



Habitats Regulations Assessment of the East London Joint Waste Plan HRA Report

**London Boroughs of Barking & Dagenham,
Havering, Newham, and Redbridge**

Final report
Prepared by LUC
May 2024

Version	Status	Prepared	Checked	Approved	Date
1	Draft Regulation 18 HRA	C Codd K Sydney	K Sydney	J Allen	01.05.24
2	Final Regulation 18 HRA	K Sydney	K Sydney	J Allen	17.05.25



Land Use Consultants Limited

Registered in England. Registered number 2549296. Registered office: 250 Waterloo Road, London SE1 8RD. Printed on 100% recycled paper

Contents

Chapter 1 **5**

Introduction

Context of the new East London Joint Waste Plan	5
The requirement to undertake Habitats Regulations Assessment of development plans	6
Structure of this report	9

Chapter 2 **11**

East London Joint Waste Plan

Chapter 3 **14**

Approach to HRA

Stages of HRA	14
Case law	18
Screening methodology	22
Appropriate Assessment methodology	31

Chapter 4 **34**

HRA Screening

Physical damage and loss of habitat	34
Non-physical disturbance	35
Air pollution	36
Recreation and urban impacts	41
Pests and vermin	41
Water quality and quantity	42

Contents

Summary of HRA Screening	45
Chapter 5 Appropriate Assessment	47
Chapter 6 Conclusions and Next Steps	51
Appendix A Attributes of Habitats Sites considered in the HRA	52
Appendix B Screening of policies	70
Policy JWP1: Circular Economy	70
Policy JWP2: Safeguarding and Provision of Waste Capacity	71
Policy JWP3 Prevention of Encroachment	72
Policy JWP4: Design of Waste Management Facilities	73
Policy JWP5: Energy from Waste	74
Policy JWP6: Deposit of Waste on Land	76
References	78

Chapter 1

Introduction

1.1 LUC has been commissioned to carry out a Habitats Regulations Assessment (HRA) of the emerging East London Joint Waste Plan (ELJWP). The ELJWP is a joint plan for the London Borough of Barking and Dagenham, London Borough of Havering, London Borough of Newham, and the London Borough of Redbridge.

1.2 The purpose of the HRA is to determine whether the ELJWP policies or development within site allocations is likely to have significant effects on, or adverse effects on the integrity of, any sites designated as Special Protection Areas (SPAs), Special Areas of Conservation (SACs), or Ramsar sites.

Context of the new East London Joint Waste Plan

1.3 The ELJWP area is consistent with the geography for the East London Waste Authority [**See reference 1**] formed by the four most easterly London Boroughs north of the Thames: London Borough of Barking and Dagenham, London Borough of Havering, London Borough of Newham, and the London Borough of Redbridge. The ELJWP also includes the area covered by the London Legacy Development Corporation (LLDC) within the London Borough of Newham. The LLDC does not have a separate waste apportionment within the London Plan 2021, and therefore waste is planned for by the London Borough of Newham.

1.4 The current version of the ELJWP was adopted in 2012 [**See reference 2**] and set out to meet the requirements of the national policy and the London Plan at that time, to plan effectively for waste across the four London Boroughs. There have been four iterations of the London Plan since 2011: the London

Plan (2016), the Revised Early Minor Alterations to the London Plan (2013) to align within the NPPF, the Further Alterations to the London Plan (2015), and the current adopted London Plan (2021).

1.5 The new ELJWP will provide the local planning policy framework for all waste planning matters across London Borough of Barking and Dagenham, London Borough of Havering, London Borough of Newham, and London Borough of Redbridge. The LLDC will transfer planning powers back to LBN by the end of 2024.

1.6 This HRA assesses the draft ELJWP which has been prepared for 'Regulation 18' consultation.

Previous HRA work

1.7 The 2012 ELJWP was subject to HRA but, as there are likely to have been significant changes to both the environmental baseline and there have been changes to how HRA is undertaken (see 'case law' section of Chapter 3), this 2024 HRA of the emerging new ELJWP does not rely on the previous HRA assumptions or findings.

1.8 However, where relevant, the HRA will make use of evidence gathered as part of the HRA of other plans in the region.

The requirement to undertake Habitats Regulations Assessment of development plans

1.9 The requirement to undertake HRA of development plans was confirmed by the amendments to the Habitats Regulations published for England and Wales in 2007 [**See reference 3**]; which is now known as the Habitats Regulations

2017 (as amended) [See reference 4]. When preparing the development plans, the joint authorities therefore required by law to carry out an HRA. The joint authorities can commission consultants to undertake HRA work on its behalf and this (the work documented in this report) is then reported to and considered by the joint authorities as the 'competent authority'. They will consider this work and would usually only progress the ELJWP if they consider that the ELJWP will not adversely affect the integrity [See reference 5] of any of the 'Habitats Sites, as defined below (the exception to this would be where 'imperative reasons of overriding public interest' can be demonstrated). The requirement for authorities to comply with the Habitats Regulations when preparing a development plan is also noted in the Government's online Planning Practice Guidance (PPG) [See reference 6].

1.10 HRA refers to the assessment of the potential effects of a development plan on one or more sites afforded the highest level of protection in the UK: Special Protected Areas (SPAs) and Special Areas of Conservation (SACs). These were classified under European Union (EU) legislation but since 1 January 2021 are protected in the UK by the Habitats Regulations 2017 (as amended) [See reference 7]. Although the EU Directives from which the UK's Habitats Regulations originally derived are no longer binding, the Regulations still make reference to the lists of habitats and species that the sites were designated for, which are listed in annexes to the EU Directives:

- SACs are designated for particular habitat types (specified in Annex 1 of the EU Habitats Directive [See reference 8]) and species (Annex II). The listed habitat types and species (excluding birds) are those considered to be most in need of conservation at a European level. Designation of SACs also has regard to the threats of degradation or destruction to which the sites are exposed and, before EU exit day, to the coherence of the 'Natura 2000' network of 'European sites'. After EU exit day, regard is had to the importance of such sites for the coherence of the UK's 'National Site Network'.
- SPAs are classified for rare and vulnerable birds (Annex I of the EU Birds Directive [See reference 9]), and for regularly occurring migratory species not listed in Annex I.

1.11 The term ‘European Sites’ was previously commonly used in HRA to refer to ‘Natura 2000’ sites [See reference 10] and Ramsar sites (international designated under the Ramsar Convention). However, a Government Policy Paper [See reference 11] on changes to the Habitats Regulations 2017 post-Brexit states that:

- Any references to Natura 2000 in the 2017 Regulations and in guidance now refer to the new ‘National Site Network’;
- The National Site Network includes existing SACs and SPAs; and new SACs and SPAs designated under these Regulations; and
- Designated Wetlands of International Importance (known as Ramsar sites) do not form part of the national site network. Many Ramsar sites overlap with SACs and SPAs and may be designated for the same or different species and habitats.

1.12 Although Ramsar sites do not form part of the new National Site Network, Government guidance [See reference 12] states that:

Any proposals affecting the following sites would also require an HRA because these are protected by government policy:

- proposed SACs
- potential SPAs
- Ramsar sites – wetlands of international importance (both listed and proposed)
- areas secured as sites compensating for damage to a European site.”

1.13 Furthermore, the NPPF [See reference 13] and practice guidance [See reference 14] currently state that competent authorities responsible for carrying out HRA should treat Ramsar sites in the same way as SACs and SPAs. The legislative requirement for HRA does not apply to other nationally designated wildlife sites such as Sites of Special Scientific Interest or National Nature Reserves.

1.14 For simplicity, and in line with common usage, this report uses the term 'Habitats Site' to refer to all types of designated site within the 'National Site Network' for which Government guidance [See reference 15] requires an HRA.

1.15 The overall purpose of an HRA is to conclude whether or not a proposal or policy, or a whole development plan would adversely affect the integrity of the Habitats Site in question. This is judged in terms of the implications of the plan for a site's 'qualifying features' (i.e. those Annex I habitats, Annex II species, and Annex I bird populations for which it has been designated). Significantly, HRA is based on the precautionary principle. Where uncertainty or doubt remains, an adverse effect should be assumed.

Structure of this report

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

- **Chapter 2** summarises the content of the ELJWP, which is the subject of this report, as relevant to the HRA.
- **Chapter 3** describes the proposed approach to the HRA, taking into account the requirements of the Habitats Regulations and relevant case law.
- **Chapter 4** describes the findings of the screening stage of the HRA.
- **Chapter 5:** describes the findings of the Appropriate Assessment stage of the HRA.
- **Chapter 6:** Summarises the HRA conclusions and describes the next steps to be undertaken.

1.17 The information in the main body of the report is supported by the following appendices:

- **Appendix A** presents the attributes of Habitats Sites screened into the HRA.

- **Appendix B** presents the HRA screening of the policies of the Regulation 18 ELJWP.

Chapter 2

East London Joint Waste Plan

2.1 The ELJWP will set out how and where waste will be managed and will be used to determine planning applications affecting the management of waste in the four East London boroughs that are the joint authorities preparing the plan (Barking & Dagenham, Havering, Newham and Redbridge).

2.2 The ELJWP will form part of the Development Plan for each of the boroughs, sitting alongside separate Local Plans that are concerned with other forms of development such as housing and that related other forms of employment.

2.3 The draft plan has set out a Joint Waste Plan Vision and 8 strategic objectives:

- Strategic Objective 1: Significantly Reduce Waste Production Overall;
- Strategic Objective 2: All Built Development Will Contribute to the Achievement of a Fully Functioning Circular Economy by 2041;
- Strategic Objective 3: Appropriately Locate Waste Management Capacity;
- Strategic Objective 4: Contribute to East London's Regeneration and Economic Growth;
- Strategic Objective 5: Achieve Net Zero Waste Management;
- Strategic Objective 6: Optimise Existing Waste Management Capacity;
- Strategic Objective 7: Minimise Transportation and Establish Alternative Infrastructure; and
- Strategic Objective 8: Restrict Landfilling to Exceptional Circumstances.

2.4 There are six strategic policies set out in the draft ELJWP. In some cases there may be overlap between the policies of the Borough's Local Plans and the

policies in this Plan, where this occurs the latest policy to have been adopted will take precedence.

2.5 The policies align with the strategic objectives as below:

- Strategic Objective 1: Policy JWP1: Circular Economy & Policy JWP5: Energy from Waste;
- Strategic Objective 2: Policy JWP1: Circular Economy & Policy JWP4: Design of Waste Management Facilities;
- Strategic Objective 3: Policy JWP2: Safeguarding and Provision of Waste Capacity & Policy JWP 3 Prevention of Encroachment;
- Strategic Objective 4: Policy JWP2: Safeguarding and Provision of Waste Capacity & Policy JWP4: Design of Waste Management Facilities;
- Strategic Objective 5: Policy JWP1: Circular Economy, Policy JWP4: Design of Waste Management Facilities & Policy JWP6: Deposit of Waste on Land;
- Strategic Objective 6: Policy JWP5: Energy from Waste;
- Strategic Objective 7: Policy JWP4: Design of Waste Management Facilities; and
- Strategic Objective 8: Policy JWP1: Circular Economy.

2.6 It is estimated that there is currently 2,570,000tpa of waste management capacity in East London which is more than sufficient to manage the London Plan apportioned forecast arisings to 2041. The draft plan states there is sufficient waste management capacity in East London to meet requirements over the plan period. In light of this, the ELJWP does not allocate specific areas of land for the development of additional waste management facilities. This means the status of the sites allocated for the development of waste management capacity in the current East London Waste Plan would fall away.

2.7 Through the plan-making process, a number of existing waste sites have been identified as being surplus to requirements whose re-development will achieve wider planning objectives (i.e. have been identified for other uses either

in borough Local Plans or through planning consents) and so are no longer safeguarded for waste use; however all other existing waste sites are safeguarded, as listed in Appendices 1 & 2 of the ELJWP.

2.8 For the purposes of this HRA of the Draft ELJWP, it is currently assumed that waste activities could occur at any existing safeguarded waste site, until such time as the list of sites earmarked for release from safeguarding status is finalised. As there will be no additional waste capacity resulting from the ELJWP, development in new locations would not be expected to provide additional waste management capacity, but is more likely to replace existing capacity lost elsewhere. Within existing waste sites, changes arising from the plan that are relevant to the HRA are those that will result in changes in operation (e.g. changes in waste management process and/or vehicles trips to a site) that alter impact pathways or scale of impact.

