



Habitats Regulations Assessment of the City of York Council Local Plan

19 February 2019

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SUMMARY

The City of York Council (the *Council*) formally submitted its Regulation 19 Publication Draft of its Local Plan in February 2018. This was accompanied by a Habitats Regulations Assessment (HRA) dated April, 2018. However, following comment by Natural England and the production of new evidence, it was found that the 2018 HRA had to be updated. This 2019 version of the HRA document replaces the 2018 edition and presents different outcomes.

The role of an HRA is to assess the impact of the proposed policies and allocations on the internationally important sites for biodiversity in and around the City. Together, these Special Protection Areas, Special Areas of Conservation and Ramsar sites are known as European sites.

HRA asks very specific questions of a local plan. Firstly, it *screens* the plan to identify which policies or allocations may have a *likely significant effect* on a European site, *alone or (if necessary) in combination* with other plans and projects. If likely significant effects can be ruled out, then the plan may be adopted but if they cannot, the plan must be subjected to the greater scrutiny of an *appropriate assessment* to find out if the plan will have an *adverse effect on the integrity* of the European sites. Typically, a Plan may only be adopted if an adverse effect on the integrity of the site can be ruled out. If necessary, a plan should be amended to *mitigate* any problems, which usually means that some policies or allocations will need to be modified or, more unusually, may have to be removed altogether.

This document follows best practice (drawing heavily, in particular, on guidance contained within the Habitats Regulations Assessment Handbook¹) and takes full account of policy and law. Where appropriate, this HRA also draws on previous draft HRAs completed in 2014 and 2017 and, in particular the 2018 HRA which accompanied the formal submission of the Plan.

The 2018 HRA concluded that the Plan would not have an adverse effect on the integrity of any European sites. This outcome was challenged by Natural England which prompted the production of visitor surveys at three European sites to assess the impact of recreational pressure - the Lower Derwent Valley, Skipwith Common and Strensall Common - and the re-evaluation of existing air quality data.

Natural England made similar comments in relation to the anticipated increase in air pollution associated with residential development promoted by the Plan with regard to the River Derwent and Strensall Common European sites. This too prompted further re-assessment.

In turn, this new evidence changed the outcomes of the previous HRA which are summarised below.

All policies plus associated allocations were screened; the individual outcomes of the initial screening of each policy and allocation can be found in Appendix B and are summarised in Tables 5 and 6. Overall, this HRA found that likely significant effects could be ruled out for the vast majority of policies and allocations which meant they could be excluded from any further scrutiny.

However, likely significant effects could not be ruled out alone in terms of Policies SS19/ST35, E18 and H59 because of anticipated increases in recreational pressure, changes to the hydrological regime and the effect of air pollution on the adjacent Strensall Common European site. Again, because of anticipated increases in recreational pressure, likely significant effects could not be ruled out alone for Policy ST33 on the Lower Derwent Valley European site. Finally, even though situated several kilometres from the Lower Derwent Valley, likely significant effects could not be ruled out alone for Policy SS13/ST15 for two reasons: again because of anticipated increases in recreational pressure but also for impacts on the bird communities of the European site that utilised land beyond the European site boundary.

¹ Tyldesley, D., and Chapman, C., (2013) *The Habitats Regulations Assessment Handbook*, November 2018 edition UK: DTA Publications Ltd



Accordingly, an appropriate assessment was carried out. The outcome of this further scrutiny was as follows:

With regard to air pollution, the evidence produced allowed a conclusion that an adverse effect on the integrity of the European sites could be ruled out, effectively confirming the outcomes described in the 2018 HRA.

In terms of recreational pressure, the additional work also confirmed that an adverse effect on the integrity could be ruled out at the Lower Derwent Valley, again effectively confirming the outcomes of the 2018 HRA.

At Strensall Common, in contrast, the survey identified, that there was existing evidence to show, *inter alia*, that the worrying of livestock by dogs was disrupting the grazing regime, an essential component of the management of the site. In addition, it calculated that access to the site was expected to increase by 24%, largely from the new residents of Policies SS19/ST35 and H59 and that the number of dogs would also rise. Furthermore, it raised doubts regarding the effectiveness of a range of mitigation measures. The survey concluded that (emphasis added):

Given the scale of increase in access predicted from the visitor surveys, the proximity of new development and concerns relating to current impacts from recreation, adverse (effects on the sic) integrity on the SAC cannot be ruled out as a result of the quantum of development proposed. In addition, for individual allocations that are adjacent to the site it will be difficult to rule out adverse effects on integrity.

Natural England subsequently concurred with this statement.

This latest edition of the HRA found no reasons to disagree with this new evidence and opinion.

Taking full account of these outcomes, this HRA identified that the addition of policy changes to the employment area E18 was possible and would be sufficient to remove the threat of an adverse effect on the integrity of the site, enabling E18 to be retained in the Plan and to leave the outcome of the 2018 HRA effectively unchanged.

In contrast, uncertainty over the effectiveness of the mitigation measures embedded within Policies SS19/ST35 and H59 led to the conclusion that they were not sufficient to remove the threat of an adverse effect on the integrity of Strensall Common European site. Therefore, for the Plan to be adopted, it was found necessary to recommend, that SS19/ST35 and H59 should be removed from the Plan. This would represent both a major modification to the Plan and a departure from the 2018 HRA.

All other factors remain the same as described in the previous edition of this HRA. Therefore, provided that all the modifications suggested above are adopted, the Council would be able to ascertain that an adverse effect on the integrity of the European sites would be avoided.

Lastly, although this HRA has been prepared to help the Council discharge its duties under the Habitats Regulations, the Council is the competent authority and it must decide whether to adopt this report or otherwise.



1. INTRODUCTION

Background

- 1.1. The City of York Council (the *Council*) has submitted its Regulation 19 Publication Draft of its Local Plan (February 2018). This will deliver the strategic vision and objectives in York over a 20 year period. When adopted, the Local Plan will influence all future development within the Council's boundaries.
- 1.2. The Habitats Directive requires local (or '*competent*') authorities to assess the impact of development plans on the Natura 2000 network of protected sites. The Directive is given domestic effect by the Habitats and Species Regulations 2018 ² (the '*Habitats Regulations*'). In England, this requirement is implemented via a *Habitats Regulations Assessment (HRA)* which comprises a series of mandatory tests.
- 1.3. A draft HRA (Amec, 2014)³ was prepared alongside a previous Local Plan Publication draft. However, consultation on this document and its supporting evidence base was halted following a decision by Full Council in October 2014 to undertake further work on the Local Plan evidence base in relation to housing numbers. Work continued to update the policies and portfolio of site allocations within the Plan until late 2017.
- 1.4. Subsequently, a further draft HRA was completed (Waterman, 2017)⁴ to evaluate the impact of these changes to the Plan. However, this only comprised an initial 'screening assessment (alone)' and did not explore the in combination or appropriate assessment (or AA) stages.
- 1.5. In April 2018, the formal HRA (Waterman, 2018⁵) was submitted alongside the Local Plan as part of the Regulation 19 consultation exercise. It concluded, after carrying out an appropriate assessment that the Plan would not have an adverse effect on the integrity of any European site.
- 1.6. However, in its letter of 4 May 2018, when referring to the effects of recreational pressure, Natural England stated:

(it did) not agree that adverse effects on integrity can be ruled out based on the evidence available.
- 1.7. Natural England also raised concerns about the assessment of recreational pressure on Skipwith Common. Similar points were made regarding anticipated changes in air quality with regard to the River Derwent and Strensall Common.
- 1.8. In response to this advice, the Council carried out further analysis of nitrogen deposition on the River Derwent and Strensall Common from road traffic. In addition, visitor surveys of the Lower Derwent Valley, Skipwith Common and Strensall Common were commissioned which were published in February 2019.
- 1.9. The outcome of both these exercises prompted production of this further HRA.
- 1.10. For presentational reasons, the Lower Derwent Valley and Skipwith Common Surveys were combined into one report but it should be noted that the Lower Derwent Valley Survey was co-funded with the neighbouring Selby District Council (which 'shares' the site with York) whereas the Skipwith Common Survey was entirely funded by Selby given (a) its location within that authority and (b) the large distances from any proposals within York's Plan.

² Conservation of Habitats and Species and Planning (Various Amendments) (England and Wales) Regulations 2018

³ City of York Council Habitats Regulations Assessment of the Local Plan. AMEC Environment & Infrastructure UK limited. September 2014 (DRFAT).

⁴ HRA of Plan Allocations. Habitats Regulations Assessment of City of York Council Local Plan. Waterman Infrastructure & Environment Limited. September 2017

⁵ Habitats Regulations Assessment of City of York Council Local Plan. Waterman Infrastructure & Environment Limited. April 2018.



- 1.11. Defra guidance⁶ (expanded in C12 of the Handbook⁷) allows competent authorities to reduce the duplication of effort by drawing on earlier conclusions where there has been no material change in circumstances. If there is any doubt, the allocation or policy is assessed normally. Consequently, this current HRA draws on the findings of both previous documents where possible but evaluates the Plan in the context of contemporary evidence and best practice.

Habitats Regulations Assessment of Local Plans, Natura 2000 and European sites

- 1.12. Natura 2000 is the cornerstone of European nature conservation policy; it is an EU-wide network of Special Protection Areas (SPA) classified under the 1979 Birds Directive and Special Areas of Conservation (SAC) designated under the 1992 Habitats Directive. Together, the network comprises over 27,000 sites⁸ and safeguards the most valuable and threatened habitats and species across Europe; it represents the largest, coordinated network of protected areas in the world.
- 1.13. In the UK, these sites are commonly referred to as 'European sites' which, according to Government policy⁹, also comprise 'Wetlands of International Importance', or Ramsar sites. Over 8.5% of the UK land area forms part of this network including, locally, sites such as Strensall Common, Skipwith Common, the Lower Derwent Valley and River Derwent. Further afield, it also incorporates such well known sites as the Yorkshire Dales and the North York Moors.
- 1.14. The Regulations employ a series of mandatory tests outlined in Fig 1 (derived from Circular 06/05).
- 1.15. In practical terms, experience gained from implementation of the process has encouraged the adoption of additional filters at the outset to explore if the plan even needs to be subject to HRA at all. This more sensible approach is laid out in Fig 2 where many of the component steps are given expression. It is the process described in Fig 2 that is followed in this HRA.
- 1.16. So, for example, the initial test adopted in this HRA (in Section 2) firstly explores if the plan can be excluded from the HRA simply because it is considered that it could not have any conceivable effect on a European site before exploring whether the plan is actually necessary for the management of a European site (in section 2 of this HRA).
- 1.17. If the plan cannot be ruled out at this stage, the competent authority (ie the Council) must then identify whether the plan is '... likely to have a significant effect on a European Site ... either alone or in combination with other plans or projects'. If significant effects are found to be absent or can be avoided, the plan may be adopted without further scrutiny.
- 1.18. An in-combination assessment is required where an impact is identified which would have an insignificant effect on its own ('a residual effect) but where likely significant effects arise cumulatively with other plans or projects. Together, these first few steps of Stage 1 (in Fig 2) are often referred to as 'Screening'.

⁶ Habitats Directive – Guidance on competent authority coordination under the Habitats Regulations, Defra (July 2012).

⁷ Tyldesley, D., and Chapman, C., (2013) *The Habitats Regulations Assessment Handbook*, November 2018 DTA Publications Ltd

⁸ Natura 2000 Barometer

<https://view.officeapps.live.com/op/view.aspx?src=http://ec.europa.eu/environment/nature/natura2000/barometer/docs/Natura%202000%20barometer.xlsx> accessed 14 February 2019

⁹ ODPM Circular 06/2005: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System (16 August 2005)

Figure 1: Consideration of development proposals affecting European sites

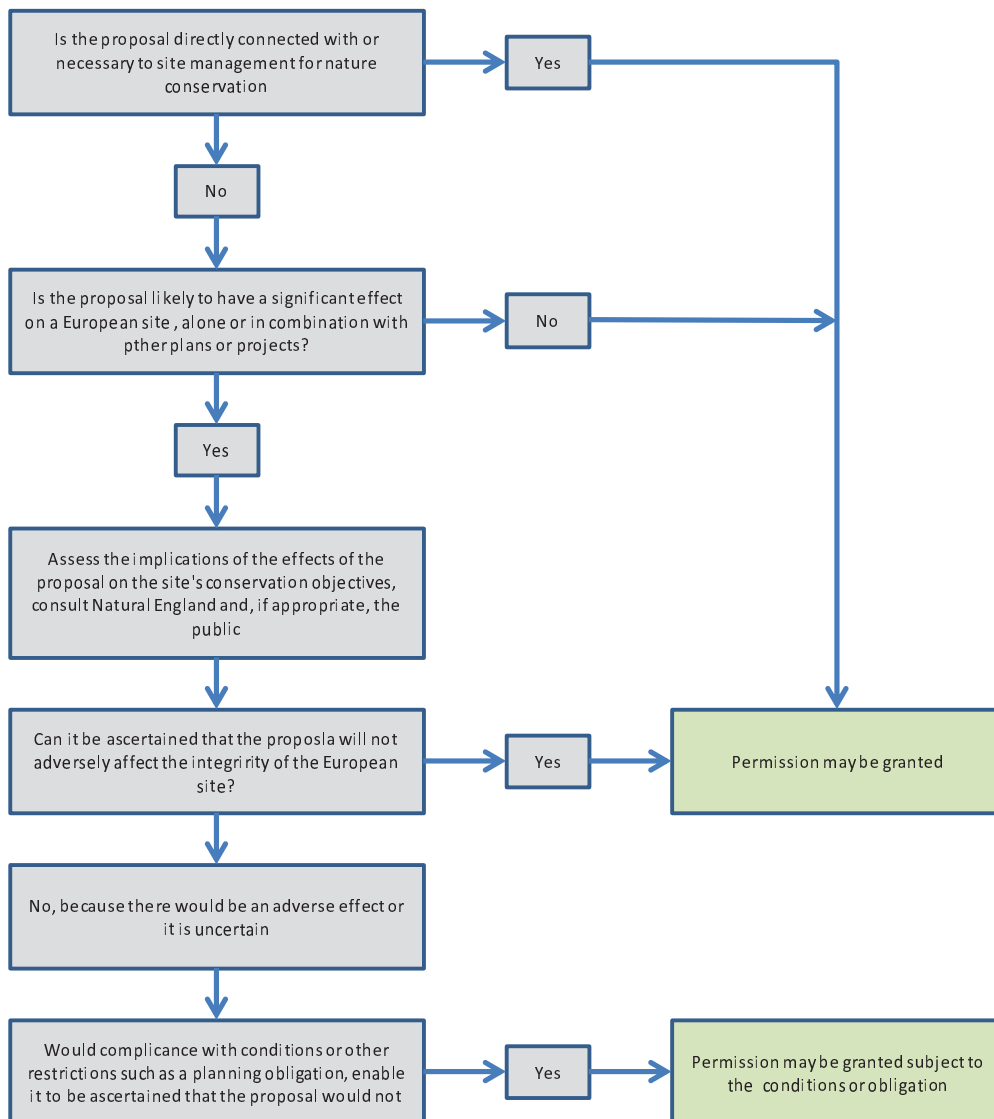
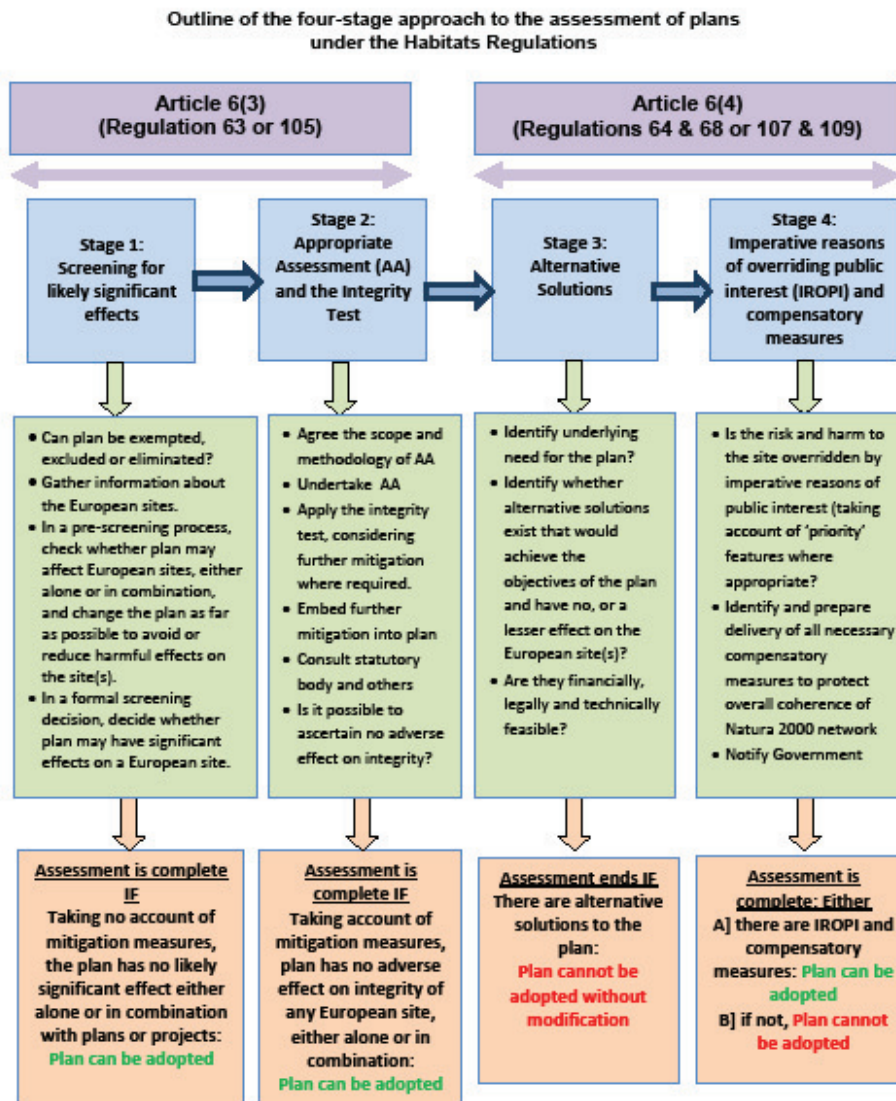


Figure 2: The four stage assessment of plans under the Habitats Regulations



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- 1.19. This HRA utilises guidance provided by the Habitats Regulations Assessment Handbook. The Handbook draws on best practice and case law at home and across the EU to identify over 180 principles that inform how HRA should be carried out. Subscribers to the Handbook include Natural England, the Environment Agency and the Planning Inspectorate which ensures that key decision-makers will be familiar with the approach shown in Fig 2.

