



North Hertfordshire Local Plan 2011-2031

Habitats Regulation Assessment



Screening Report and Appropriate Assessment

Front Cover Image / Source: *Micronecta minutissima* water boatman / NHDC

Project Title:

North Hertfordshire Habitats Regulation Assessment – Main Modifications 2018

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Lee Valley Navigation from Rye Meads SSSI RSPB Reserve
Source: NHDC

Chapter 1 - Introduction

1.1 Habitat Regulations Assessment (HRA)

North Hertfordshire District Council (the Council) is the competent authority to undertake a Habitat Regulations Assessment (HRA) for the North Hertfordshire Local Plan.

The purpose of an HRA is to identify any aspects of the emerging Local Plan that would have the potential to cause a likely significant adverse effect on a Natura 2000 / European site (European site). These sites, designated as Special Areas of Conservation (SAC's), Special Protection Areas (SPA's) and Ramsar¹ sites need to be assessed in isolation and in combination with other plans and projects. If a likely significant adverse effect is found, the HRA needs to identify appropriate avoidance and mitigation strategies to reduce the impact on the conservation objectives of the site or find alternatives to avoid the impact.

There is a legal requirement for all Local Plans to be subject to an HRA. The need for an HRA is set out within Article 6 of the EC Habitats Directive 1992, interpreted into British law by the Conservation of Habitats & Species Regulations, November 2017.

This HRA has been undertaken following the judgment C-323/17 of the European Court, which provided clarification regarding the process that should be followed when undertaking an HRA.

1.2 The North Hertfordshire Local Plan

The North Hertfordshire Local Plan Proposed Submission Plan 2011-2031 (Local Plan) was examined in public by the Planning Inspectorate from 13 November 2017. The last hearing was held on 27 March 2018. During the hearings a number of Main Modifications to the Local Plan were agreed in principle by the Council to make the Local Plan more effective. This HRA takes account of the proposed Main Modifications and subject to approval of Full Council this HRA and the proposed Main Modifications will be published for consultation.

1.3 HRA Process

The HRA can be completed in one to four stages depending on the likely significant impacts of the Local Plan on the designated European sites as follows:

Stage One: Screening — the process which identifies the likely impacts upon a European site of a project or plan, either alone or in combination with other projects or plans and considers whether these impacts are likely to be significant. If the effects are not considered significant the HRA process ends, subject to consultation.

¹ Note Ramsar is an international designation not a European designation but is covered by 'European sites' for shorthand in this HRA.

Stage Two: Appropriate assessment — the consideration of the impact on the integrity of the European site of the project or plan, either alone or in combination with other projects or plans, with respect to the site’s structure and function and its conservation objectives. Additionally, where there are adverse impacts, an assessment of the potential mitigation of those impacts. If the impacts can be mitigated then those migration measures must be included in the Local Plan and the HRA process ends, subject to consultation.

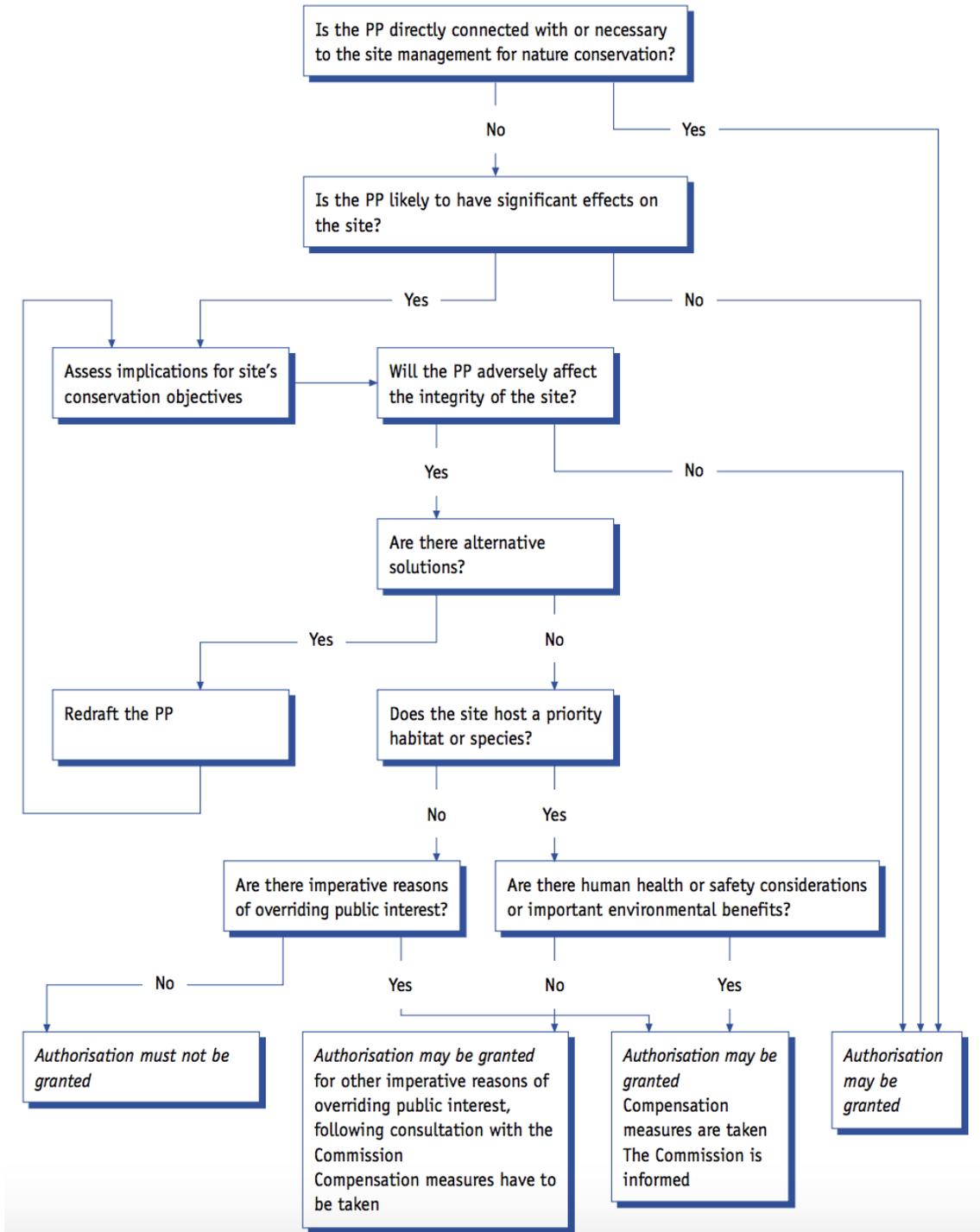
Stage Three: Assessment of alternative solutions — this process examines alternative ways of achieving the objectives of the project or plan that avoids adverse impacts on the integrity of the European site.

Stage Four: Assessment where no alternative solutions exist and where adverse impacts remain. An assessment of compensatory measures where, in the light of an assessment of imperative reasons of overriding public interest, it is deemed that the project or plan should proceed. This considers compensation measures for the loss of the conservation purposes of the European site, for example, creating new wetland for the qualifying features (flora / fauna) of the designated area.

The flowchart helps to illustrate the process:

**Flow chart of the Article 6(3) and (4) procedure (from MN2000)
in relation to the stages of the guidance**

CONSIDERATION OF A PLAN OR PROJECT (PP) AFFECTING A NATURA 2000 SITE



Source:

http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/natura_2000_assess_en.pdf

Accessed 13 June 2018

1.4 HRA Methodology

The HRA can be completed iteratively through the preparation of a Local Plan, taking account of public consultation regarding its policies and development allocations. The HRA begins with a screening process which considers the likely significant effects of the policies and development allocations in the Local Plan on European sites. Where there are no likely significant effects on European sites, the policies or development allocations in the Local Plan will be screened-out from further assessment. Where there is doubt in regard to the likely significant effects on the European sites, the policies or development allocations will be screened-in for further assessment.

If required, this further assessment will consider the baseline condition of the European site(s) and the likely significant effects from the policy or site allocation on the integrity of the conservation purposes of the European site(s). Once the likely affects are known, consideration would then be given to see how the likely affects effects could be avoided, and if necessary how the likely effects can be mitigated.

If the likely effects cannot be avoided or mitigated it is unlikely that the Local Plan will proceed with the policy or site allocation due to the onerous compensation requirements for European sites. However, if deemed necessary by the Council, it may be possible to demonstrate that there are imperative reasons for overriding public interest and providing compensatory measures for the loss of habitat or species.

Appendix 1 describes how the council's HRA is compliant with regulation 105² of the Conservation of Habitats and Species 2017.

1.5 HRA Report Structure

This chapter (Chapter 1) has provided the background to the preparation of the Local Plan and the requirement to undertake HRA. The remainder of the HRA is structured as follows:

- Chapter 2 summarises the components of the Local Plan;
- Chapter 3 provides the HRA Screening in/out of European sites and in-combination plans and projects;
- Chapter 4 provides HRA Screening of the Local Plan, the HRA Screening conclusions and recommended next steps;

² <http://www.legislation.gov.uk/ukxi/2017/1012/regulation/105/made>

- Chapter 5 provides the findings of the Appropriate Assessment stage, and where necessary, sets out the modifications and mitigation measures required to ensure no adverse effect on integrity; and
- Chapter 6 provides the conclusion of the Habitats Regulation Assessment.

Chapter 2 – The Local Plan with Main Modifications

2.1 Structure of the Local Plan

The North Hertfordshire Local Plan contains strategic policies, development management policies and site-specific allocations. It has five sections, twelve chapters and six appendices as follows:

- ❖ Section One – Introduction and Context
 - 1.0 Introduction
 - 2.0 A picture of North Hertfordshire
- ❖ Section Two – Spatial Strategy and Strategic Policies
 - 3.0 Spatial Strategy and Spatial Vision
 - 4.0 – Strategic Policies
 - Sustainable Development
 - Economy and Town Centres
 - Countryside and Green Belt
 - Transport and Infrastructure
 - Housing and Development
 - Design
 - Healthy Communities
 - Natural and Historic Environment
 - Strategic Housing Sites
- ❖ Section Three - Development Management
 - 5.0 Economy and Town Centres
 - 6.0 Countryside and Greenbelt
 - 7.0 Transport and Infrastructure
 - 8.0 Housing and Development
 - 9.0 Design
 - 10. Healthy Communities
 - 11. Natural
 - 12. Historic Environment
- ❖ Section Four – Communities
 - 13. Communities
- ❖ Section Five - Implementation, Monitoring and Review
 - 14. Delivery

- ❖ Appendix 1 – Superseded Policies
- ❖ Appendix 2 – Local Plan Designations
- ❖ Appendix 3 – Local Centres
- ❖ Appendix 4 – Car Parking Standards
- ❖ Appendix 5 – Letchworth Garden City Design Principles
- ❖ Appendix 6 - Glossary

2.2 Content of the Local Plan

Chapters, one, two, three and fourteen, and appendices one to six include introductory information, the Local Plan vision and objectives, a list of locally designated sites, standards and a glossary. These elements of the Local Plan do not provide any policies or development allocations and are therefore considered to not have any likely significant effects on European sites and are screened-out from further assessment.

Chapter four contains nineteen strategic policies. These cover: sustainable development; design; natural resources; transport; the settlement hierarchy; the spatial distribution and strategic allocation of new homes; employment allocations; retail capacities; countryside, green infrastructure, landscape, biodiversity and Green Belt policies; infrastructure requirements; developer contributions; and policies on healthy communities and the historic environment. These strategic policies will be screened-in to assess if they have a likely significant effect on any relevant European site.

Chapters five to thirteen provide development management policies and development allocations related to the strategic policies. These policies will be screened-in to assess if they have a likely significant effect on any relevant European site.

Chapter 3 – Likely Significant Effects on European Sites

This chapter considers which, if any, European site may be affected by the Local Plan. It also considers the zone of influence the Local Plan may have on European sites and provides the conservation objectives and qualifying features of any relevant European site within that zone.

3.1 Potential Effects of the Local Plan on European Sites

Likely effect on foraging pathways: Previous versions of this HRA established a 15km Local Plan zone of influence around the Council's administrative boundary. Natural England agreed to this zone being used to identify European sites for likely significant adverse effects. The 15km buffer zone is the area where development might, for example, affect the pathways of foraging protected species and also for any recreational disturbance from humans or their pets. Natural England advise that the foraging distance for wetland bird species is 2km but that some species may forage up to 15km. Whereas Bats can forage up to 20km from their roosts but typically only forage over 6-8km³. This HRA takes a precautionary approach for foraging species and therefore a 15km zone around the administrative border of North Hertfordshire District Council, as illustrated in Figure 1, is considered as the Local Plan zone of influence for foraging species.

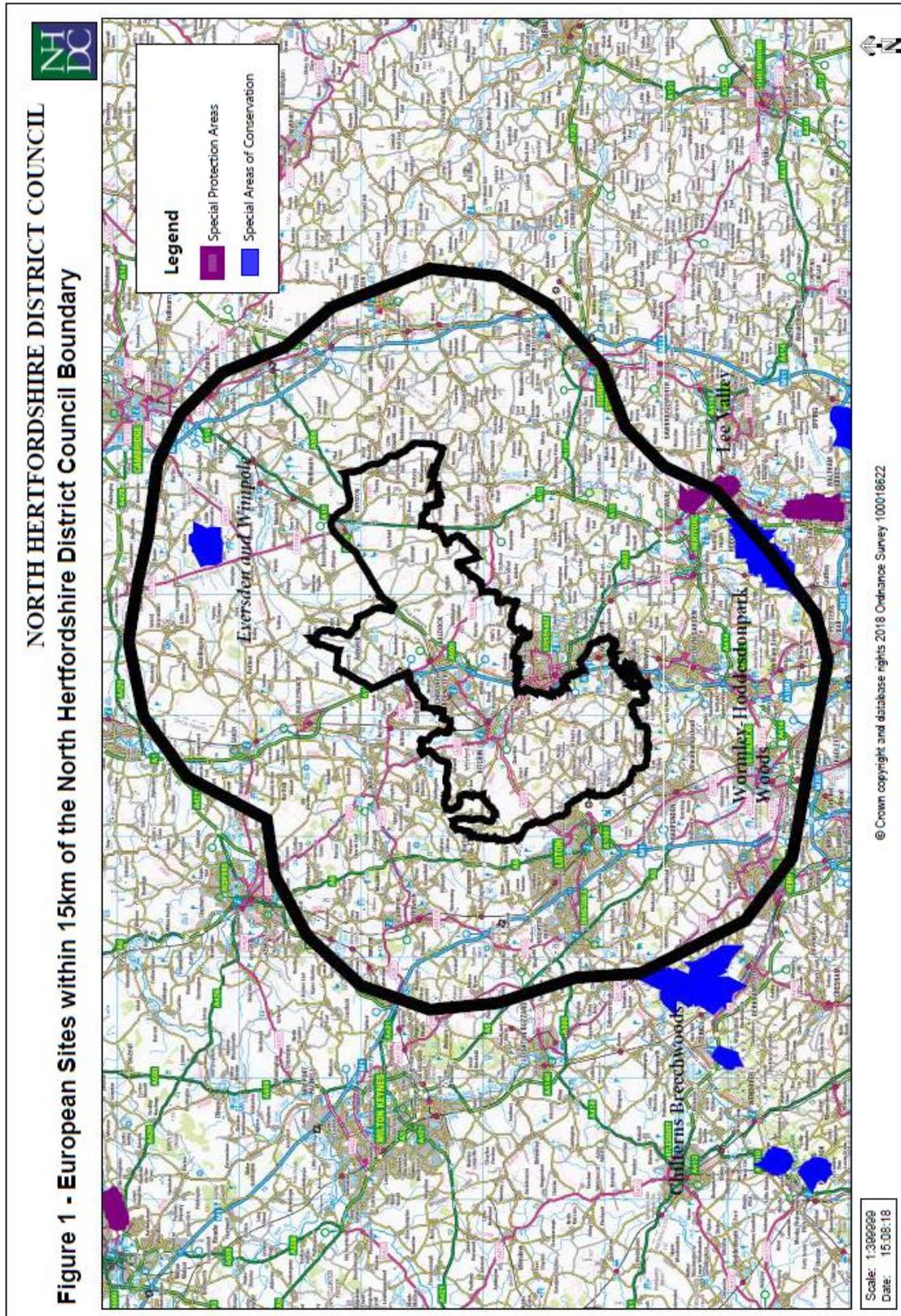
Figure 1 identifies three European sites within the 15km zone of influence and one just outside the zone as follows:

- UK0030331: Eversdon and Wimpole Woods Special Area of Conservation
- UK0013696: Wormley-Hoddesdonpark Woods Special Area of Conservation
- UK9012111: Lee Valley Special Protection Area
- UK0012724: (Beyond 15km) Chilterns Beechwoods Special Area of Conservation

There are three Special Areas of Conservation (SACs), one Special Protection Area (SPA) which also has a Ramsar covering the same geography. The Chilterns Beechwoods SAC can be screened-out given it is beyond the precautionary approach zone of influence. The other three European sites are *screened-in* for further assessment.