Chapter 3

Approach to HRA

3.1 This chapter describes the approach that will be taken to the HRA of the ELJWP throughout its development.

Stages of HRA

3.2 The HRA of development plans is undertaken in stages (as described below) and should conclude whether or not a proposal would adversely affect the integrity of the Habitats Site/s in question.

3.3 The outputs will be reported to and considered by the joint authorities, as the competent authority, before adopting the Plan.

3.4 The HRA also requires close working with Natural England as the statutory nature conservation body [See reference 16] in order to obtain the necessary information, agree the process, outcomes and mitigation proposals. Non-statutory consultees may also be in a strong position to provide advice and information throughout the process; for example the Environment Agency, as it is required to undertake HRA for its existing licences and future licensing of activities. Chapter 6 provides further information on anticipated consultation and next steps.

Requirements of the Habitats Regulations

3.5 In assessing the effects of a development plan in accordance with Regulation 105 of the Conservation of Habitats and Species Regulations 2017 (as amended) (the 'Habitats Regulations'), there are potentially two tests to be applied by the competent authority: a 'Significance Test', followed if necessary

by an Appropriate Assessment which would 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, proceed to Step 2.
- Step 2: Under Reg. 105(1)(a), consider whether the plan is likely to have a significant effect on a Habitats Site, either alone or in combination with other plans or projects (the 'Significance Test'). If yes, proceed to Step 3.

3.1 [Steps 1 and 2 are undertaken as part of Stage 1: HRA Screening.]

- Step 3: Under Reg. 105(1), make an Appropriate Assessment of the implications for the Habitats 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.

3.2 [This step is undertaken during Stage 2: Appropriate Assessment.]

- 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 would not adversely affect the integrity of a Habitats Site.

3.3 [This step follows Stage 2 where a finding of 'no adverse effect' is concluded. If it cannot be it proceeds to Step 5 as part of Stage 3 of the HRA process].

- Step 5: Under Reg. 107, if Step 4 is unable to rule out adverse effects on the integrity of a Habitats Site and no alternative solutions exist then the competent authority may nevertheless agree to the plan or project if it must be carried out for 'imperative reasons of overriding public interest' (IROPI).

3.4 [This step is undertaken during Stage 3: Assessment where no alternatives exist, and adverse impacts remain taking into account mitigation].

Typical stages

The following sections summarise the stages and associated tasks and outcomes typically involved in carrying out a full HRA of a development plan, based on various guidance documents [See reference 17] [See reference 18] [See reference 19]. This report presents the outputs of the first tasks outlined below, under Stage 1: HRA Screening and presents the outputs of Stage 2: Appropriate Assessment.

Stage 1: HRA screening

Task

- Description of the development plan and confirmation that it is not directly connected with or necessary to the management of Habitats Sites.
- Identification of potentially affected Habitats Sites and their conservation objectives [See reference 20].
- Assessment of likely significant effects of the development plan alone or in combination with other plans and projects (without consideration of avoidance or reduction ('mitigation') measures) [See reference 21].

Outcome

- Where effects are unlikely, prepare a 'finding of no significant effect report'.
- Where effects judged likely, or lack of information to prove otherwise, proceed to Stage 2.

Stage 2: Appropriate Assessment (where Stage 1 does not rule out likely significant effects)

Task

- Information gathering (development plan and Habitats Sites) [See reference 22].
- Impact prediction.
- Evaluation of development plan impacts in view of conservation objectives of Habitats Sites.
- Where impacts are considered to directly or indirectly affect qualifying features of Habitats Sites, identify how these effects will be avoided or reduced ('mitigation').

Outcome

- Appropriate assessment report describing the plan, Habitats Site baseline conditions, the adverse effects of the plan on the Habitats Site, how these effects will be avoided or reduced, 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.

Stage 3: Assessment where no alternatives exist and adverse impacts remain taking into account mitigation

Task

- Identify 'imperative reasons of overriding public interest' (IROPI).

- Demonstrate no alternatives exist.
- Identify potential compensatory measures.

Outcome

- This stage should be avoided if at all possible. The test of IROPI and the requirements for compensation are extremely onerous.

3.5 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 or reduce effects. The need to consider alternatives could imply more onerous changes to a plan document. It is generally understood that so called ‘imperative reasons of overriding public interest’ (IROPI) are likely to be justified only very occasionally and would involve engagement with the Government.

Case law

3.6 This HRA is prepared in accordance with relevant case law, including most notably the ‘*People over Wind*’ and ‘*Holohan*’ rulings from the Court of Justice for the European Union (CJEU).

3.7 The *People over Wind, Peter Sweetman v Coillte Teoranta* (April 2018) judgment ruled that Article 6(3) of the Habitats Directive should be interpreted as meaning that mitigation measures should be assessed as part of an Appropriate Assessment and should not be taken into account at the screening stage. 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.”

3.8 In light of the above, the HRA screening stage does not rely upon avoidance or mitigation measures to draw conclusions as to whether the ELJWP could result in likely significant effects on Habitats Sites, with any such measures being considered at the Appropriate Assessment stage as relevant.

3.9 This HRA is also to be undertaken in line with the *Holohan v An Bord Pleanála* (November 2018) judgment which stated that:

“Article 6(3) of Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora must be interpreted as meaning that an ‘appropriate assessment’ must, on the one hand, catalogue the entirety of habitat types and species for which a site is protected, and, on the other, identify and examine both the implications of the proposed project for the species present on that site, and for which that site has not been listed, and the implications for habitat types and species to be found outside the boundaries of that site, provided that those implications are liable to affect the conservation objectives of the site.”

3.10 In undertaking HRA, LUC considers the potential for effects on species and habitats, including those not listed as qualifying features, to result in secondary effects upon the qualifying features of Habitats Sites, including the potential for complex interactions and dependencies. In addition, the potential for offsite impacts, such as through impacts to functionally linked land, and or species and habitats located beyond the boundaries of Habitats Sites, but which may be important in supporting the ecological processes of the qualifying features, is considered.

3.11 Similarly, effects on both qualifying and supporting habitats and species on functionally linked land (FLL) or habitat are considered, in line with the High

Court judgment in *RSPB and others v Secretary of State and London Ashford Airport Ltd* [2014 EWHC 1523 Admin] (paragraph 27), which stated that:

“There is no authority on the significance of the non-statutory status of the FLL. However, the fact that the FLL was not within a protected site does not mean that the effect which a deterioration in its quality or function could have on a protected site is to be ignored. The indirect effect was still protected. Although the question of its legal status was mooted, I am satisfied that while no particular legal status attaches to FLL, the fact that land is functionally linked to protected land means that the indirectly adverse effects on a protected site, produced by effects on FLL, are scrutinised in the same legal framework just as are the direct effects of acts carried out on the protected site itself. That is the only sensible and purposive approach where a species or effect is not confined by a line on a map or boundary fence. This is particularly important where the boundaries of designated sites are drawn tightly as may be the UK practice”.

3.12 In addition to this, HRA takes into consideration the ‘*Wealden*’ judgment from the CJEU.

3.13 *Wealden District Council v Secretary of State for Communities and Local Government, Lewes District Council and South Downs National Park Authority* (2017) ruled that it was not appropriate to scope out the need for a detailed assessment for an individual plan or project based on the annual average daily traffic (AADT) figures detailed in the Design Manual for Roads and Bridges or the critical loads used by Defra or Environmental Agency without considering the in-combination impacts with other plans and projects.

3.14 In light of this judgment, the HRA will therefore consider traffic growth based on the effects of development from the ELJWP in combination with other drivers of growth such as development proposed in neighbouring boroughs and demographic change.

3.15 The HRA will also take into account the *Grace and Sweetman* (July 2018) judgment from the CJEU which stated that:

“there is a distinction to be drawn between protective measures forming part of a project and intended to avoid or reduce any direct adverse effects that may be caused by the project in order to ensure that the project does not adversely affect the integrity of the area, which are covered by Article 6(3), and measures which, in accordance with Article 6(4), are aimed at compensating for the negative effects of the project on a protected area and cannot be taken into account in the assessment of the implications of the project.”

“As a general rule, any positive effects of the future creation of a new habitat, which is aimed at compensating for the loss of area and quality of that habitat type in a protected area, are highly difficult to forecast with any degree of certainty or will be visible only in the future.”

“A mitigation strategy may only be taken into account at AA (a.6(3)) where the competent authority is “sufficiently certain that a measure will make an effective contribution to avoiding harm, guaranteeing beyond all reasonable doubt that the project will not adversely affect the integrity of the area.”

“Otherwise it falls to be considered to be a compensatory measure to be considered under a.6(4) only where there are: ‘imperative reasons of overriding public interest’”

3.16 The Appropriate Assessment of the ELJWP will therefore only consider the existence of measures to avoid or reduce its direct adverse effects (mitigation) if the expected benefits of those measures are beyond reasonable doubt at the time of the assessment.

Screening methodology

3.17 HRA Screening of the ELJWP will be undertaken in line with current available guidance and seek to meet the requirements of the Habitats Regulations.

3.18 The purpose of the screening stage is to:

- Identify all aspects of the plan which would have no effect on a Habitats Site, so that that they can be eliminated from further consideration in respect of this and other plans;
- Identify all aspects of the plan which would not be likely to have a significant effect on a Habitats Site (i.e. would have some effect, because of links/connectivity, but which are not significant), either alone or in combination with other aspects of the same plan or other plans or projects, which therefore do not require Appropriate Assessment; and
- Identify those aspects of the plan where it is not possible to rule out the risk of significant effects on a Habitats Site, either alone or in combination with other plans or projects. This provides a clear scope for the parts of the plan that will require appropriate assessment.

3.19 Each ELJWP policy will be considered, alone and in-combination with plans or projects from neighbouring authorities.

3.20 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 unlikely, based on current knowledge and the information available, that a ELJWP policy would have a significant effect on a Habitats Site.

3.21 The screening assessment (**Chapter 4**) considers the potential for likely significant effects resulting from each policy in the ELJWP, without taking mitigation (e.g. embedded in policy) into account, in accordance with the 'People over Wind' judgment.

3.22 For some types of impacts, the potential for likely significant effects can be determined on a proximity basis, using GIS data to determine the proximity of potential development locations to the Habitats 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, where assumptions have been made or where additional information has been utilised to determine whether the ELJWP is likely to have a significant effect, these are set out in **Chapter 4**.

3.23 **Chapter 3** and **Appendix B** provide the findings of the HRA screening of the ELJWP.

3.24 The Appropriate Assessment within **Chapter 5** focuses on those policies that have been screened in.

Potential impacts of the ELJWP on Habitats Sites

3.25 In our experience of HRA of waste plans, and based on previous statutory consultee comments on HRAs undertaken elsewhere, the types of development (and related activities) that are permitted by waste plans have the potential to result in a range of impacts that could affect Habitats Sites, including air pollution from changes in traffic movements and non-physical disturbance (noise, vibration or light) from new development or changes in waste management activity. These impacts could occur directly at the Habitats Sites or indirectly, for example at habitats relied on by qualifying species from the Habitats Sites – known as ‘functionally linked habitat’.

3.26 For each of the ELJWP policies, consideration is given to the type of development or activity the policy could result in, impacts that could arise from that type of development or activity, and then whether there is an impact pathway to any Habitats Sites sensitive to that impact.

3.27 Further consideration of the types of impact that could be relevant to the ELJWP and possible impact pathways to Habitats Sites is provided in **Chapter 4**.

Identification of Habitats Sites which may be affected by the ELJWP

3.28 To initiate the search of Habitats Sites that could potentially be affected by the ELJWP, it is established practice in HRAs to consider Habitats Sites within the local planning authority area covered by a plan, and also within a buffer distance from the boundary of the plan area.

3.29 A distance of 15km from the ELJWP area boundary has been used as a starting point to identify Habitats Sites that could be affected by impacts relating to the ELJWP. The use of this distance presents a precautionary approach to the screening assessment; however, consideration is also given to Habitats Sites beyond this distance that may be functionally connected to the plan area, for example through hydrological pathways.