Definitions, Evidence, Precautionary Principle and Case Law

- 1.20. The specific meaning of the key terms and tests in HRA is of considerable importance. Drawing again on Section C.7 of the Handbook and other sources the following definitions, embedded in case law, apply to key words, phrases and stages throughout the overall process:

Stage One - Screening

- *Likely* in the context of 'a likely significant effect' means a 'a possible significant effect; one whose occurrence cannot be excluded on the basis of objective information';¹⁰; therefore, 'likely' differs from the normal English meaning of a probability
 - *Significant*, in the same context, means 'any effect that would undermine the conservation objectives for a European site ...';¹¹
 - *Objective*, in this context, means clear verifiable fact rather than subjective opinion. ...
 - *There should be credible evidence to show that there is a real rather than a hypothetical risk¹² of effects that could undermine the site's conservation objectives. Any serious possibility of a risk that the conservation objectives might be undermined should trigger an 'appropriate assessment'.*
- 1.21. In other words, this means the initial screening phase should not be exhaustive, a point candidly described by Advocate General Sharpston in paragraphs 49 and 50 of the Sweetman case¹³ when describing the levels of scrutiny to be applied to each test as follows:

'The threshold at the first stage [the test for LSE] ... is thus a very low one. It operates merely as a trigger, in order to determine whether an appropriate assessment must be undertaken ... The threshold at (the second) [the appropriate assessment] stage is noticeably higher than that laid down at the first stage. That is because the question (to use more simple terminology) is not 'should we bother to check?' (the question at the first stage) but rather 'what will happen to the site if this plan or project goes ahead ...'.

- 1.22. This was amplified in the Bagmoor Wind case¹⁴ was similarly clear:

'If the absence of risk ... can only be demonstrated after a detailed investigation, or expert opinion, that is an indicator that a risk exists and the authority must move from preliminary examination to appropriate assessment'.

- 1.23. In other words, if there is any serious possibility of a risk that the conservation objectives might be undermined this should trigger an appropriate assessment.'

¹⁰ European Court of Justice Case C – 127/02 *Waddenzee* 7 September 2004

¹¹ Peter Charles Boggis and Easton Bavants Conservation v Natural England and Waveney District Council, High Court of Justice Court of Appeal case C1/2009/0041/QBACF Citation No [2009] EWCA Civ. 1061 20th October 2009

¹² Peter Charles Boggis and Easton Bavants Conservation v Natural England and Waveney District Council, High Court of Justice Court of Appeal case C1/2009/0041/QBACF Citation No [2009] EWCA Civ. 1061 20th October 2009

¹³ C-258/11 Sweetman reference for a preliminary ruling from the Supreme Court of Ireland. Opinion of the Advocate General 22 November 2012

¹⁴ Bagmoor Wind Limited v The Scottish Ministers Court of Sessions [2012] CSIH 93



- 1.24. For the avoidance of doubt, *an in combination* assessment is required only where an impact is identified which would have an insignificant effect on its own (a residual effect) but where likely significant effects may arise cumulatively with other plans or projects.

Stage Two – Appropriate Assessment and the Integrity Test

- 1.25. Fundamentally, the HRA process employs the precautionary principle and Regulation 105 ensures that where a plan is '*likely to have a significant effect*', it can only be adopted if *the competent authority* can ascertain (following an *appropriate assessment*) that it '*will not adversely affect the integrity of the European site*'. In simpler terms, it is not for the competent authority to prove harm but for the plan proposer to demonstrate the absence of harm.

- 1.26. The *integrity* of a European site was described in para 20 of ODPM Circ. 06/2005 as:

the coherence of its ecological structure and function, across its whole area, that enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it was classified.

- 1.27. Elsewhere, the CJEU (Sweetman)¹⁵ defined integrity as:

'the lasting preservation of the constitutive characteristics of the site ... whose preservation was the objective justifying the designation of that site

- 1.28. Whilst the Supreme Court (Champion)¹⁶ has found "appropriate" is not a technical term and indicates no more than that the assessment should be appropriate to the task in hand, it can be seen that when compared with the test at the screening stage for likely significant effect, the a '*appropriate assessment*' is more thorough.

Stages Three and Four – The Derogations

- 1.29. If an adverse effect on the integrity of the site can be avoided, the plan can be adopted (Fig 1). If not, derogations would have to be sought to allow the plan to continue; these are regarded as a last resort and considered only in exceptional circumstances. These explore whether *alternative solutions* are possible and if there are not, whether *imperative reasons of overriding public interest* apply and if so, whether compensation is feasible. These latter stages are not shown in Fig 1 but the entire process is summarised in Stages 2, 3 & 4 of Fig 2.

Overall approach

- 1.30. The HRA of development plans was first made a requirement in the UK following a ruling by the European Court of Justice in EC v UK¹⁷. However, the judgement¹⁸ recognised that any assessment had to reflect the actual stage in the strategic planning process and the level of evidence that might or might not be available. This was given expression in the UK High Court (Feeny¹⁹) which stated:

"Each ... assessment ... cannot do more than the level of detail of the strategy at that stage permits".

- 1.31. This is where a way has to be found that whilst mindful of the need for the precautionary principle to be applied, the HRA must strive to identify only those plausible effects and not the extremely unlikely.

¹⁵ Sweetman EU:C:2013:220 para 39

¹⁶ R (on the application of Champion) v. North Norfolk District Council [2015] UKSC 52.

¹⁷ Case C-6/04: Commission of the European Communities v United Kingdom of Great Britain and Northern Ireland judgment of the Court 20 October 2005.

¹⁸ Opinion of advocate general Kokott, 9th June 2005, Case C-6/04. Commission of the European Communities v United Kingdom of Great Britain and Northern Ireland

¹⁹ Sean Feeny v Oxford City Council and the Secretary of State CLG para 92 of the judgment dated 24 October 2011 Case No CO/3797/2011, Neutral Citation [2011] EWHC 2699 Admin



- 1.32. Because this is a strategic plan, the ‘*objective information*’²⁰ required by the HRA is typically only available at a strategic or high level, without the detail that might be expected at the planning application stage.

Mitigation and recent case law

- 1.33. Recently, the European Court of Justice gave its ruling on the People Over Wind²¹ case which provided a new interpretation of when and how mitigation measures should be considered in an HRA. In departing from previous decisions, it clearly identifies that measures designed specifically to avoid or reduce likely significant effects should not be evaluated at the screening stage but reserved for the appropriate assessment. The implications of this recent judgment are still to be fully understood, in circumstances where the plan which the specific subject of consideration under the Directive and Regulations itself includes policies which provide for mitigation, but for the avoidance of doubt this HRA takes full account of this ruling by restricting consideration of any mitigation measures to the appropriate assessment.

Evidence

- 1.34. The owner of land affected by Policies SS19/ST35, H59 and E18 at Strensall, DIO, has produced two Shadow HRAs (December 2017)^{22 23} to inform their aspirations. Some evidence provided by the DIO has been taken into account in this HRA, where appropriate, but it should be noted that the DIO evaluated a ‘larger’ scheme and the Council has not accepted some of its conclusions.
- 1.35. Also landowners affected by Policies SS13/ST15 have independently produced ecological information in support of their proposals and this is taken account of in the evaluation of those policies.

Brexit

- 1.36. The requirement for this HRA is embedded in the European Union’s Habitats Directive and so the decision to leave the EU potentially throws doubt on the need for the HRA of this and other local plans. However, UK law and policy is currently unchanged and the need for HRA remains. The HRA of the Council’s Local Plan will therefore continue and the recommendations will be acted upon until such time as Government indicates otherwise.

Role of the competent authority

- 1.37. Lastly, although this HRA has been prepared to help the Council discharge its duties under the Habitats Regulations, the Council is the competent authority and it must decide whether to adopt this report or otherwise.

²⁰ European Court of Justice Case C – 127/02 *Waddenzee* 7 September 2004

²¹ [Case C/323-17 People Over Wind](#)

²² Amec Foster Wheeler Environment & Infrastructure Limited. December 2017. DIO York Sites: Queen Elizabeth Barracks (QEB). Information to support a Habitats Regulations Assessment.

^{23 23} Amec Foster Wheeler Environment & Infrastructure Limited. December 2017. DIO York Sites: Towthorpe Lines. Information to support a Habitats Regulations Assessment.



2. THE NEED FOR ASSESSMENT AND IDENTIFYING EUROPEAN SITES AT RISK

Exclusion, Elimination and Exemption from the need for Assessment

- 2.1. Prior to the identification of vulnerable European sites, Stage 1 of Fig.2 (elaborated in F3.2 – F3.4 of the Handbook) encourages a brief review of the plan to explore if it can be:
- **Excluded** from the HRA because 'it is not a plan within the meaning and scope of the Habitats Directive', or
 - **Eliminated** from the HRA because it can easily be shown that although 'it is a plan ... it could not have any conceivable effect on any European site', or
 - **Exempted** from the HRA because it is '... directly connected with or necessary to the management of the ... European site' (ie the first formal stage of the HRA - Fig 1).
- 2.2. Taking these in turn, **it is clear the Local Plan represents a real plan with the potential to harm European sites and so can neither be excluded nor eliminated from the HRA. Likewise, the purpose of the Plan is not the nature conservation management of any European sites and so it cannot be made exempt from further assessment.** Consequently, the next steps in Stage 1 of Fig 2 need to be pursued by identifying which European sites and which features may be vulnerable as follows.

Identification of European sites at risk

- 2.3. To encourage a consistent, reliable and repeatable process, the *Handbook* (Figure F4.4) identifies 16 generic criteria, listed below in Table 1 (Columns 1 & 2), that when evaluated generate a precautionary, 'long' list of European sites in Column 3 which might be affected by the Plan²⁴. However, when considered further, using readily available information and local knowledge (Column 4) the list of plausible threats can be refined and the list of affected sites reduced (Column 5). Albeit a coarse filter, this enables the exercise to comply with the Boggis case and attempts to only consider realistic and credible threats whilst avoiding the hypothetical or extremely unlikely.
- 2.4. If Column 5 remains empty of European sites, following the tests in Column 2, then no European sites will be considered to be at risk and no further scrutiny will be required. Note that sites identified against the first criterion (ie '1. All plans') should be ignored as this is simply a list of European sites within the City Council's boundary.
- 2.5. The search was restricted to those European sites found within 20km of the district boundary as this was considered to be the maximum extent that policies and allocations could seriously be considered to generate measurable effects. This focuses the attention of this HRA on the River Derwent, Lower Derwent Valley and Strensall Common European sites, which are all found within the Council boundary and, Kirk Deighton, Skipwith Common, the Thorne and Hatfield Moor complex and the Humber Estuary which are all found in neighbouring local authorities.
- 2.6. It is important to note that although the outcomes of this site identification task will reflect the type and location of activities proposed within the plan and/or the ecological characteristics of the European sites, it does not represent the test for likely significant effect (which follows later).

²⁴ This table is taken from the Handbook albeit with changes to the number and titles of Columns appropriate to this HRA.

Table 1: Potential mechanisms and the initial list of European sites that could be affected

Types of plan (or potential effects)	Sites to scan for and check	Initial list of potentially affected European sites	Additional context	European sites selected
1. All plans (terrestrial, coastal and marine)	Sites within the geographic area covered by or intended to be relevant to the plan	Lower Derwent Valley (SPA, SAC, Ramsar) River Derwent (SAC) Strensall Common (SAC)	This 'test' simply identifies all the European sites in the Council's geographic area. All sites present will be included. Effects considered are those associated with the physical presence of built development and the <i>localised</i> effects on surface/groundwater resources and quality, resulting from changes in run-off, sedimentation, erosion etc.	Lower Derwent Valley River Derwent Strensall Common
2. Plans that could affect the aquatic environment	Sites upstream or downstream of the plan area in the case of river or estuary sites Open water, peatland, fen, marsh and other wetland sites with relevant hydrological links to land within the plan area, irrespective of distance from the plan area	Humber Estuary (SPA, SAC, Ramsar) Lower Derwent Valley (SPA, SAC, Ramsar) River Derwent (SAC)	No development is proposed that could lead to such effects in the vicinity of any of the three European sites. Therefore, effects on the aquatic environment of the Humber Estuary, the Lower Derwent Valley and the River Derwent can be ruled out and are removed from further consideration. Note that the <i>indirect</i> effects of changes to wastewater disposal are assessed separately under '7b'. Effects considered are those associated with the physical presence of built development and the <i>localised</i> effects on surface/groundwater resources and quality, resulting from changes in run-off, sedimentation, erosion etc. No development is proposed that could lead to such effects in the vicinity of Skipwith Common.	None Strensall Common

Types of plan (or potential effects)	Sites to scan for and check	Initial list of potentially affected European sites	Additional context	European sites selected
3. Plans that could affect the marine environment	<p>Sites that could be affected by changes in water quality, currents or flows; or effects on the inter-tidal or sub-tidal areas or the sea bed, or marine species</p> <p>Sites in the same coastal 'cell', or part of the same coastal ecosystem, or where there are interrelationships with or between different physical coastal processes</p>	Humber Estuary (SPA, SAC, Ramsar)	<p>Therefore, effects on the aquatic environment of Skipwith Common can be ruled out and are removed from further consideration.</p> <p>However, this may not be the case at Strensall Common where development immediately adjacent to this wetland site is proposed. Consequently, adverse effects cannot be ruled out here and so Strensall Common will remain in the assessment.</p> <p>Note that the <i>indirect</i> effects of changes to wastewater disposal are assessed separately under '7b'.</p> <p>Given the distance and lack of public access to the closest parts of the Upper Estuary, it is considered almost inconceivable that any aspect of the Plan could affect any of the physical and biological processes/features of the Humber Estuary. Consequently, effects on the marine environment on the Humber Estuary are removed from any further consideration in this HRA.</p>	None
4. Plans that could affect the coast		None	N/A	None

Types of plan (or potential effects)	Sites to scan for and check	Initial list of potentially affected European sites	Additional context	European sites selected
<p>5. Plans that could affect mobile species</p>	<p>Sites whose qualifying features include mobile species which may be affected by the plan irrespective of the location of the plan's proposals or whether the species would be in or out of the site when they might be affected</p>	<p>Humber Estuary (SPA, SAC, Ramsar) Kirk Deighton (SAC) Lower Derwent Valley (SPA, SAC, Ramsar) River Derwent (SAC)</p>	<p>This considers direct impacts of plan proposals on mobile species. Given that the great crested newts of Kirk Deighton SAC are will be restricted to the breeding pond and surrounding land, and that no development is proposed nearby, then adverse effects can be ruled out. Therefore, effects on mobile species at Kirk Deighton SAC are removed from any further consideration in this HRA. However, impacts on various bird, mammal and fish populations of the Humber, River Derwent and Lower Derwent Valley cannot be ruled out at this stage and so these sites remain in the HRA for further consideration.</p>	<p>Humber Estuary Lower Derwent Valley River Derwent</p>
<p>6. Plans that could increase recreational pressure on European sites potentially vulnerable or sensitive to such pressure</p>	<p>(a) Such European sites in the plan area (b) Such European sites within an agreed zone of influence or other reasonable and evidence-based travel distance of the plan area boundaries that may be affected by local recreational or other visitor pressure from within the plan area</p>	<p>Lower Derwent Valley (SPA, SAC, Ramsar) River Derwent (SAC) Strensall Common (SAC) Humber Estuary (SPA, SAC, Ramsar) Kirk Deighton (SAC) Thorne Moor (SAC) Hatfield Moor (SAC) Thorne & Hatfield Moors (SPA) Skipwith Common (SAC)</p>	<p>Due to the proximity of development, impacts on the three European sites cannot be ruled out at this stage and so they remain in the HRA for further consideration. Kirk Deighton SAC lies around 15km from the nearest allocation on private land with no public access and so effects from recreational pressure at Kirk Deighton SAC are removed from any further consideration in this HRA. In terms of public pressure, the otherwise fragile sites of all the components of the Thorne & Hatfield Moors complex, display either restricted access and/or effective visitor management to strongly suggest that not only would visitor</p>	<p>Lower Derwent Valley River Derwent Strensall Common Humber Estuary Skipwith Common</p>

Types of plan (or potential effects)	Sites to scan for and check	Initial list of potentially affected European sites	Additional context	European sites selected
7. Plans that would increase the amount of development	(c) Such European sites within an agreed zone of influence or other evidence-based longer travel distance of the plan area, which are major (regional or national) visitor attractions such as European sites which are National Nature Reserves where public visiting is promoted, sites in National Parks, coastal sites and sites in other major tourist or visitor destinations	Peak District SPA and SAC Yorkshire Dales SPA and SAC Flamborough Head SPA	numbers would be low, but they are likely to be well managed and the sites (and associated mobile species) would be resilient to change brought about by this Plan. Therefore, effects of recreational pressure on the Thorne and Hatfield Moor sites are removed from any further consideration in this HRA. Impacts from recreational pressure on the Humber Estuary and Skipwith Common cannot be ruled out at this stage and so remain in the HRA for further consideration.	None
7. Plans that would increase the amount of development	(a) Sites in the plan area or beyond that are used for, or could be affected by, water abstraction irrespective of distance from the	Kirk Deighton SAC Lower Derwent Valley (SPA, SAC, Ramsar)	The HRA of Yorkshire Water's Water Resources Management Plan found that there were unlikely to be any significant effects on European sites, either alone or in combination with other plans or	None

Types of plan (or potential effects)	Sites to scan for and check	Initial list of potentially affected European sites	Additional context	European sites selected
	plan area	River Derwent (SAC) Skipwith Common SAC Strensall Common (SAC)	projects ²⁵ . All potentially affected sites can therefore be ruled out from further scrutiny.	
(b) Sites used for, or could be affected by, discharge of effluent from waste water treatment works or other waste management streams serving the plan area, irrespective of distance from the plan area		Humber Estuary (SAC, Ramsar) Lower Derwent Valley (SAC, Ramsar) River Derwent (SAC)	Yorkshire Water has a legal duty to provide wastewater treatment for new dwellings. Policy GI2 (vii) effectively relates the construction of new development to the availability of capacity at wastewater treatment works across the area. Consequently, adverse effects on the receiving water bodies from the anticipated increase in wastewater disposal can be ruled out of this HRA with no residual effects. All potentially affected sites can be removed from further scrutiny.	None
7. Plans that would increase the amount of development	(c) Sites that could be affected by the provision of new or extended transport or other infrastructure	None	No such infrastructure proposed	None
(d) Sites that could be affected by increased deposition of air pollutants arising from the proposals, including emissions from significant increases in traffic		Lower Derwent Valley (SPA, SAC, Ramsar) River Derwent (SAC) Skipwith Common (SAC) Strensall Common (SAC)	Adverse impacts from increased air pollution can be possible on sites found within 200m of roads. Components of all four listed European sites are situated within this limit and so all are retained for further assessment; features that could be particularly vulnerable include heathlands at Strensall and Skipwith, and the grasslands and invertebrate communities of the River Derwent/Lower Derwent Valley complex	Lower Derwent Valley River Derwent Skipwith Common Strensall Common
8 Plans for linear developments or	Sites within a specified distance from the centre line of the	None	No such infrastructure proposed	None

Types of plan (or potential effects)	Sites to scan for and check	Initial list of potentially affected European sites	Additional context	European sites selected
infrastructure	proposed route (or alternative routes), the distance may be varied for differing types of site / qualifying features and in the absence of established good practice standards, distance(s) to be agreed by the statutory nature conservation body	None	No such activities proposed	None
9. Plans that introduce new activities or new uses into the marine, coastal or terrestrial environment	Sites considered to have qualifying features potentially vulnerable or sensitive to the effects of the new activities proposed by the plan	None	No such activities proposed	None
10. Plans that could change the nature, area, extent, intensity, density, timing or scale of existing activities or uses	Sites considered to have qualifying features potentially vulnerable or sensitive to the effects of the changes to existing activities proposed by the plan	None	No such activities proposed	None
11. Plans that could change the quantity, quality, timing, treatment or mitigation of emissions or discharges to air, water or soil	Sites considered to have qualifying features potentially vulnerable or sensitive to the changes in emissions or discharges that could arise as a result of the plan	None	No such activities proposed	None

