Hertfordshire Minerals Local Plan

Habits Regulations Assessment Report

Prepared by LUC
December 2018
**Project Title:** Hertfordshire Minerals Local Plan Habitats Regulations Assessment

**Client:** Hertfordshire County Council

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<thead>
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<th>Checked by</th>
<th>Approved by</th>
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<td>Katherine Sydney</td>
<td>Taran Livingston</td>
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</table>
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Table 3.3: Hertfordshire County Council assumed future HDV movements related to planned mineral development

Table 4.1 Roads that the specific sites and preferred area contribute HDV traffic to

Table 5.1: Hertfordshire County Council COMET model outputs – forecast traffic flows in 2014 and 2031
1 Introduction

1.1 Hertfordshire County Council is producing a new Minerals Local Plan (MLP) to manage future mineral-related development in the county for the next 15 years. LUC was appointed by Hertfordshire County Council in December 2014 to undertake Habitats Regulations Assessment (HRA) of the emerging MLP on its behalf.

1.2 This HRA Report has been prepared for the purposes of consultation under Regulation 19 of the Town and Country Planning (Local Planning) (England) Regulations 2017 and should therefore be read in conjunction with the Regulation 19 Hertfordshire Proposed Submission MLP.

1.3 The report presents the findings of the HRA and explains the process by which its conclusions have been reached. This latest version of the HRA has been amended to take into account a recent CJEU ruling (People over Wind, Peter Sweetman v Coillte Teoranta (Case C-323/17)) which ruled that Article 6(3) of the Habitats Directive should be interpreted as meaning that mitigation measures, specifically measures which avoid or reduce adverse effects, should be assessed as part of an Appropriate Assessment, and should not be taken into account at the Screening stage. In light of this, where necessary the HRA has been restructured to ensure that avoidance and mitigation measures have not been relied upon in reaching conclusions of no likely significance at the Screening stage.

Background to the preparation of the Minerals Local Plan

1.4 Hertfordshire County Council has prepared a final Proposed Submission MLP for the next 15 years which, once adopted, will replace the current MLP 2002-2016. An initial consultation on the issues and options within the draft plan took place in late 2015, and a call for sites exercise concluded in April 2016. Options for the potential mix of minerals sites and preferred areas were then considered in 2017, after which the preferred options were identified, and these were assessed through the HRA. The findings were included in an earlier iteration of this HRA Report (November 2017) which was consulted upon alongside the Hertfordshire MLP – Consultation Draft 2017. Following consultation on the Consultation Draft Hertfordshire MLP in 2017, the Hertfordshire MLP – Proposed Submission has been prepared in 2018. This HRA report assesses this latest iteration of the Plan.

1.5 The new MLP is intended to address recent changes in national policy and the need to ensure a continuous planning framework for minerals planning in the county. The plan includes an overarching vision and objectives as well as strategic policies, development management-style policies and allocations for specific sites, preferred areas and/or areas of search for future mineral extraction.

The requirement to undertake HRA of development plans

1.6 The requirement to undertake HRA of development plans was confirmed by the amendments to the Habitats Regulations published for England and Wales in July 2007 and updated in 2010, 2012 and 2017. Therefore when preparing the new MLP, Hertfordshire County Council is required by law to carry out a Habitats Regulations Assessment, although consultants can undertake the HRA on its behalf. The requirement for authorities to comply with the Habitats Regulations...
Regulations when preparing a Local Plan is explained in the National Planning Practice Guidance (NPPG).

1.7 The HRA refers to the assessment of the potential effects of a development plan on one or more European 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); and
- 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), candidate SACs (cSACs), Sites of Community Importance (SCIs) and Ramsar sites should also be included in the assessment.

- Ramsar sites support globally important wetland habitats and are listed under the Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar Convention, 1971);
- Potential SPAs are sites that have been approved by Government and are currently in the process of being classified as SPAs;
- Candidate SACs are sites that have been submitted to the European Commission, but not yet formally adopted; and
- SCIs are sites that have been adopted by the European Commission but not yet formally designated as SACs by the Government.

1.9 For ease of reference during HRA, these designations can be collectively referred to as European sites despite Ramsar designations being at the international level. The term ‘European site’ is interchangeable with the term ‘Natura 2000 site’ in the context of HRA. The former term is used throughout this report.

1.10 The overall purpose of the HRA is to conclude whether or not a proposal, policy or plan would adversely affect the integrity of the site’s ‘qualifying features’ (i.e. those Annex I habitats, Annex II species, and Annex I bird populations for which it has been designated), either alone or in combination with other plans. This is judged in terms of the implications of the plan for a site’s conservation objectives. Significantly, HRA is based on the precautionary principle meaning that where uncertainty or doubt remains, an adverse effect should be assumed.

Stages of the HRA

1.11 **Table 1.1** below summarises the stages involved in carrying out a full HRA, based on various guidance documents.  

**Table 1.1 Stages in HRA**

<table>
<thead>
<tr>
<th>Stage</th>
<th>Task</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 1: Screening (the ‘Significance Test’)</td>
<td>Determine whether HRA is required. Describe the plan. Identify potential effects on European sites with reference to conservation objectives. Assess the effects on European sites.</td>
<td>Where effects are unlikely, present this in a report. Where effects judged likely, or lack of information to prove otherwise, proceed to Stage 2.</td>
</tr>
<tr>
<td>Stage 2:</td>
<td>Assess whether the Plan will</td>
<td>Appropriate Assessment report</td>
</tr>
</tbody>
</table>
### Table 1.1

<table>
<thead>
<tr>
<th>Stage</th>
<th>Task</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appropriate Assessment (the 'Integrity Test')</td>
<td>adversely affect the integrity of the sites’ qualifying features (taking into account potential mitigation provided by other policies in the plan). Gather information (plan and European sites). Impact prediction. Evaluate impacts with reference to conservation objectives and potential mitigation provided by other policies in the plan. Where impacts are considered to result in adverse effects on the integrity of the site’s qualifying features, identify alternative options. Assess alternative options. If no alternatives exist, define and evaluate mitigation measures where necessary.</td>
<td>describing the plan, European site baseline conditions, the adverse effects of the plan on the European 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.</td>
</tr>
<tr>
<td>Stage 3: Assessment where no alternatives exist and adverse impacts remain taking into account mitigation</td>
<td>Identify and demonstrate 'imperative reasons of overriding public interest' (IROPI). Demonstrate no alternatives exist. Identify potential compensatory measures.</td>
<td>This stage should be avoided if at all possible. The test of IROPI and the requirements for compensation are extremely onerous.</td>
</tr>
</tbody>
</table>

1.12 In assessing the effects of the new MLP in accordance with Regulation 105 of the Conservation of Habitats and Species Regulations 2017, 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. 105(1)(b), consider whether the plan is directly connected with or necessary to the management of the sites. If not –
- **Step 2:** Under Reg. 105(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. 105(1), 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. 105(2) to consult Natural England, and optional under Reg. 105(3) 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.105(4), but subject to Reg.107, give effect to the land use plan only after having ascertained that the plan will not adversely affect the integrity of the European 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 development 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 Hertfordshire County 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 body\(^6\) 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.

**Structure of the HRA Report**

1.15 This chapter (Chapter 1) has introduced the requirement to undertake HRA of the MLP. The remainder of the report is structured as follows:

- **Chapter 2: The Minerals Local Plan** summarises the content of the MLP Consultation Draft and grouped options that are the subject of this report.

- **Chapter 3: Screening Methodology** sets out the approach used and the specific tasks undertaken during the screening stage of the HRA.

- **Chapter 4: Screening Findings** describes the findings of the screening stage of the HRA.

- **Chapter 5: Appropriate Assessment Methodology and Findings** describes the Appropriate Assessment stage of the HRA.

- **Chapter 6: Conclusions** summarises the HRA conclusions for the MLP and describes the next steps to be undertaken.

2 The Minerals Local Plan Proposed Submission 2018

2.1 The MLP sets out context in which the plan has been prepared, in terms of policies, economic growth in the county, and the requirement for and potential supply of minerals. It then sets out the following vision:

Throughout the plan period, Hertfordshire will continue to provide a steady and adequate supply of sand and gravel to enable local economic growth and support wider and national supply obligations. This will be achieved by permitting sand and gravel reserves within Hertfordshire for extraction and supporting clay extraction to supply specialist brickworks.

The supply of naturally occurring mineral resources of sand, gravel and clay will be conserved for future generations. This will be achieved by employing the sustainable use of minerals by using resources effectively and utilising the supply of alternative materials in construction projects. Prior extraction in cooperation with interested parties will be expected before other development takes place on land.

The sustainable use of minerals will minimise impacts and maximise improvements on the natural, built and historic environments and human health now and in the future. The effects on climate change will be managed as part of mineral development.

High quality restoration and subsequent management of mineral sites will be carried out as early as possible to conserve and enhance the character and quality of Hertfordshire’s landscape and environments. Opportunities for outdoor recreation, net gain in biodiversity, improved agricultural land and water management will be delivered.

2.2 The plan then sets out the objectives that its policies are intended to achieve:

- **Obj1**: To enable sustainable local economic growth by ensuring a steady and adequate supply of minerals across the County to meet the requirements of the Local Aggregate Assessment.
- **Obj2**: To conserve sand, gravel and clay resources for current and future generations and ensure the continued use of mineral infrastructure.
- **Obj3**: To encourage the sustainable use of minerals which includes utilising secondary and recycled aggregates, extracting minerals prior to other development taking place and using minerals in construction on the land from which they are extracted.
- **Obj4**: To promote/encourage the sustainable transport of minerals by road, rail and water, including the safeguarding of railheads.
- **Obj5**: To protect people from harm, positively contribute to local residents’ health and the natural, built and historic environments.
- **Obj6**: To ensure that mineral development addresses and minimises the impacts it will have on climate change and how climate change may impact upon it.
- **Obj7**: To positively contribute to the natural, built and historic environments with high quality, progressive and expedient restoration to achieve a beneficial after-use. The after-use will protect and enhance the environment, including landscape and biodiversity improvements.
- **Obj8**: To provide benefits for health and wellbeing through positively planner restoration of extraction sites which improve and enhance the country’s green infrastructure offer for recreation and physical activity.
2.3 The plan contains 25 policies, with specific sites for minerals extraction identified under Policy 4:

- **Policy 1: Sustainable Development**
- **Policy 2: Climate Change**
- **Policy 3: Aggregate Supply**
- **Policy 4: Working of Specific Sites or Preferred Areas**
- **Policy 5: Substitute or Secondary Materials**
- **Policy 6: Brick Clay**
- **Policy 7: Chalk**
- **Policy 8: Mineral Safeguarding**
- **Policy 9: Bulk Handling and Processing Sites**
- **Policy 10: Borrow Pits**
- **Policy 11: Incidental Extraction**
- **Policy 12: Green Belt**
- **Policy 13: Cumulative Impact**
- **Policy 14: Water Management**
- **Policy 15: Historic Environment**
- **Policy 16: Landscape and Green Infrastructure**
- **Policy 17: Biodiversity**
- **Policy 18: Protection and Enhancement of Amenity**
- **Policy 19: Health and Wellbeing**
- **Policy 20: Strategic Transport**
- **Policy 21: Operational Transport**
- **Policy 22: Public Rights of Way**
- **Policy 23: Soils and Agricultural Land**
- **Policy 24: Restoration**
- **Policy 25: Aftercare and After-use**

Minerals sites

2.4 The following sites are identified in the MLP for sand and gravel extraction:

- Specific Site 1) Hatfield Aerodrome (c.8 million tonnes);
- Specific Site 2) Hatfield Quarry – Furze Field (c.0.45 million tonnes);
- Specific Site 3) Hatfield Quarry – Land Adjoining Coopers Green Lane (c.6.6 million tonnes);

and

- Preferred Area 1: The Briggens Estate (Olives Farm) (c.10.2 million tonnes).

2.5 These sites provide a total minerals supply of c.25.25 million tonnes.

Potential impacts of the Minerals Local Plan on European sites

2.6 Table 2.1 below sets out the range of potential impacts that minerals development and related activities may have on European sites.

**Table 1.1 Potential impacts and activities adversely affecting European sites**

<table>
<thead>
<tr>
<th>Broad categories and examples of potential impacts on European sites</th>
<th>Examples of activities responsible for impacts</th>
</tr>
</thead>
</table>
| **Physical loss**  
  - Removal (including offsite effects, e.g. foraging habitat)  
  - Mine collapse  
  - Smothering  
  - Habitat degradation | Soil removal/mineral extraction  
  Infilling (e.g. of mines, water bodies)  
  Alterations or works to disused quarries  
  Tipping |
<table>
<thead>
<tr>
<th>Physical damage</th>
<th>Dredging</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Direct mortality</td>
<td>Mineral extraction</td>
</tr>
<tr>
<td>• Sedimentation / silting</td>
<td></td>
</tr>
<tr>
<td>• Prevention of natural processes</td>
<td></td>
</tr>
<tr>
<td>• Habitat degradation</td>
<td></td>
</tr>
<tr>
<td>• Erosion</td>
<td></td>
</tr>
<tr>
<td>• Trampling</td>
<td></td>
</tr>
<tr>
<td>• Fragmentation</td>
<td></td>
</tr>
<tr>
<td>• Severance / barrier effect</td>
<td></td>
</tr>
<tr>
<td>• Edge effects</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Non-physical disturbance</th>
<th>Mineral extraction</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Noise</td>
<td></td>
</tr>
<tr>
<td>• Vibration</td>
<td></td>
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<tr>
<td>• Visual presence</td>
<td></td>
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<tr>
<td>• Human presence</td>
<td></td>
</tr>
<tr>
<td>• Light pollution</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Water table/availability</th>
<th>Water abstraction</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Drying</td>
<td>Dredging</td>
</tr>
<tr>
<td>• Flooding / stormwater</td>
<td>Dewatering</td>
</tr>
<tr>
<td>• Water level and stability</td>
<td>Extraction below the water table</td>
</tr>
<tr>
<td>• Water flow (e.g. reduction in velocity of surface water)</td>
<td>Increased discharge (e.g. drainage, runoff)</td>
</tr>
<tr>
<td>• Barrier effect (on migratory species)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Toxic contamination</th>
<th>Oil / chemical spills</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Water pollution</td>
<td>Tipping</td>
</tr>
<tr>
<td>• Soil contamination</td>
<td>Landfill</td>
</tr>
<tr>
<td>• Air pollution</td>
<td>Vehicular traffic</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Non-toxic contamination</th>
<th>Water abstraction</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Nutrient enrichment (e.g. of soils and water)</td>
<td>Mineral extraction</td>
</tr>
<tr>
<td>• Algal blooms</td>
<td>Increased discharge</td>
</tr>
<tr>
<td>• Changes in salinity</td>
<td>Dust emissions</td>
</tr>
<tr>
<td>• Changes in thermal regime</td>
<td></td>
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<tr>
<td>• Changes in turbidity</td>
<td></td>
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<tr>
<td>• Air pollution (dust)</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Biological disturbance</th>
<th>Mineral extraction activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Direct mortality</td>
<td>Restoration to agriculture or aquatic after-uses</td>
</tr>
<tr>
<td>• Out-competition by non-native species</td>
<td></td>
</tr>
<tr>
<td>• Selective extraction of species</td>
<td></td>
</tr>
<tr>
<td>• Introduction of disease</td>
<td></td>
</tr>
<tr>
<td>• Rapid population fluctuations</td>
<td></td>
</tr>
<tr>
<td>• Natural succession</td>
<td></td>
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</tbody>
</table>
3 Screening Methodology

3.1 HRA Screening of the Hertfordshire MLP has been undertaken in line with current available guidance and seeks to meet the requirements of the Habitats Regulations, taking into account the ‘People over Wind’ CJEU ruling. 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 the Minerals Local Plan and the factors contributing to and defining the integrity of these sites

3.2 An initial investigation was undertaken to identify European sites within or adjacent to the Hertfordshire County boundary which may be affected by the MLP. This involved the use of Geographical Information Systems (GIS) data to map the locations and boundaries of European sites using publicly available data from Natural England.

3.3 All European sites lying partially or wholly within 10km from the county boundary were included in order to address the fact that policies in the MLP may affect European sites which are located outside the administrative boundary of the plan. This distance was also used in the HRA of the Hertfordshire Waste Core Strategy and Site Allocations Plans and is considered reasonable to ensure that all European sites that could potentially be affected by development are identified and included in the assessment.

