



Habitats Regulations Assessment of the Exeter Plan (Outline 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 may only be adopted if an adverse effect on the integrity of the site can be ruled out. If necessary, a plan should be amended to 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 an interim HRA report (that will be expanded as the Plan is finalised) to accompany the Exeter Plan at the Outline Draft Plan stage, in August 2022. This is an early stage in the formulation of the Plan and the HRA will continue to progress as the Plan develops.

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

- General urban effects, likely significant effects alone were identified for the Exe Estuary SPA/Ramsar for two separate allocations (Sites 84 and 94).
- Recreation, likely significant effects were identified alone for the Exe Estuary SPA/Ramsar, East Devon Heaths SAC/SPA¹, Dawlish Warren SAC, South Dartmoor Woods SAC from the overall quantum of growth set out in H1 and H2. Likely significant effects were also identified for recreation for all allocations, in combination, for the same European sites.
- Hydrological impacts, likely significant effects were identified in-combination for the overall quantum of growth and the individual allocations with respect to the Exe Estuary SPA/Ramsar.
- Air quality, likely significant effects were identified in-combination for the overall quantum of growth and the individual allocations with risks to the East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar and South Dartmoor Woods SAC.

¹ We use this term to refer to both the East Devon Pebblebed Heaths SAC and the East Devon Heaths SPA, which have identical boundaries

For each impact pathway we review the information available to inform the appropriate assessment and identify areas where further evidence or information are required and also highlight where changes or additional policy wording may be necessary as the Plan progresses.

For general urban effects we identify the need for specific policy wording with respect to site 84.

For recreation, further evidence is required in relation to the South Dartmoor Woods SAC. Discussion is required with neighbouring authorities, Dartmoor National Park and Natural England in order to ascertain whether there is more information available on visitor use and recreation impacts. Some additional evidence gathering may be required and mitigation may be necessary. For recreation we highlight the importance of the existing strategic mitigation approach for the Exe Estuary SPA/Ramsar/East Devon Heaths SAC/SPA and Dawlish Warren SAC; the strategy has been running since 2014 and a review and update has been commissioned. This will be available prior to the Plan being finalised and the next version of the HRA will need to ensure the strategy includes adequate mitigation for the levels of growth set out in the Plan.

The studies required or evidence needed to inform the assessment of air pollution and water quality, respectively, have not yet been carried out or are not yet available. Whilst work will continue on both these issues and will inform further updates of the plan and the HRA, at present adverse effects on the integrity of several European sites cannot be ruled out.

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This report has been commissioned by Exeter City Council. We are grateful to Jill Day for overseeing the commission and also to George Marshall for useful discussion and comment.

1. Introduction

Overview

- 1.1 This report is an interim Habitats Regulations Assessment (HRA) report to accompany the Exeter Plan ('the Plan') at the Outline Draft Plan stage. This report has been prepared by Footprint Ecology on behalf of Exeter City Council. A 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 Exeter Plan

- 1.3 Exeter City covers an area just under 4800ha and is the county town of Devon. It lies at the head of the Exe Estuary, around 10km from the open coast.
- 1.4 The Exeter Plan will be the main planning policy document for Exeter and will set out where development should take place and provide the policies which will be used in making decisions on planning application. It will eventually replace the policies in the Core Strategy and the Local Plan First Review.
- 1.5 The Outline Draft Plan is the first version of the Plan and includes a vision for the city, potential development sites and a set of draft policies. Additional policies will be written and other may be added at later Plan iterations.

Habitats Regulations Assessment process

- 1.6 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 2019²) take account of the UK's departure from the EU.

² 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

- 1.7 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 Regulations³.

European sites

- 1.8 ‘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 protection⁴.
- 1.9 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.
- 1.10 The designations made under the European Directives still apply and the term, ‘European site’ remains in use. According to long-established Government policy⁵, European sites also comprise ‘Wetlands of International Importance’ (or Ramsar sites) although these do not form part of the national network.

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.

³ 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)

⁴ 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.

⁵ 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.

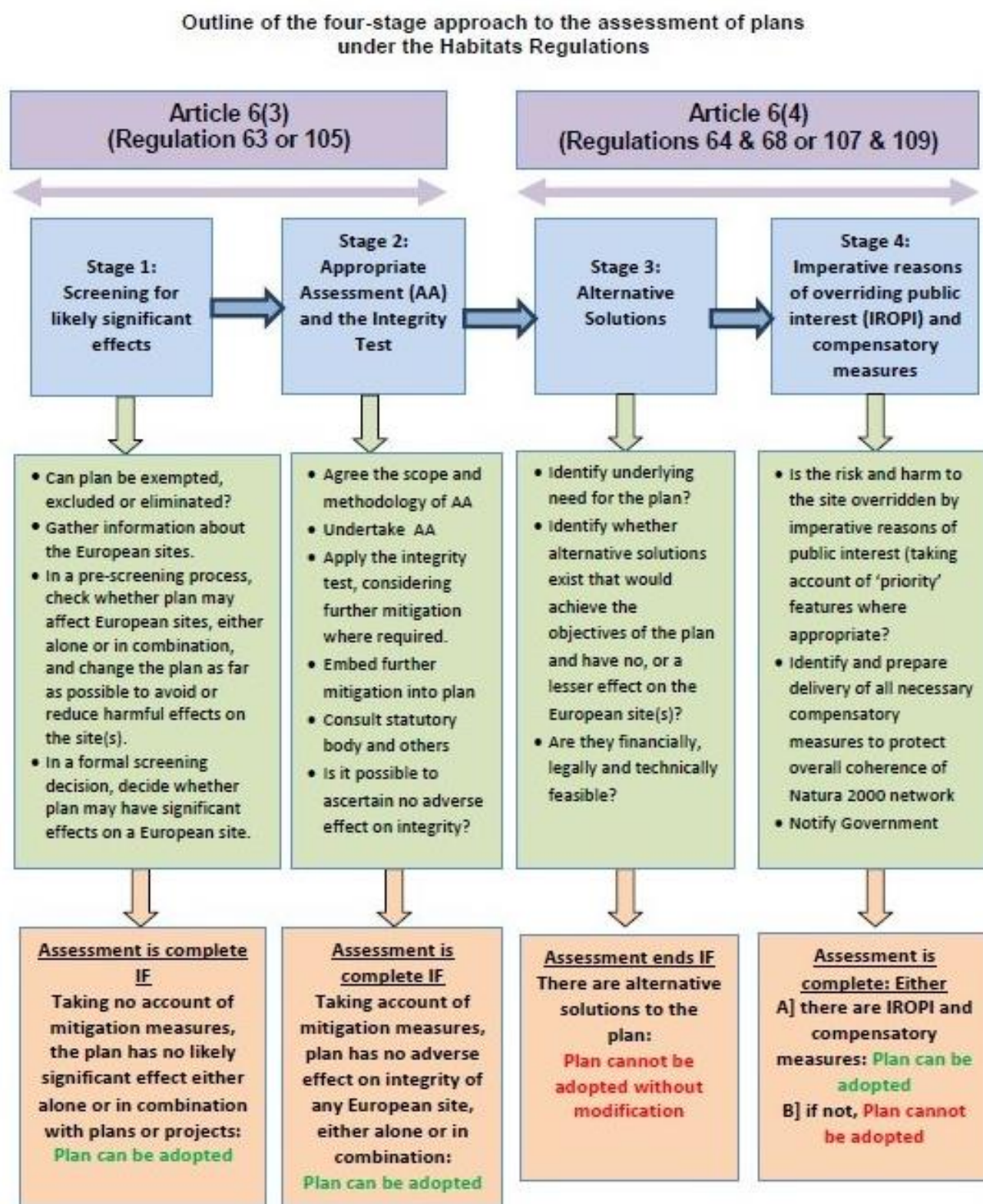
- 1.11 The overarching objectives of the national network are to maintain, or where appropriate, restore habitats and species listed in Annexes I and II of the Habitats Directive to a Favourable Conservation Status, and contribute to ensuring, in their area of distribution, the survival and reproduction of wild birds and securing compliance with the overarching aims of the Wild Birds Directive.
- 1.12 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

- 1.13 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

- 1.14 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.



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

- 1.15 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.
- 1.16 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.
- 1.17 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.
- 1.18 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.
- 1.19 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.
- 1.20 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

- 1.21 This HRA follows principles of case law, both UK and EU. It also refers as appropriate to the Habitats Regulations Assessment Handbook (Tyldesley & Chapman, 2021), to which Footprint Ecology subscribes. We also follow relevant government guidance.
- 1.22 Drawing on the Handbook, other relevant guidance and case law, we clarify the following terms used in the flow chart (Figure 1):
- 1.23 In Stage 1, A **‘likely significant effect’** following Waddenzee⁶, 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 Sweetman⁷, 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 Wind⁸ 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’*.

⁶ Waddenzee: European Courts C-127/02 Waddenzee 7th September 2004, reference for a preliminary ruling from the Raad van State.

⁷ Sweetman: European Court C – 258/11 Sweetman 11th April 2013, reference for a preliminary ruling from the Supreme Court of Ireland

⁸ Bagmoor Wind: UK courts Bagmoor Wind v The Scottish Ministers, Court of Session [2012] CSIH 93

- 1.24 Following the People Over Wind judgement⁹, when making screening decisions for the purposes of deciding whether an appropriate assessment is required, competent authorities cannot take into account any mitigation measures.
- 1.25 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 precautionary approach and means it is necessary to show the absence of harm.
- 1.26 Following Champion¹⁰ '**appropriate**' is not a technical term but simply indicates that the assessment needs to be appropriate to the task in hand.
- 1.27 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 classified¹¹. An alternative definition, after Sweetman¹², is 'the lasting preservation of the constitutive characteristics of the site'.
- 1.28 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 UK¹³. However, the judgement¹⁴ 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)¹⁵ which stated: "*Each ... assessment ... cannot do more than the level of detail of the strategy at that stage permits*".
- 1.29 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

⁹ *People Over Wind and Sweetman v Coillte Teoranta* (323-17) [2018] PTSR 1668

¹⁰ *R (on the application of Champion v North Norfolk District Council* [2015] 1 WLR 3170 at para 41

¹¹ Para 20 of the ODPM Circ. 06/2005

¹² *Sweetman v An Bord Pleanála* (C-258-11) [2014] PTSR 1092 at paragraph 39

¹³ *Commission v UK* (C-6/04) [2005] ECR I-9017

¹⁴ *Commission of the European Communities v UK* Opinion of Advocate General Kokott

¹⁵ *Feeney v Oxford City Council* [2011] EWHC 2699 Admin at paragraph 92

effects of other relevant plans or projects alongside the plan under 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. Exceptionally, the Wealden decision¹⁶ requires the impacts of air pollution to be considered alone and in-combination.

¹⁶ Wealden District Council v Secretary of State for Communities and Local Government, Lewes District Council and the South Downs National Park Authority (Defendants) and Natural England (Interested Party) [2017] EWHC 351 (Admin).

2. European sites in and around Exeter

Overview of potentially relevant European sites

- 2.1 We have used 20km from the City 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 and the map highlights those within 20km. Similarly Map 2 shows SPA and Ramsar sites and those which are within 20km. For the avoidance of doubt Dartmoor SAC lies beyond 20km and is excluded from further consideration. The nearest part of Dartmoor SAC is 20.6km from the edge of the Exeter administrative boundary and most of the SAC lies much further away from the western edge of the city (over 40km for some parts).
- 2.3 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.

Table 1: European Sites within a 20km radius.

SAC	SPA	Ramsar
Dawlish Warren	East Devon Heaths	Exe Estuary
East Devon Pebblebed Heaths	Exe Estuary	
Lyme Bay & Torbay		
Sidmouth To West Bay		
South Dartmoor Woods		
South Hams		

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).

Initial review of sites and potential impact pathways

- 2.5 Potential impact pathways - 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 Exeter City boundary and as such impacts such as direct loss of habitat are not relevant. The Plan relates to the growth within the city and therefore will predominantly involve brownfield sites and development within the existing urban area – impacts such as fragmentation or loss of supporting habitat associated with European sites can therefore also be ruled out at an early stage. Impacts are therefore indirect and could apply to a limited number of sites. It can be seen that there are no potential pathways identified that might relate to Lyme Bay and Torbay SAC, Sidmouth to West Bay SAC or South Hams SAC, predominantly due to the distances involved. Recreation impacts could be relevant with respect to the coastal sites (e.g. Liley & Bishop, 2022), however such risks relate to specialist activities and very specific locations (see Liley & Bishop, 2022 for discussion) which would not be relevant to growth in Exeter.

