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# Habitats Regulations Assessment of the East Devon Local Plan 2020 to 2042 (Regulation 19 Draft Plan)

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# Summary

The Conservation of Habitats and Species Regulations 2017 (as amended) require local authorities to assess the impact of their local plan on the internationally important sites for biodiversity in and around their administrative areas. Together, these Special Protection Areas, Special Areas of Conservation and Ramsar sites are known as European sites. The task is achieved by means of a Habitats Regulations Assessment (HRA).

An HRA asks very specific questions of a plan. Firstly, it 'screens' the plan to identify if there is a risk that certain 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 the risk of 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.

Following an appropriate assessment, a Plan is typically only adopted if an adverse effect on the integrity of the site can be ruled out. If necessary, a plan should be amended to avoid or mitigate any likely conflicts. This usually means that some policies or allocations will need to be modified or, more unusually, may have to be removed altogether.

This document is the HRA report for the East Devon Local Plan and has been undertaken at the Regulation 19 consultation version of the Plan (February 2025).

The screening of the Plan identified the potential for likely significant effects with respect to a number of different impact pathways:

- Urban effects (East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar);
- Loss of supporting habitat/functionally-linked land (Beer Quarry & Caves SAC, East Devon Heaths SPA);
- Recreation (Dawlish Warren SAC, East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar, River Axe SAC, Sidmouth to West Bay SAC);
- Water supply (Exe Estuary SPA/Ramsar);
- Water quality (River Axe SAC);
- Air quality (East Devon Heaths SAC/SPA).

At the appropriate assessment stage there is not yet sufficient certainty to rule out adverse effects on integrity in relation to water quality (River Axe SAC) and air quality (East Devon Heaths SAC/SPA).

Key steps for the Council to take as the Plan is progressed through further consultation involve:

- Checks with Natural England and the Environment Agency regarding nutrient neutrality to understand the extent to which measures deliver restoration and the necessary reductions in nutrient loading are achievable in practice, whether they have been identified and whether they have been secured and/or are being implemented.

- Progressing with a strategy or guidance around vehicle emissions and air quality for the East Devon Heaths SAC/SPA.

In relation to the other pathways, for a number of allocations, further assessment will be important once further details are available. It may be possible to update subsequent iterations of the Plan HRA if masterplans and further details for these sites are available, or else there will be a need for project level HRA to undertake specific checks.

The Council is proposing a further Regulation 19 consultation later in 2025 prior to submitting the Plan. The HRA will continue to progress as the Plan develops and will be finalised at adoption.

# Contents

# Acknowledgements

This report has been commissioned by East Devon Council. We are grateful to Matt Dickins for overseeing the work.

# 1. Introduction

## Overview

1.1 This report is an interim Habitats Regulations Assessment (HRA) report to accompany the East Devon Local Plan 2020 to 2042 ('the Plan') at Regulation 19 Publication Draft (first phase of the consultation, February 2025). This report has been prepared by Footprint Ecology on behalf of East Devon Council. An HRA assesses the implications of a plan for legally protected European sites.

1.2 This report will be updated each stage of the Plan and the HRA will be finalised at the point at which the Plan is ready for adoption.

## The East Devon Plan

1.3 East Devon District spans the area from the Dorset border west as far as Exeter. The East Devon Local Plan will be the main planning policy document for the District, and will set out where development should take place and provide the policies which will be used in making decisions on planning application.

1.4 The Regulation 19 Publication Draft (February 2025) is the initial Regulation 19 consultation and further phases of Regulation 19 consultations are anticipated by the Council during the summer 2025. Thereafter the plan will be submitted for examination in the autumn 2025. This is an updated version of the HRA report, and supersedes a previous version that was produced in July 2022 to accompany the Regulation 18 (Preferred Options) consultation.

## Habitats Regulations Assessment process

1.5 The designation, protection and restoration of European wildlife sites is embedded in the Conservation of Habitats and Species Regulations 2017, as amended, which are commonly referred to as the 'Habitats Regulations'. Importantly, the most recent amendments (the Conservation of Habitats and

Species (amendment) (EU Exit) Regulations 2019[1]) take account of the UKs departure from the EU.

1.6 Regulation 105 *et seq* addresses the assessment of local plans and determines the scope of this HRA alongside recent Government Guidance on the interpretation and application of the Regulations[2] .

## *European sites*

1.7 'European sites' are the cornerstone of UK nature conservation policy. Each forms part of a 'national network' of sites that are afforded the highest degree of protection in domestic policy and law. They comprise Special Protection Areas (SPA) classified under the 1979 Birds Directive and Special Areas of Conservation (SAC) designated under the 1992 Habitats Directive. As a matter of policy, potential SPAs (pSPAs), possible SACs (pSACs) and those providing formal compensation for losses to European sites, are also given the same protection[3].

1.8 The network safeguards the most valuable and threatened habitats and species across the country and Europe. Prior to Brexit, this formed part of the EU-wide Natura 2000 network of SPAs and SACs to form the largest, coordinated network of protected areas in the world.

1.9 The designations made under the European Directives still apply and the term, 'European site' remains in use. According to long-established

[1] The amending regulations generally seek to retain the requirements of the 2017 Regulations but with adjustments for the UK's exit from the European Union. See Regulation 4, which also confirms that the interpretation of these Regulations as they had effect, or any guidance as it applied, before exit day, shall continue to do so.

[2] Habitats regulations assessments: protecting a European site. Defra and Natural England. 24 February 2021. https://www.gov.uk/guidance/habitats-regulations-assessments-protecting-a-european-site (accessed 17th August 2022).

[3] For the avoidance of doubt, the list of statutory European sites also comprises: A site submitted by the UK to the European Commission (EC) before Exit Day (a candidate SAC or cSAC) as eligible for selection as a Site of Community Importance (SCI) but not yet entered on the ECs list of SCI, until such time as the Appropriate Authority has designated the site or it has notified the statutory nature conservation body that it does not intend to designate the site. After Exit Day, no further cSACs will be submitted to the EU. Statutory European sites also include SCI included on a list of such sites by the European Commission from cSACs submitted by the UK before the UK left the EU, until such time as the UK designates the site when it will become a fully designated SAC.

Government policy[4], European sites also comprise 'Wetlands of International Importance' (or Ramsar sites) although these do not form part of the national network.

1.10 The overarching objectives of the national network are to maintain, or where appropriate, restore habitats and species listed in Annexes I and II of the Habitats Directive to a Favourable Conservation Status, and contribute to ensuring, in their area of distribution, the survival and reproduction of wild birds and securing compliance with the overarching aims of the Wild Birds Directive.

1.11 The appropriate authorities must have regard to the importance of protected sites, coherence of the national site network and threats of degradation or destruction (including deterioration and disturbance of protected features) on SPAs and SACs.

### *Role of the competent authority*

1.12 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 accept this report or otherwise. Further, it should be noted that this HRA has been prepared for the purposes of preparing and examining the Plan. Individual allocations will need to be reviewed when they become the subject of an individual planning application, to ensure that if further assessment under the Habitats Regulations is necessary, it is undertaken in accordance with the requirements of appropriate assessment.

### *Process*

1.13 The step-by-step process of HRA is summarised in Figure 1. Though dated prior to the latest amendments to the Regulations, the same tests still apply and it remains valid.

[4] ODPM Circular 06/2005: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System (16 August 2005), to be read in conjunction with the current NPPF, other Government guidance and the current version of the Habitats Regulations.

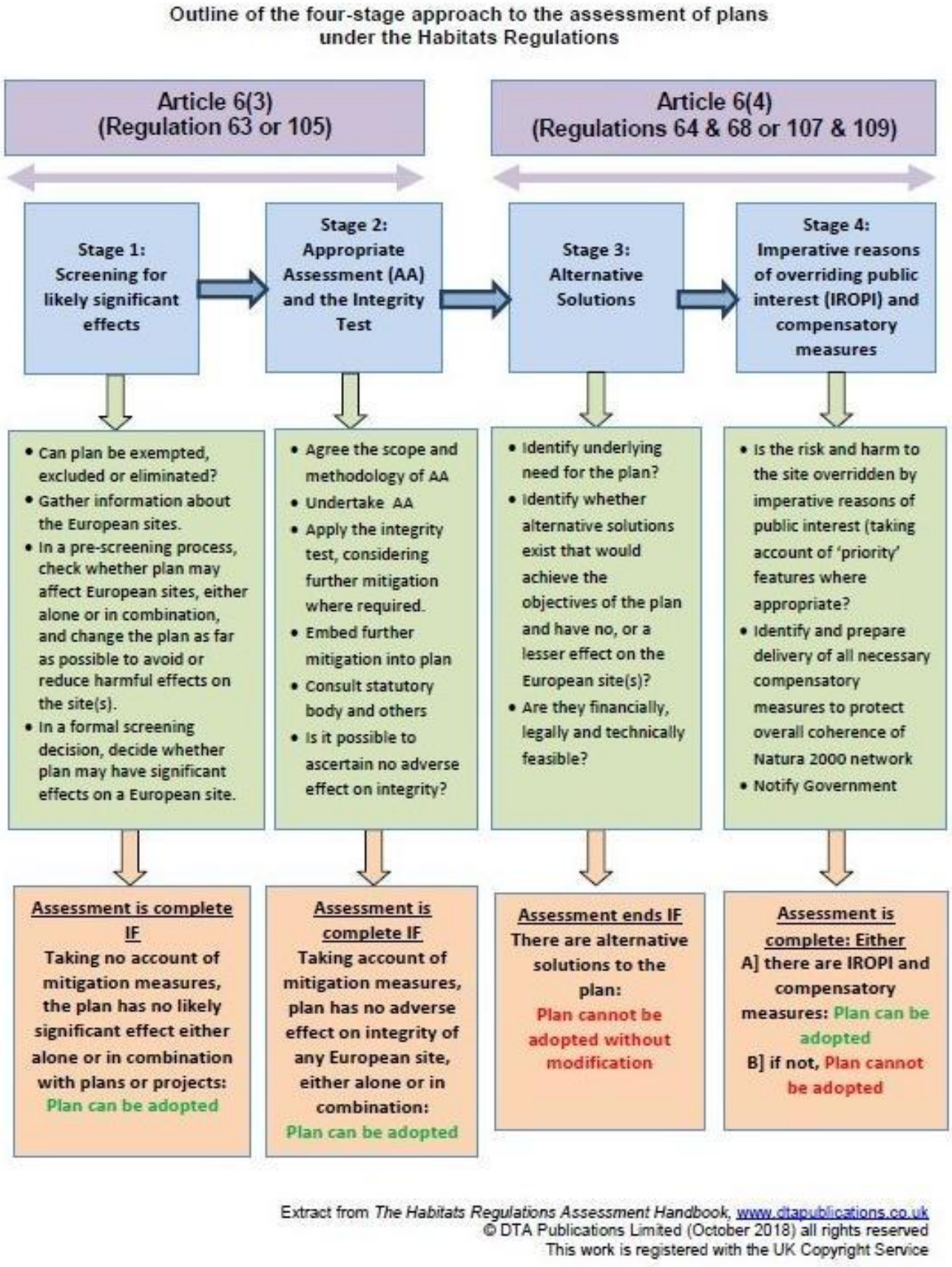




**Figure 1: Outline of the assessment of plans under the Habitat Regulations**

1.14 Throughout all stages, there is a continual consideration of the options available to avoid and mitigate any identified potential impacts. A competent authority may consider that there is a need to undertake further levels of evidence gathering and evaluation at the appropriate assessment stage in order to provide the necessary certainty. At this point the competent authority may identify the need to add to or modify the plan in order to adequately protect the European site, and these mitigation measures may be added through the imposition of particular restrictions and conditions.

1.15 For plans, the stages of HRA are often quite fluid, with the plan normally being prepared by the competent authority itself. This gives the competent authority the opportunity to repeatedly explore options to prevent impacts, refine the plan and rescreen it to demonstrate that all potential risks to European sites have been successfully dealt with.

1.16 When preparing a plan, a competent authority may therefore go through a continued assessment as the plan develops, enabling the assessment to inform the development of the plan. For example, a competent authority may choose to pursue an amended or different option where impacts can be avoided, rather than continue to assess an option that has the potential to significantly affect European site interest features.

1.17 After completing an assessment, a competent authority should only adopt a plan where it can be ascertained that there will not be an adverse effect on the integrity of the European site(s) in question. In order to reach this conclusion, the competent authority may have made changes to the plan, or modified the project with restrictions or conditions, in light of their Appropriate Assessment findings.

1.18 Where adverse effects cannot be ruled out, further exceptional tests are set out in Regulation 107. In exceptional cases, this allows a plan to be taken forward where there are no 'alternative solutions', where 'imperative reasons of overriding public interest' apply and where compensation can be delivered. It should be noted that meeting these tests is a rare last resort and ordinarily, competent authorities seek to ensure that a plan or project is fully mitigated for, or it does not proceed.

1.19 In such circumstances where a competent authority considers that a plan should proceed under Regulations 107, they must notify the relevant Secretary of State. Normally, planning decisions and competent authority duties are then transferred, becoming the responsibility of the Secretary of State, unless on considering the information, the planning authority is

directed by the Secretary of State to make their own decision on the plan or project at the local level. The decision maker, whether the Secretary of State or the planning authority, should give full consideration to any proposed 'overriding reasons' for which a plan or project should proceed despite being unable to rule out adverse effects on European site interest features, and ensure that those reasons are in the public interest and are such that they override the potential harm. The decision maker will also need to secure any necessary compensatory measures, to ensure the continued overall coherence of the European site network if such a plan or project is allowed to proceed. However, it is understood that the Council would not wish to pursue these derogations.

### *Definitions, references to case law and guidance*

1.20 This HRA follows principles of case law, both UK and EU. It also refers as appropriate to the Habitats Regulations Assessment Handbook (Tyldesley & Chapman, 2013), to which Footprint Ecology subscribes. We also follow relevant government guidance.

1.21 Drawing on the Handbook, other relevant guidance and case law, we clarify the following terms used in the flow chart (Figure 1):

1.22 In Stage 1, A '**likely significant effect'** following Waddenzee[5], is a '*possible significant effect; one whose occurrence cannot be excluded on the basis of objective information'*. It is a low threshold and simply means that there is a risk or doubt regarding such an effect. The screening stage is a preliminary examination, sometimes described as a coarse filter, or following Sweetman[6], as '*a trigger for the obligation to carry out an appropriate assessment*'. There should however be credible evidence to show that there is a real rather than a hypothetical risk of effects that could undermine a site's conservation objectives. This was amplified in the Bagmoor Wind[7] case where '*if the absence of risk… can only be demonstrated after a detailed investigation, or expert opinion,* [then] *the authority must move from preliminary examination to appropriate assessment'.*

[5] Waddenzee: European Courts C-127/02 Waddenzee 7th September 2004, reference for a preliminary ruling from the Raad van State.
[6] Sweetman: European Court C – 258/11 Sweetman 11th April 2013, reference for a preliminary ruling from the Supreme Court of Ireland.
[7] Bagmoor Wind: UK courts Bagmoor Wind v The Scottish Ministers, Court of Session [2012] CSIH 93.

1.23 Following the People Over Wind judgement[8], when making screening decisions for the purposes of deciding whether an appropriate assessment is required, competent authorities cannot take into account any mitigation measures.

1.24 Stage 2 involves the **appropriate assessment and integrity test**. Here a plan can only be adopted if the competent authority can demonstrate that it will not adversely affect the integrity of the European site. This is a precautionary approach and means it is necessary to show the absence of harm.

1.25 Following Champion[9] '**appropriate'** is not a technical term but simply indicates that the assessment needs to be appropriate to the task in hand.

1.26 The **integrity** of a European site has been described 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[10]. An alternative definition, after Sweetman[11], is 'the lasting preservation of the constitutive characteristics of the site'.

1.27 In terms of the burden of proof, 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 UK[12]. However, the judgement[13] 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 High Court (Feeney)[14] which stated: "*Each … assessment … cannot do more than the level of detail of the strategy at that stage permits*".

1.28 The need to consider possible **in-combination** effects arises at stage 1 – the screening and also at stage 2 – the appropriate assessment and integrity test. The effects of the plan in-combination with other plans or projects are the cumulative effects which will or might arise from the addition of the effects of other relevant plans or projects alongside the plan under

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[8] *People Over Wind and Sweetman v Coillte Teoranta* (323-17) [2018] PTSR 1668
[9] *R (on the application of Champion v North Norfolk District Council* [2015] 1 WLR 3170 at para 41
[10] Para 20 of the ODPM Circ. 06/2005
[11] *Sweetman v An Bord Pleanála* (C–258-11) [2014] PTSR 1092 at paragraph 39
[12] Commission v UK (C-6/04) [2005] ECR 1-9017
[13] Commission of the European Communities v UK Opinion of Advocate General Kokott
[14] *Feeney v Oxford City Council* [2011] EWHC 2699 Admin at paragraph 92

consideration. If during the stage 1 screening it is found the subject plan would have no likely effect alone, but might have such an effect in-combination then the appropriate assessment at stage 2 will proceed to consider cumulative effects. Where a plan is screened as having a likely significant effect alone, the appropriate assessment should initially concentrate on its effects alone.

1.29 It is also relevant to highlight the Planning Reform Working Paper: Development and Nature Recovery[15] which was published by the Ministry of Housing, Communities and Local Government (MHCLG) and Defra in December 2024. This indicates that there may be changes to primary legislation and planning reform in the future, with the intention to move responsibility for planning and implementation of strategic mitigation onto the state. The working paper specifically uses a hypothetical example relating to nutrient neutrality and as such serves to highlight that there may be changes in the future as to how such issues are addressed through HRA. Until any changes are implemented by the government, it is necessary for the Council as competent authority to fully assess the impacts of development and ensure necessary mitigation is in place.

[15] https://www.gov.uk/government/publications/planning-reform-working-paper-development-and-nature-recovery/planning-reform-working-paper-development-and-nature-recovery

# 2. European sites in and around East Devon

## Overview of potentially relevant European sites

2.1 We have used 20km from the District boundary as an initial area of search (20km providing a reasonable area of search within which policies could reasonably be considered to generate measurable effects). Air quality impacts at plan level are typically considered to relate to a 10km distance (Chapman & Kite, 2021) while generic analysis of Footprint Ecology visitor data to countryside sites in the UK (Weitowitz et al., 2019) indicates that the majority of visitors originate within a 12.6km radius. The choice of 20km is therefore precautionary.

2.2 Sites that fall within this initial area of search are listed in Table 1. SAC sites are shown in Map 1, Map 2 shows SPA and Ramsar sites. All sites are described in Appendix 2.

**Table 1: European Sites within a 20km radius.**

| SACs | SPA | Ramsar |
|---|---|---|
| Beer Quarry & Caves | East Devon Heaths | Exe Estuary |
| Bracket's Coppice | Exe Estuary | Somerset Levels & Moors |
| Chesil & The Fleet | Somerset Levels & Moors | |
| Culm Grasslands | | |
| Dawlish Warren | | |
| East Devon Pebblebed Heaths | | |
| Hestercombe House | | |
| Holme Moor & Clean Moor | | |
| Lyme Bay and Torbay | | |
| Quants | | |
| River Axe | | |
| Sidmouth to West Bay | | |
| South Dartmoor Woods | | |
| South Hams | | |
| West Dorset Alder Woods | | |

2.3 It is essential to fully understand the ecology and sensitivity of the sites, in order to identify how they may be affected and which may be relevant for further consideration within the HRA. Appendix 1 summarises the generic conservation objectives and Appendix 2 provides detail of the relevant sites, listing their qualifying features, describing the sites and providing links to the relevant detailed conservation advice from Natural England.

### *Overlapping site boundaries*

2.4 It should be noted that the East Devon Pebblebed Heaths SAC and the East Devon Heaths SPA have identical boundaries and in the rest of this report we will refer to the East Devon Heaths SAC/SPA where we mean both sites together. Where we use the specific site name then the text is specific to the relevant site (i.e. the SAC or SPA). Similarly, we use the Exe Estuary SPA/Ramsar when referring to both the Exe Estuary SPA and Ramsar site together (again the boundaries overlap) and Somerset Levels and Moors SPA/Ramsar to refer to the SPA and Ramsar together there.

## Initial review of sites and potential impact pathways

2.5 Potential impact pathways, which are described as ways in which elements of the Plan might impact the relevant European sites, are summarised in Table 2. Potential impact pathways are then summarised by European site in Table 3. Many of the European sites listed are well outside the East Devon boundary and as such many can be easily excluded from any further assessment at this stage – they will not be relevant to the screening as there is no conceivable way they could be impacted. Table 3 therefore works to identify a shortlist of sites that are relevant to the screening and need to be checked against the relevant policies as part of screening for likely significant effects.

**Table 2: Impact Pathways**

| Pathway | Explanation |
|---|---|
| General urban effects | Effects on a European site from nearby development, including light, noise, domestic cats, spread of invasive species, etc. Relates to development in close proximity. |
| Loss of supporting habitat/functionally linked land | Effects on European sites relating to the loss or deterioration of land outside the site boundary which supports the relevant qualifying features and directly relates to the individuals or populations on the European site. For example, bats foraging in the wider landscape away from a roost. |
| Recreation impacts | Effects on a European site caused by human use of site for recreational activities and their consequences, including walking, riding, sports, organised activities etc. Effects may include direct disturbance of species by people, dogs or vehicles, trampling, erosion, fire, vandalism and fly tipping. |
| Water supply | Effects on a European site from interruption, reduction or other interference of local hydrology, including groundwater, surface standing water or watercourses. |
| Water quality | Effects on a European site from altered local water quality, including outflows from wastewater treatment and surface water run-off. Water quality issues are considered further in Appendix 4, which comprises a separate report by DTA Ecology. |

| | |
|---|---|
| Air Quality | Effects on a European site from changes in local air quality, primarily likely from increased vehicle traffic associated with growth in the Plan. Impacts from traffic can occur where roads are within 200m of the European site. Air quality issues are considered further in Appendix 5, which comprises a separate report by DTA Ecology. |

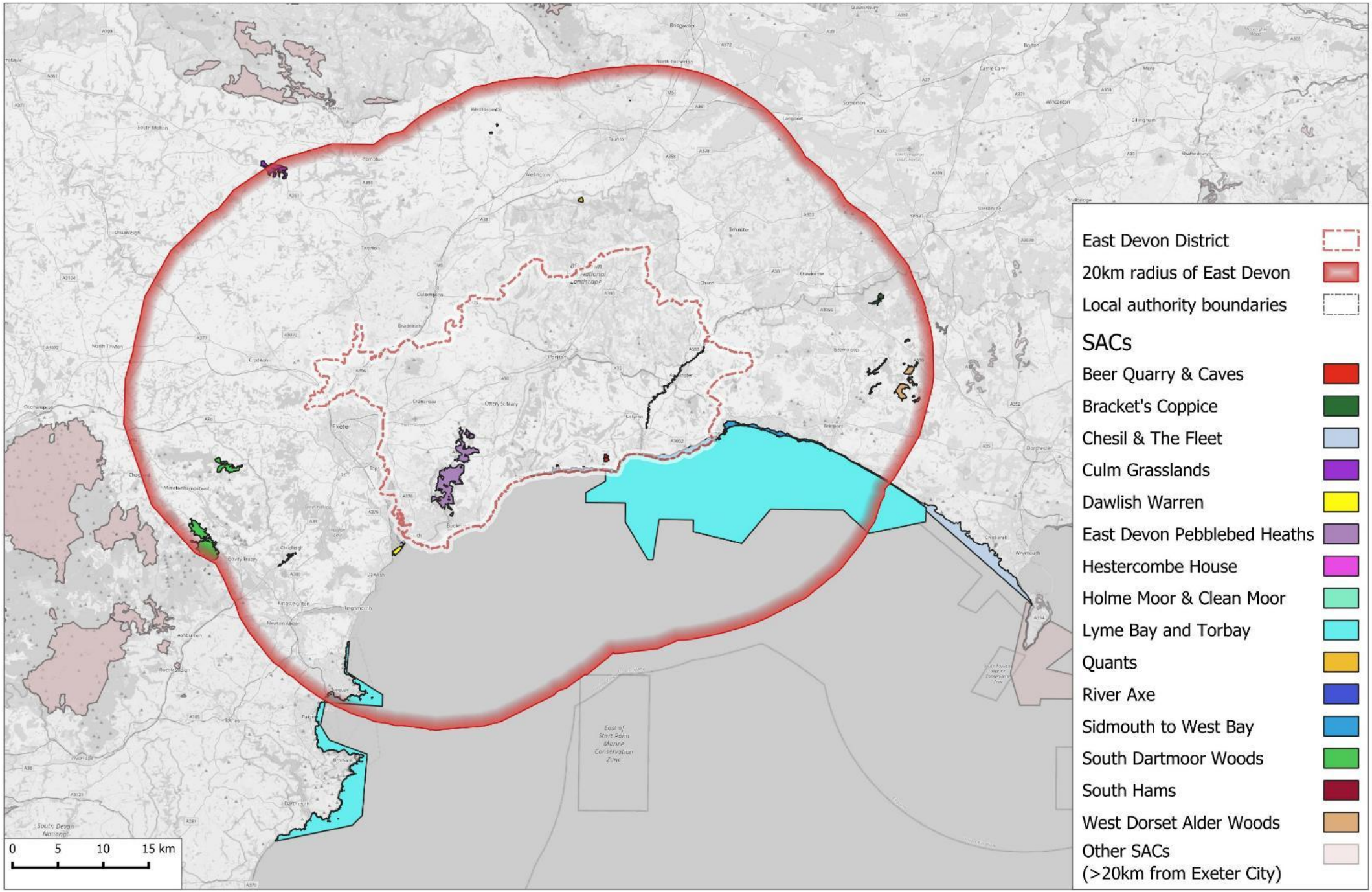
**Table 3: Potential impact pathways with a tick indicating where the pathway is relevant to the site. Distances are the approximate distances from the nearest part of the European site to the nearest part of the city boundary. No distances are given for those sites that are within the District boundary. Grey shading indicates sites that can be eliminated at this stage from any further assessment.**

| Site | Distance (km) | General urban effects | Loss of supporting habitat | Recreation impacts | Water supply | Water Quality | Air Quality | Notes |
|---|---|---|---|---|---|---|---|---|
| Beer Quarry & Caves SAC | | ✓ | ✓ | | | | | Urban effects could include direct disturbance, vandalism etc at the roost site. Zones and guidance established for bats and the risk of loss of supporting habitat (Jennings & Youngman, 2022) and clear risks away from the roost in terms of supporting habitat and disruption of flight lines, loss of foraging habitat etc. No credible risk with respect to air quality (see Appendix 5). |
| Bracket's Coppice SAC | 14.2 | | | | | | | Site qualifies for Bechstein's Bat and Purple Moor Grass/Rush Pasture. Site is distant and in a very rural area, access is limited and the site is relatively hard to find. |
| Chesil & The Fleet SAC | 12.6 | | | | | | | Recreation impacts can be ruled out based on distance. Visitor survey data (Liley et al., 2022) indicates a potential zone of influence of around 7.3km and there were just 3 visitors from E. Devon. |
| Culm Grasslands SAC | 17.8 | | | | | | | Air quality and recreation impacts can be ruled out on the distance. |
| Dawlish Warren | 0.4 | | | ✓ | | | | Potential for recreation impacts due to ease of access by boat from Exmouth and ferry. |
| East Devon Heaths SAC/SPA | | ✓ | ✓ | ✓ | | | ✓ | Existing mitigation strategy in place for recreation impacts and 10km zone of influence established which extends to cover a large part of the District. Areas outside heaths could be used by SPA birds (Nightjar) and therefore potentially functionally-linked. Hydrological impacts ruled out as while the SAC qualifies for Southern Damselfly, these occur on rain-fed valley mires and site is on a plateau above any development locations. |

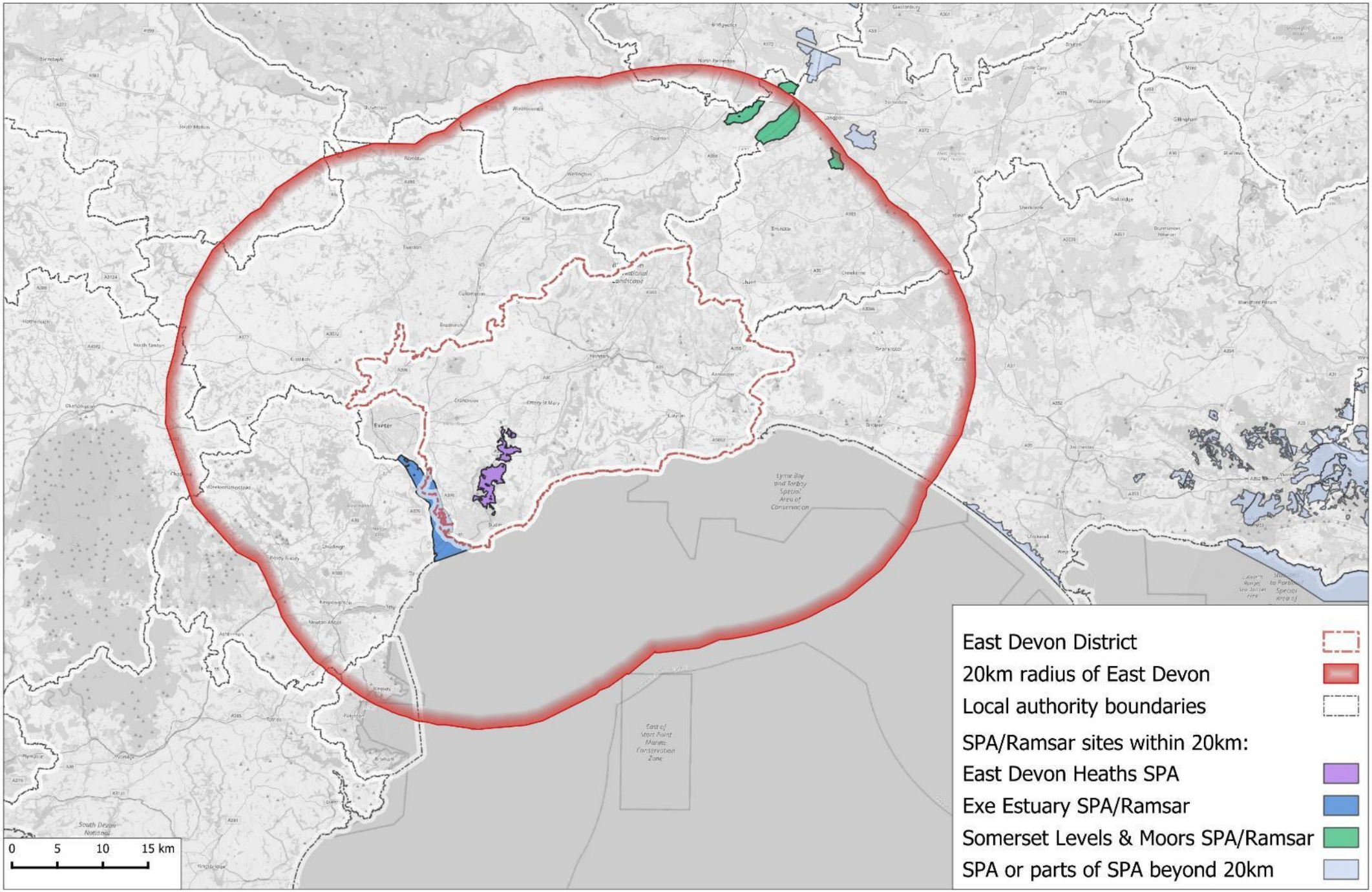
| Site | Distance (km) | General urban effects | Loss of supporting habitat | Recreation impacts | Water supply | Water Quality | Air Quality | Notes |
|---|---|---|---|---|---|---|---|---|
| Exe Estuary SPA/Ramsar | | ✓ | ✓ | ✓ | ✓ | | | Existing mitigation strategy in place for recreation impacts and 10km zone of influence established which extends to cover a large part of the District. Site within District and close to main settlements. No credible risks with respect to water quality (See Appendix 4) or air quality (see Appendix 5). Water supply a potential pathway as Wimbleball Reservoir (at head of River Exe) is main source of drinking water for East Devon. However, pathway probably of low risk given it is an estuary and classified/listed on the basis of birds, which feed on exposed mud. |
| Hestercombe House SAC | 16.1 | | | | | | | Site qualifies for Lesser Horseshoe Bats, which roost in the roof of the house. Given distance no impact pathways relevant. |
| Holme Moor & Clean Moor SAC | 14.5 | | | | | | | Small fen and Purple Moor Grass/Rush Pasture site well to the north of the district. |
| Lyme Bay and Torbay SAC | | | | | | | | The sea caves are potentially vulnerable to recreation impacts but these only occur around Torbay. Water quality from waste water unlikely to have an impact – eutrophication is identified as a low risk by Natural England in the supplementary conservation advice. |
| Quants SAC | 5.9 | | | | | | | Neutral grassland site that qualifies for Marsh Fritillary. Site is well to the north of the District, towards Wellington and Taunton. Impacts can be ruled out on distance and rural nature of site. |
| River Axe SAC | | | | ✓ | | ✓ | | Recreation possibly a risk as there is canoeing on the river and there is access to the river from a range of Public Rights of Way and roads. Fish spawning areas may be impacts by trampling and disturbance. Paddling and entering the water could increase turbidity. Water quality a current concern and SAC a focus for nutrient neutrality (see Appendix 4). No credible risk with respect to air quality (see Appendix 5). |

| Site | Distance (km) | General urban effects | Loss of supporting habitat | Recreation impacts | Water supply | Water Quality | Air Quality | Notes |
|---|---|---|---|---|---|---|---|---|
| Sidmouth to West Bay SAC | | ✓ | | ✓ | ✓ | | | Recreation impacts unlikely on steep slopes but annual vegetation of drift lines could be vulnerable to trampling impacts on beaches. Water quality could be relevant for any development in close proximity. No credible risk with respect to air quality (see Appendix 5). |
| South Dartmoor Woods SAC | 9.3 | | | | | | | Site is the other side of Exeter from East Devon and recreation impact pathway not relevant given the challenge of getting round Exeter and the distance. No credible risk with respect to air quality (see Appendix 5). |
| South Hams SAC | 11.4 | | | | | | | Exe Estuary creates a physical barrier and given distance involved, no impact pathways relevant. |
| West Dorset Alder Woods SAC | 12.6 | | | | | | | Well to the east and within the relatively isolated and rural valleys towards Dorchester. No impact pathways can be relevant. |
| Somerset Levels and Moors SPA/Ramsar | 13.8 | | | | | | | Distance means all impact pathways can be ruled out. No hydrological links to district. |

## Map 1: SACs within 20km



**Map 2: SPA/Ramsar sites**



# 3. Screening for Likely Significant Effects

3.1 This section is an initial screening of the policies of the Plan at this stage in the plan making.

3.2 The screening is the first step in the four-stage process of HRA. The screening for likely significant effects of a plan involves checking all aspects of the plan and identifying any areas of potential concern, which are then examined in more detail in the appropriate assessment (stage 2) of the HRA. The check for likely significant effects provides an initial test of the plan. It is undertaken to enable the plan maker as competent authority to do two things. Firstly, it narrows down and highlights those elements of the plan that may pose a risk to European sites. Secondly, where an option poses a risk but is a desired element of the plan, the screening exercise identifies where further assessment is necessary in order to determine the nature and magnitude of potential impacts on European sites and what could be done to avoid, cancel, reduce or eliminate those risks. Further assessment and evidence gathering after early screening may include, for example, the commissioning of additional survey work, modelling, researching scientific literature or setting out justifications in accordance with expert opinion.

## What constitutes a likely significant effect?

3.3 Where the screening identifies risks that cannot be avoided with simple clarifications, corrections or instructions for project level HRA, a more detailed assessment is undertaken to gather more information about the likely significant effects and give the necessary scrutiny to potential mitigation measures. This is the appropriate assessment stage of HRA.

3.4 A likely significant effect could be concluded on the basis of clear evidence of risk to European site interest, or there could be a scientific and plausible justification for concluding that a risk is present, even in the absence of direct evidence. The latter is an example of the precautionary approach, which is embedded through the HRA process. The precautionary principle should be applied at all stages in the HRA process and follows the principles established in domestic and EU case law.

3.5 The screening in this report looks at policies prior to any avoidance/reduction/mitigation measures in line with People Over Wind[16]; mitigation can only be considered at Appropriate Assessment stage. People Over Wind clarified the need to carefully explain actions taken at each HRA stage, particularly at the screening for likely significant effects stage. The Judgment highlights the need for clear distinction between the stages of HRA, and good practice in recognising the function of each. The screening for likely significant effects stage should function as a screening or checking stage (regardless of avoidance/reduction/mitigation measures), to determine whether further assessment is required. Assessing the nature and extent of potential impacts on European site interest features, and the robustness of mitigation options, should be done at the appropriate assessment stage.

## The screening

3.6 Allocations are shown in Map 3.

3.7 The screening for likely significant effects within Table 4 below provides the screening at this stage in the plan-making. The screening covers the whole plan. Policies are screened to check the various European sites and pathways identified in the previous section. Where risks are highlighted and there is a possibility of significant effects on European sites, further and more detailed appropriate assessment will be required. Inevitably there will be precaution in screening elements of the plan, as the purpose of screening for likely significant effects is to identify where there is either no possibility of an effect, or where there are uncertainties.

[16] People Over Wind: European Count Case C-323/17 People Over Wind & Peter Sweetman v Coillte Teoranta 12 April 2018.