Types of plan (or potential effects)	Sites to scan for and check	Initial list of potentially affected European sites	Additional context	European sites selected
<p>12. Plans that could change the quantity, volume, timing, rate, or other characteristics of biological resources harvested, extracted or consumed</p>	<p>Sites whose qualifying features include the biological resources which the plan may affect, or whose qualifying features depend on the biological resources which the plan may affect, for example as prey species or supporting habitat or which may be disturbed by the harvesting, extraction or consumption</p>	None	No such activities proposed	None
<p>13. Plans that could change the quantity, volume, timing, rate, or other characteristics of physical resources extracted or consumed</p>	<p>Sites whose qualifying features rely on the non-biological resources which the plan may affect, for example, as habitat or a physical environment on which habitat may develop or which may be disturbed by the extraction or consumption</p>	None	No such activities proposed	None
<p>14. Plans which could introduce or increase, or alter the timing, nature or location of disturbance to species</p>	<p>Sites whose qualifying features are considered to be potentially sensitive to disturbance, for example as a result of noise, activity or movement, or the presence of disturbing features that could be brought about by the plan</p>	<p>Lower Derwent Valley (SPA, SAC, Ramsar) River Derwent (SAC) Thorne & Hatfield Moors (SPA) Humber Estuary (SPA, SAC, Ramsar) Kirk Deighton (SAC)</p>	<p>For the purposes of this HRA, it is considered that the effects of this category will be captured effectively via the application of criteria 5 (mobile species) and/or 6 (recreation). Therefore, this criterion is screened out to avoid duplication and so impacts resulting from 'Disturbance' will be removed from further consideration in this HRA on all five European sites listed.</p>	None

Types of plan (or potential effects)	Sites to scan for and check	Initial list of potentially affected European sites	Additional context	European sites selected
15. Plans which could introduce or increase or change the timing, nature or location of light or noise pollution	Sites whose qualifying features are considered to be potentially sensitive to the effects of changes in light or noise that could be brought about by the plan	None	No such activities proposed	None
16. Plans which could introduce or increase a potential cause of mortality of species	Sites whose qualifying features are considered to be potentially sensitive to the source of new or increased mortality that could be brought about by the plan	None	No such activities proposed	None

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- 2.7. The outputs of the review carried out in Table 1 rule out the possibility of any credible effects from any aspect of the Plan on Kirk Deighton SAC, Thorne Moor SAC, Hatfield Moor SAC and Thorne & Hatfield Moors SPA. These sites will therefore be ruled out of any further scrutiny in this HRA s.
- 2.8. In addition, the exercise reduces the number of factors at play and begins to clarify the nature of potential impacts. Importantly, it confirms that the focus of this HRA should be restricted to only the following European sites and issues:

European sites	Feature
(2) Aquatic environment	Strensall Common SAC
(5) Mobile species	Humber Estuary SPA, SAC and Ramsar Lower Derwent Valley SPA, SAC and Ramsar River Derwent SAC
(6) Recreational pressure	Humber Estuary SPA and Ramsar Lower Derwent Valley SPA, SAC and Ramsar River Derwent Skipwith Common SAC Strensall Common SAC
(7d) Airborne pollution	Lower Derwent Valley SPA, SAC and Ramsar River Derwent SAC Skipwith Common SAC Strensall Common SAC

- 2.10. The net result, and benefit to the HRA, is that the list of issues and sites potentially affected is reduced, making for a shorter and more focused HRA than would otherwise be the case.
- 2.11. However, as impacts on a number of European sites cannot be ruled out, further ecological information needs to be gathered to inform subsequent tests in the HRA. Drawing on the citations, conservation objectives, supplementary advice (where published) and site improvement plans, all five European sites that remain at risk are described in Table 2 and are accompanied by observations on their sensitivity to external factors – the latter informed by Table 1. Conservation objectives and threats and pressures extracted from the SIP are provided in full. Citation and qualifying features are provided in Appendix A.
- 2.12. For ease of access, references that influence Table 2 inform much of the rest of the HRA are listed immediately below.

References

Lower Derwent Valley SPA, SAC, Ramsar

Lower Derwent Valley SPA Citation. 1993

Conservation Objectives for Lower Derwent Valley SPA. 30 June 2014. (Version 2)

Draft Supplementary advice on conserving and restoring features. Lower Derwent Valley SPA. 25 January 2019

Lower Derwent Valley SAC Citation. 14 June 2005



Conservation Objectives for Lower Derwent Valley SAC. 27 November 2018. (Version 3)

Draft Supplementary advice on conserving and restoring features. Lower Derwent Valley SAC. 29 June 2016

Site Improvement Plan. Lower Derwent Valley. 6 October 2014. V1.0

Ramsar Information Sheet Lower Derwent Valley SAC Citation. 8 June 1993

River Derwent SAC

River Derwent SAC Citation. 14 June 2005

Conservation Objectives for River Derwent SAC. 27 November 2018. (Version 3)

Draft Supplementary advice on conserving and restoring features. River Derwent SAC. 27 March 2017 (Version 2)

River Derwent SAC Site Improvement Plan. Natural England. V1.0. 8 October 2014.

Skipwith Common SAC

Skipwith Common SAC Citation. 14 June 2005

Conservation Objectives for Skipwith Common SAC. 27 November 2018. (Version 3)

Draft Supplementary advice on conserving and restoring features. Skipwith Common SAC. 25 January 2019

Skipwith Common Site Improvement Plan, Natural England, v1.0, 18 December 2014

Strensall Common SAC

Strensall Common SAC Citation. 14 June 2005

Conservation Objectives for Strensall Common SAC. 27 November 2018. (Version 3)

Draft Supplementary advice on conserving and restoring features. Strensall Common SAC. 25 January 2019

Strensall Common Site Improvement Plan, Natural England, v1.0, 18 December 2014

Humber Estuary SPA, SAC, Ramsar

Humber Estuary SPA Citation. 31 August 2007

Conservation Objectives for Humber Estuary SPA. 30 June 2014. (Version 3)

Humber Estuary SAC Citation. 10 December 2009

Conservation Objectives for Humber Estuary SAC. 27 November 201. (Version 3)

Humber Estuary Site Improvement Plan, Natural England, v1.1. 8 July 2015

Humber Estuary Ramsar Information Sheet. 31 August 2007

Table 2: Description of European Sites

Description (including summary of qualifying features)	Conservation objectives	Pressures and threats (P/T)
<p>Lower Derwent Valley SPA, SAC, Ramsar</p> <p>The Lower Derwent Valley (LDV) supports the largest single expanse of wet, neutral (MG4) hay meadow in the UK. The site also hosts alder woodland and internationally important populations of breeding and wintering waterbirds. The habitats are reliant in part on the maintenance of a favourable hydrological regime, including periodic inundation, whilst mobile species remain susceptible to development, public pressure and disturbance both on and off the site on functionally-linked land outside the designated site, sometimes several kilometres distant. In common with the River Derwent SAC, the qualifying features include other which is similarly vulnerable.</p> <p>The Ramsar designation adds wetland invertebrates, passage birds, ruff and whimbrel. Most of the site is privately owned and farmed with limited public access but all is managed for nature conservation with Natural England, including the LDV National Nature Reserve. Limited car parking and a formal arrangement of paths and hides effectively reduces the impact of existing recreational pressure although some 'informal' access or trespass occurs. Despite this, the site is relatively robust but large increases in visitors may be difficult to accommodate without adequate mitigation.</p> <p>The grassland and water bodies remain vulnerable to nutrient enrichment - the addition of inorganic nitrogen fertiliser is not allowed - but birds and mammals are more resilient. There are five component SSSIs. All of Derwent Ings SSSI to be in 'favourable' or 'unfavourable recovering' condition. 99.2% of the River Derwent SSSI is 'favourable' or 'unfavourable recovering'; 0.8% is 'unfavourable no change' but the threat level is 'high' across a wider area. All Newton Mask SSSI, Brighton Meadows SSSI and Melbourne and Thornton Ings SSSI are in favourable condition but carry a range of threats.</p> <p>For the avoidance of doubt, the Ramsar site encompasses a similar area to the SPA but excludes the river (ie the River Derwent SAC). Given the overlap between the majority of Ramsar and SPA/SAC features, this HRA will restrict assessment to just the latter to reduce repetition. However, the 'unique' wetland invertebrate assemblage of the Ramsar site is not reflected in the corresponding SAC.</p> <p>This assemblage forms an integral component of the grassland, wetland and woodland complex of the Lower Derwent Valley and it is considered that the assessment of impacts on this group is fundamentally linked to those of its supporting habitats. Therefore, it is not assessed independently and instead, reflecting the ecology of the species and habitats, an approach based on the evaluation of just the SPA and SAC features is considered adequate to embrace this feature. This approach is given weight by the fact that as a Ramsar feature it does not benefit from bespoke conservation objectives not is it considered in Natural England's SIP or its supplementary advice.</p>	<p>SPA</p> <p>Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;</p> <p>The extent and distribution of the habitats of the qualifying features;</p> <p>The structure and function of the habitats of the qualifying features;</p> <p>The supporting processes on which the habitats of the qualifying features rely;</p> <p>The population of each of the qualifying features, and,</p> <p>The distribution of the qualifying features within the site.</p> <p>SAC</p> <p>Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;</p> <p>The extent and distribution of qualifying natural habitats and habitats of qualifying species;</p> <p>The structure and function (including typical species) of qualifying natural habitats;</p> <p>The structure and function of the habitats of qualifying species;</p> <p>The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely;</p> <p>The populations of qualifying species, and,</p> <p>The distribution of qualifying species within the site.</p>	<p>1. Hydrological changes (P);</p> <p>2. Drainage (P);</p> <p>3. Public access/Disturbance (T);</p> <p>4. Invasive species (T);</p> <p>5. Undergrazing (T);</p> <p>6. Inappropriate scrub control (T);</p> <p>7. Air pollution; impact of atmospheric nitrogen deposition (T);</p> <p>8. Invasive species (Himalayan balsam) (T);</p> <p>9. Invasive species (others) (T)</p>

Description (including summary of qualifying features)

Conservation objectives

Pressures and threats (P/T)

River Derwent SAC

The River Derwent represents one of the best examples in England of a lowland river stretching from Ryemouth in the north to its confluence with the Ouse in the south of the District – a small section lies within the Lower Derwent Valley National Nature Reserve.

It supports diverse communities of flora and fauna, notably floating vegetation dominated by water crowfoot; and river lamprey, sea lamprey, bullhead and otter. The mobile species utilise extensive stretches of water both upstream and downstream throughout the catchment beyond the boundaries of the SAC, and are critically dependent on the maintenance of a favourable hydrological (including physical and chemical) conditions throughout their range and so are vulnerable to pollution events and the creation of physical or chemical barriers; lamprey migrate to the open sea via the Derwent, Ouse and Humber Estuary providing an intimate link between both sites.

The Derwent is meso/eutrophic and carries a high nutrient load providing a degree of resilience against air pollution, and whilst otter can be considered resilient, the floating vegetation communities and fish populations may be vulnerable. Overall, the site can be considered relatively robust but vulnerable to changes in water quality (especially inputs of phosphate) from wastewater disposal, for instance.

Limited car parking and a formal arrangement of footpaths reduces the impact of existing recreational pressure (although informal access or trespass also occurs, although this is regarded to be limited to local residents) and the simple width of the channel reduces direct impacts. So, whilst bullhead and lamprey can be considered immune to such pressure, otter and the floating vegetation community may not be.

There are two component SSSIs – the River Derwent and Newton Mask. Natural England has assessed 99.2% of the River Derwent SSSI to be in 'favourable' or 'unfavourable recovering' condition; 0.4% is 'unfavourable no change' but the threat level is considered to be 'high' across a much wider area. All of Newton Mask SSSI is considered to be in favourable condition but carries a 'medium' threat level.

For the avoidance of doubt, the Lower Derwent Ramsar site encompasses a similar area to the SPA but excludes the River Derwent SAC.

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring:

The extent and distribution of qualifying natural habitats and habitats of qualifying species;

The structure and function (including typical species) of qualifying natural habitat;

The structure and function of the habitats of qualifying species;

The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely;

The populations of qualifying species, and,

The distribution of qualifying species within the site.

1. Physical modification (P/T);

2. Water pollution (T);

3. Invasive species (T);

4. Change in land management (T);

5. Water abstraction (T).

Description (including summary of qualifying features)

Conservation objectives

Pressures and threats (P/T)

Skipwith Common SAC

Skipwith Common supports extensive areas of both wet and dry heath, with rush pasture, mire, reedbed, open water and woodland. The entire European site is managed as a National Nature Reserve by Natural England, grazed with cattle and sheep and has been dedicated as open access land under CRoW. The number of visitors is thought to be increasing causing some erosion and disturbance of grazing animals, and the heathland could be vulnerable to nitrogen deposition. The site remains both fragile and vulnerable.

The underpinning Skipwith Common SSSI was assessed by Natural England to be in 'favourable' or 'unfavourable recovering' condition. The corresponding SIP for the European site identifies, *inter alia*, a number of threats including public pressure, air pollution and drainage.

- H4010. Northern Atlantic wet heaths with *Erica tetralix*; wet heathland with cross-leaved heath (or 'wet heath');
 H4030. European dry heaths (or 'dry heath').
1. Public access/Disturbance (P);
 2. Inappropriate scrub control (T);
 3. Drainage (T);
 4. Air pollution: impact of atmospheric nitrogen deposition (P).

Strensall Common SAC

Strensall Common is managed in part by the Yorkshire Wildlife Trust and MOD, and, at over 570ha, supports one of the largest areas of lowland heath in northern England. Extensive areas of both wet and dry heath occur and form a complex habitat mosaic with grassland, woodlands/scrub and ponds. Grazing, by sheep and cattle is the key management tool with stock typically present during summer and autumn.

Vulnerable to nitrogen deposition, it is also subject to considerable visitor pressure although an established network of paths reduces trampling pressure; regular closures of much of the heath by the MOD to allow safe operation of the adjacent firing ranges also helps reduce the intensity of this threat. However, both the dry and wet heath habitats are particularly vulnerable, not only to erosion etc, but also changes to the local hydrological regime and so construction proposed nearby will require careful scrutiny.

The entire, underpinning SSSI was considered by Natural England in 2011 to be in favourable or unfavourable-recovering condition. However, the corresponding SIP identifies a number of threats including, *inter alia*, public pressure and air pollution. The draft Supplementary Advice, recently published by Natural England (February 2019) highlights the threat posed to the maintenance of the grazing regime by the worrying and subsequent disturbance of livestock by dogs. It states:

'any activity (*sic*) threatened the viability of this management could pose a risk to heathland habitat'.

- H4010. Northern Atlantic wet heaths with *Erica tetralix*; wet heathland with cross-leaved heath;
 H4030. European dry heaths.
1. Public access/Disturbance (P);
 2. Inappropriate scrub control (T);
 3. Air pollution: impact of atmospheric nitrogen deposition (P).

Humber Estuary SAC, SPA & Ramsar

The Humber Estuary carries a high suspended sediment load which sustains a dynamic system of intertidal and subtidal mudflats, sandflats, saltmarsh and reedbeds extending to around 37,000ha. Other notable habitats include sand dunes, coastal lagoons and sub-tidal sandbanks. Qualifying (mobile) species include river and sea lamprey which migrate through the estuary to rivers in the Humber catchment.

Importantly, the estuary regularly supports around 150,000 wintering and passage waterbirds. At high tide, large mixed flocks congregate in key roost sites often beyond the European site boundary due to the combined effects of extensive land claim, coastal squeeze and lack of grazing marsh and grassland on both banks of the estuary. In summer, the site supports important breeding populations of Bittern, Marsh harrier, Avocet and Little tern. All could be vulnerable to development or recreational pressure on functionally-linked land.

Natural England has assessed 99% of the underpinning Humber Estuary SSSI to be in 'favourable' or 'unfavourable recovering' condition. Only 1% of the site is assessed to be in 'unfavourable no change' or 'unfavourable declining' condition. However, the 'threat' level is considered to be 'medium' or 'high' across a much wider area.

The corresponding SIP for the European site identifies, *inter alia*, a number of threats including water pollution and public pressure.

Whilst therefore potentially vulnerable to a wide range of factors, its size, considerable distance from any point sources within the Council area and relative robustness of many of the features make the likelihood of harmful effects remote.

The one possible exception to this is the population of lamprey which migrate from the sea, via the Humber to breeding grounds in the River Derwent. Physical or chemical barriers to migration may cause harm and so factors like wastewater disposal can require careful scrutiny if not addressed effectively in policy terms. Similarly, grey seals could also be vulnerable to similar factors.

Given the similarity between Ramsar and SPA/SAC features, this HRA will restrict assessment to just the latter to avoid repetition.

SPA objectives

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:

The extent and distribution of the habitats of the qualifying features;

The structure and function of the habitats of the qualifying features;

The supporting processes on which the habitats of the qualifying features rely;

The population of each of the qualifying features; and,

The distribution of the qualifying features within the site.

SAC objectives

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring:

The extent and distribution of qualifying natural habitats and habitats of qualifying species;

The structure and function (including typical species) of qualifying natural habitats;

The structure and function of the habitats of qualifying species; and the supporting processes on which qualifying natural habitats and habitats of qualifying species rely;

The populations of qualifying species; and,

The distribution of qualifying species within the site.

1. Water pollution (P/T);
2. Coastal squeeze (T);
3. Changes in species distributions (T);
4. Undergrazing (P);
5. Invasive species (T);
6. Natural changes to site conditions (P/T);
7. Public access/Disturbance (P);
8. Fisheries: Fish stocking; (P)
9. Fisheries: Commercial marine and estuarine (P);
10. Fisheries: Commercial marine and estuarine (T);
11. Direct and take from development (T);
12. Air pollution: impact of atmospheric nitrogen deposition (P);
13. Shooting/scaring (P);
14. Direct impact from third party (T);
15. Inappropriate scrub control (P)

2.13. The outputs of Table 1 allow this HRA to focus solely on a restricted number of possible impacts on five European sites: the Humber Estuary, Lower Derwent Valley, the River Derwent and both Skipwith and Strensall Commons. However, by drawing on the additional information provided in Table 2, the HRA is able to further refine the possible impacts to specific features, habitats and species. These, the key issues for the next, formal stage of this screening exercise are presented in Table 3.

Table 3: Summarised, initial list of European sites, affected features and potential effects

European site	Potential effects	Qualifying features at risk
Lower Derwent Valley SPA, SAC & Ramsar	(5) Impacts on mobile species	Breeding, non-breeding birds and otter
	(6) Impacts from recreational pressure	All habitats Breeding, non-breeding birds and otter
	(7d) Impacts from air pollution	All habitats
River Derwent SAC	(5) Impacts on mobile species	Otter, bullhead and lamprey
	(6) Impacts from recreational pressure	Otter Floating vegetation dominated by water crowfoot
	(7d) Impacts from air pollution	Floating vegetation dominated by water crowfoot River and sea lamprey, and bullhead
Skipwith Common SAC	(6) Impacts from recreational pressure	Wet heath and Dry heath
	(7d) Impacts from air pollution	Wet heath and Dry heath
Strensall Common SAC	(2) Impacts on the aquatic environment	Wet heath and Dry heath
	(6) Impacts from recreational pressure	Wet heath and Dry heath
	(7d) Impacts from air pollution	Wet heath and Dry heath
Humber Estuary SAC, SPA, Ramsar	(5) Impacts on mobile species	River and sea lamprey, grey seal and both breeding and non-breeding birds
	(6) Impacts from recreational pressure	Breeding and non-breeding birds

2.14. It is important to reiterate comments embedded in Table 2, regarding the assessment of Ramsar site features. The Humber Estuary Ramsar features are effectively duplicated by the SPA/SAC features. There is, therefore, no need for separate assessment and so further assessment in this HRA will focus entirely on the latter unless outcomes demand otherwise.