3.30 As shown in **Figure 3.1**, one Habitats Site is within the ELJWP area:

- Epping Forest SAC (partly within the London Borough of Redbridge).

3.31 Habitats Sites which lie outside of the ELJWP area but within 15km are:

- Lee Valley SPA and Ramsar site;
- Wormley Hoddesdonpark Woods SAC; and
- Thames Estuary and Marshes SPA and Ramsar site.

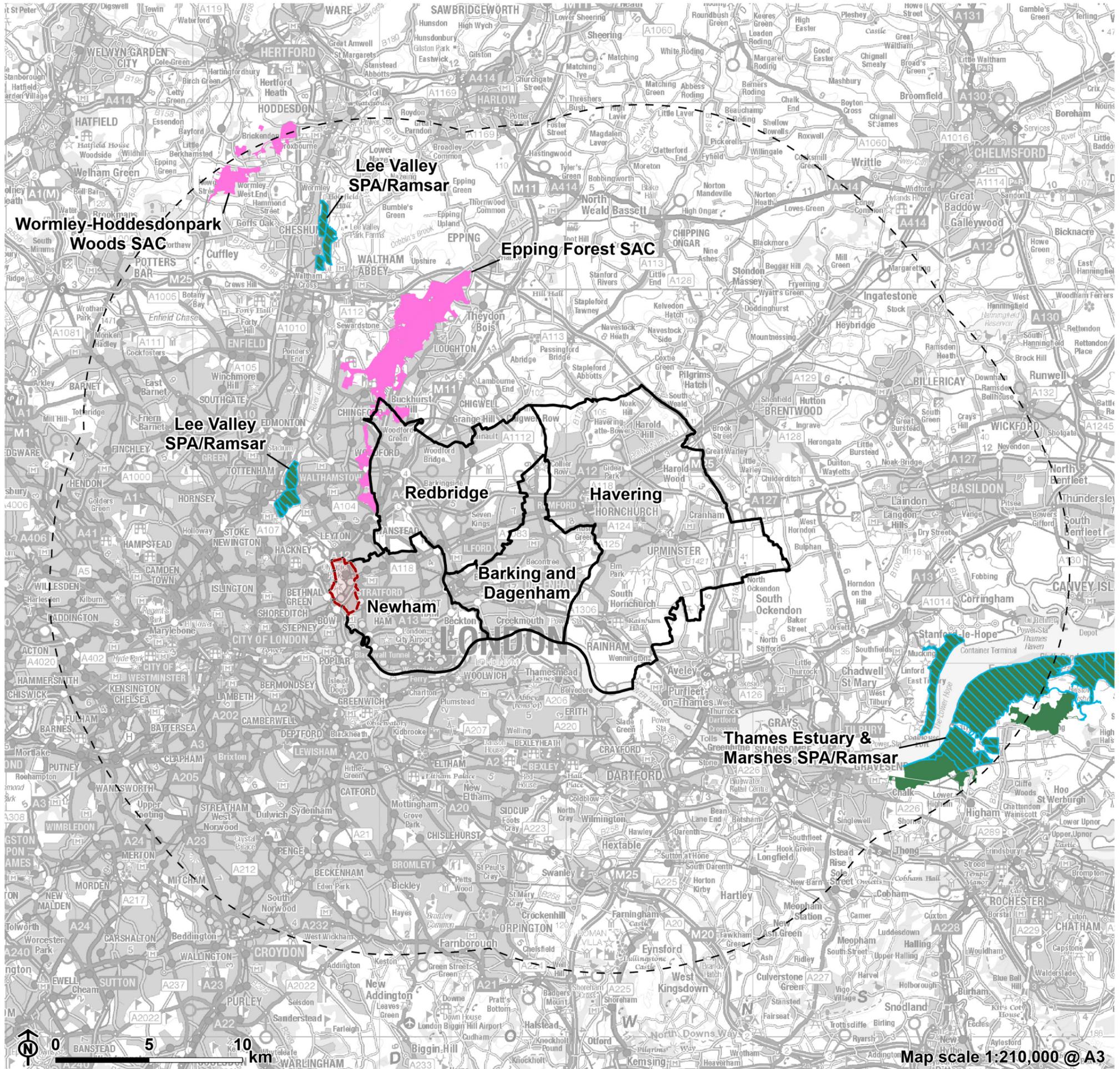


Figure 3.1: Habitat Sites within 15km of the Plan Area

- London Borough boundary
- Plan area 15km buffer
- London Legacy Development Corporation within plan area
- Special Area of Conservation
- Special Protection Area
- Ramsar site

3.32 The assessment also takes into account areas that may be functionally linked to the Habitats Sites. The term ‘functional linkage’ can be used to refer to the role or ‘function’ that land or other habitats beyond the boundary of a Habitats Site might fulfil in supporting the species populations for which the site was designated or classified. Such an area is therefore ‘linked’ to the site in question because it provides a (potentially important) role in maintaining or restoring a protected population at favourable conservation status.

3.33 While the boundary of a Habitats Site will usually be drawn to include key supporting habitat for a qualifying species, this cannot always be the case where the population for which a site is designated or classified is particularly mobile. Individuals of the population will not necessarily remain in the site all the time. Sometimes, the mobility of qualifying species is considerable and may extend so far from the key habitat that forms the SAC or SPA that it would be entirely impractical to attempt to designate or classify all of the land or sea that may conceivably be used by the species. HRA therefore considers whether any qualifying species of nearby (or linked) Habitats Sites make use of functionally linked habitats, and the impacts that could affect those habitats.

3.34 The following Habitats Sites are designated for mobile species, which may use habitats outside the designated Habitats Sites:

- Lee Valley SPA and Ramsar site, designated for bird species: great bittern, northern shoveler, gadwall). Although the lower reaches of the River Lee/Lea pass along the edge of the plan area, the open water and reedbed habitats that these species prefer occurs in the reservoirs of the upper Lee, outside the ELJWP area.
- Thames Estuary and Marshes SPA and Ramsar site, designated for bird species: pied avocet, ringed plover, grey plover, black-tailed godwit, red knot, dunlin, common redshank). These species favour coastal and estuarine habitats including marshes, mudflats, sandy beaches. Although there are some wetland habitats in the east of the plan area (by the Thames and Rainham Creek), these are c.15km from the SPA/Ramsar and the sites’ species are unlikely to depend upon them as functionally linked habitat.

- Epping Forest SAC, designated for stag beetle. Due to the rarity of many of the qualifying invertebrate species, there is very limited published data on their use of habitats located outside of Habitats Sites; however it is considered precautionary to assume that stag beetles may rely on suitable habitat (i.e. woodland habitats with decaying wood) within 500m of Habitats Site.

3.35 Functionally linked habitat used by birds from the SPA and Ramsar sites is not likely to occur within the plan area and is therefore scoped out. However, the HRA considers the potential for ELJWP policies to result in changes that affect potential functionally linked habitats used by stag beetles within 500m of Epping Forest SAC (in Redbridge) and habitats used by birds from the SPA and Ramsar sites that are beyond the plan area.

3.36 Detailed information about each Habitats Site screened into the HRA is provided in **Appendix A**, described with reference to Standard Data Forms, for the SPAs and SACs, Information Sheets for the Ramsar sites [See reference 23], and Natural England's Site Improvement Plans [See reference 24]. Natural England's conservation objectives [See reference 25] and any supplementary advice on conserving and restoring site features for the SPAs and SACs have also been reviewed. All of the conservation objectives state that site integrity must be maintained or restored by maintaining or restoring the habitats of qualifying features, the supporting processes on which they rely, and populations of qualifying species.

Assessment of 'likely significant effect'

3.37 As required under Regulation 105 of The Conservation of Habitats and Species Regulations 2017 (SI 2017/1012), as amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (SI 2019/579), an assessment will be undertaken of the 'likely significant effects' of the policy approaches set out within the emerging ELJWP. The assessment will be undertaken to identify which policies would be likely to have a significant effect

on Habitats Sites in ELJWP area (+15km). This assessment will need to be repeated with each HRA iteration of the ELJWP.

3.38 A risk-based approach involving the application of the precautionary principle will be adopted in the assessment, such that a conclusion of ‘no significant effect’ will only be reached where it is considered very unlikely, based on current knowledge and the information available, that a proposal in the ELJWP would have a significant effect on the integrity of a Habitats Site.

Interpretation of ‘likely significant effect’

3.39 Relevant case law helps to interpret when effects should be considered as a Likely Significant Effect (LSE), when carrying out HRA of a development plan.

3.40 In the Waddenzee case [See reference 26], the European Court of Justice ruled on the interpretation of Article 6(3) of the Habitats Directive (translated into Reg. 102 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); and
- 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 An opinion delivered to the Court of Justice of the European Union [See reference 27] commented that:

“The requirement that an effect in question be ‘significant’ exists in order to lay down a de minimis 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 minimis; referring to such cases as those “which 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’.

3.43 The HRA screening assessment therefore considers whether the ELJWP policies could have likely significant effects either alone or in combination.

In-combination effects

3.44 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, the Screening assessment must consider whether any impacts identified from the ELJWP may combine with other plans or projects to give rise to significant effects in-combination.

3.45 If the HRA Screening determines that the ELJWP will have a particular type of effect (e.g. due to water pollution) on its own but it is not likely to be significant, the in-combination assessment at Screening stage will need to determine whether there may also be the same type of effect from other plans or projects that could combine with the ELJWP to produce a significant effect. If so, this likely significant effect arising from the ELJWP in combination with other plans or projects would then need to be considered through the Appropriate Assessment stage to determine if it would have an adverse effect on integrity of the relevant Habitats Site. However, if the screening assessment concludes that

there is no impact pathway by which development proposed in the ELJWP could affect the conditions necessary to maintain qualifying features of a Habitats Site, then there will be no in-combination effects to assess at the Screening or Appropriate Assessment stage. This approach accords with recent guidance on HRA [\[See reference 28\]](#).

3.46 If impact pathways are found to exist for a particular type of effect but it is not likely to be significant from the ELJWP alone, the in-combination assessment will identify which other plans and programmes could result in the same impact on the same Habitats Site. This will focus on planned growth (including housing, employment, transport, minerals and waste) around the affected site, or along the impact corridor, for example, if impacts could arise as a result of changes to a waterway, then planned growth in local authorities along that waterway will be considered.

3.47 Where required, the potential for in-combination impacts therefore focusses on plans prepared by local authorities that overlap with the Habitats Site that are within the scope of the HRA. The findings of any associated HRA work for those plans are reviewed where available. Where relevant, any strategic projects in the area that could have in-combination effects with the ELJWP are also identified and reviewed.

3.48 The online HRA Handbook suggests the following plans and projects may be relevant to consider as part of the in-combination assessment:

- Applications lodged but not yet determined, including refusals subject to an outstanding appeal or legal challenge;
- Projects subject to periodic review e.g. annual licences, during the time that their renewal is under consideration;
- Projects authorised but not yet started;
- Projects started but not yet completed;
- Known projects that do not require external authorisation;
- Proposals in adopted plans; and

- Proposals in draft plans formally published or submitted for final consultation, examination or adoption.

3.49 The need for in-combination assessment also arises at the Appropriate Assessment stage, as discussed in the Appropriate Assessment section below.

Appropriate Assessment methodology

3.50 Following the screening stage, if likely significant effects on the Habitats Site 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 the Habitats Site, in view of their conservation objectives. European Commission Guidance 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 the Habitats Site with respect to their conservation objectives and to their structure and function.

Assessing the effects on site integrity

3.51 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. The 'Holohan' judgement also clarifies that effects on species and habitats not listed as qualifying features, but which could result in secondary effects upon the qualifying features of Habitats Sites also need to be considered. The Appropriate Assessment, if required, will build upon the information set out in Appendix A of this report, to consider the characteristics of supporting habitats and species that could be affected by impacts identified at the screening stage.

3.52 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.