³ Greenaway F (2004) Advice for the management of flightlines and foraging habitats of the barbastelle Bat *Barbastella barbastellus*, English Nature Research Report 657.

Figure 1 - European Sites within 15km of the North Hertfordshire District Council Boundary



Likely physical damage / loss of habitat effects: There are no European sites within the North Hertfordshire district. This means from an HRA perspective, developments proposed in the Local Plan for the district can not have direct physical damage or cause the loss of habitat on any European site. Physical damage / loss of habitat can be *screened-out* from further assessment.

Likely non-physical disturbance (noise, vibration and light) effects: Noise, vibration and light can affect European sites where birds are a qualifying feature. Whilst birds are qualifying features, (see Figure 3) of the screened-in European sites, the distances of the Local Plan allocations from the European sites are too far to be considered likely significant effects. The impact distances are identified in numerous HRA's⁴ and specialist publications, which have established 500m as a distance for noise and vibration disturbance and 300m⁵ for light disturbance. The closest Local Plan allocations to a European Site are as follows:

Figure 2 – Proximity of Nearest Local Plan Allocation to a European Site

Eversden and Wimpole Woods	– RY4 (approx. 10,155m)	Housing Allocation
Lee Valley	– KB4/CD6 (approx. 14,055-14,145m)	Housing / Traveller Allocation
Wormley-Hoddesdonpark	– CD6/KB4 (approx. 13,250-13508m)	Traveller Allocation

Non-physical disturbance can therefore be *screened-out* from further assessment. Please see Appendix 3 for the approximate mapping of distances.

Likely recreation effects: The Local Plan proposes at least 15,950 new homes between 2011 and 2031. Each of the three European sites may attract residents and their pets from these new homes for recreational purposes. This HRA considers, on the advice of Natural England, that a zone of influence of 5,000m from the boundary of a European site should be established where measures must be taken to ensure that the integrity of the European site is protected.

Figure 2 establishes the closest Local Plan allocation is approximately 10,155m from a European Site. Given this is over twice the distance of 5,000m it is considered reasonable to *screen-out* recreational disturbance as a likely significant effect on any of the European sites.

⁴ Habitats Regulations Assessment Report, Hertfordshire Local Transport Plan (LTP4) Summary Consultation Document, LUC 2016 and Thames Water Utilities Ltd Water Resources Management Plan 2019 Habitats Regulations Assessment Methodology

⁵ British Wildlife Magazine. October 2007.

Likely non-toxic contamination effects: European Sites can be subject to non-toxic contamination, such as nutrient enrichment, changes in salinity, dust due to industrial action, agriculture, construction and water abstraction and discharge. European sites with potential to be affected by non-toxic contamination are sites that lie within close proximity, or are hydrologically connected to proposed development in the Local Plan. Previous iterations of North Hertfordshire's Local Plan HRA have determined from Water Cycle studies that infrastructure capacity at Rye Meads Sewage Treatment Works needs to be upgraded to accommodate the proposed growth deriving from Local Plans within the Rye Meads Wastewater Treatment Works catchment area (RMCA). Local Plan allocations that fall within the RMCA are hydrologically connected to the Lee Valley SPA and are therefore are *screened-in* for assessment.

Air Pollution: Air pollution can affect plant, soil and water within European Sites. In turn qualifying animal species may also be affected, either directly or indirectly, by deterioration in habitat as a result of air pollution. The pollution can alter the characteristics of the soil, affecting the pH and nitrogen levels that can in turn affect plant health, productivity and species composition. The main source of air pollution is vehicle traffic nitrogen oxides. The Highways Agency Design Manual for Road and Bridges (DMRB) Manual Volume 11 (as amended) assumes that air pollution from traffic is unlikely to be significant beyond 200m.

Figure 2 establishes the closest Local Plan allocation as approximately 10,155m from a European Site. Given this substantially exceeds 200m it is considered reasonable to *screen-out* air pollution.

The following section describes the conservation objectives, qualifying habitats, species and issues of threat established in the Site Improvement Plans for the remaining three *screened-in* European Sites.

3.2 Conservation Objectives, Qualifying Features and Threats to the European Sites

The Joint Nature Conservation Committee website⁶ has Standard Data Forms for SAC's and SPA's and Information Sheets for Ramsar sites. In addition Natural England undertook Site Improvement Plans⁷ for all sites and has a set of objectives⁸ for the sites, agreed with the land owners and through public consultation. These explain what the designated features to protect are, what the conservation objectives are and also provide site improvement plans. These help to inform the assessment of potential likely significant effects.

The European Court of Justice has provided its opinion as to what a likely significant effect is, this can be found in appendix 4. In summary, if it is not clear if the project or plan by itself

⁶ <http://jncc.defra.gov.uk/>

⁷ <http://publications.naturalengland.org.uk/category/5458594975711232>

⁸ <http://publications.naturalengland.org.uk/category/6490068894089216>

or in combination with other projects or plans would significantly adversely affect the conservation objectives of the European site, then an Appropriate Assessment should be carried out.

The conservation purposes of the European Sites are:

Figure 3 – European Site – Conservation Objectives, Qualifying Features & Existing Site Improvement Plans

European Site	Conservation Objectives	Qualifying Features	Site Improvement Plans
Eversdon / Wimpole SAC 66.48ha	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; - The extent and distribution of the habitats of qualifying species - The structure and function of the habitats of qualifying species - The supporting processes on which the habitats of qualifying species rely - The populations of qualifying species, and, - The distribution of qualifying species within the site.	S1308. <i>Barbastella barbastellus</i> ; Barbastelle bat	- Additional bat survey areas -Offsite habitat availability -Forestry and woodland management -Impact of atmospheric nitrogen desposition.
Wormley-Hoddesdon park SAC 335.53ha	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; -The extent and distribution of qualifying natural habitats - The structure and function (including typical species) of qualifying natural habitats, and - The supporting processes on which qualifying natural habitats rely	H9160. Sub-Atlantic and medio-European oak or oak-hornbeam forests of the <i>Carpinion betuli</i>	- Oak disease - Invasive plant species - Impact of atmospheric nitrogen desposition - Deer - Illicit vehicles - Forestry / woodland management - Public access / disturbance - air pollution - risk of atmospheric nitrogen deposition
Lee Valley SPA / Ramsar 447.87ha Ramsar Link https://rsis.ramsar.org/ri-s-search/Lee?pagetab=1	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,	SPA and Ramsar A051 <i>Anas strepera</i> ; Gadwall (Non-breeding) A056 <i>Anas clypeata</i> ; Northern shoveler (Non-breeding) SPA A021 <i>Botaurus stellaris</i> ; Great bittern (Non-breeding)	- Water pollution Hydrological changes - Public access / disturbance - Inappropriate scrub - Fisheries: Fish stocking - Invasive species - Inappropriate cutting/mowing

European Site	Conservation Objectives	Qualifying Features	Site Improvement Plans
	- The distribution of the qualifying features within the site.	Ramsar whorled water-milfoil <i>Myriophyllum verticillatum</i> Water boatman <i>Micronecta minutissima</i>	

The conservation objectives for each European site is to ‘Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features’. The qualifying features vary in flora and fauna (biota) and include insects, birds, woodland, scrubland, grassland and bats. The site improvement plans provide a high-level overview of the issues (both current and predicted) affecting the consideration of the European sites. These are helpful in identifying issues that exist on the sites and assessing if the Local Plan may further affect these issues.

The majority of the issues identified in the site improvement plans are matters for the management organisations and landowners of the European sites, such as inappropriate scrub, deer enclosures, cutting and mowing. These issues are not necessarily affected by Local Plan development allocations.

Matters which are more typically affected by Local Plan development allocations include: increased recreational disturbance, nitrogen disposition and water issues as covered in section 3.1.

3.3 Plans and Projects in-combination Effects

Regulation 105 of the Conservation of Habitats and Species Regulations 2017 not only requires an HRA to consider if the Local Plan is likely to have a significant effect on a European site, but also if there may be effects when considered in combination with other plans or projects.

Figure 4 lists the screened-in European sites and the Local Planning Authorities which host the European sites. These authorities can have a direct effect on the European sites (i.e. development within the European site) whereas any affect from developments in North Hertfordshire would be an indirect effect (i.e. effects on pathways to the European sites).

Figure 4 – In-combination Local Plans Screened-In

Local Plan Owner	European Site
Broxbourne Borough Council	Wormley-Hoddesdonpark Woods / Lee Valley
Cambridgeshire County Council	Eversden and Wimpole Woods
East Hertfordshire District Council	Lee Valley
Epping District Council	Lee Valley
Essex County Council	Lee Valley
Harlow District Council	Lee Valley
Hertfordshire County Council	Wormley-Hoddesdonpark Woods / Lee Valley
South Cambridgeshire District Council	Eversden and Wimpole Woods

Figure 5 additionally screens-in Stevenage and Welwyn Hatfield Local planning Authorities as earlier iterations of North Hertfordshire’s HRA found that these authorities’ developments either wholly or in part drain wastewater to the RMCA.

Figure 5 – Additional Screened-in Local Plans for the Rye Meads Wastewater Treatment Works catchment area (RMCA)

Local Plan Owner	Rye Meads Wastewater Treatment Works catchment area
Broxbourne Borough Council	Yes
Cambridgeshire County Council	No
East Hertfordshire District Council	Yes
Epping District Council	Part
Essex County Council	Yes
Harlow District Council	Yes
Hertfordshire County Council	Yes
South Cambridgeshire District Council	No
Stevenage Borough Council	Yes
Welwyn Hatfield District Council	Part

The indirect effect can be in-combination with the host authorities' development. Therefore Figure 6 provides the status of the individual host's plans and the findings of their Habitats Regulation Assessments.

Figure 6 – Status of HRA and Screened –in Local Plans

Authority	Current Plan	HRA Completed and Findings	Revised Plan Published Since 2012 NPPF
Broxbourne	Local Plan Second Review 2001-2011 (2005)	March 2018 No LSE. Therefore there are no in-combination effects. (recreation / air pollution mitigated)	Submitted to SoS March 2018 EiP Commencing September 2018
Cambridgeshire County Council	Cambridgeshire and Peterborough Minerals and Waste Plan (2011/2012)	X 2009 No LSE Therefore there are no in-combination effects with the existing Local Plan.	Preliminary Draft Minerals and Waste Local Plan May 2018, out to consultation – no HRA available
Harlow District Council	Adopted Replacement Harlow Local Plan (2006) Saved Policies	February 2018 No LSE Therefore there are no in-combination effects. (RMCA mitigated by adopting the optional water standards of 110 litres of water /person/day giving TMCA capacity to 2036)	Harlow Local Development Plan up to 2033 – Published for Consultation in May 2018
Hertfordshire County Council	Hertfordshire Minerals Local Plan 2016-2031. Hertfordshire Waste	November 2017 No LSE Therefore there are no in-combination effects (HRA does flag up air pollution for HCC sites – not in NHDC area) August 2017	Currently considering representations to consultation which closed on 9 February 2018 Currently calling for sites until 16 September 2018

Authority	Current Plan	HRA Completed and Findings	Revised Plan Published Since 2012 NPPF
	Local Plan 2016-2031.	No LSE Therefore there are no in-combination effects (HRA does flag up air pollution for HCC sites – not in NHDC area)	
East Hertfordshire District Council	The Adopted East Herts Local Plan – Second Review (2007)	September 2016 No LSE Therefore there are no in-combination effects. (with mitigation Epping Forest SAC)	The East Herts Submission District Plan is awaiting Adoption, as of July 2018
Epping Forest District Council	Combined Policies of Epping forest District Plan 1998 and Alterations 2006 (2008)	December 2017 No LSE Therefore there are no in-combination effects. (with mitigation Epping Forest SAC)	The Epping Forest Local Plan Submission Version 2017 is awaiting submission to the SoS following the dismissal of a Judicial Review
Essex County Council	Waste Local Plan Minerals Local Plan	January 2016 X 2012 No LSE. Therefore there are no in-combination effects	Adopted July 2017 Adopted x 2014
Stevenage	The Local Plan for Stevenage (2004)	May 2016 No LSE. Therefore there are no in-combination effects.	The Stevenage Submission District Plan 2011-31 is awaiting resolution of Holding Objection http://www.stevenage.gov.uk/149690/planning-policy/191157/ before considering Adoption, as of July 2018
Welwyn Hatfield	Welwyn Hatfield	August 2016	The Welwyn Hatfield

Authority	Current Plan	HRA Completed and Findings	Revised Plan Published Since 2012 NPPF
	Local plan (2005)	No LSE but capacity of the RMCA and Lee Valley SPA and Ramsar need to be planned carefully and monitored. Therefore there are no in-combination effects.	Local Plan 2013-2032 is at Examination, as of July 2018

3.4 Findings from HRA reports and likely in-combination effects.

Figure 6 provides the status of Local Plans and their HRA's as of July 2018. Each of the Local Plans have been assessed as not having likely significant effects on European sites. This conclusion has in some instances required mitigation measures set out in development policies, and / or memorandums of understanding with infrastructure providers.

A key finding is that uncommon with the North Hertfordshire Local Plan, other Local Plans require drainage within the RMCA. Thames Water is responsible for the RMCA and its waste water treatment plant. It was established in earlier iterations of this HRA and the Water Cycle Studies published in 2009⁹ and updated in 2015¹⁰, that the Rye Meads Sewerage Treatment Works (RMSTW) had capacity constraints. These constraints, if not mitigated can lead to increases in phosphorus from foul water discharges from the proposed housing allocations. Excess phosphorus in waste water can lead to eutrophication, such as algae growth and changes in plant ecology which in turn can affect the designated purposes of the protected plant or species in a European site. The potentially affected European site is the Lee Valley SPA / Ramsar. The RMSTW forms part of the Lee Valley SPA / Ramsar and is hydrologically connected to the proposed development allocations within the North Hertfordshire Local Plan that are within the RMCA. These development sites are already screened-in under 'Likely non-toxic contamination effects' (see 3.1).

For the Examination in Public of the North Hertfordshire Local Plan, Thames Water provided a policy wording change to Policy NE10 in January 2017¹¹, this helped to establish the Main Modification for NE10 and SP11 which also took account of Thames Water's later position

⁹ <https://www.north-herts.gov.uk/files/ti10-rye-meads-water-cycle-strategy.pdf>

¹⁰ <https://www.north-herts.gov.uk/files/ti11-rye-meads-water-cycle-strategy-review.pdf>

¹¹ <https://www.north-herts.gov.uk/files/mou6-thames-water.pdf>

statement¹² for the Harlow Local Plan (June 2017). The effect of this policy is that the Council will work with Thames Water to ensure wastewater treatment capacity is provided for growth beyond the predicted capacity constraints at 2026. Harlow District Council's emerging Local Plan (May 2018)¹³ is more bullish on the timeline stating at paragraph 11:30:

Thames Water position statements indicate capacity in the Treatment Works up to 2036, subject to further improvements to sludge and storm streams. Further network modelling is being undertaken by Thames Water to understand sewer capacity in the area before outlining further intervention solutions.

Whereas Stevenage's emerging Local Plan¹⁴ is more constrained

f. Ensure new development does not have an adverse effect on the Lee Valley Special Protection Area (SPA). New development post 2026 will only be permitted if the required capacity is available at Rye Meads STW, including any associated sewer connections.

From an in-combination perspective the RMWTW capacity is an issue affecting both the West Essex / East Hertfordshire and the Stevenage / North Hertfordshire Housing Market Areas. However, all emerging / Local Plans have taken account of the likely significant effect on the Lee Valley SPA / Ramsar and have provided, as appropriate, policy safeguards.