Table 2: Impact Pathways

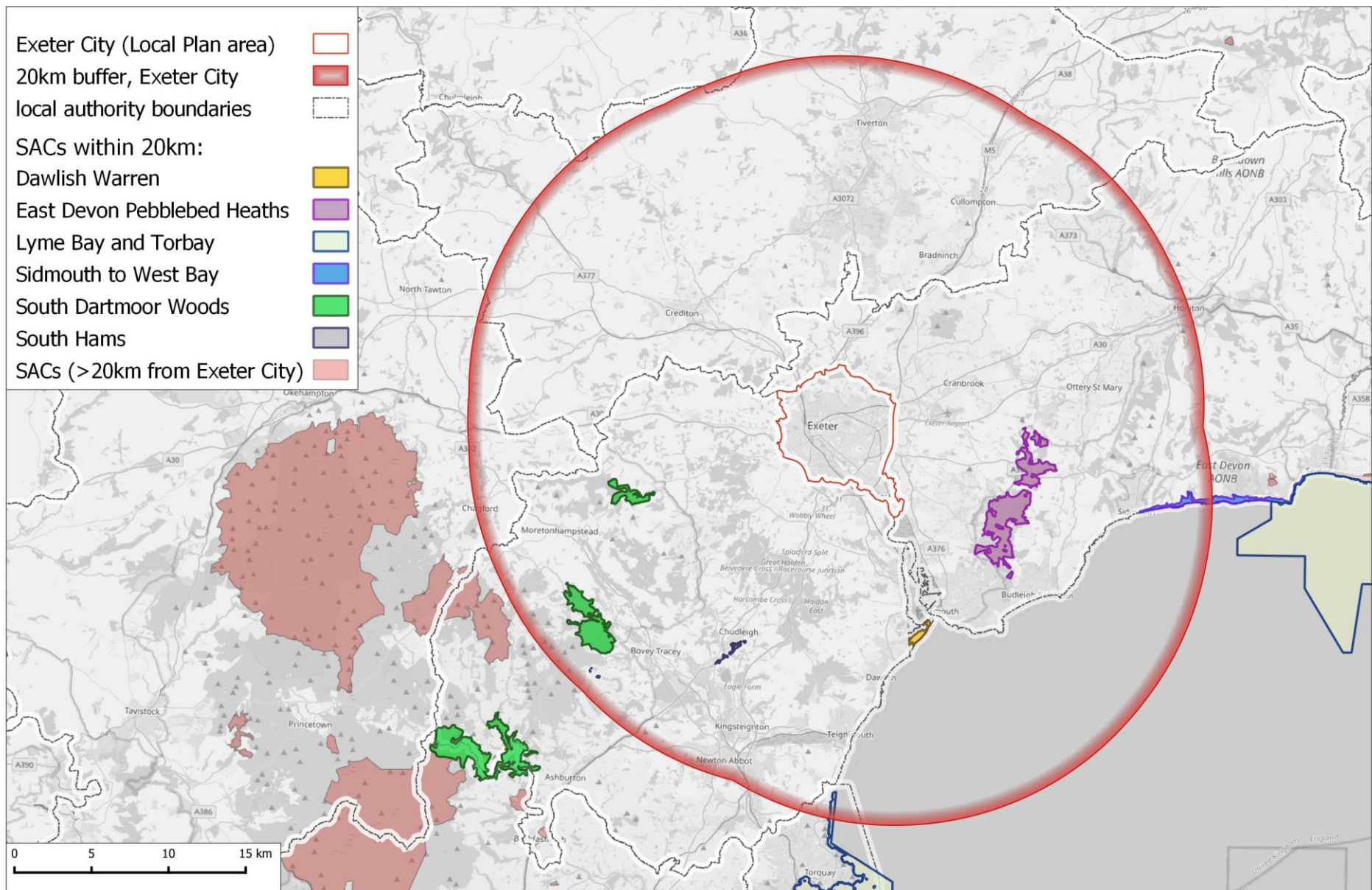
Pathway	Explanation
General urban effects	Effects on a European site from nearby development, including light, noise, domestic cats, spread of invasive species, etc. Either adding to existing levels in urban areas or creating new issues in non-urban areas, for example affecting the ability of light sensitive species to navigate the landscape or deterring use of existing habitat/feeding/roosting sites.
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, fly tipping.
Hydrological impacts (water quality & availability)	Effects on a European site from altered local water quality or from interruption, reduction or other interference of local hydrology, including groundwater, surface standing water or watercourses.
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.

Table 3: Potential impact pathways with a tick indicating where the pathway is relevant to the site. See Saunders & Hoskin 2019 for full details and explanation. 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 the Exe Estuary SPA/Ramsar as it falls within the city boundary.

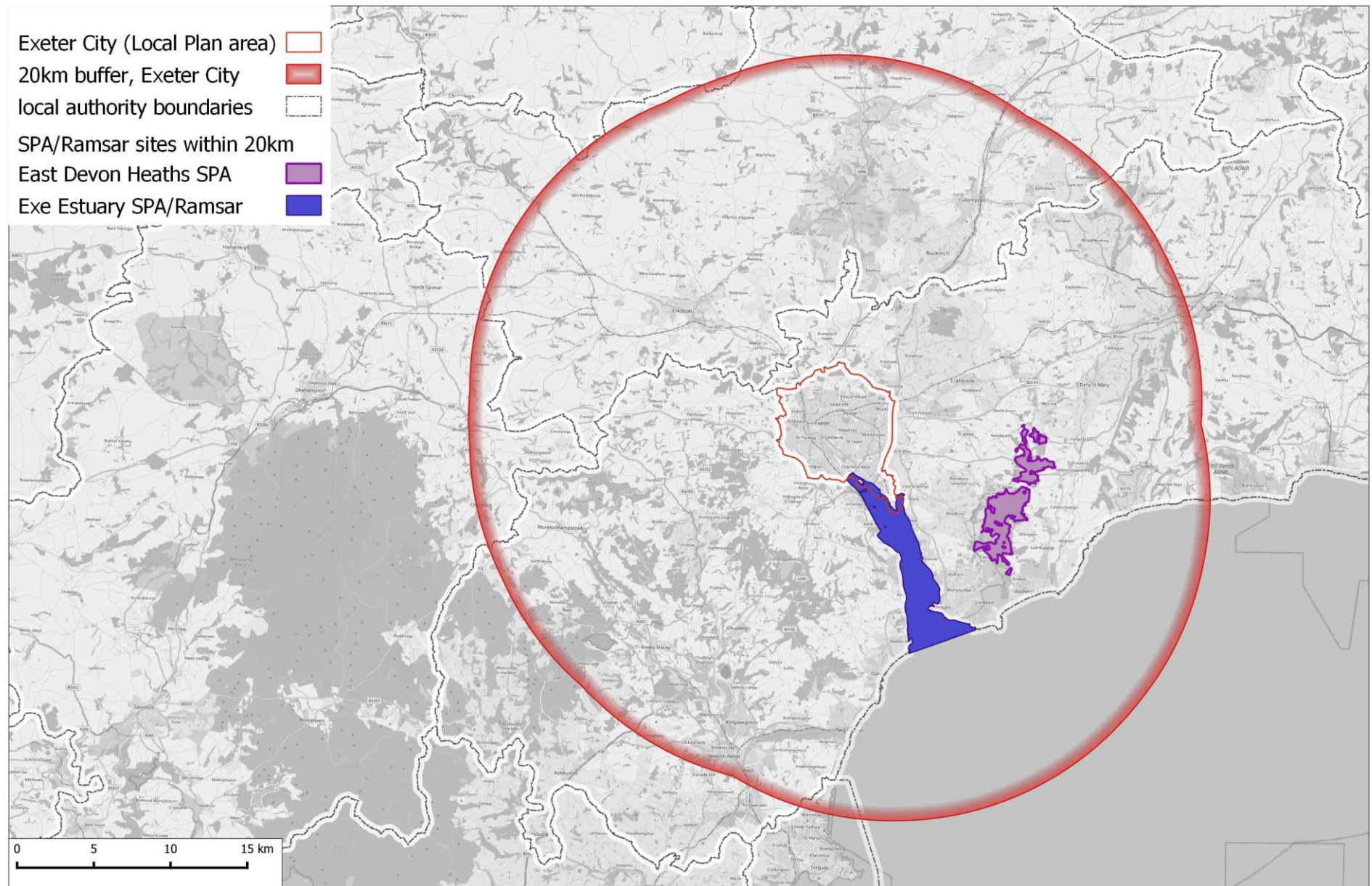
Site	Distance (km)	General urban effects	Recreation impacts	Hydrological impacts (water quality & availability)	Air Quality	Notes
East Devon Pebblebed Heaths SAC	5.4		✓		✓	Included in existing mitigation strategy relating to recreation. Crossed by roads with direct connection to Exeter, so air quality relevant. Well outside city boundary and above the city, so no issues from run off etc and hydrology of site linked to groundwater (not likely to be affected by development in Exeter) so no hydrological links. Too far outside city for any risk of urban effects.
East Devon Heaths SPA	5.4		✓		✓	As above
Dawlish Warren SAC	7.0		✓			Included in existing mitigation strategy relating to recreation. A379 (Exeter Road) well beyond 200m and only tiny proportion of site just within 200m of minor roads, so air quality not relevant. Train track separates site from housing. Too far from city for risks relating to hydrology, urbanisation etc.
Exe Estuary Ramsar		✓	✓	✓	✓	Site falls within city boundary. Direct hydrological links, access and roads within 200m.
Exe Estuary SPA		✓	✓	✓	✓	As above
Lyme Bay & Torbay SAC	17.7					Marine SAC with sea caves and reefs the qualifying interest. Links only plausible from recreation and quite specialist activities (such as coasteering) and therefore ruled out from further assessment.
Sidmouth to West Bay SAC	15.4					Habitat interest relates to cliffs and beaches. Distance from the city means site can be ruled out from further assessment.
South Dartmoor Woods SAC	8.7		✓		✓	Woodland sites within relatively close proximity to city. Potential for impacts from increased recreation (dog walking) and air quality (road traffic).
South Hams SAC	11.2					Site interest relates to bats and coastal (predominantly cliff) habitats. Distance means site can be ruled out from further assessment.

Exeter Plan HRA

Map 1: SACs within 20km



Map 2: SPA/Ramsar sites



- 2.6 In assessing the implications of any plan or project on European sites, it is essential to fully understand the ecology and sensitivity of the sites, in order to identify how they may be affected. 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. Appendix 3 lists the threats and pressures for each identified in the relevant site improvement plan.

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 initial stage in the 4 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 Wind¹⁷; 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.

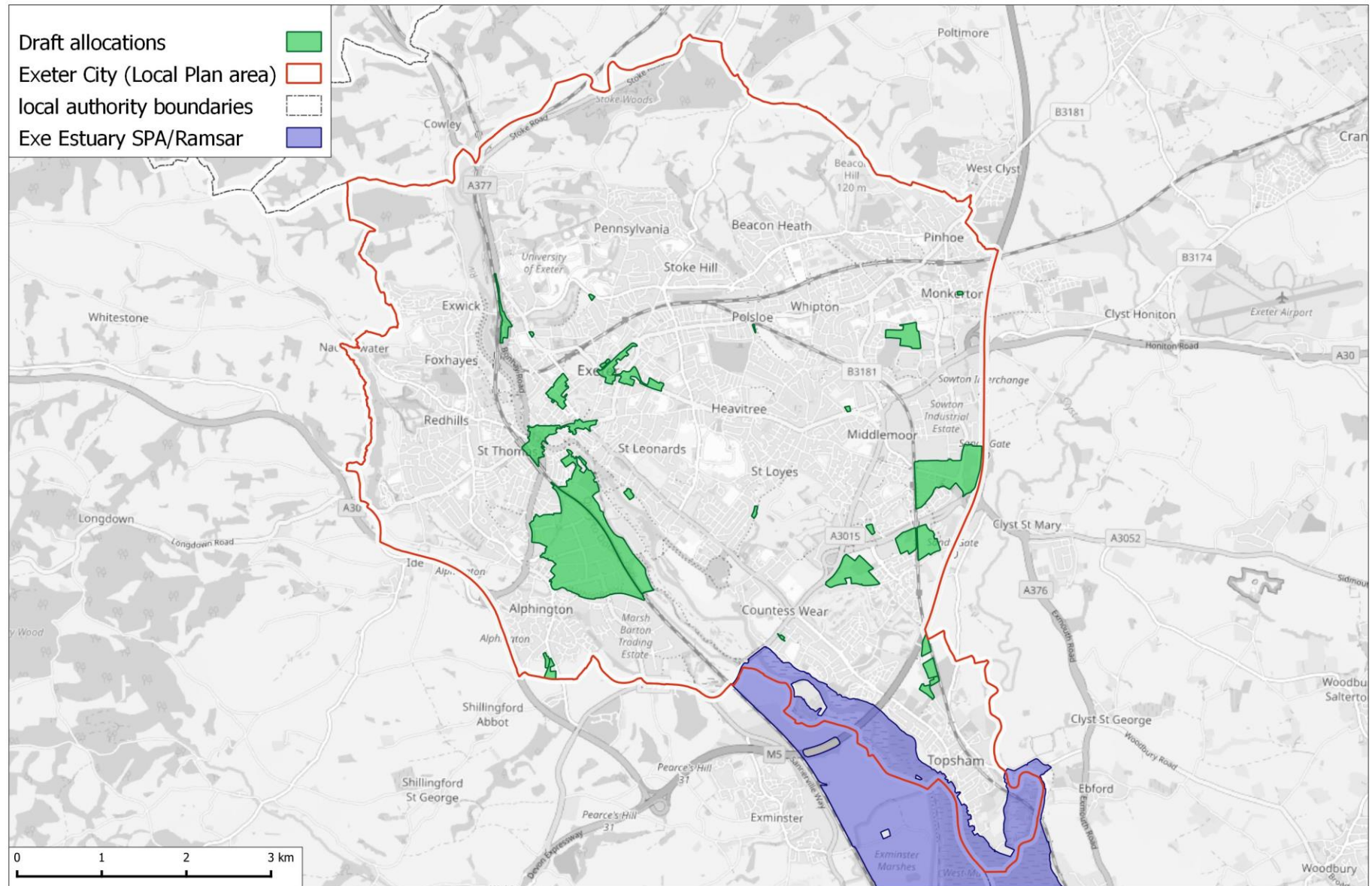
The screening

- 3.6 Map 3 shows the allocations within the Plan.
- 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. 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.
- 3.8 Below the screening table, Table 5 summarises the distances from each of the allocation sites to each of the European sites. This gives further context. In Table 5, grey shading indicates distances that are below 10km, reflecting the distance used in the mitigation strategy to define the zone of influence for the East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar and Dawlish Warren SAC. The shading therefore provides an easy means to identify sites that fall within that zone. Red text indicates distances of 500m or less, highlighting allocations that are particularly close to a European site, and where, for example, urban effects could be relevant.