2.15. Whilst the same is true for the Lower Derwent Valley Ramsar and SPA bird communities, the relationship is not always so convenient. For instance, the wetland invertebrate assemblage in the Lower Derwent Valley Ramsar site is not represented in the corresponding SAC. However, there are strong reasons suggest that that assessment of the SAC habitats would be adequate to provide the necessary scrutiny to safeguard this assemblage.

2.16. This assemblage forms an integral component of the grassland, wetland and woodland complex of the Lower Derwent Valley and it is considered that the assessment of impacts on this group is fundamentally linked to those of its supporting habitats. Therefore, the wetland invertebrate



assemblage it is not assessed independently and instead, reflecting the ecology of the species and habitats, an approach based on the evaluation of just the SPA and SAC features is considered adequate to safeguard this feature and deliver the necessary scrutiny of Ramsar sites as required by current Government policy. Therefore, there will no specific reference to Ramsar features in the following screening exercise unless it is required for clarity.

3. SCREENING THE POLICIES – PROCESS AND OUTCOMES

Methodology

- 3.1. Section 2 of this HRA confirmed that the Local Plan could not be excluded from scrutiny and identified which European sites and which features might be affected by it. Again, by drawing on the Handbook, the next step, encompassing the second formal test from Fig 1, is to identify if there is a credible risk that a proposal in the Local Plan may lead to a LSE on a European site (by threatening to undermine its conservation objectives). It achieves this by evaluating the proposals in the plan against the following criteria to see if they are:
- **Screened out from further scrutiny** (because the individual policies or allocations are considered not 'likely to have a significant effect on a European site, either alone or in combination with other plans and projects');
 - **Screened in for further scrutiny** (because the individual policies or allocations are considered 'likely to have a significant effect on a European site, either alone or in combination with other plans and projects').
- 3.2. Mindful of the People Over Wind decision, section 6.3 of the Handbook describes a list of 'screening categories' (summarised in Table 4 below, itself adapted from an earlier edition of the Handbook) designed to evaluate both policy and site-based allocations to provide a rigorous and transparent approach to the screening process. Importantly, this process helps to provide a distinction between the *essential features and characteristics*, and *mitigation measures* of the Plan where relevant.

Table 4: Screening Categories

Code	Category	Outcome
A	General statement of policy/general aspiration	Screened out
B	Policy listing general criteria for testing the acceptability/sustainability of the plan	Screened out
C	Proposal referred to but not proposed by the plan	Screened out
D	Environmental protection/site safeguarding policy	Screened out
E	Policies or proposals which steer change in such a way as to protect European sites from adverse effects	Screened out
F	Policy that cannot lead to development or other change	Screened out
G	Policy or proposal that could not have any conceivable effect on a site	Screened out
H	Policy or proposal the (actual or theoretical) effects of which cannot undermine the conservation objectives (either alone or in combination with other aspects of this or other plans or projects (used when the location of a policy or allocation is unspecified)	Screened out
I	Policy or proposal with a likely significant effect on a site alone	Screened in
J	Policy or proposal with an effect on a site but not likely to be significant alone, so need to check for likely significant effects in combination	Check

Code	Category	Outcome
K	Policy or proposal unlikely to have a significant effect either alone or in combination (screened out after the in combination test)	Check
L	Policy or proposal which might be likely to have a significant effect in combination (screened in after the in combination test)	Check

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- 3.3. The impact of each potential effect is evaluated against the conservation objectives (Appendix A) of the relevant features of the European sites (Table 3) and categorised according to criteria in Table 4 for every policy and/or allocation in the Plan. This provides a bespoke screening opinion for each and every policy and/or allocation in the Plan. The outcomes are summarised in Tables 5 and 6 but given the large number of policies and allocations, the preliminary screening outcome for each policy and allocation is only presented in Appendix B. Where there is a risk of a likely significant effect alone and in combination, the issue will be categorised as Category I for simplicity but any in combination issues will still be considered below if necessary.
- 3.4. Issues of particular importance, arranged by potential effect, which influenced the outcome of this exercise, are discussed below taking each issue in turn.

Screening

Potential Effect – Aquatic environment

European site	Feature
Strensall Common SAC	Wet heath and Dry heath

Context

- 3.5. This potential effect is concerned with built development and its localised effects on surface and sub-surface flows both in terms of water quality and water resources resulting from changes in run-off, sedimentation, erosion etc. Table 3 shows that both the wet heath and dry heath communities of Strensall Common could be affected but as this criterion is restricted to localised threats, only three policies/allocations required evaluation.
- 3.6. The Council proposes development at three locations immediately adjacent or in close proximity to the Strensall Common European site (Policies SS19/ST35, E18 and H59). Together these comprise the development of 545 dwellings (500 under SS19/ST35 and 45 under H59) and a 4ha employment area. Despite supporting extensive areas of wet heath, a threatened habitat with a restricted distribution in the UK and beyond, changes to the hydrological regime are not identified as a key pressure or threat in the Strensall Common SIP (Table 1).

Screening opinions

Strensall Common

- 3.7. Wet and dry heath is found in the vicinity of all three proposed policies/allocations and extends across much of the European site. It is a fragile habitat, vulnerable to changes in the local surface or sub-surface hydrological regime. It is anticipated that construction of the proposed development, across all three allocations would be prolonged, extending over several years and

would comprise substantial earthworks, the installation of drains and the storage of fuel and other potential contaminants, all with the potential to adversely affect the local hydrological regime.

- 3.8. Whilst it is not suggested that impacts from construction will adversely affect the entire site, it is possible that changes to drainage patterns could extend across localised but significant areas of the SAC. This would conflict with the conservation objective for Strensall Common to '*maintain ... the extent and distribution ... the structure and function ... and the supporting processes ... of the qualifying natural habitats ...*'
- 3.9. Whilst Policies H59 and E18 do not provide for any mitigation, the same cannot be said for SS19/ST35 which suggests measures are required to manage hydrological effects. The latter cannot be regarded as embedded characteristics of the policy and must therefore be subjected to further scrutiny via an appropriate assessment.
- 3.10. Given the interrelationship between all three policies, all three will be subject to this further scrutiny, despite their differing approaches to mitigation.

Therefore, there is a risk that the proposals contained within Policies SS19/ST35, E18 and H59 could undermine the conservation objectives of the heathland features of Strensall Common SAC and that a likely significant effect cannot be ruled out (alone). Consequently, the policies must be screened in (Category I) and an appropriate assessment is required. Each policy is capable of resulting in a likely significant effect alone and, therefore, no residual effects are anticipated and there is no need for an in combination assessment at this stage.

Potential Effect – Mobile Species

European sites	Feature
Lower Derwent Valley SPA and SAC	Breeding and non-breeding birds, and otter
River Derwent SAC	Otter, bullhead and lamprey
Humber Estuary SPA, SAC and Ramsar	Lamprey, grey seals and both breeding and non-breeding birds

Context

- 3.11. Mobile Species are defined here as those that utilise ('functionally-linked') land or water beyond the European site boundary for some part of their life-cycle be it seasonally, diurnally or even intermittently. Consequently, they are vulnerable to a range of both localised and strategic effects away from protected areas. Therefore, in the case of fish and otter, effects on water quality and resources will have to be considered both up and downstream, and, in terms of bird populations, attention will have to be paid to land-take or disturbance on potentially wide areas of land.
- 3.12. Table 3 shows that a number of mobile species across three European sites (the Humber Estuary, River Derwent and Lower Derwent Valley) could be affected and potentially, a considerable number of policies/allocations could be implicated. All the potential European sites selected (except the River Derwent) identify 'disturbance' as a key pressure or threat in the relevant SIP (Table 1).
- 3.13. The individual features are considered in turn by site. Inevitably, because of some shared features, this introduces some repetition.



Screening opinions

Humber Estuary

- 3.14. Given the absence of proposed development in close proximity to the estuary or known, functionally-linked land, **it is considered highly unlikely that any proposals in the Plan could undermine the conservation objectives of the breeding and non-breeding bird populations of the Humber Estuary SPA and so likely significant effects (alone) can be screened out (Category G)**. There would be no residual effects and no need for an in combination assessment.
- 3.15. Similarly, and simply because of the distance between the Plan area and seal haul-out areas, **it is considered highly unlikely that any proposals in the Plan could undermine the conservation objectives of the grey seal populations of the Humber Estuary SAC and so likely significant effects (alone) can be screened out (Category G)**. There would be no residual effects and no need for an in combination assessment.
- 3.16. Furthermore, with the lack of proposals in the Plan for the creation of physical or other obstructions in watercourses, **it is considered highly unlikely that any proposals in the Plan could undermine the conservation objectives of the lamprey populations of the Humber Estuary SAC (or River Derwent SAC) and so likely significant effects (alone) can be screened out (Category G)**. There would be no residual effects and no need for an in combination assessment.

River Derwent

- 3.17. Otters are associated with waterways throughout the district and, in common with experiences across much of lowland England, populations have been steadily increasing as water quality, in particular, has improved. Otters are typically nocturnal and elusive and although they will range widely in the rivers and adjacent riparian habitats to forage, holts are typically established away from human influence. As no allocations promote obstructions in the rivers and all are situated far from water courses, no significant effects are anticipated.
- 3.18. Consequently, **it is considered highly unlikely that any proposals in the Plan could undermine the conservation objectives of the otter populations of the River Derwent (or Lower Derwent Valley SAC) SAC and so likely significant effects (alone) can be screened out (Category G)**. There would be no residual effects and no need for an in combination assessment.
- 3.19. Given the absence of proposals for the creation of physical or other obstructions in watercourses, **it is considered highly unlikely that any proposals in the Plan could undermine the conservation objectives of the lamprey and bullhead populations of the River Derwent (or Humber Estuary) SAC and so likely significant effects (alone) can be screened out (Category G)**. There would be no residual effects and no need for an in combination assessment.

Lower Derwent Valley

- 3.20. As with otters associated with the River Derwent (above), **it is considered highly unlikely that any proposals in the Plan could undermine the conservation objectives of the otter populations of the Lower Derwent Valley SAC (and River Derwent SAC) and so likely significant effects (alone) can be screened out (Category G)**. There would be no residual effects and no need for an in combination assessment.
- 3.21. The Lower Derwent Valley supports diverse, fragile breeding and non-breeding bird populations throughout the year, both within the SPA and on functionally-linked land beyond. All are equally vulnerable to disturbance from public pressure which could result in their disturbance or displacement.

- 3.22. However, only one policy is considered to affect the location of mobile species on functionally-linked land, the proposal for a new garden village at Elvington (SS13/ST15 – Land West of Elvington Lane). Evidence drawn from ecological reports prepared^{26, 27} by two landowners associated with this proposal has confirmed the presence of significant numbers of non-breeding golden plover and lapwing associated with the Lower Derwent Valley SPA utilise land in and around this major new settlement.
- 3.23. The policy wording provides comprehensive mitigation measures including the establishment of extensive areas of wet grassland which would represent ideal habitat for mobile species. However, the policy wording does not make it clear whether this is provided within the allocation boundary or as off-site mitigation. Consequently, there can be no confidence that the demands of the policy wording can be met and harm cannot be ruled out.
- 3.24. This would conflict with the conservation objective for the Lower Derwent Valley SPA to ‘ensure that the integrity of the site is maintained by ...*maintaining ... the extent and distribution ... the structure and function ... and the supporting processes on which the habitats of the qualifying features rely .. and the distribution of the qualifying features*’
- 3.25. Furthermore, the mitigation proposed cannot be regarded as embedded characteristics of the policy and must therefore be subjected to further scrutiny via an appropriate assessment.
- 3.26. Therefore, **there is a risk that the proposals contained within Policy SS13/ST15 could undermine the conservation objectives for the non-breeding birds of the Lower Derwent Valley SPA and that a likely significant effect cannot be ruled out (alone). Consequently, the policy must be screened in (Category I) and an appropriate assessment is required.** This policy is capable of resulting in a likely significant effect alone and, therefore, no residual effects are anticipated and there is no need for an in combination assessment at this stage
- 3.27. It should be noted that this evaluation is only concerned with direct effects from new development. Indirect effects resulting from an increased number of visits to the site or land nearby are considered immediately below.

Potential Effects – Recreation

European Sites	Feature
Humber Estuary SPA and Ramsar	Breeding and non-breeding birds
Lower Derwent Valley SPA, SAC and Ramsar	All habitats Breeding and non-breeding birds, and otter
River Derwent SAC	Floating vegetation community Otter
Skipwith Common SAC	Wet and Dry heath
Strensall Common SAC	Wet and Dry heath

Context

- 3.28. For those European sites around York, adverse ecological effects from recreational pressure are largely limited to walking (frequently with dogs).



- 3.29. The most popular destinations can draw in visitors in great numbers from considerable distances and lead to erosion and disturbance. Less popular sites, or those with fewer facilities, have a smaller catchment, fewer visitors and the issue is typically less problematic. Alternatively, sites managed specifically to encourage large numbers of visitors can tolerate these pressures without causing significant harm.
- 3.30. Excessive recreational pressure typically leads to the disturbance of qualifying species, and a reduction in habitat quality/extent from trampling. It can be particularly problematic on land with open or unauthorised access where desire lines can be created and so compromise site management.
- 3.31. In addition, dogs can not only cause localised eutrophication but can also disturb grazing stock, reducing the effectiveness of site management and a decline in the condition of features not normally considered vulnerable.
- 3.32. Distance or accessibility remain key factors and in general, where modest residential allocations are situated over 5km from a vulnerable European site, then LSE (alone) can often (but not always) be ruled out. Of course, each site is different and other key factors will include the fragility of the feature, size of the development, the accessibility of alternative destinations, the availability of footpaths, public transport and so on
- 3.33. Of note, all purely employment allocations (except E18 which is situated immediately adjacent to Strensall Common SAC) are excluded from consideration in this category; given the reduced opportunities for workers to visit European sites nearby during the working day, any adverse impacts can be screened out, alone.
- 3.34. Table 3 shows that a number of features across five European sites (the Humber Estuary, River Derwent, Lower Derwent Valley and both Skipwith and Strensall Commons) and consequently, numerous policies/allocations could be affected. All the potential European sites selected identify 'disturbance/public access' as a key pressure or threat in the relevant SIP (Appendix A).
- 3.35. Following advice from Natural England, the Council (in collaboration with its neighbour, Selby District Council (reflecting their common interests in the site as it lies within both administrative areas) commissioned Footprint Ecology to carry out a visitor survey of the Lower Derwent Valley. Separately, Selby District Council commissioned Footprint Ecology to carry out the same task at Skipwith Common (which lies solely within its boundaries and far from any proposals in York's Plan). For presentational reasons both surveys were, however, submitted as one report²⁸ (see Appendix C). Independently, the City of York Council also commissioned the same company to perform a survey at Strensall Common²⁹ (Appendix D). The outcomes of these three surveys inform consideration of this issue below.
- 3.36. As with 'mobile species' previously, this evaluation is presented by European site to provide clarity albeit with some repetition.

Screening Opinions

Humber Estuary

- 3.37. Given the absence of proposed development nearby, limited access to the foreshore, compounded by private ownership of much of the functionally-linked land **it is considered highly unlikely that any proposals in the Plan could undermine the conservation objectives of the breeding and**

²⁸ Liley, D. (2018). Visitor surveys at the Lower Derwent SPA/SAC and Skipwith Common SAC. Unpublished report by Footprint Ecology for City of York Council and Selby District Council

²⁹ Liley, D. & Lake, S., (2019). Visitor surveys and impacts of recreation at Strensall Common SAC. Unpublished report by Footprint Ecology for City of York Council.



non-breeding bird communities of the Humber Estuary SPA and so likely significant effects alone can be screened out (Category G); a visitor survey in 2012³⁰ suggested that the median distance travelled by visitors (by car) was just 4.4km. There would be no residual effects and no need for an in combination assessment.

Lower Derwent Valley

- 3.38. The evaluation of this issue is similar to that provided for ‘mobile species’ above. Otters are found in and along the banks of the Lower Derwent Valley (and River Derwent). They are clearly associated with waterways throughout the district and populations have been steadily increasing as water quality, in particular, has improved. Otters are typically nocturnal and elusive and although they will range widely in the rivers and adjacent riparian habitats to forage, holts are typically established away from human influence. Given that access to the riverside is effectively (although not entirely) restricted by management measures and private ownership, adverse effects can be ruled out.
- 3.39. Consequently, **it is considered highly unlikely that any proposals in the Plan could undermine the conservation objectives of the otter populations of the Lower Derwent Valley (or River Derwent) SAC and so likely significant effects (alone) can be screened out (Category G).** There would be no residual effects and no need for an in combination assessment
- 3.40. Similarly, the network of formal paths and effective field boundaries provides confidence that trampling and other harm of the grassland, wetland and woodlands, combined with their relative resilience, will be avoided. Therefore, **it is considered highly unlikely that any proposals in the Plan could undermine the conservation objectives of the grassland, wetland and woodland habitats of the Lower Derwent Valley SAC and so likely significant effects (alone) can be screened out (Category G).** There would be no residual effects and no need for an in combination assessment.
- 3.41. Such mitigating factors do not apply to the bird communities and habitats of the Lower Derwent Valley. This comprises diverse, fragile breeding and non-breeding bird populations throughout the year, both within the SPA and on functionally-linked land beyond which are vulnerable to disturbance and displacement (and predation by domestic cats). In addition, the terrestrial habitats, especially the grassland communities, are all equally vulnerable to trampling, erosion and the disturbance of stock.
- 3.42. Whilst access to much of the SPA is managed and/or restricted, it is not completely controlled. Furthermore, whilst the majority of functionally-linked land is found on private land, access here can also not be fully managed and some trespass occurs (although this appears to be restricted to existing, local residents from adjacent villages where no further development is proposed via the York Local Plan). Consequently, given the location of the proposed large garden village at Elvington (Policy (SS13/ST15) within a few kilometres of the European site, and the more modest SS18/ST33 within 2km, harmful effects cannot be ruled out if recreational pressure is to increase considerably. All other policies/allocations are considered to be far too distant to result in a measureable effect and are ruled out of further scrutiny.
- 3.43. The policy wording provides comprehensive mitigation measures including the establishment of extensive open areas designed to provide alternative destinations to the European site for informal recreation (whilst also providing functionally-linked land for the SPA). However, the policy wording does not make it clear whether this is provided within the allocation boundary or as off-site mitigation. Consequently, there can be no confidence that the demands of the policy wording can be met and harm cannot be ruled out.