The North Hertfordshire development allocations that fall within the RMWTW are:

Knebworth -	KB1, KB2, KB3, KB4
Codicote -	CD1, CD2, CD3, CD5, CD6
Graveley -	GR1 ¹⁵
North Stevenage -	NS1
Great Ashby -	GA1, GA2

These development allocations may have a likely significant effect on the Lee Valley SPA / Ramsar and will therefore be subject to further assessment, please see Chapter 4, figures 9 and 10.

¹² <http://www.harlow.gov.uk/evidence-base-thames-water-greater-harlow-position-statement-june-2017pdf>

¹³ <http://www.harlow.gov.uk/local-plan-publication>

¹⁴ <http://www.stevenage.gov.uk/149690/planning-policy/90175/>

¹⁵ GR1 and NS1 are physically within the Anglian River Basin but due to geography of water treatment infrastructure, Local Plan evidence studies (footnotes 11 and 12), take a precautionary approach and assume that wastewater from NS1 and GR1 will be pumped over 'boundary' and treated in Thames area under commercial arrangement between the Thames and Anglian water companies.

Chapter 4 – Screening of the Local Plan

4.1 Screening of the Policies in the Local Plan

The Local Plan has been screened using the zones of influence for likely significant effects discussed in Chapter 3. This has enabled the screening-in and screening out of types of likely significant effects on the European Sites. Appendix 2 – Screening 1 provides the screening.

Figure 7 lists the four screened-out likely significant effects and Figure 8 provides the three screened-in likely significant effects on the European sites covered in this HRA.

Figure 7 – Screened-out Likely Significant Effects

Effect	Significant if with KM / M of European site / Hydro connection
Physical damage / Loss within NHDC administrative area	None – there are no European Sites within NHDC and therefore there can be no direct physical damage and/or loss from development
Non-physical disturbance (noise, vibration, light)	None – there are no allocations within 500 meters noise, vibration , light); within 300 ¹⁶ meters noise- or within 500m as a precaution.
Air Pollution	None – there are no allocations within 200m ¹⁷ of a European Site – the zone considered to be most likely to be affected by increased traffic pollutants
Recreational Disturbance	None – there are no allocations within 5k of the European sites or as a precaution 10km.

Figure 8 – Screened-in Likely Significant Effects

Effect	Significant if with KM / M of European site / Hydro connection
Physical damage / Loss to pathways within NHDC administrative area	Potentially – There are allocations in the Local Plan within the 15km precautionary foraging zones of European Sites
Non-toxic contamination (hydrologically connected, nutrient enrichment, salinity)	Potentially - The Thames Water, water catchment area includes a part of NHDC's administrative area. The Lee Valley SPA could potentially be affected by allocations in the Local Plan.
Water Quantity / Quality (hydrology, water chemistry,)	Potentially - The Thames Water, water catchment area includes a part of NHDC's administrative area. The Lee Valley SPA could potentially be affected by allocations in the Local Plan.

The Local Plan has been subject to an Examination in Public. During the process of the Examination a number of Main Modifications to the policies, including the development allocations, have been drafted for consultation.

¹⁶ British Wildlife Magazine, October 2007

¹⁷ Highways Agency Design Manual for Roads and bridges – Volume11 as amended

Appendix 2 – Screening 2, contains the screening of the amended policies and development allocations. This screening also includes the policies / development allocations which have not changed, this is because they still need to be assessed to establish if they have a likely significant effect on a European Site(s). Please note, if a policy or allocation has been deleted as part of the Main Modifications, it will not appear in Appendix 2 – Screening 2.

Figure 9, below is a table of the policies / development allocations which have been screened in for further assessment from Appendix 2 – Screening 2.

Appendix 2 – S2 provides the screening for every policy within the North Hertfordshire Local Plan with Main Modifications. The screening is based on the 15 km zone of influence established in chapter 3 of this report. Each of these development allocations fall within 15 km of one or two European Sites

Figure 9 – Local Plan Policies with Main Modifications Screened-in for Further Assessment

Policy Site	European Site	Foraging pathway	Non-toxic contamination
SP16 – NS1	Lee Valley	No	Potentially
SP16- GA2	Lee Valley	No	Potentially
AS1 Land West of Claybush Road	Eversden and Wimpole Woods	Potentially	No
CD1 Land south of Cowards Land	Lee Valley	Potentially	Potentially
CD3 Land north of the Close	Lee Valley	Potentially	Potentially
CD4 Land at Pulmer Water	Lee Valley	Potentially	Potentially
CD5 Land south of Heath Lane	Lee Valley	Potentially	Potentially
CD6 Danesbury Park Lane	Lee Valley / Wormley-Hoddesdonpark Woods	Potentially	Potentially
GA1 Land at Roundwood	Lee Valley	No	Potentially
GR1 Land at Milksey Lane	Lee Valley	No	Potentially
KB1 Land at Deards End	Lee Valley / Wormley-Hoddesdonpark Woods	Potentially	Potentially
KB2 Land off Gypsy Lane	Lee Valley / Wormley-Hoddesdonpark Woods	Potentially	Potentially
KB3 Chas Lowe Site	Lee Valley / Wormley-Hoddesdonpark Woods	Potentially	Potentially
KB4 Land east of Knebworth	Lee Valley / Wormley-Hoddesdonpark Woods	Potentially	Potentially
RD1 Land at Blacksmiths Lane	Eversden and Wimpole Woods	Potentially	No
RY1 Land west of Ivey Farm	Eversden and Wimpole Woods	Potentially	No
RY2 Land north of Newmarket Road	Eversden and Wimpole Woods	Potentially	No
RY4 Land north of Lindsay Close	Eversden and Wimpole Woods	Potentially	No

Policy Site	European Site	Foraging pathway	Non-toxic contamination
RY7 Anglia Business Park	Eversden and Wimpole Woods	Potentially	No
RY8 Land at Lumen Road	Eversden and Wimpole Woods	Potentially	No
RY10 Land south of Newmarket Road	Eversden and Wimpole Woods	Potentially	No
RY11 Land at Barkway Road	Eversden and Wimpole Woods	Potentially	No
RY9 Land north of York Way	Eversden and Wimpole Woods	Potentially	No
RY12 Town Hall Site, Melbourne Road	Eversden and Wimpole Woods	Potentially	No

Appendix 2 – Screening 3 provides the screening for the development allocations in Figure 9 above. All the sites that were screened-in for foraging pathway likely significant effects, have been screened out in this assessment due to the distances of the development allocations being over the typical distances for foraging of the qualifying features – Bats 6-8km and wetland birds 2km (see footnotes 5 and 32).

Figure 10 provides the list of sites that are screen-out in Screening 3.

Figure 10 - Local Plan Policies with Main Modifications Screened-out for Further Assessment

Policy Site	European Site
AS1 Land West of Claybush Road	Eversden and Wimpole Woods
RD1 Land at Blacksmiths Lane	Eversden and Wimpole Woods
RY1 Land west of Ivey Farm	Eversden and Wimpole Woods
RY2 Land north of Newmarket Road	Eversden and Wimpole Woods
RY4 Land north of Lindsay Close	Eversden and Wimpole Woods
RY7 Anglia Business Park	Eversden and Wimpole Woods
RY8 Land at Lumen Road	Eversden and Wimpole Woods
RY10 Land south of Newmarket Road	Eversden and Wimpole Woods
RY11 Land at Barkway Road	Eversden and Wimpole Woods
RY9 Land north of York Way	Eversden and Wimpole Woods
RY12 Town Hall Site, Melbourne Road	Eversden and Wimpole Woods

By virtue of the assessment screening out the above development allocations, it is possible to screen out the European Site Eversdon and Wimpole Woods as no policy / allocation is within the foraging distance of the qualifying feature S1308 *Barbastella barbastellus* Barbastelle bat. In addition the qualifying features of the wetland birds for the European Site Lee Valley can be screened out for foraging as no development allocations are within 2km of the Lee Valley.

Figure 11 below provides a table of the remaining development allocations – these allocations cannot be screened-out because further assessment is required in regard to the relationships between the RMCA, the Lee Valley SPA / Ramsar and the qualifying features of this European Site. The development allocations that will be taken forward to Stage 2 – Appropriate Assessment are those in Figure 10. These development allocations are within the RMCA and may have a likely significant effect on non-toxic contamination. In this context it concerns the water quality of the catchment area and the infrastructure capability of the Rye Meads WTC to decontaminate the additional foul water emanating from the proposed development allocations. This is in order to maintain the water quality for the protection of the habitats for the qualifying features which depend on the Lee Valley SPA and Ramsar.

Figure 11 – Sites to be taken forward to Stage 2 - Appropriate Assessment

Policy Site	European Site	Non-toxic contamination
SP16 – NS1	Lee Valley	Yes
SP16- GA2	Lee Valley	Yes
CD1 Land south of Cowards Land	Lee Valley	Yes
CD3 Land north of the Close	Lee Valley	Yes
CD4 Land at Pulmer Water	Lee Valley	Yes
CD5 Land south of Heath Lane	Lee Valley	Yes
CD6 Danesbury Park Lane	Lee Valley / Wormley-Hoddesdonpark Woods	Yes
GA1 Land at Roundwood	Lee Valley	Yes
GR1 Land at Milksey Lane	Lee Valley	Yes
KB1 Land at Deards End	Lee Valley / Wormley-Hoddesdonpark Woods	Yes
KB2 Land off Gypsy Lane	Lee Valley / Wormley-Hoddesdonpark Woods	Yes
KB3 Chas Lowe Site	Lee Valley / Wormley-Hoddesdonpark Woods	Yes
KB4 Land east of Knebworth	Lee valley / Wormley-Hoddesdonpark Woods	Yes

Chapter 5 – Appropriate Assessment

5.1 The Lee Valley SPA / Ramsar

In order to assess if the proposed development allocations will have likely significant effects on the qualifying features of the Lee Valley SPA and Ramsar European Sites, it is necessary to understand more about the features of these designations.

The Site Improvement Plan¹⁸ for the Lee Valley SPA (447.87ha) describes it as comprising of:

... a series of embanked water supply reservoirs, sewage treatment lagoons and former gravel pits that display a range of man-made and semi-natural wetland and valley bottom habitats. The site is important for overwintering bittern as well as an internationally important population of two duck species.

The SPA qualifying criteria are:

A021(NB) *Botaurus stellaris*: Great bittern
A051(NB) *Anas strepera*: Gadwall
A056(NB) *Anas clypeata*: Northern shoveler

The Information Sheet on Ramsar Wetlands¹⁹ describes it as comprising of:

... a series of embanked water supply reservoirs, sewage treatment lagoons and former gravel pits along approximately 24 km of the valley. These waterbodies support internationally important numbers of wintering gadwall and shoveler and nationally important numbers of several other bird species. The site also contains a range of wetland and valley bottom habitats, both man-made and semi-natural, which support a diverse range of wetland fauna and flora.

The qualifying Ramsar criteria²⁰ for identifying Wetlands of International Importance for biological diversity at the Lee Valley are:

Ramsar Criterion 2 – vulnerable endangered species

The site supports the nationally scarce plant species whorled water-milfoil *Myriophyllum verticillatum* (an aquatic plant) and the rare or vulnerable invertebrate (RDB3) water boatman *Micronecta minutissima*.

Ramsar criterion 6 – species/populations occurring at levels of international

¹⁸ <http://publications.naturalengland.org.uk/publication/5864999960444928>

¹⁹ <http://jncc.defra.gov.uk/pdf/RIS/UK11034.pdf>

²⁰ https://www.ramsar.org/sites/default/files/documents/library/ramsarsites_criteria_eng.pdf

Importance (1% or more).

Species with peak counts in spring/autumn:
Northern shoveler , *Anas clypeata*, NW & C Europe

Species with peak counts in winter:
Gadwall , *Anas strepera*, NW Europe

Note there are also Ramsar noteworthy flora and fauna, Great cormorant, Tufted duck, Common coot, Great bittern, Smew, and Water rail..

Figure 12 provides a table of the qualifying features and the supportive environment required²¹ for the protection of them for the screened-in likely significant effect.

Figure 12 – Non-toxic Contamination (water quality) and Protection of the Qualifying Features

Species / Fauna	Habitat / Flora	Significance / Season	Locality	Water Quality / non-toxic contamination
A021 Botaurus stellaris; Great bittern	N/A	1% of the total British wintering population (six individuals wintering ²²) (year 2000)) / Winter This figure is declining according to White and Harris 2010 ²³ . Natural England ²⁴ has identified Lee valley for targeted restoration to arrest the apparent decline.	The Bittern favours a reed-bed habitat. It is vital to the species, providing them with feeding areas and locations to hide. The majority of bittern are found in the Turnford and Cheshunt Pits site while Amwell Quarry and Rye Meads also support the	The 2018 Draft Supplementary advice from Natural England explains: For SPA / Ramsar 'features which are dependent on wetland habitats supported by surface water, maintaining the quality and quantity of water supply will be critical, especially at certain times of year during key stages of their life cycle. Poor water quality and inadequate quantities of water

²¹ European Site Conservation Objectives: Draft Supplementary Advice on Conserving and Restoring Site Features Lee Valley Special Protection Area (SPA) 2018 Site code: UK9012111

²² <http://publications.naturalengland.org.uk/file/6230224169598976>

²³ WHITE & HARRIS, 2010. The wetland resource of the Lee Valley: an assessment of its importance to nature conservation, with special reference to water birds.

²⁴ NATURAL ENGLAND, 2015. Site Improvement Plan for Lee Valley SPA (SIP118).

Species / Fauna	Habitat / Flora	Significance / Season	Locality	Water Quality / non-toxic contamination
			species. Walthamstow Reservoirs also occasionally supports bittern.	can adversely affect the availability and suitability of feeding and roosting habitats. Typically, meeting the surface water and groundwater environmental standards set out by the Water Framework Directive (WFD 2000/60/EC) will also be sufficient to support the SPA Conservation Objectives but in some cases more stringent standards may be needed to support the SPA feature'.
A051(NB) <i>Anas strepera</i> : Gadwall (non-breeding) (SPA & Ramsar)	N/A	1.5% of the North West European wintering population (406 ²⁴ individuals wintering) (year 2000) / Winter The population has seen an increase since classification (2000). Availability of food is regarded as a key factor affecting distribution. The abundance of aquatic weed in one of the older gravel pits, (Holyfield Lake) has been attributed to the number of birds present. Regardless, the proportion of	Gadwall favour gravel pits and reservoirs during the winter period where they feed on seeds, leaves and stems of water plants. Each of the supporting SSSIs support gadwall in numbers which are sufficient to qualify them as being of national importance.	As above

Species / Fauna	Habitat / Flora	Significance / Season	Locality	Water Quality / non-toxic contamination
		birds within the SPA sites has remained steady between 60% and 80% of the total Lee Valley population, with an average between 1999/00 – 2008/09 of 73% (White & Harris 2010).		
A056(NB) <i>Anas clypeata</i> : Northern shoveler (SPA & Ramsar)	N/A	<p>1.0% of the North West/Central European wintering population (456²⁴ individuals wintering) (year 2000) / Winter</p> <p>The population of Northern Shoveler within Lee Valley SPA has shown a slight decrease since Classification (2000). The key SPA sites at Amwell and Turnford & Cheshunt Pits experienced a population decline during the 1999/00 – 2008/09 period, along with the functionally linked non- SPA Holyfield gravel pits. This is linked to the a maturing of trees in the area and flags a need to actively manage this growth.</p>	Shoveler are found throughout the site and in winter they frequent shallow water areas on marshes, flooded pasture, reservoirs and lakes with plentiful, marginal reeds or emergent vegetation.	As above
	<i>whorled</i>			As above

Species / Fauna	Habitat / Flora	Significance / Season	Locality	Water Quality / non-toxic contamination
	<i>water-milfoil</i> <i>Myriophyllum verticillatum</i> (Ramsar)			
water boatman <i>Micronecta minutissima</i> (Ramsar)				As above

5.2 Wastewater Treatment

The main water quality issue in regards to the Lee Valley SPA / Ramsar is achieving the right balance of nutrients within the water bodies. The main concern from a likely significant effect from a North Hertfordshire perspective is in regards to phosphates. Phosphates occur naturally from rocks, but also from agricultural fertiliser run off and partially treated / untreated sewerage. The issue for this Appropriate Assessment (AA) is whether or not the wastewater discharged from the screened-in proposed development allocations can be adequately treated by the relevant wastewater treatment works. This AA does not consider the untreated sewerage from farm and wildlife as the SPA / Ramsar is not within the administrative area of North Hertfordshire. This AA does however consider the wastewater discharged from the screened-in North Hertfordshire proposed development allocations.