¹⁷ People Over Wind: European Court Case C-323/17 People Over Wind & Peter Sweetman v Coillte Teoranta 12 April 2018

Exeter Plan HRA

Map 3: Allocations and sites within the Plan



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Table 4: Initial screening of the Outline Draft Plan for likely significant effects. Orange shaded rows with bold text indicates policies that are screened in alone or in-combination.

Plan section/policy	Description	Initial LSE screening	Potential risks	Comments
Explaining the Exeter Plan	Initial text setting context and introduction	Introductory text. No LSE		
Our vision for Exeter	Overarching vision	Strategic text. No LSE.		
Spatial strategy	Introductory text on spatial strategy.	Introductory text. No LSE		
S1: Spatial strategy	Sets out the main principles for guiding the pattern and characteristics of development in the city	Strategic text. No LSE.		Very strategic with no quantum of growth set or specific locations.
S2: Liveable Exeter principles	Broad principles for large scale developments	General statements. No LSE		
Climate emergency	Introductory text on climate emergency.	Introductory text. No LSE		
CE1: Net zero Exeter	Lists a range of criteria to ensure development proposals support the achievement of net zero	General criteria for development proposals. No LSE		Policy provides links to green infrastructure, biodiversity net gain and landscape schemes which are likely to be positive with respect to European sites
CE2: Local Energy Networks	Identifies locations for local energy networks and criteria for new development in the vicinity of such networks	Policy or proposal that could not have any conceivable impact on a site. No LSE.		

Plan section/policy	Description	Initial LSE screening	Potential risks	Comments
CE3: Flood risk	Sets general criteria relating to flood risk and sustainable drainage	General criteria for development proposals. No LSE		Policy screened out as not relating to European site and not specific mitigation for the estuary. Policy nonetheless potentially ensures some incidental protection to the Exe Estuary in relation to contamination from surface water/flooding.
Homes	Introductory text for section on housing requirement and allocations.	Introductory text. No LSE		
H1: Housing requirement	Sets quantum of growth, targeting the delivery of at least 650 homes per year between 2020 and 2040. 14,300 homes proposed.	LSE. Screened in.	Urban effects alone (Exe Estuary SPA/Ramsar); Recreation alone (Exe Estuary SPA/Ramsar, East Devon Heaths SAC/SPA, Dawlish Warren SAC, South Dartmoor Woods SAC); Hydrological impacts in-combination (Exe Estuary SPA/Ramsar); Air Quality in-combination (East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar, South Dartmoor Woods SAC)	Total includes 2024 completions (2020-2022) and approximately 5380 homes with existing planning consents. New homes anticipated are approximately 6,205 homes on allocated sites and 691 windfall.
H2: Housing allocations	Lists development sites that are allocated.	LSE. Screened in.	Urban effects alone (Exe Estuary SPA/Ramsar); Recreation alone (Exe Estuary SPA/Ramsar, East Devon Heaths SAC/SPA, Dawlish Warren SAC, South Dartmoor Woods SAC); Hydrological impacts in-combination (Exe Estuary SPA/Ramsar); Air Quality in-combination (East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar, South Dartmoor Woods SAC)	Overall amount of growth in allocations as per H1
Economy and jobs	Introductory text on employment and the economy.	Introductory text. No LSE		
EJ1: Economic growth in the	General policy supporting development proposals	Policy or proposal that		

Plan section/policy	Description	Initial LSE screening	Potential risks	Comments
transformational sectors	relating to transformational sectors	could not have any conceivable impact on a site. No LSE.		
EJ2: Retention of employment land	Policy retaining the established employment areas at Southernhay, Matford, Pinhoe, Sowton, Exeter Business Park, Pynes Hill and Peninsula Park for employment use-	Policy or proposal that could not have any conceivable impact on a site. No LSE.		
EJ3: New forms of employment provision	General policy supporting development proposals for new forms of employment provision	Policy or proposal that could not have any conceivable impact on a site. No LSE.		
EJ4: Access to jobs and skills	General policy supporting access to jobs and skills	Policy or proposal that could not have any conceivable impact on a site. No LSE.		
The future of our high streets	Introductory text relating to high streets and retail.	Introductory text. No LSE		
HS1: The vitality of our high streets	General policy relating to supporting certain proposals in the city, district and local	Policy or proposal that could not have		

Plan section/policy	Description	Initial LSE screening	Potential risks	Comments
	centres and not permitting large scale retail proposals outside existing centres.	any conceivable impact on a site. No LSE.		
Sustainable transport and communications	Introductory text on travel.	Introductory text. No LSE		
STC1: Sustainable movement	General policy ensuring/promoting active travel and sustainable transport options	Policy or proposal that could not have any conceivable impact on a site. No LSE.		
STC2: Active and sustainable travel in new developments	Policy sets out what new development will need to look like and what it will need to provide to make it easier for people to walk, cycle or use public transport and shared mobility	General criteria for development proposals. No LSE		
STC3: Active travel proposals	Policy safeguards existing/future links to long distance strategic trails and identifies areas where improvements required or new cycle routes.	Policy or proposal that could not have any conceivable impact on a site. No LSE.		Safeguards rather than allocates Exe Estuary routes and the cycle route here already in place and has been subject to HRA, so no risks of increased recreation to Exe Estuary as a result of the proposals.
STC4: Public transport proposals	Policy that improves the public transport network including	Policy or proposal that could not have		

Plan section/policy	Description	Initial LSE screening	Potential risks	Comments
	enhanced bus routes and rail provision	any conceivable impact on a site. No LSE.		
STC5: Digital communications	General policy requiring new major development to incorporate necessary digital infrastructure	Policy or proposal that could not have any conceivable impact on a site. No LSE.		
Natural environment	Introductory text on the environment and relevant policies	Introductory text. No LSE		
NE1: Landscape setting areas	Policy protecting landscape, in terms of character, beauty and views	General criteria for development proposals and environmental protection. No LSE		
NE2: Valley Parks	General policy supporting appropriate development within the Valley Parks, restricting inappropriate development and requiring large-scale residential proposals to demonstrate how residents will access the Parks.	Policy intended to avoid or reduce harmful effects to a European site. Screened in		Screened in for further consideration as the policy refers to Suitable Alternative Natural Greenspace which will function as mitigation to address recreation pressure on the European sites (East Devon Heaths SAC/SPA); Exe Estuary SPA/Ramsar; Dawlish Warren SAC).

Plan section/policy	Description	Initial LSE screening	Potential risks	Comments
NE3: Biodiversity	Plan-wide policy setting environmental protection (including designated sites), mitigation requirements and biodiversity net gain.	Policy intended to avoid or reduce harmful effects to a European site. Screened in		Screened in for further consideration as sets out mitigation requirements.
NE4: Green infrastructure	Plan-wide policy protecting and enhancing green infrastructure.	Policy or proposal that could not have any conceivable impact on a site. No LSE.		Cross references to the Green Infrastructure Strategy. Not specific to mitigation and general green infrastructure policy, some cross-over and potential likely incidental benefits to European sites in terms of protection from recreation impacts
History and heritage	General introduction on history and heritage	Introductory text. No LSE		
HH1: Conserving and enhancing heritage assets	Policy to protect and enhance the city's heritage, historic character, built form, historic landscape, heritage assets, their setting and the cultural offering and identity of the city.	Policy or proposal that could not have any conceivable impact on a site. No LSE.		
Culture and tourism	General introduction relating to culture and tourism	Introductory text. No LSE		
C1: Protecting and enhancing cultural and tourism facilities	General policy protecting and enhancing cultural and tourism facilities	Policy or proposal that could not have any conceivable		

Plan section/policy	Description	Initial LSE screening	Potential risks	Comments
		impact on a site. No LSE.		
High quality places and design	Introductory text relating to general design principles and development quality.	Introductory text. No LSE		
D1: Design principles	Policy listing factors relating to design principles	General criteria for development proposals. No LSE		
Health and wellbeing	Introductory text on health and wellbeing, covering quality housing, job creation, increases in physical activity, enhancing nature etc.	Introductory text. No LSE		
H1: Health and wellbeing	General policy maximising opportunities for achieving positive mental and physical health outcomes	General criteria for development proposals. No LSE		
Infrastructure and community facilities	General introduction covering infrastructure and community facilities	Introductory text. No LSE		
IC1: Delivery of infrastructure	General policy relating to infrastructure delivery, CIL/S106 payments and need for Infrastructure Delivery Plans	Policy or proposal that could not have any conceivable impact on a site. No LSE.		

Plan section/policy	Description	Initial LSE screening	Potential risks	Comments
IC2: Community facilities	General policy relating to community facilities, such as schools, open spaces, allotments, sports pitches, leisure centres or other community facilities such as community halls, churches, libraries, children's centres or youth clubs	Policy or proposal that could not have any conceivable impact on a site. No LSE.		
IC3: Viability	General policy covering viability	Policy or proposal that could not have any conceivable impact on a site. No LSE.		
Potential development sites	Introductory text for individual sites	Introductory text. No LSE		
Marsh Barton – Site Reference 14	Allocation	LSE. Screened in.	Recreation alone (Exe Estuary SPA/Ramsar), in-combination (South Dartmoor Woods SAC); Hydrological impacts in-combination (Exe Estuary SPA/Ramsar); Air Quality in-combination (East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar, South Dartmoor Woods SAC)	
Water Lane – Site Reference 15	Allocation	LSE. Screened in.	Recreation alone (Exe Estuary SPA/Ramsar), in-combination (South Dartmoor Woods SAC); Hydrological impacts in-combination (Exe Estuary SPA/Ramsar); Air Quality in-combination (East Devon Heaths SAC/SPA, Exe	

Plan section/policy	Description	Initial LSE screening	Potential risks	Comments
			Estuary SPA/Ramsar, South Dartmoor Woods SAC)	
East Gate – Site Reference 52	Allocation	LSE. Screened in.	Recreation alone (Exe Estuary SPA/Ramsar), in-combination (South Dartmoor Woods SAC); Hydrological impacts in-combination (Exe Estuary SPA/Ramsar); Air Quality in-combination (East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar, South Dartmoor Woods SAC)	
Red Cow / St David's – Site Reference 22	Allocation	LSE. Screened in.	Recreation alone (Exe Estuary SPA/Ramsar), in-combination (South Dartmoor Woods SAC); Hydrological impacts in-combination (Exe Estuary SPA/Ramsar); Air Quality in-combination (East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar, South Dartmoor Woods SAC)	
Sandy Gate – Site Reference 89	Allocation	LSE. Screened in.	Recreation in-combination (Exe Estuary SPA/Ramsar, East Devon Heaths SAC/SPA, South Dartmoor Woods SAC); Hydrological impacts in-combination (Exe Estuary SPA/Ramsar); Air Quality in-combination (East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar, South Dartmoor Woods SAC)	
North Gate – Site Reference 42	Allocation	LSE. Screened in.	Recreation in-combination (Exe Estuary SPA/Ramsar, South Dartmoor Woods SAC); Hydrological impacts in-combination (Exe Estuary SPA/Ramsar); Air Quality in-combination (East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar, South Dartmoor Woods SAC)	

Plan section/policy	Description	Initial LSE screening	Potential risks	Comments
West Gate – Site Reference 39	Allocation	LSE. Screened in.	Recreation in-combination (Exe Estuary SPA/Ramsar, South Dartmoor Woods SAC); Hydrological impacts in-combination (Exe Estuary SPA/Ramsar); Air Quality in-combination (East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar, South Dartmoor Woods SAC)	
South Gate – Site Reference 46	Allocation	LSE. Screened in.	Recreation in-combination (Exe Estuary SPA/Ramsar, South Dartmoor Woods SAC); Hydrological impacts in-combination (Exe Estuary SPA/Ramsar); Air Quality in-combination (East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar, South Dartmoor Woods SAC)	
St Bridget Nurseries, Old Rydon Lane – Site Reference 83	Allocation	LSE. Screened in.	Recreation in-combination (Exe Estuary SPA/Ramsar, East Devon Heaths SAC/SPA, South Dartmoor Woods SAC); Hydrological impacts in-combination (Exe Estuary SPA/Ramsar); Air Quality in-combination (East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar, South Dartmoor Woods SAC)	
Land north, south and west of the Met Office – Site Reference 109	Allocation	LSE. Screened in.	Recreation in-combination (Exe Estuary SPA/Ramsar, East Devon Heaths SAC/SPA, South Dartmoor Woods SAC); Hydrological impacts in-combination (Exe Estuary SPA/Ramsar); Air Quality in-combination (East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar, South Dartmoor Woods SAC)	
Land south of the A379 – Site Reference 113	Allocation	LSE. Screened in.	Recreation in-combination (Exe Estuary SPA/Ramsar, East Devon Heaths SAC/SPA, South Dartmoor Woods SAC); Hydrological	