**Map 3: Allocations**

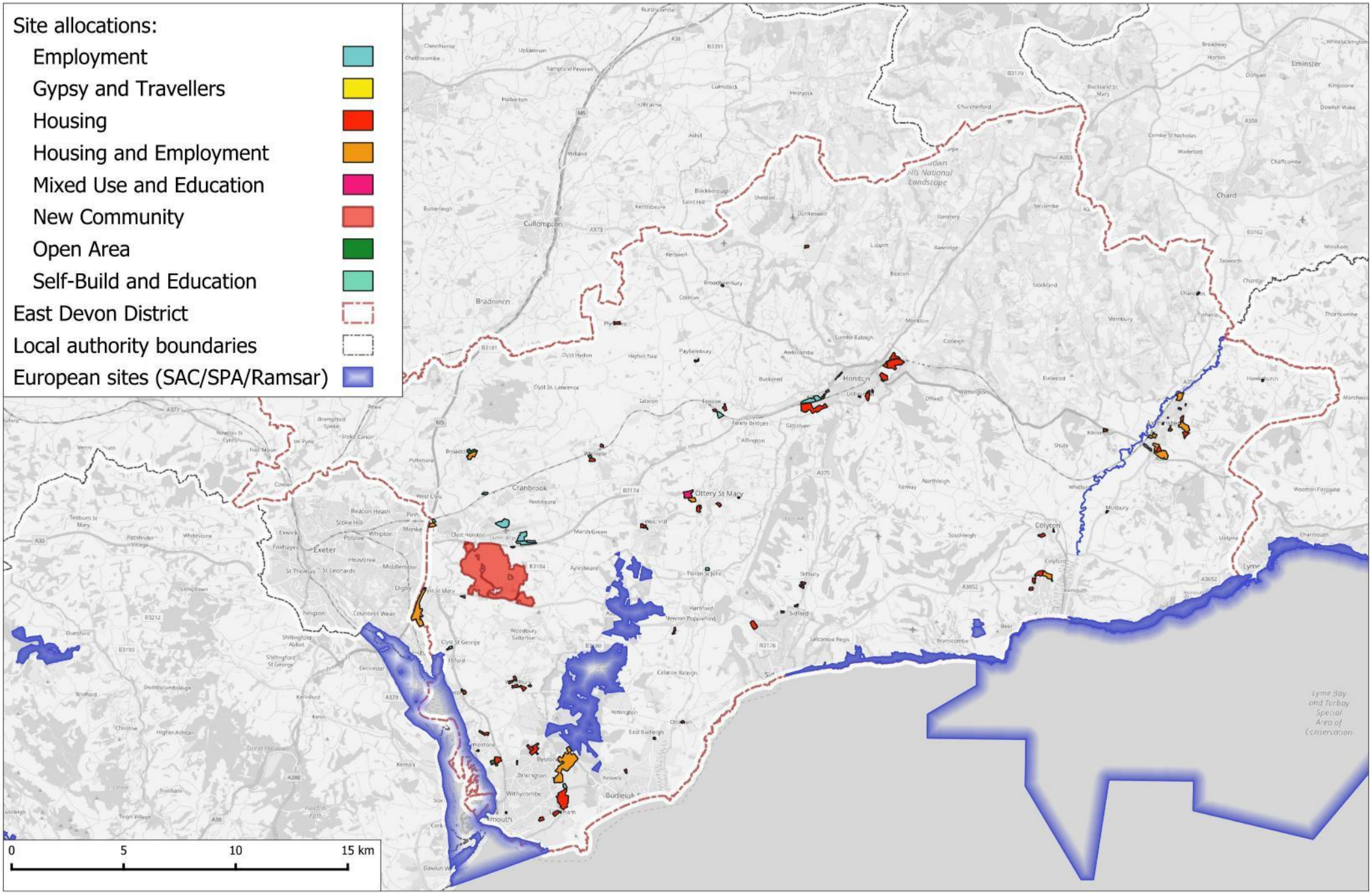


**Table 4: Initial screening of the Plan for likely significant effects. Orange shaded rows with bold text indicates policies that are screened in, alone or in-combination. Grey shading indicates chapter headings for ease of reference. Yellow highlights indicate text referring to minor changes to the plan wording that could be improved for later iterations of the plan.**

| Plan section/policy | Description | Initial LSE screening | Potential risks | Comments |
|---|---|---|---|---|
| Chapter 1. Introduction | | | | |
| Chapter 2. The vision | | | | |
| Chapter 3. The spatial strategy | | | | |
| SP01: Spatial Strategy | Sets general strategic context and directs development towards the most sustainable locations. | General policy. No LSE. | | Policy very strategic and while setting broad locations for development, sets no specific quantum of growth or detail. Policy is implemented through later policies in the Plan which are more specific and more appropriate to assess for their effects. |
| **SP02: Levels of future housing development** | **Sets overall level of housing provision (20,909 dwellings, 2020 – 2042)** | **LSE. Screened in.** | **General urban effects alone (Beer Quarry & Caves SAC, East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar); Loss of supporting habitat alone (Beer Quarry & Caves SAC, East Devon Heaths SAC/SPA); Recreation impacts alone (Dawlish Warren SAC, East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar, River Axe SAC, Sidmouth to West Bay SAC); Water supply alone (Exe Estuary SPA/Ramsar); Water quality alone (River Axe SAC); Air quality impacts alone (East Devon Heaths SAC/SPA).** | **Policy very strategic and does not set specific locations, but overall quantum of growth enough to trigger likely significant effects for virtually all European sites and pathways. Water supply issues triggered for the Exe Estuary SPA/Ramsar due to water supply for the area coming from the Wimbleball Reservoir, upstream of the Exe. Risks relate to the overall quantum of growth within the relevant water resource zone.** |
| **SP03: Housing requirement by Designated Neighbourhood Area** | **Policy gives housing requirement figures for Neighbourhood Areas for the purposes of neighbourhood planning** | **LSE. Screened in.** | **General urban effects alone (Beer Quarry & Caves SAC, East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar); Loss of supporting habitat alone (Beer Quarry & Caves SAC, East Devon Heaths SAC/SPA,); Recreation impacts alone (Dawlish Warren SAC, East Devon Heaths** | **Minimum housing requirements total several thousand new dwellings spread across a range of neighbourhoods.** |

| Plan section/policy | Description | Initial LSE screening | Potential risks | Comments |
|---|---|---|---|---|
| | | | **SAC/SPA, Exe Estuary SPA/Ramsar, River Axe SAC, Sidmouth to West Bay SAC); Water quality alone (River Axe SAC); Air quality impacts alone (East Devon Heaths SAC/SPA).** | |
| Chapter 4: Economic vision and strategy | | | | |
| **SP04: Employment provision and distribution strategy** | **Outlines the level of employment provision and the distribution of employment sites** | **LSE. Screened in** | **General urban effects alone (East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar); Loss of supporting habitat alone (Beer Quarry & Caves SAC, East Devon Heaths SAC/SPA); Water supply alone (Exe Estuary SPA/Ramsar); Water quality alone (River Axe SAC); Air quality impacts alone (East Devon Heaths SAC/SPA).** | **178ha of provision. Includes allocations within 400m of the East Devon Heaths SAC/SPA and Exe Estuary SPA/Ramsar, and therefore potential for urban effects. Seaton allocation at Harepath Road is adjacent to a pinch point for bats commuting from Beer Quarry and close to Lesser Horseshoe Bat roost site. Land at St. John's is directly adjacent to the East Devon Heaths and potential for loss of foraging habitat for Nightjar. None of the allocations in locations where bird interest from Exe Estuary might occur. Employment allocations unlikely to add to water quality risks for the River Axe but screened in on a precautionary basis. Risks for air quality from increased traffic.** |
| SP05: Development inside Settlement Boundaries | Cross references to Policies Map and supports development in principle within the boundaries | Policy listing general criteria No LSE. | | Development within settlement boundaries may have impacts that need to be assessed – this is best achieved through the relevant policies setting numbers and distribution of growth |

| Plan section/policy | Description | Initial LSE screening | Potential risks | Comments |
|---|---|---|---|---|
| SP06: Development beyond Settlement Boundaries | Strategic text on development outside of settlement boundary. | Policy listing general criteria. No LSE. | | |
| SP07: Delivery of infrastructure | Strategic policy requiring new development proposals to be supported by appropriate infrastructure | Policy listing general criteria. No LSE. | | |
| SP08: Phased delivery of Infrastructure and Services | Strategic policy ensuring developments that are brought forward in phases or in parcels by multiple developers are designed to ensure infrastructure and services are provided to the relevant boundaries | Policy listing general criteria. No LSE. | | |
| Chapter 5: Development at the West End | | | | |
| **WS01: Development of a second new community east of Exeter** | **Strategic policy establishing a new community of 10,000 new homes (8,000 of which are allocated in this plan). Allocation includes housing, employment, gypsy and traveller, town centre, social, community and education facilities and infrastructure.** | **LSE. Screened in.** | **Recreation effects alone (East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar); Air Quality alone (East Devon Heaths SAC/SPA).** | **Large volume of new housing in a vulnerable location in close proximity to the East Devon Heaths SAC/SPA and Exe Estuary SPA/Ramsar with risks relating to recreation and air quality. Loss of supporting habitat not a risk for the Exe Estuary SPA/Ramsar or East Devon Heaths SPA as site comprises arable fields that are too far from the estuary to provide roost/feeding areas for waterbirds and unlikely to provide foraging habitat for Nightjar** |

| Plan section/policy | Description | Initial LSE screening | Potential risks | Comments |
|---|---|---|---|---|
| WS02: Development within the Enterprise Zone | Strategic policy giving support for inward investment and development for business and allied uses. | Policy listing general criteria. No LSE. | | |
| WS03: Exeter Science Park | Strategic policy outlining uses for the Science park and other general criteria | Policy listing general criteria. No LSE. | | Policy is site specific but strategic in that it does not set any particular levels of development and simply information on which uses are acceptable. |
| **WS04: Land north of the Science Park** | **Strategic policy, allocation of 4.3ha for housing, small business use and supporting infrastructure.** | **LSE. Screened in.** | **Recreation impacts in-combination (East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar); Air quality impacts in-combination (East Devon Heaths SAC/SPA).** | **Allocation near Monkerton for housing and employment. Approximately 5km from Exe Estuary SPA/Ramsar and 8.5km from East Devon Heaths SAC/SPA.** |
| WS05: Exeter Airport and its future operation and development | Strategic policy supporting expansion and growth of airport and related businesses within the current operational boundaries. | Policy listing general criteria. No LSE. | | Any increase in traffic or flights could have implications for nearby sites, e.g. air quality and the East Devon Heaths SAC/SPA. However, policy simply outlines support for growth and expansion of the airport and airport related businesses and is too strategic for any impacts to be identified or assessed. |
| **WS06: Employment land east of airport** | **Strategic policy, allocation of 24.34ha land east of existing airport buildings.** | **LSE. Screened in.** | **Air quality impacts in-combination (East Devon Heaths SAC/SPA).** | **Site within relatively close proximity and with road connections across the East Devon Heaths SAC/SPA.** |
| **WS07: Employment land north of airport,** | **Strategic policy, allocation of 15.3ha of employment land.** | **LSE. Screened in.** | **Air quality impacts in-combination (East Devon Heaths SAC/SPA).** | **Site within relatively close proximity and with road connections across the East Devon Heaths SAC/SPA.** |

| Plan section/policy | Description | Initial LSE screening | Potential risks | Comments |
|---|---|---|---|---|
| adjoining Treasbeare | | | | |
| WS08: Employment land opposite airport buildings, south of A30 | Strategic policy, allocation of 1ha for small business use. | LSE. Screened in. | Air quality impacts in-combination (East Devon Heaths SAC/SPA). | Site within relatively close proximity and with road connections across the East Devon Heaths SAC/SPA. |
| WS09: Clyst Valley Regional Park | Strategic policy, allocation for regional park delivering green and blue infrastructure. | Screened in as a policy intended to avoid or reduce harmful effects on a European site. | Recreation impacts (Dawlish Warren, East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar); | Environmentally positive policy. Policy screened in (in accordance with *People Over Wind*) as SANG role a component of the policy which will deliver bespoke mitigation. Mitigation role needs to be considered as part of appropriate assessment for recreation. |
| WS10: Development next to the M5 and north of Topsham | Strategic policy, allocation of land near Topsham, for 596 homes as well as employment, education and supporting infrastructure. | LSE. Screened in. | Recreation effects in-combination (East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar); Air Quality in-combination (East Devon Heaths SAC/SPA). | Very close proximity (1.5km) to Exe Estuary SPA/Ramsar and to East Devon Heaths SAC/SPA (7.5km). |
| WS11: Gypsy and traveller site east of the M5 | Strategic policy, allocation of land for at least 5 pitches/gypsy and traveller development. | LSE. Screened in. | Recreation effects in-combination (East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar); Air Quality in-combination (East Devon Heaths SAC/SPA). | This site is 5.5km from Exe Estuary SPA/Ramsar and 8.5km from East Devon Heaths SAC/SPA. |
| WS12: Employment land at Sandygate, | Strategic policy, allocation for small business use. | LSE. Screened in. | Air quality impacts in-combination (East Devon Heaths SAC/SPA). | |

| Plan section/policy | Description | Initial LSE screening | Potential risks | Comments |
|---|---|---|---|---|
| between M5 and Clyst Road | | | | |
| WS13: Employment land at Lodge Trading Estate, Broadclyst | Strategic policy, allocation for employment use. | LSE. Screened in. | Air quality impacts in-combination (East Devon Heaths SAC/SPA). | |
| WS14: Employment land south of Langdon's Business Park, Clyst St. Mary | Strategic policy, allocation for employment use. | LSE. Screened in. | Air quality impacts in-combination (East Devon Heaths SAC/SPA). | |
| WS15: Employment land at Darts Farm | Strategic policy, allocation for small business units. | LSE. Screened in. | Air quality impacts in-combination (East Devon Heaths SAC/SPA). | |
| Chapter 6: Development in the Towns and Village | | | | |
| SD01: Exmouth and its development locations | Strategic policy, allocation of 11 sites for development in or around Exmouth. | LSE. Screened in. | General urban effects alone (East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar); Loss of supporting habitat alone (East Devon Heaths SAC/SPA); Recreation impacts in-combination (Dawlish Warren SAC, East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar); Air quality impacts in-combination (East Devon Heaths SAC/SPA). | Policy includes a number of allocations. Given the location of the town, all allocations are close to the Exe Estuary SPA/Ramsar and the East Devon Heaths SAC/SPA. Land at St. John's abuts the East Devon Heaths SAC/SPA. |
| SD02: Axminster and development locations | Strategic policy, allocation of 13 sites for development in or around Axminster. | LSE. Screened in. | Recreation impacts alone (River Axe SAC), in-combination (Sidmouth to West Bay SAC); water quality alone (River Axe SAC). | Policy allocates a number of locations all in close proximity to the River Axe. Land at Chard Road and the Axminster Carpet site are both very close (well within 100m) of the SAC boundary, bringing particular risks. |

| Plan section/policy | Description | Initial LSE screening | Potential risks | Comments |
|---|---|---|---|---|
| | | | | Axminster is approximately 12km from Beer Quarry & Caves SAC and outside the landscape connectivity zone for the SAC set out in the guidance (Jennings & Youngman, 2022). |
| SD03: Honiton and its development allocations | Strategic policy, allocation of sites for development in Honiton. | LSE. Screened in. | Recreation effects in-combination (East Devon Heaths SAC/SPA); Air Quality in-combination (East Devon Heaths SAC/SPA). | Land west of Hayne Lane is within 10km of East Devon Heaths SAC/SPA. Honiton is outside the landscape connectivity zone for the Beer Quarry and Caves SAC set out in the guidance (Jennings & Youngman, 2022) and also too far from the Sidmouth to West Bay SAC for recreation impacts to be a concern. |
| SD04: Ottery St Mary and its development allocations | Strategic policy, allocation of sites for development in Ottery St Mary. | LSE. Screened in. | Recreation effects in-combination (East Devon Heaths SAC/SPA, Sidmouth to West Bay SAC); Air Quality in-combination (East Devon Heaths SAC/SPA). | 288 new homes allocated for Ottery St Mary and 1.25 hectares for employment. Approximately 5km from East Devon Heaths SAC/SPA. Ottery St. Mary is outside the landscape connectivity zone for the Beer Quarry and Caves SAC set out in the guidance (Jennings & Youngman, 2022). |
| SD05 Seaton and its development allocations | Strategic policy, allocation of sites for development in Seaton. | LSE. Screened in. | Loss of supporting habitat/functionally linked land alone (Beer Quarry & Caves SAC); Recreation effects in-combination (Sidmouth to West Bay SAC). | Allocations for housing and employment. Policy identifies the need for avoidance/mitigation/ compensation measures to be identified to ensure no adverse effects to Beer Quarry & Caves SAC (3km away). Seaton is beyond the |

| Plan section/policy | Description | Initial LSE screening | Potential risks | Comments |
|---|---|---|---|---|
| | | | | zone of influence for the East Devon Heaths SAC/SPA |
| SD06: Sidmouth and its development allocations | Strategic policy, allocation of sites for development in Sidmouth. | LSE. Screened in. | Loss of supporting habitat/functionally linked land alone (Beer Quarry & Caves SAC); Recreation effects in-combination (East Devon Heaths SAC/SPA, Sidmouth to West Bay SAC); Air Quality effects in-combination (East Devon Heaths SAC/SPA) | Less than 5km to both East Devon Heaths SAC/SPA and Sidmouth to West Bay SAC. |
| SD07: Development allocations at Broadclyst | Strategic policy, allocation of sites for development in Broadclyst. | LSE. Screened in. | Recreation impacts in-combination (East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar); Air quality impacts in-combination (East Devon Heaths SAC/SPA). | |
| SD08: Development allocations at Budleigh Salterton | Strategic policy, allocation of sites for development in Budleigh Salterton. | LSE. Screened in. | Recreation impacts in-combination (East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar); Air quality impacts in-combination (East Devon Heaths SAC/SPA). | |
| SD09: Development allocations at Colyton | Strategic policy, allocation of sites for development in Colyton. | LSE. Screened in. | Loss of supporting habitat/functionally linked land alone (Beer Quarry & Caves SAC); Recreation effects in-combination (Sidmouth to West Bay SAC); | |
| SD10: Development allocations at Lympstone | Strategic policy, allocation of sites for development in Lympstone. | LSE. Screened in. | General urban effects alone (Exe Estuary SPA/Ramsar); Recreation impacts in-combination (Dawlish Warren SAC, East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar); Air quality impacts in-combination (East Devon Heaths SAC/SPA). | 3 allocations, closest of which (Little Paddocks) is around 250m from the Exe Estuary SPA/Ramsar. Checks on aerial imagery indicate none of the sites are on potential supporting habitat for the SPA/Ramsar. |
| SD11: Development allocations at Woodbury | Strategic policy, allocation of sites for development in Woodbury. | LSE. Screened in. | Recreation impacts in-combination (Dawlish Warren SAC, East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar); Air quality impacts in-combination (East Devon Heaths SAC/SPA). | 5 allocations. Closest is around 1300m from the East Devon Heaths SAC/SPA so beyond the distance urban effects (such as cats) would be a risk |

| Plan section/policy | Description | Initial LSE screening | Potential risks | Comments |
|---|---|---|---|---|
| SD12: Development allocation at Broadhembury | Strategic policy, allocation of site for development in Broadhembury. | Policy the effects of which cannot undermine the conservation objectives either alone or in combination with other plans or projects | | Single allocation of 10 homes. Broadhembury is outside the zones of influence for recreation impacts for the East Devon Heaths SAC/SPA and for the Exe Estuary SPA/Ramsar. The site is outside the catchment for the Axe Estuary and beyond the distance that traffic impacts for the East Devon Heaths SAC/SPA or recreation impacts to the coast could occur. |
| **SD13: Development allocation at Chardstock** | **Strategic policy, allocation of site for development in Chardstock.** | **LSE. Screened in.** | **Water quality in-combination (River Axe SAC).** | **Allocation is within the catchment for the Axe.** |
| **SD14: Development (Neighbourhood Plan led) at Clyst St Mary** | **Strategic policy for development of at least 72 dwellings to be made through the Neighbourhood Plan.** | **LSE. Screened in.** | **Recreation impacts in-combination (East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar); Air quality impacts in-combination (East Devon Heaths SAC/SPA).** | |
| SD15: Development allocation at Dunkeswell | Strategic policy, allocation for 43 homes. | Policy the effects of which cannot undermine the conservation objectives either alone or in combination with other plans or projects | | Dunkeswell is outside the zones of influence for recreation impacts for the East Devon Heaths SAC/SPA and for the Exe Estuary SPA/Ramsar. The allocation is outside the catchment for the Axe Estuary and beyond the distance that traffic impacts for the East Devon Heaths SAC/SPA or recreation impacts to the coast could occur. |

| Plan section/policy | Description | Initial LSE screening | Potential risks | Comments |
|---|---|---|---|---|
| SD16: Development allocation at East Budleigh | Strategic policy, allocation for 22 homes. | LSE. Screened in. | Recreation impacts in-combination (East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar); Air quality impacts in-combination (East Devon Heaths SAC/SPA). | |
| SD17: Development allocations at Exton | Strategic policy, allocation of 2 sites at Exton. | LSE. Screened in. | Recreation impacts in-combination (East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar); Air quality impacts in-combination (East Devon Heaths SAC/SPA). | Allocations are both around 430m from the Exe Estuary SPA/Ramsar and therefore too far for urban effects. Checks on aerial imagery indicate neither are potential supporting habitat for the SPA/Ramsar. |
| SD18: Development allocations at Feniton | Strategic policy, allocation of 3 sites at Feniton. | LSE. Screened in. | Recreation impacts in-combination (East Devon Heaths SAC/SPA); Air quality impacts in-combination (East Devon Heaths SAC/SPA). | |
| SD19: Development allocation at Hawkchurch | Strategic policy, single allocation of 12 dwellings at Hawkchurch. | LSE. Screened in. | Water quality in-combination (River Axe SAC). | Allocation is within the catchment for the Axe |
| SD20: Development allocations at Kilmington | Strategic policy, two allocations at Kilmington. | LSE. Screened in. | Loss of supporting habitat/functionally linked land alone (Beer Quarry & Caves SAC); Recreation impacts alone (River Axe SAC), in-combination (Sidmouth to West Bay SAC); Water quality in-combination (River Axe SAC). | Kilmington is within the sustenance zone for Lesser Horseshoe Bat and Bechstein's Bat in the guidance for Beer Quarry & Caves SAC. Recreation impacts for Axe triggered as there is a byway open to all traffic close to the allocations that provides access directly to the SAC. |
| SD21: Development allocation at Musbury | Strategic policy for a single allocation (22 homes plus employment use) at Musbury. | LSE. Screened in. | Recreation effects in-combination (Sidmouth to West Bay SAC). | |

| Plan section/policy | Description | Initial LSE screening | Potential risks | Comments |
|---|---|---|---|---|
| **SD22: Development allocations at Newton Poppleford** | **Strategic policy, allocation of sites for development in Newton Poppleford.** | **LSE. Screened in.** | **Recreation effects in-combination (East Devon Heaths SAC/SPA, Sidmouth to West Bay SAC);; Air Quality effects in-combination (East Devon Heaths SAC/SPA)** | |
| **SD23: Development allocation at Otterton** | **Strategic policy, single allocation of 10 dwellings at Otterton.** | **LSE. Screened in.** | **Recreation impacts in-combination (East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar); Air quality impacts in-combination (East Devon Heaths SAC/SPA).** | |
| **SD24: Development allocation at Payhembury** | **Strategic policy, single allocation of 15 dwellings at Payhembury.** | **LSE. Screened in.** | **Recreation impacts in-combination (East Devon Heaths SAC/SPA); Air quality impacts in-combination (East Devon Heaths SAC/SPA).** | |
| SD25: Development allocation at Plymtree | Strategic policy, single allocation of 30 dwellings at Plymtree. | Policy the effects of which cannot undermine the conservation objectives either alone or in combination with other plans or projects | | Allocation is outside the zones of influence for recreation impacts for the East Devon Heaths SAC/SPA and for the Exe Estuary SPA/Ramsar. The site is outside the catchment for the Axe Estuary and beyond the distance that traffic impacts for the East Devon Heaths SAC/SPA or recreation impacts to the coast could occur. |
| **SD26: Development allocation at Sidbury** | **Strategic policy, single allocation of 43 dwellings at Sidbury.** | **LSE. Screened in.** | **Loss of supporting habitat/functionally linked land alone (Beer Quarry & Caves SAC); Recreation effects in-combination (East Devon Heaths SAC/SPA, Sidmouth to West Bay SAC); Air Quality effects in-combination (East Devon Heaths SAC/SPA)** | **Policy flags the Beer Quarry and Caves SAC and need for suitable avoidance or mitigation measures.** |

| Plan section/policy | Description | Initial LSE screening | Potential risks | Comments |
|---|---|---|---|---|
| **SD27: Development allocation at Tipton St John** | **Strategic policy, single allocation of 5 self-build homes and a new primary school.** | **LSE. Screened in.** | **Recreation effects in-combination (East Devon Heaths SAC/SPA, Sidmouth to West Bay SAC); Air Quality effects in-combination (East Devon Heaths SAC/SPA).** | |
| **SD28: Development allocations at West Hill** | **Strategic policy, 2 allocations totalling 64 dwellings.** | **LSE. Screened in.** | **Recreation effects in-combination (East Devon Heaths SAC/SPA, Sidmouth to West Bay SAC); Air Quality in-combination (East Devon Heaths SAC/SPA).** | |
| **SD29: Development allocations at Whimple** | **Strategic policy, 2 allocations totalling 83 dwellings.** | **LSE. Screened in.** | **Recreation effects in-combination (East Devon Heaths SAC/SPA, Sidmouth to West Bay SAC); Air Quality in-combination (East Devon Heaths SAC/SPA).** | |
| Chapter 5. Mitigating Climate Change | | | | |
| CC01: Climate Emergency | Strategic policy with target for East Devon to be carbon-neutral by 2040. | Policy listing general criteria. No LSE. | | |
| CC02: Net-Zero carbon development | Strategic policy with requirement for developments to be net-zero and 'future proofed' for the effects of climate change. | Policy listing general criteria. No LSE. | | |
| CC03: Promoting low carbon and renewable energy | Strategic text to support proposals for low carbon and renewable energy generation as long as certain criteria are met. | General policy that will not lead to development. No LSE. | | Proposals for wind farms may have a risk for bat and bird features of qualifying sites, however policy is general, does not cite a particular quantum or locations and risks are removed with the policy setting a requirement that any significant adverse risks must be mitigated and |

| Plan section/policy | Description | Initial LSE screening | Potential risks | Comments |
|---|---|---|---|---|
| | | | | proposals only being allowed within the defined areas shown on the Policies map. |
| CC04: Energy storage | Strategic policy, setting out support for energy storage facilities as long as particular criteria are met. | General policy that will not lead to development. No LSE. | | |
| CC05: Heat Networks | Strategic policy ensuring heat networks will be installed for larger developments or expanded where one exists already. | General policy that will not lead to development. No LSE. | | |
| CC06: Embodied carbon | Strategic policy requiring proposals to demonstrate actions taken to minimise embodied carbon. | General policy that will not lead to development. No LSE. | | |
| Chapter 6: Adapting to Climate Change | | | | |
| AR01: Flooding | Strategic policy requiring development to minimise the impact of climate change and reduce the likelihood flooding. | General policy that will not lead to development. No LSE. | | |
| AR02: Water efficiency | Strategic policy requiring new dwellings to achieve the standard of 110 litres per day for water efficiency. | General policy that will not lead to development. No LSE. | | Positive policy that will potentially reduce water use and ensure impacts of new development are minimise (although not bespoke mitigation in relation to European sites). |

| Plan section/policy | Description | Initial LSE screening | Potential risks | Comments |
|---|---|---|---|---|
| AR03: Coastal Change Management Areas (CCMAs) | Policy ensuring that new residential development or conversion of existing buildings will not be permitted within CCMAs. | Policy listing general criteria. No LSE. | | |
| AR04: Relocation of uses affected by coastal change | Policy supporting relocation/replacement of buildings where certain criteria are met. | Policy listing general criteria. No LSE. | | |
| AR05: Development affecting coastal erosion | Policy to support the promotion of coastal management proposals provided they do not have unacceptable adverse economic, social or environmental impact. | General policy that will not lead to development. No LSE. | | Policy seeks to balance the need for protective measures to reduce rates of coastal change with the integrity of the World Heritage Site. |
| Chapter 7. Meeting Housing Needs | | | | |
| HN01: Housing to address needs | Strategic policy outlining the range of housing needs, such as by age (retirement homes and first homes for younger generations), affordable housing, private accommodation, using up an to date Local Housing Needs Assessment of the district. | General policy that will not lead to development. No LSE. | | |
| HN02: Affordable housing | Strategic policy giving the minimum requirements of affordable housing, rented | Policy listing general | | |

| Plan section/policy | Description | Initial LSE screening | Potential risks | Comments |
|---|---|---|---|---|
| | housing, first homes and any other conditions to consider per development site. | criteria. No LSE. | | |
| HN03: Housing to meet the needs of older people | Policy aiming to widen housing choices for older people in East Devon by securing a diverse supply of market and affordable housing, including specialist accommodation. | Policy listing general criteria. No LSE. | | |
| HN04: Accessible and Adaptable Housing | Policy ensures new homes in East Devon are accessible and adaptable, meeting current and future needs by adhering to specific building regulations. | Policy listing general criteria. No LSE. | | |
| HN05: Self-Build and custom build housing | Policy supports custom and self-build housing to meet diverse housing needs, encourage high-quality design, and provide opportunities for individuals to build their own homes. | Policy listing general criteria. No LSE. | | |
| HN06: Sub-dividing or replacing existing buildings and dwellings | Policy supports the sub-division and replacement of existing dwellings to meet housing needs, reduce carbon footprints, and reuse existing | Policy listing general criteria. No LSE. | | |

| Plan section/policy | Description | Initial LSE screening | Potential risks | Comments |
|---|---|---|---|---|
| | resources within established communities. | | | |
| HN07: Householder Annexes, Extensions, Alterations and Outbuildings | Policy supports householder annexes, extensions, alterations, and outbuildings to meet changing needs while maintaining the character and sustainability of existing dwellings. | Policy listing general criteria. No LSE. | | |
| HN08: Hostels and Houses in Multiple Occupation (HMOs) | Policy outlining the criteria for converting a residential dwelling to multi-occupancy. | Policy listing general criteria. No LSE. | | |
| HN09: Gypsy and traveller sites | Policy ensures the provision and safeguarding of sites for Gypsies, Travellers, and Travelling Showpeople, addressing their accommodation needs while integrating sites into the community and landscape. | Policy listing general criteria. No LSE. | | |
| HN10: Rural housing exception sites | Strategic policy supporting rural exception site housing proposals to provide affordable housing for local communities, ensuring developments are well-related to | Policy listing general criteria. No LSE. | | |

| Plan section/policy | Description | Initial LSE screening | Potential risks | Comments |
|---|---|---|---|---|
| | settlements and meet proven needs. | | | |
| HN11: Housing for rural workers | Policy supports housing for rural workers outside settlement boundaries, ensuring it meets the needs of rural businesses while minimizing environmental impacts. | Policy listing general criteria. No LSE. | | |
| Chapter 9. Supporting the Economy and Town Centres | | | | |
| SE01: Employment development within settlement boundaries | Policy addressing the need for employment land within settlement boundaries, supporting self-containment and reflecting the settlement hierarchy. | Policy that could not have any conceivable effect on a site No LSE. | | |
| SE02: Employment development in the countryside | Policy supporting the intensification and extension of existing employment businesses in the countryside, focusing on reusing or adapting existing buildings to minimise new development. | Policy listing general criteria. No LSE. | | |
| SE03: Farm diversification | Policy supporting employment growth on existing rural sites while protecting the countryside's character. | Policy listing general criteria. No LSE. | | |

| Plan section/policy | Description | Initial LSE screening | Potential risks | Comments |
|---|---|---|---|---|
| | Outlines the criteria for farm diversification and expansion. | | | |
| SE04: Resisting the loss of employment sites | Policy aims to resist the loss of employment sites to other uses, ensuring that land designated for employment remains available to support economic growth and local job opportunities. | Policy listing general criteria. No LSE. | | |
| SE05: Employment and Skills Statements | Policy requiring major developments to complete an Employment and Skills plan and provide an Employment and Skills Statement. | Policy listing general criteria. No LSE. | | |
| SE06: Town centre hierarchy | Strategic policy setting the relevance of the hierarchy of town centres in East Devon, prioritising tier one and two centres for main town centre uses. | Policy listing general criteria. No LSE. | | |
| SE07: Town centre development, sequential approach and impact assessment | Policy supporting the development of town centres in East Devon, enhancing their role as sustainable shopping and leisure destinations. | Policy that could not have any conceivable effect on a site No LSE. | | |
| SE08: Local shops and services | Policy supporting the development of new shops | Policy that could not have | | |

| Plan section/policy | Description | Initial LSE screening | Potential risks | Comments |
|---|---|---|---|---|
| | and services within tier 1-4 settlements, villages, and neighbourhood centres, ensuring they enhance the local retail or service role and are accessible by walking and cycling. | any conceivable effect on a site No LSE. | | |
| SE09: Rural shops outside of towns and villages | Policy supports retail development in rural areas outside towns and villages, provided it directly relates to an existing rural business and meets specific criteria to protect town centres and local shops. | Policy that could not have any conceivable effect on a site No LSE. | | |
| SE10: Sustainable Tourism | Policy aims to secure a high-quality, sustainable tourism experience in East Devon, benefiting local communities and businesses while conserving the district's natural beauty, wildlife, and cultural heritage. | Policy listing general criteria. No LSE. | | There could be risks associated with tourism growth e.g. with respect to water quality or recreation. Policy however sets no quantum of growth or specific locations. |
| SE11: Holiday accommodation parks in designated landscapes | Policy restricts new holiday accommodation parks in East Devon's most sensitive landscapes, allowing only extensions or ancillary facilities on existing sites under | Policy listing general criteria. No LSE. | | |

| Plan section/policy | Description | Initial LSE screening | Potential risks | Comments |
|---|---|---|---|---|
| | specific conditions to protect the environment and local communities. | | | |
| Chapter 9: High Quality Design | | | | |
| DS01: Design and local distinctiveness | Strategic policy ensuring new development and refurbishment of existing buildings are of high-quality design and locally distinctive, aligning with local and national design guidance. | Policy listing general criteria. No LSE. | | |
| DS02: Housing density and efficient use of land | Policy ensuring residential development optimises site density while conserving or enhancing the area's character and making efficient use of land. | Policy that could not have any conceivable effect on a site No LSE. | | Minimum density standards yet to be determined. |
| DS03: Display of advertisements | Policy ensuring that advertisements are appropriately positioned, safe, sympathetic to the area's character, and designed with compatible colours and materials. | Policy that could not have any conceivable effect on a site No LSE. | | |
| DS04: Green and blue infrastructure | Policy ensuring that development in East Devon delivers high-quality, multi-functional Green and Blue | Policy that could not have any conceivable | | Positive policy that may play incidental role in mitigating recreation impacts to European sites. |

| Plan section/policy | Description | Initial LSE screening | Potential risks | Comments |
|---|---|---|---|---|
| | Infrastructure in line with Natural England's Green Infrastructure Framework. | effect on a site No LSE. | | |
| Chapter 10: Sustainable Transport and Communications | | | | |
| TR01: Prioritising walking, wheeling, cycling, and public transport | Strategic policy prioritising walking, wheeling, cycling, and public transport for short local journeys and as part of longer journeys. | Policy that could not have any conceivable effect on a site No LSE. | | |
| TR02: Protecting transport sites and routes | Strategic policy, supporting the delivery and protection of sites and routes critical for developing infrastructure to widen transport choice and facilitate large-scale development. | Policy that could not have any conceivable effect on a site No LSE. | | |
| TR03: Travel plans, transport statements, transport assessments | Policy requiring requires developments likely to generate significant vehicle movements to be supported by a transport statement or assessment and a travel plan to ensure sustainable travel arrangements. | Policy that could not have any conceivable effect on a site No LSE. | | |
| TR04: Parking standards | Policy sets minimum parking standards for new residential and employment | Policy that could not have any conceivable | | |

| Plan section/policy | Description | Initial LSE screening | Potential risks | Comments |
|---|---|---|---|---|
| | developments, considering car and cycle parking requirements to promote sustainable transport and reduce emissions | effect on a site No LSE. | | |
| TR05: Aerodrome safeguarded areas and Public Safety Zones | Policy ensuring that developments within aerodrome safeguarded areas and Public Safety Zones do not compromise the safe operation of protected aerodromes or public safety. | Policy that could not have any conceivable effect on a site No LSE. | | |
| TR06: Digital Connectivity | Policy ensuring that major developments have access to superfast broadband and high-quality communications infrastructure, supporting economic growth and social well-being. | Policy that could not have any conceivable effect on a site No LSE. | | |
| TR07: Wireless connectivity and telecoms infrastructure | Policy ensuring proposals accord with principles of good practice for wireless network development and outlining the criteria for permission. | Policy that could not have any conceivable effect on a site No LSE. | | |
| Chapter 11: Our Outstanding Landscape | | | | |
| OL01: Landscape features | Strategic policy protecting East Devon's landscape, countryside, and rural | General environmental policy. No LSE. | | Environmentally positive policy that will protect rural areas from development. |

| Plan section/policy | Description | Initial LSE screening | Potential risks | Comments |
|---|---|---|---|---|
| | areas from harmful development. Development is permitted only if a proportionate Landscape Appraisal demonstrates it will protect and enhance valued landscape attributes and special features. | | | |
| OL02: National Landscapes (Areas of Outstanding Natural Beauty) | Strategic policy ensuring the highest level of protection for the landscape and scenic beauty of National Landscapes (NLs) in East Devon, including the Heritage Coast. | General environmental policy. No LSE. | | |
| OL03: Coastal Preservation Areas | Strategic policy designating land around the coast and estuaries of East Devon as a Coastal Preservation Area, protecting its undeveloped and open status while supporting appropriate proposals that increase public access to the coast. | General environmental policy. No LSE. | | |
| OL04: Areas of strategic visual importance | Policy ensuring that development proposals preserve the visual integrity, identity, and | General environmental policy. No LSE. | | |

| Plan section/policy | Description | Initial LSE screening | Potential risks | Comments |
|---|---|---|---|---|
| | scenic quality of East Devon by conserving and enhancing key views and landmarks. | | | |
| OL05: Green wedges | Policy restricting development within green wedges to prevent settlement coalescence and maintain the individual character and identity of settlements | General environmental policy. No LSE. | | |
| OL06: Land of Local Amenity Importance or Local Green Space | Policy gives added protection against development to specific locally valued green areas or open spaces, including those which are identified during the period of the Local Plan. | General environmental policy. No LSE. | | |
| OL08: Contaminated land | Policy requires a contaminated land assessment for development sites where contamination is anticipated, ensuring safe remediation and mitigation. | General environmental policy. No LSE. | | |
| OL09: Potentially hazardous developments and notifiable installations | Policy ensures that development within notified consultation zones around hazardous | General environmental policy. No LSE. | | |

| Plan section/policy | Description | Initial LSE screening | Potential risks | Comments |
|---|---|---|---|---|
| | installations poses no health and safety risks. | | | |
| OL10: Control of Pollution | Policy prevents development that would result in unmitigated pollution, protecting the environment and public health | General environmental policy. No LSE. | | Policy does make specific mention of wildlife sites, noting European designated sites and species. However, this is too general to be taken into account as mitigation and is therefore screened in (following *People Over Wind*). |
| OL11: Development on high quality agricultural land | policy restricts development on the best and most versatile agricultural land (Grades 1, 2, and 3a) unless there is an overriding need and no suitable lower-grade land is available | Policy that could not have any conceivable effect on a site No LSE | | |
| Chapter 12: Our Outstanding Biodiversity and Geodiversity | | | | |
| PB01: Protection of Internationally and nationally important wildlife sites | Strategic policy which clarifies existing legislation and government guidance, detailing when impacts may be permitted, expectations for biodiversity enhancement, and the designations included within the policy scope. | General environmental policy. No LSE. | | Policy related to European sites, however, it is too general to be taken into account as mitigation and is therefore screened out (following *People Over Wind*). |
| PB02: Protection of regionally and | Policy provides additional detail on permissible impacts and biodiversity | General environmental policy. No LSE. | | Environmentally positive policy ensuring protection to wider countryside sites outside National Network. |