3.53 A conclusion needs to be reached as to whether or not the ELJWP would adversely affect the integrity of the Habitats Site. As stated in the European Commission Guidance, assessing the effects on the site(s) integrity involves considering whether the predicted impacts of the ELJWP policies (either alone or in combination) have the potential to:

- Cause delays to the achievement of conservation objectives for the site;
- Interrupt progress towards the achievement of conservation objectives for the site;
- Disrupt those factors that help to maintain the favourable conditions of the site;
- Interfere with the balance, distribution and density of key species that are the indicators of the favourable condition of the site;
- Cause changes to the vital defining aspects (e.g. nutrient balance) that determine how the site functions as a habitat or ecosystem;
- Change the dynamics of relationships that define the structure or function of the site (e.g. relationships between soil and water, or animals and plants);
- Interfere with anticipated natural changes to the site;
- Reduce the extent of key habitats or the population of key species;
- Reduce the diversity of the site;
- Result in disturbance that could affect the population, density or balance between key species;
- Result in fragmentation; or
- Result in the loss of key features.

3.54 The conservation objectives for each Habitats Site (**Appendix A**) are generally to maintain the qualifying features in favourable condition. The Site Improvement Plans for each Habitats Site provide a high-level overview of the issues (both current and predicted) affecting the condition of the European features on the site(s) and outline the priority measures required to improve the

condition of the features. These have been drawn on to help to understand what is needed to maintain the integrity of the Habitats Site .

3.55 For each Habitats Site where an uncertain or likely significant effect is identified in relation to the ELJWP, the potential impacts will be set out and judgements made (based on the information available) regarding whether the impact will have an adverse effect on the integrity of the site. Consideration will be 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.

Chapter 4

HRA Screening

4.1 This chapter sets out the assumptions used in screening the ELJWP policies, along with the conclusions of the screening process (see also **Appendix B**).

Physical damage and loss of habitat

4.1 New development or changes to waste management activities resulting from the ELJWP would take place within the ELJWP area and largely within existing waste sites. None of the existing waste sites are within Habitats Sites or could be functionally linked habitats; however, the following policies permit development outside of existing waste sites, that could in theory (if mitigation is not taken into account; see Chapter 5) fall within a Habitats Site or its functionally linked habitats:

- Policy JWP2: Safeguarding and Provision of Waste Capacity;
- Policy JWP5: Energy from Waste; and
- Policy JWP6: Deposit of Waste on Land.

4.2 Epping Forest SAC is within the plan area and may have functionally linked habitats used by stag beetle (within 500m of the SAC) that are also within the plan area.

In relation to physical damage and loss of habitat, likely significant effects (for the ELJWP alone) could not be ruled out for:

- Epping Forest SAC (directly or via functionally linked habitats)

This will be considered further in the Appropriate Assessment

Non-physical disturbance

4.3 Noise and vibration effects, e.g. during the operation of waste management sites, are most likely to disturb bird species and are thus a key consideration with respect to Habitats 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 street lamps, flood lighting and security lights) is most likely to affect bat populations and some nocturnal bird species, and therefore have potential to adversely effect the integrity of Habitats Sites where bats or nocturnal birds are a qualifying feature.

4.4 It has been assumed (on a precautionary basis and based on our experience of previous HRAs and consultation on those with Natural England) that the effects of noise, vibration and light pollution are capable of causing an adverse effect if development takes place within 500m of a Habitats Site (or functionally linked habitat) with qualifying features sensitive to these disturbances.

4.5 Habitats Sites that may be adversely affected by noise, vibration and light pollution as a result of the ELJWP are those that are both within the ELJWP area or within 500m of its boundary and that also support bird species. The SPA and Ramsar sites and their potential functionally linked land are beyond 500m from the ELJWP boundary. All other Habitats Sites are located over 500m from the ELJWP area boundary at the closest point and/or do not support species likely to be significantly affected as a result of noise, vibration and light pollution.

Non-physical disturbance is screened out as there is no impact pathway.
No Appropriate Assessment is required.

Air pollution

Dust

4.6 Air pollution can be caused by the creation of dust from construction or operation. This can smother terrestrial habitats or increase the turbidity of freshwater, estuarine and coastal habitats, preventing natural processes. It can also contribute to nutrient enrichment, which can lead to changes in the rate of vegetative succession and habitat composition.

4.7 The effects of dust creation are most likely to be significant if development takes place within 500m of a Habitats Site with qualifying features sensitive to these effects, such as terrestrial, freshwater or estuarine and coastal habitats, or sites designated for habitats and plant species. This is the distance that, in our experience, provides a robust assessment of effects in plan-level HRA and meets with the agreement of Natural England.

4.8 Habitats Sites that may be adversely affected by the creation of dust as a result of development as part of the ELJWP are those within the ELJWP area or within 500m of its boundary with habitats sensitive to dust, i.e.:

- Epping Forest SAC (qualifying habitats).

4.9 Epping Forest SAC's stag beetle population may be indirectly affected by dust, if the impact of dust is significant enough to reduce the extent of woodland that stag beetle rely on. However, the scale of potential impact from dust due to the ELJWP is not considered likely to have significant effects on stag beetle, either within the SAC or at any functionally linked land within 500m of the SAC.

4.10 All other Habitats Sites are located over 500m from the ELJWP area boundary at the closest point and/or do not support qualifying features likely to be sensitive to the effects of dust.

4.11 Policies that could result in activities that produce dust are:

- Policy JWP2: Safeguarding and Provision of Waste Capacity; and
- Policy JWP6: Deposit of Waste on Land.

In relation to dust, likely significant effects (for the ELJWP alone) could not be ruled out for:

- Epping Forest SAC (direct impacts only)

This will be considered further in the Appropriate Assessment

Industrial emissions

4.12 Industrial emissions may arise from processes such as energy from waste, which can produce air pollutants that include acid gases, particulates, dioxins and heavy metals.

4.13 The area over which industrial emissions can have an adverse effect depends on the nature of the emissions and factors such as stack height and topography of the surrounding area.

4.14 Policy JWP5: Energy from Waste permits development that results in industrial emissions.

4.15 Environment Agency guidance on environmental permitting **[See reference 29]** uses a distance of 10km to screen the potential for effects on Habitats Sites from industrial emissions. Habitats Sites within 10km of the ELJWP boundary that are sensitive to air pollution are:

- Epping Forest SAC;
- Lee Valley SPA and Ramsar site; and
- Thames Estuary & Marshes SPA and Ramsar site.

4.16 As with dust (paragraph 4.9) stag beetles may be indirectly affected by air pollution, if it is significant enough to alter its habitat, but likely significant effects are not anticipated for stag beetle at Epping Forest SAC or its functionally linked land. Similarly, air pollution from industrial emissions from Policy JWP5 would be unlikely to affect functionally linked habitats associated with the Lee Valley and Thames Estuary & Marshes SPA and Ramsar sites to the extent that the qualifying bird species of the Habitats Sites was significantly affected. Open water habitats and highly dynamic estuary habitats are not particularly sensitive to nitrogen from air pollution. Functionally linked habitats are therefore screened out in relation to industrial emissions.

In relation to industrial emissions, likely significant effects (for the ELJWP alone or in-combination) could not be ruled out for :

- Epping Forest SAC (direct impacts only);
- Lee Valley SPA and Ramsar site (direct impacts only); and
- Thames Estuary & Marshes SPA and Ramsar site (direct impacts only).

This will be considered further in the Appropriate Assessment

Vehicle emissions

4.17 Air pollution can be caused by the deposition of pollutants to the ground and vegetation, which can alter the characteristics of the soil, affecting the pH and nitrogen (N) availability that can then affect plant health, productivity and species composition.

4.18 Air pollution is most likely to affect Habitats Sites where freshwater and estuarine habitats, nitrogen limited terrestrial habitats, or plants are the qualifying features. However, some qualifying animal species may also be affected directly or indirectly, by deterioration in habitat as a result of air pollution.

4.19 In terms of vehicle emissions, nitrogen oxides (NO_x, i.e. NO and NO₂) are considered to be the key pollutants, although ammonia can also arise from vehicle emissions. Deposition of nitrogen compounds may lead to both soil and freshwater acidification, and NO_x can cause eutrophication of soils and water.

4.20 The DMRB Guidance for the assessment of local air quality [\[See reference 30\]](#) in relation to highways developments provides criteria that should be applied to ascertain whether there are likely to be significant impacts associated with routes or corridors. Based on the DMRB guidance, roads that should be assessed are those where: Daily traffic flows will change by 1,000 AADT (Annual Average Daily Traffic) or more; or

- Heavy duty vehicle (HDV) flows will change by 200 AADT or more; or
- Daily average speed will change by 10km/hr or more; or
- Peak hour speed will change by 20km/hr or more; or
- Road alignment will change by 5m or more.

4.21 In line with the Wealden judgment [\[See reference 31\]](#), 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), then these should be included in road traffic modelling by the local authority whose plan or project is being assessed. The screening criteria of 1,000 AADT should then be applied to the traffic flows of the plans in combination.

4.22 Policies within the ELJWP that could alter traffic flows and therefore air pollution levels are:

- Policy JWP2: Safeguarding and Provision of Waste Capacity;
- Policy JWP5: Energy from Waste; and
- Policy JWP6: Deposit of Waste on Land.

4.23 The JNCC's 'Guidance on decision-making thresholds for air pollution' [\[See reference 32\]](#) states that, when assessing the air pollution impacts of a

development plan, 10km should be used as a zone of influence within which the plan is likely to have significant effects on air quality.

4.24 Typically, it is the roads forming part of the strategic road network (motorways and trunk roads) that experience a significant increase in vehicle traffic as a result of development (e.g. greater than 200 AADT HDVs), although there are sometimes exceptions. The 'affected road network' is confirmed through traffic modelling, in line with DMRB guidance; however roads within 10km of the plan area and within 200m of the Habitats Sites considered in this HRA include:

- Epping Forest SAC (directly): A406 (north circular), A104, A1199, A121, which are all within of adjacent to the plan area; and several other roads to the north of the plan area.
- Lee Valley SPA/Ramsar (directly): A503, which links the site to the plan area.

4.25 The portion of the Thames Estuary & Marshes SPA and Ramsar site that is within 10km of the Plan area is not adjacent to any major roads and is screened out in relation to vehicle emissions.

4.26 As with dust and industrial emissions (paragraph 4.16) effects on functionally linked habitats are screened out in relation to vehicle emissions.

In relation to air pollution, likely significant effects (from the ELJWP alone or in-combination) could not be ruled out at:

- Epping Forest SAC (direct impacts only); and
- Lee Valley SPA and Ramsar site (direct impacts only).

Recreation and urban impacts

4.27 Recreational activities and human presence can result in significant effects on Habitats Sites as a result of erosion and trampling, associated impacts such as fire and vandalism or disturbance to sensitive features, such as birds, through both terrestrial and water-based forms of recreation.

4.28 The ELJWP will not alter patterns of recreation and urban impacts.

Recreation and urban impacts are screened out as there is no impact pathway. No Appropriate Assessment is required.

Pests and vermin

4.29 There are potential vermin or pest impacts where waste is managed in the open air, for example composting or landfill. However, it is assumed that impacts from waste facilities would not be significant unless the potential waste site extends within the boundary of a Habitats Site, or would affect off-site habitats that sustain the site.

4.30 Development due to the ELJWP would largely occur at existing waste sites, which are not within a Habitats Site or likely to be functionally linked land; however, the following policy could permit landfill outside of existing waste sites:

- Policy JWP6: Deposit of Waste on Land.

4.31 Epping Forest SAC is within the plan area and may have functionally linked habitats used by stag beetle (within 500m of the SAC) that are also within the plan area.

In relation to pests and vermin, likely significant effects (for the ELJWP alone) could not be ruled out for:

- Epping Forest SAC (directly or via functionally linked habitats)

This will be considered further in the Appropriate Assessment

Water quality and quantity

4.32 Changes in water quality or quantity can affect Habitats Sites due to:

- Pollution from direct run-off between new development and waterbodies.
- Abstraction for water supply affecting the hydrology of the aquifer or waterbody being abstracted;
- Discharge of wastewater affecting water quality of receiving water body (the sea), for example due to nutrient loading or other pollutants; and

4.33 Habitats Sites with the potential to be affected by changes in water quantity or quality that result from development provided for by the ELJWP are principally those that support qualifying features of freshwater, estuarine, coastal and marine habitats either lie within the ELJWP area boundary or that are otherwise hydrologically connected to the ELJWP, i.e.:

- Lee Valley SPA and Ramsar site; and
- Thames Estuary and Marshes SPA and Ramsar site.