3.4 In some instances there is the possibility that sites beyond the 10km distance could be affected by development within the area in question, for example where impacts of sand and gravel extraction on water flow in a river affect areas of the river downstream that are subject to European designation. Therefore, if information gathered during the HRA indicated that other European sites outside of the 10km zone around Hertfordshire could be affected, these would also be considered in the assessment, as appropriate.

3.5 Seven European sites are located within 10km of the Hertfordshire County boundary. These European sites are listed below in Table 3.1 and are mapped in Figure 3.1. Wormley Hoddesdonpark Woods SAC, part of the Chilterns Beechwoods SAC and part of Lee Valley SPA and Ramsar site lie within the county, while the other European sites (Epping Forest SAC, Burnham Beeches SAC and Eversden and Wimpole Woods SAC) are all outside of Hertfordshire but at least partly within the 10km buffer.

<table>
<thead>
<tr>
<th>Special Areas of Conservation (SACs)</th>
<th>Special Protection Areas (SPAs)</th>
<th>Ramsar sites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chilterns Beechwoods SAC</td>
<td>Lee Valley SPA</td>
<td>Lee Valley Ramsar site</td>
</tr>
<tr>
<td>Wormley Hoddesdonpark Woods SAC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Epping Forest SAC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Burnham Beeches SAC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eversden and Wimpole Woods SAC</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3.6 The attributes of these sites which contribute to and define their integrity have been described (see Appendix 1). In doing so, reference was made to Standard Data forms for SACs and SPAs\(^7\) as well as Natural England’s Site Improvement Plans for the sites (where available). Specific conservation objectives for each site were also referred to. 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 informed the analysis of how the potential impacts of the Hertfordshire MLP may affect the integrity of each site.

**Assessment of ‘likely significant effects’ of the Minerals Local Plan**

3.7 As required under Regulation 105 of the Conservation of Habitats and Species Regulations 2017\(^8\) an assessment of the ‘likely significant effects’ of the Hertfordshire MLP has been undertaken.

3.8 A screening matrix has been prepared in order to assess which policies or site allocations are likely to have a significant effect on European sites. The findings of the screening assessment have been presented in a detailed matrix in Appendix 3 and have been summarised Chapter 4. The structure of the screening matrix is shown in Table 3.2 below.

**Table 3.2 Structure of the HRA screening matrix**

<table>
<thead>
<tr>
<th>Proposed policy/site allocation</th>
<th>Potential activities (operations) to result as a consequence of the policy/site allocation</th>
<th>Potential effects if policy/site allocation is implemented</th>
<th>European site(s) potentially affected</th>
<th>Could the policy/site allocation have likely significant effects on European sites?</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

3.9 A ‘traffic light’ approach has been 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.

<table>
<thead>
<tr>
<th>Colour</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td>There are likely to be significant effects (Appropriate Assessment required).</td>
</tr>
<tr>
<td>Amber</td>
<td>There may be significant effects, but this is currently uncertain (Appropriate Assessment required).</td>
</tr>
<tr>
<td>Green</td>
<td>There are unlikely to be significant effects (Appropriate Assessment not required).</td>
</tr>
</tbody>
</table>

3.10 A risk-based approach involving the application of the precautionary principle has been adopted in the assessment, such that a conclusion of ‘no significant effect’ has only been reached where it is 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.

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\(^7\) These were obtained from the Joint Nature conservation Committee and Natural England websites (www.jncc.gov.uk and www.naturalengland.org.uk)

Figure 3.1: European sites within Hertfordshire County (+10km)

- Hertfordshire
- Hertfordshire 10km buffer
- County boundary
- SAC
- Lee Valley SPA
- Lee Valley Ramsar

Map Scale @ A3: 1:300,000

Source: Natural England, JNCC

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

3.11 The screening stage of the HRA has taken the approach of screening each policy or potential site option individually, which is consistent with current guidance.

3.12 For many of the types of impacts, screening for likely significant effects has been determined on a proximity basis, using GIS data to determine the proximity of potential development locations to the European sites that are the subject of the assessment. However, there are many uncertainties associated with using set distances as there are very few standards available as a guide to how far impacts will travel. Therefore, during the screening stage a number of assumptions have been applied in relation to assessing the likely significant effects on European sites that may result from the MLP, as described below.

3.13 These assumptions take account of the nature of development likely to result from a MLP (as opposed to a Local Plan that proposes residential development, for example).

Physical loss of habitat

3.14 None of the specific sites or the preferred area allocated in the MLP are within the boundaries of European sites, therefore direct loss of habitat can be screened out of the assessment for those. However, some of the policies allow for development outside of the specific sites or preferred area. In theory, therefore, development could occur within the boundaries of any of the European sites. **Physical loss of habitat has therefore been screened in where proposals allow for development in any location.**

3.15 Loss of habitat from outside of the boundaries of a European site could still affect the integrity of that site if it occurs in an area used for offsite breeding, foraging or roosting by the qualifying species of the site. Therefore, consideration has been given to whether the European sites in and around Hertfordshire have transient species amongst their qualifying features, which could be affected by habitat loss resulting from development outside of the European site boundary. This consideration is relevant to the following sites:

- Lee Valley SPA and Ramsar site (birds);
- Eversden and Wimpole Woods SAC (Barbastelle bat); and
- Chiltern Beechwoods SAC and Epping Forest SAC (stag beetle).

3.16 The transient species for which the Lee Valley SPA/Ramsar sites are designated (Bittern, Northern Shoveler and Gadwall) predominantly use open water and wetland habitats, although Northern Shoveler and Gadwall occasionally breed away from the water if there is no suitable habitat nearby. As the SPA/Ramsar provides a range of habitats, it is assumed that only sites with significant wetland habitats, or those very close to the SPA/Ramsar sites or potentially linked sites could support offsite habitats used by Lee Valley SPA/Ramsar species.

3.17 There is evidence that the home range of Barbastelle bats is 1-20km. As the nearest minerals sites are greater than 30km away from Eversden and Wimpole Woods SAC, the impact of the MLP on its offsite habitats can be screened out of the assessment of the minerals sites. **Where policies allow for development outside of the specific sites or preferred areas, but within 30km of Eversden and Wimpole Woods SAC, there is the potential for offsite habitat related to the SAC to be affected.**

3.18 The stag beetle is a qualifying feature of both Chiltern Beechwoods and Epping Forest SACs and may travel outside of the SAC boundaries, although it is unlikely that they will travel far (it is generally only the male stag beetle that flies during the summer months, and the female beetle rarely flies). The preferred habitat for stag beetles is old, established woodland, as the larvae feed on rotting tree matter; therefore only this type of habitat could provide a functional link for

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9 [http://www.birdlife.org/datazone](http://www.birdlife.org/datazone)
10 [http://jmammal.oxfordjournals.org/content/93/4/1110](http://jmammal.oxfordjournals.org/content/93/4/1110)
the SAC populations. Research\textsuperscript{12} suggests that 2km may be an appropriate buffer inside which sites could be functionally connected, as this is the distance that males travel to females during the breeding season. Epping Forest SAC is more than 2km outside the county boundary and none of the specific sites or the preferred area are within 2km of Chiltern Beechwoods SAC, therefore only policies that allow for the development outside of the specific sites or preferred area but within 2km of Chiltern Beechwoods SAC could have an effect on habitats functionally linked to SAC.

**Noise, vibration and light pollution**

3.19 Noise and vibration effects, e.g. during mineral extraction and/or transportation of minerals to and from the site, are most likely to disturb bird species during the day and are thus a key consideration with respect to European sites where birds are the qualifying features, although such effects may also impact upon some mammals and fish species. Artificial lighting at night (e.g. from additional street lamps, flood lighting and security lights) is most likely to affect bat populations or nocturnal birds, and therefore have an adverse effect on the integrity of European sites where bats and nocturnal birds are a qualifying feature. Adult male stag beetles do fly around dusk during May-August\textsuperscript{29}, but although they can be attracted by light it is not known to be a significant factor in stag beetle mortality. The effects of noise, vibration and light are most likely to be significant if minerals development takes place within 500m of a European site with qualifying features sensitive to these disturbances, or mapped off-site breeding, foraging or roosting areas. This is the distance that, in our experience, provides a robust assessment of effects and meets with the agreement of Natural England.

3.20 None of the mineral sites are within 500m of European sites; therefore this effect can be screened out of further assessment for those. However, where development has the potential to occur outside of specific sites or the preferred area, there could be an effect within 500m of the Chilterns Beechwoods SAC and Lee Valley SPA and Ramsar.

3.21 Wormley Hoddesdonpark Woods SAC is designated for sub-Atlantic and medio-European oak or oak-hornbeam forest and so will not be affected by noise, vibration and light pollution. The other European sites, namely Burnham Beeches SAC, Epping Forest SAC and Eversdeen and Wimpole Woods SAC, lie more than 500m outside the County boundary as so noise, vibration and light pollution effects on these sites can be discounted.

**Air pollution**

3.22 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.

3.23 In terms of vehicle traffic arising from transportation of minerals, nitrogen oxides (NO\textsubscript{x}, i.e. NO and NO\textsubscript{2}) are considered to be the key pollutants. Deposition of nitrogen compounds may lead to both soil and freshwater acidification, and NO\textsubscript{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 1\textsuperscript{13} (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 HRA 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:

\begin{itemize}
\end{itemize}
• 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 10 km/hr or more; or
• Peak hour speed will change by 20 km/hr or more; or
• Road alignment will change by 5 m or more.

3.26 Defra defines Heavy Duty Vehicles (HDVs) as road vehicles greater than 3.5 tonnes gross weight and Heavy Goods Vehicles (HGVs) as road vehicles greater than 7.5 tonnes gross weight\(^{14}\). Minerals extraction sites could generate HDV traffic that includes both HGVs and smaller types of HDVs.

3.27 Therefore the second criterion from the DMRB above (highlighted above) is relevant to this HRA of the MLP. Estimated daily HDV flows for the minerals sites have been based on other recently permitted minerals sites within Hertfordshire and assumptions made about the likely A roads or motorways that HDVs may travel along. By considering which A roads or motorways HDVs from each site would be likely to use, we have estimated the potential increase in HDV AADT on each road in order to determine if there are likely to be significant effects from air pollution.

3.28 Estimates of HDV trips for each site have been provided by Hertfordshire County Council and set out in **Table 3.3**.

**Table 3.3: Hertfordshire County Council assumed future HDV movements related to planned mineral development**

<table>
<thead>
<tr>
<th>Site/Area</th>
<th>Assumed HGV movements</th>
<th>Source / notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>SS1 Hatfield Aerodrome</td>
<td>174 daily movements (116 extraction, 58 import)</td>
<td>Transport statement for planning application 5/0394-16 which was granted a resolution to approve permission subject to S106 and Conditions.</td>
</tr>
<tr>
<td>SS2 Hatfield Quarry – Furze Field</td>
<td>238 daily movements (166 extraction, 72 restoration)</td>
<td>Transport statement for planning permission 5/3720-16. SS2 is due to replace the existing operations at Hatfield Quarry and therefore is unlikely to result in an actual net increase of 238 daily movements.</td>
</tr>
<tr>
<td>SS3 Hatfield Quarry – Land adj Coopers Green Lane</td>
<td>238 daily movements (166 extraction, 72 restoration)</td>
<td>This assumes a continuation of current processing levels and restoration after SS2 has been worked. These vehicle movements will not occur in combination with SS2.</td>
</tr>
<tr>
<td>PA1 Briggens Estate</td>
<td>400 daily movements (180 extraction, 180 for restoration, 40 for ready mix operations)</td>
<td>Transport and Access Appraisal submitted by site promoter as part of a representation to the Draft Mineral Local Plan. This is only indicative but seems to be a fair reflection of a worst-case scenario (for example,</td>
</tr>
</tbody>
</table>

\(^{14}\) https://uk-air.defra.gov.uk/assets/documents/reports/aqeg/nd-glossaryapp.pdf
In addition, it should be noted that recent case law, known as the Wealden judgement, has revised the method by which Natural England expects to see in-combination air pollution effects assessed. The implication of the judgement is that, where the road traffic effects of other plans or projects are known or can be reasonably estimated (including those of adopted plans or consented projects), these should be included in road traffic modelling by the local authority whose local plan or project is being assessed. The DMRB screening criteria should then be applied to the traffic flows of the plans in combination. The judgement focussed on the 1,000 AADT daily traffic flow data rather than 200 AADT HDV flows, but it assumed that the same principle would apply.

Finally, an assessment has been undertaken to identify which European sites lie within 200m of either motorways or A roads. The following European sites are within 200m of either ‘A’ roads or motorways:

- Chiltern Beechwoods SAC: A41, A4010
- Burnham Beeches SAC: A355
- Wormley Hoddesdonpark Woods SAC: A10
- Lee Valley SPA: A414, A503, A1055
- Lee Valley Ramsar site: A414, A503, A1055

Therefore, significant effects associated with increased air pollution from vehicle traffic have only been considered in relation to the above European sites and can be ruled out in relation to Eversden and Wimpole Woods SAC which does not lie within 200m of a motorway or ‘A’ road.

**Impacts of recreation**

Recreation activities and general human presence can have an adverse impact on the integrity of a European site as a result of physical disturbance, e.g. through erosion and trampling. However, although mineral sites may provide a recreation resource once restored, it is assumed that proposals in a MLP will not result in an increase in recreational use of European sites (this is more likely to be an issue where residential development is proposed, for example). Therefore, this type of effect has been screened out of this HRA.

**Water quantity and quality**

Minerals extraction can affect water flows and quality through processes used such as dredging, dewatering and excavation below the water table. Impacts on water quantity and quality are most likely to affect European sites that are hydrologically connected to the mineral sites, either via surface or groundwater pathways. Consideration has been given to the likelihood of hydrological connectivity between the mineral sites and the European sites within 10km of the county boundary. Where there is connectivity, the potential for significant effects to arise through changes in water flows or quality has been considered for each site.

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15 Wealden District Council v. (1) Secretary of State for Communities and Local Government; (2) Lewes District Council; (3) South Downs National Park Authority and Natural England

16 Note that the strategic road network includes all motorways and major trunk A-roads in England that are managed by the Highways Agency. All other A roads are managed locally by the Highways Authority.
3.34 Above-ground connectivity has been identified where the River Lea or its tributaries pass through the minerals sites, upstream of the Lee Valley SPA/Ramsar sites. Potential connectivity also exists where sites are very close to the Lee Valley SPA/Ramsar sites and there is the potential for occasional surface water flows. None of the other European sites have above-ground connectivity with the minerals sites. Where policies allow for development outside of the specific sites or preferred area, there is the potential for additional above- or below-ground connectivity.

3.35 Below-ground connectivity has been identified by considering any underlying aquifers and their connectivity. All of the European sites are at least partially above a Secondary A aquifer, and the Lee Valley SPA/Ramsar, Chilterns Beechwoods SAC and Eversden and Wimpole Wood SAC are also above the Principal chalk aquifer. Other Secondary aquifers have been excluded as they have limited permeability. While all of the European sites could potentially be affected by significant changes in groundwater quality or quantity across the whole catchment, only the Lee Valley SPA/Ramsar site has wetland habitats that could be directly affected by groundwater changes. Groundwater in Hertfordshire generally flows towards the Thames; therefore, the further west the minerals sites are from the Lee Valley SPA/Ramsar sites, the less likely they are to have below-ground connectivity to them.

3.36 It should be noted that any water abstraction and discharges arising from mineral extraction will be regulated through the Environmental Permit regime administered by the Environment Agency, which also takes into account environmental impacts including likely significant effects on European sites.

3.37 Changes in water quantity and quality have therefore been screened in where policies or sites could result in development that has below-ground connectivity to the Lee Valley SPA/Ramsar, only.

**Interpretation of ‘likely significant effect’**

3.38 HRA screening seeks to determine whether a significant effect will be likely, uncertain, or unlikely (either no effect or an effect that will not be significant). Likely and uncertain effects are then taken forward to the Appropriate Assessment stage.

3.39 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.

3.40 In the Waddenzee case\(^{17}\), the European Court of Justice ruled on the interpretation of Article 6(3) of the Habitats Directive (translated into Reg. 105 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).

3.41 A 2012 opinion delivered to the Court of Justice of the European Union\(^{18}\) commented that:

“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.”

3.42 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*;

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\(^{17}\) *ECJ Case C-127/02 "Waddenzee"* Jan 2004.

\(^{18}\) *Advocate General’s Opinion to CJEU in Case C-258/11 Sweetman and others v An Bord Pleanala 22nd Nov 2012.*
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’.