| Plan section/policy | Description | Initial LSE screening | Potential risks | Comments |
|---|---|---|---|---|
| locally important wildlife sites | enhancement expectations. | | | |
| PB03: Protection of irreplaceable habitats and important features | Proposals that will adversely affect important habitats will be refused, unless in exceptional circumstances. Important habitats include hedgerows and ancient woodland, for example. | General environmental policy. No LSE. | | Environmentally positive policy ensuring protection to wider countryside sites outside National Network. |
| **PB04: Policy – Habitats Regulations Assessment** | **Strategic policy setting out need for HRA and mitigation requirements for particular European sites.** | **Policy intended to avoid or reduce harmful effect to European sites. Screened in.** | **Mitigation and site-specific wording relates to urban effects (East Devon Heaths SPA), loss of supporting habitat (Beer Quarry and Caves SAC), recreation impacts (Exe Estuary SPA/Ramsar, East Devon Heaths SAC/SPA and Dawlish Warren SAC), water quality (River Axe SAC) and air quality impacts (East Devon Heaths SAC/SPA/Ramsar).** | **Safeguarding / protective policy that is intended to avoid or reduce harmful effects to a European site.** |
| PB05: Biodiversity Net Gain | Strategic policy setting out requirements for Biodiversity Net Gain. | General environmental policy. No LSE. | | Environmentally positive policy expected to have general positive benefits for biodiversity. |
| PB06: Local Nature Recovery Strategy and Nature Recovery Network | Strategic policy that supports proposals that enhance existing Nature Recovery Networks (NRNs) and features within them, expands NRN areas, and improvements in landscape-scale connectivity of ecological features. | General environmental policy. No LSE. | | Likely to be beneficial to European sites through ensuring connectivity. |

| Plan section/policy | Description | Initial LSE screening | Potential risks | Comments |
|---|---|---|---|---|
| PB07: Ecological enhancement and biodiversity in the built environment | Policy promotes wildlife enhancement in new developments by requiring features that support biodiversity, such as bird and bat boxes, hedgehog-friendly fencing, and suitable nesting sites. | General environmental policy. No LSE. | | Positive policy likely to benefit species associated with urban environments. |
| PB08: Tree, hedges and woodland on development sites | Policy setting out requirements around tree protection and tree planting. | General environmental policy. No LSE. | | |
| PB09: Monitoring requirements for new planting schemes | Policy setting requirements for monitoring and inspection of new planting. | Policy that could not have any conceivable effect on a site No LSE. | | |
| PB10: Protection and enhancement of the Jurassic Coast World Heritage site | Policy setting out assessment requirements in relation to the Jurassic World Heritage Site. | General environmental policy. No LSE. | | |
| PB11: Protection of designated geological sites | Policy ensures protection for nationally designated geological sites, such as Sites of Special Scientific Interest (SSSIs), from adverse impacts of development. | General environmental policy. No LSE. | | |

| Plan section/policy | Description | Initial LSE screening | Potential risks | Comments |
|---|---|---|---|---|
| PB12: Regionally important geological and geomorphological sites | Policy providing protection for Regionally Important Geological and Geomorphological Sites (RIGS) from adverse impacts of development, ensuring their scientific and educational value is maintained. | General environmental policy. No LSE. | | |
| | | | | |
| Chapter 13. Open Space and Sports and Recreation | | | | |
| OS01: Access to open space and recreation facilities | Policy aims to align open space and recreation provision with new development and address current deficits. | Policy that could not have any conceivable effect on a site No LSE. | | |
| OS02: Sport, recreation and open space provision in association with development | Policy sets quantified open space standards based on Fields in Trust guidelines. | Policy listing general criteria. No LSE. | | |
| OS03: Location of facilities for sport and recreation and open spaces | Policy supports the provision of new and enhanced open spaces, sports facilities, and allotments within or near urban areas, ensuring they are accessible and compatible with neighbouring uses. | Policy that could not have any conceivable effect on a site No LSE. | | Policy could have incidental benefit for European sites through deflecting recreational use. However, policy is general and not specific mitigation requirements and therefore does not need to be considered at appropriate assessment (after *People Over Wind*). |

| Plan section/policy | Description | Initial LSE screening | Potential risks | Comments |
|---|---|---|---|---|
| OS04: New allotments and avoiding the loss of existing ones | Policy supports the creation of new allotments and protects existing ones, ensuring they are well-located and avoid adverse impacts. | Policy listing general criteria. No LSE. | | |
| OS05: Leisure and recreation developments in the countryside | Policy supports the provision of outdoor recreation facilities in the countryside and on the coast, ensuring they are appropriately scaled and located. | Policy listing general criteria. No LSE. | | could have incidental benefit for European sites through deflecting recreational use. However, policy is general and not specific mitigation requirements and therefore does not need to be considered at appropriate assessment (after *People Over Wind*). |
| Chapter 14. Our Outstanding Historic Environment | | | | |
| HE01: Historic Environment | Strategic policy ensuring new developments consider the significance of heritage assets, promoting their conservation and viable use while enhancing local character and distinctiveness. | General policy that will not lead to development. No LSE. | | |
| HE02: Listed buildings | Policy ensures that any development affecting listed buildings conserves and enhances their heritage significance, respecting their architectural and historic features. | Policy listing general criteria. No LSE. | | |

| Plan section/policy | Description | Initial LSE screening | Potential risks | Comments |
|---|---|---|---|---|
| HE03: Conservation Areas | Policy ensures that development within or affecting Conservation Areas conserves or enhances their special interest, character, setting, and appearance. | General policy that will not lead to development. No LSE. | | |
| HE04: Archaeology and Scheduled Monuments | Policy protects Scheduled Monuments and archaeological remains, ensuring development proposals consider their significance and setting. | Policy that could not have any conceivable effect on a site No LSE. | | |
| HE05: Historic Landscapes, Parks and Gardens | Sites of special historic interest should be conserved or enhanced. Policy ensures that development proposals conserve or enhance the special historic interest, character, or setting of parks and gardens on the Historic England Register. | Policy that could not have any conceivable effect on a site No LSE. | | |
| Chapter 15: Community Facilities | | | | |
| CF01: New or extended community facilities | Policy encouraging provision of new social and community facilities and the extension of existing facilities. | Policy listing general criteria. No LSE. | | |
| CF02: Loss of Community facilities | Policy aims to prevent the loss of community facilities | Policy listing general | | |

| Plan section/policy | Description | Initial LSE screening | Potential risks | Comments |
|---|---|---|---|---|
| | unless they are no longer needed or viable, or an equivalent replacement is provided. | criteria. No LSE. | | |
| Chapter 17. Implementation and Monitoring | Infrastructure will be developed alongside housing and economic development. Monitoring of the local plan will ensure that policies are carried out successfully and not just a 'wish list', via the Annual Monitoring Report. | No LSE. | | |

## Screening conclusions

3.8 The screening of the Plan has checked all relevant sites for a number of risks in terms of general urban effects, loss of supporting habitats, recreation, hydrological impacts and air quality.

3.9 All allocations were checked, with the following criteria underpinning how allocations were screened in as having a likely significant effect:

- Urban effects:
  - Allocations within close proximity - typically within 400m of European sites (screening identified allocations that had likely significant effects for the East Devon Heaths SAC/SPA and for the Exe Estuary SPA).
- Loss of supporting habitat:
  - Beer Quarry & Caves SAC: using the guidance by Jennings & Youngman (2022) and checking allocations within connectivity zones or sustenance zones as to whether they hold potential habitat (trees, pasture, scrub, hedgerows etc.) and checking in relation to pinch points (numerous allocations screened in, with particular risks for allocations north of Seaton due to proximity to pinch points).
  - East Devon Heaths SPA: sites that may be suitable foraging habitat for Nightjar in terms of supporting wetland, scrub or woodland habitat, trees, hedgerows etc., and checking that the allocation would not be a barrier to movement from the heaths towards suitable habitat (screening identified sites around Exmouth in particular).
  - Exe Estuary SPA/Ramsar: any allocations on low lying, open, flat ground within a few hundred metres of the SPA/Ramsar or deemed likely to hold regular roost or feeding areas for wintering waterbirds (no allocations identified).
- Recreation:
  - Exe Estuary SPA/Ramsar and/or East Devon Heaths SAC/SPA: any allocations or increase in residential accomodation within the relevant zones of influence (10km) from the strategic migitation scheme (lots of allocations and policies screened in).
  - Dawlish Warren SAC: allocations or tourism growth in or around Exmouth where direct access by ferry or boat is possible to Warren Point (a small number of policies screened in).
  - River Axe SAC: allocations in close proximity to the SAC where there is public access to the River (allocations at Axminster and Kilmington screened in).
  - Sidmouth to West Bay SAC: allocations where the SAC coastline is the nearest coast and where access via road network or rights of way is relatively easy (lots of allocations and policies screened in).

- Water supply:
    - Exe Estuary SPA/Ramsar: any policies setting the overall quantum of growth on water supply (as Water Resource Zone is fed by reservoir upstream of the River Exe).
- Water quality:
    - River Axe SAC: any allocations or development within the catchment (numerous allocations screened in).
    - Sidmouth to West Bay SAC: any allocations or development identified that will influence water run-off or have septic tanks that might overflow directly into the SAC (no allocations identified).
- Air quality:
    - East Devon Heaths SAC/SPA: all policies which might result in increased traffic on relevant roads within 200m of the SAC/SPA (numerous policies relating to development within 10km of the SAC/SPA screened in).

3.10 Policies that have been screened in are summarised in Table 5.

**Table 5: Summary of policies screened in for Likely Significant Effects and relevant European sites and impact pathways. Grey shaded cells indicate effects alone (as opposed to in-combination). * Indicates policies intended to reduce or avoid harmful effects to European sites and as such are screened in for further consideration at appropriate assessment.**

| Policy | Urban effects | | Loss of supporting habitat | | Recreation | | | | | Water Supply | Water Quality | Air quality |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | East Devon Heaths SAC/SPA | Exe Estuary SPA/Ramsar | Beer Quarry & Caves SAC | East Devon Heaths SPA | Dawlish Warren SAC | East Devon Heaths SAC/SPA | Exe Estuary SPA/Ramsar | River Axe SAC | Sidmouth to West Bay SAC | Exe Estuary SPA/Ramsar | River Axe SAC | East Devon Heaths SCA/SPA |
| SP02: Levels of future housing development | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| SP03: Housing requirement by Designated Neighbourhood Area | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ |
| SP04: Employment provision and distribution strategy | ✓ | ✓ | ✓ | ✓ | | | | | | ✓ | ✓ | ✓ |
| WS01: Development of a second new community east of Exeter | | | | | | ✓ | ✓ | | | | | ✓ |
| WS04: Land north of the Science Park | | | | | | ✓ | ✓ | | | | | ✓ |
| WS06: Employment land east of airport | | | | | | | | | | | | ✓ |
| WS07: Employment land north of airport, adjoining Treasbeare | | | | | | | | | | | | ✓ |
| WS08: Employment land at Wares Farm, opposite airport buildings, south of A30 | | | | | | | | | | | | ✓ |
| *WS09: Clyst Valley Regional Park | | | | | ✓ | ✓ | ✓ | | | | | |
| WS10: Development next to the M5 and north of Topsham | | | | | | ✓ | ✓ | | | | | ✓ |
| WS11: Gypsy and traveller site east of the M5 | | | | | | ✓ | ✓ | | | | | ✓ |
| WS12: Employment land at Sandygate, between M5 and Clyst Road | | | | | | | | | | | | ✓ |
| WS13: Employment land at Lodge Trading Estate, Broadclyst | | | | | | | | | | | | ✓ |

| Policy | Urban effects | | Loss of supporting habitat | | Recreation | | | | | Water Supply | Water Quality | Air quality |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | East Devon Heaths SAC/SPA | Exe Estuary SPA/Ramsar | Beer Quarry & Caves SAC | East Devon Heaths SPA | Dawlish Warren SAC | East Devon Heaths SAC/SPA | Exe Estuary SPA/Ramsar | River Axe SAC | Sidmouth to West Bay SAC | Exe Estuary SPA/Ramsar | River Axe SAC | East Devon Heaths SCA/SPA |
| **WS14: Employment land south of Langdon's Business Park, Clyst St. Mary** | | | | | | | | | | | | ✓ |
| **WS15: Employment land at Darts Farm** | | | | | | | | | | | | ✓ |
| **SD01: Exmouth and its development locations** | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | | | | | ✓ |
| **SD02: Axminster and development locations** | | | | | | | | ✓ | ✓ | | ✓ | |
| **SD03: Honiton and its development allocations** | | | | | | ✓ | | | | | | ✓ |
| **SD04: Ottery St Mary and its development allocations** | | | | | | ✓ | | | ✓ | | | ✓ |
| **SD05 Seaton and its development allocations** | | | ✓ | | | | | | ✓ | | | |
| **SD06: Sidmouth and its development allocations** | | | ✓ | | | ✓ | | | ✓ | | | ✓ |
| **SD07: Development allocations at Broadclyst** | | | | | | ✓ | ✓ | | | | | ✓ |
| **SD08: Development allocations at Budleigh Salterton** | | | | | | ✓ | ✓ | | | | | ✓ |
| **SD09: Development allocations at Colyton** | | | ✓ | | | | | | ✓ | | | |
| **SD10: Development allocations at Lympstone** | | ✓ | | | ✓ | ✓ | ✓ | | | | | ✓ |
| **SD11: Development allocations at Woodbury** | | | | | ✓ | ✓ | ✓ | | | | | ✓ |
| **SD13: Development allocation at Chardstock** | | | | | | | | | | | ✓ | |
| **SD14: Development (Neighbourhood Plan led) at Clyst St Mary** | | | | | | ✓ | ✓ | | | | ✓ | ✓ |
| **SD16: Development allocation at East Budleigh** | | | | | | ✓ | ✓ | | | | | ✓ |
| **SD17: Development allocations at Exton** | | | | | | ✓ | ✓ | | | | | ✓ |
| **SD18: Development allocations at Feniton** | | | | | | ✓ | | | | | | ✓ |
| **SD19: Development allocation at Hawkchurch** | | | | | | | | | | | ✓ | |

| Policy | Urban effects | | Loss of supporting habitat | | Recreation | | | | | Water Supply | Water Quality | Air quality |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | East Devon Heaths SAC/SPA | Exe Estuary SPA/Ramsar | Beer Quarry & Caves SAC | East Devon Heaths SPA | Dawlish Warren SAC | East Devon Heaths SAC/SPA | Exe Estuary SPA/Ramsar | River Axe SAC | Sidmouth to West Bay SAC | Exe Estuary SPA/Ramsar | River Axe SAC | East Devon Heaths SCA/SPA |
| **SD20: Development allocations at Kilmington** | | | ✓ | | | | | ✓ | ✓ | | ✓ | |
| **SD21: Development allocation at Musbury** | | | | | | | | | ✓ | | | |
| **SD22: Development allocations at Newton Poppleford** | | | | | | ✓ | ✓ | | ✓ | | | ✓ |
| **SD23: Development allocation at Otterton** | | | | | | ✓ | ✓ | | | | | ✓ |
| **SD24: Development allocation at Payhembury** | | | | | | ✓ | | | | | | ✓ |
| **SD26: Development allocation at Sidbury** | | | ✓ | | | ✓ | | | ✓ | | | ✓ |
| **SD27: Development allocation at Tipton St John** | | | | | | ✓ | | | ✓ | | | ✓ |
| **SD28: Development allocations at West Hill** | | | | | | ✓ | | | ✓ | | | ✓ |
| **SD29: Development allocations at Whimple** | | | | | | ✓ | | | ✓ | | | ✓ |
| ***PB04: Policy – Habitats Regulations Assessment** | ✓ | | ✓ | | ✓ | ✓ | ✓ | | | | ✓ | ✓ |

# 4. Appropriate assessment: Urban effects

## Relevant policies from the screening for likely significant effects

4.1 Likely significant effects were identified in the screening for a range of policies (see Table 5), all of which support development in close proximity to European site boundaries. Relevant European sites were:

- East Devon Heaths SAC/SPA
- Exe Estuary SPA/Ramsar

4.2 In addition, Policy PB04 includes specific mitigation text around the East Devon Heaths SPA and urban effects, establishing a zone within 400m of the SPA boundary where new dwellings will not be allowed. In accordance with People Over Wind this policy has not been taken account in the screening and will need to be considered as part of the appropriate assessment.

## Introduction

4.3 Urban effects relate to issues where development is close to the European site boundary and is an umbrella term relating to impacts such as light, noise, cat predation, fly tipping, spread of invasive species (e.g. from gardens and garden waste) and vandalism. Development in close proximity can mean European sites are fragmented and isolated with development creating barriers to species movement.

4.4 Studies of fire incidence have shown that sites with high levels of housing within 500m of the site boundary have a higher fire incidence (Kirby & Tantram, 1999). Fires can start in a range of ways, including deliberate arson, children playing, campfires, barbeques, sparks from vehicles, discarded cigarettes etc. While linked to urban effects we treat fire risk under recreation, as the issues are not limited to housing in close proximity. Similarly, invasive species can be spread through garden waste and can also be spread through recreation, and we consider spread of invasives by people in the appropriate assessment section for recreation.

4.5 Where housing is in close proximity, adjacent green space is often the focus for uses such as bike jumps or den building or camps. Fly-tipping and dumping of garden waste can also be more common when housing is in close proximity. Noise pollution and light pollution can spill from urban areas

and where housing is in close proximity. As such, managing and looking after such sites can be more challenging.

4.6 A development exclusion zone has been established around many European sites to reflect the particular risks with development directly adjacent to the boundary. Local plans and strategic mitigation schemes include a presumption against development within these areas and such zones have become an established policy approach.

4.7 Examples of areas where a zone is established in planning policy include:

- Across the Thames Basin Heaths (11 local planning authorities)
- Around the Dorset Heaths (five local planning authorities)
- In the Brecks (e.g. Breckland District)
- Around the East Devon Pebblebed Heaths (East Devon District Council)
- Around Cannock Chase SAC (e.g. Cannock Chase Council Local Plan)
- At Ashdown Forest SPA/SAC (e.g. Wealden District's Core Strategy Local Plan)
- Burnham Beeches (e.g. Chilterns and South Bucks).

4.8 Most of the above examples are heathland sites and a 400m zone is used, however Burnham Beeches is a woodland site and the zone is 500m.

4.9 The exclusion approach is widely accepted and reduces the risks from increasing urbanisation. It provides greater certainty that mitigation measures (such as access management) for cumulative levels of urban growth will be successful as such measures can be targeted to those travelling some distance.

4.10 The choice of 400m is based on the literature (summarised in Underhill-Day, 2005) and to some extent is a pragmatic choice. For example, 400m reflects distances at which sites will be 'local' and easily accessible from nearby housing and fits with the fire research outlined above. Studies of cat roaming behaviour indicate that 400m is likely to work as an appropriate buffer width to limit cats (Pirie et al., 2022) particularly in very urban environments (Thomas, Baker, & Fellowes, 2014). How far cats roam does however relate to housing density (Hall et al., 2016) and in more rural areas cats can roam considerably further and some studies have suggested ranges over 2km for more rural situations (Hall et al., 2016; Metsers, Seddon, & van Heezik, 2010).

## The East Devon Heaths SAC/SPA

4.11 The East Devon Heaths are currently relatively rural in feel, with little housing adjacent to the SAC/SPA boundary. Urban effects would have the potential to undermine the conservation objectives for the European site through:

- Cat predation (potentially impacting the population of each of the qualifying features of the SPA);
- Fly tipping (potentially leading to spread of invasive species and undermining the structure and function (including typical species) of the qualifying natural habitats of the SAC);
- Presence of people from nearby homes undertaking activities such as den building, building bike jumps, flying drones, collecting firewood etc., with the potential to undermine a range of conservation objectives.

4.12 Policies SP02, SP03 and SP04 set the overall quantum of housing and employment land and the broad distribution, which includes sites adjacent to the East Devon Heaths SAC/SPA. Policy SD01 (Exmouth and its development locations) includes a large allocation (700 dwellings) at St. John's that directly abuts the southern parts of the East Devon Heaths SAC/SPA (Withycombe Raleigh Common). In addition, the allocation at Marley's Drive (50 dwellings) is just over 400m from the SAC/SPA boundary.

4.13 St John's is therefore the key allocation of concern, and will include employment uses as well as housing. Policy SD01 is clear that the whole allocation will require a complete masterplan, with housing focussed on the southern part of the allocation and no housing being within 400m of the heaths. Furthermore, a SANG will provide alternative space for recreation use.

4.14 Policy PB04 provides further strategic protection, stating that new dwellings and tourist accommodation will not be permitted on or within 400m of the East Devon Heaths SAC/SPA. In addition, PB04 sets out a requirement for strategic mitigation for recreation, in accordance with the mitigation strategy. This provides a ranger presence among other measures which – while not specifically targeting urban effects – will help address some of the issues.

4.15 At a strategic level these requirements are sufficient to ensure adequate protection to the East Devon Heaths SAC/SPA. Further assessment will be necessary at project level and once masterplans are available. Key

components to the masterplans and design elements at project level that will ensure adequate protection to the heaths will need to include:

- SANG design that makes SANG easier to access than the heaths, and the default location for new residents when looking for informal countryside space for exercise and other activities. This will require extensive SANG provision of high quality and providing for a range of recreational opportunities.
- Housing set well back from the SAC/SPA boundary, certainly at least 400m.
- Robust barriers to cat movement between urban areas and the heaths, for example through water bodies, fencing etc., which while unlikely to completely limit cat movement, will help.
- Lighting design to ensure no increased light on the heaths or around the periphery of the SAC/SPA.
- Site design to deflect visitor flow away from the heaths and limiting the number of entry points onto the heath close to new housing.
- Careful siting of employment areas such that any noise, run-off or litter/pollution is contained and no potential to impact nearby areas of heath.

### *Integrity test*

4.16 At a plan level, adverse effects on integrity can be ruled out for the Plan alone for the East Devon Heaths SAC/SPA and urban effects. This conclusion is reached as a result of the scale of growth proposed, the specific locations and mitigation requirements relating to setting development back 400m from the European site boundary, provision of SANG at the St. John's allocation in Exmouth and the strategic mitigation scheme.

4.17 There is no need for an in-combination assessment as the East Devon Plan addresses all relevant development that could have an urban effect. Urban effects may be exacerbated or relate also to recreation use (e.g. fire incidence), however these are addressed through the strategic mitigation for recreation, which addresses cumulative effects.

4.18 Project level assessment will be required for allocations in and around Exmouth. Careful site design and master planning of these development sites will be necessary and should be checked through project-level HRA prior to planning permission being granted. Such reliance on lower tier assessment is entirely appropriate and complies with the guidance in the Habitats Regulations Assessment Handbook, which states that a plan-making

body may rely on mitigation measures in a later stage of plan making if the following three criteria are all met:

1. The earlier stage or higher level plan assessment cannot reasonably predict any effect on a European site in a meaningful way; whereas
2. The later stage or lower level plan, which will identify more precisely the nature, timing, duration, scale or location of development, and thus its potential effects, will have the necessary flexibility over the exact nature, timing, duration, scale of the proposal to enable an adverse effect on site integrity to be avoided; and
3. The HRA of the plan at the later stage or lower level is required as a matter of law or Government policy.

## Exe Estuary SPA/Ramsar

4.19 Risks from urban effects for the Estuary could include light pollution, potentially affecting foraging behaviour and distribution of birds (Dwyer et al., 2013; Longcore & Rich, 2004; Santos et al., 2010). Cat predation (e.g. Cecchetti et al., 2021; Hall et al., 2016; Kays et al., 2019; Loss & Marra, 2017) is potentially a risk only where aggregations of small waders or other waterbirds are accessible to cats. Fly-tipping and dumping of garden waste resulting in contamination and spread of non-native species are also a risk, but only likely to be of concern where the upper marsh is accessible and adjacent to roads or paths. Tall buildings and structures could pose problems for birds moving around the estuary.

4.20 These effects could undermine the conservation objectives of the SPA in terms of the populations of the qualifying features and their distributions.

4.21 Policies SP02, SP03 and SP04 set the overall quantum of housing and employment land and the broad distribution. More site-specific policies include development within 400m of the Exe Estuary SPA/Ramsar, specifically:

- SD01 Exmouth and its development locations
- SD10 Development allocations at Lympstone

4.22 At Exmouth, the key location with particular risks for the Exe Estuary SPA/Ramsar is Courtlands, where there is an allocation for sports pitches alongside two housing allocations (12 homes at Courtlands Lane and around 100 homes and employment land at Courtlands Cross). These allocations will

extend the urban area of Exmouth north and are almost contiguous with Lympstone. The sports pitches are within 400m of the estuary while the housing allocations are just over 500m. The location is above the estuary and only one or two fields from the edge of the SPA/Ramsar.

4.23 The railway line does provide a barrier to direct access to the estuary and there are currently no public footpaths or direct access to the shoreline. This will reduce the risks and the distance from the housing sites to the shore and the main focus of the bird use in that area being on the open intertidal habitats will mean cat predation is perhaps unlikely. As such risks from the site are low but further checks will be necessary at project level, where assessment will need to ensure that:

- Bird surveys during the winter check for use of the site by SPA/Ramsar qualifying features in the surrounding fields and the results used to inform the design;
- No structures such as flood lights or powerlines etc around the sports pitches will pose a risk to birds (in terms of flight lines, collision or light pollution);
- Site design ensures adequate screening and barriers to movement and people from the site and towards the south and the low-lying fields or the SPA/Ramsar;
- Site design ensures visual/noise barriers to the buildings and pitches to ensure any disturbance impacts associated with the presence of people in the area around the allocation (including during construction) are eliminated;
- Construction procedures and site design ensures no risks of contamination of the estuary.

4.24 At Lympstone, the one allocation within 400m of the SPA/Ramsar is the Little Paddocks site (for 8 homes) to the south of the settlement and around 260m from the SPA/Ramsar. Here the allocation is largely surrounded by existing buildings and likely to be a low risk. The railway provides a clear barrier to movement from the allocation site and the small size further reduces risk. Project level assessment should simply check for that the design when this comes forward does not include any powerlines or similar across neighbouring fields or tall structures that could pose a risk to birds.

### *Integrity test*

4.25 At a plan level, adverse effects on integrity can be ruled out for the Plan alone for the Exe Estuary SPA/Ramsar and urban effects. This conclusion is reached on the basis that the potential for urban effects to undermine the

conservation objectives is relatively low and there is therefore little risk. No allocations are directly adjacent to the SPA/Ramsar boundary and all are set back and have infrastructure such as the railway creating a barrier between the development location and European site. Given the locations involved, such impacts can be ruled out alone. No in-combination assessment is required as the Plan covers all development in the broad area (eastern shore of the estuary) and as such all potential cumulative effects.

4.26 Further checks at project level are necessary for the allocations at Courtlands, Exmouth and the Little Paddocks site at Lympstone, these are primarily to check the detailed design and in particular risks from light pollution, construction and localised movement of people that cannot be considered at the level of detail provided in the Plan. Such reliance on further assessment is in keeping with guidance on the HRA process (see para 4.18).

# 5. Appropriate assessment: Loss of supporting habitat/functionally linked land

## Relevant policies from the screening for likely significant effects

5.1 Likely significant effects were identified in the screening for a range of policies (see Table 5), all of which support development in areas which might be supporting habitat for key species. Relevant European sites were:

- Beer Quarry & Caves SAC
- East Devon Heaths SPA

5.2 In addition, Policy PB04 includes specific mitigation text around the East Devon Heaths SPA and urban effects, establishing a zone within 400m of the SPA boundary where new dwellings will not be allowed. PB04 also includes specific mitigation text around the Beer Quarry & Caves SAC and the need to protect the pinch points where bats rely on particular parts of the wider countryside. The Policy also cross references to the guidance on the sustenance zones and key areas for the bats (Jennings & Youngman, 2022). In accordance with People Over Wind this policy has not been taken account in the screening and will need to be considered as part of the appropriate assessment.

## Introduction

5.3 Development outside European sites may impact qualifying features where individuals of the relevant species roam outside the European site boundary (see Chapman & Tyldesley, 2016 for review and discussion). Impacts can involve the direct loss of habitat or impacts such as disturbance/disruption of flight lines that might mean the supporting habitat does not function as well.

## Beer Quarry & Caves SAC

5.4 For the Beer Quarry & Caves SAC the bats can roam widely in the landscape, following particular flight-lines to reach other roost sites and foraging areas outside the SAC boundary. Further background and details are set out by Jennings and Youngman (2022).

5.5 Likely significant effects were identified in relation to the overall quantum of housing and employment growth (Policies SP02, SP03 and SP04). More site-

specific policies which include allocations within the sustenance zone (set out by Jennings and Youngman) are:

- SD05 Seaton and its development allocations
- SD06 Sidmouth and its development allocations
- SD09 Development allocations at Colyton
- SD20 Development allocations at Kilmington
- SD26 Development allocation at Sidbury.

5.6 At Seaton there are four allocations that are in very close proximity to the pinch points and extend the settlement north and west. These four include three housing allocations: Land adjacent to Axe View, Land at Barnards Hill, Land south of Harepath Hill and an employment site on land off Harepath Road. The two Harepath Road sites are particularly sensitive as they appear to shrink the existing pinch point between Colyford and Seaton which is identified for both Lesser and Great Horseshoe Bats. All four allocations have the potential to illuminate areas that might be used by the bats and any loss of hedgerows and trees in the landscape is likely to have impacts for the bats.

5.7 At Colyton, allocations at Hillhead and to the east of Colyton pose less risk as they have existing housing on multiple sides and do not appear to disrupt potential flight lines or areas that bats might move through so much. Nonetheless there are trees and hedgerows present and there could be risks.

5.8 At Sidmouth all allocations are within the wider consultation zone ('landscape connectivity zone'). The allocation south of Woolbrook Road is a particular risk as the Jennings and Youngman guidance highlights a Lesser Horseshoe Bat maternity roost nearby (three fields away and about 800m as the bat flies). Aerial imagery shows the allocation site to currently comprise some scrub and trees that could well be used by the bats.

5.9 At Sidbury, the allocation on land between Furzehill and Hillside is also within the landscape connectivity zone. Adjacent to the housing allocation are open space allocations. Any changes at these locations could involve loss of foraging habitat or illumination that should be checked once further details and site design are available.

5.10 At Kilmington the risk is Lesser Horseshoe Bat and Bechstein's Bat; the settlement is outside the landscape connectivity zone for Greater Horseshoe Bats. There are some key Bechstein's Bat roosts just to the west of

Kilmington that are flagged in the guidance and the whole of Kilmington is within the sustenance zone for Bechstein's Bats. The risks are potentially low as the Kilmington allocations are adjacent to the A35 and surrounded by existing housing.

5.11 For all the above allocations, further assessment is necessary at project level. Surveys of trees, buildings and for foraging bats will be necessary and key landscape features will need to be identified and protected. Site design will need to take into account survey findings and ensure risks are addressed or eliminated.

### *Integrity test*

5.12 At a plan level, adverse effects on integrity can be ruled out for the Plan alone in relation to the Beer Quarry Caves SAC and loss of supporting habitat/functionally linked land. This conclusion can be reached on the basis that the umbrella policy within the plan (PB04) ensures strict protection for European sites and specifically references the Beer Quarry and Caves guidance, highlighting the need for plans and proposals to be in accordance with the guidance. Policy PB04 further protects the pinch points and secures their long-term suitability for bat species. The guidance is strategic and provides the means to address the cumulative effects of incremental loss of habitat or impacts to bats (e.g. lighting). As such, no in-combination assessment is necessary.

5.13 Nonetheless, the Plan does include a number of allocations within the connectivity zones identified in the guidance and in particular two allocations at Seaton that are in very close proximity to pinch points. As such, project level assessment will be necessary for all these allocations. Such project level HRA will need to be informed, as relevant, by surveys for bats and checks for features that may be important for bats. These will need to be taken into account in the site design. Such reliance on further assessment is in keeping with guidance on the HRA process (see para 4.18).

## East Devon Heaths SPA

5.14 Nightjar are a qualifying feature of the East Devon Heaths SPA. Radio-tracking studies of Nightjar have shown that birds will fly a considerable distance (up to 7km away) away from the breeding sites to feed at night (Alexander & Cresswell, 1990; Cresswell, 1996; Evens et al., 2017). These showed that at night the birds were leaving the conifer plantations and

heathland areas where they were known to be nesting to feed in a range of habitats. The work in Dorset (Cresswell 1996) highlighted the importance of deciduous woodland, orchards, village gardens and that they also used wetland sites such as streams, small ponds and water meadows and even saltmarsh. In Belgium (Evens *et al.* 2017) the Nightjar were shown to use extensively cultivated grasslands and recreational areas, these latter areas were described in more detail as "*man-made fishponds, wet meadows and extensively cultivated grasslands surrounded by hedgerows and scattered trees*".

5.15 Nightjar feed on insects and predominantly catch them in flight, either in sustained flight or 'fly-catching' from a perch or the ground (see Cresswell, 1996 for details). Cresswell (1996) argues that habitats used on foraging trips – deciduous woodland and wet grassland in particular – may be of considerable importance to Nightjar: "when it comes to Nightjar conservation, we believe that there may be a need to consider both breeding and feeding habitats".

5.16 More recent advances in technology have allowed the use of GPS tags, which do not require surveyors to 'track' the radio signal but automatically log the locations of birds. Nightjar have now been tagged at a number of different sites and data span multiple years. HRA work undertaken for the Borough of Poole Local Plan in 2018 (see Hoskin, Liley, & Underhill-Day, 2018) drew on GPS tracking, commissioned by developers (Souter, 2016, 2017). Results highlighted that Nightjar were using areas outside the heaths, often for extended periods. Multiple birds were using some locations (a disused area of gravel pit was particularly favoured) and individuals often returned to favoured locations. There was also evidence of some long flights, including birds moving to other heathland patches.

5.17 The issues are complex as Nightjar are summer migrants and present on the heaths from May through to August and September. During this time, it is likely that different areas and habitats will be important for foraging. Different areas are likely to be important depending on the weather (for example some areas will be more sheltered than others), depending on prey abundance (different insects will peak at different times and in different habitats) and for individual Nightjar (for example requirements may be different just after migration or when feeding chicks), as such it is expected that a range of habitats are likely to be important.

5.18 Loss of foraging habitat or disruption of routes to reach feeding areas could undermine the conservation objectives of the SPA in terms of the population

of Nightjar and its distribution. The supplementary advice for the East Devon Heaths SPA, produced by Natural England, sets targets around supporting habitats. These include maintaining the safe passage of breeding Nightjar moving between their nesting and feeding areas. Also in relation to food availability within supporting habitat, maintaining a high abundance and availability of key prey items (e.g. moths, beetles) at prey sizes preferred by Nightjar.

5.19 Policies SP02, SP03 and SP04 set the overall quantum of housing and employment land and the broad distribution, which includes sites adjacent to the East Devon Heaths SAC/SPA and these policies were therefore screened in. Also screened in was Policy SD01 (Exmouth and its development locations). This policy includes the large allocation (700 dwellings) at St. John's that directly abuts the southern parts of the East Devon Heaths SAC/SPA and the allocation at Marley's Drive (50 dwellings) which is just over 400m from the SAC/SPA boundary. These two sites both contain scattered trees, hedgerows etc and tree cover that means they could well be used extensively by Nightjar. In addition, a number of other allocations around Exmouth could result in changes or loss to Nightjar foraging habitats, these include:

- Land south of Littleham (housing allocation)
- Land directly east of Liverton business park (employment allocation)
- Land at Courtlands Cross (housing allocation).

5.20 Screening did not identify a risk for the East Devon New Community as the area allocated is primarily large arable fields with a low density of hedgerows and trees. Similarly, allocations around Woodbury, Lympstone and Ottery St. Mary were not screened in as they appear from aerial imagery to involve sites with few trees and are relatively contiguous with existing development (and as such likely to already be well lit and not to be commuting routes or on regular flight paths).

5.21 There has been no work to our knowledge on the off-site foraging undertaken by Nightjars on the East Devon Heaths. On the Dorset Heathlands SPA, regression analyses of Nightjar numbers in relation to housing levels in the surrounding landscape indicated that the population of Nightjar might be around 14% higher in the absence of development (Clarke et al., 2008). However, component SSSIs of the Dorset Heaths, such as Canford Heath and Upton Heath, are largely surrounded by development

that extends over a wide area and yet the sites do still support substantial populations of Nightjar. The East Devon Heaths are very much more rural. Any birds moving away from the heaths to feed are likely to fly to the River Otter, including the extensive marshes and floodplain in the valley. There are also wooded areas just beyond the SPA including Hayes Wood and Uphams Plantation. None of these areas will be lost to development and neither do any allocations appear to create barriers to movement between the heath and surrounding landscape. As such risks at plan level are relatively low and appear to be specific to the allocations around Exmouth. The umbrella policies within the plan (PB04) ensure strict protection at plan level and the restriction on any development within 400m of the SPA further reduces risk.

5.22 For Exmouth allocations it will however be necessary for further assessment at project level, once more information is available for each site and before planning permission is granted. Nightjar surveys at the allocation site, potentially involving GPS tracking may be necessary to better understand how Nightjar use particular areas. Site design may need to take account of certain parts of the landscape (likely to be mature trees, hedgerows etc) as informed by the survey work.

### *Integrity test*

5.23 At a plan level, adverse effects on integrity can be ruled out for the Plan alone for the East Devon Heaths SPA and loss of supporting habitat/functionally-linked land. There are only very limited allocations (around Exmouth) that encompass land that have the potential to be used by foraging Nightjar, and this accounts for a very small proportion of the available habitat for Nightjar around the SPA. Based on studies elsewhere, the most important likely foraging areas will include the floodplain of the River Otter and the Plan contains no proposals that might obstruct access to the valley.

5.24 The restriction on development within 400m of the SPA, as set out in Policy PB04 ensures development is set back from the SPA and further reduces risk.

5.25 The Plan encompasses the area likely to be used by foraging Nightjar and sets out all relevant proposals around development. No other cumulative impacts are likely to impact the overall availability of supporting habitat and as such no in-combination assessment is required.

5.26 Project-level HRA, for the St. John's allocation and Marley's Drive allocation in Exmouth will be necessary and should draw on more detailed, site-specific evidence. It may be necessary to retain trees, hedgerows or other features. Such reliance on further assessment is in keeping with guidance on the HRA process (see para 4.18).

# 6. Appropriate assessment: Recreation

## Relevant policies from the screening for likely significant effects

6.1 Likely significant effects were identified in the screening for a range of policies (see Table 5), all of which support development that could result in increased recreation use of nearby European sites. Relevant European sites were:

- Dawlish Warren SAC;
- East Devon Heaths SAC/SPA;
- Exe Estuary SPA/Ramsar;
- River Axe SAC;
- Sidmouth to West Bay SAC.

6.2 In addition, Policy PB04 includes specific mitigation text around the strategic mitigation scheme that covers recreation use of Dawlish Warren SAC, the East Devon Heaths SAC/SPA and the Exe Estuary SPA/Ramsar. In accordance with People Over Wind this policy has not been taken account in the screening and will need to be considered as part of the appropriate assessment.

## Dawlish Warren SAC, East Devon Heaths SAC/SPA & Exe Estuary SPA/Ramsar

6.3 For the Exe Estuary SPA/Ramsar, Dawlish Warren SAC and the East Devon Heaths SAC/SPA concern about recreation impacts and links to local housing growth are long standing and a strategy was established in 2014 to mitigate the impacts from residential development. Public access/disturbance is identified in the respective site improvement plans (produced by Natural England) as a current pressure and/or future threat at all three sites. Recreation issues have the potential to undermine the conservation objectives of the European sites (where likely significant effects have been identified) in a range of ways (see Table 6).