The likely significant effect of too much phosphate in water bodies is that it stimulates the growth of plankton and aquatic plants (and on-going through the food chain). Over-time if the phosphate loading continues, a build up can occur which can lead to an imbalance in the nutrient and biomass water cycling processes. This imbalance can lead to eutrophication, an over nourished production of plankton and aquatic plants which cannot be consumed by the ecosystem, often visible as blue-green algal blooms (cyanobacteria) which can produce harmful toxins to the qualifying features.

Figure 13 provides a map of Stevenage Borough Council and the Thames Water Basin and Anglian Water Basin watershed. The screened in proposed development allocations, NS1, GA1 and GA2 can be seen to the north of this map. The Gravely, Coddicote and Knebworth screened-in allocations are not on Figure 12 but can be seen as being with the Thames Water Basin in Figure13.

As noted in footnote 17, GR1 and NS1 are physically within the Anglian River Basin but due to geography of water treatment infrastructure, Local Plan evidence studies (footnotes 11

and 12), take a precautionary approach and under commercial arrangement between the Thames and Anglian water companies, wastewater from NS1 and GR1 will be pumped over 'boundary' and treated in Thames area.

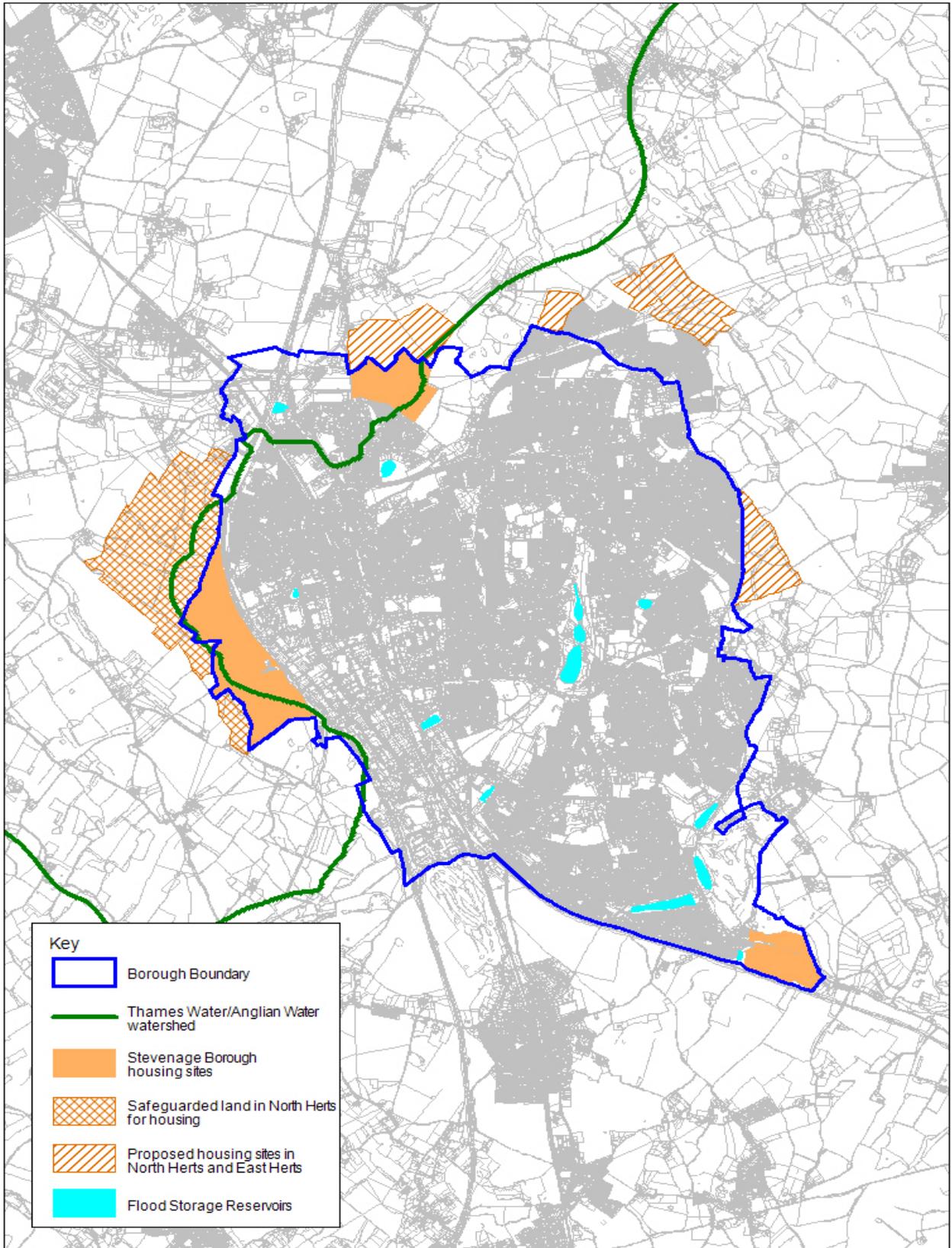
The in-combination likely significant effects in 3.4 illustrated that the screened-in proposed development allocations would be served by the Rye Meads Sewerage Treatment Works (RMSTW).

Wastewater treatment plants are essential to aid the balance of aerobic and anaerobic discharges for the condition of the water bodies. In anaerobic conditions (absence of oxygen) where bacteria has used up the oxygen in decomposing the waste, other bacteria will then continue the decomposition processes which may lead to the decaying materials turning the water bodies into a swamp. In aerobic conditions (presence of oxygen) natural cycles usually occur until an excess of phosphates (or nitrates) enter the water. The image below shows the Rye Meads Sewerage Treatment Works (RMSTW) aerating wastewater.



Source: NHDC

Figure 13 Thames Water Basin and Anglia Water Basin Watershed



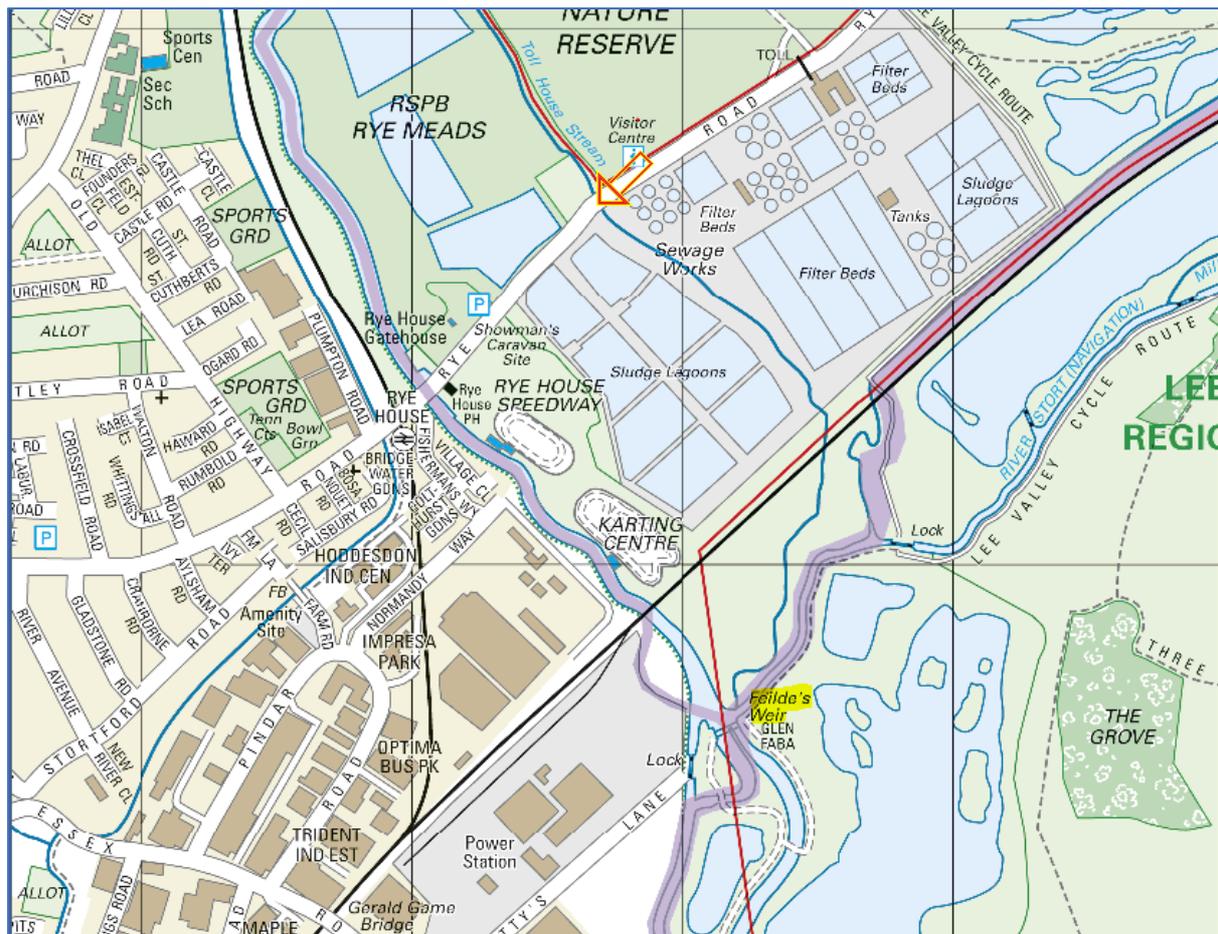
Source: Stevenage Borough Council

The Lee Valley SPA/ Ramsar is coterminous with the four Lee Valley Sites of Special Scientific Interests (SSSI); Amwell Quarry, Rye Meads, Turnford and Cheshunt Pits and Walthamstow Reservoirs. These are sites protected by the UK government for conservation and improvement because of their fauna, flora, geological or physiological features.

Figure 14 illustrates that the RMSTW discharges the treated effluent²⁵ in to the Tollhouse Stream (see arrow), which passes through a siphon under the River Stort and joins the River Lea just downstream of the Fields Weir (see highlight). Parts of the RMSTW are within the Rye Meads SSSI part of the Lee Valley SPA / Ramsar (see Figure 15). Therefore treatment takes place within the SPA / Ramsar. The treated water is then discharged to the River Lea with water courses connecting with the Turnford and Cheshunt Pits SSSI and Walthamstow Reservoirs SSSI parts of the Lee valley SPA / Ramsar.

If the RMSTW can adequately treat the wastewater and discharge it to the water bodies within the Rye Meads Water Catchment Area then the likely significant effect of the proposed development allocations are mitigated.

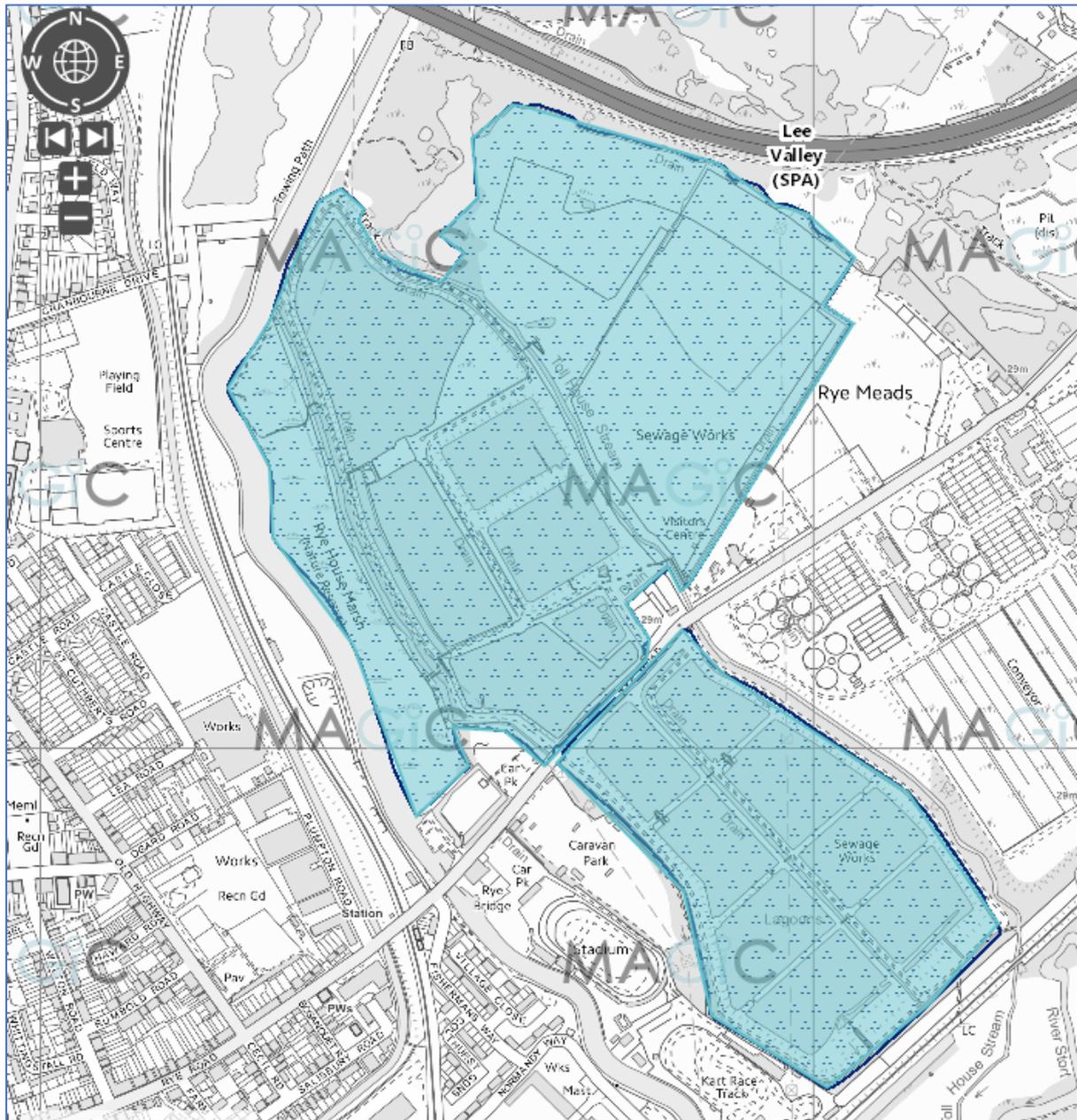
Figure 14 – Rye Meads Sewerage Treatment Works Discharge



Source Streetmap.co.uk via heritagegateway.org.uk

²⁵ Rye Meads Water Cycle Study, 2009

Figure 15 – RMWTW Sludge Lagoons in the SSSI



Source: Magic

5.3 Lee Valley SPA / Ramsar Mitigation

The responsible authority for the RMSTW is Thames Water. Thames Water has collaborated with the North Hertfordshire District Council in both the development of policy wording and infrastructure evidence. A memorandum of understanding and position statement²⁶ was agreed in April 2017 to determine that was headroom capacity up to 2024 (with work being

²⁶ www.north-hert.gov.uk/files/mou6-thames-waterpdf

undertaken to look further forward) and that subject to policy wording amendments that 'the strategy, sites and policies...provide a sound basis for the delivery of water and wastewater infrastructure in the Thames area of the district'.

The wording alterations to Policy NE10(d) were agreed by both Thames Water and Anglian Water²⁷ and were as follows:

d. 'Mechanisms for delivering any necessary new or improved water **and/ or wastewater infrastructure** are secured under the requirements of Policy SP7 **and adequate foul water treatment and disposal already exists or can be provided in time to serve the development.**'

This wording sought to secure the provision of adequate wastewater infrastructure was provided in time to serve the relevant proposed development allocations.

The Infrastructure Delivery Plan²⁸ states the following:

12.42 Rye Meads STW currently treats a population equivalent (pe) of 396,000. This is residential population plus trade/business discharges converted to a residential equivalent. The constraint that is limiting the treatment capacity at Rye Meads STW is within the main treatment area – the Activated Sludge Plant (ASP). Although this is not leading to a failure of the discharge consent it does now fall within the range for which investigations are undertaken and options for resolution determined.

12.43 An upgrade to the existing assets by constructing additional treatment tanks has been considered by Thames Water; however, given the uncertainties around the scale and phasing of new dwellings planned to drain to Rye Meads STW from the 7 constituent Local Authorities, such a solution not considered feasible at this time.