Plan section/policy	Description	Initial LSE screening	Potential risks	Comments
			impacts in-combination (Exe Estuary SPA/Ramsar); Air Quality in-combination (East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar, South Dartmoor Woods SAC)	
12-31 Sidwell Street – Site Reference 51	Allocation	LSE. Screened in.	Recreation in-combination (Exe Estuary SPA/Ramsar, South Dartmoor Woods SAC); Hydrological impacts in-combination (Exe Estuary SPA/Ramsar); Air Quality in-combination (East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar, South Dartmoor Woods SAC)	
Land to the east of Newcourt Road, Topsham – Site Reference 92	Allocation	LSE. Screened in.	Recreation in-combination (Exe Estuary SPA/Ramsar, Dawlish Warren SAC, East Devon Heaths SAC/SPA, South Dartmoor Woods SAC); Hydrological impacts in-combination (Exe Estuary SPA/Ramsar); Air Quality in-combination (East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar, South Dartmoor Woods SAC)	
Exeter Squash Club, Prince of Wales Road – Site Reference 26	Allocation	LSE. Screened in.	Recreation in-combination (Exe Estuary SPA/Ramsar, South Dartmoor Woods SAC); Hydrological impacts in-combination (Exe Estuary SPA/Ramsar); Air Quality in-combination (East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar, South Dartmoor Woods SAC)	
Land at Newcourt Road, Topsham – Site Reference 91	Allocation	LSE. Screened in.	Recreation in-combination (Exe Estuary SPA/Ramsar, Dawlish Warren SAC, East Devon Heaths SAC/SPA, South Dartmoor Woods SAC); Hydrological impacts in-combination (Exe Estuary SPA/Ramsar); Air Quality in-	

Plan section/policy	Description	Initial LSE screening	Potential risks	Comments
			combination (East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar, South Dartmoor Woods SAC)	
Land adjoining Silverlands, Chudleigh Road – Site Reference 18	Allocation	LSE. Screened in.	Recreation in-combination (Exe Estuary SPA/Ramsar, South Dartmoor Woods SAC); Hydrological impacts in-combination (Exe Estuary SPA/Ramsar); Air Quality in-combination (East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar, South Dartmoor Woods SAC)	
Belle Isle Depot, Belle Isle Drive – Site Reference 72	Allocation	LSE. Screened in.	Recreation in-combination (Exe Estuary SPA/Ramsar, South Dartmoor Woods SAC); Hydrological impacts in-combination (Exe Estuary SPA/Ramsar); Air Quality in-combination (East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar, South Dartmoor Woods SAC)	
Land to the west of Newcourt Road, Topsham – Site Reference 94	Allocation	LSE. Screened in.	Urban effects alone (Exe Estuary SPA/Ramsar); Recreation in-combination (Exe Estuary SPA/Ramsar, Dawlish Warren SAC, East Devon Heaths SAC/SPA, South Dartmoor Woods SAC); Hydrological impacts in-combination (Exe Estuary SPA/Ramsar); Air Quality in-combination (East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar, South Dartmoor Woods SAC)	In very close proximity to Exe Estuary SPA/Ramsar (500m)
Chestnut Avenue – Site Reference 75	Allocation	LSE. Screened in.	Recreation in-combination (Exe Estuary SPA/Ramsar, East Devon Heaths SAC/SPA, South Dartmoor Woods SAC); Hydrological impacts in-combination (Exe Estuary SPA/Ramsar); Air Quality in-combination (East	

Plan section/policy	Description	Initial LSE screening	Potential risks	Comments
			Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar, South Dartmoor Woods SAC)	
Former Overflow Tesco Car Park, Russell Way – Site Reference 80	Allocation	LSE. Screened in.	Recreation in-combination (Exe Estuary SPA/Ramsar, East Devon Heaths SAC/SPA, South Dartmoor Woods SAC); Hydrological impacts in-combination (Exe Estuary SPA/Ramsar); Air Quality in-combination (East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar, South Dartmoor Woods SAC)	
Land behind 66 Chudleigh Road – Site Reference 125	Allocation	LSE. Screened in.	Recreation in-combination (Exe Estuary SPA/Ramsar, South Dartmoor Woods SAC); Hydrological impacts in-combination (Exe Estuary SPA/Ramsar); Air Quality in-combination (East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar, South Dartmoor Woods SAC)	
Land east of Pinn Lane – Site Reference 106	Allocation	LSE. Screened in.	Recreation in-combination (Exe Estuary SPA/Ramsar, East Devon Heaths SAC/SPA, South Dartmoor Woods SAC); Hydrological impacts in-combination (Exe Estuary SPA/Ramsar); Air Quality in-combination (East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar, South Dartmoor Woods SAC)	
Land at Hamlin Lane – Site Reference 60	Allocation	LSE. Screened in.	Recreation in-combination (Exe Estuary SPA/Ramsar, South Dartmoor Woods SAC); Hydrological impacts in-combination (Exe Estuary SPA/Ramsar); Air Quality in-combination (East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar, South Dartmoor Woods SAC)	

Plan section/policy	Description	Initial LSE screening	Potential risks	Comments
Yeomans Gardens, Newcourt Road, Topsham – Site Reference 93	Allocation	LSE. Screened in.	Recreation in-combination (Exe Estuary SPA/Ramsar, Dawlish Warren SAC, East Devon Heaths SAC/SPA, South Dartmoor Woods SAC); Hydrological impacts in-combination (Exe Estuary SPA/Ramsar); Air Quality in-combination (East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar, South Dartmoor Woods SAC)	
Fever and Boutique, 12 Mary Arches Street – Site Reference 100	Allocation	LSE. Screened in.	Recreation in-combination (Exe Estuary SPA/Ramsar, South Dartmoor Woods SAC); Hydrological impacts in-combination (Exe Estuary SPA/Ramsar); Air Quality in-combination (East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar, South Dartmoor Woods SAC)	
88 Honiton Road – Site Reference 110	Allocation	LSE. Screened in.	Recreation in-combination (Exe Estuary SPA/Ramsar, East Devon Heaths SAC/SPA, South Dartmoor Woods SAC); Hydrological impacts in-combination (Exe Estuary SPA/Ramsar); Air Quality in-combination (East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar, South Dartmoor Woods SAC)	
Garages at Lower Wear Road – Site Reference 84	Allocation	LSE. Screened in.	Urban effects alone (Exe Estuary SPA/Ramsar); Recreation in-combination (Exe Estuary SPA/Ramsar, East Devon Heaths SAC/SPA, South Dartmoor Woods SAC); Hydrological impacts in-combination (Exe Estuary SPA/Ramsar); Air Quality in-combination (East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar, South Dartmoor Woods SAC)	In very close proximity to Exe Estuary SPA/Ramsar (180m)

Plan section/policy	Description	Initial LSE screening	Potential risks	Comments
99 Howell Road - Site Reference 24	Allocation	LSE. Screened in.	Recreation in-combination (Exe Estuary SPA/Ramsar, South Dartmoor Woods SAC); Hydrological impacts in-combination (Exe Estuary SPA/Ramsar); Air Quality in-combination (East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar, South Dartmoor Woods SAC)	

Table 5: Summary of distances (km) from the closest part of each strategic allocation to the closest point of each of the relevant European sites.

Distances of under 500m are shown in red and grey shading indicate distances within 10km.

Allocation Name	Site Ref	No. dwellings	Distance (km) from allocation			
			Dawlish Warren SAC	East Devon Heaths SAC/SPA	Exe Estuary SPA/Ramsar	South Dartmoor Woods SAC
Marsh Barton	14	1880	11.73	10.47	1.39	10.42
Water Lane	15	1180	11.77	10.39	1.37	10.88
East Gate	52	750	13.78	11.12	3.25	11.76
Red Cow / St David's	22	430	15.19	13.03	4.73	10.84
Sandy Gate	89	250	10.81	7.30	1.78	14.87
North Gate	42	200	14.15	12.07	3.67	11.1
West Gate	39	200	13.73	12.02	3.36	10.61
South Gate	46	170	13.76	11.66	3.27	11.13
St Bridget Nurseries, Old Rydon Lane	83	334	10.69	7.85	1.01	13.75
Land north, south and west of the Met Office	109	225	13.22	8.72	3.89	15.1
Land south of the A379	113	184	10.91	7.60	1.77	14.64
12-31 Sidwell Street	51	51	14.35	11.82	3.81	11.81
Land to the east of Newcourt Road, Topsham	92	43	9.44	6.89	0.67	14.8
Exeter Squash Club, Prince of Wales Road	26	40	15.11	12.31	4.57	12.02
Land at Newcourt Road, Topsham	91	38	9.71	7.04	0.8	14.79
Land adjoining Silverlands, Chudleigh Road	18	37	11.58	11.25	2.08	10.33
Belle Isle Depot, Belle Isle Drive	72	33	12.83	10.94	2.34	11.61
Land to the west of Newcourt Road, Topsham	94	31	9.20	6.89	0.50	14.74
Chestnut Avenue	75	26	11.96	9.5	1.52	13.02
Former Overflow Tesco Car Park, Russell Way	80	18	11.26	8.13	1.80	14.33
Land behind 66 Chudleigh Road	125	16	11.73	11.39	2.17	10.34
Land east of Pinn Lane	106	14	13.74	8.69	4.73	16.07
Land at Hamlin Lane	60	13	13.97	10.45	3.71	13.66
Yeomans Gardens, Newcourt Road, Topsham	93	13	9.35	6.87	0.61	14.87
Fever and Boutique, 12 Mary Arches Street	100	10	14.28	12.22	3.80	11.13
88 Honiton Road	110	10	12.73	9.02	2.93	14.4

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Allocation Name	Site Ref	No. dwellings	Distance (km) from allocation			
			Dawlish Warren SAC	East Devon Heaths SAC/SPA	Exe Estuary SPA/Ramsar	South Dartmoor Woods SAC
Garages at Lower Wear Road	84	9	10.49	8.75	0.18	13.12
99 Howell Road	24	6	15.07	12.76	4.57	11.2

Screening conclusions

- 3.9 The initial screening of the outline draft plan has identified a number of risks in terms of general urban effects, recreation, hydrological impacts and air quality.
- 3.10 For general urban effects, likely significant effects were identified for the Exe Estuary SPA/Ramsar from two separate allocations. For recreation, likely significant effects were identified alone for the Exe Estuary SPA/Ramsar, East Devon Heaths SAC/SPA, Dawlish Warren SAC, South Dartmoor Woods SAC from the overall quantum of growth set out in H1 and H2. Likely significant effects were also identified for recreation for all allocations, in combination, for the same European sites.
- 3.11 For both hydrological impacts and air quality, impacts were identified in-combination for the overall quantum of growth and the individual allocations with risks to the Exe Estuary SPA/Ramsar for hydrology and to East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar and South Dartmoor Woods SAC with respect to air quality.
- 3.12 It is too early to undertake a full appropriate assessment as the site options are still to be finalised and key pieces of evidence are still to be collated. Following the initial screening, topics for appropriate assessment are highlighted to advise on the scope of the appropriate assessment and inform the evidence that will need to be gathered as the Plan progresses. These topics will be assessed in detail within the appropriate assessment at the next iteration of the Plan, when more detail and evidence are available.

4. Appropriate assessment topic: Urban effects

Relevant policies from initial LSE screening

- 4.1 Likely significant effects were identified alone with respect to the Exe Estuary SPA/Ramsar for policies:
- H1 Housing requirement;
 - HS Housing allocations.
- 4.2 These policies set the overall level of growth and locations. Likely significant effects alone were identified only for allocations that were within 500m of the Exe Estuary SPA/Ramsar:
- Garages at Lower Wear Road – Site Reference 84;
 - Land to the west of Newcourt Road, Topsham – Site Reference 94.

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, increased fire risk, spread of invasive species (e.g. from gardens and garden waste) and vandalism. Where housing is directly adjacent to sites, access can occur directly from gardens and informal access points. Use will spill over from adjacent gardens and adjacent green space next to urban areas is often subject to a range of activities and issues that are not necessarily compatible with nature conservation. We treat urban effects separately from recreation as urban effects are specific to where housing is in close proximity and urban effects are not addressed through the existing mitigation strategy.

Urban effects and the Exe Estuary SPA/Ramsar

- 4.4 The only European site relevant to development in Exeter in this respect is the Exe Estuary SPA/Ramsar.
- 4.5 Risks from urban effects for the Estuary could include increased fire incidence, potentially a concern only during dry periods around saltmarsh and fringing vegetation (reedbeds for example). Fires can start in a range of ways, including deliberate arson, children playing, campfires, barbeques, sparks from vehicles, discarded cigarettes etc. Studies of fire incidence have shown higher incidence of fires in locations with higher levels of housing within 500m of the site boundary (Kirby & Tantram, 1999). Light pollution is also a risk, potentially affecting foraging

behaviour and distribution of birds (Dwyer et al., 2013; Longcore & Rich, 2004; Santos et al., 2010)

- 4.6 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.
- 4.7 Two allocations were identified from the screening due to their particular close proximity to the Exe Estuary SPA/Ramsar; both are within 500m of the European site boundary. These are considered in more detail below.