**Table 6: Summary of risks to the relevant European sites from recreation and urban effects.**

| Impact | Exe Estuary SPA/Ramsar | Dawlish Warren SAC | East Devon Heaths SPA/SAC | Notes | References and examples |
|---|---|---|---|---|---|
| Disturbance to breeding birds | | | ✓ | Risks from reduced breeding success and avoidance of otherwise suitable habitat. | Murison (2002); Liley & Clarke (2003); Murison *et al.* (2007). |
| Disturbance to wintering waterbirds | ✓ | | | Risks from avoidance of otherwise suitable areas, reduced feeding rate, stress and increased energetic costs. | Goss-Custard & Verboven (1993); Stillman *et al.* (2001); West *et al.* (2002); Liley *et al.* (2011). |
| Increased fire risk | | ✓ | ✓ | Fire risk linked to recreation through discarded cigarettes, BBQs etc. | Kirby & Tantram (1999); Lake (2010). |
| Trampling and wear | | ✓ | ✓ | Heavy footfall can result in vegetation wear, soil compaction & erosion. | Lowen *et al.* (2008); Lake (2010). |
| Interaction with predators | ? | | ✓ | Species such as Crows and Magpies may be drawn to areas with greater human activity or occur at higher densities; redistribution of birds may result in greater vulnerability to predation. | Marzluff & Neatherlin (2006). |
| Nutrient enrichment from dog fouling | | ✓ | ✓ | Risks from dog fouling resulting in increased soil nutrient levels and changes in vegetation. | Bonner & Agnew (1983); Taylor *et al.* (2005); De Frenne *et al.* (2022). |
| Contamination of water bodies from dogs | | ✓ | ✓ | Dogs swimming in ponds and other waterbodies brings potential risks from increased turbidity and pollution from flea treatments etc. | Groome *et al.* (2018); Denton & Groome (2017); Perkins *et al.* (2020). |
| Disruption of management | | ✓ | ✓ | Disruption such as dog attacks to livestock; gates left open; theft of equipment/material; all issues to be expected at more urban sites or those with more recreation. | |
| Public opposition/objection to management | ✓ | ✓ | ✓ | Management interventions such as tree or scrub removal, water level management etc. can be sensitive and opposed by local residents, leading to issues achieving the necessary management . | Woods (2002). |

### *Strategic mitigation*

6.4 A strategic approach to mitigation has been in place since 2014. This strategic approach applies to residential and some tourist development within a zone of influence drawn around each European site and is applied consistently across Exeter City, East Devon and Teignbridge. Full details of the issues and mitigation measures are set out in the strategy (see the original 'South East Devon European Site Mitigation Strategy', Liley et al., 2014, as well as the emerging updated 'South East Devon Wildlife - Joint Habitat Sites Mitigation Strategy').

6.5 Mitigation has involved on-site measures such as rangers, management of parking and engagement with visitors on the respective sites (these measures are referred to as SAMM – Strategic Access Management and Monitoring) and the provision of alternative places for recreation use by local residents (SANG – Suitable Alternative Natural Greenspace).

6.6 The mitigation strategy is long running, well established and ensures mitigation can be delivered. It provides transparency for developers as the costs and mitigation requirements are known in advance. The strategy is clearly referenced and mitigation requirements for the Plan established in Policy PB04.

6.7 The strategy was revised and updated during 2023 and 2024 (in a joint commission by East Devon, Exeter City and Teignbridge District) with the new strategy set up to continue indefinitely with reviews and updated scheduled at five-year intervals. The new strategy will therefore cover the period 2025-2030 at which point it will be revised and updated as necessary. Key parties, including Natural England and stakeholders involved in the delivery of the strategy (such as the Pebblebed Heaths Conservation Trust) have been consulted and commented on early drafts.

### *Implications for the HRA*

6.8 The mitigation strategy provides a robust and established means to deliver the mitigation and is in line with strategies in other parts of the country, for example the Thames Basin Heaths, the Dorset Heaths, the Solent Coast, the Suffolk Coast and the North Kent Coast. As such there can be confidence in the broad approach as a means to address impacts arising from the cumulative effects of development across a wide area. Natural England have reviewed the updated strategy and are supportive of the approach.

6.9 As such the strategy provides the means to rule out adverse effects on integrity, from the Plan alone and in-combination with other local plans and development coming forward in the surrounding area. The strategy ensures the necessary SAMM and SANG are adequately resourced and deliverable and that the level of

mitigation is sufficient to address the scale of growth coming forward. All local planning authorities that fall within the respective zones of influence are involved in the scheme.

### *Integrity test*

6.10 The strategic mitigation scheme is well established, set out in Policy PB04 and the strategy has been updated to reflect levels of growth in the Plan. The approach is in line with strategies in other parts of the country, for example the Thames Basin Heaths, the Dorset Heaths, the Solent Coast, the Suffolk Coast and the North Kent Coast (Beveridge et al., 2024). This means there can be confidence in the strategy as a means to address impacts arising from the cumulative effects of development across a wide area. The strategy ensures the necessary SAMM and SANG are adequately resourced and deliverable. Natural England have reviewed the updated strategy and are supportive of the approach.

6.11 As such, at a plan level, adverse effects on integrity can be ruled out for the Plan alone or in-combination with respect to recreation and Dawlish Warren SAC, the East Devon Heaths SAC/SPA and the Exe Estuary SPA/Ramsar. All local planning authorities that fall within the respective zones of influence are involved in the scheme, meaning in-combination effects are addressed.

## River Axe SAC

6.12 Recreation use of the River Axe SAC is relatively low risk compared to the sites considered above, however increased recreation use could result in harm. Of primary concern would be contamination of the water as a result of people swimming and dogs entering the water. This can result in increased turbidity and there is growing evidence of contamination of water bodies well used by dogs as a result of proprietary flea treatments (Denning et al., 2024; Perkins et al., 2024). Localised damage to spawning sites for fish could occur if people enter the water and trample over gravel or use such areas to launch kayaks. Other concerns could relate to damage to the banks where people enter the water and risks of damage to aquatic vegetation from kayaks, paddleboards and people in the water.

6.13 Such impacts could undermine the conservation objectives in terms of the structure and function of the qualifying habitat, or the populations or distributions of qualifying species.

6.14 There is currently very little access to much of the river as, for example, there are very few footpaths that allow access to the river bank. Risks will only relate to specific sections of river that are close to housing allocations and where there is

direct and easy access to the river banks. As such any risks will be localised. Public access or disturbance was not recognised as a threat or pressure for the SAC by Natural England in their site improvement plan in 2014 and neither is recreation identified by Natural England as a current pressure for the River Axe SSSI which underpins the SAC designation. Checks on the internet[17] suggest that kayaking use is focussed around the estuary around Axmouth, which is outside the SAC. There appear to be limited launch points within the SAC, however kayaks do sometimes launch at Whitford Bridge.

6.15 Policies SP02 and SP03 set the overall quantum of housing and the broad distribution, and were therefore screened in for recreation impacts and the River Axe SAC. The following policies include allocations with direct access to the River Axe SAC and were therefore also screened in:

- SD02: Axminster and its development locations
- SD20: Development allocations at Kilmington

6.16 At Axminster, the Land at Chard Road site abuts the SAC while the Axminster Carpets factory site is relatively close but the railway acts in part as a barrier to direct access. There are also various footpaths that provide scope for new residents at the allocations North of Shoals, Land off Wyke Lane and Great Jackleigh Farm to access the river bank. At Kilmington, both the allocations (Land east of George Lane and Land west and southwest of the Old Inn) are relatively close to the SAC and there is a byway open to all traffic that provides access to the river bank to the south of the village.

6.17 The number of allocations and the extent of the SAC that is likely to be affected is therefore small. For the allocations above, project level assessment will need to check the local environment, access opportunities for new residents and ensure any design elements necessary to further avoid risks are incorporated. There may be a need for very localised and targeted mitigation which for example could involve fencing on footpaths to ensure dogs do not enter the water, planting to create a barrier to the water's edge or signage.

### *Integrity test*

6.18 Adverse effects from recreation on the River Axe SAC can be ruled out as a result of the Plan alone on the basis that the risks are relatively low and recreation

[17] E.g. https://www.songofthepaddle.co.uk/devon-and-the-axe-t32964.html and https://gopaddling.info/rivers/river-axe/

pressure has not been identified as a current threat by Natural England. Very few sites within the Plan are in locations where there is likely to be any increase in recreation use of the river and any changes will be slight. The umbrella policy within the plan (PB04) ensures strict protection at plan level and means no sites will be able to come forward if adverse effects on integrity cannot be ruled out. Project level HRA will ensure that, where necessary, design of sites or local mitigation measures are secured. Such reliance on further assessment is in keeping with guidance on the HRA process (see para 4.18).

6.19 In-combination effects can also be ruled out on the basis that there are no new proposals for access to waterways in general or to the River Axe. Given the limited access along much of the River Axe SAC and limited opportunities to enter the water, locations where in-combination effects could arise are limited. There could be the possibility of in-combination effects from recreation and changes in water quality, however given the very low risks from recreation associated with the Plan, and their very localised nature, there is no credible risk or meaningful concern.

## Sidmouth to West Bay SAC

6.20 The Sidmouth to West Bay SAC qualifies for three habitat types, namely:

- H1210 Annual vegetation of drift lines;
- H1230 Vegetated sea cliffs of the Atlantic and Baltic coasts;
- H9180 Tilio-Acerion forests of slopes, screes and ravines.

6.21 The latter two habitats occur on the cliffs and are largely inaccessible to the public, and as such recreation impacts are only relevant in relation to the annual vegetation of drift lines feature. This habitat type occurs on deposits of shingle lying at or above mean high-water spring tides. These shingle deposits occur as fringing beaches that are subject to periodic displacement or overtopping by high tides and storms. The distinctive vegetation, which may form only sparse cover, is ephemeral and composed of annual or short-lived perennial species. Level or gently-sloping, high-level mobile beaches, with limited human disturbance, support the best examples of this vegetation.

6.22 The supplementary conservation advice sets a target to maintain and restore the management measures (either within and/or outside the site boundary as appropriate) which are necessary to maintain and restore the structure, functions and supporting processes associated with the annual vegetation of drift lines feature. The notes in the advice highlight that: "*Measures should be considered to manage the impact of visitor pressure on certain high footfall areas by protecting areas of suitable substrate from continuous disturbance, preventing the establishment of*

*annual vegetation of drift lines. Additionally, any new proposals that could adversely increase footfall in areas where annual vegetation of drift lines is possible (due to sediment size) should be carefully considered and ideally avoided.*"

6.23 The supplementary conservation advice for the SAC notes in the introduction that "*a common characteristic of the coast …. is that of a predominantly undisturbed, remote coast, punctuated by points where access is easy and visitor numbers high, albeit to quite small stretches.*" It also highlights that "*The South West Coast Path National Trail runs the entire length of the SAC, allowing public access along the coast, although much of the SAC and cliffs are largely inaccessible due to topography and dense unmanaged cliff scrub and woodland. Public access to the coast and beaches is high in some locations (principally Sidmouth, Branscombe, Lyme Regis and Charmouth)…".* Given that the distribution of the habitat feature changes over time, impacts are hard to predict however the beaches that are likely to be popular with visitors are also likely to have the potential to support the habitat.

6.24 Public access or disturbance is not identified as a current pressure or threat to the SAC in Natural England's site improvement plan. Natural England have however identified recreational disturbance as a current pressure for the Sidmouth to Beer Coast SSSI stretch of the SAC, however this is classified as a low risk.

6.25 The coast is part of the King Charles III England Coast Path and coastal access rights came into force for the Kingswear to Lyme Regis stretch in July 2024[18]. Proposals associated with the route were subject to HRA, undertaken by Natural England who concluded, on the basis of objective information, that the proposals would not have a likely significant effect on any of the qualifying features of the Sidmouth to West Bay SAC, either alone or in combination with other plans or projects. While that HRA predates the HRA work for the Local Plan and did not account for new levels of local housing, the conclusions are useful in informing the HRA for the East Devon Local Plan.

6.26 Access to the undercliff and beaches is relatively restricted and Sidmouth, Seaton and Lyme Regis are the main locations where access is likely to be focussed. These are already busy locations where existing footfall will already have impacts on any vegetation present. Climate change, increased storminess and the distribution of landslides will affect how people spread around the coast and these are likely to make access to most beach areas more challenging over time. The nature of the habitat makes access relatively difficult (shingle is hard to walk on for long

[18] See https://www.gov.uk/government/collections/england-coast-path-kingswear-to-lyme-regis for background and details

distances and not all areas of undercliff are accessible in the first place). The scale of housing growth and distribution of the growth is unlikely to generate significantly different use or a marked uplift that might further hinder any restoration on the existing easy to access beaches. As such risks from the Plan are very low.

### *Integrity test*

6.27 Following detailed consideration of the risks, adverse effects on integrity can be ruled out alone or in-combination as there is little credible evidence of harm. Given the scale of the risks identified and very limited extent and locations, there is no need for in-combination assessment.

# 7. Appropriate assessment: Water supply

## Relevant policies from the screening for likely significant effects

7.1 Likely significant effects were identified in the screening (see Table 5), in relation to the overall quantum of growth and the Exe Estuary SPA/Ramsar.

## Introduction

7.2 South West Water provide water to homes and businesses across the region. Any increases in development and the number of people in East Devon potentially means additional water being required. Where the water is being deflected from European sites this can have implications for the habitats and species in those sites. Risks are exacerbated by climate change, with drought and high temperatures increasing demand and reducing the availability of water.

## Role of the Environment Agency

7.3 It is the role of the Environment Agency to make sure that abstraction is sustainable and does not damage the environment. Water abstraction is managed through a licensing system originally introduced by the Water Resources Act 1963.

7.4 The Environment Agency oversees the publication of River Basin Management Plans (RBMPs). These set the legally binding locally specific environmental objectives that underpin water regulation. They set out how the management of water bodies will be undertaken, the roles of relevant bodies and the steps undertaken to ensure environmental targets are met.

7.5 The most recent South West River Basin Management Plan was updated in 2022[19]. The Plan commits the Environment Agency to assess all licence applications and only issue licences that adequately protect and improve the environment; where necessary each should be subject to an individual HRA. The Agency will only grant replacement licences where the abstraction is environmentally sustainable, and abstractors can demonstrate they have a continued need for the water, and it will be used efficiently. In addition, for existing licences, the Agency will prioritise actions to protect and improve European sites and address the most seriously damaging abstractions during this plan period. All abstractors in surface water and groundwater bodies where serious damage is occurring or could occur without

[19] https://www.gov.uk/guidance/south-west-river-basin-district-river-basin-management-plan-updated-2022

action should expect that their licences will be constrained over the next 6 years. The South West River Basin Management Plan was subject to HRA[20] which determined that the RBMP was not likely to have any significant effects on any European sites, alone or in combination with other plans or projects.

## Water Resource Management Plan

7.6 The Water Act 2003 introduced a legal requirement into the Water Industry Act 1991 for water companies to prepare, publish and maintain Water Resources Management Plans (WRMPs). South West Water's most recent WRMP (WRMP24, draft from October 2023[21]) predicts demand for water and identifies issues around supply. East Devon is supplied with domestic water from the Wimbleball Water Resource Zone (WRZ), which also includes Exeter. Wimbleball Reservoir is located in the headwaters of the River Exe and is the main source of water for the WRZ, with water from the reservoir also being supplemented by ground water. Forecasts are made based on population forecasts from the Office of National Statistics and property forecasts from local plans. The WRMP used water supply and demand forecasts, together with climate change and target headroom values to forecast baseline supply demand for a 25 year period, to 2050. This shows that, without any interventions the Wimbleball WRZ is in immediate risk of deficit.

7.7 In order to close the deficit the draft WRMP includes measures to incorporate smart meters and networks, address leakage, increase water efficiency and draw on new water supplies. The draft WRMP24 has been subject to HRA[22] which screened all relevant measures, including supply and drought options and included appropriate assessment for those where likely significant effects were identified. The HRA concludes that South West Water will be able to ascertain beyond reasonable scientific doubt that the proposed updated WRMP24 will not adversely affect the integrity of any European site, alone or in-combination with other plans or projects.

7.8 Given the potential deficit (in the absence of interventions) predicted for the Wimbleball Water Resource Zone, it is reasonable and appropriate for Policy AR02

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20 https://assets.publishing.service.gov.uk/media/635246fae90e07768c1a73a2/South_west_river_basin_management_plan_2022_HRA.pdf

21 https://www.southwestwater.co.uk/about-us/what-we-do/improving-your-service/water-resources-management-plan.

22 Dated December 2023. See https://www.southwestwater.co.uk/siteassets/documents/about-us/wrmp/revised-wrmp/sww-dwrmp24-appendix-7-sea-report-dec23-annex-h-hra.pdf

in the Plan to emphasise the need for future development to incorporate water-saving measures, in accordance with South West Water advice. Policy AR02 relates to water efficiency and is a strategic policy requiring new residential development to achieve water efficiency of 110 litres per day per person.

### *Integrity test*

7.9 As the water company and Environment Agency represent the most suitable competent authorities to assess the WRMP24, once produced its findings can and should be adopted by East Devon Council with respect to the Local Plan HRA. While the final WRMP24 has not been published, the draft plan and accompanying HRA provide sufficient confidence and are sufficiently advanced to allow adverse effects on integrity to be ruled out, alone or in combination, in relation to water resources.

# 8. Appropriate assessment: Water quality

## Relevant policies from the screening for likely significant effects

8.1 Likely significant effects were identified in the screening (see Table 5) in relation to the River Axe SAC. All allocations and development that is within the catchment were screened in.

8.2 In addition, Policy PB04 includes specific mitigation text around nutrient neutrality. In accordance with People Over Wind this policy has not been taken account in the screening and will need to be considered as part of the appropriate assessment.

## Introduction

8.3 Wastewater or sewage can be very damaging to water bodies as it can contain large amounts of nutrients (such as phosphorus and nitrates), ammonia, bacteria, harmful chemicals and other damaging substances. Issues arise where sewage treatment technology to adequately reduce levels of phosphorus and harmful chemicals is not in place, where leakages occur from privately owned septic tanks and, in wet weather, storm overflows can discharge untreated sewage. Poorly installed domestic washing machines and even washing cars at home can, in places, also add to the pollution load. Outcomes can include increased turbidity, algal blooms, reduced dissolved oxygen and an overall increase in the nutrient status of receiving waterbodies. Simply, increases in housing increase pressure on the sewage network and the volume of wastewater.

8.4 The pollution of inland and coastal waters has received greater recognition in recent years and the significance of such potential impacts and the need to mitigate has been given emphasis by Natural England's demands. These state that new development affecting vulnerable water bodies must achieve 'nutrient neutrality', i.e. avoid any net increase in nitrate and phosphate pollution. Whilst this relates primarily to the disposal of foul water, run-off from hard surfaces can also be a factor. This reflects contemporary case law (the Dutch case) which makes clear that where water quality targets of European sites are not being met, further inputs of pollutants should not be allowed.

8.5 With respect to the East Devon Local Plan, the key concern is the River Axe SAC. There is a significant issue with phosphate levels which are having a detrimental

impact on the SAC and Natural England have advised East Devon Council accordingly[23].

## Policy PB04

8.6 The Council has included policy wording within PB04 that requires development proposals within the River Axe SAC catchment to demonstrate how nutrient neutrality will be achieved in accordance with the latest advice and guidance from Natural England. The policy wording also recognises that legislation and government guidance requires the planning authority to be confident beyond reasonable scientific doubt that proposals will not result in an adverse effect on the integrity of a European site. Consequently, the policy states that the Council require evidence of a high quality and accuracy to inform HRA and they will seek the advice of the statutory conservation body (Natural England).

8.7 PB04 therefore ensures strict protection and means that any new development in the catchment of the River Axe SAC does not add to the nutrient loading.

8.8 To inform the HRA of the Plan, East Devon Council commissioned DTA Ecology to provide advice on water quality issues and the DTA Ecology report is provided in full in Appendix 4. The DTA work was undertaken in Autumn 2024 prior to final housing provision and allocation numbers being determined. Housing numbers referred to in this work have been superseded and references in subsequent assessment and reporting will be updated. This provides the information required for appropriate assessment and the integrity test. The DTA Ecology report advises that before progressing with nutrient neutrality as a mitigation approach, the Council needs to be satisfied that nutrient neutrality principles set out by Natural England can be met. DTA Ecology highlight that there will be a degree of overlap between the measures which could be implemented to deliver overall reductions in nutrient loading and those which might be relied on to achieve nutrient neutrality. The delivery of restoration is a duty which is more closely aligned with the remit and statutory powers of the Environment Agency and Natural England. There is a risk that nutrient neutrality may deplete the availability of measures which the Environment Agency and Natural England might otherwise be relying upon to deliver proactive restoration duties.

### *Integrity test*

[23] See https://eastdevon.gov.uk/planning/phosphates-on-the-river-axe/ and https://publications.naturalengland.org.uk/file/5533796329062400 for background

8.9 The protective wording in PB04, requiring nutrient neutrality for all development within the River Axe catchment, should allow a conclusion of no adverse effects on integrity from the Plan alone (including all policies which support development within the catchment). Given that nutrient neutrality would ensure no net increase in nutrients entering the catchment, there would be no residual effects to assess in combination.

8.10 However, at this stage it is not possible to rule out adverse effects on integrity, in line with the advice from DTA Ecology in Appendix 4. There is not sufficient certainty that the policy wording can be relied on, as mitigation is yet to be secured and there is concern that mitigation measures may need to involve measures that would otherwise be necessary to restore the SAC. As the Plan progresses through further consultation and to submission, there is a need for the Council to check with Natural England and the Environment Agency to understand the extent to which measures to deliver restoration and the necessary reductions in nutrient loading are achievable in practice, whether they have been identified and whether they have been secured and/or are being implemented.

# 9. Appropriate assessment: Air quality

## Relevant policies from the screening for likely significant effects

9.1 Likely significant effects were identified in the screening for a range of policies (see Table 5), all of which support development that could result in increased traffic on roads within 200m of the East Devon Heaths SAC/SPA.

9.2 In addition, Policy PB04 includes specific mitigation text around vehicle emissions impacting the Pebblebed Heaths. In accordance with People Over Wind this policy has not been taken account in the screening and will need to be considered as part of the appropriate assessment.

## Introduction

9.3 Development is typically associated with increased traffic and emissions which can increase the airborne concentration of nitrogen oxides ($NO_x$) and ammonia ($NH_3$), and the subsequent rate of nitrogen deposition from the atmosphere. This can lead to the nutrient enrichment and acidification of soils, encouraging more tolerant ruderal species at the expense of sensitive plant, lower plant and invertebrate communities. In high concentrations, ammonia can result in direct toxic effects on vegetation, a factor which may also be true of $NO_x$. Larger animals, such as small mammals and birds are considered immune to direct effects but can be vulnerable to change in their supporting habitats. Furthermore, it can exacerbate the effects of other factors such as climate change or pathogens, for example.

9.4 However, levels of deposition typically fall quickly over the first few metres from the roadside before gradually levelling out; beyond 200m, they become difficult to distinguish from background levels. In other words, impacts at 10m, 50m or 200m can be very different from those at the roadside.

## DTA Ecology advice

9.5 East Devon Council commissioned DTA Ecology to provide specific advice around air quality impacts to inform the HRA. The full report from DTA Ecology is provided in Appendix 5. This draws on traffic predictions undertaken by Devon County Council and air quality modelling undertaken by Air Quality Consultants.

9.6 The report shows that the baseline levels of key pollutants are already high for East Devon Heaths and are in exceedance of the critical load for nitrogen deposition and critical level for ammonia. The air quality modelling predicts that,

as a result of the increased traffic associated with the Plan, further deterioration is expected, such that around 20% of the East Devon Heaths SAC/SPA would have levels of nitrogen deposition contributions in exceedance of 1% of the critical load and around 10% of the SAC/SPA would exceed the 1% critical level for ammonia. Much of these areas contain qualifying heathland habitat.

9.7 Appendix 5 places provides the necessary information for the appropriate assessment and to inform the integrity test.

### *Integrity test*

9.8 Appendix 5 provides the necessary information to inform the integrity test. This states (para 7.2.2) that, in the absence of proactive conservation measures and necessary steps to avoid deterioration (which might otherwise be relied upon to achieve the conservation objectives through reductions to other sources), when applying the integrity test to the predicted effects associated with traffic emissions from the Local Plan growth, it is not possible to conclude there will be no adverse effect to site integrity as a result of increased pollution loading for ammonia and nitrogen deposition.

9.9 The plan contains wording in Policy PB04 that "Development will not be permitted where there is potential for increased vehicle numbers, applying a precautionary approach, resulting in increases of emissions of nitrogen oxides (NOx) and/or ammonia (NH3), from internal combustion engine vehicles exceeding threshold levels of harm to designated sites (specifically the Pebblebed Heaths)." While this wording hypothetically should ensure any impacts from the plan are avoided, there is inherent conflict in that the growth proposed in the Plan would exceed threshold levels and there is, as yet, no means to mitigate or address the risks. Policy PB04 refers to proposed HRA guidance/a strategy on vehicle emissions. It is clearly necessary for this document to be progressed in order to inform further iterations of this HRA.

# 10. Conclusions and further steps required

10.1 Screening of the Plan identified the potential for likely significant effects and:

- Urban effects (East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar)
- Loss of supporting habitat/functionally-linked land (Beer Quarry & Caves SAC, East Devon Heaths SPA)
- Recreation (Dawlish Warren SAC, East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar, River Axe SAC, Sidmouth to West Bay SAC)
- Water supply (Exe Estuary SPA/Ramsar)
- Water quality (River Axe SAC)
- Air quality (East Devon Heaths SAC/SPA)

10.2 At this stage in the plan-making, there is not sufficient certainty to rule out adverse effects on integrity in relation to water quality (River Axe SAC) and air quality (East Devon Heaths SAC/SPA). While the Plan is relatively advanced, a further Regulation 19 consultation is proposed by the Council prior to submission. The HRA will be finalised only at the point at which the Plan is adopted and as such there is scope for the HRA to be further updated as the Plan progresses.

10.3 Key steps for the Council to take involve:

- Checks with Natural England and the Environment Agency regarding nutrient neutrality to understand the extent to which measures to deliver restoration and the necessary reductions in nutrient loading are achievable in practice, whether they have been identified and whether they have been secured and/or are being implemented.
- Progressing with a strategy or guidance around vehicle emissions and air quality for the East Devon Heaths SAC/SPA.

10.4 It is also necessary to flag that, in the case of some allocations, further assessment will be important once further details are available. It may be possible to update subsequent iterations of the Plan HRA if master planning and further details for sites are available, or else there is a necessary reliance on project level HRA. Relevant sites are:

- St. John's (Exmouth) with respect to urban effects and foraging Nightjar and the East Devon Heaths SAC/SPA
- Marley's Drive (Exmouth) with respect to urban effects and foraging Nightjar and the East Devon Heaths SAC/SPA
- Courtlands (three allocations at Exmouth) in relation to urban effects and the Exe Estuary SPA/Ramsar and also with respect to foraging Nightjar associated with the East Devon Heaths SPA
- Little Paddocks (Lympstone): Urban effects and the Exe Estuary SPA/Ramsar

- All Seaton allocations, in particular the two Harepath Road allocations, with respect to supporting habitat for bats associated with the Beer Quarry & Caves SAC;
- Allocations at Colyton: allocations at Hillhead and to the east of Colyton, with respect to supporting habitat for bats associated with the Beer Quarry & Caves SAC;
- All allocations at Sidmouth, in particular south of Woolbrook Road, with respect to supporting habitat for bats associated with the Beer Quarry & Caves SAC;
- All allocations at Kilmington, with respect to supporting habitat for Bechstein's Bats associated with the Beer Quarry & Caves SAC and with respect to recreation use of the River Axe SAC;
- Land south of Littleham (Exmouth), with respect to foraging Nightjar associated with the East Devon Heaths SPA;
- Land directly east of Liverton business park (Exmouth), with respect to foraging Nightjar associated with the East Devon Heaths SPA;
- Land at Chard Road (Axminster), with respect to recreation use of the River Axe SAC;
- The Axminster Carpets factory (Axminster), with respect to recreation use of the River Axe SAC;
- North of Shoals (Axminster), with respect to recreation use of the River Axe SAC;
- Land off Wyke Lane (Axminster), with respect to recreation use of the River Axe SAC;
- Great Jackleigh Farm (Axminster), with respect to recreation use of the River Axe SAC.

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# Appendix 1: Conservation Objectives

10.5 As required by the Directives, 'Conservation Objectives' have been established by Natural England, which should define the required ecologically robust state for each European site interest feature. All sites should be meeting their conservation objectives. When being fully met, each site will be adequately contributing to the overall favourable conservation status of the species or habitat interest feature across its natural range. Where conservation objectives are not being met at a site level, and the interest feature is therefore not contributing to overall favourable conservation status of the species or habitat, plans should be in place for adequate restoration.

10.6 In 2012, Natural England issued a set of generic European site Conservation Objectives, which should be applied to each interest feature of each European site. The list of generic Conservation Objectives for each European site includes an overarching objective, followed by a list of attributes that are essential for the achievement of the overarching objective. Whilst the generic objectives are standardised, they are to be applied to each interest feature of each European site, and the application and achievement of those objectives will therefore be site specific and dependant on the nature and characteristics of the site.

10.7 For SPAs, the overarching objective is to:

*'Avoid the deterioration of the habitats of qualifying features, and the significant disturbance of the qualifying features, ensuring the integrity of the site is maintained and the site makes a full contribution to achieving the aims of the Birds Directive.'*

10.8 This is achieved by, subject to natural change, maintaining and 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 populations of the qualifying features.
- The distribution of the qualifying features within the site.

10.9 For SACs, the overarching objective is to:

'*Avoid the deterioration of the qualifying natural habitats and the habitats of qualifying species, and the significant disturbance of those qualifying species, ensuring the*

*integrity of the site is maintained and the site makes a full contribution to achieving Favourable Conservation Status of each of the qualifying features.'*

10.10 This is achieved by, subject to natural change, maintaining and restoring:

- The extent and distribution of the qualifying natural habitats and habitats of qualifying species.
- The structure and function (including typical species) of qualifying natural habitats and habitats of qualifying species.
- The supporting processes on which qualifying natural habitats and habitats of qualifying species rely.
- The populations of qualifying species.
- The distribution of qualifying species within the site.

10.11 Conservation objectives inform any HRA of a plan or project, by identifying what the interest features for the site should be achieving, and what impacts may be significant for the site in terms of undermining the site's ability to meet its conservation objectives. Site specific supplementary advice highlights the importance of typical species, processes or ecological characteristics that are critical to the interest features of the site. Within the supplementary advice these are normally referred to as 'attributes' and can refer to a range of ecological characteristics such as population number, extent of habitat or a supporting process such as hydrology. Each attribute has a 'target' for the required condition of the attribute.

10.12 In Appendix 2 the hyper-links cross reference to the relevant conservation objectives page (on the Natural England website) for all the relevant European sites.

# Appendix 2: Summary of European Sites

**Summary of European sites and their interest features. Links in the site column relate to the conservation objectives for each site or (in the case of the Ramsar sites) the relevant page with the information sheet on the Natural England website. # in the interest features column denotes an interest feature for which the UK has a special responsibility. Descriptions are drawn from the description in the relevant site improvement plans.**

| Site | Interest features | Description |
|---|---|---|
| Beer Quarry & Caves SAC | S1303 *Rhinolophus hipposideros*: Lesser horseshoe bat<br>S1304 *Rhinolophus ferrumequinum*: Greater horseshoe bat<br>S1323 *Myotis bechsteinii*: Bechstein`s bat | This complex of abandoned mines in south-west England is divided in two by a road, with a working quarry to the north and a disused quarry and cave system to the south. This site supports important populations of hibernating bats. Its use as a hibernation site by the Bechstein's Bat is the primary reason for its designation as a SAC. The area also supports a significant presence of both the Lesser Horseshoe Bat and the Greater Horseshoe Bat which are both qualifying features but are not primary reasons for the site's selection. |
| Bracket's Coppice SAC | S1323 *Myotis bechsteinii*: Bechstein's bat<br>H6410 Molinia meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*); Purple moor-grass meadows | Bracket's Coppice lies close to Corscombe in the vales of West Dorset. The site comprises oak and ash woodland, wooded stream valleys, and a mosaic of herb rich grassland and fen-meadow contained within small fields bounded by tall native hedges. The site is designated for Bechstein's bat and Purple moor-grass *Molinia* meadow. One of the first maternity colonies of Bechstein's bat was discovered using bat-boxes in this small woodland. |
| Chesil & The Fleet SAC | H1150 Coastal lagoons<br>H1210 Annual vegetation of drift lines<br>H1220 Perennial vegetation of stony banks; Coastal shingle vegetation outside the reach of waves<br>H1330 Atlantic salt meadows *(Glauco-Puccinellietalia maritimae)*<br>H1420 Mediterranean and thermos-Atlantic halophilous scrubs *(Sacrocornetea fruticose)*; Mediterranean saltmarsh scrub | The Fleet is the largest example of lagoonal habitat in England, bordered by the shingle barrier of Chesil Beach, through which sea water penetrates and mixes with freshwater inlets. Extensive populations of two species of eelgrass, three species of tasselweed and a rare spiral tasselweed can be found within the lagoon, along with a number of nationally rare and scarce fauna. Chesil Beach is sparsely vegetated where it is subject to storm conditions, however supports sea kale *Crambe maritima* and sea pea *Lathyrus japonicus*, alongside other grassland and lichen-rich communities towards the eastern end of the beach. A dynamic equilibrium exists between |

| Site | Interest features | Description |
|---|---|---|
| | | the drift line vegetation and Mediterranean saltmarsh scrub, which is replaced by the former when subject to disturbance, across the inner shore of Chesil Beach. |
| Culm Grasslands SAC | H4010 Northern Atlantic wet heaths with *Erica tetralix*; Wet heathland with cross-leaved heath<br>H6410 Molinia meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*); Purple moor-grass meadows<br>S1065 *Euphydryas (Eurodryas, Hypodryas) aurinia*: Marsh fritillary butterfly | Culm Grasslands represents Molinia meadows in south-west England. This site contains extremely diverse examples of the heathy type of M24 *Molinia caerulea – Cirsium dissectum*; fen-meadow, ranging from short, grazed swards through to stands that are transitional to scrub. M26 *Molina caerulea – Crepis paludosa;* mire occurs more locally in wet upland grasslands also. Structural diversity accounts for the conservation of a wide range of flora and fauna, particularly of species characteristic of south-western Europe, such as meadow thistle *Cirsium dissectum* and whorled caraway *Carum verticillatum*. The site contains extensive areas of wet heath also, dominated by M16 *Sphagnum compactum*. Culm Grasslands contains the largest cluster of sites for Marsh fritillary *Euphydryas aurinia* in the south-west peninsula. It is judged to be the most important location for the species in its major south-west stronghold. |
| East Devon Pebblebed Heaths SAC | H4030 European dry heaths<br>S1044 *Coenagrion mercuriale*: Southern damselfly<br>H4010 Northern Atlantic wet heaths with *Erica tetralix;* Wet heathland with cross-leaved heath | The East Devon Pebblebed Heaths is the largest block of lowland heath in Devon, and it is internationally important for its Northern Atlantic wet heaths and extensive areas of lowland European dry heaths. The diversity of heathland reflects the varied topography, geology, hydrology and water chemistry of the area, and supports associated plant and animal communities. Among the 21 breeding dragonfly species recorded at the site is the southern damselfly, an Annex II species. |
| East Devon Heaths SPA | A302 (B) *Sylvia undata*: Dartford warbler<br>A224 (B) *Caprimulgus europaeus*: European nightjar | The East Devon Pebblebed Heaths is the largest block of lowland heath in Devon. There is an important assemblage of birds, and breeding European nightjar and Dartford warbler afford the site SPA status. |
| Dawlish Warren SAC | H2190 Humid dune slacks<br>S1395 *Petalophyllum ralfsii*: Petalwort | Dawlish Warren is a geomorphologically important sand spit which protects the mouth of the Exe estuary. Herb-rich neutral grassland hosts the only mainland population of the Warren Crocus *Romulea* |

| Site | Interest features | Description |
|---|---|---|
| | H2120 Shifting dunes along the shoreline with *Ammophila arenaria* ("white dunes"); Shifting dunes with marram<br>H2130# Fixed dunes with herbaceous vegetation ("grey dunes"); Dune grassland | *Colomnae*. A mosaic of reed bed, marsh, scrub and open water support several nationally rare plants, including Petalwort *Petalophyllum ralfsii,* an Annex II species for which the site is designated. |
| Exe Estuary SPA | A141 (NB) *Pluvialis squatarola*: Grey plover<br>A046a (NB) *Branta bernicla bernicla*: Dark-bellied brent goose<br>A132 (NB) *Recurvirostra avosetta*: Pied avocet<br>A156 (NB) *Limosa limosa islandica*: Black-tailed godwit<br>A149 (NB) *Calidris alpina alpina*: Dunlin<br>A007 (NB) *Podiceps auritus* Slavonian grebe<br>A130 (NB) *Haematopus ostralegus*: Eurasian oystercatcher<br>Waterbird assemblage | The Exe estuary is of international importance for wintering and migratory wetland birds. It is also of national importance for its marine life, especially that associated with intertidal sand and mud flats. Dawlish Warren is a geomorphologically important sand spit which protects the mouth of the Exe estuary. Salt marsh in the lee of the spit is an important habitat and provides a winter roost for wildfowl and waders, particularly dark-bellied Brent geese and oystercatcher. |
| Exe Estuary Ramsar | Waterfowl assemblage of international importance (under criterion 5)<br>Species/populations occurring at levels of international importance (under criterion 6):<br>*Branta bernicla bernicla*: Dark-bellied brent goose | As above. |
| Hestercombe House SAC | S1303 *Rhinolophus hipposideros*: Lesser horseshoe bat | Hestercombe House SAC is a Lesser horseshoe bat summer maternity roost and winter hibernacula of national importance in the vale of Taunton Deane. It consists of two roof voids within the former stable block and main house of Hestercombe House - a former country house and estate consisting of mixed woodland, pasture, lakes and landscaped garden. This site holds only a small proportion of the UK population, it has been selected as a representative of the species in south-west England. The UK holds one of the largest populations of this species in western Europe. |
| Holme Moor & Clean Moor SAC | H6410 *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*); Purple moor-grass meadows<br>H7210# Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae*; Calcium-rich fen by great fen sedge (Saw sedge) | Holme Moor and Clean Moor SAC is important as alkaline/calcareous fen, with *Cladium mariscus* and species of the *Caricion davallianae*, and is highly species rich, with transitions from *Cladium* fen to mire with Black Bog-Rush and Blunt-Flowered Rush. It consists of fen, marsh and swamp habitats associated with high water tables fed by base rich, nutrient poor ground water, and has |