12.44 Thames Water has investigated alternatives and considers the most cost beneficial solution would be to make a change in how the plant is operated. The solution proposed is to dose the incoming sewage with an iron solution to encourage the settlement of solids within the Primary Settlement stage thus relieving the load on the ASP. This solution will provide an interim increase in capacity of approx. 47,000 pe, which should be sufficient for all potential growth planned within the catchment until at least 2026. This solution is currently planned for delivery by mid-2017.

12.45 The longer term plan for capacity at the STW post 2026 will be appraised by Thames Water and developed as details of the proposed scale and phasing of development sites becomes clearer. To obtain this better picture Thames Water has confirmed that they will continue to work with and support the local planning authorities as their Local Plans are formalised and adopted.

12.46 Thames Water continue to monitor incoming flows, their chemical make-up, the pe of the incoming loads, the performance of the plant, the cost of operating the plant and the daily volumetric effluent flows discharged to the river. Additionally, they will continue to

²⁷ www.north-herts.gov.uk/files/mou2-anglian-waterpdf

²⁸ www.north-herts.gov.uk/filesti1-infrastructure-delivery-planpdf

work with the Environment Agency to understand what future water quality consents changes may be necessary for Water Framework Directive compliance.

The Hearing Session for the Examination in Public of the Local Plan chapter Natural Environment was held on 27 November 2017. The suggested policy changes were discussed at the hearing and it was agreed to propose those changes as Main Modifications to the Local Plan as follows:

d. Mechanisms for delivering any necessary new or improved water **and/ or wastewater infrastructure** are secured under the requirements of Policy SP7 **and**

e. adequate foul water treatment and disposal already exists or can be provided in time to serve the development.'

In addition the Strategic Policy SP11: Natural Resources and Sustainability had an additional bullet point added as a proposed Main Modification, as follows:

e. work with utilities providers, East Hertfordshire District council and relevant agencies to ensure additional wastewater treatment capacity is delivered without harm to protected European sites.

And within the supporting text:

4.1xx Wastewater from some parts of North Hertfordshire is treated at Rye Meads on the Hertfordshire / Essex border. This site lies within a protected site of European importance and currently has capacity to serve additional development until 2026. We will work with the relevant bodies to ensure long-term wastewater treatment solutions are available which will not have an adverse impact upon the Lee Valley Special Protection Area.

The purpose of these Main Modifications is to underpin in policy the reason to refuse planning applications for developments within the RMCA. The reason to refuse would be that Thames Water is unable to provide adequate wastewater treatment capacity to ensure that the designated species and habitats would not be at threat from wastewater sources related to the proposed development allocations. Thames Water state they are able to provide sufficient capacity for projected growth across the RYCA to 2026 and are developing solutions beyond this period.

5.4 Mitigation Screening

The Main Modifications make it possible to refuse development where there is insufficient wastewater treatment capacity. This means that the qualifying features of the SPA/ Ramsar should be protected by policy and therefore permission for the proposed development allocations beyond 2026 can only be relied upon where capacity has become available. With this mitigation in place (as taken forwarded in the Main Modifications consultations and then adopted by the Council) then the remaining European Sites, proposed

development allocations and the likely significant effect of non-toxic contamination can be screened-out (see Figure 16).

Figure 16 – Final Screening

Policy Site	Screened Out?	European Site	Screened Out?	Non-toxic contamination Screened-out?
SP16 – NS1	Yes	Lee Valley	Yes	Yes
SP16- GA2	Yes	Lee Valley	Yes	Yes
CD1 Land south of Cowards Land	Yes	Lee Valley	Yes	Yes
CD3 Land north of the Close	Yes	Lee Valley	Yes	Yes
CD4 Land at Pulmer Water	Yes	Lee Valley	Yes	Yes
CD5 Land south of Heath Lane	Yes	Lee Valley	Yes	Yes
CD6 Danesbury Park Lane	Yes	Lee Valley / Wormley-Hoddesdonpark Woods	Yes	Yes
GA1 Land at Roundwood	Yes	Lee Valley	Yes	Yes
GR1 Land at Milksey Lane	Yes	Lee Valley	Yes	Yes
KB1 Land at Deards End	Yes	Lee Valley / Wormley-Hoddesdonpark Woods	Yes	Yes
KB2 Land off Gypsy Lane	Yes	Lee Valley / Wormley-Hoddesdonpark Woods	Yes	Yes
KB3 Chas Lowe Site	Yes	Lee Valley / Wormley-Hoddesdonpark Woods	Yes	Yes
KB4 Land east of Knebworth	Yes	Lee valley / Wormley-Hoddesdonpark Woods	Yes	Yes

Chapter 6 – Conclusion

Chapter 2 of the screening stage of this Habitat Regulation Assessment screened-out the chapters and appendices of the Local Plan that contain policies or development allocations that are unlikely to have significant effects on the European Sites (para 2.2).

Chapter 3 of the screening stage considered the potential zones of influence of the likely significant effects of the remaining policies and chapters on the European Sites. This set a zone of influence from the administrative boundary of the district of approximately 15km to any European site (figure 1). It also provided evidence for screening-out the likely significant affects deriving from physical damage, non-physical disturbance, recreation and air pollution (3.1).

Chapter 3 also considered the conservation objectives of the European Sites (Figure 3) and the in-combination effects of other plans and policies in relation to these protected species and habitats (Figures 4, 5 and 6). The findings were that the development allocations that had a potential hydrological connection to the Rye Meads Sewerage Treatment works should be screened-in for likely significant effects in regards to non-toxic contamination / water quality (3.4).

Chapter 4 screened-in the likely significant effects of loss to foraging pathways and non-toxic contamination / water quality (Figure 8) following the full Local plan screening (Appendix 2 S2). Appendix 2 S then screened-out any development allocations that had been screened-in for foraging given the zones of influence distance thresholds (Figure 10).

Chapter 4 ends the screening stage by screening-in the development allocations to be taken forward to the Appropriate Assessment stage of this HRA (Figure 11).

Chapter 5 considered the likely significant effects of the screened-in development allocations with the protected species and habitat. It finds that there are likely significant effects on the designated purposes of the Lee Valley SPA/Ramsar through nutrient enrichment.

Chapter 5 then considered the mitigation of these effects and the consultation responses from Thames Water and Anglian Water. The chapter (5.4) then concludes that the Local Plan policies Main Modifications, if accepted by the EiP Planning Inspector, would aid the management of development to ensure Planning Applications are only approved where there is capacity within the Rye Meads Sewerage Treatment Works to control nutrients to a level where the conservation objectives of species and habitat are protected. The remaining development allocations are therefore then screened-out, (Figure 16), subject to such Main Modifications being adopted by the Council.

Appendix 1 – Compliance with Regulation 105

The following extract explains the steps to be undertaken to meet the Conservation of Habitats and Species 2017, regulation 105²⁹. The bold words are the Council's responses to the regulation.

Assessment of implications for European sites and European offshore marine sites

105.—(1) Where a land use plan—

(a) is likely to have a significant effect on a European site or a European offshore marine site (either alone or in combination with other plans or projects), and

(b) is not directly connected with or necessary to the management of the site, the plan-making authority for that plan must, before the plan is given effect,

This Local Plan is not directly connected or necessary to the management of the conservation designations. This HRA will consider the likely significant effects of the Local Plan and in combination with other plans and projects. This is Stage One of the assessment, sometimes called the significant likely effects test.

make an appropriate assessment of the implications for the site in view of that site's conservation objectives.

This is Stage Two of the assessment, sometimes called the integrity test.

(2) The plan-making authority must for the purposes of the assessment consult the appropriate nature conservation body and have regard to any representations made by that body within such reasonable time as the authority specifies.

The Council will consult with Natural England and any other partner it considers appropriate.

(3) The plan-making authority must also, if it considers it appropriate, take the opinion of the general public, and if it does so, it must take such steps for that purpose as it considers appropriate.

The Council will consult with the general public alongside the Local Plan Main Modifications public consultation.

(4) In the light of the conclusions of the assessment, and subject to regulation 107, the plan-making authority must give effect to the land use plan only after having ascertained

²⁹ <http://www.legislation.gov.uk/uksi/2017/1012/regulation/105/made>

that it will not adversely affect the integrity of the European site or the European offshore marine site (as the case may be).

The Council will adopt the Local Plan only after ascertaining that the integrity of the designated areas will not be adversely affected.

Appendix 2 – Screening of the Local Plan with Main Modifications

Screening 1- Screening Assumptions for Assessment of Significant Effects

Effect	Significant if with KM / M of European site / Hydro connection	Screened In / Out
Physical damage / Loss within NHDC administrative area	None – there are no European Sites within NHDC and therefore there can be no direct physical damage and/or loss from development	<i>Screened Out</i> - Lee Valley SPA - Eversdon-Wimpole Woods SAC - Wormley-Hoddesdonpark Woods SAC
Physical damage / Loss to pathways within NHDC administrative area	Potentially – Precautionary. There are allocations in the Local Plan within the 15km precautionary foraging zones of European Sites. However the screening will consider the typical foraging distances of the qualifying species outlined in Chapter 3. 2km for wetland birds and 6-8 km for bats.	<i>Screened In</i> - Lee Valley SPA - Eversdon-Wimpole Woods SAC - Wormley-Hoddesdonpark Woods SAC
Non-physical disturbance (noise, vibration, light)	None – there are no allocations within 500 meters noise, vibration, light); within 300 ³⁰ meters noise - or within 500m as a precaution.	<i>Screened Out</i> - Lee Valley SPA - Eversdon-Wimpole Woods SAC - Wormley-Hoddesdonpark Woods SAC
Non-toxic contamination (hydrologically connected, nutrient enrichment, salinity)	Potentially - The Thames Water, water catchment area includes a part of NHDC. The Lee Valley SPA could potentially be affected by allocations in the Local Plan.	<i>Screened In</i> - Lee Valley SPA <i>Screened Out</i> - Eversdon-Wimpole Woods SAC - Wormley-Hoddesdonpark Woods SAC
Air Pollution	None – there are no allocations within 200m ³¹ of a European Site – the zone considered to be most likely to be affected by increased traffic pollutants	<i>Screened Out</i> - Lee Valley SPA - Eversdon-Wimpole Woods SAC - Wormley-Hoddesdonpark Woods SAC
Recreational Disturbance	None – there are no allocations within 5k of the European sites or as a precaution 10km.	<i>Screened Out</i> - Lee Valley SPA - Eversdon-Wimpole Woods SAC - Wormley-Hoddesdonpark Woods SAC
Water Quantity / Quality	Potentially - The Thames Water,	<i>Screened In</i>

³⁰ British Wildlife Magazine, October 2007

³¹ Highways Agency Design Manual for Roads and bridges – Volume11 as amended

Effect	Significant if with KM / M of European site / Hydro connection	Screened In / Out
(hydrology, water chemistry,)	water catchment area includes a part of NHDC. The Lee Valley SPA could potentially be affected by allocations in the Local Plan.	<ul style="list-style-type: none"> - Lee Valley SPA Screened Out - Eversdon-Wimpole Woods SAC - Wormley-Hoddesdonpark Woods SAC

Screening 2 – Local Plan Policy Screening for Significant Effects

Local Plan Policy or allocation	Within distances of effect (Table A1)	Likely operation/activities	Likely effect if implemented	European Site potentially affected	Potential Mitigation Measures	Appropriate Assessment required?
SP1 Sustainable Development and Spatial Distribution	N/A	None- the policy guides sustainable growth but does not directly result in development.	The policy at c) iv and v requires protection and mitigation measures for the environment	N/A	N/A	No
SP2 Settlement Hierarchy	Potentially	Potentially – this policy sets out the spatial strategy for development, the actual development activities are considered under site specific policies.	See Appendix 2 - Screening 3	TBD	See Appendix 2 - Screening 3	See Appendix 2 - Screening 3
SP3 Employment - Allocations BA10 - RY9	Potentially	Potentially – this policy sets allocates BA10 and RY9 on the Policies Maps. The assessment of impact will be considered under the site-specific policies.	See Appendix 2 - Screening 3	TBD	See Appendix 2 - Screening 3	See Appendix 2 - Screening 3
SP4 Town Centre, Local Centres and Community Shops	Potentially - this will be considered under site specific policies	None – this policy sets out the spatial strategy for development, the actual development activities are considered under site specific policies.	The likely effects will be considered under the site-specific policies	N/A	N/A	No

Local Plan Policy or allocation	Within distances of effect (Table A1)	Likely operation/activities	Likely effect if implemented	European Site potentially affected	Potential Mitigation Measures	Appropriate Assessment required?
SP5 Countryside and Green Belt	N/A	None – this policy sets out the spatial strategy for development in the green Belt and release of the green Belt.	N/A	N/A	N/A	No
SP6 Sustainable Transport	N/A	None – this policy sets out the spatial strategy for transport.	N/A	N/A	N/A	No
SP7 Infrastructure Requirements and Developer Contributions	N/A	None – this policy sets out the spatial strategy for infrastructure.	N/A	N/A	N/A	No
SP8 Housing	Potentially	None – this policy sets out the spatial strategy for development, the actual development activities are considered under site specific policies.	See Appendix 2 - Screening 3	TBD	See Appendix 2 - Screening 3	See Appendix 2 - Screening 3
SP9 Design and Sustainability	N/A	None – this policy sets out the spatial strategy for design.	N/A	N/A	N/A	No
SP10 Healthy Communities	N/A	None – this policy sets out the spatial strategy for healthy communities.	N/A	N/A	N/A	No
SP11 Natural Resources and Sustainability	N/A	None – this policy sets out the spatial strategy for natural resources.	This policy at c) seeks to protect, enhance and manage the water environment and at e) seeks to ensure wastewater capacity is delivered without harm to European Sites.	N/A	N/A	No
SP12 Green	N/A	None – this policy	This policy at c)	N/A	N/A	No

Local Plan Policy or allocation	Within distances of effect (Table A1)	Likely operation/activities	Likely effect if implemented	European Site potentially affected	Potential Mitigation Measures	Appropriate Assessment required?
Infrastructure, Landscape and Biodiversity		sets out the spatial strategy for Green Infrastructure, landscape and biodiversity	seeks to protect, enhance and manage internationally designated sites (Ramsar, SPA and SAC).			
SP13 Historic Environment	N/A	None – this policy sets out the spatial strategy for the historic environment.	N/A	N/A	N/A	No
SP14 BA1	No	None – outside 15km foraging zone and outside Rye Meads Sewerage Treatment Works Catchment	N/A	N/A	N/A	No
SP15 LG1	No	None – outside 15km foraging zone and outside Rye Meads Sewerage Treatment Works Catchment	N/A	N/A	N/A	No
SP16 NS1	No	Increase in demand for water abstraction and treatment in RMCA	See Appendix 2 - Screening 3	Lee Valley	See Appendix 2 - Screening 3	See Appendix 2 - Screening 3
SP17 HT1	No	None – outside 15km foraging zone and outside Rye Meads Sewerage Treatment Works Catchment	N/A	N/A	N/A	No
SP18 GA2	No	Increase in demand for water abstraction and treatment in RMCA	See Appendix 2 - Screening 3	Lee Valley	See Appendix 2 - Screening 3	See Appendix 2 - Screening 3
SP19 EL1-3	No	None – outside 15km foraging zone and outside	N/A	N/A	N/A	No

Local Plan Policy or allocation	Within distances of effect (Table A1)	Likely operation/activities	Likely effect if implemented	European Site potentially affected	Potential Mitigation Measures	Appropriate Assessment required?
		Rye Meads Sewerage Treatment Works Catchment				
ETC1 Appropriate Uses in Employment Areas	N/A	None – this policy sets out the development management policy for the employment areas. Any likely operation / activity will need to be considered at the Planning Application stage.	N/A	N/A	N/A	No
ETC2 Employment Development outside Employment Areas and Employment Allocations BA10 and RY9	N/A	None – this policy sets out the development management policy for employment outside the employment and allocations. Any likely operation / activity will need to be considered at the Planning Application stage.	N/A	N/A	N/A	No
ETC3 New Retail, Leisure and Other Main Town Centre Development	N/A	None – this policy sets out the development management policy new retail, leisure and other main town centre development. Any likely operation / activity will need to be considered at the Planning Application stage.	N/A	N/A	N/A	No
ETC4 Primary Shopping Frontages	N/A	None – this policy sets out the development management policy primary	N/A	N/A	N/A	No