Garages at Lower Wear Road – Site Reference 84

- 4.8 This allocation is for 9 houses and is approximately 180m at its closest from the SPA/Ramsar. It is screened from the SPA/Ramsar by existing housing. The closest part of the SPA/Ramsar is marshland that is potentially accessible in dry conditions (although there is a ditch that will restrict access to most of the marsh) and currently separated from the road (Glasshouse Lane) by a thin line of trees and dilapidated fence. The marsh does not support high numbers of birds and the ditch provides some protection (e.g. from cats) but could be vulnerable to impacts from fire or from fly tipping. These risks could be addressed at project level and are potentially easily mitigated (given the size of the development and distance involved) by some improved fencing or better boundary along the edge of Glasshouse Lane.

Land to the west of Newcourt Road, Topsham – Site Reference 94

- 4.9 This allocation is for 31 homes (net) and is on the outskirts of Topsham. It currently comprises a bungalow, outbuildings and a grassy field. At its closest point it is 500m from the Exe Estuary SPA/Ramsar. This distance means light pollution, cat predation and dumping of garden waste etc can be discounted. The nearest parts of the European site comprise intertidal mudflat (soft sediment) and there is minimal access to the shoreline due to numerous private gardens). This means that fire risk can be ruled out. As such, urban effects can be eliminated for this location and there will be no need for any in-combination assessment.

Key findings: urban effects

Urbanisation 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, increased fire risk, spread of invasive species (e.g. from gardens and garden waste) and vandalism.

Two allocations (Garages at Lower Wear Road, Site Reference 84 and Land to the west of Newcourt Road, Topsham, Site Reference 94) were identified in the initial screening as they were within 500m of the Exe Estuary SPA/Ramsar. Checks of these sites indicate that the risks are low and both are set back from the estuary shoreline (180m and 500m respectively). For site 84 any risks can be checked and addressed at the project level, once detailed designs are available. Mitigation may be required in the form of better boundary treatment, signage or vegetation management near the allocation site. The need for further checks and project level assessment of urban effects should be identified in the site specific text for this allocation when it is written. For Site 94 site checks provide the confidence to eliminate any risks due to the distances involved and the local geography.

5. Appropriate assessment topic: Recreation

Relevant policies from initial LSE screening

- 5.1 The initial screening identified likely significant effects alone from the overall housing growth proposed in the plan, as set out in H1: Housing requirement and H2: Housing allocations, for the Exe Estuary SPA/Ramsar, East Devon Heaths SAC/SPA, Dawlish Warren SAC and the South Dartmoor Woods SAC.
- 5.2 Likely significant effects were triggered for each allocation, in-combination:
- Marsh Barton – Site Reference 14;
 - Water Lane – Site Reference 15;
 - East Gate – Site Reference 52;
 - Red Cow/St David's – Site Reference 22;
 - Sandy Gate – Site Reference 89;
 - North Gate – Site Reference 42;
 - West Gate – Site Reference 39;
 - South Gate – Site Reference 46;
 - St Bridget Nurseries, Old Rydon Lane – Site Reference 83;
 - Land north, south and west of the Met Office – Site Reference 109;
 - Land south of the A379 – Site Reference 113;
 - 12-31 Sidwell Street – Site Reference 51;
 - Land to the east of Newcourt Road, Topsham – Site Reference 92;
 - Exeter Squash Club, Prince of Wales Road – Site Reference 26;
 - Land at Newcourt Road, Topsham – Site Reference 91;
 - Land adjoining Silverlands, Chudleigh Road – Site Reference 18;
 - Belle Isle Depot, Belle Isle Drive – Site Reference 72;
 - Land to the west of Newcourt Road, Topsham – Site Reference 94;
 - Chestnut Avenue – Site Reference 75;
 - Former Overflow Tesco Car Park, Russell Way – Site Reference 80;
 - Land behind 66 Chudleigh Road – Site Reference 125;
 - Land east of Pinn Lane – Site Reference 106;
 - Land at Hamlin Lane – Site Reference 60;
 - Yeomans Gardens, Newcourt Road, Topsham – Site Reference 93;
 - Fever and Boutique, 12 Mary Arches Street – Site Reference 100;
 - 88 Honiton Road – Site Reference 110;
 - Garages at Lower Wear Road – Site Reference 84; and
 - 99 Howell Road – Site Reference 24.
- 5.3 Policies NE2 and NE3 relate to mitigation for recreation impacts and were therefore screened in for further consideration.

Introduction

- 5.4 Postcode data indicates that there were around 56,209 residential properties within Exeter in 2020 (and for reference the data for 2022 indicate around 56,810 residential properties). The proposed level of growth in H1 of 14,300 new dwellings therefore represents an increase in the number of residential properties of around 25% for the overall growth¹⁸. While occupancy levels may change overtime this clearly represents a potential marked increase in the population living in the city and therefore the potential for a marked uplift in recreational use of surrounding countryside sites.
- 5.5 In the UK there is considerable overlap between nature conservation and recreation. Many of our most important nature conservation sites have legal rights of access, for example through Public Rights of Way or Open Access through the Countryside and Rights of Way Act (CROW) 2000. People are often drawn to sites that are important for nature conservation as they are large, scenic and often few other alternatives exist. Recreation use can include a variety of activities, ranging from the daily dog walks to competitive adventure and endurance sports. Visits to the natural environment have shown a significant increase in England as a result of the increase in population and a trend to visit more (O'Neill, 2019). The issues are particularly acute in southern England, where population density is highest. The covid pandemic resulted in a further marked increase in use of local countryside sites (Burnett et al., 2021; Natural England & Kantar Public, 2021) and a marked uplift in dog ownership (Morgan et al., 2020).
- 5.6 There can be a difficult balancing act between providing for an increasing demand for access without compromising the integrity of protected wildlife sites. There is now a strong body of evidence showing how increasing levels of access can have negative impacts on wildlife. Issues are varied and include disturbance, increased fire risk, contamination and damage (for general reviews see: Liley et al., 2010, 2019; Lowen et al., 2008; Ross et al., 2014; Underhill-Day, 2005).
- 5.7 The issues are not however straightforward. It is now increasingly recognised that access to the countryside is crucial to the long term success of nature conservation projects, for example through enforcing pro-environmental behaviours and a greater respect for the world around us (Richardson et al., 2016). Access also brings wider benefits to society that include benefits to mental/physical health (Bell et al., 2018; Keniger et al., 2013; Lee & Maheswaran, 2011; Pretty et al., 2005)

¹⁸ Note that the 14,300 figure includes existing completions (2,024 completions), which brings the level of additional growth to around 22%.

and economic benefits (ICF GHK, 2013; ICRT, 2011; Keniger et al., 2013; The Land Trust, 2018). Nature conservation bodies are trying to encourage people to spend more time outside and government policy is also promoting countryside access in general (e.g. through enhancing coastal access).

Potential sites and risks

- 5.8 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) and are identified in the respective site improvement plans (produced by Natural England) as summarised in Table 6. For the Exe Estuary SPA/Ramsar, Dawlish Warren SAC and the East Devon Heaths SAC/SPA the issues are long standing and a strategy was established in 2014 to mitigate the impacts from residential development for these sites.

Table 6: European sites and potential recreation impacts relevant at the appropriate assessment stage. Relevant pressures/threats from Site Improvement Plans (SIPs). Direct impact from third party can include unauthorised access and fire.

Site	Recreation impacts/risks	Relevant pressures/threats from SIPs		
		Direct impact from third party	Wildfire/arson	Public access/disturbance
Dawlish Warren SAC	Trampling damage to dune habitats, dog fouling, fire incidence.			✓
East Devon Pebblebed Heaths SAC	Trampling damage, dog fouling, increased fire risk.		✓	✓
East Devon Heaths SPA	Disturbance to Nightjar and Dartford Warbler; also fire risk.		✓	✓
Exe Estuary Ramsar	Disturbance to waterbirds.			✓
Exe Estuary SPA	Disturbance to waterbirds.			✓
South Dartmoor Woods SAC	Trampling damage, dog fouling, fire.			

South Dartmoor Woods SAC

Impacts of recreation

- 5.9 South Dartmoor Woods SAC lies within Dartmoor National Park and consists of seven individual sites within two clusters, one near Lustleigh and one near Buckfastleigh. There are 7 component SSSIs of which the Teign Valley Woods SSSI is the closest to Exeter (8.7km from the city boundary). The next closest are Bovey Valley Woodlands SSSI (around 15.4km at its closest) and Yarner Wood and Trendlebere Down SSSI (around 16.1km at its closest).
- 5.10 High levels of visitor footfall can create a range of problems in woodlands such as soil damage, enrichment (e.g. from dog fouling) and direct damage to trees including their roots (for general reviews of recreation impacts and woodland see: Anderson & Radford, 1992; Corney et al., 2008; Liley et al., 2010, 2019; Lowen et al., 2008; Marzano & Dandy, 2012; Ryan, 2012). Heathland habitats are also vulnerable to recreation impacts, for example from trampling damage, enrichment and increased fire risk and these issues (see Underhill-Day, 2005 for review). Disturbance is also relevant as ground-nesting heathland birds (Nightjar and

Dartford Warbler) are included in the supplementary conservation advice for the dry heathland component of the SAC as key structural, influential and/or distinctive species, and these are species known to be vulnerable to recreation impacts (Liley & Clarke, 2003; Murison, 2002; Murison et al., 2007). Similarly, the supplementary advice for the old sessile oak woodland identifies the assemblage of breeding woodland birds including Wood Warbler (a ground nesting species and therefore vulnerable to dogs off-lead) as key species.

- 5.11 While there is therefore potential for the conservation objectives of the SAC to be undermined by increased recreation use, recreation is not however identified as a current pressure or a future threat in Natural England's site improvement plan. SSSI condition assessments are not specifically designed to assess recreation impacts but can provide some general indications of current issues and concerns at sites. The latest condition assessment for the Teign Valley Woods SSSI¹⁹ reports that 5 of the units are currently in favourable condition while 2 are unfavourable declining. The unfavourable condition relates to a loss of the extent of heathland due to heather dieback in unit 1 and in unit 3 the deadwood targets not being met due to ash dieback. For unit 3, close proximity to the main road, car-parking and a dwelling means that tree safety management is a priority and target levels of standing deadwood are unlikely ever to be met due to the over-riding health and safety requirements.

Visitor use

- 5.12 Postal survey results (Cruickshanks & Liley, 2012), although dated, provide some information on recreation use of the Dartmoor area by residents living within Exeter. Exeter City residents made an average of 17.5 visits per year to Dartmoor and the Steps Bridge/Dunsford Wood area (within the Teign Valley SSSI) was the most commonly cited destination, visited on average around 2.4 times per year by Exeter residents. There is therefore evidence that Exeter residents visit this part of the SAC but that the levels of use may be low.
- 5.13 Work on recreation pressure for Dartmoor National Park and the impacts of growth in the wider area, were undertaken by Exeter University (Day et al., 2018). Their modelling indicated that there are currently around 7 million day trips per year to Dartmoor from residents of the eight neighbouring local authorities. Increased populations in those authorities was predicted to result in more than

¹⁹ See

<https://designatedsites.naturalengland.org.uk/ReportUnitCondition.aspx?SiteCode=S1003004&ReportTitle=Teign%20Valley%20Woods%20SSSI> accessed 17th August 2022

870,000 additional annual visits, a rise of some 12%. The report considers the impacts from the additional recreation and highlights a range of species that are considered vulnerable, based on expert review. These species include Nightjar and Wood Warbler. The analyses also considered trampling damage to habitats and they estimated that increasing recreational pressure on Dartmoor could result in 10,854 m² of bare ground being exposed along the path network and increased gullyng along 42km of path.

Implications for the Exeter Local Plan

- 5.14 There is potential for impacts from recreation on the South Dartmoor Woods SAC and evidence that people from Exeter do visit the SAC, albeit at a low level. Further evidence will be necessary before adverse effects on integrity can be ruled out, either from the development in Exeter alone or in-combination with other plans or projects.

- 5.15 The work by Exeter University flags the need for ongoing consideration. The SAC lies within Dartmoor National Park and visitor use includes a mix of day trips and visits from further afield. As such the impacts from housing growth are complex and potentially relate to a wide area. It should be noted that there are two statutory purposes for national parks in England and Wales. The first is to conserve and enhance natural beauty, wildlife and cultural heritage and the second is to promote opportunities for the understanding and enjoyment of the special qualities of national parks by the public. This second purpose includes opportunities for open air recreation. However, if it appears that there is a conflict between the two National Park purposes, the Environment Act 1995 requires greater weight to be attached to the purpose of conserving and enhancing the natural beauty, wildlife and cultural heritage of the National Park (this is known as the Sandford Principle²⁰).

- 5.16 It is potentially a challenge for Dartmoor National Park to continue to manage the growing recreation use without harm to the ecological interest and where that increase is linked to growth in housing within the adjacent local authorities the challenges are harder. This is because such visitor use will not be staying visitors who are likely to plan their visit carefully in advance using the National Park website, going to visitor centres etc.