| Site | Interest features | Description |
|---|---|---|
| | H7230 Alkaline fens; Calcium-rich springwater-fed fens | Molinia meadows on calcareous, peaty or clayey-silt-laden soils. These wetland areas are of international importance, with communities of local, nationally rare and uncommon plant species. Clean Moor supports the only Black bog-rush - Blunt-flowered rush calcareous flush community in Somerset, and Holme Moor supports a rare swamp community dominated by Great Fen-Sedge. Both sites are the only Somerset sites for Broad-leaved Cotton Grass. |
| Lyme Bay & Torbay SAC | H1170 Reefs<br>H8330 Submerged or partially submerged sea caves | The two sections of the Lyme Bay and Torbay SAC off the Devon coast of England contain a greater diversity of habitats than found in other existing SACs in the Western English Channel and Celtic Sea. Within the Lyme Bay Reefs portion, bedrock and stony reef, boulders and cobble and sediments comprise a type of reef uncommon in the region. This complex and diverse reef habitat supports particularly high species richness. Hydroids, anemones, sea squirts, sponges and corals populate the area to the extent the area has been identified as a marine biodiversity 'hotspot.' The pink sea fan and the nationally rare southern cup coral is found throughout the site. The diverse geology of the 'Mackerel Cove to Dartmouth Reefs' in Torbay, limestone reefs and outcrops, sandstone, slate reef, granite outcrops, and stony reef, supports a similarly rich assemblage of animal communities, including an extensive coverage of kelp and blue mussel communities on shallower reefs, and species of sponge, anemone, soft corals and crustaceans on the deeper reefs. The area also contains a diversity of wave-eroded sea caves at Babbacombe to Hopes Nose and Broad Sands to Berry Head. The freshwater and saltwater mix in these caves makes them some of the best examples of coastal solution caves in the UK. The caves also support a richness of animal life including many nationally significant species such as sponges, pink sea fingers, burrowing anemones and southern cup coral. |

| Site | Interest features | Description |
|---|---|---|
| Quants SAC | S1065 *Euphydryas (Eurodryas, Hypodryas) aurinia;* Marsh fritillary butterfly | This damp and sheltered site on the slopes of the Blackdown Hills supports a medium-sized but strong marsh fritillary population in an unimproved neutral grassland/fen mosaic. It is strategically placed close to other smaller sub-populations, with which it forms a metapopulation, and may exchange individuals with the large population at Southey Moor (outside the SAC series). |
| River Axe SAC | H3260 Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation; Rivers with floating vegetation often dominated by water-crowfoot<br>S1095 *Petromyzon marinus*: Sea Lamprey<br>S1096 *Lampetra planeri*: Brook Lamprey<br>S1163 *Cottus gobio*: Bullhead | The lower reaches of the River Axe feature a mixed catchment geology of sandstones and limestones giving rise to calcareous waters and associated Water-Crowfoots *Ranunculion fluitantis* and Water-Starworts *Callitricho batrachion*. The river also supports the significant presence of Sea Lamprey, Brook Lamprey, Bullhead and Atlantic Salmon. |
| Sidmouth to West Bay SAC | H1210 Annual vegetation of drift lines<br>H1230 Vegetated sea cliffs of the Atlantic and Baltic coasts<br>H9180# *Tilio-Acerion* forests of slopes, screes and ravines; Mixed woodland on base rich coils associated with rocky slopes | Sidmouth to West Bay is an example of a highly unstable soft cliff coastline subject to mudslides and landslips. The principal rock types are soft mudstones, clays and silty limestones, with a small chalk outlier in the west. Vegetation is very varied, and includes pioneer communities on recent slips in addition to short-lived ephemeral and perennial species, calcareous grassland and scrub on detached chalk blocks, and extensive self-sown woodland dominated by ash Fraxinus excelsior or sycamore *Acer pseudoplatanus*. This mosaic of habitats makes this site rich in invertebrates, especially bees and wasps. The Red Data Book lichen *Parmelia quercina* occurs on ash Fraxinus excelsior trees. |
| South Dartmoor Woods SAC | H4030 European dry heaths<br>H91A0 Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles; Western acidic oak woodland | The SAC consists of fine examples of old sessile oak woods, some of the best remaining in South Devon. The SAC forms a complex mosaic of woodland, grassland and heathland, which supports an assemblage of animal species, nationally rare invertebrate species of Pearl Border Fritillary and High Brown Fritillary and rare lichen species. |
| South Hams SAC | H8310 Caves not open to the public<br>H6210# Semi-natural dry grasslands and scrubland facies: on calcareous substrates (*Festuco-Brometalia*) | The South Hams SAC is comprised of several but separate component SSSIs. The SAC is thought to hold the largest population of Greater horseshoe bat in the UK and is the only one containing |

| Site | Interest features | Description |
|---|---|---|
| | H4030 European dry heaths<br>H1230 Vegetated sea cliffs of the Atlantic and Baltic coasts<br>H9180# *Tilio-Acerion* forests of slopes, screes and ravines; Mixed woodland on base-rich soils associated with rocky slopes<br>S1304 *Rhinolophus ferrumequinum*: Greater Horseshoe Bat | more than 1,000 adult bats. It contains the largest known maternity roost in the UK and possibly Europe. The site contains both maternity and hibernation sites. Many of the roosts are within caves not open to the public. The SAC is important for its extensive limestone grassland, some areas on the plateau support European dry heath characteristic of acid soil. The limestone headland cliffs of Torbay support calcareous grassland and scrubland facies. The site is exceptional in that it supports a number of rare and scarce vascular plants typical of the oceanic southern temperate and Mediterranean-Atlantic elements of the British flora. The SAC also supports areas of *Tilio-Acerion* ravine forest which is woodland containing ash, wych elm and small leaved lime and field maple. |
| Somerset Levels & Moors SPA | A142(NB) *Vanellus vanellus*: Northern Lapwing<br>A037(NB) *Cygnus columbianus* bewickii: Bewick Swan<br>A140(NB) *Pluvialis apricaria* : European Golden Plover<br>A052(NB) *Anas crecca*: Eurasian Teal<br>Waterbird assemblage | The Somerset Levels and Moors are located in south-west England and are one of the largest and richest areas of traditionally managed wet grassland and fen habitats in lowland UK. The SPA is within this area and covers about 35,000 ha in the floodplains of the Rivers Brue, Parrett, Tone and their tributaries. The majority of the site is only a few metres above mean sea level and drains through a large network of ditches, rhynes, drains and rivers. Flooding may affect large areas in winter depending on rainfall and tidal conditions. Parts of the site in the Brue Valley include areas of former raised peatbog that have now been substantially modified by agricultural intensification and peat extraction. This has created areas of open water, fen and reedbed. The site attracts important numbers of waterbirds (swans, ducks and waders) in winter. |
| Somerset Levels & Moors Ramsar | 17 species of red-listed invertebrate (under criterion 2)<br>Waterfowl assemblage of international importance (under criterion 5)<br>Species/populations occurring at levels of international importance (under criterion 6):<br>*Anas crecca*: Eurasian Teal<br>*Vanellus vanellus*: Northern Lapwing | As above. |

| Site | Interest features | Description |
|---|---|---|
| West Dorset Alder Woods SAC | H6410 *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*); Purple moor-grass meadows<br>H9190 Old acidophilous oak woods with *Quercus robur* on sandy plains; Dry oak-dominated woodland<br>H91E0# Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*); Alder woodland on floodplains<br>S1065 *Euphydryas* (*Eurodryas, Hypodryas) aurinia*: Marsh Fritillary butterfly<br>S1166 *Triturus cristatus*: Great Crested Newt | The SAC comprises mixed ash-alder woods found along the sinuous valleys in West Dorset. They have developed along the headwaters of alkaline streams and seepages having their origin in the chalk downland and issuing from the underlying Upper Greensand at its junction with the Gault Clay. The wetter woods or carr form transitions to drier oak-ash woodland as well as associated further transitions to base-rich fens, reedswamp, fen meadow and acid grassland. This mosaic of grassland and scrub habitat supports a population of Marsh fritillary species and combined with aquatic habitat in parts of the SAC provides ideal breeding and foraging conditions for the great crested newt. |

# Appendix 3: Site pressures and threats for relevant European sites

The table lists the threats and pressures identified for each European site in the relevant site improvement plan. The links are for the relevant plan and the threats/pressures are listed in prioritised order.

| Site | Site pressures and threats |
|---|---|
| East Devon Pebblebed Heaths SAC/SPA | 1 Inappropriate scrub control<br>2 Undergrazing<br>3 Change in land management<br>4 Public access/disturbance<br>5 Air pollution: impact of atmospheric nitrogen deposition<br>6 Water pollution<br>7 Hydrological changes |
| Exe Estuary SPA and Dawlish Warren SAC | 1 Public access/disturbance (affecting birds)<br>2 Changes in species distributions<br>3 Coastal squeeze<br>4 Change in land management<br>5 Public access/disturbance (visitor pressure at Dawlish Warren)<br>6 Fisheries: Commercial marine and estuarine |
| Lyme Bay & Torbay SAC | 1 & 2 Fisheries: commercial marine and estuarine<br>3 Public access/disturbance |
| Sidmouth to West Bay SAC | 1 Invasive species<br>2 Disease<br>3 Direct impact from third party<br>4 Planning permission: general<br>5 Water pollution<br>6 Vehicles<br>7 Habitat fragmentation<br>8 Inappropriate coastal management<br>9 Air pollution: risk of atmospheric nitrogen deposition |
| South Dartmoor Woods SAC | 1 Air pollution: impact of atmospheric nitrogen deposition |
| South Hams SAC | 1 Change in land management |

| Site | Site pressures and threats |
|---|---|
| | 2 Planning permission: general<br>3 Physical modification<br>4 Inappropriate vegetation management<br>5 & 7 Public access/disturbance<br>6 Forestry and woodland management<br>8 Inappropriate scrub control<br>9 Air pollution: impact of atmospheric nitrogen deposition |

# Appendix 4: DTA Water Quality Report

The following appendix was produced by DTA Ecology to inform the HRA in relation to water quality, in the autumn 2024.

**ADVICE TO EAST DEVON COUNCIL**

# EAST DEVON LOCAL PLAN REPORT TO INFORM APPROPRIATE ASSESSMENT IN RESPECT OF Water QUALITY (Appendix to main HRA)


**BY**
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Doc. Ref. 1137 East Dorset Local Plan WQ

Date: 11th Nov 2024

# Contents

# 1 Introduction

## 1.1 Structure and function of this report

1.1.1 This report is submitted by DTA Ecology Ltd to East Dorset Council in respect of the Habitats Regulations Assessment (HRA) for the Local Plan. This report is relevant to the assessment of water quality impacts to accompany the additional appendix to the main HRA report on air quality. It is comprised of the following parts:

- European sites potentially at risk and screening for a likely significant effect for increased nutrient discharges.
- River Axe SAC Conservation Objectives and Supplementary Advice
- Nutrient neutrality and mitigation measures
- Conclusions regarding integrity test

1.1.2 East Devon Council are the competent authority under the Habitats Regulations. The statutory duty to undertake the assessment and apply the relevant legal tests rests with the Council. The recommendations and conclusions within this report represent the professional opinion of DTA Ecology. The Council will need to review the findings and recommendations and decide whether they will adopt the conclusions for the purpose of their own assessment, or not.

## 1.2 The Plan

1.2.1 The primary role of the plan subject to assessment is to guide and inform decisions on where and how development will take place in East Devon. The plan includes allocations for 18000 new dwellings with implications for increased pressures from associated increase in residents. These supplementary paragraphs are concerned with the effects of increased waste water discharges, and associated impacts of growth on the water quality targets for designated European sites.

# 2 European sites potentially at risk and screening for a likely significant effect for increased nutrient discharges.

## 2.1 European sites potentially at risk from water quality changes

2.1.1 The primary impact mechanism for water quality relates to increased waste water (including sewage) discharges associated with new development. Natural England guidance on Nutrient Neutrality explains that '[1]

> *Nutrient pollution is a major environmental issue for many of our most important places for nature in England. In freshwater habitats and estuaries, increased levels of nutrients (especially nitrogen and phosphorus) can speed up the growth of certain plants, disrupting natural processes and impacting wildlife. This process (called 'eutrophication') damages these water dependent sites and harms the plants and wildlife that are meant to be there. In technical terms it can put sites in 'unfavourable condition'. The sources of excess nutrients are very site specific but include sewage treatment works, septic tanks, livestock, arable farming and industrial processes.*
>
> *Where sites are already in unfavourable condition, extra wastewater from new housing developments can make matters worse and undermine ongoing efforts to recover these sites. However, when development is designed alongside suitable mitigation* measures, the additional damage can often be avoided.'*

2.1.2 Screening for sites that might be impacted by planned growth within the local plan area has identified one European site, the River Axe Special Area of Conservation as relevant in respect of effects from nutrient pressure and water quality effects.[2] The following sections provide further information.

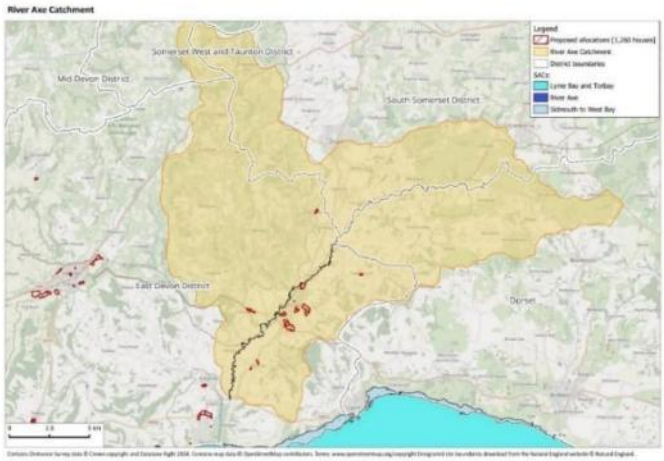



**Figure 2.1 River Axe SAC Catchment Source Natural England River Axe Evidence Pack**

2.1.3 At the screening stage the Exe Estuary SPA was also reviewed for whether there was a risk of impacts from planned growth. See supporting table at Page 25, which sets out the relevant features and water quality attributes.

[1] Nutrient Neutrality and Nutrient Mitigation
https://publications.naturalengland.org.uk/publication/6687601766694912
[2] River Axe Special Area of Conservation Evidence Pack.

## 2.2 Screening for a likely significant effect – Is an effect 'likely'?

2.2.1 Case law has clarified that, when applying the screening step an effect is 'likely' if it cannot be excluded on the basis of objective information. The ability to exclude effects on the basis of common sense and 'objective' information is important to avoid unnecessary assessment effort in respect of purely hypothetical risks and to enable the assessment work to be focussed on effects which represent a real risk to the sites concerned.

2.2.2 An overview of the inherent sensitivity of the screened in sites to additional nutrient and water quality impacts is outlined in table 2.2.1 below. The issue to be addressed is whether there is credible evidence of a real risk to the site from additional nutrients, or whether the risk can be excluded on the basis of objective information.

**Table 2.2.1: Inherent sensitivity of sites to water quality impacts**

| European site | Inherent sensitivity of site |
|---|---|
| River Axe SAC | The qualifying habitat identified as sensitive to water quality impacts with specific targets provided within the supplementary advice to the conservation objectives is the *Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation.* Three further species features are also identified as sensitive to nutrients: Brook Lamprey, Sea Lamprey and Bullhead. |
| Exe Estuary SPA | The qualifying features are Avocet, *Recurvirostra avosetta* - A132-A, nb, Black-tailed godwit, *Limosa limosa islandica* - A616, nb Dark-bellied Brent goose, *Branta bernicla bernicla* - A675, nb Dunlin, *Calidris alpina alpina* - A672, nb Grey plover, *Pluvialis squatarola* - A141, nb Oystercatcher, *Haematopus ostralegus* - A130, nb Slavonian grebe, *Podiceps auritus* - A007, nb Waterbird assemblage,<br><br>The Supplementary advice for the site identifies that '*the risk of eutrophication across the site has been assessed as low using the Environment Agency's Weight of Evidence approach.*'<br>Whilst there is a risk from increased nutrients from proposed growth, the risk needs to be considered against the attribute to limited algal cover (<15%) and low biomass (< 500 g m2) of macroalgal blooms in the available intertidal habitat. The risk to the site from water quality impacts is considered below. |

## 2.3 Screening for a likely significant effect – Is an effect 'significant'?

2.3.1 It is settled case law that, when applying the likely significant effect test, an effect is 'significant' if it undermines the achievement of the conservation objectives.

*Exe Estuary SPA*

2.3.2 It is DTA Ecology's advice that, in view of the low risk/sensitivity of the Exe Estuary SPA features, as set out in the Conservation Objectives Supplementary Advice; there is no credible evidence of a real risk of significant effect. In providing this advice consideration has also been given to the lack of any requirement from Natural England to take a nutrient neutrality approach in the Exe Estuary SPA catchment. **It is possible to exclude effects on the basis of objective information and no further assessment is required.**

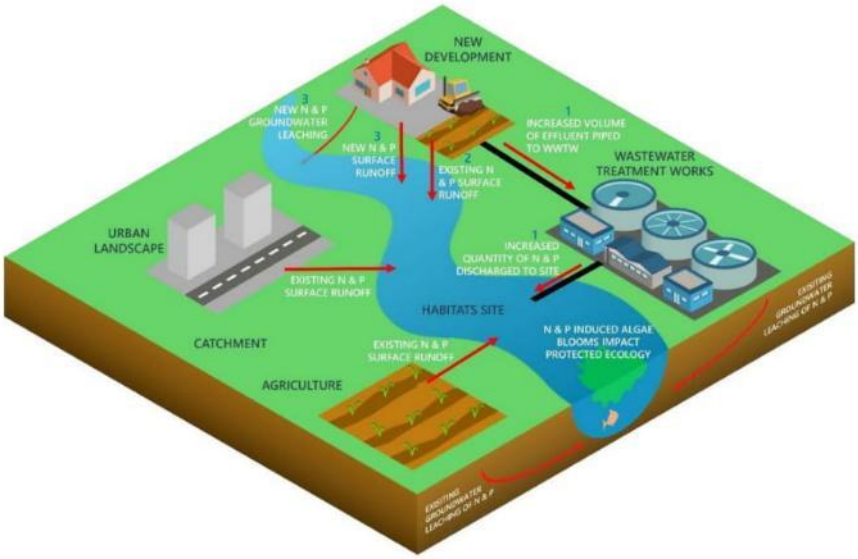
*River Axe SAC*

2.3.3 On the contrary DTA Ecology advice is that there is credible evidence of a real risk of significant effect for the River Axe SAC.

2.3.4 This assessment follows the guidance provided by Natural England to competent authorities, where at page 7 of NE NERC 459[3] it is stated (our emphasis).

> *'Where new residential development is proposed, the additional nutrient load from the increase in wastewater and/or the change in the land use of the development land created by a new residential development can create an impact pathway for potential adverse effects on Habitats sites that are already suffering from problems related to nutrient loading. This impact pathway is shown diagrammatically in Figure 1. Habitats Regulations Assessments (HRAs) of new residential developments therefore need to consider whether nutrient loading will result in 'Likely Significant Effects' (LSE) on a Habitats site.'*

**Figure 1: Schematic of a water catchment system (river or coastal) showing the pathway for impact (black line) from new residential development, as well as the current sources of nutrient pollution within catchments**




3

# 3 Conservation Objectives and Supplementary Advice

3.1.1 Natural England's TIN 193 describes the River Axe SAC in the following terms.

> *The mixed catchment geology of sandstones and limestones gives rise to calcareous waters where stream water-crowfoot Ranunculus penicillatus ssp. Pseudofluitans dominates, giving way to river water-crowfoot R. fluitans further downstream. Short-leaved water-starwort Callitriche truncata is an unusual addition to the water-crowfoot community.*
>
> *The diverse flora results from a number of contributing factors. Firstly, the lower reaches of the Axe have high bed stability. Secondly, the river has few trees along its banks, allowing much light to reach the riverbed. Finally, the active geomorphology of the river has generated a range of natural features (including long riffles, deep pools, islands and meanders), which provide a variety of ecological niches.*
>
> *This variety of river channel habitats also supports an important fish community, includeng Atlantic salmon Salmo salar, sea lamprey Petromyzon marinus, brook lamprey Lampetra planeri and bullhead Cottus gobio.*

The qualifying features for which the River Axe SAC has been designated are:

- H3260 Water courses of plain to montane levels with R. fluitantis
- S1095 Sea lamprey, Petromyzon marinus
- S1096 Brook lamprey, Lampetra planeri
- S1163 Bullhead, Cottus gobio

3.1.2 The conservation objectives for the site are to:

> Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;
>
> - The extent and distribution of qualifying natural habitats and habitats of qualifying species
> - The structure and function (including typical species) of qualifying natural habitats
> - The structure and function of the habitats of qualifying species
> - The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely
> - The populations of qualifying species, and,
> - The distribution of qualifying species within the site.

## 3.2 Natural England Supplementary Advice to the conservation objectives

3.2.1 The conservation objectives the SAC needs to be read and interpreted in light of Natural England's supplementary advice. Information on what the supplementary advice is, and when to use it, reads as follows:

> ***Supplementary advice***

*The Supplementary Advice on Conservation Objectives (SACOs) present attributes which are ecological characteristics or requirements of the designated species and habitats within a site. The listed attributes are considered to be those which best describe the site's ecological integrity and which if safeguarded will enable achievement of the Conservation Objectives. These attributes have a target which is either quantified or qualified depending on the available evidence.*

*The target identifies as far as possible the desired state to be achieved for the attribute. In many cases, the attribute targets show if the current objective is to either 'maintain' or 'restore' the attribute. The targets given for each attribute do not represent thresholds to assess the significance of any given impact in Habitats Regulation Assessments. You will need to assess this on a case-by-case basis using the most current information available.*

***When to use***
*You should use this information, along with the conservation objectives and case-specific advice issued by Natural England when developing, proposing or assessing an activity, plan or project that may affect the site.*

*Any proposals or operations which may affect the site or its features should be designed so they do not adversely affect any of the attributes in the SACO or achievement of the conservation objectives*

3.2.2 The supplementary advice for the River Axe SAC includes the following further information with regard to water quality which is relevant to the Qualifying Features:

| Attribute | Sub-attribute | Targets | Supporting and Explanatory notes |
|---|---|---|---|
| H3260 Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation; Rivers with floating vegetation often dominated by water-crowfoot | | | |
| Supporting processes (on which the feature relies) | Water quality - nutrients | The natural nutrient regime of the river should be protected, with any anthropogenic enrichment above natural/background concentrations should be limited to levels at which adverse effects on characteristic biodiversity are unlikely. **Maximum phosphorus concentrations (µgL-1 SRP) should be 50µg/l.** The Total Inorganic | Elevated nutrient levels interfere with competitive interactions between higher plant species and between higher plants and algae, leading to dominance by attached forms of algae and a loss of characteristic plant species (which may include lower plants such as mosses and liverworts). Through changes to plant growth and plant community composition and structure they also affect the wider food web, altering the balance between species with different feeding and behavioural strategies. The respiration of artificially large growths of benthic or floating algae may generate large diurnal sags in dissolved oxygen and poor substrate conditions (increased siltation) for fish and invertebrate species. The management focus is typically on phosphorus in rivers, on the assumption that it can be more easily controlled at levels that limit the growth of |

| | | | |
|---|---|---|---|
| | | Nitrogen (TIN) target is 0.2mg/l N. | plant species. However, nitrogen may also be important in river eutrophication and ideally co-limitation would be the management aim. |
| **Supplementary Advice for Qualifying Features: S1095 Sea lamprey, *Petromyzon marinus,* S1096 Brook lamprey, *Lampetra planeri* and S1163 Bullhead, *Cottus gobio*** | | | |
| Supporting habitat: structure/ function | Water quality - nutrients | Restore the natural nutrient regime of the rivers, with any anthropogenic enrichment above natural/background concentrations limited to levels at which adverse effects on the feature are unlikely. | Nutrient enrichment can lead to loss of substrate condition for spawning, egg development and ammocoete growth, due to benthic algal growth and associated enhanced siltation and sediment anoxia. Lamprey/Bullhead species may be affected by both episodic and chronic organic pollution. Episodic pollution causes direct mortalities whilst chronic pollution affects substrate condition through the build-up of excessive microbial populations. |

3.2.3 JNCC Common Standards Monitoring for Rivers set out UK wide guidance on maximum phosphorous concentrations of 50ug for low altitude high alkalinity sites.[4]

**Table 6. Proposed maximum phosphorus concentrations (µg $L^{-1}$ SRP) consistent with favourable condition of SSSI/SAC river habitat.**

| River type | | | Headwater | River | Large river |
|---|---|---|---|---|---|
| High altitude (>80 metres) | Low alkalinity (<50 mg $L^{-1}$ $CaCO_3$) | | 10 | 20 | 30 |
| | High alkalinity (>50 mg $L^{-1}$ $CaCO_3$) | | 15 | 25 | 40 |
| Low altitude (<80 metres) | Low alkalinity (<50 mg $L^{-1}$ $CaCO_3$) | | 30 | 40 | 50 |
| | High alkalinity (>50 mg $L^{-1}$ $CaCO_3$) | Chalk | 40 | 50 | 50 |
| | | Clay | 40 | 50 | 60 |

3.2.4 In 2014 Environment Agency and Natural England jointly agreed that the River Axe SAC Phosphate targets were not achievable with the next five years and an interim progress goal by 2021 for 82 (µg/L) needed to be achieved. The draft second river basin management plan was used to consult the public about the locally proposed measures and targets. [5]

## 3.3 Current Site Condition - River Axe SAC

3.3.1 Natural England report[6] that the River Axe SAC is in an unfavourable condition due to nutrient pressures from phosphorus. Further, that the Natural England's nutrient neutrality advice applies to the surface water catchment.

[4] https://data.jncc.gov.uk/data/1b15dd18-48e3-4479-a168-79789216bc3d/CSM-Rivers-2016-r.pdf

[5] 186 River Axe : Proposed targets for SAC conservation objectives (based on revised Common Standards Guidance) and interim progress goals for uRBMP - RIVPDF186

[6] TIN 193 Edition 2 River Axe SAC – Evidence Pak June 2024 River Axe Special Area of Conservation - Evidence Pack - TIN193

*'Recent water quality measurements for the River Axe within the SAC show phosphorus concentrations to be exceeding the targets for all units. Any nutrients entering the catchment upstream of the locations which are exceeding their nutrient targets, will make their way downstream and have the potential to further add to the current exceedance. Hence the catchment map for the River Axe includes the entire catchment upstream.''*[7]

[7] TIN 193 Edition 2 River Axe SAC – Evidence Pak June 2024 River Axe Special Area of Conservation - Evidence Pack - TIN193


**Area where Natural England's Nutrient Neutrality advice applies for River Axe SAC**

European protected sites requiring nutrient neutrality strategic solutions

- Local Authorities
- Component SSSIs of impacted designated site
- Surface water catchment area of relevant designated site due to nutrient pollution



NATURAL ENGLAND

River Axe SAC

| | River Axe SSSI | | |
|---|---|---|---|
| **Feature** | **001** | **002** | **003** |
| H3260 Water courses of plain to montane levels with R. fluitantis | UD | UD | UD |
| S1095 Sea lamprey, Petromyzon marinus | | UD | UD |
| S1096 Brook lamprey, Lampetra planeri | UD | UD | UD |
| S1163 Bullhead, Cottus gobio | UD | UD | UD |

Figure 2.5. Source – Natural England Deisgnated Sites system[8] date 25 October 2024

## 3.4 Water Quality baseline information

3.4.1 For the purpose of this assessment, baseline data has obtained from the TIN 193 River Axe Evidence Pack. The findings are summarised in table 6.2.1 below.

**Table 3.1 – Site attributes with targets for water quality**

| Unit Name | SSSI Unit | Monitoring Point ID | Soluble Reactive Phosphorus (µ/gl), annual mean | Orthophosphate reactive as P (µg/l) mean | Compliance with target – Pass/Fail and % reduction needed to achieve the WQ Target |
|---|---|---|---|---|---|
| **Dorset Section** | 1 | River Axe at Broom SW - 7023012 | 50 | 120.3 (June 2019-Jan 2022)* | FAIL 58% reduction needed |
| **Devon Border to Yarty Confluence** | 2 | River Axe at Bow Bridge SW 70230103 | 50 | 105.5 (Feb 2019 - Jan 2022) | FAIL 49% reduction needed |
| **River Glenderamackin** | 3 (SSSI unit 101) | River Axe at Slymlake – SW 70220164 | 50 | 110.3 (Feb 2017 – Feb 2020) | FAIL 53% reduction |
| | | River Axe at Whitford Bridge SW - 70220159 | 50 | 108.5 (Jan 2019 – Dec2021) | FAIL 54% reduction |
| | | River Axe U/S Colyton Stw- SW 70220119 | 50 | 97.9 (Feb 2019 – Jan 2022) | FAIL 49% reduction |

8 https://designatedsites.naturalengland.org.uk/SiteFeatureCondition.aspx?SiteCode=S2000139&SiteName=River%20Axe%20SSSI

## 3.5 Other sources of information – Article 17

3.5.1 A summary of the information contained in the 3rd UK Habitats Directive report (submitted in 2019) in relation to the habitats and species across the UK for which the River Axe SAC is designated is set out in table 3.3.2 below:

**Table 3.3.2: Summary of Article 17 report assessment of favourable conservation status at UK level for qualifying features of River Axe SAC**

| Qualifying Habitat Feature | Range | Area | Specific structures and functions | Future Prospects | Overall Assessment |
|---|---|---|---|---|---|
| Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation | Favourable | Unfavourable - Inadequate | Unfavourable (bad) | Poor | Unfavourable - Bad |
| **Qualifying Species Feature** | **Range** | **Population** | **Habitat for the species** | **Future Prospects** | **Overall Assessment** |
| Brook Lamprey | Favourable | Unknown | Unknown | Unknown | Unknown |
| Sea Lamprey | Favourable | Unknown | Unknown | Unknown | Unknown |
| Bullhead | Favourable | Favourable | Unknown | Favourable | Favourable |

3.5.2 The Article 17 reports also provides a list of the main pressures and threats which are considered to be relevant to the qualifying habitat or species concerned.

**Table 3.3.3: Summary of main pressures and threats recorded against the qualifying features at a UK level**

| Qualifying features | Main pressures and threats |
|---|---|
| Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation | • Invasive alien species of Union concern<br>• Mixed source pollution to surface and ground waters (limnic and terrestrial) *S<br>• Modification of hydrological flow*S<br>• Physical alteration of water bodies *S<br>• Temperature changes (e.g. rise of temperature & extremes) due to climate change |
| S1095 Sea lamprey, Petromyzon marinus, S1096 Brook lamprey, Lampetra planeri, S1163 Bullhead, Cottus gobio | • Discharge of urban waste water (excluding storm overflows and/or urban run-offs) generating pollution to surface or ground water<br>• Agricultural activities generating point source pollution to surface or ground waters<br>• Physical alteration of water bodies |

3.5.3 By way of a summary, the Article 17 report indicates that, across the UK the SAC River habitats are considered to be within the reporting category of 'Unfavourable – Bad'. This is primarily a consequence of an unfavourable (Bad) status for specific structures and functions affecting the habitat. The main threats and pressures responsible for the unfavourable status include water pollution as a high risk.

# 4 Appropriate assessment of water quality effects from increased discharges

## 4.1 The approach to assessing water quality effects

4.1.1 This appropriate assessment follows the guidance provided by Natural England to competent authorities on nutrient neutrality contained in Nutrient Neutrality Generic Methodology NE Commission Report NECR459 and associated guidance. This sets out that if an HRA cannot exclude a LSE due to nutrient loading, the Appropriate Assessment will need to consider whether this nutrient load needs to be mitigated in order to remove adverse effects on the Habitats site. A step wise approach is suggested to calculate the scale of the additional nutrient loading (generic and site specific site calculators are provided.)

4.1.2 A nutrient budget is calculated in 4 stages:

1. The increase in nutrient loading to a Habitats site that results from the increase in wastewater from a new development.
2. The nutrient loading from the past/present land use of the development site.
3. The nutrient loading from the future mix of land use on the development site.
4. Calculation of the net change in nutrient loading to a Habitats site (with the addition of a buffer). The net change in nutrient loading + the buffer, is the nutrient budget which requires mitigating.

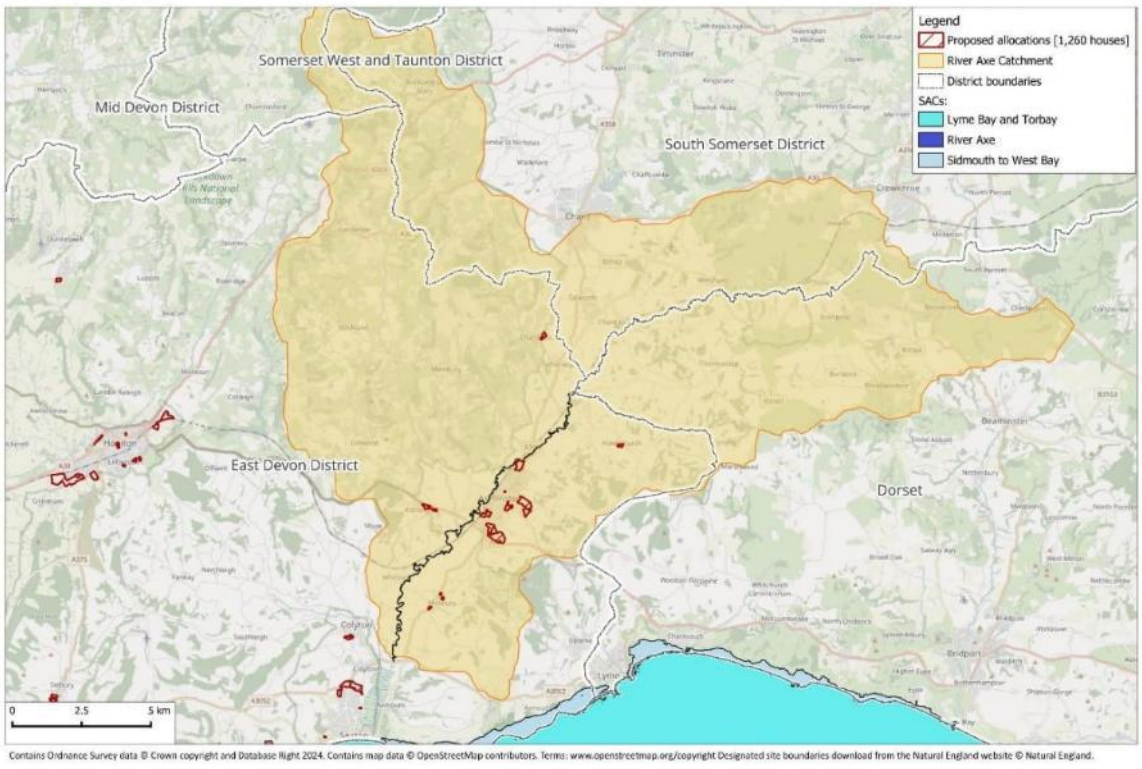
| **Table 3.1 Excerpt taken from Natural England guidance** | | | |
|---|---|---|---|
| **Overview of steps in stage 1** | | | |
| **Step** | **Description** | **Calculation** | **Output** |
| Step 1: Calculate increase in population due to the development | Calculates the additional population that will result from the development. | No. of new dwellings/units x residents per dwelling value (number of people) | Total additional population(number of people) |
| Step 2: Calculate the increase in wastewater production due to the development. | The additional population results in additional water usage and therefore additional production of wastewater with its associated nutrient load. | Additional population (number of people) x daily per person water usage (litres/person/day) | Total daily water use (litres/day) |
| Step 3: Determine the concentration of nutrients in wastewater and calculate additional wastewater nutrient load | Combine the daily rate of additional wastewater by the development with the concentration of nutrients (nitrogen or phosphorus) after wastewater treatment to get the additional nutrient load that will discharge to the Habitats site. | Daily water use (litres/day) x wastewater nutrient concentration (mg/l) | Nutrient load(kg/day) |
| **Overview of the steps in Stage 2** | | | |

| Step | Description | Calculation | Output |
|---|---|---|---|
| Step 1: Obtain nutrient export values from current land use(s) | The current land use or land uses on a development site have associated levels of nutrient export that will currently impact the Habitats site. This step provides details on how to obtain nutrient export coefficients to calculate the level of nutrient export from a development site pre-development. | Various calculations depending on the land uses | Nutrient export coefficient (kg/ha/year) |
| Step 2: Calculate the annual nutrient export from the current land use(s) on your development site | The nutrient export coefficients obtained in Step 1 of Stage 2 are used along with areas of land under each land use to calculate the total export of nutrients from the development site pre-development. | Nutrient export coefficient (kg/ha/year) x area of land (ha) | Nutrient load(kg/year) |
| **Overview of the steps in Stage 3** | | | |
| **Step** | **Description** | **Calculation** | **Output** |
| Step 1: Calculate the annual export from future land use(s) | This step accounts for the nutrient export from land use on the development site after the development has been built. It uses nutrient export coefficient for land uses that were determined in Stage 2. | Nutrient export coefficient (kg/ha/year) x area of land (ha) | Nutrient load (kg/year) |
| **Overview of the steps in Stage 4** | | | |
| **Step** | **Description** | **Calculation** | **Output** |
| Stage 4: Calculating the nutrient budget | The outputs from Stages 1-3 are combined to calculate the nutrient budget for the development. | Final Stage 1 output - Final Stage 2 output +Final Stage 3 output | Nutrient load (kg/yr) – this is the nutrient budget |
| Stage 4: Add the buffer to the nutrient budget | The nutrient budget calculated in Step 1 of Stage 4 is increased by a 20% "buffer". to account for any residual uncertainties in the methods used to derive the various inputs to Stages 1-4 of the nutrient budget. | Nutrient budget (kg/yr) x 1.2 | Nutrient load (kg/yr) – this is thefinal output of the methodology |

## 4.2 Location of planed future developments

4.2.1 The updated plan proposes an allocation for circa 18,000 dwellings, and it is DTA Ecology's understanding that circa 1260 of those fall within locations within the River Axe catchment.

**River Axe Catchment**






4.2.2 Using the generic Natural England Nutrient neutrality calculators for the River Axe catchment, of 2.4 persons per dwelling, this gives rise to an additional circa 1270 kg/TP/yr (inclusive of 20% buffer requirement) to be potentially added to the River Axe SAC catchment, - *Stage 1 step 1* pre 2030. The contribution post 2030, following scheduled upgrades to the receiving waterworks (and assuming a nutrient pollution standard of 0.25 applies to receiving works) will be reduced to circa 36 kg/TP/yr. The location of development, and the receiving water treatment works, will significantly influence the post 2030 loading.

4.2.3 At present it is not possible to progress calculations at Stage 2 and 3 further without specific information on locations and current land use. This can be added as further details on the developments is made available. F 9 of DTA Publications Habitats Regulations Assessment Manual provides

> *As with project assessments, the appropriate assessment of a plan can be an iterative process, re-assessing changes and new or different mitigation measures before making its final conclusions as to the implications for the site, so long as it is clear exactly what has been assessed in the final analysis. If further mitigation measures are to be included in the plan there must be a clear record as to what they are, when and how they will be incorporated into the plan and that the appropriate*

*assessment relied on those measures being embedded into the plan, and that without them the plan may not meet the integrity test.*

4.2.4 NE guidance is that any additional phosphate will add to an already exceeded system, and that it may be possible to take a nutrient neutrality approach to be able to conclude no adverse effects at for a plan level HRA.