- 3.44. Regarding Policy SS18/ST33, this provides mitigation by ensuring that any new development must accord with principle (iv) to '*undertake a comprehensive evidence based approach in relation to biodiversity to address potential impacts of recreational disturbance on the Lower Derwent Valley Special Protection Area (SPA)/Ramsar/SSSI*'. However, this fails to adequately describe a desired outcome and cannot be relied on to provide adequate mitigation.
- 3.45. Both Policies SS13/ST15 and SS18/ST33 could therefore conflict with the conservation objective for the Lower Derwent Valley SPA to '*ensure that the integrity of the site is maintained by ...maintaining ... the extent and distribution ... the structure and function ... and the supporting processes on which the habitats of the qualifying features rely .. the population ... and the distribution of the qualifying features*'
- 3.46. This observation is supported by the outcomes of the Visitor Survey (Appendix C) which, when considering the impacts of recreational pressure, states:
- ... there is the potential for Likely Significant Effects from development for ...the Lower Derwent Valley SPA ...*
- 3.47. Given that the acceptability or otherwise of this proposal is reliant on mitigation, which cannot be regarded as embedded characteristics of the policy, further scrutiny will require an appropriate assessment
- 3.48. Therefore, **it is considered that there is a risk that the proposals contained within Policies SS13/ST15 and SS18/ST33 could undermine the conservation objectives for the breeding and non-breeding birds of the Lower Derwent Valley European site and that a likely significant effect cannot be ruled out (alone). Consequently, the policy must be screened in (Category I) and an appropriate assessment is required.** Each policy is capable of a likely significant effect alone and so there would be no residual effects and no need for an in combination assessment.
- 3.49. It should be noted that despite its proximity to the Lower Derwent Valley, H39 is screened out of the need for further assessment due to the lack of local access other than to a small section of the riverbank where harmful effects are highly unlikely.

River Derwent

- 3.50. The relatively fragile floating vegetation communities could be considered vulnerable to recreational pressure but given its relative inaccessibility, (in this situation it is essentially restricted to the open water of the river channel) it can be assessed to be immune from such a threat.
- 3.51. Otters are also considered to avoid harm for the same reasons as expressed above for the Lower Derwent Valley.
- 3.52. Therefore, **it is considered highly unlikely that any proposals in the Plan could undermine the conservation objectives of the River Derwent SAC in terms of the floating vegetation community and otter populations and so likely significant effects (alone) can be screened out (Category G).** There would be no residual effects and no need for an in combination assessment.
- 3.53. For the avoidance of doubt, although the River Derwent runs through the Lower Derwent Valley European site, and is subject to similar levels of access and possible threats, it is argued that the inaccessibility of the aquatic features of the River Derwent make it immune from harm and the need for appropriate assessment identified for the Lower Derwent Valley does not apply to the River Derwent.



- 3.54. As with the Lower Derwent Valley immediately above, H39 is screened out of the need for further assessment due to the lack of local access allied with the intrinsic resilience of aquatic features to recreational pressure.

Skipwith Common

- 3.55. The dry and wet heathland communities of Skipwith Common SAC are vulnerable to recreational pressure. It is a popular site for (dog) walking with the small, local community but limited places to park currently appear to deter larger numbers from further afield. The site is carefully managed as a National Nature Reserve by Natural England and a mosaic of fenced grazing compartments effectively delineate a network of footpaths which largely prevent the damaging trampling of fragile habitats (although some erosion and widening of paths is evident). That said, even dogs on leads can have the subtle effect of driving grazing stock into cover reducing the effectiveness of the essential grazing management. These issues can only be expected to increase if the local population grows considerably.
- 3.56. However, there are no proposals for development of any scale in close proximity to the European site, with SS18/ST33 being 10km distant, and both ST36 and the garden village at Elvington (SS13/ST15) over 15km away by road.
- 3.57. Yet, this observation is not supported by the outcomes of the Skipwith Common Visitor Survey (Appendix C) which, when considering the impacts of recreational pressure, states:

... there is the potential for Likely Significant Effects from development for both the Lower Derwent Valley SPA and Skipwith Common SAC.

- 3.58. However, it should be noted here that the reasons which prompted this particular exercise largely relate to proposed development in the emerging Local Plan of the neighbouring Selby District Council. At the time of writing, it is currently considering a cluster of development in much closer proximity to the site. Whilst not explicitly stated in the report, it can safely be assumed that the above conclusion applies solely to proposed development in Selby and not York, Therefore, the threat of recreational pressure from the latter can be dismissed. Further confidence in this conclusion can be gained from the same report which went on to rule out an adverse effect on the integrity of Skipwith Common from recreational pressure.

Therefore, **it is considered highly unlikely that any proposals in the Plan could undermine the conservation objectives of the wet heath and dry heath at Skipton Common SAC and so likely significant effects (alone) can be screened out (Category G).** There would be no residual effects and no need for an in combination assessment.

Strensall Common

- 3.59. Strensall Common supports similar habitats to Skipwith Common and currently experiences similar issues. This large heathland attracts a greater number of visitors although access is heavily influenced by a network of footpaths, limited car parking and active management of parts by the Yorkshire Wildlife Trust; regular closure of large parts of the Common by the MOD to allow for firing practice on the adjacent ranges also reduces public pressure. However, the wet and dry heathland communities which represent a threatened habitat with a restricted distribution in the UK and beyond remain particularly vulnerable to increases in public pressure.
- 3.60. Of particular concern is the worrying of livestock by dogs, especially when off the lead and the degree to which. Given the importance of the grazing regime to site management and the achievement of the conservation objectives, this represents a considerable threat should the number of visitors and their dogs increase.



- 3.61. The Council proposes development at three locations immediately adjacent or in close proximity to the Strensall Common European site (Policies SS19/ST35, E18 and H59). Together these comprise the development of 545 dwellings (500 under SS19/ST35 and 45 under H59) and a 4ha employment area.
- 3.62. However, a number of mitigation measures are embedded in Policy SS19/ST35 that require any development to produce a visitor management strategy, informed by a range of visitor and ecological surveys, to deliver effective, deliverable, mitigation measures prior to any consent; the establishment of a wardening service is also required. In addition, development must provide extensive open space within the development, including a new area of strategic open space (OS12) and restrict direct access to the Common. It is reasonable to presume that together, these would reduce, to some extent, access to the Common by new residents and have some influence on the behaviour of those that did visit the European site (as well as existing visitors) provided that the increase in numbers was modest.
- 3.63. However, this proposed mitigation cannot be regarded as embedded characteristics of the policy and must therefore be subjected to further scrutiny via an appropriate assessment.
- 3.64. No such mitigation is proposed in the policy wording or explanatory text for neither the specific allocations (E18 and H59), nor their over-arching policies (EC1 and H1). Whilst the impact from both can be considered to be less than that provided by SS19/ST35, a function of scale and in terms of E18 its employment use, unrestricted access from both these allocations will still provide a threat.
- 3.65. Together, all three policies have considerable potential to increase public pressure on Strensall Common prompting further trampling, erosion and disturbance of stock. Consequently, the impact of these policies could conflict with the conservation objective for Strensall Common SAC to '*maintain or restore... the extent and distribution ... the structure and function ... and the supporting processes ... of the qualifying natural habitats ...*'
- 3.66. This observation is supported by the outcomes of the Strensall Common Visitor Survey (Appendix D) which although it did not address the risk of likely significant effects, moved directly to consider impact on the integrity of the site, the test normally associated with the appropriate assessment stage. When considering the impacts of recreational pressure, it stated:
- The most concerning impact is worrying of livestock by dogs, which is already resulting in loss of animals and may jeopardise future grazing. It went on to add:*
- (An) adverse integrity on the SAC cannot be ruled out as a result of the quantum of development proposed*
- 3.67. Given that the acceptability or otherwise of this proposal is reliant on mitigation, which cannot be regarded as embedded characteristics of the policy, further scrutiny will require an appropriate assessment
- 3.68. Therefore, given the uncertainty surrounding the impacts of Policies SS19, E18 and H59 **there is a risk that the proposals could undermine the conservation objectives for Strensall Common SAC and that a likely significant effect cannot be ruled out (alone). Consequently, the policy must be screened in (Category I) and an appropriate assessment is required.** Each policy is capable of a likely significant effect alone and given the distance of the European site from other residential allocations, it is considered that there would be no residual effects and no need for an in combination assessment.
- 3.69. All other policies and/or allocations were screened out of the HRA in terms of this potential effect.

Potential Effects – Air Pollution

European sites	Feature
Lower Derwent Valley SAC and Ramsar	All habitats
River Derwent SAC	Floating vegetation dominated by water crowfoot River lamprey, sea lamprey and bullhead
Skipwith Common SAC	Wet and dry heath
Strensall Common SAC	Wet and dry heath

Context

- 3.70. Development is typically associated with increased traffic and emissions which can increase the airborne concentration of nitrogen oxides (NO_x) and the rate of nitrogen deposition from the atmosphere. Impacts are assessed by calculating the relative contribution of the Plan in relation to the relevant *critical level* for NO_x and the *critical loads* for nitrogen deposition.
- 3.71. Both NO_x and nitrogen deposition have been associated with impacts on vegetation even though levels fall quickly in the first few metres from roads before gradually levelling out until, beyond 200m, it becomes difficult to distinguish from background levels. In other words, impacts at 10m, 50m or 200m can be very different from that at the roadside. Consequently, only those European sites found within 200m of a road are assessed.
- 3.72. The long-term environmental standard or critical level for NO_x is 30 $\mu\text{g m}^{-3}$. It is a precautionary threshold below which there is confidence that adverse effects on vegetation will not arise. The critical loads for nitrogen deposition are specific to each individual feature. These are presented as a range of values and, as a precautionary approach, only the lower values are used as these will exaggerate any negative outcomes.
- 3.73. The contribution made by traffic flows associated with the Plan is termed the '*Process Contribution*' (PC) and is used to calculate the total '*Predicted Environmental Concentration*' (PEC) which equates to the combination of the PC with the existing baseline concentration.
- 3.74. Defra and Environment Agency online guidance states that emissions can be considered to be insignificant where the PC in terms of both critical levels and critical loads is less than 1% and the PEC less than 70% of the long-term environmental standards, respectively. However, building on recent case law in Sussex³¹, this must be considered in combination, not only with other policies in the Plan but also with those in neighbouring authorities. As a consequence, all air quality data took account of local, regional and national trends and evidence.
- 3.75. However, this is not a simple mathematical relationship. Account must be taken of the type of habitats - some are more resilient than others - and the distribution of the designated features - not all are distributed evenly across sites. Furthermore, roadside communities are often highly modified from roadworks, informal footpaths, boundary features, salt spreading in winter and the need for roadside management such as the regular cutting of vegetation. This means that the conservation objectives of a European site may not apply to land in close proximity to a road where the greatest impact from vehicle emissions is likely to be experienced, and where there is little realistic prospect of successfully restoring the site to a favourable condition.

³¹ This table is taken from the Handbook albeit with changes to the number and titles of Columns appropriate to this HRA.

³¹ Water Resource Management Plan 2014 Strategic Environmental Assessment Post Adoption Statement, Cascade/ Yorkshire Water



- 3.76. It can be seen, therefore, that the additional contributions that might arise from increased traffic are therefore only likely to be significant where the European site lies within 200m of a road, where a feature is known to be sensitive to such effects and where the appropriate critical loads and levels are either exceeded or approaching exceedance.
- 3.77. It should also be noted that employment allocations have the potential to generate specific, point-sourced emissions that may or may not adversely affect European sites. As no information is provided on the latter, it is assumed that for this stage in the assessment process, that no such processes are proposed allowing this assessment to focus solely on road traffic emissions.
- 3.78. Reflecting these and other issues, Natural England's SIPs and supplementary advice (Table 1) all identified air pollution as a key pressure or threat for all four sites identified in this HRA: Lower Derwent Valley, River Derwent, Skipwith Common and Strensall Common.

Screening opinion

- 3.79. The site assessments below rely heavily on information drawn from the Air Pollution Information System (APIS)³² and the air quality assessment³³ commissioned by the Council which evaluated data not only from across the City of York but also from neighbouring authorities so providing the cumulative or in combination assessment required. As before, each site is taken in turn.

River Derwent

- 3.80. The Air Quality Report suggests a mean NO_x concentration of 16.26 $\mu\text{g m}^{-3}$ in 2015, falling over the Plan period to 10.40 $\mu\text{g m}^{-3}$. Despite being a mean value, it can be safely assumed that concentrations of NO_x are currently below the annual Critical Level of 30 $\mu\text{g m}^{-3}$ across the entire European site and are expected to fall further.
- 3.81. Further analysis at three crossing points along the river where emissions from road traffic would be at their highest showed that in terms of NO_x concentrations, PC and PEC contributions would equate to 4.6% and 39.3% of the long-term environmental standard. Whilst the latter suggests an insignificant outcome, falling well below 70%, the former exceeds the 1% threshold.
- 3.82. The most vulnerable features, the floating vegetation community and fish populations do not benefit from defined critical loads making similar analysis impossible. Although data is presented for the SSSI features, these are not directly comparable to the European site features and so are not relied upon heavily here. However, the mesotrophic/eutrophic nature of the River suggests a tolerance of these existing conditions.
- 3.83. Despite this, given these circumstances, it is uncertain if nitrogen deposition from road traffic would conflict with the conservation objective for the River Derwent SAC ensure *that the integrity of the site is maintained by ... maintaining ... the extent and distribution ... the structure and function ... the supporting processes of the qualifying habitats and species*. Consequently, further scrutiny of the site characteristics is required to thoroughly evaluate the level of threat.
- 3.84. Given the uncertainty associated with the assessment of air pollution impacts at this site, **there is a risk that emissions from road traffic associated with policies in the Plan could undermine the conservation objectives for the floating vegetation community and fish populations of the River Derwent European site and that a likely significant effect cannot be ruled out (alone and in combination). Consequently, the policies must be screened in (Category I) and an appropriate assessment is required.**

³³ Air Quality Assessment: Air Quality Modelling Assessment. Waterman Infrastructure & Environment Ltd, April 2018



- 3.85. Given the requirements of the Wealden decision, this opinion is expressed as alone and in combination as traffic anticipated to be generated by the entire plan has been considered in the air quality assessment. However, given that there is only one, major allocation in close proximity to the river at Elvington (SS13/ST15) with others far distant, it is reasonable, for now, to link this issue with this policy to maintain the overall structure of the HRA. Should the appropriate assessment identify adverse effects on the integrity of the river, then further air quality analysis would be required to identify the particular sources or policies contributing to this effect. Therefore, the subsequent appropriate assessment will evaluate it under Policy SS13/ST15 unless the outcomes demand otherwise.

Lower Derwent Valley

- 3.86. The Air Quality Report suggests a mean NO_x concentration of 17.18 $\mu\text{g}\text{m}^{-3}$ in 2015, falling over the Plan period to 11.00 $\mu\text{g}\text{m}^{-3}$. Despite being a mean value, it can be safely assumed that concentrations of NO_x are currently below the annual Critical Level of 30 $\mu\text{g}\text{m}^{-3}$ across the entire European site and are expected to fall further.
- 3.87. Evaluating nitrogen deposition against these critical loads, the Air Quality report predicts that nitrogen deposition will fall over the Plan period from 17.36 $\text{kgNha}^{-1}\text{yr}^{-1}$ to 11.31 $\text{kgNha}^{-1}\text{yr}^{-1}$ reflecting wider, anticipated improvements in air quality despite an increased contribution from development promoted by the Plan. Despite being a mean figure, it is reasonable to assume that nitrogen deposition levels across the Lower Derwent Valley also fall below the minimum critical loads of 20-30 $\text{kgNha}^{-1}\text{yr}^{-1}$ (for the representative feature) both now and in the future. Therefore, in terms of nitrogen deposition, the effect of the Plan is considered to be insignificant.
- 3.88. Further analysis showed that in terms of NO_x concentrations, PC and PEC contributions would equate to 0.1% and 36.8% of the long-term environmental standard. Both fall well below the 1% and 70% thresholds strongly suggesting an insignificant outcome.
- 3.89. The critical loads identified for the habitat of the qualifying breeding and wintering birds struggle to relate to the habitats at the SPA as they tend to describe the more typically associated upland and coastal communities of these species. It is considered that use of these would lead to a flawed outcome and they have been put to one side. However, by adopting figures for the low altitude hay meadows more typical of the Lower Derwent Valley SAC, critical loads of 20-30 $\text{kgNha}^{-1}\text{yr}^{-1}$ are found and are utilised. Critical loads are similarly not available for the alder woodland feature.
- 3.90. Therefore, in terms of nitrogen deposition, this suggested that PC and PEC contributions would equate to 0% and 56% of the lowest critical load. Again, both fall well below the 1% and 70% standards and also strongly suggest an insignificant outcome.
- 3.91. As the European site occupies the same geography to the River Derwent, this outcome is heavily influenced by the lack of major roads nearby. Although the site extends over a large area (1092ha), roads of any magnitude within 200m of the river are few and far between; these comprise a 500m stretch of the A163 that runs alongside the hay meadows just to the west of the river crossing at Bubwith, and two locations found south-east of Wheldrake and in the centre of Thorganby where relatively discrete parcels of land lie within 50m of Church Lane.
- 3.92. Given the low PC and PEC values, no transects were carried out for these specific locations. These meadows are considered sensitive to nitrogen deposition and in order to maintain floristic diversity of the SAC feature and to provide the vegetative structure to support the breeding and wintering birds of the SPA, the use of nitrogen-based inorganic fertiliser is not allowed. Yet, further evidence can be drawn from the ecological characteristics of the valley.
- 3.93. Almost the entire European site is subject to regular, annual flooding. Not only will periodic flooding contribute far greater amounts of nitrogen to the grassland and other habitats than air



- pollution but it is regarded as an integral component of the (semi-) natural system. Recent events suggest that flooding is affecting more land and is becoming more frequent and prolonged.
- 3.94. The River Derwent is described as meso/eutrophic, reflecting its high nutrient load, itself a function of the erosion of soil particles from within its extensive, rural and heavily farmed catchment. The nitrogen load of the river is therefore high, and in flood, is likely to add far more nitrogen to the meadows of the European site than contributions ever could.
 - 3.95. Furthermore, APIS data for the Lower Derwent Valley suggests only 4% of overall nitrogen deposition is caused by local road traffic. Although an approximation and often an underestimate, this strongly suggests the contribution from road traffic will be minor with other sources, such as livestock farming contributing an order of magnitude more.
 - 3.96. Although not assessed by the Air Quality report, it is reasonable to presume that despite the projected increases in traffic across the authority area, the electrification of vehicles and improved efficiency of conventional engines will lead to the overall contribution from road traffic being less at the end of the Plan period than at the start. In effect, the Plan doesn't meaningfully increase nitrogen deposition, it simply slows down the rate of improvement.
 - 3.97. When the impact of flooding is considered alongside the outputs of the air quality study and allied with just the handful of locations where air pollution could affect the site, harmful effects on the habitats of the European site from road traffic can be discounted.
 - 3.98. Given these factors, **it is considered highly unlikely that any proposals in the Plan that would increase the volume of road traffic and air pollution could undermine the conservation objectives (alone and in combination) of the habitats of the Lower Derwent Valley European site and so likely significant effects can be screened out (Category G)**. There would be no residual effects and no need for an in combination assessment.
 - 3.99. This outcome fully takes into account the requirements of the Wealden decision by considering the impact of air pollution from all components of the Plan alongside with those from neighbouring authorities.