Direct pollution

4.34 Direct pollution can occur during construction or due to runoff of surface water and the distance at which this impact can occur depends on the topography of a site.

4.35 The following policies could result in changes that could cause direct pollution of water:

- Policy JWP2: Safeguarding and Provision of Waste Capacity; and
- Policy JWP6: Deposit of Waste on Land.

4.36 Lee Valley SPA and Ramsar site is upstream of the plan area and therefore direct pollution of this site will not occur. Thames Estuary and Marshes SPA and Ramsar site is downstream (along the River Thames); however, given its distance, large volumes of pollution would need to run-off from waste management locations along the Thames or its tributaries for there to be likely significant effects. This is considered unlikely, given the small scale of change permitted by the ELJWP policies.

Water quality and quantity impacts associated with direct pollution are screened out as there are no likely significant effects at the Thames Estuary and Marshes SPA and Ramsar site, and no impact pathway at other Habitats Sites of functionally linked habitats. No Appropriate Assessment is required.

Abstraction

4.37 Water is supplied to plan area by Thames Water (most of the plan area) and Essex & Suffolk Water (Barking and Dagenham). Thames Water store water, pumped from the River Thames and River Lee, in large reservoirs in Oxfordshire, West London and North London, including those that along the River Lee. In North London, the reservoirs are also topped up with groundwater pumped from the chalk aquifer. In the Essex & Suffolk Water area, most of the water comes from river sources. Much of this water is imported from outside the region through a river transfer system that supports the low yield Essex rivers.

4.38 Increased demand for water could therefore increase abstraction of water from the Lee Valley SPA and Ramsar. Increases in abstraction are likely to only occur where the waste management practices change to a process that uses more water (for example landfill to Energy from Waste). The following policy could therefore result in changes in water abstraction:

- Policy JWP5: Energy from Waste

4.39 Other Habitats Sites and functionally linked land are not in locations that could be affected by abstraction associated with the ELJWP.

In relation to abstraction, likely significant effects (for the ELJWP alone or in-combination) could not be ruled out for :

- Lee Valley SPA and Ramsar site (direct impacts only)

This will be considered further in the Appropriate Assessment.

Wastewater

4.40 Sewerage services are provided within the plan area by Thames Water and much of the area's water is treated at Coppermills wastewater treatment works (WwTW), which is adjacent to Lee Valley SPA and Ramsar site. It is the largest water treatment works in north London and treats water from across London.

4.41 However, increases in wastewater discharge are likely to only occur where the waste management practices change to a process that produces more wastewater. None of the ELJWP policies are likely to significantly increase wastewater.

Water quality and quantity impacts associated with wastewater treatment and discharge are screened out as there is no impact pathway. No Appropriate Assessment is required.

Summary of HRA Screening

4.42 Following the HRA screening (Chapter 4 above and Appendix B), likely significant effects could not be ruled out in relation to:

- **Physical damage and loss of habitat:** Epping Forest (directly or via functionally linked habitats) – ELJWP alone.
- **Air pollution - dust:** Epping Forest SAC (direct impacts only) – ELJWP alone.
- **Air pollution – industrial emissions:** Epping Forest SAC (direct impacts only), Lee Valley SPA and Ramsar site (direct impacts only), and Thames Estuary & Marshes SPA and Ramsar site (direct impacts only) – ELJWP alone or in-combination with other plans / projects.
- **Air pollution – vehicle emissions:** Epping Forest SAC (direct impacts only) and Lee Valley SPA and Ramsar site (direct impacts only) – ELJWP alone or in-combination with other plans / projects.
- **Pests and vermin:** Epping Forest (directly or via functionally linked habitats) – ELJWP alone.
- **Water quality and quantity – abstraction:** Lee Valley SPA/Ramsar (direct impacts only) – ELJWP alone or in-combination with other plans / projects.

4.43 Non-physical disturbance and wastewater have been screened out as there are no impact pathways.

4.44 Potential impact pathways have been identified in relation to direct water pollution, but there are no likely significant effects and these have also been screened out.

4.45 The following policies may contribute to water abstraction or air pollution from dust, industrial emissions or vehicle emissions and will therefore be considered further in the Appropriate Assessment:

- Policy JWP2: Safeguarding and Provision of Waste Capacity;
- Policy JWP5: Energy from Waste; and
- Policy JWP6: Deposit of Waste on Land.

Chapter 5

Appropriate Assessment

5.1 At the screening stage, likely significant impacts could not be ruled out in their entirety for physical damage and loss of habitat; water abstraction; air pollution due to dust; industrial emissions; vehicle emissions; and pests and vermin. However, the Appropriate Assessment allows mitigation to be taken into account, which makes it possible to conclude that some impacts will not have an adverse effect on the integrity of Habitats Sites, and to identify where further evidence or mitigation may be required to avoid adverse effects on integrity.

5.2 Policy JWP4: Design of Waste Management Facilities is the main policy providing mitigation for other policies in the ELJWP. It states that:

“Proposals for waste management development will only be permitted which have been designed to address the following during their construction and operation (including associated vehicle movements):

The emission of greenhouse gases is minimised by working towards net zero where practicable or, where this isn't practical, an appropriate contribution will be made to the relevant Borough's carbon offset fund;

- measures to avoid unacceptable adverse impacts arising from noise, dust, litter, vermin, vibration, odour, bioaerosols, external lighting, visual intrusion, traffic or associated risks to the environment and health and wellbeing of local communities;
- storage and management of waste (other than by landfill) within a building or an appropriate level of protection is provided with respect to impacts on the local environment and amenity;
- efficient use of energy and water;

- climate adaptation measures such as sustainable drainage systems, flood resistance and resilience, water storage and recycling, open space design, green roofs and drought-resistant landscaping;
- contributions to green and blue infrastructure, community benefits (including Public Rights of Way), and biodiversity enhancement and net gain where required.
- protecting the best and most versatile agricultural land and soil quality more generally;
- achievement of a BREEAM 'Excellent' rating or its equivalent unless it is demonstrated that this isn't practical;
- preference being given to non-road transport where practicable; and,
- measures to control and reduce vehicle emissions, through the use of low emission vehicles, installation of vehicle charging points and scheduling and management of vehicle routing.

Proposals for development must demonstrate that opportunities will be provided for residents of the Borough in which the proposal is located, to access employment in both the construction and operational stages in accordance with relevant Local Plan policy and related guidance.

Proposals that have an adverse effect on the integrity of sites designated as Special Areas of Conservation (SAC), Special Protection Areas (SPAs) or Ramsar sites will not be permitted, in line with The Conservation of Habitats and Species Regulations 2017 (as amended). Any mitigation required to avoid adverse effects on their integrity, for example due to pollution risk or disturbance, must be detailed in, and secured as part of the grant of planning permission.”

5.3 The statement that proposals will not be permitted that would have an adverse effect on SACs, SPAs or Ramsar sites, and that any required mitigation

must be detailed in and secured as part of the planning permission, provides overarching protection for Habitats Sites.

5.4 This is sufficient to ensure that waste development is not permitted within a Habitats Site or its functionally linked habitat, which will avoid adverse effects due to physical damage or loss of habitat; and, along with the inclusion of ‘dust’ and ‘vermin’ in the list of unacceptable adverse impacts, is considered sufficient to avoid adverse effects due to dust and due to pests and vermin.

5.5 In relation to vehicle emissions, mitigation for air pollution effects arising from a development plan (particularly where there are in-combination effects with other plans or projects) is usually provided at the strategic/plan level, rather than relying on individual developments to mitigate possible in-combination effects. However, in this case, as the ELJWP does not plan for increased waste capacity but instead allows for development that replaces existing capacity (for example to move the management of waste up the waste hierarchy), it is not possible at this stage to quantify likely trips that would be associated with the plan, although the scale of development as a whole is likely to be relatively small in scale compared to plans with allocated sites for development. The requirements of Policy JWP4 to “avoid unacceptable adverse impacts arising from... traffic”, give “preference... to non-road transport where practicable” and to “control and reduce vehicle emissions, through the use of low emission vehicles, installation of vehicle charging points and scheduling and management of vehicle routing” are therefore likely to sufficiently reduce the risks of air pollution from vehicles emissions. However, the requirement to demonstrate that development will not have an adverse effect on Habitats Site will ensure that the effect of individual developments on vehicle emissions is assessed and, if necessary, mitigated further.

5.6 Industrial emissions and water abstraction are subject to environmental permitting by the Environment Agency and Defra, which includes ensuring that proposals will not have an adverse effect on the integrity of Habitats Sites. Policy JWP5 also states that Energy from Waste development would only be permitted where the use will “not result in long distance vehicle movements”; is energy efficient; and “the release of non-biogenic gaseous carbon emissions will be minimised, with mechanisms to capture for use and/or storage”.

5.7 With safeguards within Policy JWP4: Design of Waste Management Facilities and Policy JWP5: Energy from Waste, along with environmental permitting requirements for industrial emissions and water abstraction, it is considered that the ELJWP will not have an adverse effect on the integrity of any Habitats Sites or their functionally linked habitats, either alone or in combination with other plans or projects.

Chapter 6

Conclusions and Next Steps

6.1 The HRA Screening (Chapter 4) could not rule out likely significant effects in relation to physical damage and loss of habitat; water abstraction; air pollution due to dust; industrial emissions; vehicle emissions; and pests and vermin. These impacts would arise from three of the ELJWP's policies: JWP2, JWP5 and JWP6. However, the Appropriate Assessment (Chapter 5) concluded that, with safeguards provided by Policy JWP4 along with environmental permitting requirements for industrial emissions and water abstraction, adverse effects on the integrity of Habitats Sites will be avoided.

6.2 The ELJWP is currently a draft, which will be published for Regulation 18 consultation, alongside this HRA report. Following the consultation, the plan will be updated as necessary and will include confirmation of the existing waste sites to be removed from safeguarding. The HRA will then be updated to reflect any changes to the ELJWP and in response to any relevant Regulation 18 consultations, for example if received from Natural England.

LUC

May 2024

Appendix A

Attributes of Habitats Sites considered in the HRA

Epping Forest Special Area of Conservation (SAC)

Location

- Epping Forest SAC is formed of several fragmented sites located to the east and north of the borough of Redbridge boundary. Part of the site falls within the borough of Redbridge boundary.

Qualifying features

- Annex 1 Habitats (which are a primary reason for the selection of this site):
 - Atlantic acidophilous beech forests with *Ilex* and sometimes also *Taxus* in the shrublayer (*Quercion robori-petraeae* or *Ilici-Fagenion*).
- Annex 1 Habitats (which are present as a qualifying feature but not a primary reason for the selection of this site):
 - European dry heaths
 - North Atlantic wet heaths with *Erica tetralix* (wet heathland with etan-leaved heath).
- Annex II species (that are a primary reason for the selection of this site):
 - Stag beetle *Lucanus cervus*

Threats and pressures

- Threats and pressures [See reference 33] on this site include the following:
 - Air pollution: impact of atmospheric nitrogen deposition
 - Undergrazing
 - Public access / disturbance
 - Changes in species distributions
 - Inappropriate water levels
 - Water pollution
 - Invasive species
 - Disease
 - Invasive species
- Air Pollution: impact of atmospheric nitrogen deposition – Nitrogen deposition exceeds site-relevant critical loads for ecosystem protection. Some parts of the site are assessed as in unfavourable condition for reasons linked to air pollution impacts.
- Undergrazing – The quality and diversity of the SAC features requires targeted management best achieved through grazing to: minimise scrub invasion; minimise robust grass domination, and maximise the species diversity of heathland plant communities.
- Public Access / Disturbance – Epping Forest is subject to high recreation pressure.
- Changes in species distributions – Beech tree health and recruitment may not be coping sufficiently with environmental conditions to sustain its presence and representation within the SAC feature. This may be linked to climate change as well as other factors such as air quality, recreation pressure and water availability.