Local Plan Policy or allocation	Within distances of effect (Table A1)	Likely operation/activities	Likely effect if implemented	European Site potentially affected	Potential Mitigation Measures	Appropriate Assessment required?
		shopping frontages.				
ETC5 Secondary Shopping Centres	N/A	None – this policy sets out the development management policy secondary shopping frontages.	N/A	N/A	N/A	No
ETC6 Local Centres	N/A	None – this policy sets out the development management policy for local centres. Any likely operation / activity will need to be considered at the Planning Application stage.	N/A	N/A	N/A	No
ETC7 Local Community Shops and Services in Towns and Cities	N/A	None – this policy sets out the development management policy for community shops. Any likely operation / activity will need to be considered at the Planning Application stage.	N/A	N/A	N/A	No
ECT8 Tourism	N/A	None – this policy sets out the development management policy for tourism. . Any likely operation / activity will need to be considered at the Planning Application stage.	N/A	N/A	N/A	No
CGB1 Rural Areas Beyond the Green Belt	N/A	None – this policy sets out the development management policy for rural areas beyond the	N/A	N/A	N/A	No

Local Plan Policy or allocation	Within distances of effect (Table A1)	Likely operation/activities	Likely effect if implemented	European Site potentially affected	Potential Mitigation Measures	Appropriate Assessment required?
		Green Belt. Any likely operation / activity will need to be considered at the Planning Application stage.				
CGB2a Exception Sites for Affordable Housing in the Green Belt	N/A	None – this policy sets out the development management policy for exception sites shops. Any likely operation / activity will need to be considered at the Planning Application stage.	N/A	N/A	N/A	No
CGB2b Community Facilities, Services and Affordable Housing in the Rural Area Beyond the Green Belt	N/A	None – this policy sets out the development management policy for community facilities. Any likely operation / activity will need to be considered at the Planning Application stage.	N/A	N/A	N/A	No
CGB3 Rural Workers Dwellings	N/A	None – this policy sets out the development management policy for rural workers. Any likely operation / activity will need to be considered at the Planning Application stage.	N/A	N/A	N/A	No
CGB4 Existing buildings in the Rural Area Beyond the Green Belt	N/A	None – this policy sets out the development management policy for existing buildings in the Green Belt. Any likely operation /	N/A	N/A	N/A	No

Local Plan Policy or allocation	Within distances of effect (Table A1)	Likely operation/activities	Likely effect if implemented	European Site potentially affected	Potential Mitigation Measures	Appropriate Assessment required?
		activity will need to be considered at the Planning Application stage.				
CGB5 Urban Open Land	N/A	None – this policy sets out the development management policy for urban open land. Any likely operation / activity will need to be considered at the Planning Application stage.	N/A	N/A	N/A	No
T1 Assessment of Transport Matters	N/A	None – this policy sets out the development management policy for the assessment of transport matters. Any likely operation / activity will need to be considered at the Planning Application stage.	N/A	N/A	N/A	No
T2 Parking	N/A	None – this policy sets out the development management policy for parking. Any likely operation / activity will need to be considered at the Planning Application stage.	N/A	N/A	N/A	No
HS1 Local Housing Allocations	N/A	None – this policy sets out the development management policy for housing allocations. Any likely operation / activity will need to be considered at the Planning	N/A	N/A	N/A	No

Local Plan Policy or allocation	Within distances of effect (Table A1)	Likely operation/activities	Likely effect if implemented	European Site potentially affected	Potential Mitigation Measures	Appropriate Assessment required?
		Application stage.				
HS2 Affordable Housing	N/A	None – this policy sets out the development management policy for affordable housing. Any likely operation / activity will need to be considered at the Planning Application stage.	N/A	N/A	N/A	No
H3 Housing Mix	N/A	None – this policy sets out the development management policy for housing mix. Any likely operation / activity will need to be considered at the Planning Application stage.	N/A	N/A	N/A	No
HS4 Supported, Sheltered and Older Persons Housing	N/A	None – this policy sets out the development management policy for supported housing. Any likely operation / activity will need to be considered at the Planning Application stage.	N/A	N/A	N/A	No
HS5 Accessible and Adaptable Housing	N/A	None – this policy sets out the development management policy for accessible and adaptable housing. Any likely operation / activity will need to be considered at the Planning Application stage.	N/A	N/A	N/A	No

Local Plan Policy or allocation	Within distances of effect (Table A1)	Likely operation/activities	Likely effect if implemented	European Site potentially affected	Potential Mitigation Measures	Appropriate Assessment required?
HS6 Relatives and Dependents Accommodation	N/A	None – this policy sets out the development management policy for relatives and dependents housing. Any likely operation / activity will need to be considered at the Planning Application stage.	N/A	N/A	N/A	No
HS7 Gypsies, Travellers and Travelling Showpeople	Yes	None – this policy sets out the development management policy for gypsies and travellers and also allocates the 12 pitches.	TBD		TBD	TBD
D1 Sustainable Design	N/A	None – this policy sets out the development management policy for sustainable design. Any likely operation / activity will need to be considered at the Planning Application stage. The Policy does provide for air pollution impacts assessments and mitigation measures which may aid any mitigation for European Sites.	N/A	N/A	N/A	No
D2 House Extensions, Replacement Dwellings and Outbuildings	N/A	None – this policy sets out the development management policy for home changes. Any likely operation /	N/A	N/A	N/A	No

Local Plan Policy or allocation	Within distances of effect (Table A1)	Likely operation/activities	Likely effect if implemented	European Site potentially affected	Potential Mitigation Measures	Appropriate Assessment required?
		activity will need to be considered at the Planning Application stage.				
D3 Protecting Living Conditions	N/A	None – this policy sets out the development management policy for the protection of living conditions. Any likely operation / activity will need to be considered at the Planning Application stage.	N/A	N/A	N/A	No
D4 Air Quality	N/A	None – this policy sets out the development management policy air quality. Any likely operation / activity will need to be considered at the Planning Application stage. The Policy does provide for air pollution impacts assessments and mitigation measures which may aid any mitigation for European Sites.	N/A	N/A	N/A	No
HC1 Community Facilities	N/A	None – this policy sets out the development management policy for community facilities. Any likely operation / activity will need to be considered at the Planning Application stage.	N/A	N/A	N/A	No

Local Plan Policy or allocation	Within distances of effect (Table A1)	Likely operation/activities	Likely effect if implemented	European Site potentially affected	Potential Mitigation Measures	Appropriate Assessment required?
NE1 Strategic Green Infrastructure	N/A	None – this policy sets out the development management policy for GI. Any likely operation / activity will need to be considered at the Planning Application stage. The Policy does provide against loss, fragmentation and severance of GI, which may aid any mitigation for European Sites.	N/A	N/A	N/A	No
NE2 Landscape	N/A	None – this policy sets out the development management policy for Landscape. Any likely operation / activity will need to be considered at the Planning Application stage.	N/A	N/A	N/A	No
NE3 The Chilterns Area of Outstanding Beauty	N/A	None – this policy sets out the development management policy for the AONB. Any likely operation / activity will need to be considered at the Planning Application stage.	N/A	N/A	N/A	No
NE4 Biodiversity and Geological Sites	N/A	None – this policy sets out the development management policy for Geological sites. Any likely operation /	N/A	N/A	N/A	No

Local Plan Policy or allocation	Within distances of effect (Table A1)	Likely operation/activities	Likely effect if implemented	European Site potentially affected	Potential Mitigation Measures	Appropriate Assessment required?
		activity will need to be considered at the Planning Application stage. The Policy does provide for the protection of a hierarchy of protected sites with European sites (through Policy SP12) at the top of the protection list, this may aid any mitigation for European Sites. NE4 also provides for demonstration of avoiding / minimising any adverse effects of development.				
NE5 Protecting Open Space	N/A	None – this policy sets out the development management policy for open space. Any likely operation / activity will need to be considered at the Planning Application stage.	N/A	N/A	N/A	No
NE6 New and Improved Open Space	N/A	None – this policy sets out the development management policy for new open space. Any likely operation / activity will need to be considered at the Planning Application stage.	N/A	N/A	N/A	No
NE7 Reducing Flood Risk	N/A	None – this policy sets out the development	N/A	N/A	N/A	No

Local Plan Policy or allocation	Within distances of effect (Table A1)	Likely operation/activities	Likely effect if implemented	European Site potentially affected	Potential Mitigation Measures	Appropriate Assessment required?
		management policy for reducing flood risk. Any likely operation / activity will need to be considered at the Planning Application stage.				
NE8 Sustainable Drainage Systems	N/A	None – this policy sets out the development management policy for SuDS. Any likely operation / activity will need to be considered at the Planning Application stage.	N/A	N/A	N/A	No
NE9 Water Quality and Environment	N/A	None – this policy sets out the development management policy for water quality. Any likely operation / activity will need to be considered at the Planning Application stage.	N/A	N/A	N/A	No
NE10 Water Conservation and Wastewater Infrastructure	N/A	None – this policy sets out the development management policy for water. Likely operation / activity will need to be considered at the Planning Application stage. This policy has been amended since the Publication version of the Local Plan to reflect water supply and	N/A	N/A	N/A	No

Local Plan Policy or allocation	Within distances of effect (Table A1)	Likely operation/activities	Likely effect if implemented	European Site potentially affected	Potential Mitigation Measures	Appropriate Assessment required?
		disposal matters in regard to the Rye Meads sewerage treatment works and the Lee Valley SPA. NE10 (through SP7) provides for the provision of new infrastructure to mitigate against any likely significant effect on the SPA.				
NE11 Contaminated Land	N/A	None – this policy sets out the development management policy for contaminated land. Any likely operation / activity will need to be considered at the Planning Application stage.	N/A	N/A	N/A	No
NE12 Renewable and Low Carbon Energy Development	N/A	None – this policy sets out the development management policy for energy. Any likely operation / activity will need to be considered at the Planning Application stage.	N/A	N/A	N/A	No
HE1 Designated Heritage Assets	N/A	None – this policy sets out the development management policy for heritage assets. Any likely operation / activity will need to be considered at the Planning Application stage.	N/A	N/A	N/A	No

Local Plan Policy or allocation	Within distances of effect (Table A1)	Likely operation/activities	Likely effect if implemented	European Site potentially affected	Potential Mitigation Measures	Appropriate Assessment required?
HE2 Heritage at Risk	N/A	None – this policy sets out the development management policy for heritage at risk. Any likely operation / activity will need to be considered at the Planning Application stage.	N/A	N/A	N/A	No
HE3 Non-designated Heritage Assets	N/A	None – this policy sets out the development management policy for non-designated heritage assets. Any likely operation / activity will need to be considered at the Planning Application stage.	N/A	N/A	N/A	No
HE4 Archaeology	N/A	None – this policy sets out the development management policy for archaeology. Any likely operation / activity will need to be considered at the Planning Application stage.	N/A	N/A	N/A	No
AS1 Land West of Claybush Road	Yes	Foraging pathway	See Table 3	Eversdon-Wimpole Woods	See Appendix 2 - Screening 3	See Appendix 2 - Screening 3
BA2 Land south-west of Clothall Road	No	N/A	N/A	None	N/A	No
BA3 Land south of Clothall Common	No	N/A	N/A	None	N/A	No
BA4 Land East of Clothall Common	No	N/A	N/A	None	N/A	No
BA5 Land off Yeomanry Drive	No	N/A	N/A	None	N/A	No
BA6 Land at Icknield	No	N/A	N/A	None	N/A	No

Local Plan Policy or allocation	Within distances of effect (Table A1)	Likely operation/activities	Likely effect if implemented	European Site potentially affected	Potential Mitigation Measures	Appropriate Assessment required?
Way						
BA 7 Land rear of Clare Crescent	No	N/A	N/A	None	N/A	No
BA11 Deans Yard	No	N/A	N/A	None	N/A	No
BA10 Royston Road	No	N/A	N/A	None	N/A	No
BK1 Land off Cambridge Road	No	N/A	N/A	None	N/A	No
BK2 Land off Willmill Close	No	N/A	N/A	None	N/A	No
BK3 Land between Cambridge Road and Royston Road	No	N/A	N/A	None	N/A	No
CD1 Land south of Cowards Land	Yes	Foraging pathway Increase in demand for water abstraction and treatment	See Appendix 2 - Screening 3	Lee Valley	See Appendix 2 - Screening 3	See Appendix 2 - Screening 3
CD2 Codicote Garden Centre	No	Increase in demand for water abstraction and treatment	See Appendix 2 - Screening 3	Lee Valley	See Appendix 2 - Screening 3	See Appendix 2 - Screening 3
CD3 Land north of the Close	Yes	Foraging pathway	See Appendix 2 - Screening 3	Lee Valley	See Appendix 2 - Screening 3	See Appendix 2 - Screening 3
CD4 Land at Pulmer Water		Increase in demand for water abstraction and treatment				
CD5 Land south of Heath Lane		Increase in demand for water abstraction and treatment				
CD6 Danesbury Park Lane	Yes	Foraging pathway Increase in demand for water abstraction and treatment	See Appendix 2 - Screening 3	Wormley-Hodderson Park / Lee Valley	See Appendix 2 - Screening 3	See Appendix 2 - Screening 3
GR1 Land at Milksey Lane	No	Increase in demand for water abstraction and treatment	See Appendix 2 - Screening 3	Lee Valley	N/A	No
GA1 Land at Roundwood	No	Increase in demand for water abstraction and treatment	See Appendix 2 - Screening 3	Lee Valley	See Appendix 2 - Screening 3	See Appendix 2 - Screening 3
HT2 Land north of Pound Farm	No	N/A	N/A	None	N/A	No
HT3 Land south	No	N/A	N/A	None	N/A	No

Local Plan Policy or allocation	Within distances of effect (Table A1)	Likely operation/activities	Likely effect if implemented	European Site potentially affected	Potential Mitigation Measures	Appropriate Assessment required?
Oughtonhead Lane						
HT5 Land at junction of Grays Lane and Lucas Lane	No	N/A	N/A	None	N/A	No
HT6 Land at junction of Grays Lane and Crow Furlong	No	N/A	N/A	None	N/A	No
HT8 Industrial Area Cooks Way	No	N/A	N/A	None	N/A	No
HT10 Former B&Q Site	No	N/A	N/A	None	N/A	No
HT11 Churchgate and its Surrounding Area	No	N/A	N/A	None	N/A	No
HT12 Paynes Park	No	N/A	N/A	None	N/A	No
IC1 Land at Duncots Close	No	N/A	N/A	None	N/A	No
IC2 Burford Grange	No	N/A	N/A	None	N/A	No
IC3 Land at Bedford Road	No	N/A	N/A	None	N/A	No
KM3 Land north of High Street	No	N/A	N/A	None	N/A	No
KW1 Land west of the Heath	No	N/A	N/A	None	N/A	No
KB1 Land at Deards End	Yes	Foraging Pathway Increase in demand for water and treatment	See Table 3	Wormley-Hoddesdon park / Lee Valley	See Appendix 2 - Screening 3	See Appendix 2 - Screening 3
KB2 Land off Gypsy Lane	Yes					
KB3 Chas Lowe Site	Yes					
KB4 Land east of Knebworth	Yes					
LG3 Land east of Kristiansand	No	N/A	N/A	None	N/A	No
LG4 Land north of the former Norton School	No	N/A	N/A	None	N/A	No
LG5 Land at Birds Hill	No	N/A	N/A	None	N/A	No
LG6 Land off Radburn Way	No	N/A	N/A	None	N/A	No
LG8 Pixmore Centre	No	N/A	N/A	None	N/A	No
LG9 Former Lannock School	No	N/A	N/A	None	N/A	No
LG10 Former Playing Field	No	N/A	N/A	None	N/A	No
LG13 Glebe Road	No	N/A	N/A	None	N/A	No
LG14 Site at Icknield Way	No	N/A	N/A	None	N/A	No
LG15 Garages	No	N/A	N/A	None	N/A	No
LG16 Foundation House	No	N/A	N/A	None	N/A	No
LG17 Hamonte	No	N/A	N/A	None	N/A	No