Skipwith Common

- 3.100. The (minimum) critical load for nitrogen deposition at Skipwith Common ($10\text{--}20 \text{ kgNha}^{-1}\text{yr}^{-1}$) is already and clearly exceeded with an average rate of $19.2 \text{ kgNha}^{-1}\text{yr}^{-1}$ which almost exceeds the maximum critical load.
- 3.101. APIS data for Skipwith Common suggests that 10% of overall nitrogen deposition is caused by local road traffic. Although an approximation and often an underestimate, this strongly suggests the contribution from road traffic will be minor with other sources, such as livestock contributing three times as much. This site was not assessed by the air quality study.
- 3.102. The site extends to almost 300ha across a rural landscape. It is, however, bordered by a minor road to the east and is even bisected by another (although the latter is impassable to most vehicles and so is disregarded by this HRA).
- 3.103. However, the eastern boundary of the site is dominated by a dense scrub and woodland easily extending beyond 20m width at its narrowest point. This is not representative of the designated heathland habitats and also provides an effective barrier to the widespread dispersal of airborne nitrogen.
- 3.104. Although not assessed by the Air Quality report, it is reasonable to presume that despite the projected increases in traffic across the authority area, the electrification of vehicles and improved efficiency of conventional engines will lead to the overall contribution from road traffic being less at



the end of the Plan period than at the start. In effect, the Plan doesn't meaningfully increase nitrogen deposition, it simply slows down the rate of improvement.

- 3.105. Given these factors, **it is considered highly unlikely that any proposals in the Plan could undermine the conservation objectives (alone and in combination) of the features of Skipwith Common SAC and so likely significant effects can be screened out (Category G).** There would be no residual effects and no need for an in combination assessment.
- 3.106. This outcome fully takes into account the requirements of the Wealden decision by considering the impact of air pollution from all components of the Plan alongside with those from neighbouring authorities.

Strensall Common

- 3.107. The Council proposes development at three locations immediately adjacent or in close proximity to Strensall Common European site (Policies SS19/ST35, E18 and H59). Together these comprise development of 545 dwellings and a 4ha employment area. They will all contribute to higher traffic flows in the area as will other allocations across the city and, potentially, beyond.
- 3.108. The Air Quality report suggests a mean NO_x concentration of 13.13 µgm³ in 2015, falling over the Plan period to 8.40 µgm³. This means that concentrations of NO_x are currently below the annual Critical Level of 30 µgm³ across the entire European site and are expected to fall further. Therefore, in terms of NO_x the effect of the Plan is considered to be insignificant.
- 3.109. Further analysis showed that in terms of NO_x concentrations, PC and PEC contributions would equate to 6.5% and 34.5% of the long-term environmental standard. Whilst the latter suggests an insignificant outcome, falling well below 70%, the former clearly exceeds the 1% threshold.
- 3.110. In terms of nitrogen deposition, the report suggested that PC and PEC contributions would equate to 2.8% and 157% of the lowest critical load.
- 3.111. Given these circumstances, air pollution would conflict with the conservation objective for the Strensall Common SAC to '*maintain or restore ... the extent and distribution ... the structure and function ... and the supporting processes ... of the qualifying natural habitats ...*'. Consequently, further scrutiny of the site characteristics is required to thoroughly evaluate the level of threat.
- 3.112. Given the level of exceedance, a likely significant effect cannot be ruled out and **there is a risk that emissions from road traffic associated with Policies SS19/ST35, E18 and H59 could undermine the conservation objectives for Strensall Common SAC and that a likely significant effect cannot be ruled out (alone and in combination). Consequently, the policies must be screened in (Category I) and an appropriate assessment is required.**
- 3.113. Given the requirements of the Wealden decision, this opinion is expressed as alone and in combination as traffic from the entire plan has been considered in the air quality assessment. However, only these three allocation lie in close proximity to the Common (SS19/ST35, H59 and E18)) with others far distant and the cause of any exceedance can be considered likely to originate from here. Therefore, the subsequent appropriate assessment considers it under these three policies.

Summary of the Screening Exercise and Next Steps

Summary

- 3.114. The outcomes of this stage of the formal screening assessment are brought together in Table 5 which lists those sites and issues where it has been found that the conservation objectives may be



undermined and where likely significant effects cannot be ruled out. Table 6 lists all the policies in the Plan and summarises the outcome of each preliminary screening decision; the full assessment is provided in Appendix B.

3.115. It should be noted that the conservation objectives in the Table above are heavily summarised, all other policies have been screened out of the need for further scrutiny and that the conclusions in terms of no need for any in combination effects could be subject to review following the appropriate assessment.

Table 5: Summary of the Screening of the Policies and Allocations

European site	Issue	Policies	Feature affected	Conservation objectives*	Undermined?	Residual effects?	In combination effect?***	Outcome
Strensall Common SAC	Aquatic environment	SS19/ST35, H59, E18	Heathland communities	Extent and distribution of qualifying habitats	Uncertain	None	None	Appropriate assessment required
	Air pollution	SS19/ST35, H59, E18		Structure and function of qualifying habitats	Uncertain	None	None	
	Recreational pressure	SS19/ST35, H59, E18		Supporting processes for qualifying habitats	Uncertain	None	None	
Lower Derwent Valley SPA	Mobile species	SS13/ST15	Non-breeding birds	Extent and distribution of habitats of qualifying features	Uncertain	None	None	Appropriate assessment required
				Structure and function of habitats of the qualifying features	Uncertain	None	None	
				Supporting processes on which habitats rely	Uncertain	None	None	
	Recreational pressure	SS13/ST15 & SS18/ST33	Breeding and non-breeding birds	Population of qualifying features	Uncertain	None	None	
				Distribution of qualifying features	Uncertain	None	None	
				Structure and function of qualifying habitats	Uncertain	None	None	
River Derwent SAC	Air pollution	SS13/ST15	Floating vegetation communities	Supporting processes for qualifying habitats	Uncertain	None	None	Appropriate assessment required
				Extent and distribution of qualifying habitats and those of qualifying species	Uncertain	None	None	

European site	Issue	Policies	Feature affected	Conservation objectives*	Undermined?	Residual effects?	In combination effect?***	Outcome
			Bullhead, River and sea lamprey	Structure and function of qualifying habitats	Uncertain	None	None	
				Structure and function of habitats of qualifying species	Uncertain	None	None	
				Supporting processes on which habitats rely	Uncertain	None	None	
				Populations of qualifying species	Uncertain	None	None	
				Distribution of qualifying species	Uncertain	None	None	

*** note that in combination assessment is implied in all air pollution assessments.

3.116. Note, that to avoid confusion between housing policies and allocations which share the same names, eg H3, actual allocations have been renamed with an '(A)' eg H3(A) and housing policies with a '(P)' eg H3(P). This nomenclature is followed throughout the rest of this HRA where a potential for misunderstanding arises. .

Table 6: Summary of the Formal Preliminary Screening of the Policies and Allocations by Category

Screening outcome	Policies
A	DP1
General statement of policy	SS2
Screened out	ED1
B	DP2, DP3, DP4, SS1
General criteria for testing acceptability of proposals	EC1, EC2
Screened out	R1, R2, R3, R4 H1(P), H2(P), H3(P), H4(P), H8(P), H9(P), H10(P) HW1, HW2, HW3, HW4, HW5, HW7 ED6, ED8 D1, D2, D3, D4, D5, D6, D7, D8, D9, D10, D11, D12, D13, D14 GI7, GB1, GB2, GB3 CC1, CC2, CC3, ENV3, ENV4, ENV5 T1, T7, T8 DM1
C	WM1, WM2
Proposal referred to but not proposed by the Plan	T2
Screened out	
D	GI1, GI2, GI3, GI4, GI5, GI6
Environmental protection policy	OS1, OS2, OS5, OS6, OS7, OS8, OS9, OS10, OS11, OS12
Screened out	ENV1, ENV2
E	None
Policies or proposals which steer change in such a way as to protect European sites	
Screened out	
F	None
Policy that cannot lead to development or other change	
Screened out	
G	SS3, SS4, SS5, SS6, SS7, SS8, SS9, SS10, SS11, SS12, SS14, SS15, SS16, SS17, SS20, SS21, SS22, SS23, SS24
No conceivable effect on a European site	EC3, EC4, EC5
Screened out	E8, E9, E10, E11, E16 H5(P), H6(P), H7(P) H1a(A), H2b(A), H3(A), H5(A), H6(A), H7(A), H8(A), H10(A), H20(A), H22(A), H23(A), H29(A), H31(A), H38(A), H39(A), H46(A), H52(A), H53(A), H55(A), H56(A), H58(A), SH1 HW6

Screening outcome	Policies
	ED2, ED3, ED4, ED5, ED7 GB4, T3, T4, T5, T6, T9 C1
H Policy or proposal with unspecified location which cannot undermine the conservation objectives (either alone or in combination with other aspects of this or other plans or projects)	None
I Likely significant effect alone cannot be ruled out Screened in	SS13(ST15), SS18 (SS18/ST33), SS19 (ST35) E18 H59(A)
J Likely significant effect in combination cannot be ruled out Screened in	None
K Policy or proposal with no likely significant effect alone but which lead to in combination effects	None
L Policy or proposal considered to have in combination effects	None – no in combination assessment has been shown to be necessary. Note that the impacts of air pollution are considered in combination as a matter of course.

3.117. It should be noted that some policies will be screened out for certain potential effects and screened in for others. Where this happens, the Policy is categorised according to the most important outcome. Policy SS19/ST35 is a good example. It is screened out (G) in terms of impacts on mobile species but screened in in terms of air pollution (I). Therefore, it is identified in Table 6 and Appendix B as Category 'I'.

Next Steps

- 3.118. Overall, this exercise found that it was not possible to screen out likely significant effects alone (Category I) for Policies SS13/ST15, SS18/ST33, SS19/ST35, E18 and H59 for a range of possible but credible impacts regarding air pollution, mobile species and recreational pressure affecting three European sites: the Lower Derwent Valley, River Derwent and Strensall Common. Consequently, an appropriate assessment is required which is presented in Section 4 below.
- 3.119. All other policies and allocations were screened out of further scrutiny by the HRA.
- 3.120. An appropriate assessment is now required that will assess whether it can be ascertained that an adverse effect on the integrity of the European sites can be ruled out. Drawing on the recent People Over Wind ruling, this will explore if embedded or additional mitigation measures can avoid a negative outcome.

4. APPROPRIATE ASSESSMENT AND INTEGRITY TEST

- 4.1. The screening assessment has identified that likely significant effects have been ruled out for all policies except those listed below which require an appropriate assessment.

European site	Policies	Issue	Feature affected
Strensall Common SAC	SS19/ST35, H59 & E18	Aquatic environment	Wet and dry heathland habitats
		Air pollution	
		Recreational pressure	
Lower Derwent Valley SPA	SS13/ST15	Mobile species	Non-breeding birds
		Recreational pressure	Breeding/non-breeding birds
	SS18/ST33	Recreational pressure	Breeding/non-breeding birds
River Derwent SAC	SS13/ST15	Air pollution	Floating vegetation community River and sea lamprey, and bullhead

- 4.2. The role of the appropriate assessment is to identify whether the competent authority is able to ascertain that the Plan ‘*will not adversely affect the integrity of the European site*’. In line with the recent People Over Wind ruling it will also explore if the mitigation proposed can be applied that would allow a positive conclusion to be drawn. This is the fundamental test of an HRA; competent authorities should not normally consent or adopt proposals that cannot rule out an adverse effect.
- 4.3. The Handbook highlights the ODPM definition of integrity and adds that for a plan-making body to conclude the absence of an adverse effect **it should be convinced that no reasonable scientific doubt remains** though this does not mean it has to be absolute. In terms of the burden of proof, Lord Nimmo-Smith in the Court of Session case of WWF-UK Ltd and RSPB stated:

I do not accept that this means there must be an absolute guarantee that the site will not be adversely affected ...and the most that can be expected of planning authority ... is to identify the potential risks so far as they may be reasonably foreseeable in light of such information as can reasonably be obtained ... with a view to preventing these risks from materialising.’

- 4.4. Reference to the Boggis case, which demands a focus on credible and not hypothetical risks, is also relevant. The Handbook addresses the reduced level of evidence in a plan as opposed to a project when carrying out the appropriate assessment and ‘integrity test’. In F.10.1 it states:

Because the integrity test incorporates the application of the precautionary principle as a matter of law, and because plan assessments are, by their nature, less precise than project assessments, it is important for the assessment process to eliminate the prospect of adverse effects on site integrity in so far as that is possible at the level of specificity inherent in the nature and purpose of the particular plan.

- 4.5. Bearing this in mind, each site is taken in turn and each issue dealt with. The effectiveness of any mitigation embedded in the policies is considered. If an adverse effect on the integrity of the site cannot be removed even when mitigation is considered, the appropriate assessment will consider if other restrictions are available that could secure a positive outcome. Each issue is concluded with a bespoke statement that represents the integrity test on that site. These individual outcomes are



summarised in Table 7. The appropriate assessment concludes with a final statement that confirms the outcome of the HRA.

- 4.6. It should be noted that the appropriate assessment also explores if residual effects (as described in the screening stage) remain. In this case, this refers to effects that would not result in an adverse effect on the integrity of the site alone but when considered with other residual effects identified elsewhere in the appropriate assessment could combine to harm the integrity of the site. IF any arise, this could prompt an in combination assessment.

The Appropriate assessment

STRENSALL COMMON SAC

European site	Policies	Issue	Feature affected
Strensall Common SAC	SS19/ST35, H59 & E18	Aquatic environment	Wet and dry heathland habitats
		Air pollution	
		Recreational pressure	

- 4.7. The screening exercise has concluded that a likely significant effect cannot be ruled out alone for three policies: SS19/ST35, H59 and E18. This is because of concern that:
- Works associated with construction would cause changes to the hydrological regime or aquatic environment of the Common that could harm the wet and dry heath communities;
 - The increase in recreational pressure would lead to trampling, erosion and eutrophication of the fragile heathland communities and interfere with the management of the site by the disturbance of grazing stock; and
 - Increased road traffic pollution would lead to eutrophication of the dry and wet heathland communities.
- 4.8. All three allocations lie immediately adjacent to the European Site; SS19/ST35 provides for 500 new dwellings, H59 for 45 and E18 allows for a 4ha employment area. Each of the three potential effects are taken in turn below:

Aquatic environment at Strensall Common – SS19/ST35, H59 and E18

- 4.9. The screening exercise concluded that significant effects on the aquatic environment from built development at Strensall Common SPA cannot be ruled out alone. All policies are considered together.
- 4.10. The HRA prepared by Amec Foster Wheeler^{34, 35} for the landowner, evaluated all three allocations. It concluded that (further to site-specific assessment) none would be likely to result in a significant effect on the SAC given the ability to design and employ a range of standard mitigation measures. These included the incorporation of Sustainable Drainage Systems (SUDS) for the management of surface water, use of silt fencing to trap sediment, and the adoption of best practice measures for pollution management embedded within a Construction Management Plan (CEMP).

³⁴ Amec Foster Wheeler Environment & Infrastructure Limited. December 2017. DIO York Sites: Queen Elizabeth Barracks (QEB). Information to support a Habitats Regulations Assessment.

³⁵ Amec Foster Wheeler Environment & Infrastructure Limited. December 2017. DIO York Sites: Towthorpe Lines. Information to support a Habitats Regulations Assessment.



- 4.11. The need for these and a number of other mitigation measures are embedded, if not specifically, in Policy SS19/ST35 that require hydrological and related studies to be completed and used to inform the development of effective, deliverable, mitigation measures prior to any consent.
- 4.12. It should be noted here that Amec's HRA was completed before the People Over Wind ruling. Consequently, it is based on the use of mitigation at the screening stage not the appropriate assessment.
- 4.13. Whilst mindful of the different tests employed at these two stages, it is considered that there is no reason to disagree with this conclusion and consequently, the potential threat can be discounted. There is, however, no such requirement that relates directly to Policies E18 and H59. Despite this, as the recommendations made in the Amec HRA simply require the implementation of standard evaluation and construction techniques which are commonplace in such situations, it is considered reasonable to expect that the same measures will be employed as a matter of course when development proposals are submitted for E18 and H59.

Integrity Test for effects on the aquatic environment at Strensall Common – SS19/ST35, H59 and E18

- 4.14. Consequently, it is concluded that **the Council can ascertain that Policies SS19/ST35, E18 and H59 will have no adverse effect on the integrity of Strensall Common European site in terms of impacts on the aquatic environment. There would be no residual effects and no need for an in combination assessment.**

Recreational pressure at Strensall Common – SS19/ST35, H59 and E18

- 4.15. The screening exercise concluded that significant effects from recreational pressure on the dry and wet heathland communities at Strensall Common SPA cannot be ruled out alone.
- 4.16. The HRA submitted by the Council (April 2018) concluded that *if proposed amendments are adopted, then the Council can ascertain that Policies SS19/ST35, E18 and H59 will have no adverse effect on the integrity of Strensall Common European site in terms of recreational pressure.*
- 4.17. Because of their different residential and employment characteristics, SS19/ST35 and H59 are considered first, followed by E18.

Policies SS19/ST35 and H59

- 4.18. This 2018 HRA conclusion for these policies was based on the adoption of a suite of modifications to Policy SS19/ST35 including, but not limited to, the erection of a barrier between the allocation and the Common, the management of open space within the policy area and the development of a funded wardening service to influence public behaviour on the SAC of existing and future residents. Drawing on the experiences of other proposals elsewhere in the country, it was believed that these mitigation measures would provide sufficient confidence to allow an adverse effect on the integrity of the site to be ruled out and, notwithstanding any other issues, to enable the policy to be adopted.
- 4.19. However, in its letter of 4 May 2018 (when referring to the threat posed by recreational pressure) Natural England stated, that:

(it did) not agree that adverse effects on integrity can be ruled out based on the evidence available.

And went on to recommend:



.... that robust and comprehensive visitor assessment will be necessary to determine whether the mitigation outlined in policy SS19 are adequate to offset the impact of the proposal and the wider impact of the plan and allocation H59 in particular.

- 4.20. Accordingly, the Council commissioned Footprint Ecology to undertake this research and a programme of activities were carried out in late summer 2018. The reports are presented in full in Appendix C but key findings included the following:
- 70% of interviewed visitors brought dogs with 63% accompanied by more than one;
 - Of the 190 dogs accompanying interviewees, 85 (45%) were off the lead during the interview;
 - 43% of dog-walkers visited daily;
 - 78% of all interviewees visited regularly throughout the year;
 - The median distance travelled, as the crow flies, was 2.4km and 75% of visitors came from within a radius of 5.5km;
 - The median length that visitors travelled on the Common was 2.5km;
 - Overall, access to the site was expected to increase by 24%;
 - Housing numbers within 500m of the SAC would increase by 61% as a consequence of the adoption of SS19/ST35 and H59;
 - Access to the site would increase by 63% as a result of new housing within 500m;
 - Recreational impacts, typically comprising trampling, fires, eutrophication from dog fouling etc were evident although these were mostly limited in extent and severity, and generally concentrated in fairly close proximity to the car parks;
 - In contrast, the report identified that the:

... worrying of livestock by dogs, which is already resulting in a loss of animals and may jeopardise future grazing. Appropriate grazing will be a vital tool in restoring the SAC to favourable condition.
 - The report concluded (in the absence of mitigation) that:

Given the scale of increase in access predicted from the visitor surveys, the proximity of new development and concerns relating to current impacts from recreation, adverse (effects on the sic) integrity on the SAC cannot be ruled out as a result of the quantum of development proposed. In addition, for individual allocations that are adjacent to the site it will be difficult to rule out adverse effects on integrity.
- 4.21. The report went on to discuss potential mitigation measures. In the main, these comprised a range of measures similar to those proposed in the amended Policy SS19/ST35 although it did provide additional elaboration and considered additional site management techniques eg (re-wetting) to influence visitor behaviour.
- 4.22. Again, the outcomes are discussed fully in the report but key findings of each proposed measure are described briefly below:
- 4.23. Significantly, it cast doubt on the effectiveness of the open space within SS19/ST35 and the proposed barrier. In particular, the report raised doubt that it could provide a circular walk of 2.5km (that represented the median distance walked by visitors to the Common) and would, lack the natural setting (highlighted by many interviewees as one of the main reasons to visit the SAC).