**In-combination effects**

3.43 Regulation 105 of the Habitats Regulations 2017 requires an Appropriate Assessment where “a land use plan is likely to have a significant effect on a European site (either alone or in combination with other plans or projects) and is not directly connected with or necessary to the management of the site”. Therefore, where likely significant effects are identified during the screening stage for the Hertfordshire MLP it will be necessary to consider whether there may also be significant effects in combination with other plans or projects.

3.44 The first stage in identifying ‘in-combination’ effects involves identifying which other plans and projects in addition to the new MLP may affect the European sites that will be the focus of this assessment. There are a large number of potentially relevant plans; therefore the review will focus on planned spatial growth within authorities within Hertfordshire, as well as the county-level Waste Local Plan. Appendix 2 lists the plans that were reviewed, outlining the components of each plan that could have an impact on nearby European sites and considering the findings of the accompanying HRA work (where available).

3.45 The purpose of the review of other plans was to identify any components of other plans that could have an impact on the European sites within the Hertfordshire county boundary (+10km), e.g. areas or towns where additional housing or employment development is proposed near to the European sites (as there could be effects from the transport, water use, infrastructure and recreation pressures associated with the new developments).

3.46 The potential for the effects of these plans to combine with the effects of the MLP has been considered in the next chapter and is updated at each stage of the HRA to take account of the most recent iterations of the relevant plans and the associated HRA work.

**Mitigation provided by the policies**

3.47 Some of the potential effects of the Hertfordshire MLP could be mitigated through the implementation of other proposals in the Plan itself, such as those relating to the provision of improved sustainable transport links (which would help to mitigate potential increases in air pollution associated with increased vehicle traffic).

3.48 However, a recent CJEU ruling (People over Wind, Peter Sweetman v Coillte Teoranta (Case C-323/17) judgement) ruled that Article 6(3) of the Habitats Directive should be interpreted as meaning that mitigation measures, specifically measures which avoid or reduce adverse effects, should be assessed as part of an Appropriate Assessment, and should not be taken into account at the screening stage. As part of this HRA this has been taken to include any forms of mitigation upon which conclusions rely, either solely or partly. The precise wording of the ruling is as follows:

"Article 6(3)...must be interpreted as meaning that, in order to determine whether it is necessary to carry out, subsequently, an appropriate assessment of the implications, for a site concerned, of a plan or project, it is not appropriate, at the screening stage, to take account of measures intended to avoid or reduce the harmful effects of the plan or project on that site."

3.49 Prior to this judgment, UK case law had established that avoidance or reduction measures that form part of a proposal could be taken into account at the screening stage, on the basis of objective information. This HRA has therefore been updated to take account of this recent ruling and as a result, conclusions have not relied on mitigation measures at the screening stage. Where such measures are proposed to avoid the harmful effects of the plan, they have been considered at the Appropriate Assessment stage to ensure compliance with recent case law.

3.50 The extent to which mitigation, if required, may be achieved through the emerging Hertfordshire MLP was considered during the Appropriate Assessment process and has influenced the Appropriate Assessment conclusions (see Chapter 5). In contrast, previous versions of this HRA
The report considered the mitigation from other policies at the screening stage. The policies which potentially provide mitigation, and which have now been considered in the Appropriate Assessment include policies 13 (Cumulative Impact), 14 (Water Management), 17 (Biodiversity), 20 (Strategic Transport), 21 (Operational Transport), 24 (Restoration) and 25 (Aftercare and After-Use).
### 4 Screening Findings

#### Screening of the Minerals Local Plan

4.1 As described in Chapter 3, a screening assessment was carried out in order to identify the likely significant effects of the MLP on the European sites around Hertfordshire. The detailed screening matrix used for this assessment can be found in Appendix 3 and the findings are summarised below.

4.2 Note that where the Screening findings suggest that a significant effect was either likely or uncertain, a more detailed assessment is triggered under Stage 2 of the HRA, Appropriate Assessment – the findings of which are described in Chapter 5 of this report. The screening findings below are therefore not the final conclusions of this HRA; the screening conclusions are superseded by the findings of the Appropriate Assessment stage, i.e. it may be possible to reduce some of the uncertainty regarding the likelihood of significant effects with the result that an adverse effect on the integrity of the European site in question is able to be ruled out.

#### Screening effects likely

4.3 None of the policies or site allocations in the MLP is considered likely to have a significant effect on the European sites within 10km of Hertfordshire.

#### Screening effects uncertain

**Physical loss of habitat**

4.4 Uncertain significant effects have been identified in relation to the potential loss of / damage to habitats either within European sites located in the County and off site habitats used by qualifying species.

4.5 These uncertain significant effects relate to a number of policies within the MLP which either set a minimum requirement for mineral extraction within the County, presenting the possibility that if specific allocated sites do not come forward other extraction sites may need to be permitted; or highlight opportunities for mineral extraction and recycling across the County, setting the criteria that are required to be met in order for non-allocated mineral extraction sites to be permitted for extraction within the plan period. These policies are:

- Policy 3: Aggregate Supply;
- Policy 5: Substitute or Secondary Materials;
- Policy 6: Brick Clay;
- Policy 7: Chalk; and,
- Policy 10: Borrow Pits.

4.6 Given that the location of the potential mineral extraction sites are unknown, significant effects cannot be ruled out at the screening stage.

4.7 Furthermore, two of the mineral extraction sites allocated in Policy 4 (Working of specific sites or preferred area), specifically SS3 (Hatfield Quarry – Land adjoining Coopers Green Lane) and the Preferred Area at the Briggens Estate are located in close proximity to the Lee Valley, presenting the possibility that qualifying SPA wetland birds use habitat within the allocations.

4.8 Effects generated by the physical loss of habitat are therefore considered further in the Appropriate Assessment.

**Noise, vibration and light pollution**

4.9 Uncertain significant effects have been identified in relation to potential noise, vibration and light pollution generated by mineral extraction or recycling sites which have not been allocated within...
the MLP but which may come forward within the plan period through requirements and provisions set out in the MLP, specifically in:

- Policy 3: Aggregate Supply
- Policy 5: Substitute or Secondary Materials;
- Policy 6: Brick Clay;
- Policy 7: Chalk;
- Policy 10: Borrow Pits; and,
- Policy 24: Restoration.

4.10 Given that the location of the potential mineral extraction sites are unknown, significant effects cannot be ruled out at the screening stage for Lee Valley SPA/Ramsar and Chiltern Beechwoods SAC. Effects generated by noise, vibration and light pollution are therefore considered further in the Appropriate Assessment.

**Air pollution**

4.11 Uncertain significant effects have been identified in relation to potential air pollution impacts on Epping Forest SAC, Lee Valley SPA / Ramsar and Wormley Hoddesdonpark Woods SAC where minerals extraction would generate HDV traffic on the M25, A414 or A10 (respectively). The policies which set out the framework for mineral extraction, including the overall requirement for minerals extraction, the types of mineral extraction acceptable within the county and the location of specific extraction sites, and which therefore influence the overall generation of HDV traffic and likely roads affected are:

- Policy 3: Aggregate supply;
- Policy 5: Substitute or Secondary Materials;
- Policy 4: Working of specific sites or preferred areas;
- Policy 6: Brick Clay;
- Policy 7: Chalk;
- Policy 10: Borrow Pits;
- Policy 11: Incidental Extraction; and,
- Policy 24: Restoration.

4.12 Although some minerals development may be permitted outside of the specific sites or preferred area, the location of sites has the largest influence over which roads will be used by HDV traffic. Three of the specific sites and preferred area are expected to have uncertain effects in relation to air pollution on their own:

- Specific Site 2) Hatfield Quarry - Furze Field;
- Specific Site 3) Hatfield Quarry – Land adjoining Coopers Green Lane; and
- Preferred Area 1: The Briggens Estate (Olives Farm).

4.13 In addition, Specific Site 1 (Hatfield Aerodrome) has the potential to generate significant HDV movements in combination with the other extraction sites on the same roads. Table 4.1 shows the roads on which HDV traffic from each site could increase. In combination air pollution effects from the MLP as a whole are therefore only likely in relation to Epping Forest SAC.

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19 Although Burnham Beeches and Chilterns Beechwoods SACs are within 200m of A-roads and motorways within Hertfordshire, the HDV traffic from the specific sites would be unlikely to use the roads that pass them. Therefore effects have been ruled out in relation to these European sites.
Table 4.1 Roads that the specific sites and preferred area contribute HDV traffic to

<table>
<thead>
<tr>
<th>Site</th>
<th>Roads and sites affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site 1) Hatfield Aerodrome</td>
<td>M25 Epping Forest SAC</td>
</tr>
<tr>
<td>Site 2) Hatfield Quarry - Furze Field</td>
<td>A414 Lee Valley SPA / Ramsar</td>
</tr>
<tr>
<td>Site 3) Hatfield Quarry – Land adjoining Coopers Green Lane</td>
<td>A10 Wormley Hoddesdonpark Woods SAC</td>
</tr>
<tr>
<td>Preferred Area 1: The Briggens Estate (Olives Farm)</td>
<td></td>
</tr>
</tbody>
</table>

4.14 Air pollution effects are therefore considered further in the Appropriate Assessment for Epping Forest SAC, Lee Valley SPA/Ramsar and Wormley Hoddesdonpark Woods SAC.

Water quantity and quality

4.15 Uncertain significant effects on the water quality and quantity of the Lee Valley Ramsar site and SPA have been identified in relation to potential mineral extraction or recycling sites which have not been allocated within the MLP but which may come forward within the plan period through requirements and provisions set out in the MLP, specifically in:

- Policy 3: Aggregate Supply
- Policy 5: Substitute or Secondary Materials;
- Policy 6: Brick Clay;
- Policy 7: Chalk; and,
- Policy 10: Borrow Pits.

4.16 Given that the location of the potential mineral extraction sites are unknown, significant effects cannot be ruled out at the screening stage. Effects on the water quality and quantity of the Lee Valley Ramsar site and SPA are therefore considered further in the Appropriate Assessment.

Screening effects unlikely

4.17 The following policies were screened out (i.e. considered unlikely to have significant effects) on the basis that they will not lead directly to development or because they include measures designed to protect or enhance the quality of the natural environment:

- Policy 1: Sustainable Development;
- Policy 2: Climate Change;
- Policy 8: Mineral Safeguarding;
- Policy 9: Bulk Handling and processing Sites;
- Policy 12: Green Belt;
- Policy 13: Cumulative Impact;
- Policy 14: Water Management;
- Policy 15: Historic Environment;
- Policy 16: Landscape and Green Infrastructure;
- Policy 17: Biodiversity;
• Policy 18: Protection and Enhancement of Amenity;
• Policy 19: Health and Wellbeing;
• Policy 20: Strategic Transport;
• Policy 21: Operational Transport; and
• Policy 22: Public Rights of Way; and
• Policy 23: Soils and Agricultural Land
• Policy 25: Aftercare and After-use.

4.18 On the basis of these screening conclusions the policies listed above do not need to be considered further during the Appropriate Assessment stage.

In-Combination effects

Multiple policies or sites in combination

4.19 The HRA screening has taken into account the potential for multiple policies or sites to have in-combination effects. The specific sites and preferred area together, along with the policies that permit development outside of the specific sites and preferred area have the potential for air pollution effects, in combination with each other. This is assessed further in the Appropriate Assessment (see Chapter 5).

Multiple effects on the same receptor

4.20 It has not been possible to screen out significant effects in relation to physical loss of habitat, noise, vibration and light pollution, air pollution and water quantity and quality. Therefore, the MLP could result in multiple (different) effects on the same receptor. This is assessed further in the Appropriate Assessment for each European site.

In-combination effects with other plans

4.21 Plans from the following authorities have been taken into account in the assessment of potential in-combination effects (see Appendix 2 for further information):

• Hertfordshire County Council;
• Essex County Council;
• Buckinghamshire County Council;
• Cambridgeshire County Council;
• Broxbourne Borough Council;
• Dacorum Borough Council;
• East Herts District Council;
• Hertsmere Borough Council;
• North Hertfordshire District Council;
• St Albans City and District Council;
• Stevenage Borough Council;
• Three Rivers District Council;
• Watford Borough Council;
• Welwyn Hatfield District Council;
• Central Bedfordshire Council;
• Luton Borough Council;
• North London Boroughs (including Enfield & Barnet); and
• West London Boroughs (including Harrow & Hillingdon).

4.22 Based on the findings of the HRAs of those plans, it is considered that in-combination effects can be ruled out for all but the following plans:

• Plans for which work is not sufficiently far progressed for the HRAs to have reached their conclusions:
  - Hertsmere Local Plan;
  - Three Rivers District Council New Local Plan; and
  - Buckinghamshire Local Transport Plan 4.

• Plans for which the HRA is not in the public domain:
  - Essex Transport Strategy;
  - Bedford, Central Bedfordshire & Luton Minerals and Waste Local Plan; and
  - Luton Local Transport Plan 3.

4.23 The HRA for the following plan identified potential significant effects, but they are not of a nature that would cause in-combination effects with the MLP:

• St Albans City and District Council Local Plan: the Appropriate Assessment Screening Report from 2008, which represents the most up to date assessment available online for the St Albans City Draft Local Plan identified potential effects on Chilterns Beechwoods SAC, but as no effects on this site have been identified in the MLP HRA, in-combination effects can be ruled out.

4.24 All plans that contribute traffic to the road network through planned population growth could have air pollution impacts in combination with the MLP, if there is general growth in traffic flows over the plan period.

4.25 This has been acknowledged by a Memorandum of Understanding (MoU) related to ‘Managing the impacts of growth within the West Essex/East Hertfordshire Housing Market Area on Epping Forest Special Area of Conservation.’ The MoU has been published and agreed between Hertfordshire County Council, Essex County Council, East Hertfordshire District Council, Epping Forest District Council, Harlow District Council, Uttlesford District Council, the City of London and Natural England. Together they agree to work together to facilitate the collection of data and evidence to identify the impacts of proposed development and growth under the Local Plans on the SAC, notably air quality and recreation impacts. The evidence will inform a Joint Strategy to address potential adverse impacts on the integrity of Epping Forest SAC. This is considered further in the Appropriate Assessment.
5 Appropriate Assessment Methodology and Findings

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 105 of the Habitats Regulations 2017 to make an ‘Appropriate Assessment’ of the implications of the plan for European sites, in view of their conservation objectives. EC Guidance20 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 Hertfordshire (+10km) where likely significant effects from the MLP were identified (or were not able to be ruled out) during the screening stage, i.e. in relation to the potential for effects from:

- Policy 3: Aggregate Supply;
- Policy 4: Working of Specific Sites or Preferred Areas:
  - Specific Site 2) Hatfield - Furze Field;
  - Specific Site 3) Hatfield Quarry - Land adjoining Coopers Green Lane;
  - Preferred Area 1: The Briggens Estate (Olives Farm); and
  - The above sites in combination with Specific Site 1) Hatfield Aerodrome.
- Policy 5: Substitute or Secondary Materials;
- Policy 6: Brick Clay;
- Policy 7: Chalk;
- Policy 10: Borrow Pits;
- Policy 11: Incidental Extraction; and,
- Policy 24: Restoration.

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 MLP would adversely affect the integrity of a European site. In order to try to reach a conclusion, consideration has been given to whether the predicted impacts of the proposals (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; or
• Result in the loss of key features.

5.5 The conservation objectives for each European site (listed in Appendix 1) 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 the condition of the 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 proposals in the MLP (i.e. those listed in Chapter 4 and shaded orange 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.

Potential avoidance and mitigation provided by the MLP

5.7 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. Several of the policies in the MLP include reference to measures which can be expected to provide mitigation for otherwise potentially significant effects. In accordance with the recent CJEU ‘People over Wind’ ruling, these were not taken into account in assessing ‘Likely Significant Effects’ at the screening stage. However, they have been taken into account as part of the Appropriate Assessment conclusions provided below.

5.8 The policies which are expected to provide appropriate mitigation are:
• Policy 13: Cumulative Impact requires proposals for minerals extraction and associated development to take account of and mitigate the potential cumulative impact of multiple developments on the natural environment.
• Policy 14: Water Management requires proposals to demonstrate that they will have no unacceptable adverse effects on water quality or quantity, including the impact on nature conservation.
• Policy 17: Biodiversity requires, among other things, that proposals have no irreversible or significant adverse impact on International and National statutory nature conservation sites. The policy also requires proposals to deliver measurable net gain in biodiversity, including new and improved green infrastructure networks.
• Policy 18: Protection and Enhancement of Environment and Amenity states that proposals will be permitted only where they can demonstrate that there will be no adverse effects on the natural environment, that mitigation has been provided where needed, and enhancement where possible.
• Policy 20: Strategic Transport encourages developments to use sustainable transport and minimise transport movements where possible.
• Policy 21: Operational Transport requires that traffic movements do not have an unacceptable impact on the natural environment. Transport Assessments must also consider the proximity of sites to designated sites. Mitigation to minimise the impacts of traffic must be provided.