Local Plan Policy or allocation	Within distances of effect (Table A1)	Likely operation/activities	Likely effect if implemented	European Site potentially affected	Potential Mitigation Measures	Appropriate Assessment required?					
LG18 Former Depot	No	N/A	N/A	None	N/A	No					
LG19 The Wynd	No	N/A	N/A	None	N/A	No					
LG20 Gernon Road	No	N/A	N/A	None	N/A	No					
LG21 Arena Parade	No	N/A	N/A	None	N/A	No					
LS1 Land at Bedford Road	No	N/A	N/A	None	N/A	No					
PR1 Land off Templers Lane	No	N/A	N/A	None	N/A	No					
RD1 Land at Blacksmiths Lane	Yes	Foraging pathway	See Table 3	Eversdon-Wimpole Woods	See Appendix 2 - Screening 3	See Appendix 2 - Screening 3					
RY1 Land west of Ivey Farm	Yes										
RY2 Land north of Newmarket Road	Yes										
RY4 Land north of Lindsay Close	Yes										
RY7 Anglia Business Park	Yes										
RY8 Land at Lumen Road	Yes										
RY9 Land north of York Road	Yes										
RY10 Land south of Newmarket Road	Yes										
RY11 Land at Barkway Road	Yes										
RY12 Town Hall Site	Yes										
SI1 Land south of Waterdell Lane	No						N/A	N/A	None	N/A	No
SI2 Land south of Stevenage Lane	No						N/A	N/A	None	N/A	No
WH1 Land between Horn Hill and Bendish Lane	No	N/A	N/A	None	N/A	No					
TH1 Land at Police Row	No	N/A	N/A	None	N/A	No					
WE1 Land off Hitchin Road	No	N/A	N/A	None	N/A	No					
WY1 Land south of Little Wyndondley	No	N/A	N/A	None	N/A	No					

A2 – Screening 3 - Further Screening of Sites within 15k of a European Site / Rye Meads STW

Local Plan Policy or allocation	Within distances of effect (Table A1)	Likely operation/activities	Qualifying Feature	European Site potentially affected	Potential Mitigation Measures	Appropriate Assessment required?
SP2	Yes – as the SP for housing allocations	1 - Foraging pathway 2 - Increase in demand for water abstraction and treatment	1 - Barbastelle Bat 1 - Anas strepara 1 - Anas clypeata 2 - Botaurus stellaris 2 - Myriophyllum verticillatum 2 - Mincronecta nminutissima	Eversdon-Wimpole Woods Lee Valley	The sites that are allocated and require appropriate assessment are listed individually in this table.	See below
SP3	Yes – as the SP for RY9	1- Foraging pathway	1 - Barbastelle Bat	Eversdon-Wimpole Woods	1- None beyond 6-8 KM bat foraging	1 - No
SP4	Yes – as the SP for RY12	1- Foraging pathway	1 - Barbastelle Bat	Eversdon-Wimpole Woods	1- None beyond 6-8 KM bat foraging	1 - No
SP8	Yes – as the SP for housing allocations	1 - Foraging pathway 2 - Increase in demand for water abstraction and treatment	1 - Barbastelle Bat 1 - Anas strepara 1 - Anas clypeata 2 - Botaurus stellaris 2 - Myriophyllum verticillatum 2 - Mincronecta nminutissima	Eversdon-Wimpole Woods Lee Valley	The sites that are allocated and require appropriate assessment are listed individually in this table.	See below
SP16 – NS1	No	1 - Increase in demand for water	1 - Botaurus stellaris	Lee Valley	1 - ?	1 - Yes

Local Plan Policy or allocation	Within distances of effect (Table A1)	Likely operation/activities	Qualifying Feature	European Site potentially affected	Potential Mitigation Measures	Appropriate Assessment required?
		abstraction and treatment	1 - <i>Myriophyllum verticillatum</i> 1 - <i>Mincronecta nminutissima</i>			
SP18 – GA2	No	1 - Increase in demand for water abstraction and treatment	1 - <i>Botaurus stellaris</i> 1 - <i>Myriophyllum verticillatum</i> 1 - <i>Mincronecta nminutissima</i>	Lee Valley	1 - ?	1 - Yes
AS1 Land West of Claybush Road	Yes	1- Foraging pathway	1 - <i>Barbastelle Bat</i>	Eversdon-Wimpole Woods	1- None beyond 6-8 KM bat foraging	1 - No
CD1 Land south of Cowards Land	Yes	1 - Foraging pathway 2 - Increase in demand for water abstraction and treatment	1 - <i>Anas strepara</i> 1 - <i>Anas clypeata</i> 2 - <i>Botaurus stellaris</i> 2 - <i>Myriophyllum verticillatum</i> 2 - <i>Mincronecta nminutissima</i>	Lee Valley	1 - None beyond 2km for wetland birds foraging. 2 - ?	1 – No 2 - Yes
CD3 Land north of the Close	Yes	Foraging pathway Increase in demand for water abstraction and treatment	1 - <i>Anas strepara</i> 1 - <i>Anas clypeata</i> 2 - <i>Botaurus stellaris</i> 2 - <i>Myriophyllum</i>	Lee Valley	1 - None beyond 2km for wetland birds foraging. 2 - ?	1 – No 2 - Yes

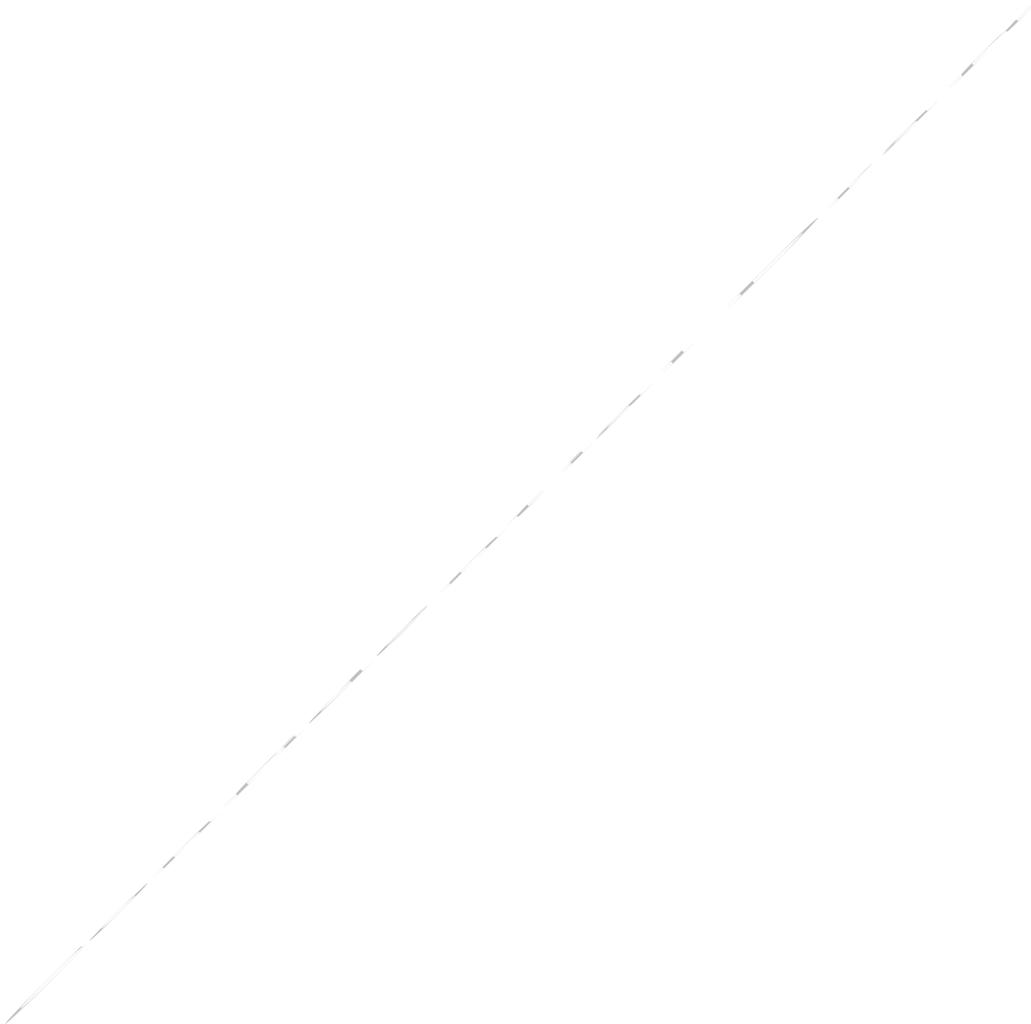
Local Plan Policy or allocation	Within distances of effect (Table A1)	Likely operation/activities	Qualifying Feature	European Site potentially affected	Potential Mitigation Measures	Appropriate Assessment required?
			verticillatum 2 - Mincronecta nminutissima			
CD4 Land at Pulmer Water	Yes	Foraging pathway Increase in demand for water abstraction and treatment	1 - Anas strepara 1 - Anas clypeata 2 - Botaurus stellaris 2 - Myriophyllum verticillatum 2 - Mincronecta nminutissima	Lee Valley	1 - None beyond 2km for wetland birds foraging. 2 - ?	1 - No 2 - Yes
CD5 Land south of Heath Lane	Yes	Foraging pathway Increase in demand for water abstraction and treatment	1 - Anas strepara 1 - Anas clypeata 2 - Botaurus stellaris 2 - Myriophyllum verticillatum 2 - Mincronecta nminutissima	Lee Valley	1 - None beyond 2km for wetland birds foraging. 2 - ?	1 - No 2 - Yes
CD6 Danesbury Park Lane	Yes	Foraging pathway Increase in demand for water treatment	1 - Anas strepara 1 - Anas clypeata 2 - Botaurus stellaris 2 -	Lee Valley	1 - None beyond 2km for wetland birds foraging. 2 - ? 3 - ?	1 - No 2 - Yes 3 - Yes

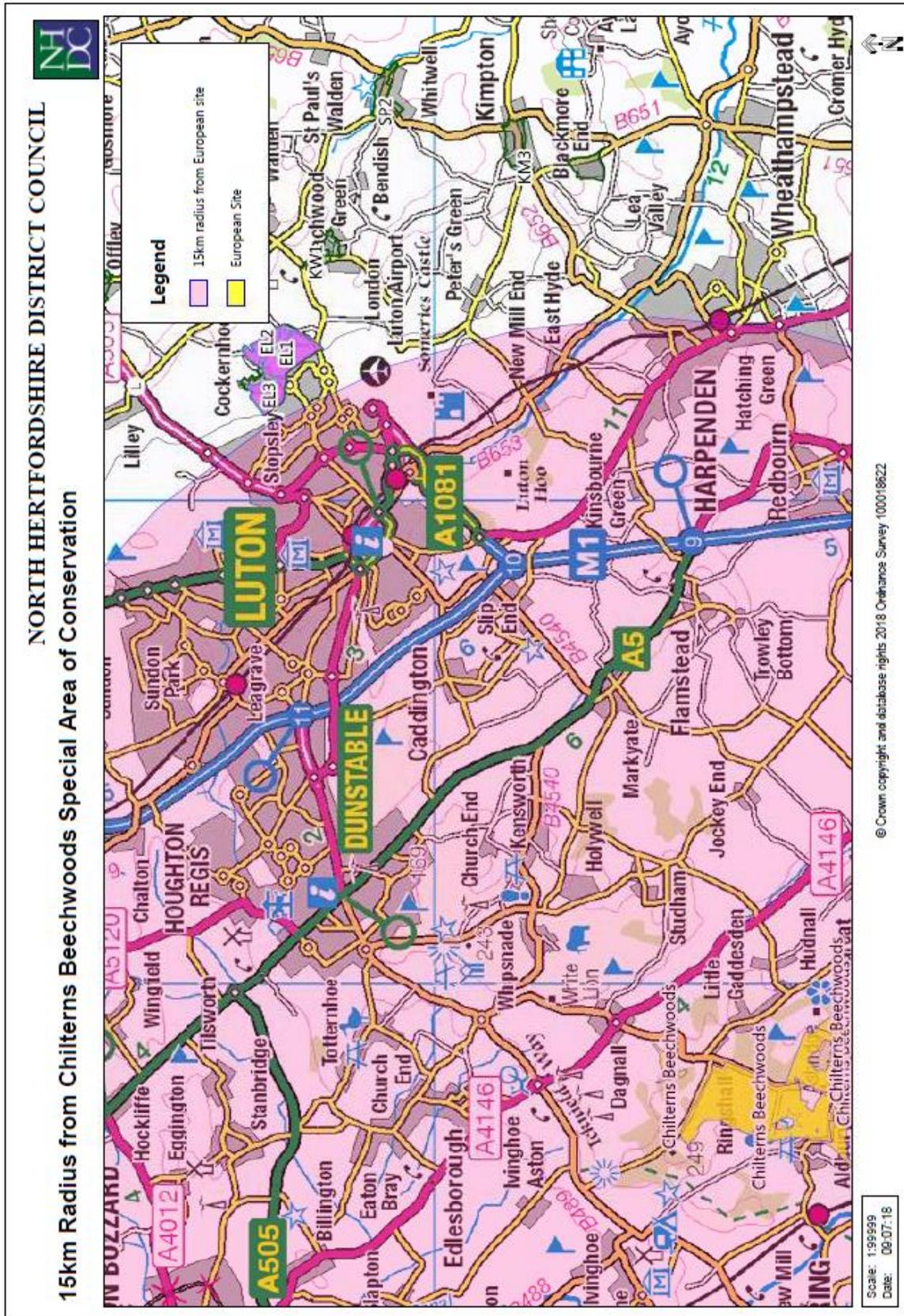
Local Plan Policy or allocation	Within distances of effect (Table A1)	Likely operation/activities	Qualifying Feature	European Site potentially affected	Potential Mitigation Measures	Appropriate Assessment required?
			<p>Myriophyllum verticillatum</p> <p>2 - Mincronecta nminutissima</p> <p>3- Carpinion betuli</p>	Wormley-Hodderson Park		
GR1 Land at Milksey Lane	No	Increase in demand for water abstraction and treatment	<p>1 - Anas clypeata</p> <p>2 - Botaurus stellaris</p> <p>2 - Myriophyllum verticillatum</p> <p>2 - Mincronecta nminutissima</p>	Lee Valley	<p>1 - None beyond 2km for wetland birds foraging.</p> <p>2 - ?</p>	<p>1 – No</p> <p>2 – Yes</p> <p>2 - Yes</p>
GA1 Land at Roundwood	No	Increase in demand for water abstraction and treatment	<p>- Anas-strepara</p> <p>1 - Anas clypeata</p> <p>2 - Botaurus stellaris</p> <p>2 - Myriophyllum verticillatum</p> <p>2 - Mincronecta nminutissima</p>	Lee Valley	<p>1 - None beyond 2km for wetland birds foraging.</p> <p>2 - ?</p>	<p>1 – No</p> <p>2 – Yes</p>