- This evidence suggests that the new open space would prove less attractive than anticipated and that new residents would still seek access to the Common.
- 4.24. Although the report recognised that a permanent barrier could restrict direct access to the Common (at least in the short term) it referred to evidence from a similar scenario at Talbot Heath in Dorset where the Secretary of State questioned the effectiveness of a barrier to reduce access to the adjacent SAC/SPA because its permanency could not be guaranteed, and refused the application. The report rightly acknowledges that the MODs current presence provides greater confidence that a barrier could be maintained but questions how long this can be guaranteed.
 - 4.25. Importantly, the report reminds us that around the Thames Basin Heaths European site, where recreational pressure has been studied intensively, residential development is precluded within 400m of the heathlands to reduce the magnitude of recreational pressure. It should be noted though that this was also designed to accommodate the breeding bird interest of the heathland SPA (and the threat posed by predation by pet cats) as well as the habitats of the SAC.
 - 4.26. The report also highlights that once occupied, new residents may well push for greater access over time. Overall, this evidence and opinion raises credible doubts over the long term reliance on the barrier as an effective visitor management tool.
 - 4.27. Turning to site management, the report suggests that areas could be re-wetted and, allied with the use of boardwalks, could encourage visitors to utilise the relatively more robust areas of the site. Significantly, this would have the potential to expand the extent of the wet heath community (one of the two qualifying features of the SAC) without diminishing the area of dry heath. Whilst the report justifiably identifies that this would influence visitor behaviour and reduces the risk of fire, the report is relatively silent on its overall effectiveness.
 - 4.28. Exploring this further, the hot, dry summer of 2018 (when the surveys were conducted) caused many of the existing wetland habitats to dry out and allowed visitors easy access to much of the site. Although not explored in the Footprint report, it is considered that this response to current weather patterns suggests that the permanent establishment of wet heath cannot be guaranteed and could not be relied upon to effectively influence visitor behaviour upon especially given the uncertainties posed by climate change. Furthermore, it should be noted that the summer of 2018 was an exception and much of Strensall Common is actually wet for much of the year casting doubt on the suitability for this as a management tool
 - 4.29. The establishment of a wardening service was proposed in the amendments to Policy SS19/ST35 and by the report. The latter provides evidence of where such schemes have effectively influenced visitor behaviour via a combination of a presence on the ground, education, websites and signage. There can be some confidence that the provision of these services could reduce the impact of a modest increase in recreational pressure by reducing vandalism, steering activity away from fragile areas and, importantly, securing better behaviour from dog-walkers and their dogs.
 - 4.30. However, the report provides evidence of the marked increase in new dwellings within just 500m of the SAC and the disproportionate effect this would have on visitor numbers. Footprint was able to show that given the proximity of SS19/ST35 and H59 to the Common, new residents would probably make frequent visits, often with dogs, resulting in a likely increase of 63% in access. Whilst the condition assessment for the SSSI confirms that the Common is recovering towards or is in favourable condition, it cannot be ruled out that increases in the worrying of livestock by dogs would increase and further compromise the effectiveness of site management and the subsequent delivery of the conservation objectives.



- 4.31. The importance of an effective grazing regime should not be underestimated^{36, 37}. Heathlands are best managed by extensive sheep and cattle grazing where the intensity is carefully controlled to ensure the floristic and faunal diversity can be maintained and, where appropriate, restored. The Common is managed by Natural England, Yorkshire Wildlife Trust and the MOD and the grazing regime a requirement of the Higher Level Stewardship agreement.
- 4.32. The worrying of livestock is not simply restricted to the death of animals, though this has occurred, but more importantly, from a management point of view, is that dogs, especially those off the lead, can displace stock, effectively driving them into cover. The consequence is that grazing pressure becomes concentrated in more remote parts of the site to the detriment of those areas more frequently visited. This issue is identified in both Natural England's SIP and Supplementary Advice for the site
- 4.33. This evidence questions whether wardening activities could accommodate the increase in visitors and dogs anticipated to be associated with SS19/ST35 and H59. This concern is drawn into focus when it is considered the report suggests that in the absence of SS19/ST35 and H59, access from all allocations within 7.5km of the SAC would increase by only 6% (without taking account of the open space associated with those more distant allocations which could be expected to reduce the number of visits further). It should be remembered here that 75% of all current visits arise from within 5.5km of the Common.
- 4.34. Furthermore, the report concludes by reminding us that:
- At plan-level HRA it will be necessary to have confidence that the above mitigation measures are feasible and achievable in order to rule out adverse effects on integrity on Strensall Common SAC as a result of increases in recreation there needs to be confidence that the measures will be successful.*
- 4.35. Evidence from around the country shows that all the proposed mitigation measures suggested in Policy SS19/ST35 and Footprint's report could contribute potentially to a reduction in harmful impacts from increased recreational pressure. However, section C5.1 of the Handbook³⁸ reminds us that for mitigation measures to be taken into account they should be effective, reliable, timely, guaranteed to be delivered and as long term as they need to be. The report provides evidence that the effectiveness of the measures proposed to adequately address the effects of visitor pressure of this scale are likely to be of varying success and the long term implementation of such measures would be challenging.
- 4.36. This HRA considers that the report provides new, strong evidence (or *objective information*) that the proposed mitigation cannot be completely relied upon. Therefore, it confirms the outcomes of the screening exercise that the competent authority would not be able to conclude that Policies SS19/ST35 and H59 would not undermine the conservation objectives for the SAC (which require the maintenance or restoration of the extent and distribution of the heathland communities).
- 4.37. This evidence also contradicts the expectation expressed in the 2018 HRA that the additional requirement for a wardening service would remove the threat of an adverse effect on the integrity of the SAC; the increase in access of 24% is particularly compelling. Fundamentally, this scale of increase, the uncertainty surrounding the effectiveness of mitigation and in particular, the predicted increase in the worrying of livestock, ensures that neither the *preservation of the constitutive characteristics* (Sweetman) nor *the coherence of its ecological structure and function, across* (the)

³⁶ Grazing management of heathlands. English Nature 2005.

<http://publications.naturalengland.org.uk/publication/72034>

³⁷ <https://www.buglife.org.uk/advice-and-publications/advice-on-managing-bap-habitats/lowland-heathland>

³⁸ Principle 2, section C.5.1 of the Habitats Regulations Assessment Handbook



whole area of the European site (ODPM Circ. 06/2005) could be assured. Therefore, an adverse effect on the integrity of the European site cannot be ruled out. This calls into question the suitability of SS19/ST35 and H59 for residential development.

4.38. The Handbook (F.10.1.6 states:

To include proposals that would be potentially doomed or vulnerable to failure under the Habitats Regulations at project assessment stage was regarded by the European Court's Advocate General as 'faulty planning'.

Consequently, if at appropriate assessment stage 2, a plan-making body considers that an adverse effect on site integrity is a real possibility, and would create problems for the delivery of the proposal, the proposal should be deleted from the plan or otherwise modified to enable the plan-making body to ascertain there would not be an adverse effect on the integrity of the site.

4.39. Between the previous HRA and the Visitor Survey all reasonable mitigation measures have been explored but found to be unreliable. Should alternative measures be proposed, they would have to satisfy the requirements laid down in section C.5.1 of the Handbook (described above) to merit consideration. Mindful of the Handbook's advice and given the absence of further mitigation at this stage, the only course of action remaining is to remove both policies from the Plan.

Integrity Test for effects of recreational pressure at Strensall Common – SS19/ST35 and H59

4.40. **Given the doubts surrounding the effectiveness of mitigation, the only reliable mechanism to avoid an adverse effect on the integrity of the European site is to REMOVE BOTH SS19/ST35 AND H59 FROM THE PLAN.**

4.41. The survey suggests that the remaining allocations within 7.5km of the SAC would still result in a maximum increase in access of 6%. However, the survey was not able to consider the extensive open space associated with some, if not all, these allocations which could reasonably be expected to reduce the number of visits accordingly.

4.42. Therefore, if residential development at SS19/ST35 and H59 is ruled out, it is considered that the remaining allocations within 7.5km can be safely adopted.

Policy E18

4.43. This Policy introduces different aspects associated with recreational pressure. As discussed in the screening exercise, a marked increase in the number of visits from the workforce is not anticipated given that most would be restricted to occasional lunchtime excursions. In contrast, the threat is posed not by employees but by the public utilising the area as a *de facto* public car park, both during and outside normal working hours.

4.44. Given that a considerable number of visitors to the Common arrive by car, one effective, limiting factor remains the size and location of car parks. Furthermore, access to the southern part of the Common is not easy, requiring a long walk from more popular access points to the west; it therefore remains relatively quiet and less exposed to recreational pressure. Should the employment area have no access restrictions, the site could quickly provide extensive new parking facilities and increase the number of visitors or allow existing users with easier access to a greater area of the European site.

4.45. Policy E18 does not currently have any restrictions on access embedded within the policy wording. However, the introduction of a requirement to effectively and permanently etc (cf C.5.1 of the



Handbook) restrict access to employees and *bona fide* business visitors allied with the creation of a suitable barrier further restricting access from within the site then this threat could be completely removed. It is noted that the effectiveness of a barrier at SS19/ST35 was doubted but given the behavioural differences between residents and employees, but it is believed this could be considered to be effective here when considered alongside parking controls and the smaller number of visitors it would have to influence.

- 4.46. These modifications (as outlined above) have now been proposed via changes to Policy EC1 and GI2 which will strengthen the Plan's approach to dealing with applications relating to internationally and nationally important sites.

Integrity Test for effects of recreational pressure at Strensall Common - E18

- 4.47. Therefore, it is concluded that **provided that proposed modifications are made to the wording of Policies EC1 and GI2 to accommodate the restrictions described above, the Council can ascertain that Policy E18 will have no adverse effect on the integrity of Strensall Common European site in terms of recreational pressure. There would be no residual effects and no need for an in combination assessment.**

Air pollution at Strensall Common – SS19/ST35, H59 and E18

- 4.48. The screening exercise concluded that significant effects from air pollution on the dry and wet heathland at Strensall Common SPA cannot be ruled out alone. Given that they lie in such close proximity, they were assessed and are considered together.
- 4.49. The Air Quality report predicts that nitrogen deposition will fall over the Plan period from 24.08 kgNha⁻¹yr⁻¹ to 15.41 kgNha⁻¹yr⁻¹ reflecting wider, anticipated improvements in air quality despite an increased contribution from development promoted by the Plan. However, this shows that both existing and predicted nitrogen deposition at Strensall Common clearly exceed the minimum critical loads of 10-20 kgNha⁻¹yr⁻¹.
- 4.50. Drawing on screening opinion, the Air Quality report showed that in terms of NO_x concentrations, PC and PEC contributions would equate to 6.5% and 34.5% of the respective long-term environmental standards. Whilst the latter figure suggests an insignificant outcome, falling well below 70%, the former clearly exceeds the 1% threshold.
- 4.51. In terms of nitrogen deposition, the report suggested that PC and PEC contributions would equate to 2.8% and 157% of the lowest critical load. This time, both clearly exceed the 1% and 70% standards.
- 4.52. Detailed APIS data for Strensall Common suggests that only 8% of overall nitrogen deposition is caused by local road traffic. Although an approximation and often an underestimate, this strongly suggests the contribution from road traffic will be relatively minor with other sources, such as livestock representing almost half (47%) of the total contribution.
- 4.53. Along Towthorpe Moor Lane, road traffic is predicted to decline in real terms across the Plan period so resulting in a corresponding reduction in nitrogen deposition. Furthermore, the SAC boundary here is dominated by extensive scrub and bracken extending several metres into the European site. These are not representative of the designated heathland habitats and also provide an effective barrier to the widespread dispersal of airborne nitrogen. Consequently, harmful effects on Strensall Common from traffic along this road can be discounted.
- 4.54. Such mitigating factors do not apply to the north along Lords Moor Lane/York Lane that bisects the site in the north. Here, the road runs (for around 1.5km) through open heathland with wet and dry heath present beyond a few metres distance of the kerbside. Traffic levels are predicted to



- increase throughout the Plan period. Although traffic and therefore air quality data meets the needs of the recent Wealden decision to take account of in combination traffic from York and neighbouring authorities this means it doesn't currently identify what contribution the three local allocations make to this. For the purpose of this HRA it is assumed, with some confidence that its location ensures that SS19/ST35, E18 and H59 will contribute by far the vast majority of traffic along Lords Moor Lane/York Lane. None of the HRA of the neighbouring authorities' local plans identified any impact on Strensall Common either from air pollution or any other factor so reducing the possibility of any in combination effects.
- 4.55. Given the expected increases in traffic, and the open heathland it crosses, harmful effects on the vegetation in closest proximity the road cannot be ruled out. However, these roadside communities like most others are considerably modified by the effects of road maintenance, salt-spreading, pollution, ditches, eutrophication from horses and litter, and erosion/compaction from vehicles which encourages the development of scrub or ruderal vegetation. Beyond this strip, which at Strensall frequently extends from the kerb for an estimated 2-5 metres along both sides of the carriageway, the more characteristic heathland communities gradually regain dominance. Despite this, Natural England has assessed heathland here to be in favourable or recovering condition, which can suggest enhanced resilience.
- 4.56. Transects carried out for the Air Quality report identify that roadside nitrogen deposition increases at the kerbside by 2.8% of the PC declining to 1% at 10m suggesting that nitrogen deposition quickly returns to near-background levels. Levels fall to zero somewhere between 50 and 100m from the kerb. However, PEC never appears to fall below 150% anywhere across the site.
- 4.57. It is important to realise that exceeding a 1% threshold does not indicate harm but rather a figure below which the change in concentration or deposition cannot be described as negligible. However, a PEC of 150% is more than double the equivalent threshold and a PC of 2.8% (measured at the kerbside) almost three times the PC threshold. Yet, the overall concentration of NO_x of 13.13 $\mu\text{g}\text{m}^{-3}$ in 2015, falling over the Plan period to 8.40 $\mu\text{g}\text{m}^{-3}$ is well below the critical level of 30 $\mu\text{g}\text{m}^{-3}$; it represents a set of contrasting data.
- 4.58. It should be remembered that the 70% threshold also does not equate to harm as any value less than 100% of the critical level or load suggests harm should not arise. Indeed, levels below 70% are relatively rare anywhere in the UK. This situation focuses attention back onto the critical loads
- 4.59. If it is accepted that the 1% increase in PC nitrogen deposition is an almost imperceptible increase over background levels, then rates above this are restricted to a strip 10m wide, on each side of the carriageway for a 1500m stretch of the European site where vegetation could be measurably affected. It should be noted that the traffic models seem to suggest that vehicle numbers decline significantly part-way along Lords Moor Lane/York Lane but this is discounted as what appears to be erroneous data. Together, this scenario suggests a total area potentially affected along Lords Moor Lane/York Lane would be limited to 3.0ha or 0.53% of the area of the European site.
- 4.60. This could be sufficient to conclude an adverse effect on the integrity of the site. However, the effect of incremental increases in nitrogen deposition on the species richness of lowland heath is addressed in NERC 210³⁹. Table 21 of NERC 210 shows that for species richness to decline by one (species) would require an increase in nitrogen deposition of 1.3 kgNha⁻¹yr⁻¹. Yet, even the highest rate of deposition attributed to development of 0.281 kgNha⁻¹yr⁻¹ (found at the roadside) at the end of the Plan period would be an order of magnitude below this threshold (when overall deposition would also have declined to c15 kgNha⁻¹yr⁻¹), The impact on the heathland

³⁹ CAPORN, S., FIELD, C., PAYNE, R., DISE, N., BRITTON, A., EMMETT, B., JONES, L., PHOENIX, G., S POWER, S., SHEPPARD, L. & STEVENS, C. 2016. *Assessing the effects of small increments of atmospheric nitrogen deposition (above the critical load) on semi-natural habitats of conservation importance*. Natural England Commissioned Reports, Number 210.



communities further away from the roadside would be correspondingly less as nitrogen deposition declines with distance.

- 4.61. Therefore, this suggests that increases in nitrogen deposition caused by development proposed in the Plan would not result in a decline in species richness and can be interpreted to mean that an adverse effect on the integrity of the European site is avoided.
- 4.62. Given the modified nature of vegetation in close proximity to the road, even this conclusion is considered to be a worst case scenario. Furthermore, it could be suggested that any harm is also reversible as deposition will continue to decline into the future. However, this is not expected to result in rapid improvement as existing elevated levels of soil nitrogen will persist for many years and other adverse factors, listed above, are not expected to diminish.
- 4.63. In addition, these observations should be considered in the context that overall, despite the projected increases in traffic, the electrification of vehicles and improved efficiency of conventional engines will lead to the overall contribution from road traffic being less at the end of the Plan period than at the start. In effect, the Plan doesn't meaningfully increase nitrogen deposition, it simply slows down the rate of improvement.
- 4.64. Given the size of the European site, the modest area that could potentially be affected allied with the active management of the site for nature conservation, its favourable or recovering condition and, not least, that air quality is predicted to be better at the end of the Plan period than today, it is concluded that an adverse effect on the integrity of the site can be ruled out; in other words, that both the *preservation of the constitutive characteristics* and *the coherence of its ecological structure and function, across (the) whole area* of the European site would not be harmed.
- 4.65. No evidence of any compelling threat to the River Derwent that could combine with this impact was found in the emerging or adopted local plans of Selby, Harrogate, East Riding, North Yorkshire, North York Moors and Scarborough; at worst Ryedale's was rather ambivalent. Therefore, in combination issues can be ruled out. Given the use of air quality data from within and beyond the Plan area, this outcome can be also considered to have taken account of possible in combination effects as required by the Wealden case.

Integrity Test for effects of air pollution at Strensall Common – SS19/ST35, H59 and E18

- 4.66. Consequently, it is concluded **that the Council can ascertain that Policies SS19/ST35, E18 and H59 will have no adverse effect on the integrity of Strensall Common European site in terms of the impact of air pollution. There would be no residual effects, and no further need for an in combination assessment.**
- 4.67. It should also be noted that should Policies SS19/ST35 and H59 be removed from the Plan as recommended previously, it would be reasonable to expect that air pollution issues would be removed entirely.