• Policy 24: Restoration provides some mitigation, where inert material is used to restore the site, such that this will only be permitted where the use of inert material does not have unacceptable adverse impacts on the environment, local amenity or transport movements.

• Policy 25: Aftercare and After-Use provides additional mitigation relating to the restoration of sites.

Appropriate Assessment of effects generated by the physical loss of habitat

5.9 The screening stage could not rule out the potential for uncertain significant effects generated by MLP policies 3, 4, 5, 6, 7 and 10 creating the potential for the physical loss of habitat either within European sites or on functionally linked off-site habitat used by qualifying species. Policy 3 sets a minimum requirement for mineral extraction within the County, presenting the possibility that if specific allocated sites do not come forward other extraction sites may need to be permitted. Furthermore, policies 5, 6, 7 and 10 encourage mineral extraction and recycling across the County, setting the criteria that are required to be met in order for non-allocated mineral extraction and recycling sites to be permitted within the plan period, if required.

5.10 Given that the location of the potential mineral extraction and recycling sites are unknown until specific development proposals come forward, significant effects could not be ruled out at the screening stage for any of the European sites within Hertfordshire. Preferred Area 1: The Briggens Estate (Olives Farm) allocated in Policy 4 (Working of specific sites or preferred area) is located 0.8km to the north east of the Lee Valley SPA, presenting the possibility that the qualifying SPA wetland birds may use functionally linked habitat within the allocation. Therefore, a review of the habitat within the Preferred Area and the bird species that use the SPA has been undertaken to establish the likelihood that loss of habitat within the Preferred Area would have a significant effect on the bird species that use the Lee Valley SPA. The qualifying species of the Lee Valley SPA are dependent upon wetland habitat. It is noted that shoveler utilise flooded pastures, however they prefer permanent water sources. Given that the majority of the Preferred Area is comprised of arable fields located within areas at low risk from flooding, the suitability of the area for supporting shoveler or other qualifying bird species is considered to be negligible. Furthermore, mitigating factors and policies which contribute to the avoidance and/or minimisation of effects on European sites can be considered in the Appropriate Assessment.

5.11 Policies 13 (Cumulative Impact), 17 (Biodiversity), 20 (Strategic Transport), 21 (Operational Transport), 24 (Restoration) and 25 (Aftercare and After-Use) work in combination with the criteria set out within policies 3, 5, 6, 7 and 10 to avoid unacceptable effects, and provide sufficient safeguard that loss of habitat within European sites, or loss of functionally linked off-site habitat would not occur within minerals development proposals coming forward outside of the allocations within the MLP.

5.12 In light of the mitigation available it is therefore concluded that adverse effects on integrity can be ruled out in relation to the potential for the MLP to result in the physical loss of habitat within European sites or within functionally linked off-site habitats used by the qualifying species.

Appropriate Assessment of effects generated by noise, vibration and light pollution

5.13 The screening stage concluded uncertainty regarding likely significant effects generated by MLP policies 3, 5, 6, 7, 10 and 24 as a result of noise vibration and light pollution. Policy 3 sets a minimum requirement for mineral extraction within the County, presenting the possibility that if specific allocated sites do not come forward other extraction sites may need to be permitted. Furthermore, policies 5, 6, 7, 10 and 24 encourage mineral extraction and recycling across the
County, setting the criteria that are required to be met in order for non-allocated mineral extraction and recycling sites to be permitted within the plan period, if required, including their restoration.

5.14 Given that the location of the potential mineral extraction and recycling sites are unknown until specific development proposals come forward, significant effects could not be ruled out at the screening stage for the Lee Valley SPA/Ramsar and Chiltern Beechwoods SAC. However, mitigating factors and policies which contribute to the avoidance and/or minimisation of effects on European sites can be considered in the Appropriate Assessment.

5.15 Policies 13 (Cumulative Impact), 17 (Biodiversity), 20 (Strategic Transport), 21 (Operational Transport), 24 (Restoration) and 25 (Aftercare and After-Use) work in combination with the criteria set out within policies 3, 5, 6, 7, 10 and 24 to avoid unacceptable effects, and provide sufficient safeguard that noise, vibration and light pollution will not significantly affect European sites.

5.16 In light of the mitigation available it is therefore concluded that adverse effects on integrity can be ruled out in relation to the potential for the MLP to result in noise, vibration and light pollution effects on European sites, either alone or in-combination.

Appropriate Assessment of effects on water quantity and quality

5.17 The screening stage could not rule out the potential for uncertain significant effects generated by MLP policies 3, 5, 6, 7 and 10 on the water quality and quantity of the Lee Valley Ramsar site and SPA, due to minerals extraction techniques which could cause changes in water quantity within the SPA and/or water pollution through increased sediments entering the SPA. Policy 3 sets a minimum requirement for mineral extraction within the County, presenting the possibility that if specific allocated sites do not come forward other extraction sites may need to be permitted. Furthermore, policies 5, 6, 7 and 10 encourage mineral extraction and recycling across the County, setting the criteria that are required to be met in order for non-allocated mineral extraction and recycling sites to be permitted within the plan period, if required.

5.18 Given that the location of the potential mineral extraction and recycling sites are unknown, significant effects could not be ruled out at the screening stage. However, mitigating factors and policies which contribute to the avoidance and/or minimisation of effects on European sites can be considered in the Appropriate Assessment.

5.19 Policies 13 (Cumulative Impact), 14 (Water Management), 17 (Biodiversity), 24 (Restoration) and 25 (Aftercare and After-Use) work in combination with the criteria set out within policies 3, 5, 6, 7 and 10 to avoid unacceptable effects on water quality and quantity, and provide sufficient safeguard that changes in water quality or quantity will not adversely affect the Lee Valley SPA and Ramsar site.

5.20 In light of the mitigation available it is therefore concluded that adverse effects on integrity can be ruled out in relation to the potential for the MLP to result in reduced water quality and quantity on European sites, either alone or in-combination.

Appropriate Assessment of air pollution effects

5.21 As described in Chapter 3, based on the Highways Agency Design for Road and Bridges Manual (DMRB)\(^{21}\), it is assumed that air pollution from roads is likely to be significant only up to 200 metres from the road itself. The DMRB also sets out criteria by which impacts should be screened in or out, on the basis of increases in traffic flow (AADT), vehicle speeds or road alignment.

5.22 Air pollution-related impacts were able to be ruled out for European sites in and around Hertfordshire that do not lie within 200m of the strategic road network (Eversden and Wimpole

\(^{21}\) Highways Agency Design for Road and Bridges Manual Volume 11, Section 3, Part 1
Woods SAC) or because HDV traffic from the specific allocated sites would be unlikely to use the roads that pass them (Burnham Beeches and Chilterns Beechwoods SACs).

Potential air pollution effects generated by unallocated minerals development

5.23 The screening stage could not rule out the potential for uncertain significant air pollution effects generated by MLP policies 3, 4, 5, 6, 7, 10, 11 and 24. Policy 3 sets a minimum requirement for mineral extraction within the County, presenting the possibility that if specific allocated sites do not come forward other extraction sites may need to be permitted. Furthermore, policies 5, 6, 7, 10 and 11 encourage mineral extraction and recycling across the County, setting the criteria that are required to be met in order for non-allocated mineral extraction and recycling sites to be permitted within the plan period, if required.

5.24 Without knowing whether and where additional non-allocated mineral extraction and recycling sites will be developed within the County, significant air pollution effects generated by unallocated development effects could not be ruled out at the screening stage, nor can they be tied to specific European sites. It is unlikely that in isolation such non-allocated developments would be of a significant enough scale to generate more than the 200 HDV movements noted in the DMRB to be of significance. Furthermore, mitigating factors and policies which contribute to the avoidance and/or minimisation of air quality effects on European sites should also be considered in the Appropriate Assessment. These include policies 13 (Cumulative Impact), 17 (Biodiversity), 20 (Strategic Transport), 21 (Operational Transport), 24 (Restoration) and 25 (Aftercare and After-Use) in combination with the criteria set out within policies 3, 5, 6, 7, 10 and 24.

5.25 Therefore, overall, adverse air pollution effects on integrity of European sites generated by unallocated minerals development both in isolation and in-combination can be ruled out until such time as detailed proposals are identified. Such proposals will then be subject to project-level HRA screening.

Potential air pollution effects generated by minerals development allocated in the MLP

5.26 The following European sites were identified as having the potential to be affected by air pollution as a result of specific proposals in the MLP, due to their proximity to strategic roads and the likelihood that HDV traffic from the specific sites / preferred area would pass them:

- Lee Valley SPA / Ramsar (within 200m of the A414);
- Epping Forest SAC (within 200m of the M25); and
- Wormley Hoddesdonpark Woods SAC (within 200m of the A10).

5.27 Based on the assumptions set out in Table 3.3, two of the specific sites (Furze Field and Coopers Green Lane) and the preferred area (Preferred Area 1: The Briggens Estate (Olives Farm)) are likely to generate HDV traffic of greater than 200 AADT on the M25, where it passes Epping Forest SAC, due to their high extraction rates. The combination of all of the sites could therefore have an air pollution effect on Epping Forest SAC.

5.28 The preferred area (Preferred Area 1: The Briggens Estate (Olives Farm)) also has the potential to increase HDV AADT by more than 200 on the A414 or A10 where they pass Lee Valley SPA/Ramsar and Wormley Hoddesdonpark Woods SAC, respectively.

5.29 Nitrogen dioxides (NOx) are considered to be the key pollutants from traffic emissions. Deposition of nitrogen compounds may lead to both soil and freshwater acidification, and NOx can cause eutrophication of soils and water.

5.30 Air pollution from traffic is most likely to affect European sites that have plant, soil and water habitats amongst their qualifying features but some qualifying animal species may also be indirectly affected by deterioration in habitat. Therefore, where European sites do not include species that are vulnerable to these impacts amongst their qualifying features, air pollution-related effects can be ruled out. During the Appropriate Assessment, consideration has been given to the qualifying features of the above three European sites and whether they are vulnerable to increased air pollution. APIS data has also been used to identify where levels of pollutants are already exceeding critical loads at the relevant European sites.
5.31 Where the qualifying features of a site are vulnerable to increased air pollution, consideration needs to be given to the potential for increases in traffic volume and speed on the relevant roads to be significant, and the impact that the change in vehicle emissions will have on the site’s qualifying features. Air pollution levels drop off rapidly with distance away from a road (see example in Figure 5.1); therefore if significant effects occur only at the site’s edge, they may not affect sufficient area of sensitive habitat to have an adverse effect on the site’s integrity.

Figure 5.1 Traffic contribution to pollutant concentration at different distances from the road centre

5.32 Due to a recent High Court judgement, it can no longer be assumed that non-HDV traffic growth below 1,000 AADT is negligible and will not give rise to significant air quality effects in combination with other plans or consented projects. Instead, where the road traffic effects of other plans or projects are known or can be reasonably estimated, then these should be included in road traffic modelling by the local authority whose local plan or project is being assessed.

5.33 Hertfordshire County Council’s Highways COMET model provides daily and am/pm peak levels of vehicle movements and average level of vehicle movements on highways across the county from a ‘base’ year (2014) and a future year (2031), enabling the Council to predict future traffic conditions over the plan period and inform preparation and statutory assessment of the Hertfordshire MLP. COMET model data has been generated for AADT and HDVs. Table 5.1 sets out AADT and HDV Figures for appropriate sections of the M25, A414 and A10

Table 5.1: Hertfordshire County Council COMET model outputs – forecast traffic flows in 2014 and 2031

<table>
<thead>
<tr>
<th>AADT Flows (in vehicles)</th>
<th>All Vehicles</th>
<th>HDVs</th>
<th>All Vehicles</th>
<th>HDVs</th>
</tr>
</thead>
<tbody>
<tr>
<td>M25 Epping Forest</td>
<td>86,754</td>
<td>13,178</td>
<td>82,654</td>
<td>14,677</td>
</tr>
</tbody>
</table>

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22 Figure C1 from Design Manual for Roads and Bridges (May 2007) Volume 11 Environmental Assessment, Section 3 Environmental Assessment Techniques. Part 1 HA207/7 Air Quality

<table>
<thead>
<tr>
<th>AADT Flows (in vehicles)</th>
<th>All Vehicles</th>
<th>HDVs</th>
<th>All Vehicles</th>
<th>HDVs</th>
</tr>
</thead>
<tbody>
<tr>
<td>M25 Epping Forest</td>
<td>64,585</td>
<td>14,154</td>
<td>90,744</td>
<td>20,867</td>
</tr>
<tr>
<td>A414 Rye Meads</td>
<td>14,525</td>
<td>840</td>
<td>12,088</td>
<td>1,476</td>
</tr>
<tr>
<td>A414 Rye Meads</td>
<td>13,817</td>
<td>756</td>
<td>14,478</td>
<td>1,115</td>
</tr>
<tr>
<td>A10 Hoddesdon Park Wood</td>
<td>25,183</td>
<td>1,066</td>
<td>33,103</td>
<td>1,522</td>
</tr>
<tr>
<td>(south of Dinant Link Road)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A10 Hoddesdon Park Wood</td>
<td>24,562</td>
<td>943</td>
<td>34,541</td>
<td>1,281</td>
</tr>
<tr>
<td>(south of Dinant Link Road)</td>
<td></td>
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</tr>
</tbody>
</table>

5.34 In accordance with the recent High Court judgement\(^{24}\) this forecast incorporates the cumulative impact of proposed Local Plan allocations for housing and employment sites across Hertfordshire and West Essex, specifically allocations in well advanced (i.e. at least Proposed Submission consultation versions) and adopted Local Plans as of late 2017. In addition, the model factors in planned highway infrastructure projects designed to mitigate traffic flows, such as a Hertford Southern bypass (tying into the A10 / Amwell junction), A10 junction improvement schemes and the additional Stort crossings associated with the large-scale housing allocation in the Gilston area, which will attract additional traffic onto the network.

5.35 In reality, the HDV movements generated by minerals development sites are likely to be scattered across several routes rather than the specific roads assessed in the Appropriate Assessment. Furthermore, the most significant increases in traffic flows modelled through COMET up to 2031 are associated with housing allocations, some of which are planned for development after mineral extraction has been undertaken, eliminating the potential for in-combination effects associated with some of the modelled movements, as is the case for Specific Site 3: Hatfield Quarry – Land adjoining Coopers Green Lane.

5.36 An Appropriate Assessment of air pollution effects generated by the MLP’s minerals allocations on the Lee Valley SPA / Ramsar, Epping Forest SAC and Wormley Hoddesdonpark Woods SAC has been carried out below using data from HCC’s observed count data and the COMET Model to record baseline and future traffic flows.

**Lee Valley SPA / Ramsar**

5.37 The Site Improvement Plan for the Lee Valley SPA/Ramsar\(^{25}\) identifies atmospheric nitrogen deposition as a threat to Bittern, one of the site’s qualifying features, although data from APIS\(^{26}\) indicates that nitrogen deposition at the site is currently just within critical loads.

5.38 Hertfordshire County Council’s observed count traffic data/COMET model (2018) identifies that the A414 contains the greatest numbers of HGV movements during the day in between 10am and 4pm. During this period the average combined east and westbound hourly HGV traffic flows are modelled for 2014 at 128 HGVs an hour and for 2031 at 204 HGVs, which are below or just over the 200 HDV threshold in the DMRB. However, the preferred area (Preferred Area 1: The Briggens Estate (Olives Farm)) is located near Stanstead Abbots, <1km from Lee Valley SPA/Ramsar. HDV traffic from the site is likely to travel on the A414, with some travelling westbound to the A10. The majority of this traffic is therefore likely to pass within ten metres of the Lee Valley SPA/Ramsar.

