycle materials.

HRA findings

The November 2014 Sustainability Appraisal Report⁸⁹ states the HRA screening of the Core Strategy concluded that there will be no adverse effect on the integrity of international sites from the implementation of the Strategy, subject to the adoption of the avoidance and reduction measures, as outlined in the HRA and Environmental Reports. Natural England concurred with this conclusion prior to the adoption of the Core Strategy. It also highlighted that the Development Management Policies and Site Allocations in the Local Plan Part 2 do not introduce any policies /sites that would affect the findings of the HRA of the Core Strategy and its conclusions therefore remain unchanged.

Therefore there are no likely in-combination effects of Watford's Local Plan 2006-2031 with the Hertfordshire LTP4.

Welwyn Hatfield Local Plan 2016⁹⁰

Status

Drafted and submitted for examination in May 2017, due for adoption in Autumn 2017.

Schedule of Minor Modifications⁹¹ also submitted in May 2017.

This follows the Welwyn Hatfield District Plan 2005⁹² in which the development quantum has now expired.

Development quantum

Housing

Provision of 12,000 new homes between 2013-2032:

- 2/3 will be within and adjoining Welwyn Garden City and Hatfield
- 1,100 dwelling will be within a new village settlement
- 5,440 dwellings will be located within planned release of a limited amount of land from the Green Belt

Employment Land Provision

294.1 ha of employment land have been identified to maintain a sufficient supply of jobs in the borough and provide the opportunity for new employment floorspace to be provided between 2013-2032.

Provision made for at least 116,400 sq.m of new floorspace for industry, offices and warehousing over the plan period from; designated employment areas and mixed use sites including the strategic development site at Marshmoor, Welham Green.

This will provide for a range of 15,960 to 17,900 total new jobs over the plan period.

11 employment areas are designated within the plan.

Top Tier Settlements

Main Town: Welwyn Garden City.

Town: Hatfield.

Transport Policies

Transport policies including:

- Promotion of sustainable modes of travel and improving highway safety

⁸⁹ Watford Borough Council - Part 2 Local Plan: Development Management Policies Options Proposed 1st Consultation Version - Sustainability Appraisal Report November 2013: <https://watford.jdi-consult.net/localplan/readdoc.php?docid=5&chapter=1&doceleid=d231#d231>

⁹⁰ Welwyn Hatfield Local Plan: <http://www.welhat.gov.uk/localplan>

⁹¹ Schedule of Minor Modifications: <http://www.welhat.gov.uk/article/6937/Submission-Documents>

⁹² Welwyn Hatfield District Plan: <http://www.welhat.gov.uk/districtplan>

- Requirements for developments to produce a Transport Assessment
- Requirements for developments to maintain highway safety and access
- Requirements for development to provide suitable parking
- Requirements for large developments to produce Travel Plans
- Sustainable initiatives including provision for:
 - Cyclists - including routes, parking and changing facilities
 - Pedestrians - including accessible routes
 - Enhancement of Rights of Way
 - Public transport
 - Community transport - through implementation of Travel Plans e.g. Car pools
 - Servicing and emergency vehicles
 - Charging facilities

Sustainable Construction Policies

A Sustainable design and construction policy including prioritisation of materials and construction techniques that have smaller ecological and carbon footprints.

An Environmental Pollution policy including requirements for developments and their construction to not result in unacceptable risk to human health through air quality. This also requires developments to mitigate contaminated land, produce an Air Quality Assessment, produce a Noise and Vibration Impact Assessment, and produce a Lighting Assessment where appropriate.

HRA findings

The HRA (2016)⁹³ concluded that adverse effects on the integrity of any of the European sites were able to be ruled out in relation to air pollution, recreational pressure and water quality and quantity. It also found in-combination likely significant effects were ruled out for many potential effects in the screening assessment, and the Appropriate Assessment concluded that there would be no adverse effects on the integrity of European sites in-combination with other plans and projects. The HRA concluded that there will be no significant effects on European sites, however the issues relating to the capacity of Rye Meads WwTW and its relationship with Lee Valley SPA and Ramsar site need to be planned carefully and monitored. Rye Meads WwTW serves development in a number of boroughs and districts, including the northern part of Welwyn Hatfield.

Therefore there are no likely in-combination effects of Welwyn Hatfield Local Plan 2016 with the Hertfordshire LTP4.

⁹³ Welwyn and Hatfield Proposed Submission Local Plan 2016 Habitats Regulations Assessment Report:
<http://www.welhat.gov.uk/article/6937/Submission-Documents>