> *Where it is not possible to rule out likely significant effects, plans and projects should be subject to an appropriate assessment. That appropriate assessment must contain complete, precise and definitive findings which are capable of removing all reasonable scientific doubt as to the absence of adverse effects on the integrity of the site.*
>
> *Appropriate assessments should be made in light of the characteristics and specific environmental conditions of the habitats site. Where sites are already in unfavourable condition due to elevated nutrient levels, Natural England considers that competent authorities will need to carefully justify how further inputs from new plans or projects, either alone or in combination, will not adversely affect the integrity of the site in view of the conservation objectives. This should be assessed on a case-by-case basis through appropriate assessment of the effects of the plan or project. In Natural England's view, the circumstances in which a Competent Authority can allow such plans or projects may be limited. Developments that contribute water quality effects at habitats sites may not meet the no adverse effect on site integrity test without mitigation.*
>
> *Mitigation through nutrient neutrality offers a potential solution. Nutrient neutrality is an approach which enables decision makers to assess and quantify mitigation requirements of new developments. It allows new developments to be approved with no net increase in nutrient loading within the catchments of the affected habitats site.*
>
> *Where properly applied, Natural England considers that nutrient neutrality is an acceptable means of counterbalancing nutrient impacts from development to demonstrate no adverse effect on the integrity of habitats sites and we have provided guidance and tools to enable you to do this.*

4.2.5 Natural England's guidance further states that

> *Nutrient neutrality is a means of ensuring that a plan or project does not add to existing nutrient burdens so there is no net increase in nutrients as a result of the plan or project (i.e. it "consumes its own smoke"). Where nutrient neutrality is properly applied and the existing land use does not undermine the conservation objectives1, Natural England considers that an adverse effect on integrity alone and in combination can be ruled out.*
>
> *Where neutrality measures are needed, the purpose of these mitigation measures is to avoid impacts to the designated sites, rather than compensating for the impacts once they have occurred.*

4.2.6 Natural England has set out seven principles which must be satisfied in order for nutrient neutrality to be relied upon to avoid adverse effects to site integrity. Natural England guidance describes the principles in the following manner:

*Nutrient Neutrality Principles. These set out the key principles which must be met for nutrient neutrality to be an effective mitigation measure which can be relied upon to enable development to proceed that would otherwise adversely affect the integrity of habitats sites.*

4.2.7 Noting that there is an intention to develop a strategic mitigation plan for nutrients impacts, before implementing a nutrient neutrality approach the Council needs to satisfy themselves that these principles can be met. The principles are considered further in section 5.

# 5 Nutrient neutrality and mitigation measures

## 5.1 Application of the nutrient neutrality principles

5.1.1 An evaluation of the nutrient neutrality principles in respect of the River Axe is provided in table 5.1 below.

Table 5.1 Natural England Nutrient Neutrality Principle and DTA advice

| Principle | Description of requirements | DTA Advice & recommendations |
|---|---|---|
| 1. Have scientific certainty that the measures at the time of the AA will deliver the required reduction to make the plan or project 'neutral'. | The competent authority should explain in its AA how any measures relied upon are certain at the time of assessment. Natural England considers that references to 'certainty' in the context of a HRA means that **"no reasonable scientific doubt remains as to the absence of such effects"**. Absolute certainty is not required; a competent authority could be certain that there would be no adverse effects even though, objectively, absolute certainty is not proven. | It is DTA Ecology's advice that this principle can by met through the good design of mitigation measures that fully mitigate for the impacts from proposed growth.<br><br>Strategic mitigation strategy is referenced by the Council as being progress, though we note that there are some uncertainties regarding funding.<br><br>There are a range of possible measures that have been accepted by Natural England as potentially forming part of a tool kit of options, and being suitable for consideration.<br><br>**Types of mitigation measures.**<br><br>Once the application has calculated the nutrient budget, the types of measures available to 'off-set' can be either<br>direct measures – such as upgrading sewage treatment works or alternatives like interceptor wetlands to remove TP from effluent discharges before they reach the International sites. Or<br>indirect measures, taking land in the sub-catchment out of high nutrient uses e.g. crop or intensive livestock systems.<br><br>Measures can be delivered on a case-by-case basis but examples are emerging of strategic approaches such as is proposed in the Local Plan.<br>Conversion of agricultural land for community and wildlife benefits.<br>Permanent changes to land use from a high nutrient loading use to a lower loading use. This may involve the use of areas within the development site itself as potentially SANGS or designated open space, or off-site – by acquiring (or otherwise securing through third parties) agricultural land in the sub-catchment.<br>Woodland planting |

| | | |
|---|---|---|
| | | Woodland planting on agricultural land, that results in a 20% canopy cover at maturity. Planting would rapidly be of a size that tree removal would require a felling licence from Forestry Commission and woodland removal covered by EIA regulations.<br>Wetlands<br>Creation of wetlands can remove a proportion of phosphorous. The NE advise identities wetlands and SUDs, and their ongoing management as possible avoidance measure, which will need to be secured through a planning permission.<br>Other Strategic Mitigation options<br>Purchase of nitrogen credits. The 'credit' might be realised through taking the above measures by a third party, and then traded. There are also schemes – such as Portsmouth City Council – which has designed the first scheme by creating headroom from implementing water saving efficiencies in its housing stock. |
| 2. Have practical certainty that the measures will be implemented and in place at the relevant time when the AA is undertaken, e.g. secured and funded for the lifetime of the development's effects. | The competent authority should explain in its AA how any measures relied upon are certain at the time of assessment. There may be different ways to achieve this certainty. One common method of ensuring full implementation of measures that are relied on in an AA would be for the measures to be secured through legally binding obligations that are enforceable.<br>b. Mitigation must be in place for the lifetime of the proposed development so in most cases this will be in perpetuity. We generally define in perpetuity between 80-125 years, however, it does not follow that mitigation is not needed after that period. | To secure the necessary mitigation, the Local Plan could contain specific policies for this to be embedded as a requirement, and the Council could take the lead in having a strategic mitigation scheme in place and prior to any impacts on the River Axe SAC. Alternatively individual developers might have restrictive conditions to ensure that mitigation is in place prior to impacts.<br><br>Timely<br>As an 'avoidance' measure, the mitigation measures (to neutralise the additional nutrient burden) are required to be in place prior to any impact. Where land is to be used as an off-site mitigation measure NE has advised that land tenure is secured through a change of ownership to a local authority or non-governmental organisation; or otherwise legally protected, to provide certainly that the benefits will be delivered in the long term. Where discharges are land on chalk, there is provision to allow for the time it would take for the nutrients to reach the International sites (approx. 1 year).<br>Size of Mitigation land<br>The size of any mitigation land should provide for fully neutralising (avoiding) additional phosphorus loads.<br>Location and catchment for mitigation land<br>Any land used for mitigation must be located in the same sub-catchment to be considered as an avoidance measure, and locations up stream in catchment.<br>Guaranteed to be delivered<br>The period over which the measures must be in place is 80-125 years (in perpetuity). To secure this for agricultural land that has been changed to open |
| 3. Be preventative in nature so as to avoid effects in the first place rather than offset or compensate for damage. This applies both temporally and spatially. | a. Temporally: i. Consideration will need to be given as to (i) when the measures will come online and into effect and (ii) when the pollutants come online as the impact may be phased and take place over the lifetime of a development, rather than on day one. It may be that a range of measures may be needed to address impacts over time.<br>ii. There may be cases where nutrient neutrality is not, at first, achieved because there is a time lag between the initial effects from the plan or project at the Habitats site compared to the benefits of neutrality measures (on-site or off-site) being felt at the Habitats site. One option is to consider whether bridging measures or reasonable restrictions on occupation or phasing could close that time lag so that neutrality can be achieved. | |

| | | |
|---|---|---|
| | b. Spatially: i. Consideration will need to be given as to the location of any mitigation relative to where the development will have its impact on the Habitats site to ensure that it avoids any increase in nutrients within the site. The mitigation measure will need to be upstream of the location where the development site run off and wastewater input will have its effect on the Habitats site. This means if the wastewater/run off is direct to (i.e. within) the Habitats site boundary the measures will need to be upstream of this location. If the discharge is indirect i.e. upstream in the catchment of the Habitats site, then the mitigation measures can be up or downstream within the catchment, as long as it will provide the offsetting before the point at which the development impacts the Habitats site.<br>ii. There may be cases where it is not possible to provide mitigation on land outside of the development, because it will not actually remove the impact from the development. For example, a terrestrial wetland (e.g. fen/bog) where there is a direct discharge to the wetland which is not to open water but to the wetland itself, then there may be no or very limited ability to avoid this localised impact, due to there being no or very limited other sources which contribute to this exact location. | green space or other community use, NE has previously advised that this should be through transferring of ownership of land to local authorities or NGOs, and a suitable legal mechanism. The exception to this is where agricultural land has been revegetated with 20% canopy cover; whereby regulatory controls for the prevention of felling could be considered adequate. |
| 4. Not undermine the objective of restoring the site to favourable condition by making the 'restore' objective appreciably more difficult or prejudicing the fulfilment of that objective. | a. For example, where there is only a limited pool of measures available for addressing an existing exceeded threshold and these are used to enable growth rather than bring the site into favourable condition, this may undermine the 'restore' objective. The key question would be whether, in fact, there is actually a limited pool of measures in the relevant circumstances.<br>b. Additionally, the implementation of mitigation measures through nutrient neutrality should not prevent the implementation of future measures under Articles 6(1) and 6(2) of the Habitats Directive (incorporated through Regulations 9(1) and 9(3) of the Habitats Regulations) aimed at restoring the site to favourable conservation status in the long term. This may be the case where, for example, proposed off-site mitigation land has been earmarked for the implementation of positive measures designed to improve the conservation status of the site and this opportunity for improvement in the quality of the site would be lost if the land were instead used for mitigation for a specific project. | It is relevant to consider that there have been ongoing projects between Natural England and Environment Agency to seek reductions in the P levels in the River Axe catchment. This relates to seeking to deliver interim restoration targets, and to target the most intensive dairy operations, to see to reduce total P entering the catchment.<br><br>Given the level of exceedance in the catchment (see table at para 3.4.1 above) – the local council will need to satisfy itself that there is sufficient capacity in the River Axe catchment, to both reduce the exceeding exceedance and also deliver mitigation for the additional phosphates entering the system from proposed growth.<br><br>Further information required from Natural England and the Environment Agency |
| | | |

| | | |
|---|---|---|
| 5. Not directly use or double count measures that are already in place or must be put in place to protect, conserve or restore the site (to meet article 6(1) and (2) requirements) in order to justify new growth. | a.For example, those measures that have been identified in a Diffuse Water Pollution Plan (DWPP) or Nutrient Management Plan (NMP) as needed to restore the site (such as wastewater treatment work upgrades that do not take account of growth) cannot also be used as mitigation for development2. | This is relevant to the above principle 4 whereby any measures required for Art 6(1) management or to prevent deterioration of the site should not be double counted.<br><br>However there is a caveat in that where there are funding shortfalls and no current funding mechanism, then there may be a case made that bringing forward unfunded measures may on some occasions by considered mitigation, where beyond normal management of the site. (Insert Reference) |
| 6. Be carefully justified together with calculations of the change in the nutrient contribution before and after the development taking account of any mitigation on land outside the development. | a. Over-estimating the existing nutrient contribution from development land or mitigation land outside the development site and/or under-estimating the nutrient contribution from the development to reduce the scale of nutrient reduction mitigation needed to meet 'nutrient neutrality' would not satisfy the precautionary requirements of the Habitats Regulations. The national generic nutrient neutrality methodology sets out how calculations can be undertaken.<br>b. To be able to take account of WwTW upgrades in any NN calculations, the upgrades need to have been agreed and funded through the water companies Periodic review process. Those that have already been agreed as part of the Water Industry National Environmental Program (WINEP) for PR19 and will therefore be implemented by end of 2024 can be taken into account and have been included within the NN calculators | This principle can be satisfied in ensuring that the guidance on nutrient loads and the site-specific calculators are utilised. |
| 7. Ensure that there is no real risk that the existing land use, which may be maintained by neutrality (or an improvement), undermines the conservation objective to 'restore' the site to favourable condition. | This applies to the existing land use at the development site and at any off-site mitigation land. | This principle can be satisfied by ensuring that the location for any nutrient neutrality mitigation site, and the scale of the reductions in total phosphate from that area are of a sufficient reduction. For example, a situation might arise where only small reductions are achieved over a large area, that might otherwise have been able to drive down additional inputs in the catchment. IN such cases, and where there are limited additional opportunities in the catchment, it might be valid to consider that the conservation objectives to restore are undermined. |

## 5.2 Conclusions

5.2.1 Before progressing with nutrient neutrality as a mitigation approach, the Council needs to be satisfied that the nutrient neutrality principles set out by Natural England can be met. Following a review of these principles with regards the Rover Axe catchment it is not yet possible to demonstrate compliance with principle 4. Further information is required before the Council are able to form a view on the extent to which a nutrient neutrality approach might compromise the undermine the objective of restoring the site to favourable condition by making the 'restore' objective appreciably more difficult or prejudicing the fulfilment of that objective.

5.2.2 As set out in table 3.1, in order to achieve the conservation objective targets for phosphorus reductions in the range of 49 – 58% from current levels will be required. There will be a degree of overlap between the measures which could be implemented to deliver overall reductions in nutrient loading and those which might be relied upon to achieve nutrient neutrality. The delivery of restoration is a duty which is more closely aligned with the remit and statutory powers of the Environment Agency and Natural England and **the Council recognises a risk that nutrient neutrality may deplete the availability of measures which the Environment Agency and Natural England might otherwise be relying upon to deliver proactive restoration duties**.

5.2.3 As a planning authority the Council are also mindful of inadvertently perpetuating constraints which are currently imposed upon the delivery of development. The delivery of wider duties to restore the River Axe is central to the application of the integrity test under regulation 63; the Council does not want an inappropriate reliance on nutrient neutrality to undermine any shift to a more flexible approach to decision-making for new plans and projects which might depend upon demonstrable progress in the delivery of restoration.

5.2.4 In order to make an informed judgement on principle 4 the Council needs to understand the extent to which measures to deliver the necessary reductions are achievable in practice, whether they have been identified and whether they have been secured and/or are being implemented.

5.2.5 It is the advice of DTA Ecology that in order to demonstrate compliance with principle 4 the Council needs to seek further information from Natural England and the Environment Agency. In seeking such advice, to inform a decision as to whether it is possible to adopt a nutrient neutrality approach in accordance with the Natural England principles, it will be necessary to take account of planned growth across the catchment as a whole, including development that might come forwards in neighbouring local authorities.

# 6 Conclusions regarding integrity test

6.1.1 With reference to table above it is the advice of DTA Ecology that, in the absence of further information regarding a) scheduled improvements to receiving water treatment works (to understand predicted loading post 2030), and b) other measures being taken to deliver wider management/restoration duties (to evaluate compliance with principle 4), it cannot yet be concluded with sufficient certainty, at plan stage, that the Strategic Policy proposed

to be included for the *Protection of Internationally and Nationally important wildlife sites* and the (as yet to be designed) strategic mitigation will ensure no adverse effects on a site.

*Supporting Table Exe Estuary SPA – Features and associated supporting habitat water quality – nutrients.*

| Feature/Subfeature name | Attribute | Target | Season | Supporting notes |
|---|---|---|---|---|
| **Slavonian grebe (Podiceps auritus), Non-breeding** | Supporting habitat: water quality - nutrients | Maintain water quality at mean winter dissolved inorganic nitrogen levels where biological indicators of eutrophication (opportunistic macroalgal and phytoplankton blooms) do not affect the integrity of the site and features, avoiding deterioration from existing levels. This target was set using the Environmental Agency 2019 water body classifications data. | Year round | High concentrations of nutrients in the water column can cause phytoplankton and opportunistic macroalgae blooms, leading to reduced dissolved oxygen availability. This can impact sensitive fish, epifauna and infauna communities (Devlin et al., 2007), (Best, 2014) and hence adversely affect the availability and suitability of bird breeding, rearing, feeding and roosting habitats. The aim is to seek no further deterioration or improve water quality. |
| | | | | Site-specifics:<br><br>**The risk of eutrophication across the site has been assessed as low using the Environment Agency's Weight of Evidence approach**. This takes into account assessments of the Water Framework Directive opportunistic macroalgae and phytoplankton quality elements using the respective assessment tools. Adverse effects to integrity should be avoided. Therefore opportunistic macroalgal levels should be maintained so there is no adverse effect to the feature through limited algal cover (<15%) and low biomass (< 500 g m2) of macroalgal blooms in the available intertidal habitat, with area of available intertidal habitat affected by opportunistic macroalgae less than 15 %. There should also be limited (<5%) entrainment of algae in the underlying sediment (all accounting for seasonal variations and fluctuations in growth). Phytoplankton levels should be |

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| | | | | maintained above a WFD assessment tool score of 0.6, where there is only a minor (a) decline in species richness, and (b) disturbance to the diatom-dinoflagellate succession in the spring bloom compared to reference conditions.<br><br>The target has been set using expert judgement based on knowledge of the sensitivity of the feature to activities that are occurring / have occurred on the site. |
| **Dark-bellied brent goose (Branta bernicla bernicla), Non-breeding** | Supporting habitat: water quality - nutrients | Maintain water quality at mean winter dissolved inorganic nitrogen levels where biological indicators of eutrophication (opportunistic macroalgal and phytoplankton blooms) do not affect the integrity of the site and features, avoiding deterioration from existing levels. This target was set using the Environmental Agency 2019 water body classifications data. | Year round | High concentrations of nutrients in the water column can cause phytoplankton and opportunistic macroalgae blooms, leading to reduced dissolved oxygen availability. This can impact sensitive fish, epifauna and infauna communities (Devlin et al., 2007), (Best, 2014) and hence adversely affect the availability and suitability of bird breeding, rearing, feeding and roosting habitats. The aim is to seek no further deterioration or improve water quality. |
| | | | | Site-specifics:<br><br>**The risk of eutrophication across the site has been assessed as low using the Environment Agency's Weight of Evidence approach**. This takes into account assessments of the Water Framework Directive opportunistic macroalgae and phytoplankton quality elements using the respective assessment tools. Adverse effects to integrity should be avoided. Therefore opportunistic macroalgal levels should be maintained so there is no adverse effect to the feature through limited algal cover (<15%) and low biomass (< 500 g m2) of macroalgal blooms in the available intertidal habitat, with area of available intertidal habitat affected by opportunistic macroalgae less |

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| | | | | than 15 %. There should also be limited (<5%) entrainment of algae in the underlying sediment (all accounting for seasonal variations and fluctuations in growth). Phytoplankton levels should be maintained above a WFD assessment tool score of 0.6, where there is only a minor (a) decline in species richness, and (b) disturbance to the diatom-dinoflagellate succession in the spring bloom compared to reference conditions.<br><br>The target has been set using expert judgement based on knowledge of the sensitivity of the feature to activities that are occurring / have occurred on the site. |
| **Oystercatcher (Haematopus ostralegus), Non-breeding** | Supporting habitat: water quality - nutrients | Maintain water quality at mean winter dissolved inorganic nitrogen levels where biological indicators of eutrophication (opportunistic macroalgal and phytoplankton blooms) do not affect the integrity of the site and features, avoiding deterioration from existing levels. This target was set using the Environmental Agency 2019 water body classifications data. | Year round | High concentrations of nutrients in the water column can cause phytoplankton and opportunistic macroalgae blooms, leading to reduced dissolved oxygen availability. This can impact sensitive fish, epifauna and infauna communities (Devlin et al., 2007), (Best, 2014) and hence adversely affect the availability and suitability of bird breeding, rearing, feeding and roosting habitats. The aim is to seek no further deterioration or improve water quality. |
| | | | | Site-specifics:<br><br>**The risk of eutrophication across the site has been assessed as low using the Environment Agency's Weight of Evidence approach.** This takes into account assessments of the Water Framework Directive opportunistic macroalgae and phytoplankton quality elements using the respective assessment tools. Adverse effects to integrity should be avoided. Therefore opportunistic macroalgal levels should be maintained so there is no adverse effect to the feature through |

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| | | | | limited algal cover (<15%) and low biomass (< 500 g m2) of macroalgal blooms in the available intertidal habitat, with area of available intertidal habitat affected by opportunistic macroalgae less than 15 %. There should also be limited (<5%) entrainment of algae in the underlying sediment (all accounting for seasonal variations and fluctuations in growth). Phytoplankton levels should be maintained above a WFD assessment tool score of 0.6, where there is only a minor (a) decline in species richness, and (b) disturbance to the diatom-dinoflagellate succession in the spring bloom compared to reference conditions.<br><br>The target has been set using expert judgement based on knowledge of the sensitivity of the feature to activities that are occurring / have occurred on the site. |
| **Avocet (Recurvirostra avosetta), Non-breeding** | Supporting habitat: water quality - nutrients | Maintain water quality at mean winter dissolved inorganic nitrogen levels where biological indicators of eutrophication (opportunistic macroalgal and phytoplankton blooms) do not affect the integrity of the site and features, avoiding deterioration from existing levels. This target was set using the Environmental Agency 2019 water body classifications data. | Year round | High concentrations of nutrients in the water column can cause phytoplankton and opportunistic macroalgae blooms, leading to reduced dissolved oxygen availability. This can impact sensitive fish, epifauna and infauna communities (Devlin et al., 2007), (Best, 2014) and hence adversely affect the availability and suitability of bird breeding, rearing, feeding and roosting habitats. The aim is to seek no further deterioration or improve water quality. |
| | | | | Site-specifics:<br><br>**The risk of eutrophication across the site has been assessed as low using the Environment Agency's Weight of Evidence approach**. This takes into account assessments of the Water Framework Directive opportunistic macroalgae and phytoplankton quality elements using |

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| | | | | the respective assessment tools. Adverse effects to integrity should be avoided. Therefore opportunistic macroalgal levels should be maintained so there is no adverse effect to the feature through limited algal cover (<15%) and low biomass (< 500 g m2) of macroalgal blooms in the available intertidal habitat, with area of available intertidal habitat affected by opportunistic macroalgae less than 15 %. There should also be limited (<5%) entrainment of algae in the underlying sediment (all accounting for seasonal variations and fluctuations in growth). Phytoplankton levels should be maintained above a WFD assessment tool score of 0.6, where there is only a minor (a) decline in species richness, and (b) disturbance to the diatom-dinoflagellate succession in the spring bloom compared to reference conditions.<br><br>The target has been set using expert judgement based on knowledge of the sensitivity of the feature to activities that are occurring / have occurred on the site. |
| **Grey plover (Pluvialis squatarola), Non-breeding** | Supporting habitat: water quality - nutrients | Maintain water quality at mean winter dissolved inorganic nitrogen levels where biological indicators of eutrophication (opportunistic macroalgal and phytoplankton blooms) do not affect the integrity of the site and features, avoiding deterioration from existing levels. This target was set using | Year round | High concentrations of nutrients in the water column can cause phytoplankton and opportunistic macroalgae blooms, leading to reduced dissolved oxygen availability. This can impact sensitive fish, epifauna and infauna communities (Devlin et al., 2007), (Best, 2014) and hence adversely affect the availability and suitability of bird breeding, rearing, feeding and roosting habitats. The aim is to seek no further deterioration or improve water quality. |
| | | | | Site-specifics: |

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| | | the Environmental Agency 2019 water body classifications data. | | **The risk of eutrophication across the site has been assessed as low using the Environment Agency's Weight of Evidence approach**. This takes into account assessments of the Water Framework Directive opportunistic macroalgae and phytoplankton quality elements using the respective assessment tools. Adverse effects to integrity should be avoided. Therefore opportunistic macroalgal levels should be maintained so there is no adverse effect to the feature through limited algal cover (<15%) and low biomass (< 500 g m2) of macroalgal blooms in the available intertidal habitat, with area of available intertidal habitat affected by opportunistic macroalgae less than 15 %. There should also be limited (<5%) entrainment of algae in the underlying sediment (all accounting for seasonal variations and fluctuations in growth). Phytoplankton levels should be maintained above a WFD assessment tool score of 0.6, where there is only a minor (a) decline in species richness, and (b) disturbance to the diatom-dinoflagellate succession in the spring bloom compared to reference conditions.<br><br>The target has been set using expert judgement based on knowledge of the sensitivity of the feature to activities that are occurring / have occurred on the site. |
| **Dunlin (Calidris alpina alpina), Non-breeding** | Supporting habitat: water quality - nutrients | Maintain water quality at mean winter dissolved inorganic nitrogen levels where biological indicators of eutrophication (opportunistic macroalgal and phytoplankton blooms) do not affect the integrity of the site and features, avoiding | Year round | High concentrations of nutrients in the water column can cause phytoplankton and opportunistic macroalgae blooms, leading to reduced dissolved oxygen availability. This can impact sensitive fish, epifauna and infauna communities (Devlin et al., 2007), (Best, 2014) and hence adversely affect the availability and suitability of bird breeding, rearing, feeding and roosting habitats. The aim is to seek no further deterioration or improve water quality. |

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| | | deterioration from existing levels. This target was set using the Environmental Agency 2019 water body classifications data. | | Site-specifics:<br><br>**The risk of eutrophication across the site has been assessed as low using the Environment Agency's Weight of Evidence approach.** This takes into account assessments of the Water Framework Directive opportunistic macroalgae and phytoplankton quality elements using the respective assessment tools. Adverse effects to integrity should be avoided. Therefore opportunistic macroalgal levels should be maintained so there is no adverse effect to the feature through **limited algal cover (<15%) and low biomass (< 500 g m2**) of macroalgal blooms in the available intertidal habitat, with area of available intertidal habitat affected by opportunistic macroalgae less than 15 %. There should also be limited (<5%) entrainment of algae in the underlying sediment (all accounting for seasonal variations and fluctuations in growth). Phytoplankton levels should be maintained above a WFD assessment tool score of 0.6, where there is only a minor (a) decline in species richness, and (b) disturbance to the diatom-dinoflagellate succession in the spring bloom compared to reference conditions.<br><br>The target has been set using expert judgement based on knowledge of the sensitivity of the feature to activities that are occurring / have occurred on the site. |
| **Black-tailed godwit (Limosa** | Supporting habitat: water | Maintain water quality at mean winter dissolved inorganic nitrogen levels where biological | Year round | High concentrations of nutrients in the water column can cause phytoplankton and opportunistic macroalgae blooms, leading to reduced dissolved oxygen availability. This can impact sensitive fish, |

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| limosa islandica), Non-breeding | quality - nutrients | indicators of eutrophication (opportunistic macroalgal and phytoplankton blooms) do not affect the integrity of the site and features, avoiding deterioration from existing levels. This target was set using the Environmental Agency 2019 water body classifications data. | | epifauna and infauna communities (Devlin et al., 2007), (Best, 2014) and hence adversely affect the availability and suitability of bird breeding, rearing, feeding and roosting habitats. The aim is to seek no further deterioration or improve water quality.<br><br>Site-specifics:<br><br>**The risk of eutrophication across the site has been assessed as low using the Environment Agency's Weight of Evidence approach**. This takes into account assessments of the Water Framework Directive opportunistic macroalgae and phytoplankton quality elements using the respective assessment tools. Adverse effects to integrity should be avoided. Therefore opportunistic macroalgal levels should be maintained so there is no adverse effect to the feature through limited algal cover (<15%) and low biomass (< 500 g m2) of macroalgal blooms in the available intertidal habitat, with area of available intertidal habitat affected by opportunistic macroalgae less than 15 %. There should also be limited (<5%) entrainment of algae in the underlying sediment (all accounting for seasonal variations and fluctuations in growth). Phytoplankton levels should be maintained above a WFD assessment tool score of 0.6, where there is only a minor (a) decline in species richness, and (b) disturbance to the diatom-dinoflagellate succession in the spring bloom compared to reference conditions.<br><br>The target has been set using expert judgement based on knowledge of the sensitivity of the feature to activities that are occurring / have occurred on the site. |

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| **Waterbird assemblage, Non-breeding** | Supporting habitat: water quality - nutrients | Maintain water quality at mean winter dissolved inorganic nitrogen levels where biological indicators of eutrophication (opportunistic macroalgal and phytoplankton blooms) do not affect the integrity of the site and features, avoiding deterioration from existing levels. This target was set using the Environmental Agency 2019 water body classifications data. | Year round | High concentrations of nutrients in the water column can cause phytoplankton and opportunistic macroalgae blooms, leading to reduced dissolved oxygen availability. This can impact sensitive fish, epifauna and infauna communities (Devlin et al., 2007), (Best, 2014) and hence adversely affect the availability and suitability of bird breeding, rearing, feeding and roosting habitats. The aim is to seek no further deterioration or improve water quality. |
| | | | | Site-specifics:<br><br>**The risk of eutrophication across the site has been assessed as low using the Environment Agency's Weight of Evidence approach**. This takes into account assessments of the Water Framework Directive opportunistic macroalgae and phytoplankton quality elements using the respective assessment tools. Adverse effects to integrity should be avoided. Therefore opportunistic macroalgal levels should be maintained so there is no adverse effect to the feature through limited algal cover (<15%) and low biomass (< 500 g m2) of macroalgal blooms in the available intertidal habitat, with area of available intertidal habitat affected by opportunistic macroalgae less than 15 %. There should also be limited (<5%) entrainment of algae in the underlying sediment (all accounting for seasonal variations and fluctuations in growth). Phytoplankton levels should be maintained above a WFD assessment tool score of 0.6, where there is only a minor (a) decline in species richness, and (b) disturbance to the diatom-dinoflagellate succession in the spring bloom compared to reference conditions. |

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| | | | | The target has been set using expert judgement based on knowledge of the sensitivity of the feature to activities that are occurring / have occurred on the site. |

# Appendix 5: DTA Air Quality Report

The following appendix was produced by DTA Ecology to inform the HRA in relation to air quality, in the autumn 2024.

**ADVICE TO EAST DEVON COUNCIL**

# EAST DEVON LOCAL PLAN REPORT TO INFORM APPROPRIATE ASSESSMENT IN RESPECT OF AIR QUALITY (Appendix to main HRA)


**BY**
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Doc. Ref. 1137 East Dorset Local Plan

Date: 25th October 2024

# Contents

# 1 Introduction

## 1.1 Structure and function of this report

1.1.1 This report is submitted by DTA Ecology Ltd to East Dorset Council in respect of the Habitats Regulations Assessment (HRA) for the Local Plan. This report is relevant to the assessment of air quality impacts only and is produced as an appendix to the main HRA report. It is comprised of the following sections:

- Section 2: European sites potentially at risk and screening for a likely significant effect
- Section 3: Further detail for European sites progressed to appropriate assessment
- Section 4: Approach to the Appropriate Assessment
- Section 5: Baseline air quality data and relevant critical loads/levels
- Section 6: Appropriate Assessment of air quality effects from traffic emissions
- Section 7: Applying the integrity test to in respect of air quality effects

1.1.2 East Devon Council are the competent authority under the Habitats Regulations. The statutory duty to undertake the assessment and apply the relevant legal tests rests with the Council. The recommendations and conclusions within this report represent the professional opinion of DTA Ecology. The Council will need to review the findings and recommendations and decide whether they will adopt the conclusions for the purpose of their own assessment, or not.

## 1.2 The Plan

1.2.1 The primary role of the plan subject to assessment is to guide and inform decisions on where and how development will take place in East Devon. The plan includes allocations for 18000 new dwellings with implications for increased pressures from associated increase in residents. This report is concerned with the effects of increased traffic flows on the existing road network, and associated impacts of vehicular emissions on designated European sites.

# 2 European sites potentially at risk and screening for a likely significant effect for air quality

## 2.1 European sites potentially at risk from air quality changes

2.1.1 The primary impact mechanism for air quality relates to increased traffic emissions associated with new development. Natural England guidance[1] explains that protected sites within 200m of the edge of a road require further assessment. The guidance continues to advise however that, where there is a credible risk that air quality impacts may extend beyond 200m, additional sites can be scoped in.

2.1.2 Applying a 200m screening distance (and including some roads within 300m where a risk may arise) to roads which may be affected by predicted plan, growth five European sites have been identified as potentially relevant in respect of effects associated with air quality effects from traffic as set out in table 2.2.1.

**Table 2.1.1: Sites within 200m of roads affected by Local Plan growth**

| European site | Roads within 200m | Distance to nearest site boundary |
|---|---|---|
| Exe Estuary SPA | M5 | adjacent |
| | A376 (Exmouth) | 30m |
| | A379 (Bridge Road) | adjacent |
| | A379 (Sannerville Way) | 75m |
| | A379 (Starcross) | adjacent |
| East Devon (Pebblebed) Heaths SAC/SPA | B3179 (towards Budleigh Salterton) | adjacent |
| | A3052 (West of Newton Poppleford) | adjacent |
| | B3180 (North) | adjacent |
| | B3180 (South) | adjacent |
| Sidmouth to West Bay SAC | B3172 (East of Seaton) | 220m |
| | B3174 (Seaton to Beer) | 160m |
| River Axe SAC | A35 (Axminster) | crosses |
| | A358 (Axminster to Seaton) | 330m |
| | B3261 (Lyme Road) | 280m |
| | A3052 (Seaton & Colyford) | crosses |
| South Dartmoor Wood SAC | B3212 (Strawberry Hill to Doccombe) | adjacent |

## 2.2 Screening for a likely significant effect – Is an effect 'likely'?

2.2.1 Case law has clarified that, when applying the screening step and effect is 'likely' if it cannot be excluded on the basis of objective information. The ability to exclude effects on the basis of common sense and 'objective' information is important to avoid unnecessary assessment

[1] NE Internal Guidance - Natural England's approach to advising competent authorities on the assessment of road traffic emissions under the Habitats Regulations, June 2018.

effort in respect of purely hypothetical risks and to enable the assessment work to be focussed on effects which represent a real risk to the sites concerned.

2.2.2 Natural England guidance applies a 200m zone of influence in terms of localised effects of air pollution from traffic. When considering air quality impacts, a process contribution of 1% of the relevant critical load or level, either alone or in combination with other plans and projects, is used to identify an effect as potentially 'significant'. Air quality modelling work to generate process contribution data for all roads within 200m of a European site is a significant undertaking so, a first step in the assessment process is to consider the credible evidence of a real risk. In other words, to consider whether there is objective evidence upon which a risk from air quality can be excluded, in the absence of detailed modelling outputs.

2.2.3 Whilst a road may be within 200m of a site, in some cases the spatial extent of the sites within 200m of the road, the sensitivity of the qualifying features to air pollution impacts and the feature distribution are such that, irrespective of any actual increased pollutant contribution from a road it would never represent a risk to the integrity of the site.

2.2.4 An overview of the inherent sensitivity of the site to air quality impacts is outlined in table 2.2.1 below.

**Table 2.2.1: Inherent sensitivity of sites within 200m of roads to air quality impacts**

| European site | Inherent sensitivity of site |
|---|---|
| Exe Estuary SPA | The APIS website shows that none of the qualifying features are sensitive to direct effects of ammonia or nitrogen oxides. The only potential sensitivity is therefore from nitrogen deposition and associated changes to supporting habitats for the qualifying species.<br><br>The habitat identified as sensitive in APIS is the saltmarsh habitat, and a critical load of 10-20kg/ha/yr has been assigned. Baseline nitrogen deposition levels across the site are between 10-13kg/ha/yr which is within the lower end of critical load range reducing the potential risk to site integrity. Only 6.7% of local nitrogen deposition contributions are attributed to road sources.<br><br>Saltmarsh habitat is spatially constrained within the site; with Magic map showing saltmarsh communities being present primarily in the northern end of the site (north of Exton), with a smaller presence around Dawlish Warren and along the Royal Avenue in Exmouth.<br><br>**The credible evidence of a real risk from air quality change is therefore constrained to areas within the site where saltmarsh communities are present, but the relative contribution from roads to local nitrogen deposition, the baseline deposition being within the lower end of the critical load range all moderate the risk to site integrity from road sources.** |
| East Devon (Pebblebed) Heaths SAC/SPA | All qualifying features for which the SAC is designated are potentially sensitive to air quality impacts. The critical load range of 5-15 applies alongside the more stringent critical level for ammonia of 1ug/$m^3$ and the roads affected by the Local Plan run through the site of adjacent to it. Baseline values for ammonia range from 1.5-1.9ug/$m^3$ and for nitrogen deposition range from 12-15kg/ha/yr). **These sites are** |

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| | **therefore considered to be sensitive to potential air quality effects from increased traffic flows along affected roads.** |
| Sidmouth to West Bay SAC | Most of the qualifying features of the SAC are considered to be potentially sensitive to air quality impacts. However **the geographic location of the SAC, extending along the coastline significantly limits its exposure to road based sources. Source attribution data shows that road sources comprise only 3% of local nitrogen deposition.** |
| River Axe SAC | The only qualifying feature identified as sensitive to air quality impacts on APIS is the *Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation.* No critical load for nutrient nitrogen is given on APIS due to the inherent complexity in terms of the extent to which nitrogen deposition can affect riverine habitats, where water-borne sources of nutrients exert such a dominant effect over total nutrient loads. A critical level of 30ug/$m^3$ is given for $NO_x$ but baseline levels across the SAC are consistently below 10 ug/$m^3$ (in the region of 5-6 ug/$m^3$). A critical level of 1 or 3 ug/$m^3$ is specified for ammonia and baseline levels are around 2. **The risk to the site from air quality impacts is considered to below. Whilst there is a theoretical risk from ammonia concentrations any such risk is constrained to in areas where the one sensitive qualifying habitat is present.** |

2.2.5 Table 2.2.2 considers the relative risk to a protected site from emissions from the roads identified in table 2.1.1, in view of the information presented in table 2.2.1 above. The issue to be addressed is whether there is credible evidence of a real risk to the site for increased traffic, or whether the risk from air quality can be excluded on the basis of objective information.