5.39 A review of the SPA and Ramsar constituent habitats has revealed that areas located within 200m of main roads do not comprise the reedbed, fen or similar aquatic marginal vegetation suitable for supporting bittern. Instead these areas comprise open water reservoirs or grassland habitat considered entirely unsuitable for supporting overwintering bittern both currently and in the

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\(^{25}\) Site Improvement Plan for Lee Valley SPA/Ramsar: http://publications.naturalengland.org.uk/publication/5864999960444928

\(^{26}\) Air pollution data for Lee Valley SPA/Ramsar: http://www.apis.ac.uk/src/select-a-feature?site=UK90121111&SiteType=SPA&submit=Next
future. The effect of nitrogen deposition on these habitat types would not be expected to result in any notable change in their suitability for supporting feeding gadwall or shoveler (SPA and Ramsar), or whorled water-milfoil *Myriophyllum verticillatum* and the water-boatman *Micronecta minutissima* (Ramsar only). Habitat types suitable for supporting bittern, including strongholds at the Rye Meads SSSI component site, are located beyond 300m from the A414 and therefore these habitats would not be expected to be affected by the effects of nitrogen deposition as a result of the MLP.

5.40 In light of the above, the Hertfordshire MLP will not result in adverse effects on the Lee Valley SPA or Ramsar as a result of changes in air quality, either alone or in-combination with other plans and projects.

**Epping Forest SAC**

5.41 Hertfordshire County Council's observed count traffic data/COMET model (2018) identifies that the M25 contains the greatest numbers of HGV movements during the day in between 10am and 4pm. During this period the average combined east and westbound hourly HGV traffic flows are modelled for 2014 at 1,850 HGVs an hour and for 2031 at 2,579 HGVs. All of the specific sites and the preferred area identified in Policy 4 of the MLP have the potential to contribute HDV traffic to the M25, where it passes Epping Forest SAC, although only a small portion of the traffic from each of the sites is likely to end up on that section of the M25.

5.42 The Site Improvement Plan for Epping Forest SAC identifies atmospheric nitrogen deposition as a pressure on the site’s qualifying wet heathland with cross-leaved heath, European dry heaths, and beech forests on acid soils. APIS data shows that nitrogen deposition at the site currently far exceeds critical loads, and a Defra study reports that local traffic is the most significant source of nitrogen.

5.43 This has been acknowledged by a Memorandum of Understanding (MoU) related to ‘Managing the impacts of growth within the West Essex/East Hertfordshire Housing Market Area on Epping Forest Special Area of Conservation.’ The MoU has been published and agreed between Hertfordshire County Council, Essex County Council, East Hertfordshire District Council, Epping Forest District Council, Harlow District Council, Uttlesford District Council, the City of London and Natural England. Together they agree to work together to facilitate the collection of data and evidence to identify the impacts of proposed development and growth under the Local Plans on the SAC, notably air quality and recreation impacts. The evidence will inform a Joint Strategy to address both the requirement to avoid, or effectively mitigate, adverse impacts on the integrity of the SAC from Local Plan-led development and the requirement to prevent deterioration of the SAC features. If necessary notable measures will include sustainable mitigation strategies for air quality, traffic controls, highways and recreation and Local Plans will be required to include appropriate monitoring policies.

5.44 A detailed assessment is currently underway on the ecological impacts of current and future air pollution and recreation pressures. Once the assessment is complete and a Joint Strategy is in place, it is not considered that the Hertfordshire MLP will result in adverse effects on the Epping Forest SAC as a result of changes in air quality, either alone or in-combination with other plans and projects.

**Wormley Hoddesdonpark Woods SAC**

5.45 The Site Improvement Plan for Wormley Hoddesdonpark Woods SAC identifies atmospheric nitrogen deposition as a threat to its qualifying oak-hornbeam forests. APIS data indicates that the nitrogen deposition for this habitat currently far exceeds critical loads.

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27 Site Improvement Plan for Epping Forest SAC: http://publications.naturalengland.org.uk/publication/6663446854631424
28 Air pollution data for Epping Forest SAC: http://www.apis.ac.uk/src/select-a-feature?site=UK0012720&SiteType=SAC&submit=Next
29 Nitrogen deposition impacts on protected areas in the UK: http://jncc.defra.gov.uk/pdf/4Page_booklet_nitrogenDep_ForWeb.pdf
30 Site Improvement Plan for Wormley Hoddesdonpark Woods SAC: http://publications.naturalengland.org.uk/publication/6314181103976448
31 Air pollution data for Wormley Hoddesdonpark Woods SAC: http://www.apis.ac.uk/src/select-a-feature?site=UK0013696&SiteType=SAC&submit=Next
5.46 As with the A414, only The Briggens Estate is likely to contribute HDV traffic to the A10, where it passes Wormley Hoddesdonpark Woods SAC.

5.47 Hertfordshire County Council’s observed count traffic data/COMET model (2018) identifies that the A10 contains the greatest numbers of HGV movements during the day in between 10am and 4pm. During this period the average combined north and southbound hourly HGV traffic flows are counted at 248 an hour for the baseline and modelled for 2031 at 210 HGVs. However, it should be noted that the observed count data for the baseline year is 86 HGVs lower than the modelled baseline, which may indicate that the modelled figure for 2031 for the A10 could be an underestimate and that, at its busiest, the A10 may contain closer to 300 HGV movements per hour. However, Wormley Hoddesdonpark Woods SAC lies south of Hertford and therefore will not be as affected by HDV traffic from The Briggens Estate to the extent that Lee Valley SPA/Ramsar is likely to, as some of the traffic from the site will head north on the A10, or along the A414.

5.48 In addition, the narrowest gap between the SAC and the A10 measures at 170m, with only 0.021% of the total area of the SAC being within the 200m buffer. At this distance, and given that the western edge of the A10 nearest the SAC is bordered by a thick band of scrub and woodland which would likely provide an additional buffer to the effects of nitrogen deposition, the effect of air quality changes through nitrogen deposition is expected to be negligible.

5.49 Therefore, overall, air quality changes as a result of traffic along the A10 would not be expected to result in discernible changes to the composition or quality of the SAC at discernible levels and certainly not to a point where the integrity of the qualifying features are compromised.

5.50 Finally, mitigating factors and policies which contribute to the avoidance and/or minimisation of air quality effects from the specific site allocations and the preferred area on European sites should also be considered in the Appropriate Assessment. Again, these include policies 13 (Cumulative Impact), 17 (Biodiversity), 20 (Strategic Transport), 21 (Operational Transport), 24 (Restoration) and 25 (Aftercare and After-Use) in combination with the criteria set out within policies 3, 5, 6, 7, 10 and 24.

5.51 Therefore, overall, adverse air pollution effects on integrity of European sites generated by the MLP’s allocations set out in Policy 4 can be ruled out.
6 Conclusions

6.1 This HRA has considered the effects of the Proposed Submission MLP policies and sites on European sites in and around Hertfordshire, alone and in combination with other plans.

6.2 It was possible to rule out recreation impacts in the initial screening, as the type of development proposed by the MLP will not result in a significant increase in recreation. The following impacts were considered in relation to all policies and sites: physical loss of habitat (on-site and off-site); noise, vibration and light pollution; air pollution; and changes to water quantity and quality.

6.3 It was not possible to screen out physical loss of habitat (on-site and off-site); noise, vibration and light pollution; air pollution; and changes to water quantity and quality impacts, therefore an Appropriate Assessment was carried out to assess the effect of the following on European sites:
   - Policy 3: Aggregate Supply;
   - Policy 4: Working of Specific Sites or Preferred Areas;
     - Specific Site 2) Hatfield - Furze Field;
     - Specific Site 3) Hatfield Quarry – Land adjoining Coopers Green Lane;
     - Preferred Area 1: The Briggens Estate (Olives Farm); and
     - The above sites in combination with Specific Site 1) Hatfield Aerodrome.
   - Policy 5: Substitute or Secondary Materials;
   - Policy 6: Brick Clay;
   - Policy 7: Chalk;
   - Policy 10: Borrow Pits;
   - Policy 11: Incidental Extraction; and,
   - Policy 24: Restoration.

6.4 The Appropriate Assessment concluded that the MLP will not result in adverse effects as a result of physical loss of habitat (on-site and off-site), noise, vibration and light pollution and changes to water quantity and quality in relation to minerals development proposals that may come forward on non-allocated sites, or due to development of the allocations within the MLP. The allocations within the MLP do not include habitat likely to be functionally linked to any of the European sites. In addition, for development coming forward on either the allocations or non-allocated sites, it is considered that the mitigation measures set out in the MLP, most notably policies 13 (Cumulative Impact), 17 (Biodiversity), 20 (Strategic Transport), 21 (Operational Transport), 24 (Restoration) and 25 (Aftercare and After-Use) work in combination with the criteria set out within policies 3, 4, 5, 6, 7, 10 and 24 to avoid physical loss of habitat (on-site and off-site) and avoid unacceptable effects generated by noise, vibration and light pollution and changes in water quality and quantity.

6.5 In relation to air pollution effects the Appropriate Assessment concluded that the MLP will not result in adverse effects on the integrity of the European sites within 200m of roads that may be used by HDV traffic from the MLP allocations for the following reasons:
   - Lee Valley SPA / Ramsar, either alone or in-combination, because the constituent habitat types located within 200m of the A414 are of low importance for the qualifying features, and in particular do not comprise habitat types suitable for supporting bittern either currently or in the future.
   - Wormley Hoddesdonpark Woods SAC, either alone or in-combination, because less than 0.025% of the total area of the SAC is within the 200m buffer of the A10. Furthermore, the
A10 is bordered by a thick band of scrub and woodland which provides an additional buffer to the effects of nitrogen deposition.

- Epping Forest SAC, either alone or in-combination, because work is under way between Hertfordshire County Council, Essex County Council, East Hertfordshire District Council, Epping Forest District Council, Harlow District Council, Uttlesford District Council, the City of London and Natural England to monitor and manage the effects of air pollution on the Epping Forest SAC through a Memorandum of Understanding (MoU). This work will inform a Joint Strategy to avoid, or effectively mitigate, adverse impacts on the integrity of the SAC from Local Plan-led development and the requirement to prevent deterioration of the SAC features. Measures will include sustainable mitigation strategies for air quality, traffic controls, highways and recreation.

Next Steps

6.6 This HRA Report will be available for consultation alongside the Proposed Submission MLP.

6.7 After the public consultation, consultation comments on the Proposed Submission MLP will be reviewed before submission of the Proposed Submission MLP to the Secretary of State for Examination. Necessary changes to the Proposed Submission MLP will be organised in a schedule of Minor and Main Modifications for consideration by an Independent Examiner. In addition, the Independent Examiner may be invited to make recommendations on any further Minor or Main Modifications if required. Depending on the nature and scale of Main Modifications proposed, an HRA Addendum may need to be prepared, and would be made available alongside any consultation on the Main Modifications.
Appendix 1
Attributes of European Sites within Hertfordshire (+10km)
<table>
<thead>
<tr>
<th>Site name</th>
<th>Area (ha)</th>
<th>Location</th>
<th>Qualifying features</th>
<th>Key vulnerabilities and environmental conditions to support site integrity</th>
<th>Natural England Conservation Objectives</th>
</tr>
</thead>
</table>
| 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. | *Asperulo-Fagetum* beech forests
Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*)
(important orchid sites)
Stag beetle *Lucanus cervus* | 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 **invasive species**, like the grey squirrels. To encourage regeneration and conservation of beech woodlands, restoration management is needed to diversify age and physical structure. Current and future threats of **climate change** are also likely to impact upon woodland regeneration and species composition. 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. | 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:
- 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
- The distribution of qualifying species within the site |
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<tr>
<th>Site name</th>
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<tr>
<td>Wormley Hoddesdonpark Woods SAC</td>
<td>335.53</td>
<td>Fragmented site lying to the south of the county.</td>
<td>Sub-Atlantic and medio-European oak or oak-hornbeam forests of the <em>Carpinion betuli</em></td>
<td>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 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 and over 95% is ancient woodland. Natural England’s Site Improvement Plan for the SPA identifies the main threats facing</td>
<td>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;</td>
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<td>the site to be the risk of atmospheric nitrogen deposition and resultant reduction of overall lichen diversity; lack of monitoring which can cause changes in species distribution; high recreational pressure; and tree diseases such as Box blight present a real threat.</td>
<td>- The extent and distribution of qualifying natural habitats</td>
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<td>- The structure and function (including typical species) of qualifying natural habitats</td>
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<td>- The supporting processes on which qualifying natural habitats rely</td>
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| 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. | *Botaurus stellaris* Great bittern (non-breeding)  
*Anas clypeata* Northern shoveler (Non-breeding)  
*Anas strepera* Gadwall (Non-breeding) | 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 | 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;  
- 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  
- The distribution of the qualifying features within the site |
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| 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. | Whorled water-milfoil *Myriophyllum verticillatum*  
*Micronecta minutissima* (a water-boatman)  
Northern Shoveler                                                                 | Environment Agency review of consents. The threat from potential **development pressures** in this urbanised and urban-fringe area is largely covered by the relevant provisions of the Conservation Regulations (1994).  
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 *azolla* and/or invasive aquatic blanket; and the risk of atmospheric **nitrogen deposition** which exceeds site relevant critical loads. | No conservation objectives published for the Ramsar site. |
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<tr>
<td>Epping Forest SAC</td>
<td>1,604.95</td>
<td>Fragmented site beyond the county boundary to the south within Great London and Essex.</td>
<td>Atlantic acidophilous beech forests with <em>Ilex</em> and sometimes also <em>Taxus</em> in the shrublayer (<em>Quercion robori-petraeae</em> or <em>Ilici-Fagenion</em>); Beech forests on acid soils Northern Atlantic wet heaths with <em>Erica tetralix</em>; Wet heathland</td>
<td>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, 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; • The extent and distribution of qualifying natural habitats and habitats of qualifying species • The structure and function (including typical species) of</td>
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<tr>
<td><strong>Burnham Beeches SAC</strong></td>
<td>382.76</td>
<td>Outside of the county boundary to the south west within Buckinghamshire.</td>
<td>with cross-leaved heath&lt;br&gt;European dry heaths&lt;br&gt;Stag beetle <em>Lucanus cervus</em></td>
<td>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 was completed and consented in 1998. The site is subject to the provisions of the Epping Forest Act of 1878. 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; high recreational pressure; tree diseases such as <em>Phytophthora</em> present a real threat to the Beech population; and the invasive species of the oak processional moth and <em>Rhododendron</em>.</td>
<td>ensuring 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 ensuring the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring the site as appropriate.</td>
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*Hertfordshire Minerals Local Plan*
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<th>Site name</th>
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<td><em>petraeae or Ilici-Fagenion</em>; Beech forests on acid soils</td>
<td>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. Measures are in place to reduce <strong>possible damaging influences from adjacent mineral workings, such as dust and hydrological changes.</strong> 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. 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; deer are causing adverse impacts on tree regeneration and ground maintaining or restoring;</td>
<td>• The extent and distribution of qualifying natural habitats • The structure and function (including typical species) of qualifying natural habitats • The supporting processes on which qualifying natural habitats rely</td>
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<td>Site name</td>
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<td>Eversden and Wimpole Woods SAC</td>
<td>66.48</td>
<td>Outside of the County boundary to the north within Cambridgeshire.</td>
<td>Barbastelle bat <em>Barbastella barbastellus</em></td>
<td>Wimpole Woods is owned and managed by the National Trust and their management is aimed at maintaining, and where possible, enhancing the 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. 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 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;  • 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  • The distribution of qualifying species within the site</td>
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<td>maintain, enhance and increase the supporting habitat.</td>
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Appendix 2
Plans, Policies and Programmes with the Potential for In-Combination Effects
Hertfordshire Plans and Strategies


Status

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) 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, in-combination effects with the Hertfordshire MLP can be ruled out.

Hertfordshire’s Local Transport Plan

Status
Adopted in May 2018.

Development quantum
Corridors that are the focus for improved connectivity within the county:

- Corridor 1: Aylesbury – Watford - London

Corridor 2: London – Watford – Luton – Milton Keynes
Corridor 3: London – Stevenage – Peterborough
Corridor 4: London – Harlow – Stansted – Cambridge
Corridor 5: Hemel & Watford – St. Albans – Harlow
Corridor 6: Luton – Stevenage
Corridor 7: Stevenage – Cambridge
Corridor 8: Stevenage – Stanstead

Major Schemes:
- Cycle Infrastructure Improvement Towns
- Sustainable Travel Towns
- Passenger Transport Hub/Coachway to Investigate: M1 J8 and A1(M) J8
- A414 Bus Rapid Transit
- Hertford Bypass
- New M1 Junction 8a (additional junction)
- New Rail Stations to Investigate

Strategies include: Active Travel Strategy; Bus Strategy; Intalink Strategy; Intelligent Transport Systems (ITS) Strategy; Inter-urban Route Strategy; Rail Strategy; Rights of Way Improvement Plan; Road Safety Strategy; Rural Transport Strategy; and Speed Management Strategy

HRA findings
The HRA Report (2017) found that significant effects are unlikely in relation to 20 policies and 25 major schemes. The assessment identified the following likely significant effects as potentially affecting Wormley Hoddesdonpark Woods SAC and Lee Valley SPA/Ramsar: air pollution, disturbance and physical loss of habitat. After assessing these effects, the assessment concluded that the LTP4 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, there is the potential for adverse effects to on the Lee Valley SPA/Ramsar due to proposed rail improvements and potential A414 Rapid Bus Transit extension. Therefore, in-combination effects with the new Hertfordshire MLP can be ruled out.