Appendix A Attributes of Habitats Sites considered in the HRA

- Inappropriate water levels – Wet heath is dependent on suitable ground water levels. There is a threat of prolonged drying out through climate change.
- Water pollution – Surface run-off of poor quality water from roads with elevated levels of pollutants, nutrients and salinity may be affecting wet heath, probably mostly around the edges.
- Invasive species – Heather beetle has locally impacted on some heathland areas. Grey squirrel is not currently known to be significantly affecting tree health or regeneration but this will need to be monitored.
- Disease – Tree diseases such as Phytophthora present a real threat to Beech.
- In addition to the above, the supplementary advice [\[See reference 34\]](#) identifies the following vulnerabilities:
 - Adaptation and resilience of the feature – the vulnerability of Epping Forest SAC to climate change has been assessed by Natural England as being Medium taking into account the sensitivity, fragmentation, topography and management of its habitats.
 - Functional connectivity with wider landscape- The heathland resource is extensive in county terms but is fragmented, mainly by closed tree canopy habitat and roads. It is therefore vulnerable to encroachment, boundary effects, pollution, recreational impact and hydrological changes.
 - Vegetation structure – Variations in the structure of the heathland vegetation (vegetation height, amount of canopy closure, and patch structure) is needed to maintain high niche diversity and hence high species richness of characteristic heathland plants and animals. There is currently low cover (<25%) of dwarf shrubs present for the feature and less than 15% of scrub and tree cover.
 - Soils – the soils of the wet heath habitat are vulnerable to, and have been exposed to acidification, nutrient enrichment and pollution due to their fragmentation and proximity to roads and urban/residential development.

- Illumination – Epping Forest is fragmented by roads and largely surrounded by urban development and residential areas. Opportunities should be sought to minimise and reduce light pollution from existing development and any development plans or projects to ensure SAC features and significant biodiversity assets are safeguarded.

Non-qualifying habitats and species upon which the qualifying habitats and/or species depend

- Stag beetles require decaying wood of broadleaved trees for larvae to feed, although not of a particular tree species. The supplementary advice on conserving and restoring site features [See reference 35] states that off-site trees in local gardens, parks and along the roadside may be important in helping to maintain the local stag beetle population if decaying timber is present and may help to ‘connect’ the SAC population with neighbouring colonies.
- The supplementary advice also states:
- The qualifying habitat comprises beech *Fagus sylvatica* forests with holly *Ilex aquifolium*, growing on acid soils, in a humid Atlantic climate. Sites of this habitat type often are, or were, managed as wood-pasture systems, in which pollarding of beech *Fagus sylvatica* and oak *Quercus* spp. Was common.
- Wet heath usually occurs on acidic, nutrient-poor substrates, such as shallow peats or sandy soils with impeded drainage.
- European dry heaths typically occur on freely-draining, acidic to circumneutral soils with generally low nutrient content. Nearly all dry heath is seminatural, being derived from woodland through a long history of grazing and burning. Most dry heaths are managed as extensive grazing for livestock.
- Some plant or animal species (or related groups of such species) make a particularly important contribution to the necessary structure, function and/or quality of qualifying habitats. For wet heath, this includes: *Calluna*

Appendix A Attributes of Habitats Sites considered in the HRA

vulgaris, *Erica cinerea*, *E. tetralix*, *Salix repens*, *Ulex minor*, *Vaccinium* spp., *Carex panicea*, *C. pulicaris*, *Dactylorhiza etanus*, *Eleocharis* spp., *Eriophorum angustifolium*, *Juncus acutiflorus*, *J. etanus* ion, *Molinia caerulea*, *Anagallis tenella*, *Drosera* spp., *Galium saxatile*, *Genista anglica*, *Polygala serpyllifolia*, *Potentilla erecta*, *Succisa pratensis*. *Pedicularis sylvatica*. For dry heath, this includes: *Calluna vulgaris*, *Erica cinerea*, *E. tetralix*, *Ulex minor*, *Vaccinium* spp *Genista anglica*, *Agrostis* spp., *Carex* spp., *Danthonia decumbens*, *Deschampsia flexuosa*, *Festuca* spp., *Molinia caerulea*, *Nardus stricta*, *Galium saxatile*, *Hypochaeris radicata*, *Lotus corniculatus*, *Pedicularis sylvatica*, *Plantago lanceolata*, *Polygala* spp. *Potentilla erecta*, *Rumex acetosella*, *Succisa pratensis*, *Scilla verna*, *Serratula tinctoria*, *Teucrium scorodonia* *Thymus praecox*, *Viola riviniana*,

- There are many plants and animals which use or co-exist with non-native trees, but many rare and threatened woodland species are specialists adapted to one or a few native trees or shrub species (birches, willows and oaks, are examples of trees that host many specialist insect species). At this SAC, site-native species of tree and shrub include those typical of the H9120 type including Beech *Fagus sylvatica*, Oak *Quercus robur* and *Quercus petraea*, Holly *Ilex aquifolium*, Bramble *Rubus fruticosus* agg. Honeysuckle *Lonicera periclymenum*, Hornbeam *Carpinus betulus*, Silver birch *Betula pendula*, Downy birch *Betula pubescens*, Yew *Taxus baccata*, Elder *Sambucus nigra*, Goat willow *Salix caprea* and Wild Cherry *Prunus avium*. In addition to this, the characteristic mosaics and transitions of ancient forests and wood-pasture-types are well-represented within the site and are necessary for the conservation of SAC features and site integrity.
- Key species of ground flora, epiphytic bryophytes, mosses, liverworts and lichens are also listed.

Lee Valley Special Protection Area SPA and Ramsar

Location

- Lee Valley SPA & Ramsar is formed of several fragmented sites. The closest sections of the sites lie 4.5km west of the Redbridge borough boundary 3.3km north of the Newham borough boundary.

Qualifying features

- SPA:
 - Annex 1 species (non – breeding):
 - Great bittern *Botaurus stellaris*
 - Annex 1 (migratory species, non – breeding):
 - Northern shoveler *Anas clypeata*
 - Gadwall *Anas strepera*
 - Non Qualifying Species of Interest:
 - Cormorant *Phalacrocorax carbo*
 - Great Crested Grebe *Podiceps cristatus*
 - Tufted Duck *Aythya fuligula*
 - Pochard *Aythya etanu*
 - Grey Heron *Ardea cinereal*
- Ramsar:
 - The site supports the nationally scarce plant species whorled watermilfoil *Myriophyllum verticillatum* and the rare or vulnerable invertebrate *Micronecta minutissima* (a waterboatman).

Appendix A Attributes of Habitats Sites considered in the HRA

- Over winter the area regularly supports:
- Gadwell, *Anas strepera* – 456 individuals, representing an average of 1.5% of the population
- Shoveler, *Anas clypeata* – 406 individuals, representing an average of 1% of the population

Threats and pressures

- Threats and pressures [See reference 36] on this site include the following:
 - Water pollution
 - Hydrological changes
 - Public access / disturbance
 - Inappropriate scrub control
 - Fisheries: Fish stocking
 - Invasive species
 - Inappropriate cutting / mowing
 - Air pollution: risk of atmospheric nitrogen deposition
- Threats and pressures [See reference] on this site include the following:
 - Water pollution
 - Hydrological changes
 - Public access / disturbance
 - Inappropriate scrub control
 - Fisheries: Fish stocking
 - Invasive species
 - Inappropriate cutting / mowing

Appendix A Attributes of Habitats Sites considered in the HRA

- Air pollution: risk of atmospheric nitrogen deposition
- Water Pollution – The vegetation and invertebrates provide food for the ducks, while fish provide food for the bitterns; and the habitat mosaic needs to vary from clear open water with abundant aquatic vegetation to moderately eutrophic conditions. Changes in water quality need to be managed to prevent loss of suitable habitat and food sources.
- Hydrological changes – Reservoir levels linked to operational requirements and all water bodies subject to natural fluctuations accounting for abstraction and climatic change.
- Public Access/Disturbance – Areas of the SPA are subject to a range of recreation pressures including watersports, angling and dog walking. This has the potential to affect SPA populations directly or indirectly.
- Inappropriate scrub control – The reedbed habitats, muddy fringes, and bankside all provide habitat as part of the mosaic for the SPA birds. Scrub control is necessary to ensure these habitats are maintained.
- Fisheries: Fish stocking – Fish population and species composition needs to be appropriate to ensure suitable habitats including food resource and water quality are maintained for SPA bird species.
- Invasive species – Azolla and/or invasive aquatic blanket weeds will adversely affect aquatic habitat (food sources).
- Inappropriate cutting/mowing – The reedbed requires rotational management for bittern.
- Air Pollution: risk of atmospheric nitrogen deposition – Nitrogen deposition exceeds site relevant critical loads.
- The Information Sheet on Ramsar Wetlands [\[See reference 37\]](#) also notes the whole site supports high levels of visitor pressure; principally for purposes of angling, walking, cycling and birdwatching; with boating on the adjacent canal. These activities are mostly well regulated and at current levels are not considered to threaten the interest of the Ramsar site (although they may reduce the potential for enhancing the interest). In addition to the above, the supplementary advice [\[See reference 38\]](#) identifies the following vulnerabilities:

Appendix A Attributes of Habitats Sites considered in the HRA

- Conservation measures – Active and ongoing conservation management is often needed to protect, maintain or restore *Botaurus stellaris* Great bittern (non-breeding) at this site.
- Vegetation characteristics – Many bird species will have specific requirements that conservation measures will aim to maintain, for others such requirements will be less clear. Activities that may directly or indirectly affect the vegetation of supporting habitats and modify these characteristics may adversely affect the feature.
- Connectivity with supporting habitats – Bitterns clearly move between sites within the Lee Valley and to do this they will need to move safely to and from supporting habitat between individual waterbodies and above/across land outside the SPA. Also, the ability of Northern Shoveler to safely and successfully move to and from feeding and roosting areas is critical to their adult fitness and survival.
- Water depth – As the birds will rely on detecting their prey within the water to hunt, the depth of water at critical times of year may be paramount for successful feeding and therefore their fitness and survival.
- Population abundance – the population of Northern Shoveler within Lee Valley SPA has shown a slight decrease since Classification. The key SPA sites at Amwell and Turnford & Cheshunt Pits experienced a population decline during the 1999/00 – 2008/09 period, along with the is linked non-SPA Holyfield gravel pits. The SPA Walthamstow reservoirs and non-SPA Chingford reservoirs show population trends that appear to be related to water levels and available food resource.
- Food availability within supporting habitat – the availability of an abundant food supply is critically important for successful breeding, adult fitness and survival and the overall sustainability of the population. As a result, inappropriate management and direct or indirect impacts which may affect the distribution, abundance and availability of prey may adversely affect the population.

Non qualifying habitats and species upon which the qualifying habitats and/or species depend

- The information below is drawn from the supplementary advice on conserving and restoring site features [\[See reference 39\]](#).
- Great bittern
 - Standing open water and canals – bittern rely on the presence and continuity of open water habitat. Changes in water area, and associated marginal habitat, can adversely affect the suitability of supporting open water habitat.
 - Reedbeds.
 - Open terrain – bittern favour large areas of open terrain, largely free of obstructions, in and around its nesting, roosting and feeding areas. Often there is a need to maintain an unobstructed line of sight within nesting, feeding or roosting habitat to detect approaching predators, or to ensure visibility of displaying behaviour.
 - Key prey species include eel, rudd, roach, frogs, toads and invertebrates.
 - Within the SPA/Ramsar, the majority of bittern are found in the Turnford and Cheshunt Pits site while Amwell Quarry and Rye Meads also support the species. Walthamstow Reservoirs also occasionally supports bittern.
- Gadwall
 - Standing open water – gadwall favour gravel pits and reservoirs during the winter period where they feed on seeds, leaves and stems of water plants.
 - Preferred food plants – sweet-grass (*Glyceria fluitans*), creeping bent (*Arostis stolonifera*), stoneworts (*Chara*), pondweeds (*Potomageton*, *Ceratophyllum* spp., *Ruppia*, *Elodeo nuttallii*).