- 5.17 Further evidence gathering should involve checks and discussion with Natural England, neighbouring authorities and Dartmoor National Park to consider the

²⁰ Named after Lord Sandford, who chaired the 1974 National Parks Policy Review Committee.

scale of any risks, any additional evidence (visitor data and recreation impact assessment) that might be available or need collecting, any monitoring currently in place and the potential (if needed) for mitigation intervention. Given the National Park's role in promoting and managing recreation, it should be possible to ensure any issues can be resolved, as there is a body that can oversee and deliver mitigation. Any solution will require working with the National Park and potentially other authorities and will require some further policy wording within the Exeter Plan. There are parallels for other National Parks in southern England – for example a zone of influence of 13.8km has been established around the New Forest SPA/SAC²¹. Within this zone likely significant effects from new residential growth are assumed and mitigation required. This zone includes the city of Southampton.

The Exe Estuary SPA/Ramsar, East Devon Heaths SAC/SPA and Dawlish Warren SAC

Introduction

- 5.18 Recreation impacts for these sites have long been identified as a concern and 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 Liley et al., 2014).
- 5.19 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).
- 5.20 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 NE3 while SANGs are also referenced in Policy NE2.

²¹ See the New Forest National Park website for details : <https://www.newforestnpa.gov.uk/conservation/managing-recreation/managing-recreation/research-into-recreational-use-of-the-new-forests-protected-habitats-footprint-ecology-2020/>

- 5.21 The strategy is being updated and revised during 2022 (in a joint commission by East Devon, Exeter City and Teignbridge District) and at the time of writing the updated strategy is not available to inform this HRA report.

Implications for the HRA

- 5.22 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, such as 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. It should be straight forward for the strategy to be updated prior to the next iteration of the Exeter Plan and therefore the strategy can be up and running alongside the submission of the Plan.
- 5.23 In order to be able to rule out adverse effects on integrity from recreation on the Exe Estuary SPA/Ramsar, East Devon Heaths SAC/SPA and Dawlish Warren SAC it will be necessary for the next iteration of this HRA to be able to draw on the updated mitigation strategy. The HRA will need to be able to have the confidence that the strategy is achievable, that the necessary SAMM and SANG are adequately resourced and deliverable and that the level of mitigation is address the scale of growth coming forward.

Key findings: Recreation***South Dartmoor Woods SAC***

Risks from recreation relation to trampling, nutrient enrichment, damage to trees and increased fire incidence. Further evidence is required as the Plan develops and before the next iteration of the HRA. Discussion is required with neighbouring authorities, Dartmoor National Park and Natural England in order to ascertain whether there is more information available on visitor use and recreation impacts. Some additional evidence gathering may be required and mitigation may be necessary.

The Exe Estuary SPA/Ramsar, East Devon Heaths SAC/SPA and Dawlish Warren SAC

A strategic mitigation approach is established and long running to address the impacts from housing and some tourist development within Exeter City, East Devon and Teignbridge Districts. This strategic mitigation approach will be updated prior to the next iteration of the Plan and the next version of the HRA draw on the updated mitigation strategy. The HRA will need to be able to have the confidence that the strategy is achievable, that the necessary SAMM and SANG are adequately resourced and deliverable and that the level of mitigation is address the scale of growth coming forward.

6. Appropriate assessment topic: Hydrological issues

Relevant policies from initial LSE screening

- 6.1 Likely significant effects were identified alone with respect to the Exe Estuary SPA/Ramsar for policies:
- H1 Housing requirement;
 - HS Housing allocations.
- 6.2 These policies set the overall level of growth and locations. Likely significant effects were identified in-combination with respect to the Exe Estuary SPA/Ramsar for all allocations:
- Marsh Barton – Site Reference 14;
 - Water Lane – Site Reference 15;
 - East Gate – Site Reference 52;
 - Red Cow/St David's – Site Reference 22;
 - Sandy Gate – Site Reference 89;
 - North Gate – Site Reference 42;
 - West Gate – Site Reference 39;
 - South Gate – Site Reference 46;
 - St Bridget Nurseries, Old Rydon Lane – Site Reference 83;
 - Land north, south and west of the Met Office – Site Reference 109;
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 - Land at Hamlin Lane – Site Reference 60;
 - Yeomans Gardens, Newcourt Road, Topsham – Site Reference 93;
 - Fever and Boutique, 12 Mary Arches Street – Site Reference 100;
 - 88 Honiton Road – Site Reference 110;
 - Garages at Lower Wear Road – Site Reference 84; and
 - 99 Howell Road – Site Reference 24.

Introduction

- 6.3 Run-off outflow from sewage treatments and overflows from septic tanks and poorly installed washing machines can result in increased nutrient loads and contamination of water courses. This can have consequences for European sites which contain wetland or aquatic features, as the pollution will affect the ability of the site to support the given interest.
- 6.4 Furthermore, abstraction and land management can influence water flow and quantity, resulting in reduced water availability at certain periods or changes in the flow. This can exacerbate issues relating to water quality.
- 6.5 These impact pathways can be specific to particular parts of European sites or particular development locations and are also relevant to the overall quantum of development.

Water supply

- 6.6 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.
- 6.7 The Environment Agency is the competent authority for the Water Framework Directive, and it oversees the publication of River Basin Management Plans which are a requirement of the Directive. These plans 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.
- 6.8 The first River Basin Management Plans were produced in 2009 and then updated in 2015. In the more recent, second cycle river basin management plans the Environment Agency has committed to ensure abstraction licensing strategies and actions fully incorporate all environmental objectives and align with river basin management plans. The Agency will 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 action should expect that their licences will be constrained over the next 6 years.

- 6.9 The Water Act 2003 introduced a legal requirement into the Water Industry Act 1991 for water companies to prepare, publish and maintain WRMPs. South West Water's current Water Resources Management Plan (WRMP)²² predicts demand for water and identifies issues around supply. The Exeter area is supplied with domestic water from the Wimbleball Water Resource Zone (WRZ) which extends across much of east Devon. 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 2044/5. This shows that, without any interventions:
- The Wimbleball WRZ is in surplus until the very end of the planning period with a minor deficit in 2044/45
- 6.10 These predictions take into account abstraction licence changes and renewals, including information provided by the Environment Agency on actions that companies need to undertake to contribute towards meeting environmental obligations, including any required changes to abstraction licences.
- 6.11 Despite this positive outcome, the WRMP sets out a series of interventions are set out that would apply across the entire water company area and include, in the short-term, reducing South West Water's consumption of water at large sewage treatment works, reducing leakage and helping customers reduce water use. In addition, in those WRZ where future deficits are predicted, a series of bespoke measures are also proposed though these do not affect Wimbleball WRZ or Exeter.
- 6.12 With these interventions in place, the Water Resources Management Plan indicates there is sufficient surplus of water with no need to increase abstraction beyond that provided for by existing licences.
- 6.13 Furthermore, WRMPs have to be revised every five years. Accordingly, the water company has begun the process of producing 'WRMP24' for publication and implementation in 2024. At present only a scoping exercise for the Strategic Environmental Assessment (SEA)²³ has been carried out and it is too early for predictions to be made. Despite this, the HRA for Exeter will have to take note of findings as they emerge. It is anticipated that WRMP24 will be accompanied by its own HRA. As the water company and Environment Agency will represent the most suitable competent authorities to assess the WRMP24, once produced its findings can and should be adopted by the Exeter Local Plan HRA. However, as it is likely

²² South West Water Bournemouth Water (2019). Final Water Resources Management Plan.

²³ Mott MacDonald (2022). South West Water. Water Resources Management Plan 20204 (WRMP24).

that the local plan HRA will be published before the WRMP is completed reliance may have to be placed on the WRMP19. It is noted that neither WRMP19 nor its predecessor was accompanied by an HRA apparently because no changes were required from previous iterations. This seems odd and it is reassuring that the water company has committed to the production of an HRA this time. It is clear, therefore, that prior to the next iteration of the Local Plan HRA that checks should be made with the relevant bodies that forecasts are still appropriate given the scale of development within Exeter and elsewhere in the WRZ.

- 6.14 Given the reliance of the WRMP on interventions to reduce water consumption, it would be reasonable and appropriate for the Local Plan to emphasise the need for future development to incorporate water-saving measures, in accordance with South West Water advice.

Water quality

- 6.15 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.
- 6.16 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 that new development affecting vulnerable water bodies must achieve 'nutrient neutrality', ie 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.
- 6.17 For the avoidance of doubt, the Exe Estuary is not currently subject to these measures, but a range of other statutory and policy drivers still apply.

- 6.18 River Basin Management Plans provide the framework for protecting and enhancing the water environment. The relevant plan for the South West²⁴ sets out statutory objectives for protected areas and a programme of measures to achieve those objectives.
- 6.19 South West Water provides wastewater treatment for new development which it typically delivers by ensuring there is adequate capacity or headroom within the wastewater treatment system.
- 6.20 Whilst it should be expected that all existing wastewater treatment works that lie within the catchment of the Exe Estuary operate within their licensed conditions and that all have capacity to accommodate predicted levels of growth, this is not known to the Council for certain. On the other hand, licenses for all wastewater treatment works and any changes to these would have been subjected to project-level HRAs and would not be permitted to operate if adverse effects could not be ruled out.
- 6.21 Furthermore, South West Water is currently undertaking a consultation exercise (which will conclude later in 2022) on its first Drainage and Wastewater Management Plan (DWMP)²⁵. DWMPs provide the basis for integrated long-term planning relating to drainage, flooding and protection of the environment. This will inform the direction and content of the DWMP which is expected to be published in March 2023 and will cover the period from 2025 to 2050. Reassuringly, it will be accompanied by an HRA, and its findings will be of direct relevance to the outcome of the Local Plan and this HRA.
- 6.22 Given their particular knowledge of the water environment, South West Water/Environment Agency are the competent authorities best placed to assess the impact of the disposal and the subsequent management of foul water, not the Council. The DWMP and its accompanying HRA can therefore be expected to play an important role in the shape, content and direction of the Local Plan. However, it is anticipated this will only be completed after the publication of the Local Plan.
- 6.23 It is clear, therefore, that prior to the next iteration of the Local Plan HRA that checks should be made with the relevant bodies to ensure that it is provided with up to date analysis as the DWMP progresses given the scale of development within Exeter and elsewhere in the catchment of the Exe Estuary.

²⁴ See [Environment Agency website](#)

²⁵ South West Water (undated). Our Draft Drainage and Wastewater Management Plan.

Exe Estuary SPA/Ramsar

- 6.24 The Environment Agency classification for the estuary under the Water Framework Directive in 2020 is 'Moderate' for both ecological and chemical parameters. Issues preventing waters reaching 'Good' status and the contributing sectors can be summarised under growth, development and transport.
- 6.25 The Site Improvement Plan (SIP)²⁶ for the Exe Estuary does not list water resources or water quality as an existing pressure or emerging threat. However, the conservation objectives²⁷ include the following:
- '... to ensure that, subject to natural change, the ... supporting processes on which the habitat of the qualifying species rely [are maintained or restored as appropriate].
- 6.26 Furthermore, the supplementary advice for the waterbird assemblage (taken here as a reasonable surrogate for all other wetland features) adds that:
- 'aqueous contaminants' should be 'reduced',
 - 'dissolved oxygen' levels should be 'maintained',
 - dissolved inorganic nitrogen levels' should be maintained'; and
 - that 'natural levels of turbidity' should be 'maintained'.
- 6.27 The need to 'reduce' aqueous contaminants reflects the high levels of inorganic contaminants in the estuary. To 'maintain' existing levels of the other factors suggests these are of lesser concern, perhaps broadly reflecting the SIP. In contrast, no specific targets appear to be set out in terms of water resources.
- 6.28 The assessment of both water resources and water quality at present is compromised by the lack of an HRA to inform the current WRMP19, and that the emerging WRMP24 and first DWMP are still in preparation. Whilst evidence drawn from the site objectives and SIP suggest the absence of an immediate issue, this cannot be presumed.

²⁶ Natural England (2014). Site Improvement Plan. Exe Dawlish. V1.0.

²⁷ Natural England (2022). Exe Estuary Supplementary advice (last updated 18th March 2022). Available at: <https://designatedsites.naturalengland.org.uk/Marine/SupAdvice.aspx?SiteCode=UK9010081&SiteName=exe+estuary&SiteNameDisplay=Exe+Estuary+SPA&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=&NumMarineSeasonality=7> (accessed on 19 August 2022).

- 6.29 Should emerging analysis carried out for the WRMP and DWMP indicate that adverse effects on the integrity of the Exe Estuary cannot be avoided, mitigation, typically in the form of increased capacity and ability often provided by new infrastructure, may be required. South West Water has a legal duty to provide this, but it can take time to implement. Should these circumstances arise, the Local Plan could benefit from a policy requiring the phasing of development so that headroom is maintained at all times. On the other hand, should adverse effects be ruled such measures may not be required.

Key findings: Hydrological issues

The Exe Estuary SPA/Ramsar

It would be premature to provide a definitive statement here whether adverse effects could or could not be ruled out. Both the new WRMP and DWMP will be developed alongside the Local Plan and it is essential that their outcomes inform its evolution. Liaison with South West Water, the Environment Agency and Natural England is required to assess the scale of any issues and identify any mitigation measures, if necessary, before the next iteration of the Local Plan and this HRA. At present, therefore, adverse effects on the integrity of the Exe Estuary cannot be ruled out.