**Table 2.2.2: Sites within 200m of roads affected by Local Plan growth**

| European site | Roads within 200m | Distance to nearest site boundary | Credible evidence of a real risk? |
|---|---|---|---|
| Exe Estuary SPA | M5 | adjacent | The SPA features are listed as not sensitive to ammonia or $NO_x$ concentrations but a critical load of 10-20 kg/ha/yr for saltmarsh should be applied in respect of N deposition. Background levels are 13kg/ha/yr meaning only the lower end of the critical load range is exceeded.<br><br>The M5 crosses the Exe estuary on what is predominantly a raised flyover. The M5 is part of the UK strategic road network and flows are subject to control at a national level; the increase in flows represents 6% of current baseline flows.<br><br>Saltmarsh communities are present below the bridge for approximately 160m meaning only a very small spatial extent of sensitive supporting SPA |

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| | | | habitat is potentially at risk. The elevation of road above the SPA will influence the dispersion of air pollutants and minimise localised road effects on ground level vegetation.<br><br>In light of the above it is not considered that there is credible evidence of a real risk to the integrity of the site from traffic flows on the M5 flyover.<br><br>No credible evidence of a real risk |
| | A376 (Exmouth) | 30m | The nearest saltmarsh communities are located 60m from the road. The distance is such that contributions from traffic on the road will be significantly reduced. Baseline N deposition is 11-12kg/ha/yr which is within the lower end of the critical load range for the supporting SPA habitat. The spatial extent of the SPA within 200m of the A376 is 6.7ha which represents 0.25% of the SPA (which extends to 2677ha overall).<br><br>No credible evidence of a real risk |
| | A379 (Bridge Road) | adjacent | Bridge road runs adjacent to the northern boundary of the SPA and, saltmarsh habitat is present below the bridge for a stretch of around 150m but the elevation of the road above the SPA will influence the pollutant dispersion and reduce localised impacts. The baseline nitrogen deposition is 13kg/ha/yr which is towards the lower end of the critical load range further reducing the risk to the SPA qualifying features.<br><br>No credible evidence of a real risk |
| | A379 (Sannerville Way) | 75m | No saltmarsh habitat present within 200m of the road.<br><br>No credible evidence of a real risk |
| | A379 (Starcross) | adjacent | No saltmarsh habitat present within 200m of the road.<br><br>No credible evidence of a real risk |
| East Devon (Pebblebed) Heaths SAC/SPA | B3179 (towards Budleigh Salterton) | adjacent | This road runs adjacent to SAC at Withycombe Raleigh common and sensitive qualifying heathland features are present within 200m of the road.<br><br>Credible evidence of a real risk |
| | A3052 (West of Newton Poppleford) | adjacent | This road runs through and adjacent to SAC for 1.5km and sensitive heathland habitat is present in close proximity to the road.<br><br>Credible evidence of a real risk |

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| | B3180 (North) | adjacent | This road runs adjacent to the SAC (qualifying habitat on one side) for 1100m and is within 75m of designated SAC towards the junction with the A3052.<br><br>Credible evidence of a real risk |
| | B3180 (South) | adjacent | This road runs through the SAC (with qualifying habitat on each side) for 3.3km and adjacent to the SAC (qualifying habitat on one side) for 600m by Coombe common.<br><br>Credible evidence of a real risk |
| Sidmouth to West Bay SAC | B3172 (East of Seaton) | 220m | The distance between the SAC boundary and the road and the relative proximity of the road to the SAC itself (it is 220m away from the western boundary of the SAC to the east of Seaton) removes any credible evidence of a real risk to site integrity from road based emissions.<br><br>No credible evidence of a real risk |
| | B3174 (Seaton to Beer) | 160m | The distance between the SAC boundary and the road and the relative proximity of the road to the SAC itself (it is only within 200m of a limited part of from the eastern boundary of the SAC to the west of Seaton) removes any credible evidence of a real risk to site integrity from road based emissions.<br><br>No credible evidence of a real risk |
| River Axe SAC | A35 (Axminster) | crosses | The inherent lack of sensitivity to air quality impacts, and the limited spatial extent of the SAC within 200m of the crossing removed credible evidence of a real risk to site integrity from traffic on the A35.<br><br>No credible evidence of a real risk |
| | A358 (Axminster to Seaton) | 330m | The distance from the SAC boundary and the inherent lack of sensitivity to air quality impacts, and the limited spatial extent of the SAC within 200m of the crossing removed credible evidence of a real risk to site integrity from traffic on the A358.<br><br>No credible evidence of a real risk |
| | B3261 (Lyme Road) | 280m | The distance from the SAC boundary and the inherent lack of sensitivity to air quality impacts, and the limited spatial extent of the SAC within 200m of the crossing removed credible evidence of a real risk to site integrity from traffic on the B3261.<br><br>No credible evidence of a real risk |

| | | | |
|---|---|---|---|
| | A3052 (Seaton & Colyford) | crosses | The inherent lack of sensitivity to air quality impacts, and the limited spatial extent of the SAC within 200m of the crossing removed credible evidence of a real risk to site integrity from traffic on the A3052.<br><br>No credible evidence of a real risk |

2.2.6 On the basis of the assessment detailed above it is considered that there is credible evidence of a real risk from air quality related effects in respect of the East Devon (Pebblebed) Heaths SAC/SPA. For other sites, it is concluded that it is possible to exclude effects on the basis of objective information as detailed in table 2.2.2.

2.2.7 No further assessment in required in respect of the other sites. There is no likely significant effect in respect of effects on Exe Estuary SPA, Sidmouth to West Bay SAC and The River Axe SAC. There is no credible evidence or a real risk to the SAC from traffic flows along the affected roads and no further assessment in-combination with other plans or projects is therefore required.

2.2.8 Air Quality modelling and further assessment of whether effects are 'significant' is therefore undertaken for the East Devon (Pebblebed) Heaths SAC/SPA only.

## 2.3 Screening for a likely significant effect – Is an effect 'significant'?

2.3.1 It is settled case law that, when applying the likely significant effect test, an effect is 'significant' if it undermines the achievement of the conservation objectives. This assessment follows the guidance provided by Natural England to competent authorities on the assessment of road traffic emissions under the Habitats Regulations[2]. The guidance sets out 4 steps at the screening stage and applies a significance threshold of 1% of the critical load or level.

2.3.2 In order to inform the screening for likely significant effects air quality modelling was undertaken for traffic flows on roads affecting the East Devon (Pebblebed) Heaths SAC/SPA. The results of the air quality modelling indicated process contributions from growth associated with the local plan in excess of 1% in respect of $NO_x$, $NH_3$, nitrogen deposition and acid deposition. The 4 steps set out in NE guidance are summarised in table 2.3.1 below.

**Table 2.3.1 – Summary of NE guidance 4 step approach to screening**

| Step | NE approach | Assessment |
|---|---|---|
| 1 | Does the proposal give rise to emissions which are likely to reach a European site? | Yes, the local plan will increase traffic flows along local roads which will give rise to emissions which will reach the East Devon (Pebblebed) Heaths SAC/SPA |
| 2 | Are the qualifying features of sites within 200m of a road sensitive to air pollution? | Yes, qualifying features are present within 200m of the roads affected. |

[2] NEA001 Natural England's approach to advising competent authorities on the assessment of road traffic emissions under the Habitats Regulations, June 2018.

| | | |
|---|---|---|
| 3 | Could the sensitive qualifying features of the site be exposed to emissions? | Yes, qualifying features within 200m are considered to be sensitive to air pollution impacts. |
| 4a | Application of screening thresholds 'alone' | The modelling work undertaken indicates that the contributions from the Local Plan will exceed 1% of the critical load/level for $NO_x$, $NH_3$ and nitrogen deposition 'alone' |

2.3.3 Paragraph 4.28 of the NE guidance explains that:

> *'Where a proposal is considered to have a likely significant effect because it breaches the screening threshold alone it should go through to an appropriate assessment 'alone' (at least initially). There is no need to consider the potential for in-combination effects (at steps 4b/c below) at this screening step as an appropriate assessment is needed in any event'.*

2.3.4 In accordance with the NE guidance the effects of road traffic on air quality within the East Devon (Pebblebed) Heaths SAC/SPA is considered likely to have a significant effect 'alone'. An appropriate assessment is required on the basis of the effects of the plan alone and, at this stage, further assessment in-combination with other plans and projects is not necessary.

# 3 Further details for European sites progressed to appropriate assessment

## 3.1 East Devon Pebblebed Heaths SAC

3.1.1 The qualifying features for which the East Devon Pebblebed Heaths SAC has been designated are:

- H4010. Northern Atlantic wet heaths with *Erica tetralix*
- H4030. European dry heaths
- S1044. *Coenagrion mercuriale*; Southern damselfly

3.1.2 The conservation objectives[3] for the site are to:

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

- **The extent and distribution of qualifying natural habitats and habitats of qualifying species**
- **The structure and function (including typical species) of qualifying natural habitats**
- **The structure and function of the habitats of qualifying species**
- **The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely**
- **The populations of qualifying species, and,**
- **The distribution of qualifying species within the site.**

## 3.2 East Devon Heaths SPA

3.2.1 The qualifying features for which the SPA has been designated are:

- A224 *Caprimulgus europaeus*; European nightjar (Breeding)
- A302 *Sylvia undata*; Dartford warbler (Breeding)

3.2.2 The conservation objectives[4] for the site are to:

**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**

[3] Natural England conservation objectives for East Devon Pebblebed Heaths SAC
[4] Natural England conservation objectives for East Devon Heaths SPA

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

## 3.3 Natural England Supplementary Advice to the conservation objectives

3.3.1 The conservation objectives for both the SAC and SPA need to be read and interpreted in light of Natural England's supplementary advice[5]. Information on what the supplementary advice is, and when to use it, reads as follows:

> ***Supplementary advice***
> *The Supplementary Advice on Conservation Objectives (SACOs) present attributes which are ecological characteristics or requirements of the designated species and habitats within a site. The listed attributes are considered to be those which best describe the site's ecological integrity and which if safeguarded will enable achievement of the Conservation Objectives. These attributes have a target which is either quantified or qualified depending on the available evidence.*
>
> *The target identifies as far as possible the desired state to be achieved for the attribute. In many cases, the attribute targets show if the current objective is to either 'maintain' or 'restore' the attribute. The targets given for each attribute do not represent thresholds to assess the significance of any given impact in Habitats Regulation Assessments. You will need to assess this on a case-by-case basis using the most current information available.*
>
> ***When to use***
> *You should use this information, along with the conservation objectives and case-specific advice issued by Natural England when developing, proposing or assessing an activity, plan or project that may affect the site.*
>
> *Any proposals or operations which may affect the site or its features should be designed so they do not adversely affect any of the attributes in the SACO or achievement of the conservation objectives*

3.3.2 The supplementary advice for the SAC/SPA includes the following further information with regard to air quality which is relevant to the heathland habitats; both as SAC features and supporting habitat for the SPA features. It is relevant to note that a 'restore' objective has been set in respect of air quality as current pollution levels exceed the conservation objectives targets.

| Attribute | Sub-attribute | Targets | Supporting and Explanatory notes |
|---|---|---|---|
| Supporting processes (on which the feature relies) | Air quality | Restore as necessary the concentrations and deposition of air pollutants to at or | This habitat type is considered sensitive to changes in air quality. Exceedance of these critical values for air pollutants may modify the chemical status of its substrate, accelerating or damaging plant growth, altering its vegetation |

[5] Natural England Supplementary Advice to the conservation objectives for East Devon Pebblebed Heaths SAC

| | | | |
|---|---|---|---|
| | | below the site-relevant Critical Load or Level values given for this feature of the site on the Air Pollution Information System (www.apis.ac.uk). | structure and composition and causing the loss of sensitive typical species associated with it.<br><br>Critical Loads and Levels are recognised thresholds below which such harmful effects on sensitive UK habitats will not occur to a significant level, according to current levels of scientific understanding. There are critical levels for ammonia (NH3), oxides of nitrogen (NOx) and sulphur dioxide (SO2), and critical loads for nutrient nitrogen deposition and acid deposition. There are currently no critical loads or levels for other pollutants such as Halogens, Heavy Metals, POPs, VOCs or Dusts. These should be considered as appropriate on a case-by-case basis.<br><br>Ground level ozone is regionally important as a toxic air pollutant but flux-based critical levels for the protection of semi-natural habitats are still under development. It is recognised that achieving this target may be subject to the development, availability and effectiveness of abatement technology and measures to tackle diffuse air pollution, within realistic timescales.<br><br>A restore target has been set as the critical loads for this feature are being exceeded on this site. |

3.3.3 The explanatory notes explain that air pollution impacts are directly related to aspects of a habitats structure and function. Hence air pollution impacts can also be linked to associated targets concerned with aspects of structure and function such as habitat extent, distribution and species composition.

## 3.4 SSSI condition assessment

3.4.1 Local site level information can also be obtained from the underpinning SSSI condition assessment. Looking across the SSSI unit which underpins the SAC/SPA, the favourable conditions summary pie chart is provided as figure 3.3.1 below. 28% of the SSSI is in a favourable condition; 57% is Unfavourable recovering; 6% is unfavourable no change and 9% is unfavourable declining.

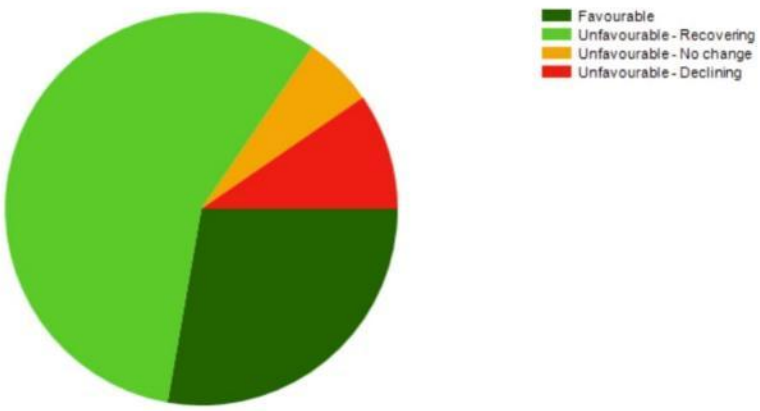


*Figure 3.3.1: favourable condition summary pie chart for East Pebblebed Heaths SSSI*

## 3.5 Other sources of information

3.5.1 Beyond the site level reporting at SSSI level, Article 17 of the Habitats Directive requires the UK Government to submit regular reports on the implementation of measures taken under the Directive. These reports were originally submitted to the European Commission but are not submitted to eth UK Government following the UKs departure from the European Union. The reports concern management measures as well as an evaluation of the impact of such measures on the 'conservation status' of the Annex 1 habitats and Annex 2 species (the habitats and species for which Special Areas of Conservation are designated).

3.5.2 At a habitat level (rather than a site level) Favourable Conservation Status is defined by reference to four parameters; 'range', 'area', 'structure and function' and 'future prospects'. The agreed method for the evaluation of conservation status assesses each of these parameters separately and then combines these assessments to give an overall assessment of 'conservation status'.

3.5.3 It is important to note that the Article 17 report relates to a 'feature level assessment' in respect of the distribution of a given qualifying feature across the UK. As such, whilst this information is of some relevance to the development of a *project specific* HRA, it is not an indication of the conservation status of each feature within the SAC (at a site level). The information is nevertheless helpful to inform an HRA as it does provide an indication of the status of the habitat overall.

3.5.4 A summary of the information contained in the 3rd UK Habitats Directive report (submitted in 2019) in relation to the habitats and species across the UK for which the affected SACs are designated is set out in table 3.3.2 below:

**Table 3.3.2: Summary of Article 17 report assessment of favourable conservation status at UK level for qualifying features of East Devon Pebblebed Heaths SAC**

| Qualifying Habitat Feature | Range | Area | Specific structures and functions | Future Prospects | Overall Assessment |
|---|---|---|---|---|---|
| European dry heaths | Favourable | Favourable | Unfavourable (bad) | Unfavourable (bad) | Unfavourable (bad) |

| | | | | | |
|---|---|---|---|---|---|
| North Atlantic wet heaths | Favourable | Unfavourable (Inadequate) | Unfavourable (bad) | Unfavourable (bad) | Unfavourable (bad) |
| **Qualifying Species Feature** | **Range** | **Population** | **Habitat for the species** | **Future Prospects** | **Overall Assessment** |
| Southern Damselfly | Favourable | Unfavourable (Inadequate) | Unfavourable (Inadequate) | Unfavourable (Inadequate) | Unfavourable (Inadequate) |

3.5.5 The Article 17 reports also provide a list of the main pressures and threats which are considered to be relevant to the qualifying habitat or species concerned. This information is relevant at a UK level but it does provide an indication of the possible reasons and cases for unfavourable conservation status. The main pressures and threats (those of high or medium importance) recorded against the qualifying features at the UK level for which the two SACs are designated are summarised in table 3.3.3:

**Table 3.3.3: Summary of main pressures and threats recorded against the qualifying features at a UK level**

| Qualifying feature | Main pressures and threats |
|---|---|
| European dry heaths | • Intensive grazing or overgrazing by livestock (H)<br>• Extensive grazing or undergrazing by livestock (M).<br>• Burning for agriculture (H)<br>• Suppression of fire for agriculture (M)<br>• Conversion to forest from other land uses, or afforestation (excluding drainage) (M).<br>• Wind, wave and tidal power, including infrastructure (M).<br>• Hydropower (dams, weirs, run-off-the-river), including infrastructure (M).<br>• Management of fishing stocks and game (H).<br>• Problematic native species (M).<br>• Mixed source air pollution (H). |
| North Atlantic wet heaths | • Intensive grazing or overgrazing by livestock (H)<br>• Burning for agriculture (H)<br>• Conversion to forest from other land uses, or afforestation (excluding drainage) (M).<br>• Wind, wave and tidal power, including infrastructure (M).<br>• Hydropower (dams, weirs, run-off-the-river), including infrastructure (M).<br>• Management of fishing stocks and game (H).<br>• Problematic native species (M).<br>• Plant and animal diseases, pathogens and pests (M).<br>• Mixed source air pollution (M). |
| Southern Damselfly | • Abandonment of grassland management (e.g. cessation of grazing or mowing) (H)<br>• Abandonment of management/use of other agricultural and agroforestry systems (all except grassland) (M)<br>• Extensive grazing or undergrazing by livestock (M).<br>• Abiotic natural processes (e.g. erosion, silting up, drying out, submersion, salinization) (H)<br>• Natural succession resulting in species composition change (other than by direct changes of agricultural or forestry practices) (M) |

3.5.6 By way of a summary, the Article 17 report indicates that, across the UK the SAC heathland habitats are considered to be within the reporting category of 'Unfavourable – Bad'. This is primarily a consequence of an unfavourable (Bad) status for specific structures and functions affecting the habitat, although the wet heath is also considered unfavourable in respect of

area. The main threats and pressures responsible for the unfavourable status include air pollution as a high risk for dry heaths and a moderate risk for wet heaths.

3.5.7 Of relevance to European dry heaths habitat it is pertinent to note that the EC has developed Habitat Action Plans for two of the most threatened habitats under the Habitats Directive. One is published in respect of European Dry Heaths[6]. The Action Plan identifies nutrient enrichment and airborne pollution as a key threat to the habitat and includes the following extract at 3.4.3 in respect of eutrophication and nitrogen deposition.

**Box 3.5.1 – Extract from EC Habitats Action Plan for European Dry Heaths**

3.4.3 Eutrophication and nitrogen deposition

Soil eutrophication by agriculture fertilisation and increased atmospheric nutrient deposition is an important threat to this habitat, which is strongly associated with infertile soils. Nitrogen addition affects the stress sensitivity of Calluna (Power et all., 1998) and hence decreases its dominance in vegetation cover. Eutrophication leads to the spread of plants with a higher production of biomass. It essentially acts by accelerating successional processes, but it can also lead to permanent alteration/change of the ecology of the habitat. Air-borne nitrogen deposition is considered one of the main threats to this habitat type in Belgium, Denmark, Germany, Ireland, Italy, Poland, Spain, the Netherlands and the UK (Diemont et al., 2013c).

The critical load has been estimated in Germany between 8 and 21 kgN/ha/year (SMB method, Balla et al. 2013. Loads ACLBB-LFC 2014), empirical critical loads are between 10 and 20 kgN/ha/year (Bobbink & Hettelingh 2011, Baden-Württemberg ACl 2019). However, the actual input in several regions exceeds these limits considerably, with up to 60 kgN/ha/year. With such large air-borne nitrogen pollution, even grazing or mowing cannot counteract the nutrient input (Härtle 2006) and controlled burning or removal of top soil is sometimes the last possibility. The problem is not only NOx-pollution from combustion but also increasingly NH3-emmissions from agriculture, which need to be dramatically reduced (mainly fertilizers, and intensive animal breeding). NH3 critical level is estimated at 2-3 micrograms/cubic meter air *[note that a critical level of 1ug/m$^3$ now applies for lower plant communities].* This is especially important for typical mosses and lichens as nitrogen enters and damages the tissues directly.

Diffuse eutrophication (by air-borne pollutants or adjacent cultivated fields or grasslands) in Belgium causes the extension of long-lived nitrophilous species (e.g. Deschampsia flexuosa is dominating dry heath over large areas in the north of Belgium). Nitrogen deposition causes major reductions in plant richness (Britton and Ross, 2018, Field et al 2014) and may also encourage more nutrient-demanding species such as grasses (Britton et al. 2001; Friedrich et al. 2011; Southon et al. 2013).

Field-scale surveys and N-manipulation experiments testing the effects of a variety of N loading rates over different temporal scales in Spain have evidenced substantial N-driven changes in the composition, diversity and functioning of nutrient-poor Calluna vulgaris heathland (Calvo et al., 2005, 2007). Increased N inputs alter a multitude of heathland characteristics such as soil and litter properties (e.g., nutrient availability, enzyme activities or microbial biomass) or plant traits (e.g., growth, flowering, tissue and litter chemistry) or plant susceptibility to biotic (e.g., Lochmaea suturalis –heather beetle) (Taboada et al., 2016) and abiotic (e.g., frost or drought) stressors.

Elevated N inputs stimulate N mineralization rates, resulting in enhanced soil N availability. N accumulation in heathland ecosystems promotes enhanced rates of nutrient uptake by Calluna plants and subsequent increases in foliar tissue N and P contents (Calvo et al., 2007), as well as increases in litter N and P contents (Calvo-Fernández et al., 2018). Some studies also highlight the relevance of taking into account the age of vegetation when investigating the responses of the plant-soil-microbial-enzyme system of heathlands to

[6] EC European Dry Heaths Action Plan, 2020.

cumulative N loading. Calluna stands in the mature phase of development have lower plant tissue N and P contents and litter N content than young ones, owing to higher nutrient demands and uptake rates by mature Calluna plants with more above-ground biomass. These greater nutrient demands of mature Calluna plants possibly lead to (1) lower N content in the soil microbial biomass and (2) greater root mycorrhizal colonization by ericoid fungi under high N availability.

Alonso et al (2001) investigated the interactions between Nitrogen deposition and grazing. This study showed that appropriate management of Calluna moorlands by regular burning and the prevention of overgrazing helps to maintain a young and healthy Calluna canopy and it may also prevent grass invasion, even under increasing nutrient inputs, by allowing Calluna to eventually overtop potential invading grass species and outcompete them for light.

# 4 Approach to the Appropriate Assessment

## 4.1 The integrity test

4.1.1 The concept of site integrity is considered in section C.11 of the HRA Handbook[7] and some key generic principles are summarised in table 4.1.1 below:

| Table 4.1.1: Key overarching principles from section C.11 of the HRA handbook |
|---|
| In the context of the Regulations, the 'integrity' of a site is defined in England and Wales 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 the site is (or will be) designated'. In 2018 EC guidance modified this to read 'the coherent sum of the site's ecological structure, function and ecological processes, across its whole area, which enables it to sustain the habitats, complex of habitats and/or populations of species for which the site is designated.' |
| The 'integrity' of a site can also be considered to be the quality or condition of being whole or complete; or in a dynamic ecological context, as having resilience and an ability to evolve in ways that are favourable to conservation. |
| A site can be described as having a high degree of integrity where the inherent potential for meeting site conservation objectives is realised, the capacity for self-repair and self-renewal under dynamic conditions is maintained, and a minimum of external management support is required. |
| When looking at effects on the integrity of a site it is important to take into account a range of factors, including the possibility of effects manifesting themselves in the short, medium and long-term, the duration of the effects and their reversibility. |
| The 'integrity of a site' relates to the site's conservation objectives. Taking each qualifying feature in turn, if the conservation objectives for a feature will be undermined, site integrity is necessarily adversely affected. On the contrary, site integrity cannot be considered to be adversely affected if the findings of an appropriate assessment demonstrate that the conservation objectives will not be undermined alone or in combination with other plans or projects. This would include low-impact effects that are too small or short-lived to undermine the achievement of the conservation objectives. For example, this may include operations which may have short term effects but no significant long term adverse effects. |
| Plans or projects must not be approved unless the authority has made 'certain' that they will not have an adverse effect on site integrity. Such certainty would only exist where the competent authority is 'convinced' about the lack of effects on integrity which will be the case where no reasonable scientific doubt remains as to the absence of such effects |
| If suitably conservative assumptions are built into the calculation of scientifically sound 'integrity' thresholds, related to the site conservation objectives and targets, then the fact that the outcome of predictive modelling or calculations in a particular case is close to the threshold, does not mean that the competent authority ought to conclude that there must be reasonable scientific doubt about the absence of adverse effects on integrity. A further layer of precaution is unnecessary. |
| The test is whether there is 'reasonable' scientific doubt rather than an absolute certainty. It is not possible to demonstrate, nor is it necessary to show, an absolute guarantee that there will not be an adverse effect on site integrity; rather a competent authority, taking advice from the statutory nature conservation body, should identify the potential risks, so far as they may be reasonably foreseeable in light of such information as can reasonably be obtained, and put in place a legally enforceable framework with a view to preventing the risks from materialising. |

[7] Tyldesley, D. and Chapman, C., (2013) *The Habitats Regulations Assessment Handbook*, October 2024 Edition UK, DTA Publications Limited.

## 4.2 How the integrity test relates to an appropriate assessment

4.2.1 Whilst closely related, the appropriate assessment and integrity test are discrete inter-related steps. The appropriate assessment is an objective assessment of the implications for the site if the plan or project goes ahead. The findings of the assessment inform the integrity test, which follows. This aligns with the ruling of the CJEU in the *Sweetman* case[8], where the court actually refers to the appropriate assessment and integrity test as separate 'stages' when describing the assessment process.

> *'That provision thus prescribes two stages. The first, envisaged in the provision's first sentence, requires the Member States to carry out an appropriate assessment of the implications for a protected site of a plan or project when there is a likelihood that the plan or project will have a significant effect on that site…*
>
> *…The second stage, which is envisaged in the second sentence of Article 6(3) of the Habitats Directive and occurs following the aforesaid appropriate assessment, allows such a plan or project to be authorised on condition that it will not adversely affect the integrity of the site concerned, subject to the provisions of Article 6(4).'*

4.2.2 The supporting Advocate General's opinion describes the question being asked through the appropriate assessment and integrity test in the following terms:

> *What will happen to this site if this plan or project goes ahead; and is that consistent with maintaining or restoring the 'Favourable Conservation Status' of the habitats and species concerned'*

4.2.3 This appropriate assessment record therefore clearly distinguishes the appropriate assessment, which sets out what will change if the plan or project goes ahead, from the integrity test, which considers the implications of the predicted changes in view of the conservation objectives. In other words the relative contribution the site makes to maintaining or restoring the favourable conservation status of the habitats and species for which it is designated.

## 4.3 Applying the integrity test generally

4.3.1 Building on the principles referred to in table 4.1.1, it is of the utmost important when applying the integrity test as part of an appropriate assessment to understand the conservation objectives for the site concerned. This is on the basis that it is a legal requirement under regulation 63 that an appropriate assessment be made 'in view of the conservation objectives'. The Natural England guidance NEA001[9] emphasises what this means in practice at paragraph 5.18:

> *'The Habitats Regulations state that appropriate assessments of plans and projects must be undertaken 'in view of that site's conservation objectives'.* ***The 'key question' for the appropriate assessment is, in view of these objectives, can it be ascertained that, should the plan or project go ahead, there will be no adverse***

[8] Case C-258/11 Reference for a preliminary ruling (The *Sweetman* Ruling)
[9] Natural England's approach to advising competent authorities on the assessment of road traffic emissions under the Habitats Regulations (NEA001)

***effect from it on the site's integrity so that the site's conservation objectives will not be undermined'***.

4.3.2 Guidance from Natural England included within the supplementary advice to the conservation objectives is clear and explicit that:

> *'You should use this information, along with the conservation objectives and case-specific advice issued by Natural England when developing, proposing or assessing an activity, plan or project that may affect the site.*
>
> *Any proposals or operations which may affect the site or its features should be designed so they do not adversely affect any of the attributes in the SACO or achievement of the conservation objectives'.*

4.3.3 The connection between the conservation objectives and the concept of site integrity is also clear from authoritative EC guidance 'Managing Natura 2000' which states:

> *'It is clear from the context and from the purpose of the Directive that the 'integrity of a site' relates to the site's conservation objectives… In other words if none of the habitat types or species for which the site has been designated is significantly affected then the site's integrity cannot be considered to be adversely affected. However, if just one of them is significantly affected, taking into account the site's conservation objectives, then the site integrity is necessarily adversely affected.'*

4.3.4 When reading and interpreting the extract above from the EC guidance it is relevant to acknowledge that, in the context of HRA, an effect is regarded as 'significant' (at the earlier screening for likely significant effects step) only if it undermines the conservation objectives. Hence a habitat or species being 'significantly' affected is equivalent to the respective conservation objectives for the habitat or species concerned being undermined.

4.3.5 Having understood what will happen if the project goes ahead in terms of air quality impacts associated with traffic emissions the application of the integrity test can helpfully be approached through an evaluation of the proposed changes in view of the conservation objectives and relevant attributes and targets in the supplementary advice.

## 4.4 Understanding the conservation objectives

4.4.1 Having recognised that an assessment must be made in view of the conservation objectives, it is helpful to explain how the conservation objectives are to be interpreted and applied. Natural England refer to conservation objectives in the following manner.

> *They provide a framework which should inform any 'Habitats Regulations Assessments' (which may include an Appropriate Assessment) that a competent authority may be required to make under the legislation referred to above. In addition, they can be used to inform any measures necessary to conserve or restore the European Site and/or to prevent the deterioration or significant disturbance of its qualifying features.*

4.4.2 The European Commission note on setting conservation objectives[10] provides further helpful clarification as follows:

> *'In its most general sense a conservation objective is the specification of the overall target for the species and/or habitat types for which a site is designated in order for it to contribute to maintaining or reaching favourable conservation status of the habitats and species concerned.'*

4.4.3 It is necessary to recognise that conservation objectives are established at a site level. They apply across the site and establish *overall* targets for the site concerned. A given site will, in most cases, be designated for a number of different habitats and species and site level conservation objectives are set for each of the qualifying features concerned. Given all qualifying features do not occur in all places within a site it logically follows that, when making an assessment 'in view of the conservation objectives' it is therefore necessary to acknowledge that the spatial application of any given objective will be dependent upon the distribution of qualifying features within the site.

4.4.4 By way of example if a site is designated for both woodland and heathland habitat types the conservation objectives for the woodland habitat would not apply in parts of the site hosting heathland habitat. The same logic applies where there is a restore objective at risk of being compromised; the spatial application of that objective will depend upon the distribution of the qualifying feature and local factors exerting an influence over condition.

4.4.5 It is also necessary to recognise that some sites contain areas which are referred to by Natural England as 'site fabric', being of no special nature conservation value. This is recognised in guidance document NEA001 at paragraph 4.18 as follows:

> *Many sites are designated for several different qualifying features. Not all features are present within a given location within the site. In some cases, a road surface and its adjacent verges may be included within a designated site boundary. This does not necessarily mean that it, and its associated verges, will be of nature conservation interest and form part of a qualifying feature. The inclusion of the hard surface of a road and/or its adjacent verges might simply have been unavoidable when denoting a boundary and included simply for convenience. These areas will therefore constitute 'site-fabric', being of no special nature conservation interest. Conversely, at some sites, roadside verges may have been deliberately included within a site boundary and be an integral part of a designated habitat. Therefore, a site's conservation objectives are unlikely to apply equally to all parts of a site and a competent authority may need to be made aware of this as necessary.*

4.4.6 The term 'site-fabric' is defined in a footnote within NEA001 as follows:

> *'Site-fabric' is a general term used by Natural England to describe land and/or permanent structures present within a designated site boundary which are not, and never have been, part of the special interest of a site, nor do they contribute towards supporting a special interest feature of a site in any way, but which have been unavoidably included within a boundary for convenience or practical reasons. Areas of site-fabric will be deliberately excluded from condition assessment and will not be expected to make a contribution to the achievement of conservation objectives.'*

[10] Commission Note on setting conservation objectives for Natura 2000 sites

4.4.7 The recognition that the spatial application of a conservation objective will be influenced by local factors is important when making an assessment in respect of air quality. This is due to the fact that air quality is not uniform across a given site. A given air quality target may be met in one part of a site and exceeded in another. Where this is the case, it would logically follow that a 'maintain' objective would apply to parts of a site where the baseline pollutant levels are already below the critical load/level and a 'restore' objective would apply to parts of the site subject to exceeding baseline pollutant levels.

4.4.8 Whilst this is entirely logical it is relevant to note that, historically, the APIS[11] website provided an average background pollutant level which applied across the site as a whole. At this time either a restore or a maintain objective would apply to a whole site on the basis of whether the average background level exceeded the relevant critical load / level. The baseline data was not historically available at a sufficient spatial resolution to recognise local variations within the site and allow a more spatially refined application of conservation objective targets.

4.4.9 Recent updates to the APIS website mean that baseline data is now provided at a 1km grid square resolution. This is a significant improvement, and it represents best available information allowing greater confidence to be attributed to baseline levels when making an assessment of predicted effects at a given location. It also enables a more refined application of underpinning conservation objective targets.

4.4.10 Given the updates are relatively recent, the published supplementary advice to conservation objectives have not yet been updated to recognise the enhanced spatial resolution for baseline air pollution data. Standard wording in Natural England's published supplementary advice to conservation objectives recognises that targets and attributes represent best available information and that they will be updated as new information becomes available. It is therefore the opinion of DTA Ecology that, for the purpose of the current assessment, the conservation objective targets for air pollution should take account of the current baseline values available on the APIS website. **As a consequence, conservation objective targets in respect of air quality will vary across a given site depending on the baseline levels provided**.

4.4.11 By way of a summary, in making an assessment in view of the conservation objectives it is necessary to acknowledge that:

- Conservation objectives set overall targets for the qualifying features concerned.
- The spatial application of any given objective will be dependent upon the distribution of qualifying features within the site and the baseline conditions.
- A site's conservation objectives are unlikely to apply equally to all parts of a site. Areas of 'site fabric' will not be expected to make a contribution to the achievement of a site's conservation objectives.

[11] Air Pollution Information System website

# 5 Baseline air quality information

## 5.1 How baseline air quality relates to conservation objectives and site integrity

5.1.1 As set out in case law, an appropriate assessment must take account of the specific environmental conditions and circumstances at the site[12]. It is established in case law that when applying the habitats regulations an effect is 'significant' if it undermines the conservation objectives[13].

5.1.2 A correct understanding of baseline conditions is therefore important when making an assessment of effects associated with air pollution *'in view of the conservation* objectives' (as legally required under regulation 63). As explained in 4.4 above, the prevailing air quality will influence the conservation objective targets for the site in respect of air quality and whether the requirement is to 'maintain' air quality (below the relevant critical load/level) or, instead, whether there is a requirement to 'restore' air quality (to achieve the critical load/level).

## 5.2 Air Quality baseline information updates

5.2.1 The air quality scope of this report is constrained to the effects associated with traffic emissions. The baseline values which are of particular relevance are therefore those in the vicinity of the roads affected by the growth provided for within the local plan which are within 200m of the east Devon (Pebblebed) Heaths SAC/SPA.

5.2.2 For the purpose of this assessment, baseline data has obtained from the Air Pollution Information System. The findings are summarised in table 6.2.1 below.

**Table 6.2.1 – baseline data from APIS website**

| Road | $NO_x$ background | Ammonia background | N dep background | Acid dep '$N_{max}$' background |
|---|---|---|---|---|
| A3179 (towards Budleigh Salterton) | 4.7 ug/$m^3$ | 1.5ug/$m^3$ | 13 kg/ha/yr | 1.1 keq/ha/yr |
| A3052 (West of Newtown Poppleford) | 5.2 ug/$m^3$ | 1.8ug/$m^3$ | 14.5 kg/ha/yr | 1.1 keq/ha/yr |
| B3180 (North of A3052) | 5.2 ug/$m^3$ | 1.8ug/$m_3$ | 14.8 kg/ha/yr | 1.1 keq/ha/yr |
| B3180 (South of A3052) | 4.8 ug/$m^3$ | 1.8ug/$m^3$ | 15kg/ha/yr | 1.1 keq/ha/yr |

5.2.3 To avoid any confusion, DTA Ecology recognises that the above values are average baseline values which are derived from modelling at a 1km grid square resolution. **These values are not therefore representative of baseline concentrations adjacent to existing roads which are expected to be higher.** This is taken into account in the appropriate assessment and modelling work considered in section 6.

[12] Refer Case C-127/02 Waddenzee Ruling para 48
[13] Refer Case C-127/02 Waddenzee Ruling para 47

## 5.3 Relevant critical loads and levels

5.3.1 The critical loads and levels for the purpose of the assessment are summarised in table 6.9.1 below.

| Table 6.9.1: Summary of critical loads and levels used in this assessment | | | | |
|---|---|---|---|---|
| **Qualifying feature** | **$NO_x$ ($ug/m^3$)** | **$NH_3$ ($ug/m^3$)** | **N dep (kg/ha/yr)** | **Acid dep '$N_{max}$' (Keq/ha/yr)** |
| **East Devon (Pebblebed) Heaths SAC** | | | | |
| European Dry Heaths | 30 | 1 | 5-15 | 1.205 |
| Northern Atlantic wet heaths | 30 | 1 | 5-15 | 1.205 |
| Southern damsefly | 30 | N/A | N/A | 1.205 |
| **East Devon Heaths SPA** | | | | |
| Nightjar | Not sensitive | Not sensitive | 5-15 | 1.205 |
| Dartford Warbler | Not sensitive | Not sensitive | 5-15 | 1.205 |

5.3.2 Natural England guidance advises that, for the purpose of an appropriate assessment it is necessary to 'review the environmental benchmarks (critical loads and levels) and feature sensitivity to nitrogen'.

5.3.3 For the purpose of this assessment, the critical load for the heathland habitats exerts a strong influence over decision-making as the lower end of the critical load range (5kg/ha/yr) is more stringent and baseline deposition values are within the critical load range (generally between 13-15 kg.ha.yr). Critical loads are presented as a range to reflect field-based surveys across Europe for the habitat concerned. The range accounts for localised variations in topography, precipitation and underlying soil characteristics. Where particular attributes are recognised as influencing the range notes are provided on the APIS system or within the original published critical loads.

5.3.4 No notes are provided on APIS in respect of the application of the critical load range for the heathland habitats concerned and DTA Ecology notes that the baseline values are very close to the upper critical load of 15kg/ha/yr. It is therefore unlikely that a robust argument could be formulated that the baseline values do not currently exceed the relevant conservation objective target for nitrogen deposition (as might have been the case if the background levels were at, say, 6kg/ha/yr).

5.3.5 It is therefore assumed for the purpose of this assessment that the existing baseline air pollution currently exceeds the critical level for ammonia and the critical load for nutrient nitrogen. The critical level for $NO_x$ is not currently exceeded and the acid deposition does not currently exceed the relevant critical load. When making an assessment in view of the conservation objectives for the site it is appropriate to recognise that achieving the conservation objectives in respect of ammonia and nitrogen deposition will require active reductions in existing levels. The conservation objectives for $NO_x$ and acid deposition will be achieved by ensuring that the critical level is not exceeded, or that any such exceedances do not represent a threat to the integrity of the site overall.

5.3.6 For purpose of assessment the critical load for the SAC and SPA is the same as the SAC heathland is the supporting habitat upon which the qualifying SPA features rely. As a consequence **the assessment can consider the SAC and SPA features together**.

# 6 Appropriate assessment of air quality effects from traffic

## 6.1 The approach to assessing air quality effects

6.1.1 This appropriate assessment follows the guidance provided by Natural England to competent authorities on the assessment of road traffic emissions under the Habitats Regulations[14]. As explained in section 2.3 the appropriate assessment was triggered on the basis that the traffic from the local plan contributed >1% of the relevant critical load/level for nitrogen deposition, acid deposition, $NO_x$ and $NH_3$ and was thus regarded as having a likely significant effect 'alone'.

6.1.2 When undertaking an appropriate assessment it is of particular importance to note that an exceedance of 1% of the critical load or level (either alone or in-combination) triggers a requirement for an appropriate assessment. **NE guidance is clear at paragraph 5.13 that the 1% threshold should not be applied as an adverse effect threshold (emphasis added)**.