LOWER DERWENT VALLEY SPA

European site	Policies	Issue	Feature affected
Lower Derwent Valley SPA	SS13/ST15	Mobile species	Non-breeding birds
		Recreational pressure	Breeding/non-breeding birds

European site	Policies	Issue	Feature affected
	SS18/ST33	Recreational pressure	Breeding/non-breeding birds

- 4.68. The screening assessment has concluded that a likely significant effect cannot be ruled out alone for two policies SS13/ST15 and SS18/ST33. This is because of concern that:
- Increased recreational pressure from SS13/ST15 and ST33 will lead to disturbance of breeding and non-breeding bird populations of the Lower Derwent Valley;
 - Development at SS13/ST15 will affect functionally-linked land currently supporting non-breeding bird communities from the Lower Derwent Valley SPA
- 4.69. Two proposals are relevant, the 147 homes provided for by ST33 in Wheldrake and the garden village of SS13/ST15 at Elvington. These are considered separately below.

Recreational pressure at the Lower Derwent Valley - ST33

- 4.70. This policy encourages the construction of 147 new dwellings within just 2km of the SPA including 'Bank Island', the most important site for breeding birds across the entire European site. Given that the SPA would be perhaps be one of the most obvious destinations for outdoor recreation, the impact of increased public pressure (frequently allied with dog walking) ensured that LSE alone cannot be ruled out.
- 4.71. Policy ST33 already comprises mitigation that seeks to take account of recreational pressure on the SPA but in isolation this was not considered to provide effective safeguards. The 2018 HRA recommended modifications to require any developer to enhance awareness of and access to other, more resilient semi-natural habitats nearby eg Wheldrake Woods. When allied with the resilience of the SPA, in terms of its careful management of visitors, it was considered that this modification would provide confidence that new residents would have a greater choice of destinations for informal countryside recreation and would effectively remove entirely any threat from this policy.
- 4.72. This modification has subsequently been made and is laid out in the Schedule of Minor Modifications (25 May 2018) (CD003). Therefore, it can be concluded that the adoption of this modification would allow the Council to conclude that an adverse effect could be avoided. There would be no residual effects and no need for an in combination assessment.

Recreational pressure at the Lower Derwent Valley – SS13/ST15

- 4.73. Policy SS13/ST15 encourages the development of 3,399 dwellings and around 2,200 units in a new garden village near Elvington. It lies just a few kilometres to the west of the Lower Derwent Valley on land that is functionally-linked to the bird populations of the European site. Furthermore, the Lower Derwent Valley will provide an attractive countryside destination for new residents which could provide a threat to various features of the European site.
- 4.74. Comprehensive requirements for mitigation are already embedded in the existing policy that anticipates the establishment of extensive areas of wet grassland and public open space. Together, these would provide enhanced areas of functionally-linked land for bird populations from the European site and provide alternative countryside recreational opportunities for new residents. However, there are insufficient opportunities within SS13/ST15 to deliver all aspects of the built development alongside the measures to provide public open space and ecological mitigation.



- 4.75. The opportunity to implement these mitigation measures is provided by Policy/Allocation OS10 which is situated immediately adjacent to the west of SS13/ST15. The purpose of OS10 is described as the provision of ‘*significant areas of open space ... in connection with a strategic site*’ designed to ‘*mitigate ... for ecological impacts*’ and, as a ‘*New Area for Nature Conservation on land to the South of the A64 in association with ST15*’. However, there is no formal policy mechanism in SS13/ST15 that ensures both it and OS10 must be pursued together to secure sustainable development.
- 4.76. The screening exercise therefore concluded that likely significant effects could not be ruled out for SS13/ST15 because of uncertainty surrounding the deliverability of (extensive) mitigation proposed in OS10.
- 4.77. The 2018 HRA identified that to provide certainty that the embedded mitigation and open space requirements described in Policy SS13/ST15 can be delivered, it recommended that the Plan was modified to provide a formal link in policy terms with OS10. This would enable delivery of the ecological mitigation whilst public open space can be secured within the footprint of SS13/ST15.
- 4.78. It suggested deleting the phrase ‘**(as shown on the proposals map)**’ in sub-section (iv) and amending sub-section (vi) to read as follows: ‘Incorporation of a new nature conservation area (as shown on the proposals map **as allocation OS10 and included within Policy GI6 New Open Space Provision**)’.
- 4.79. These modifications have now been proposed and are laid out in the Schedule of Minor Modifications (25 May 2018) (CD003) which were submitted alongside the Local Plan. Therefore, it can be concluded that the adoption of this modification would allow the Council to conclude that an adverse effect could be avoided. There would be no residual effects and no need for an in combination assessment.

Integrity Test for effects of recreational pressure at the Lower Derwent Valley – SS13/ST15 and ST33

- 4.80. Consequently, it is **concluded that the Council can ascertain that an adverse effect on the integrity of the Lower Derwent Valley SPA can be avoided for Policies ST33 and SS13/ST15 in terms of the impact from recreational pressure. There would be no residual effects, and no need for an in combination assessment.**

Mobile species at the Lower Derwent Valley – SS13/ST15

- 4.81. This issue relates solely to Policy SS13/ST15 and is closely related to ‘Recreational pressure’ discussed immediately above. Again, a likely significant effect could not be ruled out because of uncertainty surrounding the deliverability of SS13/ST15 and OS10.
- 4.82. Avoiding unnecessary repetition, the modifications proposed under Recreational pressure also accommodate impacts on mobile species and the same outcome is secured. That is, the adoption of a modification to the policy wording recommended in the 2018 HRA would enable the Policy to avoid an adverse effect.
- 4.83. These modifications have now been made and are laid out in the Schedule of Minor Modifications (25 May 2018) (CD003). Therefore, it can be concluded that the adoption of this modification would allow the Council to conclude that an adverse effect could be avoided. There would be no residual effects and no need for an in combination assessment.

Integrity Test for effects on mobile species at the Lower Derwent Valley – SS13/ST15

- 4.84. **Consequently, it is concluded that the Council can ascertain that an adverse effect on the integrity of the Lower Derwent Valley in terms of the impact on mobile species at Policy SS13/ST15 can be avoided. There would be no residual effects, and no need for an in combination assessment**

RIVER DERWENT SAC

European site	Policies	Issue	Feature affected
River Derwent SAC	SS13/ST15	Air pollution	Floating vegetation community River and sea lamprey, and bullhead

- 4.85. The screening assessment has concluded that a likely significant effect cannot be ruled out alone for SS13/ST15. This is because of concern that:
- Increased road traffic pollution would lead to eutrophication of the River Derwent and harm the floating vegetation community and the populations of river and sea lamprey, and bullhead

Air pollution at the River Derwent – SS13/ST15

- 4.86. The screening assessment concluded that a likely significant effect cannot be ruled out in terms of Policy SS13/ST15 (and/or other aspects of the Plan in combination) which lies 3km by road from the Elvington river crossing due to uncertainty regarding the scale of nitrogen deposition within the River Derwent and its impacts on the floating vegetation community. This was largely because this feature does not benefit from critical loads which typically inform traditional evaluation - ultimately, it is the complex relationship between biology and nitrogen that prevents the identification of critical loads for many aquatic features. Consequently, as recommended by APIS, assessments have to be made on a case by case basis.
- 4.87. However, reliance can be placed on generic background data. Drawing on the screening exercise, the Air Quality Report suggested a mean NO_x concentration of 16.26 ug_m³ in 2015, falling over the Plan period to 10.40 ug_m³. Despite being a mean value, it can be safely assumed that concentrations of NO_x are currently below the annual Critical Level of 30 ug_m³ across the entire European site and are expected to fall further.
- 4.88. In terms of nitrogen deposition, the report predicts that nitrogen deposition will fall over the Plan period from 16.26 kgNha⁻¹yr⁻¹ to 11.11 kgNha⁻¹yr⁻¹ reflecting wider, anticipated improvements in air quality despite an increased contribution from development promoted by the Plan. Despite being a mean figure, it is reasonable to assume that nitrogen deposition levels across the Lower Derwent Valley are also similarly modest. However, this is relatively meaningless without a critical load for the features for comparison.
- 4.89. Further analysis at various crossing points along the river where emissions from road traffic would be at their highest showed that in terms of NO_x concentrations, PC and PEC contributions would equate to 4.6% and 39.3% of the long-term environmental standard. Whilst the latter suggests an insignificant outcome, falling well below 70%, the former exceeds the 1% threshold.



- 4.90. Given these circumstances, air pollution could be considered to conflict with the conservation objective for the River Derwent SAC to '*maintain or restore ... the extent and distribution ... the structure and function ... and the supporting processes ... of the qualifying natural habitats ...*'.
- 4.91. When employing the most sensitive fen, marsh and swamp habitat (with critical loads for nitrogen deposition of 10-20 kgNha⁻¹yr⁻¹) as a proxy for the aquatic habitat, the report suggested that the maximum possible PC and PEC contributions would equate to 2.0% and 95% of the lowest critical load with a PC value of 0.20 kgNha⁻¹yr⁻¹ and a PEC of 9.52 kgNha⁻¹yr⁻¹, both below the minimum critical load for the proxy habitat.
- 4.92. Transects at three crossings over the river (Stamford Bridge (A166), Kexby Bridge (A1079) and Elvington (B1228), again using fen, marsh and swamp as a proxy suggested that nitrogen would rapidly disperse at all sites, failing to register a figure (or 0% or below measurable accuracy) at any point at Stamford Bridge, and, at Elvington (closer to SS13/ST15) not exceeding 1% for the first 10m before again effectively falling to 0%. At Kexby, the highest value, at the kerbside was 2% of the minimum critical load for the proxy habitat before falling to 1% at 3m and 0% between 15-20m.
- 4.93. At Stamford and Elvington this means predicted nitrogen deposition is indistinguishable from background readings at the end of the Plan period when traffic could be considered to be at its highest and background levels at their lowest so exacerbating any problems. At Kexby, the figures were effectively double those at Elvington but still modest in the context of the whole river. Given these modest values it was not considered necessary to explore river crossings further afield.
- 4.94. Of course, these outcomes all depend on the sensitivity of the proxy chosen but even if the minimum critical load was reduced to 5kgNha⁻¹yr⁻¹, the values would still not exceed 4% at Kexby, 2% at Elvington and less at Stamford bridge although it would be measurable at greater distances along the transect. It must be stressed, however, that this is an extreme example and doesn't reflect the characteristics of the river. For instance, and to provide some perspective, the maximum critical load for oligotrophic lakes is only 10 kgNha⁻¹yr⁻¹.
- 4.95. What is certain, however, is that this degree of nitrogen deposition is not been added to the whole site but only to a handful of point sources at river crossings and minor roads that occasionally, come within 200m of the river; the total contribution from road traffic will therefore be dwarfed by nutrient enrichment by agriculture throughout its extensive catchment. Whilst it is acknowledged that contributions from these point sources will be transported downstream it is evident that these will quickly be diluted and form no measurable component of overall nutrient levels. In summary, they represent isolated point sources across a large river system that occupies over 400ha in area, extends over 86km in length and sits within a catchment of over 2,000sqkm.
- 4.96. This is reflected again by APIS which is able to clarify that only 6% of overall, current nitrogen deposition is currently caused by road traffic. Although an approximation and often an underestimate, this strongly suggests the contribution from road traffic will be minor in comparison with other sources, with livestock farming, for example, contributing an order of magnitude more.
- 4.97. Furthermore, the River Derwent is described as meso/eutrophic, a reflection of its existing high nitrogen load, itself a consequence of the erosion and transport of soil and nutrients from its extensive, rural catchment. Like most similar systems, it is also phosphate and not nitrogen limited. This means that nitrogen deposition is usually a less important consideration than on land (where nitrogen is relatively scarce). Consequently, the control of eutrophication usually concentrates on the removal of phosphorus inputs, for example by wastewater treatment facilities.
- 4.98. Indeed, phosphorus has generally been considered more important than nitrogen in determining the biomass of phytoplankton and the actual trophic state of a river system and APIS goes on to note (when describing eutrophic *standing* waters) that:



Deposition of ... nitrogen from the atmosphere is unlikely to be the largest source of this nutrient to eutrophic standing waters and, therefore, in general nitrogen deposition is unlikely to be very harmful ... even when close to sources

- 4.99. The system, and by extrapolation, its features, can therefore be considered to be relatively resilient to nitrogen deposition, a factor borne out to some degree by Natural England's assessment that over 99% of the river is meeting or (the majority) progressing towards favourable condition.
- 4.100. Moreover, any possible impact has to be assessed in the context that overall, despite the projected increases in traffic the electrification of vehicles and improved efficiency of conventional engines will lead to the overall contribution from road traffic being less at the end of the Plan period than at the start. In effect, the Plan doesn't meaningfully increase nitrogen deposition, it simply slows down the rate of improvement.
- 4.101. In this context, otter (which has already been screened out) can be regarded as effectively immune harm. Whilst the floating vegetation community is considered vulnerable to air pollution in the supplementary advice, it should be noted that it permanently occupies the existing, high nutrient water column which again suggests existing resilience to such loads. The fish populations can therefore also be considered to be resilient to existing loads and it is perhaps relevant that Natural England's supplementary advice for the river does not identify 'air quality' as a threat to fish.
- 4.102. Furthermore, all river crossings bear at least some evidence of existing barriers within the river (ie the bridge foundations), considerable shading (and leaf litter) from overhanging trees and pleasure boats. All will have potential to influence the distribution of both fauna and flora perhaps more significantly than the modest addition of nitrogen from vehicles.
- 4.103. Whilst the lack of quantifiable evidence is lacking, the use of a proxy habitat provided strong indications that harm would not arise. Reference to case law (Boggis) is appropriate at this point as it reminds us that threats must be credible and not hypothetical.
- 4.104. Despite the lack of critical loads for the features in question, it is clear that the sources are restricted to a handful of locations, the contributions small and disperse rapidly within a system that carries a high nutrient load with an inherent resilience to nitrogen deposition (shared by its features). It is, therefore, simply not credible that such small, isolated contributions could adversely affect the constitutive characteristics of the European site. Overall, they can safely be regarded as *de minimis* and indistinguishable from background variations allowing adverse effects to be ruled out.
- 4.105. Given the size of the European site, the modest area that could potentially be affected allied and, not least, that air quality is predicted to be better at the end of the Plan period than today, it is concluded that an adverse effect on the integrity of the site can be ruled out completely with no residual effects; in other words, that both the preservation of the constitutive characteristics and the coherence of its ecological structure and function, across (the) whole area of the European site would not be harmed.
- 4.106. Given the use of air quality data from within and beyond the Plan area, this outcome can be also considered to have taken account of possible in combination effects as required by the Wealden case. Therefore, in combination issues can be ruled out.

Integrity Test for effects of air pollution on the River Derwent – SS13/ST15

- 4.107. Consequently, it is concluded **that the Council can ascertain that Policy SS13/ST15 will have no adverse effect on the integrity of the River Derwent SAC in terms of the impact of air pollution. There would be no residual effects, and no further need for an in combination assessment.**

Summary of Appropriate Assessment and Integrity Tests

4.108. The outcomes of the appropriate assessment are summarised in Table 7 below.

Table 7: Summary of the Appropriate Assessment

Issue	Recommended measures	Outcome
Strensall Common SAC Wet and dry heathland Aquatic Environment Policies SS19/ST35, E18 and H59	None required	Adverse effect on the integrity of the site is avoided
Strensall Common SAC Wet and dry heathland Recreational pressure Policies SS19/ST35 and H59	Remove policies SS19/ST35 and H59 from the Plan	Adverse effects on the integrity of the site avoided by removal of policies
Strensall Common SAC Wet and dry heathland Recreational pressure Policies E18	Mitigation must be added to Policy E18 (or similar) to restrict public access	Adverse effect on the integrity of the site will be avoided if mitigation is adopted
Strensall Common Wet and dry heathland Air pollution SS19/ST35, E18 and H59	None required.	An adverse effect on the integrity of the site is avoided with no need for mitigation. There are no residual effects and no need for an in combination assessment.
Lower Derwent Valley Breeding and non-breeding birds Recreational pressure ST33	Mitigation added by schedule of modifications (CB003) adequate to remove threat of adverse effects	Adverse effect on the integrity of the site is avoided
Lower Derwent Valley SPA Breeding and non-breeding birds Recreational pressure SS13/ST15	Mitigation added by schedule of modifications (CB003) adequate to remove threat of adverse effects	Adverse effect on the integrity of the site is avoided
Mobile species Non-breeding birds Lower Derwent Valley Policy SS13/ST15	Mitigation added by schedule of modifications (CB003) adequate to remove threat of adverse effects	Adverse effect on the integrity of the site is avoided
Air pollution Floating vegetation community and populations of river and sea lamprey, and bullhead River Derwent SS13/ST15	None required	Adverse effect on the integrity of the site is avoided

4.109. Table 7 confirms that should the recommended measures be adopted in full, the Council would be able to ascertain that there would be no adverse effect on the integrity of any of the European sites. For the avoidance of doubt, it is considered that adverse effects could be ruled out completely for all sites and all issues with no residual effects.

5. OVERALL CONCLUSION OF THE HRA

- 5.1. All policies and allocations were screened for likely significant effects; the individual outcomes of the first exercise without the benefit of mitigation can be found in Tables 5 & 6, and in Appendix B.
- 5.2. Overall, this HRA found that likely significant effects could be ruled out alone for all but five policies which could therefore be excluded from any further scrutiny. However, likely significant effects could not be ruled out alone for policies: SS13/ST15, ST33, SS19/ST35, E18 and H59 in terms of their effects on one or more of Strensall Common, Skipwith Common, the Lower Derwent Valley, the River Derwent.
- 5.3. In terms of Policies SS19/ST35, E18 and H59, likely significant effects could not be ruled out because of anticipated increases in recreational pressure, changes to the hydrological regime and the effect of air pollution on the adjacent Strensall Common SAC.
- 5.4. Similarly, likely significant effects could not be ruled out alone for Policies ST33 because of anticipated increases in recreational pressure on the Lower Derwent Valley nearby.
- 5.5. Finally, likely significant effects could not be ruled out alone for Policy SS13/ST15 for three reasons: again because of anticipated increases in recreational pressure but also for impacts on the bird communities of the Lower Derwent Valley that also utilised land beyond the European site boundary, and the effect of air pollution on the River Derwent SAC.
- 5.6. Accordingly, an appropriate assessment was required. Taking account of recent changes in case law, mitigation was only evaluated at this stage in the HRA.
- 5.7. Upon further scrutiny or by the addition of mitigation measures, it was found that adverse effects on the integrity of all the European sites could be ruled out completely for all these issues except one - the impact of recreational pressure at Strensall Common SAC. Whilst the HRA found that the addition of mitigation measures to Policy E18 would be sufficient to remove the threat of an adverse effect on the integrity of the site, this was not the case with Policies SS19/ST35 and H59. Here, it was found that uncertainty surrounding the effectiveness of the mitigation measures proposed meant that an adverse effect on the integrity could not be ruled out. Given the absence of other mitigation measures, the only option was to remove Policies SS19/SS19/ST35 and H59 from the Plan.
- 5.8. Should these measures be adopted in full, **the Council would be able to ascertain that adverse effects on the integrity of the European sites can be avoided.**

HRA Appendices

Available upon request:

- A. Citations and Qualifying Features
- B. Record of preliminary screening of proposed policies prior to mitigation
- C. Lower Derwent and Skipwith Common Visitor Surveys (Footprint Ecology, 2018)
- D. Strensall Common Visitor Survey (Footprint Ecology, 2019)
- E. Policy Changes
- F. Air Quality Assessment (Waterman Infrastructure & Environment Ltd, 2018)