7. Appropriate assessment topic: Air Quality

7.1 Likely significant effects were identified in-combination with respect to the East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar, South Dartmoor Woods SAC for policies:

- H1 Housing requirement;
- HS Housing allocations.

7.2 It should be noted that the development strategy involves mainly brownfield development close to the city centre and specifically aims to reduce the need to travel. However, at present, it is impossible to identify which allocations would contribute to any increase in traffic flows at the European sites and so all allocations have been screened in as there is the potential for likely significant effects in-combination:

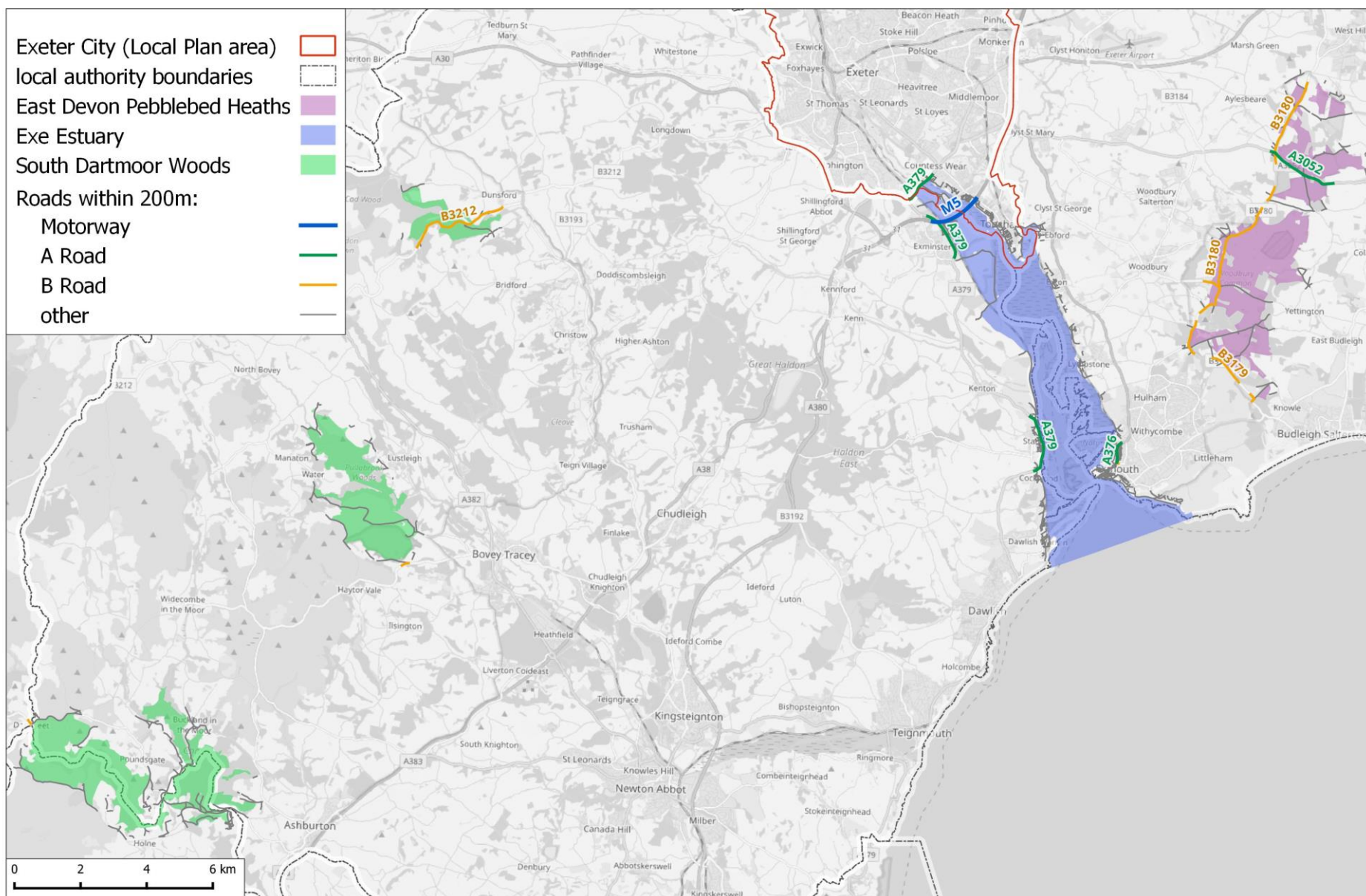
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- Land east of Pinn Lane – Site Reference 106;
- Land at Hamlin Lane – Site Reference 60;
- Yeomans Gardens, Newcourt Road, Topsham – Site Reference 93;
- Fever and Boutique, 12 Mary Arches Street – Site Reference 100;
- 88 Honiton Road – Site Reference 110;
- Garages at Lower Wear Road – Site Reference 84; and
- 99 Howell Road – Site Reference 24.

European sites: East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar, South Dartmoor Woods SAC.

- 7.3 Development is typically associated with increased traffic and emissions which can increase the airborne concentration of nitrogen oxides (NO_x) and ammonia (NH₃), 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.
- 7.4 However, levels of nitrogen 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.
- 7.5 Map 4 shows roads around the European sites and identifies the relevant roads within 200m:
- Exe Estuary SPA/Ramsar: M5, A376 and A379
 - East Devon Heaths SAC/SPA: A3052, B3180
 - South Dartmoor Woods SAC: B3213

Exeter Plan HRA

Map 4: Roads within 200m of European sites



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- 7.6 Reflecting this, Natural England provides screening criteria to assess the impact of air pollution on European sites²⁸. Essentially, this provides a stepwise process that first explores whether any European sites lie within 200 m of a busy road that is anticipated to carry increased traffic, prior to determining whether vulnerable qualifying features live within the affected area. If they do, detailed traffic analysis is required to determine if the level of traffic is anticipated to exceed a standard threshold of 1,000 Annual Average Daily Traffic (flows) for all vehicles or 200 Heavy Duty Vehicles (HDVs). If these thresholds are exceeded, air quality analysis is required.
- 7.7 Specific impacts are assessed by calculating the relative contribution of the local plan (and, bearing in mind the Wealden decision, in-combination with other plans or projects) in relation to the relevant critical levels for NO_x and ammonia, and the critical loads for nitrogen deposition.
- 7.8 The critical level for NO_x is 30 $\mu\text{g m}^{-3}$. It is a precautionary threshold below which there is confidence that adverse effects on vegetation communities will not arise. The critical level for ammonia is set at 3 $\mu\text{g m}^{-3}$ unless bryophytes or lichens form part of the qualifying features in which case it falls to 1 $\mu\text{g m}^{-3}$ (as in the case of the South Dartmoor Woodlands and East Devon Heaths). The critical loads for nitrogen deposition are specific to each individual feature or habitat and are expressed in kilograms of nitrogen per hectare per year (or $\text{kgNha}^{-1}\text{yr}^{-1}$). These are presented as a range of values (e.g. 10-20 $\text{kgNha}^{-1}\text{yr}^{-1}$) and, as a precautionary approach, only the lowest values in the range are typically used. Critical levels and loads are drawn from the Air Pollution Information Service (or APIS)²⁹.
- 7.9 Drawing on best practice³⁰ where existing background levels of these pollutants fall below the relevant critical levels or loads, emissions are considered to avoid harm where the contribution of the local plan (alone and in-combination) would not exceed the same thresholds. However, this is rare in lowland England. Indeed, where background levels already exceed these thresholds, it is considered that adverse effects will be avoided only if the increase is less than 1% of the critical levels or loads. The 1% threshold has been widely adopted in established guidance as in practice it is barely discernible from natural background fluctuations. Set at two orders of magnitude below the critical level or load, this

²⁸ Natural England's approach to advising competent authorities on the assessment of road traffic emissions under the Habitats Regulations. Version 1.4. June 2018

²⁹ Air Pollution Information Service available at <https://www.apis.ac.uk/>

³⁰ Holman et al. (2019). A guide to the assessment of air quality impacts on designated nature conservation sites – version 1.0. Institute of air quality management, London. Available at: <https://iaqm.co.uk/text/guidance/air-quality-impacts-on-nature-sites-2019.pdf>

threshold is considered suitably precautionary. Furthermore, whilst exceedance of the 1% threshold means that adverse effects cannot be ruled out, it does not necessarily mean that harm would arise.

- 7.10 It can be seen, therefore, that the additional contributions that might arise from increased traffic are only likely to be significant where a European site lies within 200m of a road which is expected to experience a marked increase in traffic, and where a feature is known to be sensitive to such effects. Map 3 shows those
- 7.11 Reflecting these and other factors, the SIPs for the East Devon Heaths SAC/SPA³¹ and the South Dartmoor Woods SAC³² both identify air pollution as an existing pressure; in the case of the latter site, it is the only pressure affecting the SACs. In contrast, the SIP for the 'Exe Estuary/Dawlish' SAC/SPA³³ does not identify air pollution as either an existing pressure or emerging threat.
- 7.12 SIPs represent only a snapshot in time, and all are now eight years old. Whilst they remain valid, reference to the conservation objectives and supplementary advice for each European site provides more contemporary advice and greater specificity. Drawing on this advice, the following is evident.
- 7.13 All three European sites, include the high-level conservation objective to:
- '... maintaining or restoring ... the supporting processes on which qualifying natural habitats [and in the case of the East Devon Heaths and Exe Estuary] and the habitats of qualifying species rely ...' (though the wording of the Exe Estuary objective refers to 'qualifying features' rather than habitats or species.
- 7.14 The supplementary advice for East Devon Heaths³⁴ and South Dartmoor Woods³⁵ states for all the qualifying features (emphasis added):
- 'Restore as necessary the concentrations and deposition of air pollutants to at or below the site-relevant Critical Load or Level values given for this feature of the site ... [on APIS];

³¹ Natural England (2014). Site Improvement Plan. East Devon Heaths. V1.0.

³² Natural England (2014). Site Improvement Plan. South Woodland Woods. V1.0.

³³ Natural England (2014). Site Improvement Plan. Exe Dawlish. V1.0.

³⁴ Natural England (2019). European Site Conservation Objectives: Supplementary advice on conserving and restoring site features. East Devon Pebblebed Heaths Special Area of Conservation.

³⁵ Natural England (2019). European Site Conservation Objectives: Supplementary advice on conserving and restoring site features. South Dartmoor Woods Special Area of Conservation.

- 7.15 For the Exe Estuary³⁶ the same text is employed though the target is to 'maintain':
- 7.16 Importantly, a target to 'restore' reflects that existing background concentrations and/or rates of deposition already exceed critical levels or loads, respectively. In turn, this highlights the greater challenge of achieving the conservation objectives.
- 7.17 Should the HRA be unable to rule out adverse effects on the integrity of the site, mitigation will be required. This could take the form of the reduction of other sources of airborne pollutants, speed restrictions, improves to junctions, improvements in public transport, reductions in the size of certain allocations to reduce traffic or, more unusually, the removal of an allocation altogether.
- 7.18 Given the context provided above, in order to obtain the evidence to assess air pollution, traffic studies will be required for those roads within 200m of the three European sites. Where this identifies increases in traffic of greater than 1,000 AADT for all traffic or 200AADT for HDVs amongst a range of other criteria, air quality analysis is typically pursued to predict the impact on NO_x, ammonia and nitrogen deposition. Where this exceeds 1% of the critical level or lowest critical load, adverse effects on the integrity of the site cannot be ruled out.

Key findings: Air Quality

East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar and South Dartmoor Woods SAC.

At present, the Council does not have the evidence for this HRA to evaluate and it is premature to make any conclusions. However, the Council will be undertaking traffic modelling work and further evidence gathering to allow this part of the assessment work to be completed and any mitigation measures (if necessary) established. This process can take some time to complete but will be necessary before the HRA can evolve. At present, therefore, adverse effects on the integrity of the East Devon Heaths SAC/SPA, Exe Estuary SPA/Ramsar and South Dartmoor Woods SAC cannot be ruled out.

³⁶ Natural England (2022). Exe Estuary Supplementary advice (last updated 18th March 2022). Available at: <https://designatedsites.naturalengland.org.uk/Marine/SupAdvice.aspx?SiteCode=UK9010081&SiteName=exe+estuary&SiteNameDisplay=Exe+Estuary+SPA&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=&NumMarineSeasonality=7> (accessed on 19 August 2022).