> *Natural England has advised that a threshold equivalent to 1% of the critical load/level can be applied as a guideline to initially check which road traffic plans and projects might require appropriate assessment. At appropriate assessment stage, Natural England recommends that this same 1% threshold is not used as a means of determining whether there is an adverse effect on site integrity from a road traffic project. Other factors are relevant which may mean that a plan or project that exceeds the 1% screening threshold can still demonstrate no adverse effect on site integrity through an appropriate assessment.*

6.1.3 The purpose of an appropriate assessment is to assess the implications of a predicted exceedance of 1% of a critical load in view of the conservation objectives. As emphasised in the NE guidance, other factors beyond the exceedance of the 1% threshold need to be taken into account in reaching a decision as to whether there is a threat to the integrity of a site, or not. Part 5 of the NE guidance identifies the following factors as potentially relevant to an appropriate assessment as follows.

- Consider the European site's conservation objectives.
- Consider background pollution (review critical loads/levels; check for exceedance; consider trends).
- Consider designated site in national context.
- Consider best available evidence on small incremental impacts from nitrogen deposition
- Consider the spatial scale and duration of the predicted impact and the ecological functioning of the affected area.
- Consider site survey information.
- Consider national, regional or local initiatives or measures which can be relied upon to reduce background levels at the site.

[14] NEA001 Natural England's approach to advising competent authorities on the assessment of road traffic emissions under the Habitats Regulations, June 2018.

- Consider measures to avoid or reduce the harmful effects of the plan or project on site integrity.
- Consider any likely in-combination effects with other live plans and projects from other sources.

6.1.4 Before turning to these factors, the first step in the appropriate assessment is to understand the predicted effects from the proposed project.

## 6.2 Modelling outputs – what will happen if the project goes ahead?

6.2.1 The modelling outputs in respect of traffic emissions are provided in the Air Quality Modelling Technical Report[15], hereafter referred to as 'the AQC Report'. Transect locations for the modelling are provided in Figure 3 of the report which is reproduced as figure 6.2.1.

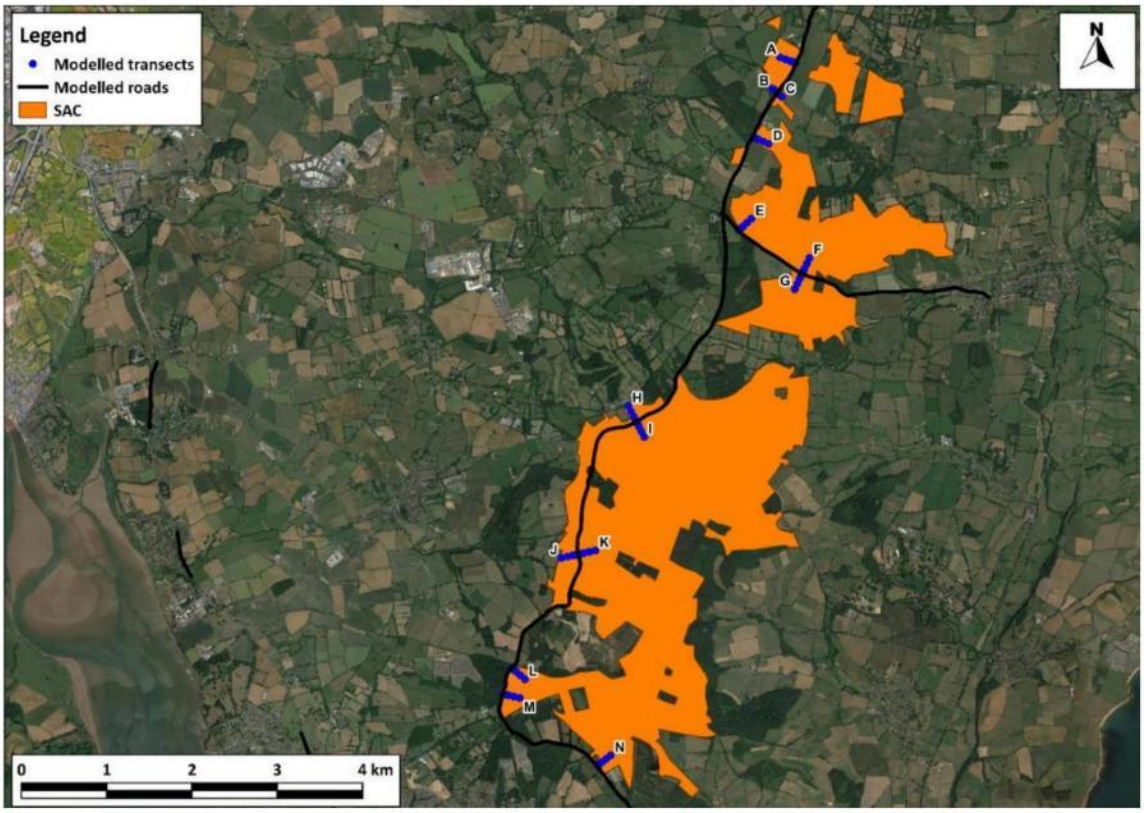


*Figure 6.2.1: Reproduction of figure 3 from AQC report showing location of modelling transects*

6.2.2 The detailed transect results are presented in tabular format in section 4 of the AQC Report. They provide baseline levels for 2022 and 2040 alongside estimated levels in 2040 with the local plan growth. The tables also provide the % change from the local plan relative to the critical load or level which applies. The results are summarised in table 6.2.1 below. Instances where the contribution exceeds 1% for the entire transect are shown in red.

| Table 6.2.1 distance from road where plan contribution exceeds 1% of relevant CL | | |
|---|---|---|
| **Pollutant** | **Transect** | **Distance from road where contribution exceeds 1% of CL** |
| $NO_x$ | A | 65-129m |
| | B | >65m |
| | C | >65m |

[15] Air Quality Modelling Technical ReporCt, 18th October 2024, Air Quality Consultants

| | | |
|---|---|---|
| | D | 65-129m |
| | E | >200m |
| | F | >200m |
| | G | >200m |
| | H | 129-200m |
| | I | >200m |
| | J | >200m |
| | K | 129-200m |
| | L | 129-200m |
| | M | 129-200m |
| | N | 33-65m |
| $NH_3$ | A | 65-129m |
| | B | 33-65m |
| | C | 65m |
| | D | 65m |
| | E | 200m |
| | F | >200m |
| | G | 129-200m |
| | H | 65-129m |
| | I | 65-129m |
| | J | 65-129m |
| | K | 65-129m |
| | L | 65-129m |
| | M | 65-129m |
| | N | 33-65m |
| N deposition | A | 65-129m |
| | B | >65m |
| | C | >65m |
| | D | 65-129m |
| | E | >200m |
| | F | >200m |
| | G | >200m |
| | H | 129-200m |
| | I | 200m |
| | J | 129-200m |
| | K | 129-200m |
| | L | 129-200m |
| | M | 129-200m |
| | N | 65-129m |
| Acid deposition | A | 17-33m |
| | B | 17-33m |
| | C | 17-33m |
| | D | 17-33m |
| | E | 65-129m |
| | F | 65-129m |
| | G | 65-129m |
| | H | 33-65m |
| | I | 33-65m |
| | J | 33-65m |
| | K | 33-65m |
| | L | 33-65m |
| | M | 33-65m |
| | N | 17-33m |

6.2.3 The AQC Report also provides a visual representation of the spatial extent of the local plan contribution above 1% of the relevant critical load and level as figures 4-7 which are reproduced in figure 6.2.1 below:


Figure 4: % Change in NOx Concentrations Relative to the Critical Level (30 µg/m³)

Figure 5: % Change in Ammonia Concentrations Relative to the Critical Level (1 µg/m³)

Figure 6: % Change in Nitrogen Deposition Relative to the Critical Load (5 kgN/ha/yr)

Figure 7: % Change in Acid Deposition Relative to the Critical Load (1.205 keq/ha/yr)

*Figure 6.2.1 – Reproduction of figures 4-7 from AQC Report showing spatial extent of plan contribution which exceeds 1% of the relevant critical load/level for $NO_x$ (top left), Ammonia (top right), N deposition (bottom left) ad acid deposition (bottom right)*

6.2.4 It is clear from table 6.2.1 and figure 6.2.1 that the greatest spatial increase above 1% arises in respect of $NO_x$, followed by N deposition, ammonia and acid deposition. Figure 6.2.1 also illustrates that the road most affected by traffic is the A3052 (west of Newton Poppleford). Table 6.2.1 shows that contributions exceed 1% for the entire lengths of transects E, F and G (on the A3052) for N deposition and $NO_x$ and for the entire length of transects E and F for ammonia.

6.2.5 The predicted effects from traffic emissions are summarised in table 6.2.2 below.

| **Table 7.2.6 Summary of transect results of predicted effects from traffic emissions** | |
|---|---|
| B3179 (toward Budleigh Salterton) – transect N | |
| $NO_x$ | • The maximum process contribution is 2.8% of the critical level adjacent to the road.<br>• The contribution falls below 1% of the critical level between 33 and 65m from the road.<br>• The predicted environmental concentration does not exceed the relevant critical level in any location. |
| Ammonia | • The maximum process contribution is 7.2% of the critical level adjacent to the road.<br>• The contribution falls below 1% of the critical level between 33 and 65m from the road. |

| Table 7.2.6 Summary of transect results of predicted effects from traffic emissions | |
|---|---|
| | • The predicted environmental concentration exceeds the critical level at all transect locations. |
| Nitrogen deposition | • The maximum in-combination process contribution is 8.8% of the critical load adjacent to the road.<br>• The contribution falls below 1% of the critical load between 65 and 129m from the road.<br>• The predicted environmental loading exceeds the critical load at all transect locations. |
| Acid deposition | • The maximum in-combination process contribution is 2.6% of the critical load adjacent to the road.<br>• The contribution falls below 1% of the critical load between 17 and 33m from the road.<br>• The predicted environmental loading does not exceed the critical load at any transect locations. |
| A3052 (West of Newton Poppleford) – transects E,F and G | |
| $NO_x$ | • The maximum process contribution is 10% of the critical level adjacent to the road.<br>• The contribution falls below 1% of the critical level more than 200m from the road edge on all transects.<br>• The predicted environmental concentration does not exceed the relevant critical level in any location. |
| Ammonia | • The maximum process contribution is 30.2% of the critical level adjacent to the road.<br>• The contribution falls below 1% of the critical level more than 200m from the road edge on transects E and F and between 129-200m on transect G.<br>• The predicted environmental concentration exceeds the critical level at all transect locations. |
| Nitrogen deposition | • The maximum in-combination process contribution is 35.9% of the critical load adjacent to the road.<br>• The contribution falls below 1% of the critical load more than 200m from the road edge on all transects.<br>• The predicted environmental loading exceeds the critical load at all transect locations. |
| Acid deposition | • The maximum in-combination process contribution is 10.6% of the critical load adjacent to the road.<br>• The contribution falls below 1% of the critical level between 65 and 129m from the road on all transects.<br>• The predicted environmental loading exceeds the critical load up to 33m from the road edge. |
| A3180 (North) – transects A-D | |
| $NO_x$ | • The maximum process contribution is 2.7% of the critical level adjacent to the road.<br>• The contribution falls below 1% of the critical level beyond 65m from the road edge on all transects.<br>• The predicted environmental concentration does not exceed the relevant critical level in any location. |
| Ammonia | • The maximum process contribution is 8.1% of the critical level adjacent to the road.<br>• The contribution falls below 1% of the critical level beyond 65m from the road.<br>• The predicted environmental concentration exceeds the critical level at all transect locations. |

| Table 7.2.6 Summary of transect results of predicted effects from traffic emissions | |
|---|---|
| Nitrogen deposition | • The maximum in-combination process contribution is 9.7% of the critical load adjacent to the road.<br>• The contribution falls below 1% of the critical level between 65 and 129m from the road<br>• The predicted environmental loading exceeds the critical load at all transect locations. |
| Acid deposition | • The maximum in-combination process contribution is 2.9% of the critical load adjacent to the road.<br>• The contribution falls below 1% of the critical level between 17 and 33m from the road.<br>• The predicted environmental loading exceeds the critical load up to 5m from the road edge. |
| A3180 (South) – transects H-M | |
| $NO_x$ | • The maximum process contribution is 4.6% of the critical level adjacent to the road.<br>• The contribution falls below 1% of the critical level more than 200m from the road edge on transects I and J and between 129-200m on transects H, K, L and M.<br>• The predicted environmental concentration does not exceed the relevant critical level in any location. |
| Ammonia | • The maximum process contribution is 12.7% of the critical level adjacent to the road.<br>• The contribution falls below 1% of the critical load more between 65 – 129m from the road edge on all transects.<br>• The predicted environmental concentration exceeds the critical level at all transect locations. |
| Nitrogen deposition | • The maximum in-combination process contribution is 15.3% of the critical load adjacent to the road.<br>• The contribution falls below 1% of the critical load at 200m from the road edge on transects I and between 129-200m on transects H, J, K, L and M.<br>• The predicted environmental loading exceeds the critical load at all transect locations. |
| Acid deposition | • The maximum in-combination process contribution is 4.5% of the critical load adjacent to the road.<br>• The contribution falls below 1% of the critical level between 33 and 65m from the road on all transects.<br>• The predicted environmental loading exceeds the critical load up to a maximum of 17m from the road edge. |

## 6.3 Initial analysis of risk to East Devon (Pebblebed) Heaths SAC/SPA

6.3.1 Before progressing to a more detailed assessment, case law has established that, whilst the approach provided for by the Habitats Regulations is precautionary, competent authorities need to be mindful of legislative overkill. There needs to be credible evidence that a risk is real (rather than hypothetical) and proposals that have no appreciable effect on a site are excluded from further detailed assessment. The modelling results are considered below in light of the extent to which there is credible evidence of a real risk from the pollutants concerned.

*NOx concentrations*

6.3.2 Whilst contributions exceed 1% of the critical level for up to 200m from some of the roads, the predicted environmental concentrations for $NO_x$ will not exceed the critical level in any

location within the SAC. The risk to site integrity is therefore considered to be avoided without a need for further consideration of site-specific factors. **There is no credible evidence of a real risk to the integrity of the SAC from $NO_x$ pollution arising from traffic emissions and further consideration of site-specific factors is not required**.

*Ammonia concentrations*

6.3.3 The plan contribution exceeds 1% of the critical level at all locations on some transects and up to 65m on all transects. In addition the predicted environmental concentrations for $NH_3$ will exceed the critical level in all transect locations and APIS shows a general exceedance across the site as a whole. The risk to site integrity is therefore considered to be high. **There is credible evidence of a real risk to the integrity of the SAC from $NH_3$ pollution arising from traffic emissions and further consideration of site-specific factors is required**.

*Nitrogen deposition*

6.3.4 The plan contribution exceeds 1% of the critical level at all locations on some transects and up to 33m on all roads. The predicted environmental loading for nitrogen deposition will exceed the critical load in all transect locations and APIS shows a general exceedance across the site as a whole. The risk to site integrity is therefore considered to be high. **There is credible evidence of a real risk to the integrity of the SAC from N deposition arising from traffic emissions and further consideration of site-specific factors is required**.

*Acid deposition*

6.3.5 The plan contribution exceeds 1% of the critical level up to 129m on transects along the A3052 and up to 65m on other roads. Having said that, the predicted environmental loading for Acid deposition is such that critical load exceedance is limited to up to 33m from the road edge on the A3052, up to 17m from road edge on A3180 (South), and up to 5m from the road edge along the A3180 (North). APIS shows that, across the site as a whole, the critical load for acid deposition is not considered to be exceeded. The risk to site integrity is therefore considered to be low but a risk remains which requires further consideration in view of site-specific factors. **There is credible evidence of a real risk to the integrity of the SAC from acid deposition arising from traffic emissions and further consideration of site-specific factors is required**.

# 7 Applying the Integrity test in respect of air quality effects

## 7.1 Considering the relevant factors from the Natural England guidance

7.1.1 Information presented in section 6 above, and a simple evaluation of credible evidence of a real risk, supports a conclusion that there will be **no adverse effect to the integrity of the SAC/SPA from effects associated with $NO_x$**. It has not been possible to exclude the risk to site integrity from ammonia, nitrogen deposition and acid deposition and further detailed assessment is required. It can be assumed that, if it is possible to conclude no adverse effect to site integrity in respect of nitrogen deposition and ammonia, it will logically follow that there will be no adverse effect to site integrity with regards acid deposition. The focus of the application of the integrity test is therefore on ammonia and nitrogen deposition.

7.1.2 The relevant factors to consider within a more detailed assessment are set out in section 5 of the Natural England guidance and are listed below.

- Consider the European site's conservation objectives.
- Consider the spatial scale and duration of the predicted impact and the ecological functioning of the affected area.
- Consider background pollution (review critical loads/levels; check for exceedance; consider trends).
- Consider designated site in national context.
- Consider best available evidence on small incremental impacts from nitrogen deposition.
- Consider site survey information.
- Consider national, regional or local initiatives or measures which can be relied upon to reduce background levels at the site.
- Consider measures to avoid or reduce the harmful effects of the plan or project on site integrity.
- Consider any likely in-combination effects with other live plans and projects from other sources.

7.1.3 These are considered in turn below before an evaluation of predicted effects in view of the conservation objectives attributes and targets is provided in section 8.2.

*Consider the European site's conservation objectives.*

7.1.4 The conservation objectives in respect of air quality for the heathland habitats at risk is currently published as 'to restore as necessary, the concentrations and deposition of air pollutants to below the site-relevant Critical Load or Levels given for this feature on the site on the Air Pollution Information System'. The current published version of the conservation objectives explains that the restore objective applies as the critical loads for the feature are exceeded on the SAC/SPA. A restore objective would also apply, on this reasoning, in respect of ammonia. The critical load for acid deposition is not currently exceeded across the site as a whole meaning a maintain objective is more appropriate.

*Consider the spatial scale and duration of the predicted impact and the ecological functioning of the affected area.*

7.1.5 Figure 6.2.1 shows the relative spatial scale over which the plan contribution exceeds 1% of the relevant critical load or level for all 4 pollutants. Baseline levels exceed the critical load/level for nitrogen deposition and ammonia and the spatial scale of the contribution above 1% requires careful consideration. For ease of reference, the figures for nitrogen deposition and ammonia are reproduced below at figure 7.1.1.

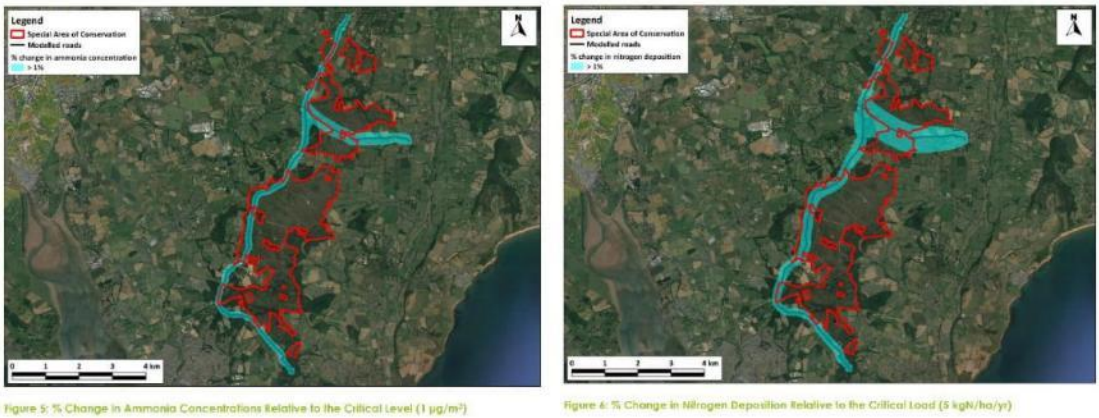


Figure 5: % Change in Ammonia Concentrations Relative to the Critical Level (1 μg/m³)

Figure 6: % Change in Nitrogen Deposition Relative to the Critical Load (5 kgN/ha/yr)

*Figure 7.1.1: Figures 5 and 6 from AQC report showing spatial extent of contribution >1% of CL for ammonia (Left) and N deposition (right)*

7.1.6 The area shown in respect of >1% change is summarised in table 7.1.1.

| Table 7.1.1 Table showing spatial extent of plan contribution above 1% | | |
|---|---|---|
| **Pollutant** | **Area of >1% change (ha)** | **% of SAC with >1% change** |
| Ammonia | 114 | 10% |
| N deposition | 224 | 20% |

7.1.7 The habitat distribution within the affected part of the site was investigated using the habitat mapping layers on the magic.gov map interface. As seen in figure 7.1.2 the vast majority of the land included within the blue 1% areas shown in figure 7.1.1 contain lowland heath habitat which is shown in pink. A few discrete areas of woodland are shown in green within the SAC boundary, but these represent very small and isolated patches. With the exception of the first 25m of transect E and the first 40m of transect L all transects run across mapped lowland heath habitat.

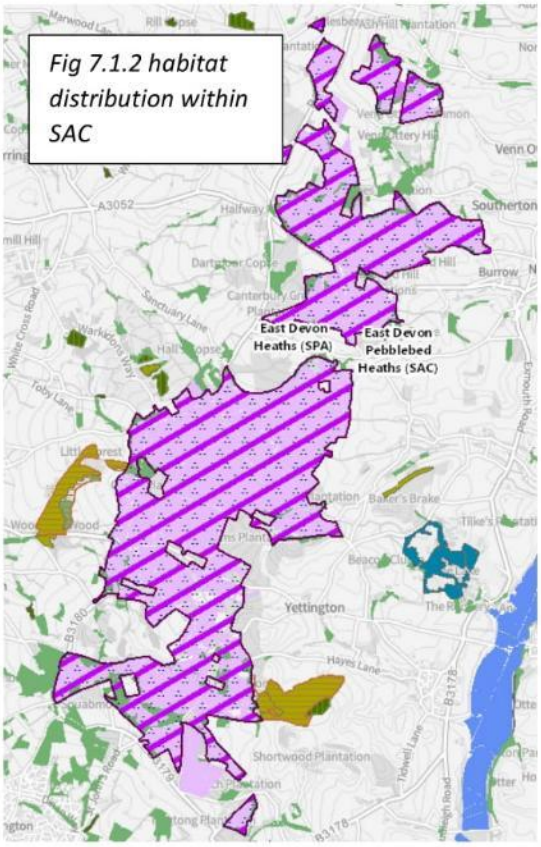


*Fig 7.1.2 habitat distribution within SAC*

7.1.8 It is therefore reasonable to work on the assumption that the majority of the area where the plan contribution exceeds 1% (10% of the SAC for ammonia and 20% of the SAC for nitrogen deposition) contains qualifying SAC heathland habitat.

*7.1.9* Whilst the contribution above 1% for acid deposition cannot be dismissed as irrelevant it

is important to recognise that the predicted environmental concentrations are such that exceedance of the critical load is limited to up to 33m from the road edge on the A3052, up to 17m from road edge on A3180 (South), and up to 5m from the road edge along the A3180 (North). The risk to the overall site integrity from acid deposition is therefore heavily influenced by the small spatial scale over which any exceedance is predicted to occur.

*Consider background pollution.*

7.1.10 Background pollution levels are considered in detail in section 6. Baseline levels within the affected areas all exceed the relevant critical load for nitrogen deposition and critical level for ammonia. The critical load for acid deposition is not currently exceeded on APIS and the modelling shows that any predicted exceedances are spatially constrained to within 33m of the road edge along the A3054 (exceedances along other roads being more limited).

*Consider designated site in national context.*

7.1.11 The standard data form for the East Devon Pebblebed Heaths SAC[16] refers to the quality and importance of the SAC in the following terms:

> *'Northern Atlantic wet heaths with Erica tetralix for which this is considered to be one of the best areas in the United Kingdom. European dry heaths for which this is considered to be one of the best areas in the United Kingdom. Coenagrion mercurial for which this is considered to be one of the best areas in the United Kingdom.'*

7.1.12 It is therefore the case that the SAC is an important site in a UK context for the qualifying features for which it has been designated. It is recognised as 'one of the best areas in the UK'. Having said this, the JNCC website[17] identifies 117 SACs in the UK designated for European dry heath, 72 SACs designated for Northern Atlantic wet heath and 10 SACs for southern damselfly. The site does not have a disproportionate importance in terms of heathland habitats, but could be argued to be of greater significance in terms of the southern damselfly as being one of only 10 sites designated for that species.

*Consider best available evidence on small incremental impacts from nitrogen deposition*

7.1.13 NE guidance refers to the Natural England commissions report 210[18]. This report identified that with a background level of around 10kg/ha/yr an increase in nitrogen deposition of 0.8kg/ha/yr is sufficient to reduce species richness by 1 species.

7.1.14 The predicted maximum plan contribution is 1.72kg/ha/yr adjacent to the road (transect F), falling to 0.79kg/ha/yr by 17m. It therefore follows that contributions up to 17m from the road may be sufficient to trigger a reduction in species richness.

*Consider site survey information.*

7.1.15 As shown in figure 7.1.2, habitat mapping available through the magic.gov.uk website indicates that, with the exception of the first 25m of transect E and the first 40m of transect L, all transects run across mapped lowland heath habitat. The area of the SAC which will experience a change of >1% of the relevant critical load or level represents 10% of the SAC for ammonia and 20% of the SAC for nitrogen deposition. There is no information to suggest

[16] Standard data from available here
[17] https://sac.jncc.gov.uk/habitat/
[18] Assessing the effects of small increments of atmospheric nitrogen deposition (above the critical load) on semi-natural habitats of conservation importance (NECR210).

that the areas affected are not primarily supporting sensitive qualifying heathland SAC habitats.

*Consider national, regional or local initiatives or measures which can be relied upon to reduce background levels at the site.*

7.1.16 There is a national improving trend in emissions from traffic which is anticipated because of the shift to a cleaner technologies and, eventually, to electric vehicles (e.g. non-combustion engine). It is reasonable to assume that emissions from traffic will, over the medium to longer term improve compared to the current and historic situation.

7.1.17 Having said this, improvements in vehicle emission abatement technology are expected to give rise to a short term rise in ammonia emissions (due to ammonia being a by-product of catalytic converters). The modelling work which was undertaken has taken account of the predicted shift in the vehicle fleet.

7.1.18 Helpful clarification has been provided in the 2019 Examination in Public of the Wealden Local Plan[19] (since withdrawn). In spite of evidence that local measurements did not reflect nationally forecast improvements, the Planning Inspectorate nevertheless concluded that predicted forecasts based on nationally agreed emissions factors (which account for measures which are already in place or which can reasonably be relied upon to be in place) provide an adequate basis upon which to assess the anticipated effects of future development. The Planning Inspectorate had regard to advice from Natural England in coming to this position.

*Consider measures to avoid or reduce the harmful effects of the plan or project on site integrity.*

7.1.19 No measures to reduce traffic emissions have been proposed.

*Consider any likely in-combination effects with other live plans and projects from other sources.*

7.1.20 The need for an appropriate assessment was triggered on the basis of the plan contribution 'alone'. Further assessment effort in-combination is not therefore required at the current time.

## 7.2 Will the project undermine the achievement of the conservation objectives for East Devon (Pebblebed) Heaths SAC/SPA?

7.2.1 It is a legal requirement that an appropriate assessment be made 'in view of the conservation objectives'. As set out in sections 2.3 an effect is only 'significant' from a HRA perspective where it 'undermines the conservation objectives' and EC guidance is clear that 'the integrity of a site' relates to the site's conservation objectives. Having understood the predicted effects of the project (section 6), and considered the factors referred to in Natural England guidance (section 7.1) a key step in applying the integrity test is to consider the predicted effects in view of the conservation objectives for the site, and to determine whether they would be undermined, or not. Table 7.2.1 identifies key attributes and targets from the conservation objectives supplementary advice and an evaluation of the extent to which the plan might 'undermine' the achievement of the conservation objective targets.

[19] https://www.wealden.gov.uk/transparency-spending-and-performance/data-protection/freedom-of-information/local-plan-freedom-of-information/

| Table 7.2.1: Evaluation of predicted effects on Chesil and the Fleet SAC in view of the relevant conservation objective attributes and targets | | | |
|---|---|---|---|
| **Attribute** | **Target** | **Supporting Notes (relevant extracts)** | **DTA Comment** |
| Supporting processes: air quality (habitat) | Restore concentrations and deposition of air pollutants to below the site-relevant Critical Load or Level values given for this feature of the site on the Air Pollution Information System | This habitat type is considered sensitive to changes in air quality. Exceedance of these critical values for air pollutants may modify the chemical status of its substrate, accelerating or damaging plant growth, altering its vegetation structure and composition and causing the loss of sensitive typical species associated with it.<br><br>Critical Loads and Levels are recognised thresholds below which such harmful effects on sensitive UK habitats will not occur to a significant level, according to current levels of scientific understanding. There are critical levels for ammonia (NH3), oxides of nitrogen (NOx) and sulphur dioxide (SO2), and critical loads for nutrient nitrogen deposition and acid deposition. There are currently no critical loads or levels for other pollutants such as Halogens, Heavy Metals, POPs, VOCs or Dusts. These should be considered as appropriate on a case-by-case basis.<br><br>Ground level ozone is regionally important as a toxic air pollutant but flux-based critical levels for the protection of semi-natural habitats are still under development. It is recognised that achieving this target may be subject to the development, availability and effectiveness of abatement technology and measures to tackle diffuse air pollution, within realistic timescales.<br><br>A restore target has been set as the critical loads for this feature are exceeded on this SAC. | The predicted environmental concentration continues to exceed the relevant critical level for $NH_3$ and the critical load for nitrogen deposition. The plan contribution is significant (>1%) across 10% of the SAC area for ammonia and 20% of the SAC area for nitrogen deposition and the affected area contains extensive areas of qualifying sensitive heathland habitat.<br><br>Action to 'restore' air quality to achieve the relevant targets will involve measures across a range of sectors. The question to be addressed is the extent to which the local plan will undermine the delivery of such measures to achieve their objectives, or otherwise make the achievement of the objectives more difficult.<br><br>In spite of duties to implement conservation measures (under Article 6(1)) and take necessary steps to avoid deterioration (Under Article 6(2)) there are currently no active initiatives to address sources of air pollution to deliver meaningful reductions across the Heaths. The achievement of the conservation objectives through wider duties and measures, targeted to the sources which represent the greatest risk, cannot therefore be taken into account when applying the integrity test and considering the risks from growth provided for by the local plan.<br><br>The spatial scale of the contribution above 1% is such that the plan is considered to represent a risk to the achievement of this conservation objective target. No action is currently secured to deliver future reductions and there is no basis upon which to evaluate whether such measures are realistically available and the extent to which plan growth might hinder their effectiveness. |

| Table 7.2.1: Evaluation of predicted effects on Chesil and the Fleet SAC in view of the relevant conservation objective attributes and targets | | | |
|---|---|---|---|
| **Attribute** | **Target** | **Supporting Notes (relevant extracts)** | **DTA Comment** |
| Distribution of the feature, including associated transitional habitats, within the site | Maintain the distribution and configuration of the feature, including where applicable its component vegetation types, across the site. | A contraction in the range, or geographic spread, of the feature (and its component vegetation and typical species, plus transitional communities) across the site will reduce its overall area, the local diversity and variations in its structure and composition, and may undermine its resilience to adapt to future environmental changes. This may also reduce and break up the continuity of a habitat within a site and how well its typical species are able to move around the site to occupy and use habitat. Such fragmentation can impact on their viability and the wider ecological composition of the Annex I habitat.<br><br>Smaller fragments of habitat can typically support smaller and more isolated populations which are more vulnerable to extinction. These fragments also have a greater amount of open edge habitat which will differ in the amount of light, temperature, wind, and even noise that it receives compared to its interior. These conditions may not be suitable for some of the typical and more specialist species associated with the Annex I habitat feature. | A recognised effect of nitrogen deposition and nutrient enrichment is a shift is species composition towards nutrient loving communities. This could result in a short in distribution of the heathland habitat away from parts of the site within 200m of the roads affected.<br><br>In spite of duties to implement conservation measures (under Article 6(1)) and take necessary steps to avoid deterioration (Under Article 6(2)) there are currently no active initiatives to address sources of air pollution to deliver meaningful reductions across the Heaths. The achievement of the conservation objectives through wider duties and measures, targeted to the sources which represent the greatest risk, cannot therefore be taken into account when applying the integrity test and considering the risks from growth provided for by the local plan.<br><br>The scale of the anticipated significant effect (10% of the SAC area for ammonia and 20% of the SAC area for nitrogen deposition). The spatial scale of the contribution above 1% is such that the plan is considered to represent a risk to the achievement of this conservation objective target. No action is currently secured to deliver future reductions and there is no basis upon which to evaluate whether such measures are realistically available and the extent to which plan growth might hinder their effectiveness. |
| Extent of the feature within the site | Northern Atlantic wet heaths: Maintain the total extent of the feature at the baseline-value of 127 hectares.<br><br>European dry heaths: Maintain the total extent of the feature of dry heath at 635 ha, | There should be no measurable reduction (excluding any trivial loss) in the extent and area of this feature, and in some cases, the full extent of the feature may need to be restored. | A recognised effect of nitrogen deposition and nutrient enrichment is a shift is species composition and a transition towards nutrient loving communities. This could result in a reduction of the area of heathland habitat within 200m of the roads affected. |

| Table 7.2.1: Evaluation of predicted effects on Chesil and the Fleet SAC in view of the relevant conservation objective attributes and targets | | | |
|---|---|---|---|
| **Attribute** | **Target** | **Supporting Notes (relevant extracts)** | **DTA Comment** |
| | | Due to high recreational use eutrophication from dogs and horses may have a significant effect on this target. More needs to be known on the impacts of this heavy use. The Site Improvement Plan highlights high recreational use and eutrophication should make up part of the investigations into its impact. | taken into account when applying the integrity test and considering the risks from growth provided for by the local plan.<br><br>The scale of the anticipated significant effect (10% of the SAC area for ammonia and 20% of the SAC area for nitrogen deposition). The spatial scale of the contribution above 1% is such that the plan is considered to represent a risk to the achievement of this conservation objective target. No action is currently secured to deliver future reductions and there is no basis upon which to evaluate whether such measures are realistically available and the extent to which plan growth might hinder their effectiveness. |

| Table 7.2.1: Evaluation of predicted effects on Chesil and the Fleet SAC in view of the relevant conservation objective attributes and targets | | | |
|---|---|---|---|
| **Attribute** | **Target** | **Supporting Notes (relevant extracts)** | **DTA Comment** |
| | estimates are made in 2012, based on 2005 NVC surveys | The baseline-value of extent given has been generated using data gathered from the listed site-based surveys. Area measurements given may be approximate depending on the methods, age and accuracy of data collection, and as a result this value may be updated in future to reflect more accurate information.<br><br>The extent of an Annex I habitat feature covers the sum extent of all of the component vegetation communities present and may include transitions and mosaics with other closely-associated habitat features. Where a feature is susceptible to natural dynamic processes, there may be acceptable variations in its extent through natural fluctuations.<br><br>Where a reduction in the extent of a feature is considered necessary to meet the Conservation Objective for another Annex I feature, Natural England will advise on this on a case-by-case basis. | In spite of duties to implement conservation measures (under Article 6(1)) and take necessary steps to avoid deterioration (Under Article 6(2)) there are currently no active initiatives to address sources of air pollution to deliver meaningful reductions across the Heaths. The achievement of the conservation objectives through wider duties and measures, targeted to the sources which represent the greatest risk, cannot therefore be taken into account when applying the integrity test and considering the risks from growth provided for by the local plan.<br><br>The scale of the anticipated significant effect (10% of the SAC area for ammonia and 20% of the SAC area for nitrogen deposition). The spatial scale of the contribution above 1% is such that the plan is considered to represent a risk to the achievement of this conservation objective target. No action is currently secured to deliver future reductions and there is no basis upon which to evaluate whether such measures are realistically available and the extent to which plan growth might hinder their effectiveness. |
| Supporting processes: Soils, substrate and nutrient cycling | Maintain the properties of the underlying soil types, including structure, bulk density, total carbon, pH, soil nutrient status and fungal: bacterial ratio, to within typical values for the habitat. | Soil is the foundation of basic ecosystem function and a vital part of the natural environment. Its properties strongly influence the colonisation, growth and distribution of those plant species which together form vegetation types, and therefore provides a habitat used by a wide range of organisms.<br><br>Soil biodiversity has a vital role to recycle organic matter. Changes to natural soil properties may therefore affect the ecological structure, function and processes associated with this Annex I feature. This Annex 1 habitat has essentially raw soils with little humus and low nutrient status. | A recognised effect of nitrogen deposition is nutrient enrichment of soils.<br><br>In spite of duties to implement conservation measures (under Article 6(1)) and take necessary steps to avoid deterioration (Under Article 6(2)) there are currently no active initiatives to address sources of air pollution to deliver meaningful reductions across the Heaths. The achievement of the conservation objectives through wider duties and measures, targeted to the sources which represent the greatest risk, cannot therefore be |

7.2.2 With reference to table 7.2.1 above it is the advice of DTA Ecology that, in the absence of proactive conservation measures and necessary steps to avoid deterioration (which might otherwise be relied upon to achieve the conservation objectives through reductions to other sources), when applying the integrity test to the predicted effects associated with traffic emissions from the Local Plan growth, **it is not possible to conclude that there will be no adverse effect to site integrity as a result of increased pollution loading for ammonia and nitrogen deposition.**

7.2.3 The effects from acid deposition are spatially constrained to areas of the site where an exceedance of the critical load is predicted. The limited spatial extent of the predicted exceedance, and the decreasing future emissions trends from vehicles are such that the **predicted changes from growth associated with the local plan is not considered to represent a risk to site integrity as a result of acid deposition.** The acidity critical load is not generally exceeded across the site and the future vehicle emission trends are such that the nominal change associated with plan growth exceedance will not undermine the achievement of the conservation objectives for the SAC in respect of air quality.

7.2.4 The predicted scale of the additional pollution contribution above 1% of the relevant critical load or level (10% of the SAC for ammonia and 20% of the SAC for nitrogen deposition) is sufficient that the plan growth will undermine the achievement of the conservation objectives for the East Devon (Pebblebed) Heaths SAC/SPA. In particular the objective to restore air quality to achieve the critical loads/levels on APIS, and those relating to maintaining the extent and distribution of habitats, and the properties of the underlying soil type.

7.2.5 The additional growth will add further to existing exceedances and there are no wider measures which might otherwise be relied upon to allow the Council to take account of the relative contribution from road sources compared to the dominant agricultural sources.

7.2.6 In coming to this conclusion it is important to recognise that road traffic is not the dominant source of air pollution affecting the heaths. All competent authorities are subject to a duty to protect, conserve and restore European sites. In spite of this duty no active measures are currently being taken to improve air quality in order to achieve the conservation objective targets for air quality. As a consequence, the capacity for new plans and projects which add further pollution loading is necessarily limited.

7.2.7 If other measures to deliver reductions from dominant sources could be identified, and there was certainty regarding future beneficial effects from such measures, the application of the integrity test could take account of the extent to which plan growth might delay or slow the delivery of such measures or otherwise undermine the improving trend which could be anticipated as a result of their implementation. This is considered further in section 8 and the consideration of mitigation measures.

## 7.3 The need for assessment in-combination

7.3.1 The need for an appropriate assessment can be triggered by two scenarios. Either a likely significant effect based on the effects of a plan or project 'alone', or a likely significant effect on the basis of the effects of a plan or project 'in combination with other plans and projects'.

7.3.2 In the current case, the need for an appropriate assessment is triggered on the basis of a likely significant effect having been identified from the effects of the proposed project 'alone'. It has not been possible to conclude no adverse effect to site integrity 'alone' and no further assessment in-combination is required.