Appendix A Attributes of Habitats Sites considered in the HRA

- Each of the SPA/Ramsar's component SSSIs support gadwall in numbers which are sufficient to qualify them as being of national importance.
- Northern shoveler
 - Standing open water – in winter, shoveler frequent shallow water areas on marshes, flooded pasture, reservoirs and lakes with plentiful, marginal reeds or emergent vegetation and are found throughout.
 - Preferred food plants – Scirpus, Eleocharis, Carex, Potaogeton, Glyceria. Shoveler also feed on zooplankton (e.g. Hydrobia, crustaceans, caddisflies, Diptera, beetles) in the shallow margins of waterbodies. Preferred food plants are linked with early successional stages of waterbodies, therefore succession, particularly tree cover, can lead to the loss of suitable foraging habitat.
- BTO Bird Facts
- The British Trust for Ornithology [See reference 40] records the site's qualifying bird species' diets as:
 - Bittern: mostly fish, amphibians, insects but wide variety;
 - Shoveler: omnivorous (incl. insects, crustaceans, molluscs, seeds); and
 - Gadwall: leaves and shoots.
- The Information Sheet on Ramsar Wetlands [See reference 41] also notes the ecological features of the site include open water, with associated wetland habitats including reedbeds, fen grassland and woodland which support a number of wetland plant and animal species including internationally important numbers of wintering wildfowl.

Wormley - Hoddesdonpark Woods SAC

- Site area: (336.47 ha)

Location

- Wormley-Hoddesdonpark Woods SAC is formed of several fragmented sites located north of the borough and within the 15km boundary buffer. The closest site is 4.3km north of the LBE boundary.

Qualifying features

- Annex I Habitats (which are a primary reason for the selection of this site):
 - Sub-Atlantic and medio – European oak, or oak-hornbeam forests of the *Carpinion betuli*.

Threats and pressures

- Threats and pressures [See reference 42] on this site include the following:
 - Disease
 - Invasive species
 - Air Pollution: risk of atmospheric nitrogen deposition
 - Deer
 - Vehicles: illicit
 - Forestry and woodland management
 - Public access / disturbance
- Disease - Acute Oak Decline (AOD) is present in at least two parts of the site and affects both native oak species, which are key components of this woodland type.
- Invasive species - Several tree and shrub species not native to the site are present. Where they are not being actively controlled, they are gradually spreading. The more invasive of these include sycamore, turkey oak, rhododendron and snowberry.

Appendix A Attributes of Habitats Sites considered in the HRA

- Air Pollution: risk of atmospheric nitrogen deposition - Nitrogen deposition exceeds the site-relevant critical load for ecosystem protection and hence there is a risk of harmful effects, but the sensitive features are currently considered to be in favourable condition on the site.
- Deer – Browsing and grazing by deer can reduce tree regeneration and damage the woodland understorey and ground flora. Deer damage levels are currently only moderate and do not appear to be affecting tree regeneration, habitat structure or species composition greatly.
- Vehicles: illicit - Illegal use of restricted byways and bridleways by off-road vehicles causes localised but sometimes severe rutting and soil compaction, damaging the woodland ground flora, shrubs and trees. Fly-tipping damages the ground flora directly and can introduce toxins and alien species.
- Forestry and woodland management - The larger woodland units with public access are under appropriate management but some of the smaller, privately-owned units are not which can result in a reduction in structural and species diversity (particularly in previously coppiced areas), the loss of temporary and permanent open space, the over-shading and deterioration of veteran pollards, and the spread of invasive species.
- Public Access/Disturbance – As the site is a large, attractive area of ancient woodland with extensive public access and close to large urban centres, it is heavily used by the public for recreational purposes.
- In addition to the above, the supplementary advice [\[See reference 43\]](#) identifies the following vulnerabilities:
 - Vegetation community composition - maintaining or restoring these characteristic and distinctive vegetation types, and the range of types as appropriate, will be important to sustaining the overall habitat feature.
 - Vegetation Structure – open space (for woodland pasture with old trees) - having some open, sunlit and largely tree-less areas as part of the woodland community is often important to facilitate natural tree and shrub regeneration and also to provide supporting habitat for specialist woodland invertebrates, birds, vascular and lower

plants. Currently, the areas of open space within the wood-pasture areas are insufficient to meet the desired target.

- Vegetation structure – dead wood – for this habitat type, old or over-mature elements of the woodland are particularly characteristic and important features, and their continuity should be a priority.
- Root zones of ancient trees - unless carefully managed, activities such as construction, forestry management and trampling by grazing livestock and human feet during recreational activity may all contribute to excessive soil compaction around ancient trees.

Non-qualifying habitats and species upon which the qualifying habitats and/or species depend

- The supplementary advice on conserving and restoring site features [See reference 44] makes it clear that the qualifying habitat can be affected by change of habitat and soil disturbance/compaction adjacent to the site.
- Light grazing and browsing by sheep and deer helps promote a diverse woodland structure but heavy browsing can prevent woodland regeneration.
- The supplementary advice identifies the following non qualifying habitats/features that the qualifying features depend on:
 - Vegetation community composition - maintaining or restoring these characteristic and distinctive vegetation types, and the range of types as appropriate, will be important to sustaining the overall habitat feature.
 - Vegetation Structure – open space (for woodland pasture with old trees) - having some open, sunlit and largely tree-less areas as part of the woodland community is often important to facilitate natural tree and shrub regeneration and also to provide supporting habitat for specialist woodland invertebrates, birds, vascular and lower plants.

Appendix A Attributes of Habitats Sites considered in the HRA

- Vegetation structure – dead wood – for this habitat type, old or over-mature elements of the woodland are particularly characteristic and important features.
- The vegetation community composition is as follows:
 - The largest part of the site is oak-bracken-bramble woodland, dominated by sessile oak *Quercus petraea* and hornbeam *Carpinus betulus*, with areas of pedunculate oak *Quercus robur* and hornbeam. Further there are large stands of almost pure hornbeam (former coppice). There are also marshy areas with alder *Alnus glutinosa*, pendulous sedge *Carex pendula* and yellow pimpernel *Lysimachia nemorum* as well as areas with higher proportions of ash *Fraxinus excelsior*, Dogs Mercury *Mercurialis perennis* and Yellow Archangel *Lamium galeobdolon* on the chalky boulder clay. Areas dominated by bluebell *Hyacinthoides non-scripta* do occur, but elsewhere there are stands of great wood-rush *Luzula sylvatica* with carpets of the mosses *Dicranum majus* and *Leucobryum glaucum*. Locally, a bryophyte community more typical of continental Europe occurs, including the mosses *Dicranum montanum*, *D. flagellare* and *D. tauricum*.

Thames Estuary & Marshes Ramsar and SPA

Location

- The SPA/Ramsar is formed of several fragmented sites. The site is located approximately 12.5 km to the south east of Havering borough boundary

Qualifying features

- Pied avocet : *Recurvirostra avosetta*

Appendix A Attributes of Habitats Sites considered in the HRA

- Hen harrier : *Circus cyaneus*
- Ringed plover: *Charadrius hiaticula*
- Grey plover: *Pluvialis squatarola*
- Black-tailed godwit: *Limosa limosa islandica*
- Red knot: *Calidris canutus*
- Dunlin: *Calidris alpina alpina*
- Common redshank: *Tringa tetanus*

Threats and pressures

- 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, and,
 - The distribution of the qualifying features within the site.

Non-qualifying habitats and species upon which the qualifying habitats and/or species depend

- In general, the qualifying bird species of the SPA rely on:
 - The sites ecosystem as a whole (see list of habitats below).
 - Maintenance of populations of species that they feed on (see list of diets below).

Appendix A Attributes of Habitats Sites considered in the HRA

- Off-site habitat, which provide foraging habitat for these species.
- Open landscape with unobstructed line of sight within nesting, foraging or roosting habitat.
- The individual qualifying species of the SPA also rely on the following habitats and species:
 - *Recurvirostra avosetta*: Pied avocet
 - Habitat Preference – Mudflats, lagoons and sandy beaches.
 - Diet – Aquatic insects and their larvae, crustaceans and worms.
 - *Circus cyaneus*: Hen harrier
 - Habitat Preference – Moor, marsh, steppe and fields; wintering at coastal areas, farmland, heathland, coastal marshes, fenland and river valleys.
 - Diet - Mainly small birds and mammals.
 - *Charadrius hiaticula*: Ringed plover
 - Habitat Preference - Sandy areas with low vegetation, and on migration estuaries.
 - Diet - In summer, invertebrates and in winter primarily marine worms, crustaceans and molluscs.
 - *Pluvialis squatarola*: Grey plover
 - Habitat Preference - Tundra, and on migration pasture and estuaries.
 - Diet - In summer, invertebrates and in winter primarily marine worms, crustaceans and molluscs.
 - *Limosa limosa islandica*: Black-tailed godwit
 - Habitat Preference - Marshy grassland and steppe, and on migration mudflats.
 - Diet - Insects, worms and snails, but also some plants, beetles, grasshoppers and other small insects during the breeding season.

Appendix A Attributes of Habitats Sites considered in the HRA

- *Calidris canutus*: Red knot
 - Habitat Preference - Tundra, and on migration coastal habitat.
 - Diet - In summer, insects and plant material, and in winter inter-tidal invertebrates, esp molluscs.
- *Calidris alpina alpina*: Dunlin
 - Habitat Preference - Tundra, moor, heath, and on migration estuaries and coastal habitat.
 - Diet - Insects, snails and worms.
- *Tringa totanus*: Common redshank
 - Habitat Preference - Rivers, wet grassland, moors and estuaries.
 - Diet - Invertebrates, especially earthworms, crane-fly larvae (inland) crustaceans, molluscs, marine worms (estuaries).

Appendix B

Screening of policies

Policy JWP1: Circular Economy

Activities likely to result as a consequence of the policy

B.1 None – this policy sets out principles for the sustainable management of waste from any development coming forward under the local authorities' Local Plans (not just waste management development), which will move waste up the waste hierarchy e.g. reduce landfill and reuse/recycling of construction and demolition waste. However, the target recycling rates have been taken into account in the calculation of required waste management capacity of the boroughs and the policy itself will not result in new development or activities.

Likely effect if policy is implemented

B.2 None

Will the policy have likely significant effects and therefore require Appropriate Assessment?

B.3 No

Policy JWP2: Safeguarding and Provision of Waste Capacity

Activities likely to result as a consequence of the policy

B.4 New waste management facilities – permitted in limited circumstances for local authority collected waste and construction & industrial waste, e.g. where the proposals move development up the waste hierarchy, increase capacity at an existing facility, consolidate waste activities, or compensate for capacity lost elsewhere.

Likely effect if policy is implemented

B.5 Development outside of existing waste sites: physical damage and loss of habitat

B.6 Change in vehicle movements: air pollution (vehicle emissions)

B.7 Construction / operational activities: air pollution (dust), non-physical disturbance, direct pollution

Will the policy have likely significant effects and therefore require Appropriate Assessment?

B.8 Yes – there are likely significant effects relating to physical damage and loss of habitat, vehicle emissions and dust.

Appendix B Screening of policies

B.9 Physical damage and loss of habitats: Epping Forest SAC (and potentially functionally linked habitats within 500m of it) is within the plan area.

B.10 Air pollution (vehicle emissions): Epping Forest SAC and Lee Valley SPA/Ramsar site are within 10km of the plan area and within 200m of A-roads that link to the plan area.

B.11 Air pollution (dust): Epping Forest SAC is within the plan area and could be affected by development within 500m.

B.12 Non-physical disturbance: there are no qualifying features that are particularly sensitive to light/noise within 500m of the plan area.

B.13 Direct pollution: Lee Valley SPA/Ramsar and Thames Estuary & Marshes SPA/Ramsar are hydrologically connected to the plan area but the Lee Valley SPA/Ramsar is upstream (no impact pathway) and the Thames Estuary & Marshes is sufficient distance away that significant effects are not likely (no LSE).

Policy JWP3 Prevention of Encroachment

Activities likely to result as a consequence of the policy

B.14 None – this policy protects safeguarded waste sites from encroachment by other types of development, and will not result in new development or activities.

Likely effect if policy is implemented

B.15 None

Will the policy have likely significant effects and therefore require Appropriate Assessment?

B.16 No

Policy JWP4: Design of Waste Management Facilities

Activities likely to result as a consequence of the policy

B.17 None – this policy sets out principles for reducing environmental impacts from waste development, but will not itself result in new development or activities.

Likely effect if policy is implemented

B.18 None

Will the policy have likely significant effects and therefore require Appropriate Assessment?