References

- Anderson, P., & Radford, E. (1992). *A review of the effects of recreation on woodland soils, vegetation and fauna*. English Nature.
- Bell, S. L., Westley, M., Lovell, R., & Wheeler, B. W. (2018). Everyday green space and experienced well-being: The significance of wildlife encounters. *Landscape Research*, 43(1), 8–19. <https://doi.org/10.1080/01426397.2016.1267721>
- Burnett, H., Olsen, J. R., Nicholls, N., & Mitchell, R. (2021). Change in time spent visiting and experiences of green space following restrictions on movement during the COVID-19 pandemic: A nationally representative cross-sectional study of UK adults. *BMJ Open*, 11(3), e044067. <https://doi.org/10.1136/bmjopen-2020-044067>
- Cecchetti, M., Crowley, S. L., & McDonald, R. A. (2021). Drivers and facilitators of hunting behaviour in domestic cats and options for management. *Mammal Review*, 51(3), 307–322. <https://doi.org/10.1111/mam.12230>
- Chapman, C., & Kite, B. (2021). *Guidance on decision-making thresholds for air pollution* (JNCC Report No. 696). JNCC.
- Corney, P. M., Smithers, R. J., Kirby, J. S., Peterken, G. F., Le Duc, M. G., & Marrs, R. H. (2008). *The impact of development on nearby ancient woodland*. Woodland Trust.
- Cruickshanks, K., & Liley, D. (2012). *East Devon, Exeter and Teignbridge household survey and predictions of visitor use of greenspaces*. Footprint Ecology.
- Day, B., Harwood, A., Tyler, C., & Zonneveld, S. (2018). *Population futures and Dartmoor National Park: Implications of developments around the outskirts of Dartmoor for recreational use and management of access*. Report by SWEEP for the Dartmoor National Park.

- Dwyer, R. G., Bearhop, S., Campbell, H. A., & Bryant, D. M. (2013). Shedding light on light: Benefits of anthropogenic illumination to a nocturnally foraging shorebird. *Journal of Animal Ecology*, 82(2), 478–485. <https://doi.org/10.1111/1365-2656.12012>
- Hall, C. M., Bryant, K. A., Haskard, K., Major, T., Bruce, S., & Calver, M. C. (2016). Factors determining the home ranges of pet cats: A meta-analysis. *Biological Conservation*, 203, 313–320. <https://doi.org/10.1016/j.biocon.2016.09.029>
- ICF GHK. (2013). *The economic impact of Natural England's National Nature Reserves* (Natural England Commissioned Report No. NECR131).
- ICRT. (2011). *The Economic Potential of Nature Tourism in Eastern Yorkshire* (p. 61). <http://mediafiles.thedms.co.uk/Publication/YS-EY/cms/pdf/YNT%20ICRT%20Report,%20Nature%20Tourism%20in%20Eastern%20Yorkshire.pdf>
- Kays, R., Dunn, R. R., Parsons, A. W., McDonald, B., Perkins, T., Powers, S. A., Shell, L., McDonald, J. L., Cole, H., Kikillus, H., Woods, L., Tindle, H., & Roetman, P. (2019). The small home ranges and large local ecological impacts of pet cats. *Animal Conservation*, n/a(n/a). <https://doi.org/10.1111/acv.12563>
- Keniger, L. E., Gaston, K. J., Irvine, K. N., & Fuller, R. A. (2013). What are the Benefits of Interacting with Nature? *International Journal of Environmental Research and Public Health*, 10(3), 913–935. <https://doi.org/10.3390/ijerph10030913>
- Kirby, J. S., & Tantram, D. A. S. (1999). *Monitoring heathland fires in Dorset: Phase 1*.
- Lee, A. C. K., & Maheswaran, R. (2011). The health benefits of urban green spaces: A review of the evidence. *Journal of Public Health*, 33(2), 212–222. <https://doi.org/10.1093/pubmed/fdq068>

- Liley, D., & Bishop, E. (2022). *Recreation impacts and Lyme Bay and Torbay Special Area of Conservation* (No. 674). Footprint Ecology / Torbay Council.
- Liley, D., & Clarke, R. T. (2003). The impact of urban development and human disturbance on the numbers of nightjar *Caprimulgus europaeus* on heathlands in Dorset, England. *Biological Conservation*, 114, 219–230.
- Liley, D., Hoskin, R., Lake, S., Underhill-Day, J., & Cruickshanks, K. (2014). *South-east Devon European Site Mitigation Strategy*. Footprint Ecology.
- Liley, D., Lake, S., Panter, C., & Saunders, P. (2019). *Potential impacts of recreation on Woodland Trust reserves: A general review* (Unpub. No. 521). Footprint Ecology / Woodland Trust.
- Liley, D., Lake, S., Underhill-Day, J., Sharp, J., White, J., Hoskin, R., Cruickshanks, K., & Fearnley, H. (2010). *Welsh Seasonal Habitat Vulnerability Review*. Footprint Ecology / CCW.
- Longcore, T., & Rich, C. (2004). Ecological light pollution. *Frontiers in Ecology and the Environment*, 2(4), 191–198. [https://doi.org/10.1890/1540-9295\(2004\)002\[0191:ELP\]2.0.CO;2](https://doi.org/10.1890/1540-9295(2004)002[0191:ELP]2.0.CO;2)
- Loss, S. R., & Marra, P. P. (2017). Population impacts of free-ranging domestic cats on mainland vertebrates. *Frontiers in Ecology and the Environment*, 15(9), 502–509. <https://doi.org/10.1002/fee.1633>
- Lowen, J., Liley, D., Underhill-Day, J., & Whitehouse, A. T. (2008). *Access and Nature Conservation Reconciliation: Supplementary guidance for England*. internal-pdf://NECR013 Access and N C Reconciliation - Supp Guidance-2802587904/NECR013 Access and N C Reconciliation - Supp Guidance.pdf

- Marzano, M., & Dandy, N. (2012). *Recreational use of forests and disturbance of wildlife. A literature review*. Forestry Commission.
- [https://www.forestry.gov.uk/pdf/FCRP020.pdf/\\$FILE/FCRP020.pdf](https://www.forestry.gov.uk/pdf/FCRP020.pdf/$FILE/FCRP020.pdf)
- Morgan, L., Protopopova, A., Birkler, R. I. D., Itin-Shwartz, B., Sutton, G. A., Gamliel, A., Yakobson, B., & Raz, T. (2020). Human–dog relationships during the COVID-19 pandemic: Booming dog adoption during social isolation. *Humanities and Social Sciences Communications*, 7(1), 1–11. <https://doi.org/10.1057/s41599-020-00649-x>
- Murison, G. (2002). *The impact of human disturbance on the breeding success of nightjar Caprimulgus europaeus on heathlands in south Dorset, England*. English Nature.
- Murison, G., Bullock, J. M., Underhill-Day, J., Langston, R., Brown, A. F., & Sutherland, W. J. (2007). Habitat type determines the effects of disturbance on the breeding productivity of the Dartford Warbler *Sylvia undata*. *Ibis*, 149(s1), 16–26.
- <https://doi.org/doi:10.1111/j.1474-919X.2007.00660.x>
- Natural England, & Kantar Public. (2021). *Impact of Covid-19 on engagement with green and natural spaces* (Natural England Report No. PANS003). The People and Nature Survey for England. <http://publications.naturalengland.org.uk/publication/4513040482697216>
- O'Neill, R. (2019). *Monitor of Engagement with the Natural Environment – The national survey on people and the natural environment. Headline report 2019* (NECR No. 275). Natural England and the Office for National Statistics.
- https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/828552/Monitor_Engagement_Natural_Environment_2018_2019_v2.pdf

- Pretty, J., Griffin, M., Peacock, J., Hine, R., Selens, M., & South, N. (2005). A countryside for health and well-being: The physical and mental health benefits of green exercise. *Countryside Recreation*, 13(1), 2–7.
- Richardson, M., Cormack, A., McRobert, L., & Underhill, R. (2016). 30 Days Wild: Development and Evaluation of a Large-Scale Nature Engagement Campaign to Improve Well-Being. *PLOS ONE*, 11(2), e0149777. <https://doi.org/10.1371/journal.pone.0149777>
- Ross, K., Liley, D., Austin, G., Clarke, R. T., Burton, N. H., Stillman, R. A., Cruickshanks, K., & Underhill-Day, J. (2014). *Housing development and estuaries in England: Developing methodologies for assessing the impacts of disturbance to non-breeding waterfowl*. Footprint Ecology, unpublished report for Natural England.
- Ryan, L. (2012). *Impacts of nearby development on ancient woodland – addendum*. The Woodland Trust. <https://www.woodlandtrust.org.uk/mediafile/100168353/Impacts-of-nearby-development-on-the-ecology-of-ancient-woodland-addendum.pdf>
- Santos, C. D., Miranda, A. C., Granadeiro, J. P., Lourenço, P. M., Saraiva, S., & Palmeirim, J. M. (2010). Effects of artificial illumination on the nocturnal foraging of waders. *Acta Oecologica*, 36(2), 166–172. <https://doi.org/10.1016/j.actao.2009.11.008>
- The Land Trust. (2018). *The Economic Value of Greenspaces*. The Land Trust.
- Tyldesley, D., & Chapman, C. (2021). *The Habitats Regulations Handbook*. DTA Publications. <https://www.dtapublications.co.uk/handbook/>
- Underhill-Day, J. C. (2005). *A literature review of urban effects on lowland heaths and their wildlife*. English Nature. [internal-pdf://EN RR 623, John Day literature review of urban effects-3794804480/EN RR 623, John Day literature review of urban effects.pdf](https://internal-pdf://EN%20RR%20623%2C%20John%20Day%20literature%20review%20of%20urban%20effects-3794804480/EN%20RR%20623%2C%20John%20Day%20literature%20review%20of%20urban%20effects.pdf)

Weitowitz, D. C., Panter, C., Hoskin, R., & Liley, D. (2019). The effect of urban development on visitor numbers to nearby protected nature conservation sites. *Journal of Urban Ecology*, 5(1). <https://doi.org/10.1093/jue/juz019>

Appendix 1: Conservation Objectives

- 7.19 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.
- 7.20 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.
- 7.21 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.'*
- 7.22 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.
- 7.23 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.'

- 7.24 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.
- 7.25 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.
- 7.26 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
East Devon Pebblebed Heaths SAC	H4030 European dry heaths S1044 <i>Coenagrion mercuriale</i> : Southern damselfly H4010 Northern Atlantic wet heaths with <i>Erica tetralix</i>	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) <i>Sylvia undata</i> : Dartford warbler A224(B) <i>Caprimulgus europaeus</i> : 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 S1395 <i>Petalophyllum ralfsii</i> : Petalwort H2120 Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes") H2130# Fixed dunes with herbaceous vegetation ("grey dunes")	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 sand crocus. A mosaic of reed bed, marsh, scrub and open water support several nationally rare plants.
Exe Estuary SPA	A141(NB) <i>Pluvialis squatarola</i> : Grey plover A046a(NB) <i>Branta bernicla bernicla</i> : Dark-bellied brent goose A132(NB) <i>Recurvirostra avosetta</i> : Pied avocet A156(NB) <i>Limosa limosa islandica</i> : Black-tailed godwit Waterbird assemblage A149(NB) <i>Calidris alpina alpina</i> : Dunlin A007(NB) <i>Podiceps auritus</i> Slavonian grebe A130(NB) <i>Haematopus ostralegus</i> : Eurasian oystercatcher	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.

Site	Interest features	Description
Exe Estuary Ramsar	Waterfowl assemblage of international importance (under criterion 5) Species/populations occurring at levels of international importance (under criterion 6): <i>Branta bernicla bernicla</i> : Dark-bellied brent goose	As above.
Lyme Bay & Torbay SAC	H1170 Reefs 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.
Sidmouth to West Bay SAC	H1210 Annual vegetation of drift lines H1230 Vegetated sea cliffs of the Atlantic and Baltic coasts H9180# <i>Tilio-Acerion</i> forests of slopes, screes and ravines	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

Site	Interest features	Description
		pioneer communities on recent slips, calcareous grassland and scrub on detached chalk blocks, and extensive self-sown woodland dominated by ash <i>Fraxinus excelsior</i> or sycamore <i>Acer pseudoplatanus</i> . This mosaic of habitats makes this site rich in invertebrates, especially bees and wasps. The Red Data Book lichen <i>Parmelia quercina</i> occurs on ash <i>Fraxinus excelsior</i> trees.
South Dartmoor Woods SAC	H4030 European dry heaths H91A0 Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles	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, with rare lichen species and nationally rare species of Pearl Border Fritillary and High Brown Fritillary.
South Hams SAC	H8310 Caves not open to the public H6210# Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>) H4030 European dry heaths H1230 Vegetated sea cliffs of the Atlantic and Baltic coasts H9180# <i>Tilio-Acerion</i> forests of slopes, screes and ravines S1304 <i>Rhinolophus ferrumequinum</i> : Greater Horseshoe Bat	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 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 <i>Tilio-Acerion</i> ravine forest which is woodland containing ash, wych elm and small leaved lime and field maple.

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 2 Undergrazing 3 Change in land management 4 Public access/disturbance 5 Air pollution: impact of atmospheric nitrogen deposition 6 Water pollution 7 Hydrological changes
Exe Estuary SPA and Dawlish Warren SAC	1 Public access/disturbance (affecting birds) 2 Changes in species distributions 3 Coastal squeeze 4 Change in land management 5 Public access/disturbance (visitor pressure at Dawlish Warren) 6 Fisheries: Commercial marine and estuarine
Lyme Bay & Torbay SAC	1 & 2 Fisheries: commercial marine and estuarine 3 Public access/disturbance
Sidmouth to West Bay SAC	1 Invasive species 2 Disease 3 Direct impact from third party 4 Planning permission: general 5 Water pollution 6 Vehicles 7 Habitat fragmentation 8 Inappropriate coastal management 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 3 Physical modification 4 Inappropriate vegetation management 5 & 7 Public access/disturbance 6 Forestry and woodland management 8 Inappropriate scrub control 9 Air pollution: impact of atmospheric nitrogen deposition