Hertfordshire District and Borough Plans
Broxbourne Borough Council
The Broxbourne Local Plan 2018-2033: A Framework For The Future Development Of The Borough - Regulation 19 Pre-Submission Consultation Document

Status
The Regulation 19 Pre-Submission Consultation closed on 21 December 2017. The Broxbourne Local Plan 2018-2033 was submitted to the Secretary of State for independent examination on 15th March 2018. This is replacing the Borough of Broxbourne Local Plan Second Review 2001-2011 which was adopted in December 2005. This was originally due to be replaced by the Core Strategy, 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 8,098 homes in the plan period at strategic development locations:

- Brookfield Garden Village - 1,250 homes
- Cheshunt Lakeside - mixed-use urban village including 1,750 homes as well as businesses and a primary school
- Rosedale Park - 790 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 between 6,000 and 7,000 net additional jobs, focusing on three key employment locations:

- Brookfield – 3,000 jobs
- Park Plaza West – 4,500 new office jobs
- Park Plaza North – 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

**HRA findings**

The 2018 HRA Appropriate Assessment for the Broxbourne Emerging Local Plan considered each European Site and the following likely significant effects closely: public access associated disturbances likely significant effect at Lee Valley SPA caused by the Local Plan alone; air pollution and public access likely significant effects at Epping Forest SAC caused by the Local Plan in-combination; and public access disturbances likely significant effects at Wormley Hoddesdonpark Woods SAC caused by the Local Plan in-combination. The Assessment concludes that, based on the Council’s continued adoption and progress of the relevant monitoring and mitigation strategies, all potential likely significant effects on European sites caused by the Local Plan alone or in-combination can be objectively ruled out at this stage.

The HRA for the 2010 Core Strategy that was not adopted found that while there were numerous policies contributing towards reducing the adverse effects upon European sites, it was considered that these measures needed to be strengthened to enable the Council to conclude that no adverse effect on European sites will result from the housing, retail and employment development to be delivered under the Core Strategy.

This HRA however was based on a different development quantum:

- Provision for 3,840 dwellings between 2010-2026, focussing on suitable urban sites, Greater Brookfield and small edge-of-urban sites and/or large green belt sites.
- Retain and improve key employment sites at Hoddesdon Business Park and Merck Sharp Dohme in Hoddesdon, Delamare Road in Cheshunt, Lea Road / Britannia Road in Waltham Cross and Park Plaza South, protect smaller employment sites, and appraise new employment land opportunities in the Southern A10 Corridor Area of Search in a Site Allocation DPD to support a likely 3,700 addition jobs from 2010-2026.

**Therefore it is not yet possible to reach a conclusion regarding the potential for in-combination effects with the new Hertfordshire MLP.**

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41 Dacorum Core Strategy: http://www.dacorum.gov.uk/home/planning-development/planning-strategic-planning/local-planning-framework/core-strategy
Dacorum Borough Council Core Strategy 2006-2031

**Status**
Adopted in September 2013.

Due to be replaced by the Dacorum Borough Council New Single Local Plan, the Regulation 18 Issues and Options version of which was consulted on between 1 November 2017 and 13 December 2017.

Prior to this was the Dacorum Borough Council Local Plan 1991-2011. 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:**
- 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 / Molyneaux 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.
**HRA findings**

The HRA Summary Report (2011)\(^{44}\) 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, 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 Addendum\(^{45}\), 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, in-combination effects with the new Hertfordshire MLP can be ruled out.

The Regulation 18 Issues and Options Consultation Document of the upcoming Dacorum Borough Council New Single Local Plan has been released, however, since it is in its early stages no HRA has been done at this stage.

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**East Herts District Council**

**East Herts District Council Local Plan 2016\(^ {46}\)**

**Status**

The East Herts District Plan was subject to an Examination in Public with hearing sessions held between October 2017 and January 2018 followed by a period of public consultation on the Main Modifications agreed through the Examination between February and March 2018.

Following this, the Inspector issued her Final Report on the Examination of the East Herts District Plan on the 9th July 2018.

The Plan was adopted on 23rd October 2018 subject to the legal challenge period. **Development quantum**

**Housing**

According to the Main Modification consultation document, over the period of 2011-2033 a total of 18,458 new homes will be delivered.

The strategy of the District Plan is to deliver sustainable development in accordance with the following hierarchy:

- Sustainable brownfield sites;
- Sites within the urban areas of Bishop’s Stortford, Buntingford, Hertford, Sawbridgeworth and Ware;
- Urban extensions to Bishop’s Stortford, Hertford, Sawbridgeworth and Ware, and to the east of Stevenage, east of Welwyn Garden Cityt and in the Gilston Area; and
- Limited development in the villages.

The 5-year housing land supply will comprise the following elements:

- The projected housing need for 839 dwellings per annum;

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\(^{46}\) District Planning - Shaping the Future of East Herts: http://www.eastherts.gov.uk/districtplan
• Any shortfall in delivery since the start of the Plan period (to be met over the ten year period 2017-2027)
• A 20% buffer for choice and flexibility brought forward from later in the Plan period.

According to the Main Modifications document, the overall minimum housing supply will meet projected housing need over the plan period 2011 to 2033. Supply Sources will total 18,913 homes including through windfall allowance, completions, commitments, sustainable brownfield sites, urban extensions and villages.

**Employment Land Provision**

Aim to achieve 10,800 new jobs in the District up to 2033. This will include making provision for 19-20 hectares of new employment land for B1/B2/B8 uses.

**HRA findings**

The Main Modifications HRA (2018) concluded that the Main Modifications do not alter the conclusion of the HRA of the submitted Local Plan as that HRA had already identified an ‘in combination’ air quality effect that would require addressing. The HRA (2016) concluded 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, in-combination effects with the new Hertfordshire MLP can be ruled out.

**Hertsmere Borough Council**

**Hertsmere Local Plan Issues and Options 2017**

**Status**

The Regulation 18 Issues and Options document was consulted on between 27th September 2017 and 30th November 2017. This will replace the Hertsmere Local Plan (2012-2027) (see below).

**Development quantum**

**Housing**

Provision of 3,000 homes, including the continued regeneration of the Elstree Way Corridor in Borehamwood, and potentially an additional 6,000 homes to meet the needs of local people and communities.

**Employment Land Provision**

Provision for an estimated 9,000 additional jobs over the next 15 years, of which around 3,650 are anticipated to be within high-quality industrial and commercial premises.

**HRA findings**

The HRA Scoping Report was produced in 2017 and introduces the HRA process. The HRA of the Issues and Options document has now been published; however, it is in the early stages, so an updated HRA has not been done at this stage. Therefore it is not yet possible to reach a conclusion regarding the potential for in-combination effects with the new Hertfordshire MLP.

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47 Main Modifications Consultation – Main Modifications Habitats Regulations Assessment: https://www.eastherts.gov.uk/media/32658/Main-Modifications-Habitats-Regulations-Assessment/PDF/E_Herts_Main_Modifications_HRA_Report_v2_150218_clean_issue.pdf
49 Hertsmere Local Plan (2012-2027): https://www.hertsmere.gov.uk/Planning--Building-Control/Planning-Policy/Local-Plan/Local-Plan-12-27.aspx
50 Supporting Studies - HRA Scoping Report: https://www.hertsmere.gov.uk/Planning--Building-Control/Planning-Policy/Local-Plan/Supporting-Studies.aspx#NLP
**Status**


This replaces the Hertsmere Local Plan 2003\(^2\) which was adopted in 2003.

This will be replaced by the Hertsmere New Local Plan.\(^3\) Recently, the Regulations 18 Issues and Options Document was consulted on, between September 2017 to November 2017.

**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 Plan\(^4\) 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.

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

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\(^{1}\) Hertsmere Local Plan (2012-2027): https://www.hertsmere.gov.uk/Planning--Building-Control/Planning-Policy/Local-Plan/Local-Plan-12-27.aspx


\(^{3}\) 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

\(^{4}\) 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
• 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 Plan\(^{55}\) which is not yet drafted but suggests around 9,000 new jobs will require provision over the next 15 years.

**HRA findings**

The Core Strategy inspectors report\(^{56}\) 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.

The Elstree Way Corridor Area Action Plan Sustainability Appraisal\(^ {57}\) and Site Allocations and Development Management Policies Plan Sustainability Appraisal\(^ {58}\) also concludes that as the circumstances have not changed since the Core Strategy was produced, new individual HRAs are not considered necessary.

**Therefore, in-combination effects with the new Hertfordshire MLP can be ruled out.**

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**North Hertfordshire District Council**

**North Hertfordshire Local Plan 2011 – 2031: Proposed Submission October 2016\(^ {59}\)**

**Status**

Draft plan and consultation completed. Submitted to Government on 9 June 2017.

This follows the North Hertfordshire District Local Plan No.2 With Alterations\(^ {60}\) which was adopted in 1996.

**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.

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\(^{55}\) 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


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)

HRA findings

The HRA Screening Report (2016)\(^6\) 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, in-combination effects with the new Hertfordshire MLP can be ruled out.

St Albans City and District Council

St Albans City and District Local Plan 2020-2036 Publication Draft (2018)\(^6\)

Status

The current adopted Local Plan is The District Local Plan Review 1994. However, this expired after 27th September 2007.

A publication draft for the new Local Plan has been submitted and is now undergoing consultation from 4 September 2018 to 17 October 2018.

Development quantum

Housing

Provision of 14,608 additional homes between 2020-2036.

Development at the Broad Locations is required to provide the specific locally needed mix of housing needed.

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 (55ha, up to circa 10,000 jobs).

Existing employment sites should be retained in employment use.

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

- Building Research Establishment (BRE) in Bricket Wood

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\(^6\) Local Plan Publication 2018: https://www.stalbans.gov.uk/planning/thelocalplan.aspx
HRA findings

During the publication of the Draft Local Plan, an updated HRA was not issued; therefore the Appropriate Assessment Screening Report from 2008 is the most up to date assessment. The Appropriate Assessment Screening Report (2008)\(^63\) 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, 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 (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 MLP, therefore in-combination effects can be ruled out.

Stevenage Borough Council

Stevenage Borough Local Plan 2011- 2031\(^64\)

Status

In draft, submitted to the Secretary of State in July 2016 for examination. Proposed main modifications to this plan have been consulted on.

This follows the Stevenage District Plan, Second Review (2004)\(^65\) in which the development quantum has now expired.

Development quantum

Housing

Provision of 7,600 homes between 2011-2031, 2,350 homes already built of 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 m\(^2\) floorspace.

HRA findings

The Appropriate Assessment Scoping Report (2016)\(^66\) 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.

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\(^64\) Stevenage Borough Emerging Local Plan: http://www.stevenage.gov.uk/149690/planning-policy/90175/

\(^65\) The Stevenage Adopted Local Plan: http://www.stevenage.gov.uk/149690/planning-policy/90238/

Therefore, in-combination effects with the new Hertfordshire MLP can be ruled out.

Three Rivers District Council

Three Rivers District Council New Local Plan: Issues & Options and Call for Sites Consultation July 2017

Status

The Issues & Options has recently been prepared and the Call for Sites Consultation completed. It was consulted on between 28 July and 8 September.

The Local Plan will replace the Local Plan 2014 (see below).

Development quantum

Housing

Potential housing need options for the District:

- Plan for a housing target that is 20% below the 514 dwellings per annum OAN for Three Rivers District. This equates to an annual figure of 411 dwellings per annum over a 15 year period from 2017 to 2032.
- Plan or the full OAN figure of 514 dwellings per annum over a 15 year period from 2017 to 2032.
- Plan for a housing target that is 20% above the 514 dwellings per annum OAN for Three Rivers District. This equates to an annual figure of 617 dwellings per annum over a 15 year period from 2017 to 2032.

Employment Land Provision

In order to minimise the loss of employment land and to ensure that current levels of employment land within the District are maintained as much as possible, the Council has confirmed three Article 4 Directions on the employment sites at Croxley Green, Maple Cross and Tolpits Lane.

Potential employment need options for the District:

- Continue safeguarding the existing allocated employment areas so that they can continue to be a focus for jobs growth only.
- Extend existing employment areas for employment use.
- Continue safeguarding the existing allocated employment areas and allocate an additional 8.6ha of land for office-based uses and warehousing, in accordance with the employment land requirements outlined in the South West Hertfordshire Economic Study.

Continue safeguarding the existing allocated employment areas, and allocate an additional 8.6ha of land, but allow the development of mixed use schemes (mix of employment, residential, retail, leisure uses) within existing employment areas.

HRA findings

The Issues and Options Sustainability Appraisal (2017) states that a HRA has not been undertaken for the Issues and Options stage of the New Local Plan preparation.

Therefore it is not yet possible to reach a conclusion regarding the potential for in-combination effects with the new Hertfordshire MLP.

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

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70 Three Rivers Local Plan: http://www.threerivers.gov.uk/egcl-page/development-plan
**Status**


This is due to be replaced by the New Local Plan which is at the Issues & Options stage and has recently undergone a Call for Sites public consultation (see above)\(^7\).

**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.

**HRA findings**

\(^7\)Three Rivers District New Local Plan: http://www.threerivers.gov.uk/egcl-page/new-local-plan
As stated in the Sustainability Appraisal (2014), 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, in-combination effects with the new Hertfordshire MLP can be ruled out.**

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**Watford Borough Council**


**Status**


This will be superseded by the Watford Local Plan 2016-2036 once produced.

**Development quantum**

**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

**HRA findings**

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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, in-combination effects with the new Hertfordshire MLP can be ruled out.

Welwyn Hatfield Borough Council

Welwyn Hatfield Local Plan 2016

Status

Drafted, due for adoption in Autumn 2017. The Council has submitted the Local Plan for examination. This follows the Welwyn Hatfield District Plan 2005 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
- 6,200 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.

HRA findings

The HRA (2016) 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, in-combination effects with the new Hertfordshire MLP can be ruled out.

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75 Welwyn Hatfield Local Plan: http://www.welhat.gov.uk/localplan
76 Welwyn Hatfield District Plan: http://www.welhat.gov.uk/districtplan
Adjacent County Minerals and Waste Plans and Strategies

**Essex County Council**

**Essex Minerals Local Plan 2014**

**Status**

Adopted in July 2014.

**Development quantum**

Provision of the following quantities of sand and silica between 2012 and 2016:

- 40.824 million tonnes of sand and gravel extraction with 31.824mt coming from Preferred Sites and 9mt coming from Reserve Sites
- 0.39 million tonnes of silica sand

This is comprised of 16 allocations on 10 sites.

Sand and gravel sites:

- 11 are extensions to existing quarries (total area of 340 ha)
- 3 are new sites (total area of 241 ha)

Silica sand site:

- Total area of 11.66 ha

**HRA findings**

The Inspector's Report on the Examination of the Development Plan (2013) concluded that, the Habitats Regulations Assessment (2012) sets out why the Preferred and Reserve Sites and policies can be screened out as unlikely to lead to significant effects that would require appropriate assessment of the Plan. However, it is noted that appropriate assessment of certain detailed site-specific proposals might be required at planning application stage and this is duly noted in the individual site requirements. Therefore, in-combination effects with the new Hertfordshire MLP can be ruled out.

**Essex and Southend-on-Sea Waste Local Plan 2016**

**Status**

The Plan was adopted in July 2017 by Essex County Council and in October 2017 by Southend-on-Sea Borough Council.

This will follow the Essex And Southend Waste Local Plan 2001.

**Development quantum**

Provision of sites to deal with the shortfall in capacity by 2031/32 of:

- Up to 217,000 tonnes per annum of biological treatment for non-hazardous organic waste;
- Up to 1.5 million tonnes per annum for the management of inert waste;
- Up to 200,000 tonnes per annum for the treatment of other waste; and
- Up to 50,250 tonnes per annum for the management of hazardous waste.