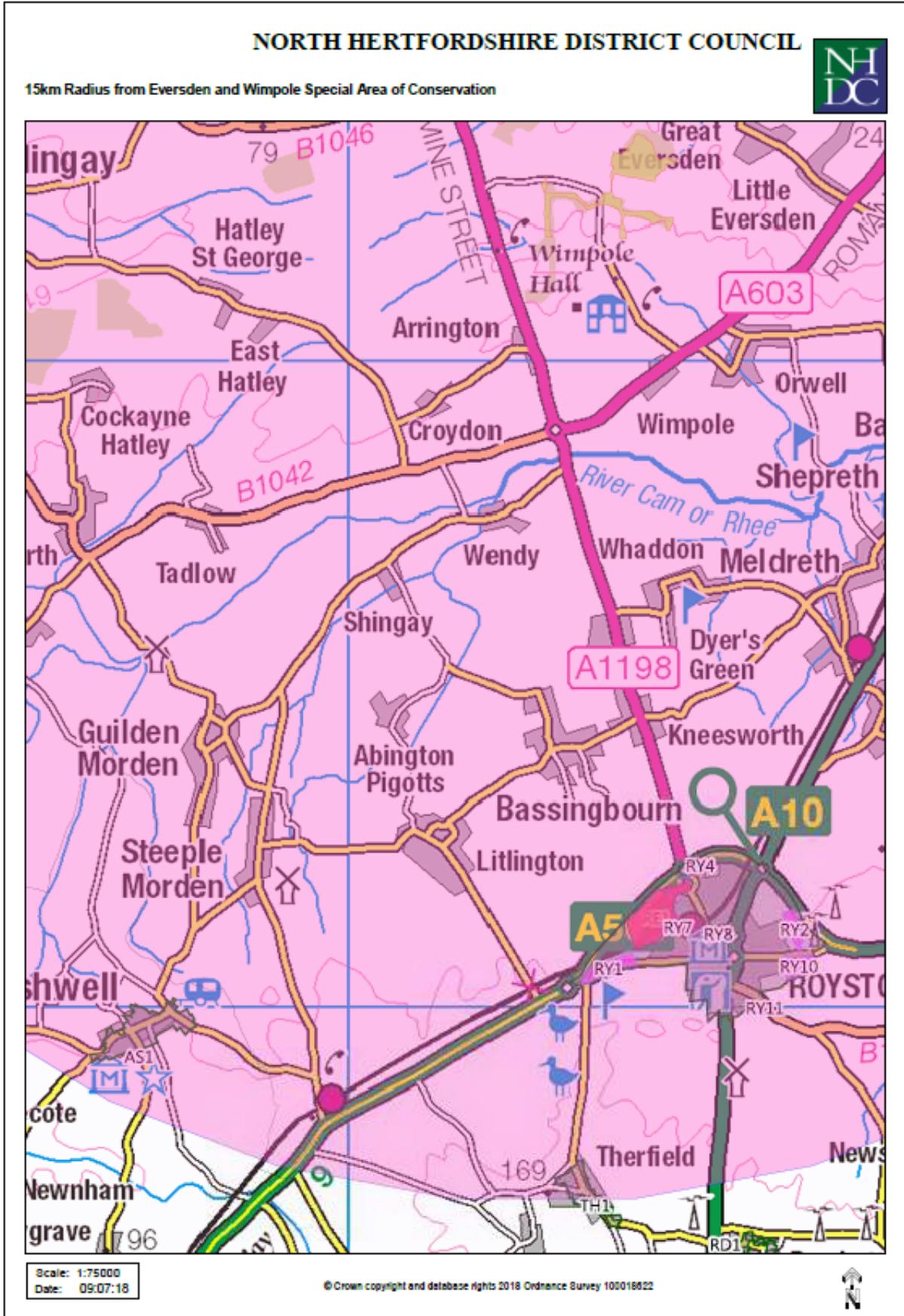
Local Plan Policy or allocation	Within distances of effect (Table A1)	Likely operation/activities	Qualifying Feature	European Site potentially affected	Potential Mitigation Measures	Appropriate Assessment required?
KB1 Land at Deards End KB2 Land off Gypsy Lane KB3 Chas Lowe Site KB4 Land east of Knebworth	Yes	Foraging pathway Increase in demand for water abstraction and treatment	1 - Anas strepara 1 - Anas clypeata 2 - Botaurus stellaris 2 - Myriophyllum verticillatum 2 - Mincronecta nminutissima 3- Carpinion betuli	Lee Valley Wormley-Hodderson Park	1 - None beyond 2km for wetland birds foraging. 2 - ? 3?	1 - No 2 - Yes 3 - Yes
RD1 Land at Blacksmiths Lane	Yes	Foraging pathway	1 - Barbastelle Bat	Eversdon-Wimpole Woods	1- None beyond 6-8 KM bat foraging	1 - No
RY1 Land west of Ivey Farm RY2 Land north of Newmarket Road RY4 Land north of Lindsay Close RY7 Anglia Business Park RY8 Land at Lumen Road RY10 Land south of Newmarket Road RY11 Land at Barkway Road RY9 Land north of York	Yes	Foraging pathway	1 - Barbastelle Bat	Eversdon-Wimpole Woods	1- None beyond 6-8 km bat foraging	1 - No

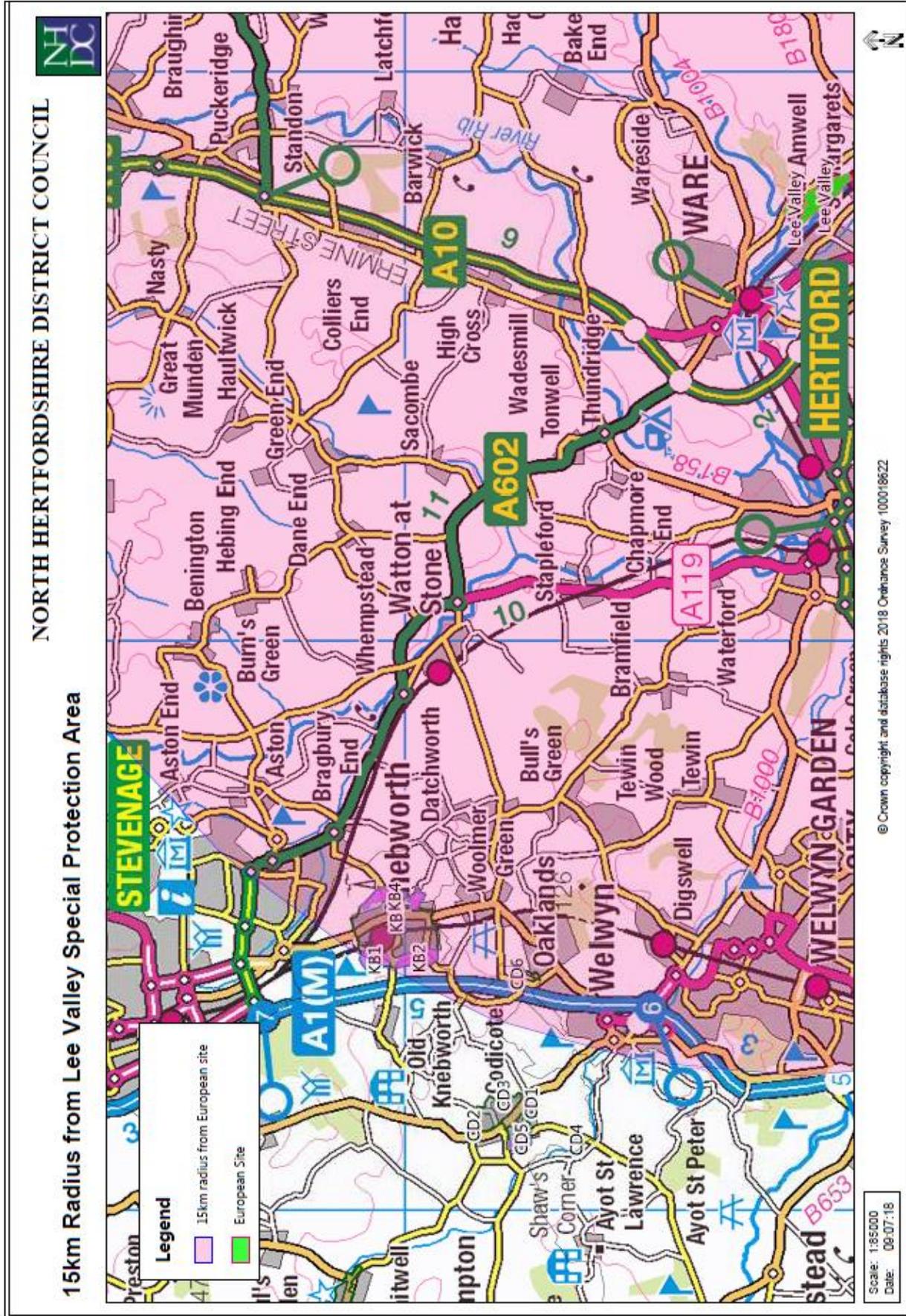
Local Plan Policy or allocation	Within distances of effect (Table A1)	Likely operation/activities	Qualifying Feature	European Site potentially affected	Potential Mitigation Measures	Appropriate Assessment required?
Way						
RY12 Town Hall Site, Melbourne Road						

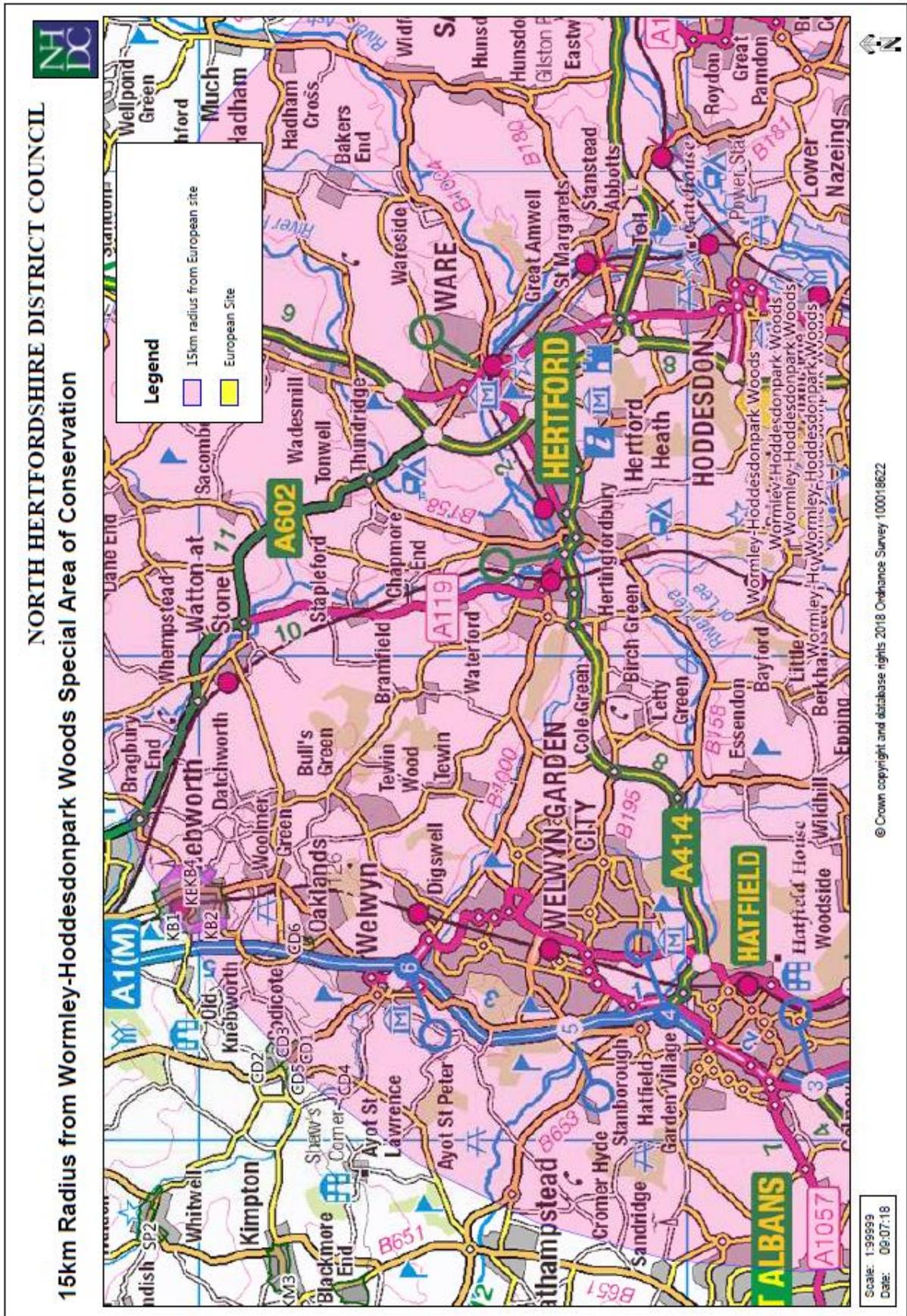
Appendix 3 – Distance of European Sites from Development Allocations











Appendix 4 - What a likely significant adverse effect is – Opinion

European Court of Justice - Case-C127/02]

62. *It should first be pointed out that the possibility of significant adverse effect is primarily a question of nature conservation which must be answered on the basis of the circumstances of the individual case. However, the Court may provide guidance.*

69. *As regards the degree of probability of significant adverse effect, the wording of various language versions is not unequivocal. The German version appears to be the broadest since it uses the subjunctive 'könnte' (could). This indicates that the relevant criterion is the mere possibility of an adverse effect. On the other hand, the English version uses what is probably the narrowest term, namely 'likely', which would suggest a strong possibility. The other language versions appear to lie somewhere between these two poles. Therefore, according to the wording it is not necessary that an adverse effect will certainly occur but that the necessary degree of probability remains unclear*

70... *If the likelihood of certain adverse effects is unclear, this militates more in favour than against an appropriate assessment.*

71. *In principle, the possibility of avoiding or minimising adverse effects should be irrelevant as regards determining the need for an appropriate assessment. It appears doubtful that such measures could be carried out with sufficient precision in the absence of the factual basis of a specific assessment.*

72. *On the other hand, it would be disproportionate to regard any conceivable adverse effect as grounds for carrying out an appropriate assessment. Adverse effects, which are not obvious in view of the site's conservation objectives, may be disregarded.*

85. *Thus, in principle any adverse effect on the conservation objectives must be regarded as a significant adverse effect on the integrity of the site concerned. Only effects which have no impact on the conservation objectives are relevant for the purposes of Article 6(3) of the habitats directive.*

What a likely significant adverse effect is, has been given opinion [Case-C127/02] by the Court of Justice of the European Court³².

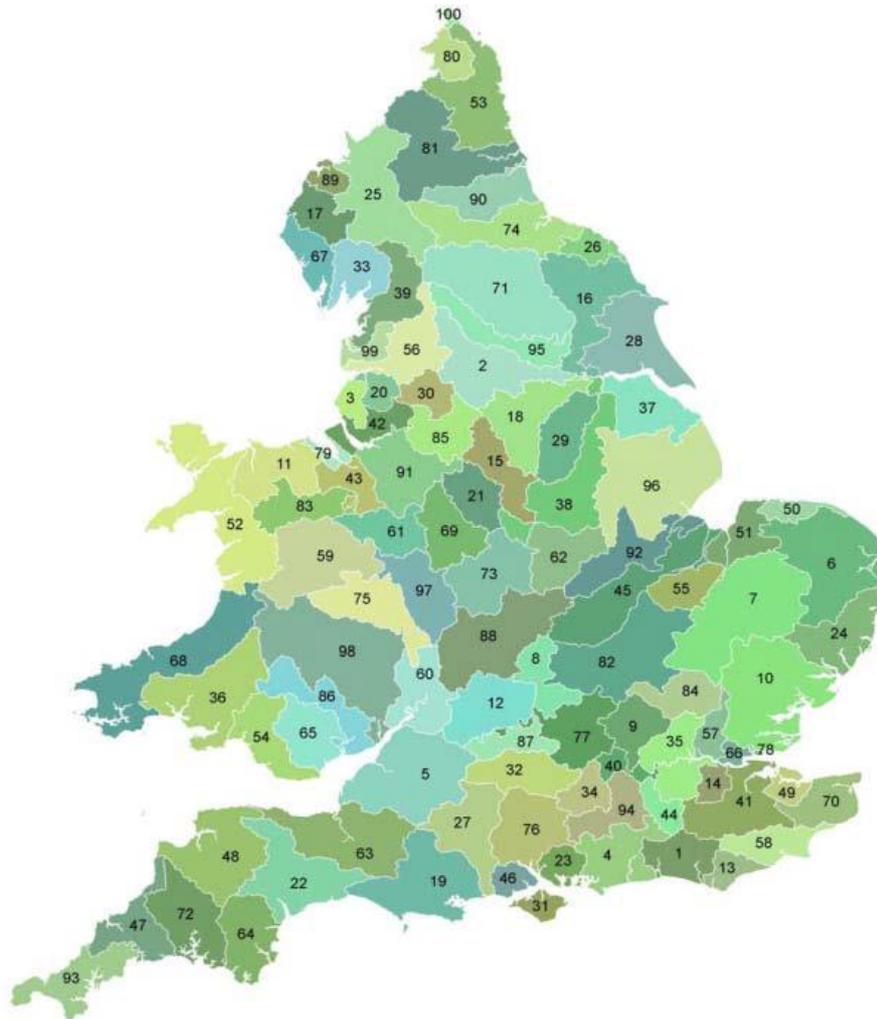
³²

<http://curia.europa.eu/juris/document/document.jsf?jsessionid=9ea7d0f130dabb1b26f8cb66460f82c8e8ae9958a91f.e34KaxiLc3eQc40LaxqMbN4Pb3mLe0?text=&docid=48882&pageIndex=0&doclang=EN&mode=lst&dir=&occ=first&part=1&cid=811696>

Appendix 5 – Useful Data Sources

Catchment Based Approach: Improving the quality of our water environment, DeFRA, 2003. Upper Lee Catchment – number 84, Thames River Basin District.

Water Framework Directive Management Catchments



0 25 50 100 Kilometres

Map produced 27/07/2011

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