B.19 No, although this policy may provide mitigation for impacts associated with other policies within the ELJWP, for example the policy states that development must be designed to: “avoid unacceptable adverse impacts arising from noise, dust, litter, vermin, vibration, odour, bioaerosols, external lighting, visual intrusion, traffic or associated risks to the environment and health and wellbeing of local communities”; and:

B.20 “Proposals that have an adverse effect on the integrity of sites designated as Special Areas of Conservation (SAC), Special Protection Areas (SPAs) or Ramsar sites will not be permitted, in line with The Conservation of Habitats and Species Regulations 2017 (as amended). Any mitigation required to avoid adverse effects on their integrity, for example due to pollution risk or disturbance, must be detailed in, and secured as part of the grant of planning permission.”

Policy JWP5: Energy from Waste

Activities likely to result as a consequence of the policy

B.21 New Energy from Waste facilities (within existing waste management sites) permitted in limited circumstances, e.g. as ‘recover’ rather than ‘disposal’ facilities; where waste cannot practically be managed by other means further up the waste hierarchy.

Likely effect if policy is implemented

B.22 Development outside of existing waste sites: physical damage and loss of habitat

B.23 Burning of waste: air pollution (industrial)

B.24 Change in vehicle movements: air pollution (vehicle emissions)

B.25 Construction / operational activities: non-physical disturbance

B.26 Increased demand for water: water abstraction

Will the policy have likely significant effects and therefore require Appropriate Assessment?

B.27 Yes – there are likely significant effects relating to physical damage and loss of habitat, industrial emissions, vehicle emissions and water abstraction.

B.28 Physical damage and loss of habitats: Epping Forest SAC (and potentially functionally linked habitats within 500m of it) is within the plan area.

B.29 Air pollution (industrial emissions): Epping Forest SAC, Lee Valley SPA and Ramsar site and Thames Estuary & Marshes SPA and Ramsar site are within the 10km screening distance for impacts from industrial emissions.

B.30 Air pollution (vehicle emissions): Epping Forest SAC and Lee Valley SPA/Ramsar site are within 10km of the plan area and within 200m of A-roads that link to the plan area.

B.31 Water abstraction: waterbodies linked to the Lee Valley SPA and Ramsar supply water to the region.

B.32 Non-physical disturbance: there are no qualifying features that are particularly sensitive to light/noise within 500m of the plan area.

Policy JWP6: Deposit of Waste on Land

Activities likely to result as a consequence of the policy

B.33 New waste management facilities – permitted in limited circumstances for the disposal of non-inert waste to land, e.g. where waste cannot be practically be managed by other means further up the waste hierarchy; and for inert waste where the waste will be used for a beneficial purpose e.g. restoring landfill sites or use in an engineering operation. This policy also allows for the re-working of old landfill sites.

Likely effect if policy is implemented

B.34 Development outside of existing waste sites: physical damage and loss of habitat

B.35 Change in vehicle movements: air pollution (vehicle emissions)

B.36 Construction / operational activities: air pollution (dust), non-physical disturbance, direct pollution

B.37 Waste open to the air: pests and vermin

Will the policy have likely significant effects and therefore require Appropriate Assessment?

B.38 Yes – there are likely significant effects relating to vehicle emissions and dust.

B.39 Physical damage and loss of habitats: Epping Forest SAC (and potentially functionally linked habitats within 500m of it) is within the plan area.

B.40 Air pollution (vehicle emissions): Epping Forest SAC and Lee Valley SPA/Ramsar site are within 10km of the plan area and within 200m of A-roads that link to the plan area.

B.41 Air pollution (dust): Epping Forest SAC is within the plan area and could be affected by development within 500m.

B.42 Pests and vermin: Epping Forest SAC (and potentially functionally linked habitats within 500m of it) is within the plan area.

B.43 Non-physical disturbance: there are no qualifying features that are particularly sensitive to light/noise within 500m of the plan area.

B.44 Direct pollution: Lee Valley SPA/Ramsar and Thames Estuary & Marshes SPA/Ramsar are hydrologically connected to the plan area but the Lee Valley SPA/Ramsar is upstream (no impact pathway) and the Thames Estuary & Marshes is sufficient distance away that significant effects are not likely (no LSE).

References

- 1 East London Waste Authority (2022) Joint Strategy [online]. Available at: <https://eastlondonwaste.gov.uk/east-london-waste-authority/jointstrategy>
- 2 East London Joint Waste Plan (2012) [pdf]. Available at: <https://www.redbridge.gov.uk/media/10405/joint-waste-dpd-adopted-feb-2012.pdf>
- 3 The Conservation (Natural Habitats, &c.) (Amendment) Regulations 2007 (2007) (SI No. 2007/1843). TSO (The Stationery Office), London.
- 4 The Conservation of Habitats and Species Regulations 2017 (2017) (SI No. 2017/1012), as amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (2019) (SI 2019/579).
- 5 The integrity of a site is the coherence of its ecological structure and function, across its whole area, that enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it was designated. [Department for Levelling Up, Housing and Communities and Ministry of Housing, Communities and Local Government \(2016, updated 2021\) Planning practice guidance: The National Planning Policy Framework and relevant planning practice guidance \[online\]](#)
- 6 [Department for Levelling Up, Housing and Communities and Ministry of Housing, Communities and Local Government \(2019\) Appropriate assessment: Guidance on the use of Habitats Regulations Assessment](#)
- 7 The Conservation (Natural Habitats, &c.) (Amendment) Regulations 2007 (2007) (SI No. 2007/1843). TSO (The Stationery Office), London.
- 8 Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (the 'Habitats Directive').
- 9 Directive 2009/147/EC of 30 November 2009 on the conservation of wild birds (the 'Birds Directive').
- 10 [European Commission \(2008\) Natura 2000 \[online\]](#) – The network of protected areas identified by the EU.

References

- 11 [Department for Environment, Food and Rural Affairs \(2021\) Changes to the Habitats Regulations 2017 \[online\]](#)
- 12 [Department for Environment, Food and Rural Affairs, Natural England, Welsh Government and Natural Resources Wales \(2021\) Habitats regulations assessments: protecting a European site \[online\]](#)
- 13 [Ministry of Housing, Communities and Local Government \(2021\) National Planning Policy Framework \[pdf\] \(Paragraph 176\)](#)
- 14 [David Tyldesley & Associates \(2021\) The HRA Handbook \(Section A3\) \[online\]](#) – A subscription based online guidance document.
- 15 [Department for Environment, Food and Rural Affairs, Natural England, Welsh Government and Natural Resources Wales \(2021\) Habitats regulations assessments: protecting a European site \[online\]](#)
- 16 Regulation 5 of the Habitats Regulations 2017.
- 17 [Department for Levelling Up, Housing and Communities and Ministry of Housing, Communities and Local Government \(2019\) Appropriate assessment: Guidance on the use of Habitats Regulations Assessment \[online\]](#)
- 18 European Commission (2001) Assessment of plans and projects significantly affecting European Sites. Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC.
- 19 [David Tyldesley & Associates \(2021\) The HRA Handbook \(Section A3\) \[online\]](#) – A subscription based online guidance document.
- 20 [Natural England \(undated\) Conservation Objectives for European Sites \[online\]](#)
- 21 In line with the CJEU judgment in Case C-323/17 People Over Wind v Coillte Teoranta, mitigation must only be taken into consideration at this stage and not during Stage 1: HRA Screening.
- 22 In addition to Habitats Site citations and conservation objectives, key information sources for understanding factors contributing to the integrity of Habitats Sites include (where available) conservation objectives supplementary advice and Site Improvement Plans prepared by Natural

References

- England. [Natural England \(Undated\) Site Improvement Plans by region \[online\]](#)
- 23** [Obtained from JNCC](#) website, <https://jncc.gov.uk/>
- 24** [Obtained from the Natural England website](#)
- 25** [Obtained from Natural England website](#)
- 26** European Court of Justice in Case C-127/02 Landelijke Vereniging tot Behoud van de Waddenzee.
- 27** Advocate General's Opinion to CJEU in Case C-258/11 Sweetman and others v An Bord Pleanala 22nd Nov 2012.
- 28** [David Tyldesley & Associates \(2021\) The HRA Handbook \(Section A3\) \[online\]](#) – A subscription based online guidance document.
- 29** <https://www.gov.uk/guidance/air-emissions-risk-assessment-for-your-environmental-permit#screening-for-protected-conservation-areas>
- 30** DMRB guidance LA105:
<https://www.standardsforhighways.co.uk/search/10191621-07df-44a3-892e-c1d5c7a28d90>
- 31** 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.
- 32** JNCC (2021) Guidance on decision-making thresholds for air pollution, <https://hub.jncc.gov.uk/assets/6cce4f2e-e481-4ec2-b369-2b4026c88447>
- 33** Site Improvement Plan: Epping Forest, Natural England, December 2016. Available at:
<http://publications.naturalengland.org.uk/publication/6663446854631424?category=35016>.
- 34** European Site Conservation Objectives: Supplementary advice on conserving and restoring site features Epping Forest (SAC). Natural England, January 2019. Available at:
<http://publications.naturalengland.org.uk/publication/5908284745711616>.
- 35** Site Improvement Plan: Epping Forest, Natural England, December 2016. Available at:

References

- <http://publications.naturalengland.org.uk/publication/6663446854631424?category=35016>.
- 36** Site Improvement Plan: Lee Valley, Natural England, December 2014. Available at: <http://publications.naturalengland.org.uk/publication/5864999960444928?category=23039>.
- 37** Information Sheet on Ramsar Wetlands (RIS) UK11034: Lee Valley. JNCC, September 2000. Available at: <https://jncc.gov.uk/our-work/ramsar-sites/>.
- 38** European Site Conservation Objectives: Supplementary Advice on Conserving and Restoring Site Features Lee Valley Special Protection Area (SPA). Natural England, February, 2018. Available at: <http://publications.naturalengland.org.uk/publication/5670650798669824>.
- 39** European Site Conservation Objectives: Supplementary Advice on Conserving and Restoring Site Features Lee Valley Special Protection Area (SPA). Natural England, February, 2018. Available at: <http://publications.naturalengland.org.uk/publication/5670650798669824>.
- 40** <https://www.bto.org/understanding-birds/birdfacts>
- 41** Information Sheet on Ramsar Wetlands (RIS) UK11034: Lee Valley. JNCC, September 2000. Available at: <https://jncc.gov.uk/our-work/ramsar-sites/>.
- 42** Site Improvement Plan: Wormley-Hoddensdonpark Woods, Natural England, April 2015. Available at: <http://publications.naturalengland.org.uk/publication/6314181103976448?category=35016>.
- 43** European Site Conservation Objectives: Supplementary advice on conserving and restoring site features Wormley Hoddesdonpark Woods Special Area of Conservation (SAC). Natural England, January 2019. Available at: <http://publications.naturalengland.org.uk/publication/4919819195383808>.
- 44** European Site Conservation Objectives: Supplementary advice on conserving and restoring site features Wormley Hoddesdonpark Woods Special Area of Conservation (SAC). Natural England, January 2019.

References

Available at:

<http://publications.naturalengland.org.uk/publication/4919819195383808>.

Report produced by LUC

Report produced by LUC

Bristol

12th Floor, Beacon Tower, Colston Street, Bristol BS1 4XE
0117 929 1997
bristol@landuse.co.uk

Cardiff

16A, 15th Floor, Brunel House, 2 Fitzalan Rd, Cardiff CF24 0EB
0292 032 9006
cardiff@landuse.co.uk

Edinburgh

Atholl Exchange, 6 Canning Street, Edinburgh EH3 8EG
0131 202 1616
edinburgh@landuse.co.uk

Glasgow

37 Otago Street, Glasgow G12 8JJ
0141 334 9595
glasgow@landuse.co.uk

London

250 Waterloo Road, London SE1 8RD
020 7383 5784
london@landuse.co.uk

Manchester

6th Floor, 55 King Street, Manchester M2 4LQ
0161 537 5960
manchester@landuse.co.uk

Sheffield

32 Eyre Street, Sheffield, S1 4QZ
0114 392 2366
sheffield@landuse.co.uk

landuse.co.uk

Landscape Design / Strategic Planning & Assessment / Transport Planning
Development Planning / Urban Design & Masterplanning / Arboriculture
Environmental Impact Assessment / Landscape Planning & Assessment
Landscape Management / Ecology / Historic Environment / GIS & Visualisation