Provision of strategic site allocations:

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• 4 biological waste management sites
• 8 inert waste recycling sites
• 1 other waste management site
• 8 inert landfill sites
• 1 hazardous landfill site

Safeguarding waste management sites - Where non waste development is proposed within 250m of safeguarded sites, the relevant Local Planning Authority is required to consult the Waste Planning Authority on the planning application

HRA findings
The Pre-submission HRA Screening Report (2016)\textsuperscript{81} determined that, providing the recommendations of this HRA are taken into account, there is a significant degree of certainty that the Plan can be achieved within the requirements of the Conservation of Habitats and Species Regulations 2010. It was therefore considered that there is no reason to not screen out any component of the RWLP Pre-submission version.

Therefore, in-combination effects with the new Hertfordshire MLP can be ruled out.

Essex Transport Strategy: The Local Transport Plan for Essex\textsuperscript{82}

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 it is not yet possible to reach a conclusion regarding the potential for in-combination effects with the new Hertfordshire MLP.

Central Bedfordshire Council

Bedford Borough, Central Bedfordshire and Luton Borough Councils: Minerals and Waste Local Plan: Strategic Sites and Policies, 2014\textsuperscript{83}

\textsuperscript{83}
Status
Adopted in January 2014.

Development quantum
Provision for management of an anticipated total of 2,100,000 tonnes of waste 2013/14, increasing to 2,300,000 tonnes in 2028/29. Over the fifteen year Plan period of the Plan, a total of 35,000,000 tonnes of waste will require management within the Plan area.

Provision of four strategic waste management sites:
- Elstow North
- Land at former Brogborough Landfill
- Rookery Pit South
- Land at Thorn Turn

Also requirement for development contributions - All new developments should include sufficient and appropriate waste storage and recovery facilities in their design and layout.

Strategic mineral sites for the supply of aggregate sand and gravels:
- Willington Lock
- Blunham/ Roxton
- Black Cat
- Willowhill Farm
- Bridge Farm
- Land south of Broom Village

Strategic mineral sites for the supply of specialist silica sands:
- Land at Clipstone Brook

The Plan has two key aims:
- To provide an average of 1.84 million tonnes per annum of sand and gravel for each year of the Plan, until such time that national guidelines on aggregate production are further revised
- To maintain a land-bank sufficient for at least 7 years supply of sand and gravel.

HRA findings
The HRA is not in the public domain, however the Inspectors Report\(^84\) states that a HRA has been carried out and is adequate.

Therefore it is not yet possible to reach a conclusion regarding the potential for in-combination effects with the new Hertfordshire MLP.

Central Bedfordshire Local Transport Plan 3 2011-2016\(^85\)

Status
Adopted in January 2011.

Development quantum
Major schemes under construction:

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Major schemes proposed:

- Luton – Dunstable Busway
- M1 Hard Shoulder Running (Junctions 10-13)

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 HRA (2011) determined that the Local Transport Plan would not have significant effects on European Sites, considered either alone or in combination with other plans and policies.

Therefore, in-combination effects with the new Hertfordshire MLP can be ruled out.
**Development quantum**

Provision for the extraction of 0.81 million tonnes per annum of sand and gravel from the Thames and Colne Valleys over the plan period from 2016-2036. Allocated sites for sand and gravel provision:

- M1: Springfield Farm South (Beaconsfield) (2Mt)
- M2: New Denham Quarry North Extension (Denham) (1.60Mt)
- M3: New Denham Quarry North West Extension (Denham) (0.85Mt)
- M4: New Denham Quarry Extension (Denham) (0.2 - 0.25Mt)
- M5: North Park, Richings Park (Iver) (3Mt)
- M6: Slade Farm North (Hedgerley) (1.25Mt)
- M7: Slade Farm South (Hedgerley) (1Mt)

Provision for the extraction of 0.12 million tonnes per annum of sand and gravel from the Great Ouse Valley over the plan period from 2016-2036. Allocated sites for sand and gravel provision:

- M8: Hydelane Farm (Leckhampstead/Foscott) (1Mt)

Provision for the maintenance of a landbank for sand and gravel equivalent to at least 7 years supply will be sought in order to ensure a steady and adequate supply.

Provision of facilities for the preparation of waste for re-use and recycled and other recovery to be focussed on the main urban areas and growth locations:

- High Wycombe
- Aylesbury
- Buckingham

**HRA findings**

The HRA Screening Report (2017) determined that the Minerals and Waste Local Plan is not likely to have a significant effect on internationally designated sites either alone or in combination with other plans and projects.

**Therefore, in-combination effects with the new Hertfordshire MLP can be ruled out.**

**Buckinghamshire County Council Minerals and Waste Core Strategy 2012**

**Status**

Adopted in November 2012.

This follows the Minerals and Waste Local Plan 2004-2016.

This will be replaced by Buckinghamshire County Council Minerals and Waste Local Plan 2016-2036.

**Development quantum**

Provision of an additional 6.5mt of sand and gravel from 2011-2026 to maintain a land-bank of sand and gravel equivalent to at least 7 years’ worth of supply over the period to 2026. Favourable consideration given to proposals for sand and gravel excavation within the defined Area or search.

Provision for 37.5 million tonnes or waste from 2010-2026, averaging 2.2 million tonnes a year. By 2026, provision for 66% of waste to be recycled and composted, 12% to have energy recovered from it and 22% to be landfilled.

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Provision of a Strategic Waste Complex (SWC) located at the Calvert Landfill Site, including a facility for the recovery of energy from residual waste and the required infrastructure e.g. roads and transfer stations. The co-locations of other waste facilities to be encouraged on the SWC, which may include recycling, composting and sorting facilities.

Safeguarded waste management sites:
- Existing waste sites within Buckinghamshire
- Woodham Industrial Area, Aylesbury Vale District
- Richings Park, Iver
- Thorney Mill, Iver

**HRA findings**

The proposed mineral extraction sites HRA (2007)\(^93\) determined that there are no mineral extraction sites likely to have a significant individual or cumulative effect upon the conservation objectives of assessed SACs and SPAs.

The proposed waste sites HRA (2007)\(^94\) determined only two of the potential waste sites are likely to have a significant individual effect on one SAC/SPA due to air emissions. Following this, atmospheric dispersion modelling determined the effects would not be significant and that it would not be necessary to undertake an Appropriate Assessment at the planning permission or Pollution Prevention and Control (PPC) permitting stage of the projects on these sites.

**Therefore, in-combination effects with the new Hertfordshire MLP can be ruled out.**

**Buckinghamshire’s Local Transport Plan 4 2016-2036\(^95\)**

**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
- 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

**HRA findings**

The Screening Report (2016)\(^96\) determined it was not possible to conclude no likely significant effects for particular policies and schemes due to insufficient detail at the time.

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\(^{93}\) Natura 2000 Sites Stage 1 Appropriate Assessment Screening: Report on the Likely Significant Effects of Proposed Mineral Extraction Sites on SACs/SPAs in Buckinghamshire and Surrounding Area: https://democracy.buckscc.gov.uk/Published/IssueDocs/0/1/5/4/I00024510/CS112a.pdf

\(^{94}\) Natura 2000 Sites Stage 1 Appropriate Assessment Screening: Report on the Likely Significant Effects of Proposed Waste Sites on SACs/SPAs in Buckinghamshire and Surrounding Area: https://democracy.buckscc.gov.uk/Published/IssueDocs/0/1/5/4/I00024510/CS111.pdf


Therefore it is not yet possible to reach a conclusion regarding the potential for in-combination effects with the new Hertfordshire MLP.

**Luton Borough Council**


See above.

**Luton Local Transport Plan 3 2011-2026**

**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 Appraisal for the Local Plan states that the nearest European site is 7 miles away and therefore the plan is unlikely to cause significant effects.

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**Notes:**


98 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
Therefore it is not yet possible to reach a conclusion regarding the potential for in-combination effects with the new Hertfordshire MLP.

Cambridgeshire County Council


**Status**
Adopted in July 2011.

**Development quantum**
Provision made for the supply of 3.0 million tonnes of sand and gravel per annum over the Plan period.

New allocations, together with permitted reserves, will enable the supply of the following over the plan period:

- An annual average of 0.75 mtpa from the Northern Zone, i.e. Peterborough and north Fenland District,
- An annual average of 0.85 mtpa from the Central / Southern Zone (excluding the Earith / Mepal Area)
- An annual average of 1.4 mtpa from the Earith / Mepal Zone (from 2010 onwards)

The principal broad locations for sand and gravel extraction will be:

- Kings Delph (Northern Zone)
- Maxey (Northern Zone)
- Eye / Thorney (Northern Zone)
- Cottenham / Landbeach (Central / Southern Zone)
- Needingworth (Central / Southern Zone)
- Block Fen / Langwood Fen (Earith / Mepal)

Allocations will be outside the Ouse and Nene river valleys.

One sand and gravel extraction strategic site allocation at Block Fen / Langwood Fen.

**Site specific allocations:**

- 6 sand and gravel extraction sites
- 6 sand and gravel borrowpit sites
- 0 limestone extraction sites
- 1 chalk marl extraction site
- 1 brick clay extraction site
- 0 engineering clay extraction sites
- 9 engineering clay borrowpit sites
- 2 specialist mineral extraction sites

Additionally – 12 designated mineral infrastructure consultation areas (areas within and around existing quarry operations and associated permitted reserves and areas within and around unimplemented permitted reserves and allocations)

Provision for and estimated 113,662,000 tonnes or waste arisings to be managed from 2006-2026.

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Provision for a minimum of by 2026:

- 63,000 tonnes per annum of Household Recycling Centre capacity
- 627,000 tonnes per annum of new recycling capacity (Materials Recycling Facilities / Mixed Recyclables)
- 10,500 tonnes per annum of in-vessel composting capacity
- 1.86 million tonnes per annum of inert waste recycling capacity
- 12.09 million cubic metres of inert landfill void space over the Plan period
- 14,000 cubic metres per annum of stable non-reactive hazardous waste landfill void space

Provision of new household recycling centres in the following broad locations:

- Cambridge East
- Cambridge North
- Cambridge South
- March
- Northstowe
- Peterborough

Site specific allocations:

- 33 site specific and Areas of Search allocations
- 6 inert landfill sites
- 1 general non-hazardous landfill site
- 2 non-reactive hazardous waste landfill sites
- 0 general hazardous waste landfill sites
- 1 Area of Search allocation for a new waste water treatment works
- 49 Waste Water Treatment Works Safeguarding Areas
- 42 proposed sites with Waste Consultation Area designations (areas within and around (250m) existing waste management facilities that make a significant contribution to managing waste in Cambridgeshire and Peterborough and areas within and around unimplemented permitted or allocated waste management sites and Areas of Search)

HRA findings

The HRA (2009) found that for all proposed policies in the Core Strategy DPD Submission Plan, either alone or in combination with other plans or projects, no adverse impacts were identified on European or Ramsar sites that cannot be avoided by legally enforceable measures. Accordingly all of the minerals and waste policies and strategic allocations proposed in the Core Strategy DPD Submission Plan can be considered to have passed the Habitats Regulations Assessment.

Therefore, in-combination effects with the new Hertfordshire MLP can be ruled out.

Cambridgeshire Local Transport Plan 2011-2031

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

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)\(^{103}\) 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, in-combination effects with the new Hertfordshire MLP can be ruled out.

North London Boroughs (including Enfield and Barnet)

North London Waste Plan 2017-2032\(^{104}\)

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\(^{104}\) North London Waste Plan: http://www.nlwp.net/
## Status

Draft plan – consulted on between July and September 2015.

## Development quantum

Site allocations:
- 3 site allocations for waste management development
- 28 area allocations for waste management developments

## HRA findings

The HRA Screening (2015)\(^{105}\) concludes there will be no significant effects on the nature conservation value of European sites from implementing the Waste Plan. It is considered unnecessary to remove any sites from the list of sites being considered for potential waste operations from the Plan because of potentially harmful impacts on European protected sites. Mitigation proposed includes close scrutiny during any subsequent development control and/or Licensing process to avoid any possibility of harm being caused by water pollution to the Lee Valley SPA or air pollution to Epping Forest SPA.

**Therefore, in-combination effects with the new Hertfordshire MLP can be ruled out.**

### West London Boroughs (including Harrow and Hillingdon)

#### West London Waste Plan 2014\(^{106}\)

## Status

Adopted between May and July 2015 (by the individual borough councils).

## Development quantum

Site allocations:
- 7 existing waste sites allocated for potential expansion
- 2 new waste sites allocated with the potential for the development of waste management facilities

## HRA findings

The HRA Screening (2010)\(^{107}\) highlighted that the protective nature of policy WLWP 2 aims to conserve the ecological integrity of all sites protected under the Habitats Directive located within the zone of influence of the draft WLWP. It was therefore concluded that the West London Waste Plan will not have a significant effect on Natura 2000 or Ramsar Sites either alone or in combination with other plans and policies. Accordingly an Appropriate Assessment under Regulation 48(1) of the Conservation (Natural Habitats &c.) Regulations, 1994 should not be required.

**Therefore, in-combination effects with the new Hertfordshire MLP can be ruled out.**

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\(^{105}\) Habitats Regulations Assessment (Screening): http://www.nlwp.net/document-centre/

\(^{106}\) West London Waste Plan: http://www.wlwp.net/index.html

Appendix 3
HRA Screening of the Minerals Local Plan
<table>
<thead>
<tr>
<th>Policy/site allocation</th>
<th>Likely activities (operations) to result as a consequence of the policy/site allocation</th>
<th>Potential effects if policy/site allocation is implemented</th>
<th>European site(s) potentially affected</th>
<th>Could the policy/site allocation have likely significant effects on European sites?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strategic Policies</strong></td>
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</tr>
<tr>
<td>Policy 1: Sustainable Development</td>
<td>None – this policy will not result in new development</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Policy 2: Climate Change</td>
<td>None – this policy will not result in new development</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
</tbody>
</table>
| Policy 3: Aggregate Supply | Minerals extraction (total supply c.25.25 million tonnes)  
Increased HDV traffic | Loss of / damage to onsite or offsite habitat  
Air pollution  
Changes to water quality or quantity  
Noise, vibration and light pollution | Loss of / damage to offsite habitat: Lee Valley SPA/Ramsar, Eversden & Wimpole Woods SAC, and Chiltern Beechwoods SAC  
Changes to water quality or quantity: Lee Valley SPA/Ramsar sites.  
Air pollution: Chiltern Beechwoods SAC, Burnham Beeches SAC, Wormley Hoddesdonpark Woods SAC, Epping Forest SAC, and Lee Valley SPA/Ramsar sites.  
Noise, vibration and light pollution: Chiltern Beechwoods SAC and Lee Valley SPA/Ramsar sites | Uncertain – loss of / damage to offsite habitats, changes to water quality or quantity, noise, vibration and light pollution.  
The policy provides for significant minerals extraction development within the county, largely at the specific sites and within the preferred area, which are unlikely to result in the loss of/damage to offsite habitat associated with the European sites within and in close proximity to Hertfordshire. Minerals development will only be permitted outside of these areas in exceptional circumstances. However, until it is known whether additional sites to those allocated within the MLP will be required to maintain the County’s seven year landbank, the potential for mineral operations to result in likely significant effects due to the loss of/damage to offsite habitats, noise, vibration and light pollution or changes in water quality cannot be ruled out.  
Uncertain – air pollution (two specific sites and the preferred area) and air pollution from all of the sites in combination (Epping Forest SAC, Lee Valley SPA/Ramsar, Wormley Hoddesdonpark Woods SAC).  
There is likely to be an increase above 200 HDVs if the overall quantum of development results in multiple sites generating HDV traffic that uses the M25, A414 or A10. | |
| Policy 4: Working of Specific Sites or Preferred Areas | Minerals extraction (25.25 million tonnes across 3 specific sites and 1 preferred area)  
Increased HDV traffic | Loss of / damage to offsite habitat  
Air pollution  
Changes to water quality or quantity | Loss of / damage to offsite habitat and changes to water quality or quantity could affect the Lee Valley SPA/Ramsar sites.  
Air pollution could affect Chiltern | Uncertain – loss of / damage to offsite habitats, changes to water quality or quantity, noise, vibration and light pollution.  
The policy provides for significant minerals extraction at specific locations within the county. | |
<table>
<thead>
<tr>
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<th>Likely activities (operations) to result as a consequence of the policy/site allocation</th>
<th>Potential effects if policy/site allocation is implemented</th>
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<th>Could the policy/site allocation have likely significant effects on European sites?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>quantity</td>
<td>Beechwoods SAC, Burnham Beeches SAC, Wormley Hoddesdonpark Woods SAC, Epping Forest SAC, and Lee Valley SPA/Ramsar sites. Noise, vibration and light pollution: Chiltern Beechwoods SAC and Lee Valley SPA/Ramsar sites Each minerals site is assessed individually, below.</td>
<td>Beechwoods SAC, Burnham Beeches SAC, Wormley Hoddesdonpark Woods SAC, Epping Forest SAC, and Lee Valley SPA/Ramsar sites. Noise, vibration and light pollution: Chiltern Beechwoods SAC and Lee Valley SPA/Ramsar sites Each minerals site is assessed individually, below.</td>
<td>The effects of individual sites / preferred area allocated in Policy 4 are screened separately below. Uncertain – air pollution (sites alone or in combination With the exception of SS1 (Hatfield Aerodrome), the other sites in Hatfield (Furze Field and Coopers Green Lane) and the preferred area have the potential to contribute increases in HDV traffic of more than 200 AADT at peak times. Furthermore, there could be an increase above 200 HDVs from the sites in combination as they could all generate HDV traffic that uses the M25. Further information is provided in relation to the potential sites being considered for allocation, below.</td>
</tr>
<tr>
<td>Policy 5: Substitute or Secondary and Recycled Materials</td>
<td>Minerals extraction</td>
<td>Loss of / damage to onsite or offsite habitat Noise, vibration and light pollution Air pollution Changes to water quality or quantity</td>
<td>Loss of / damage to offsite habitat could affect the Lee Valley SPA/Ramsar, if the proposed sites has wetland habitats or was very close to the European site; and the Eversden and Wimpole Woods SAC, if within 20km of the site. Noise, vibration and light pollution could affect Lee Valley SPA/Ramsar, Eversden or Wimpole Woods SAC if the proposed sites are within 500m. Changes to water quality or quantity could affect the Lee Valley SPA/Ramsar sites. Air pollution could affect Chiltern Beechwoods SAC, Burnham Beeches SAC, Wormley Hoddesdonpark Woods SAC, Epping Forest SAC, and Lee Valley SPA/Ramsar sites.</td>
<td>Uncertain – The policy supports the expansion of existing and the provision of new recycling facilities. Until the location and scale of potential sites are known, the potential for such recycling facilities to result in the loss of/damage to offsite habitats, noise vibration and light pollution, changes in water quality or quantity or air pollution cannot be ruled out.</td>
</tr>
<tr>
<td>Policy 6: Brick Clay</td>
<td>Minerals extraction</td>
<td>Loss of / damage to onsite or offsite habitat</td>
<td>Loss of / damage to offsite habitat could affect the Lee Valley SPA/Ramsar, if the proposed sites has</td>
<td>Uncertain - this policy does not allocate specific sites as there are no operational brick clay quarries in the County. Therefore, the scale of extraction likely to</td>
</tr>
<tr>
<td>Policy/site allocation</td>
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</tr>
<tr>
<td>Policy 7: Chalk</td>
<td>Increased HDV traffic miners extraction increased HDV traffic</td>
<td>Noise, vibration and light pollution</td>
<td>wetland habitats or was very close to the European site; and the Eversden and Wimpole Woods SAC, if within 20km of the site. Noise, vibration and light pollution could affect Lee Valley SPA/Ramsar, Eversden or Wimpole Woods SAC if the proposed sites are within 500m. Changes to water quality or quantity could affect the Lee Valley SPA/Ramsar sites. Air pollution could affect Chiltern Beechwoods SAC, Burnham Beeches SAC, Wormley Hoddesdonpark Woods SAC, Epping Forest SAC, and Lee Valley SPA/Ramsar sites.</td>
<td>permitted under this policy is likely to be small in scale with limited potential to generate significant effects. However, until the location and scale of potential sites are known, the potential for chalk operations to result in the loss of/damage to offsite habitats, noise vibration and light pollution, changes in water quality or quantity or air pollution cannot be ruled out.</td>
</tr>
</tbody>
</table>

<p>| Policy 7: Chalk        | Minerals extraction increased HDV traffic                                        | Loss of / damage to onsite or offsite habitat             | Loss of / damage to offsite habitat could affect the Lee Valley SPA/Ramsar, if the proposed sites has wetland habitats or was very close to the European site; and the Eversden and Wimpole Woods SAC, if within 20km of the site. Noise, vibration and light pollution could affect Lee Valley SPA/Ramsar, Eversden or Wimpole Woods SAC if the proposed sites are within 500m. Changes to water quality or quantity could affect the Lee Valley SPA/Ramsar sites. Air pollution could affect Chiltern Beechwoods SAC, Burnham Beeches SAC, Wormley Hoddesdonpark Woods SAC, Epping Forest SAC, and Lee Valley SPA/Ramsar sites. | Uncertain – due to the low use and unlikely requirement for further chalk supply in the county, no additional Specific Sites or Preferred Areas are identified in this Plan for the extraction of chalk. The scale of extraction likely to permitted under this policy will be small in scale and unlikely to generate significant effects. However, until the location and scale of potential sites are known, the potential for chalk operations to result in the loss of/damage to offsite habitats, noise vibration and light pollution, changes in water quality or quantity or air pollution cannot be ruled out. |</p>
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</thead>
<tbody>
<tr>
<td>Policy 8: Mineral Safeguarding</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>No – this policy seeks to safeguard access to the minerals resources required by the county, but will not itself lead to new mineral extraction.</td>
</tr>
<tr>
<td>Policy 9: Bulk Handling and Processing Sites</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>No – this policy seeks to safeguard infrastructure required to enable minerals extraction, but will not itself lead to new mineral extraction.</td>
</tr>
<tr>
<td>Policy 10: Borrow Pits</td>
<td>Minerals extraction</td>
<td>Loss of / damage to onsite or offsite habitat Noise, vibration and light pollution Air pollution Changes to water quality or quantity</td>
<td>Loss of / damage to offsite habitat could affect the Lee Valley SPA/Ramsar, if the proposed sites have wetland habitats or was very close to the European site; and the Eversden and Wimpole Woods SAC, if within 20km of the site. Noise, vibration and light pollution could affect Lee Valley SPA/Ramsar, Eversden or Wimpole Woods SAC if the proposed sites are within 500m. Changes to water quality or quantity could affect the Lee Valley SPA/Ramsar sites.</td>
<td>Uncertain – the scale of extraction likely to permitted under this policy will be small in scale and unlikely to generate significant effects. However, until the location and scale of potential sites are known, the potential for borrow pits to result in the loss of/damage to offsite habitats, noise vibration and light pollution, changes in water quality or quantity or air pollution cannot be ruled out.</td>
</tr>
<tr>
<td>Policy 11: Incidental Extraction</td>
<td>Minerals extraction Increased HDV traffic</td>
<td>Air pollution</td>
<td>Air pollution could affect Chiltern Beechwoods SAC, Burnham Beeches SAC, Wormley Hoddesdonpark Woods SAC, Epping Forest SAC, and Lee Valley SPA/Ramsar sites.</td>
<td>Uncertain – Incidental extraction refers to extraction that occurs alongside a development’s construction (e.g. reservoir construction). The aspects of this policy relevant to the MLP are therefore its requirement for the sustainable use of any mineral extracted, which may therefore result in transportation of the mineral. Although the scale of extraction likely to be permitted under this policy will be small in scale, until the location and scale of potential incidental extraction is known, significant air pollution effects cannot be ruled out.</td>
</tr>
<tr>
<td>Policy 12: Green Belt</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>No – this policy sets out the circumstances in which development in the green belt would be permissible, but will not itself lead to new mineral extraction.</td>
</tr>
</tbody>
</table>
| Policy 13: Cumulative Impact | n/a | n/a | n/a | No – this policy requires that developments do not cause unacceptable cumulative impacts on the natural environment and therefore affords protection to
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<tbody>
<tr>
<td>Policy 14: Water Management</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>No – this policy puts in place measures to protect water quality and quantity, and therefore protects European sites.</td>
</tr>
<tr>
<td>Policy 15: Historic Environment</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>No – this policy seeks to protect heritage assets.</td>
</tr>
<tr>
<td>Policy 16: Landscape and Green Infrastructure</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>No – this seeks to protect landscape character, quality and visual amenity.</td>
</tr>
<tr>
<td>Policy 17: Biodiversity</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>No – this policy provides for the protection and enhancement of biodiversity. It includes a specific requirement to avoid irreversible or unacceptable adverse impacts on National and International sites.</td>
</tr>
<tr>
<td>Policy 18: Protection and enhancement of Amenity</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>No – this policy requires that amenity is protected and enhanced.</td>
</tr>
<tr>
<td>Policy 19: Health and Wellbeing</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>No – this policy seeks to protect the health and wellbeing of local residents, as well as encouraging activities that improve health and wellbeing through restoration works.</td>
</tr>
<tr>
<td>Policy 20: Strategic Transport</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>No – this policy encourages the use of sustainable transport and minimisation of transport movements.</td>
</tr>
<tr>
<td>Policy 21: Operational Transport</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>No – this policy requires developments to demonstrate that they will have no unacceptable adverse effects on highway safety, the operation of the highway network, amenity, human health, or the natural, built and historic environment. It therefore provides protection to European sites from air pollution.</td>
</tr>
<tr>
<td>Policy 22: Public Rights of Way</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>No – this policy seeks to protect rights of way.</td>
</tr>
<tr>
<td>Policy 23: Soils and Agricultural Land</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>No – this policy seeks to protect soils and agricultural land.</td>
</tr>
<tr>
<td>Policy/site allocation</td>
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</tr>
<tr>
<td>Policy 24: Restoration</td>
<td>Land restoration Increase in HDV traffic Noise, vibration and light pollution Air pollution Conversely, habitat restoration / enhancement could have a positive effect.</td>
<td>Noise, vibration and light pollution could affect Lee Valley SPA/Ramsar, Eversden or Wimpole Woods SAC if the works are undertaken within 500m. Air pollution could affect Chiltern Beechwoods SAC, Burnham Beeches SAC, Wormley Hoddesdonpark Woods SAC, Epping Forest SAC, and Lee Valley SPA/Ramsar sites. Habitat restoration or enhancement could benefit offsite habitats for the Lee Valley SPA/Ramsar sites if wetland habitats are provided, and Eversden and Wimpole Woods SAC if woodland habitats are provided within 20km.</td>
<td>No – the restoration / enhancement of habitats is potentially beneficial to European sites. Uncertain – noise, vibration and light pollution and air pollution. Noise, vibration, light pollution and air pollution relating to restoration works would effectively extend the duration of effects arising from the operation of minerals sites that have already been permitted.</td>
<td></td>
</tr>
<tr>
<td>Policy 25: Aftercare and After-use</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>No – this policy seeks to ensure that after-use proposals are of benefit local landscape, economy, amenity, ecology, and accessibility.</td>
</tr>
</tbody>
</table>

**Specific Sites**

<p>| Specific Site 1) Hatfield Aerodrome | Minerals extraction development, including construction Increased HDV traffic | Air pollution Changes to water quantity and quality Noise, vibration and light pollution | Lee Valley SPA Lee Valley Ramsar Epping Forest SAC | No – changes to groundwater quantity and quality, and air pollution (site alone). The only potential hydrological connection to Lee Valley SPA/Ramsar is via the Primary aquifer in bedrock, whereas extraction would occur within the superficial deposits. No risk of noise, vibration and light pollution. The site is not located within 500m of a European site. The main route for HDVs leaving the site will be the A1(M), from which only a small number are likely to be joining the M25 eastbound, which passes Epping Forest SAC. Although this site is unlikely to increase HDV AADT by more than 200 on the nearest roads, it is unlikely to increase the AADT on the M25 by 200 HDVs, |</p>
<table>
<thead>
<tr>
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<th>Likely activities (operations) to result as a consequence of the policy/site allocation</th>
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</tr>
</thead>
</table>
| Specific Site 2) Hatfield Quarry - Furze Field                                       | Minerals extraction development, including construction                                  | Changes to water quantity and quality                      | Lee Valley SPA<br>Lee Valley Ramsar<br>Epping Forest SAC | because of distance from the M25. A recent planning application for extraction at the site (pending decision) capped daily HGV movements to 174.  
Uncertain – air pollution (in combination with other sites).  
There could be an increase above 200 HDVs in combination with other sites, which are likely to generate HDV traffic that uses the M25. |
| Specific Site 3) Hatfield Quarry – Land adjoining Coopers Green Lane                | Minerals extraction development, including construction                                  | Air pollution                                              | Lee Valley SPA<br>Lee Valley Ramsar<br>Epping Forest SAC | No – changes to groundwater quantity and quality.  
It has a likely hydrological connection to Lee Valley SPA/Ramsar via the Primary aquifer in bedrock, but extraction would occur within the superficial deposits.  
No risk of noise, vibration and light pollution. The site is not located within 500m of a European site.  
Uncertain – air pollution (alone or in combination).  
The main route for HDVs leaving the site will be the A1(M), from which only a small number are likely to be joining the M25 eastbound, which passes Epping Forest SAC. Daily HGV movements generated by the site are predicted not to exceed 238 daily, resulting in the potential to increase HDV traffic on the M25 by more than 200 AADT.  
There could also be an increase above 200 HDVs in combination with other sites, which are likely to generate HDV traffic that uses the M25. |
<table>
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</thead>
<tbody>
<tr>
<td></td>
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<td></td>
<td><strong>No risk of noise, vibration and light pollution. The site is not located within 500m of a European site.</strong></td>
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<td><strong>Uncertain - loss of offsite habitats.</strong></td>
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<td></td>
<td>The site is close to the River Lea, the site also has the potential to affect offsite habitats used by Lee Valley SPA/Ramsar species, although it is not known whether those species use this area.</td>
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<td></td>
<td></td>
<td><strong>Uncertain – air pollution (alone or in combination).</strong></td>
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<td>The main route for HDVs leaving the site will be the A1(M), from which only a small number are likely to be joining the M25 eastbound, which passes Epping Forest SAC. Daily HGV movements generated by the site are predicted not to exceed 238 daily, resulting in the potential to increase HDV traffic on the M25 by more than 200 AADT.</td>
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<td></td>
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<td></td>
<td>There could also be an increase above 200 HDVs in combination with other sites, which are likely to generate HDV traffic that uses the M25.</td>
</tr>
</tbody>
</table>

**Preferred area**

<table>
<thead>
<tr>
<th>Preferred Area 1: The Briggsens Estate (Olives Farm)</th>
<th>Minerals extraction development, including construction</th>
<th>Air pollution</th>
<th>Lee Valley SPA</th>
<th>Lee Valley Ramsar</th>
<th>Wormley Hoddesdonpark Woods SAC</th>
<th>Epping Forest SAC</th>
<th>No – changes to water quantity and quality. The preferred area has potential above-ground hydrological connectivity to the Lee Valley SPA/Ramsar as it is 400m from water bodies likely to be in connectivity with the sites. It also has potential below-ground connectivity via the Secondary A aquifers in the bedrock and possibly in the superficial deposits.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Minerals extraction development, including construction</td>
<td>Air pollution</td>
<td>Lee Valley SPA</td>
<td>Lee Valley Ramsar</td>
<td>Wormley Hoddesdonpark Woods SAC</td>
<td>Epping Forest SAC</td>
<td>No risk of noise, vibration and light pollution. The site is not located within 500m of a European site.</td>
</tr>
<tr>
<td></td>
<td>Minerals extraction development, including construction</td>
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<td></td>
<td><strong>Uncertain - loss of offsite habitats.</strong></td>
</tr>
<tr>
<td></td>
<td>Minerals extraction development, including construction</td>
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<td></td>
<td>The preferred area has the potential to contain offsite habitats used by Lee Valley SPA/Ramsar species as it is c.800m away from the site with wetland habitat between.</td>
</tr>
<tr>
<td>Policy/site allocation</td>
<td>Likely activities (operations) to result as a consequence of the policy/site allocation</td>
<td>Potential effects if policy/site allocation is implemented</td>
<td>European site(s) potentially affected</td>
<td>Could the policy/site allocation have likely significant effects on European sites?</td>
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<td>Uncertain – air pollution (alone or in combination). The majority of HDV traffic from the site will travel on the A414. A portion of traffic will also use the A10, which passes the Lee Valley SPA/Ramsar and Wormley Hoddesdonpark Woods SAC sites. A proportion of this traffic will also travel eastwards to the M25, past Epping Forest SAC. Daily HGV movements generated by the site are predicted not to exceed 400 daily. Therefore, this Area could have air pollution impacts, either alone or in combination with other sites, which are likely to generate HDV traffic that uses the A414, A10 or M25.</td>
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</tbody>
</table>
