Alderholt Neighbourhood Plan

Habitats Regulations Assessment

Alderholt Neighbourhood Plan Group

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Quality information

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1. Introduction

Background to the Project

1.1 AECOM was appointed by Alderholt Neighbourhood Plan Group to undertake a Report to Inform the Habitats Regulations Assessment (HRA) for the Alderholt Neighbourhood Plan (NP). This is to inform the Parish Council and Dorset Council (as competent authority) of the potential effects of the NP development on Habitat sites ((Special Areas of Conservation (SACs), Special Protection Areas (SPAs), and Ramsar sites (designated under the Ramsar convention)), formerly referred to as European sites, and how they are being or should be addressed in the NP.

1.2 The HRA is primarily based on the Regulation 14 Neighbourhood Plan but has been updated to identify changes made for the submission version of the Neighbourhood Plan, particularly where relevant to address issues on Habitats sites. The Alderholt NP contains policies on landscape, design, housing and amenities. The plan contains three site allocations for development.

1.3 For the purpose of informing this report, policies contained within the Christchurch and East Dorset Local Plan (adopted 2014)[1] which is the current Local Plan at the time of writing, have been referenced.

1.4 The objective of this report is to identify if any policies and/ or site allocations proposed in the Alderholt NP have the potential to cause Likely Significant Effects (LSEs) and, where identified, adverse effects on the integrity of Habitat sites, either in isolation or in combination with other plans and projects, and to determine whether policy mitigation measures are required.

Local Context

1.5 Alderholt parish lies on the eastern edge of the Dorset Council area, adjoining Hampshire. It covers just over 15 square kilometres (5.8 square miles) and is primarily farmland but includes some quite extensive areas of ancient woodland. The main settlement in the parish is the village of Alderholt, but there are also several outlying hamlets (Cripplestyle, Daggons and Crendell).

1.6 The parish population, as recorded in the 2021 Census, is now around 3,200 usual residents, making up just over 1,300 households, most of whom live in the village. About 20% of the population is aged under 20, and 25% is aged 65 years or more. The number of older residents is slightly lower than the Dorset average, which could be due to the lack of residential care homes in the area. Of those of a working age, nearly a third work from home (although the data for this may be slightly skewed as it was taken during the Covid pandemic). Very few live within 2km of their workplace when compared to the Dorset average, with more than half (58%) of those travelling to work commuting more than 10km there and back (this compares to a Dorset average of 45%).

[1] Available at: https://www.dorsetcouncil.gov.uk/documents/35024/290487/Christchurch+and+East+Dorset+Adopted+Core+Strategy.pdf/9ce14f8d-e447-fed2-c665-f50b37748ca5

1.7 Alderholt parish is mainly rural in character. Much of the countryside within the parish (to the north and east) is designated as an Area of Great Landscape Value.[2]

Legislative Framework

1.8 The UK left the EU on 31 January 2019 under the terms set out in the European Union (Withdrawal Agreement) Act 2020 ("the Withdrawal Act"). This established a transition period, which ended on 31 December 2020. The Withdrawal Act retains the body of existing EU-derived law within our domestic law. During the transition period EU law applies to and in the UK. The most recent amendments to the Habitats Regulations – the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019[3] – make it clear that the need for HRA has continued after the end of the Transition Period.

1.9 Under the Regulations, an appropriate assessment is required, where a plan or project is likely to have a significant effect upon an international site, either individually or in combination with other projects. The Directive is implemented in the UK by the Conservation of Habitats and Species Regulations 2017 (as amended) (the "Habitats Regulations").

The legislative basis for Appropriate Assessment

Conservation of Habitats and Species Regulations 2017 (as amended)

With specific reference to Neighbourhood Plans, Regulation 106(1) states that:
'A qualifying body which submits a proposal for a neighbourhood development plan must provide such information as the competent authority [the Local Planning Authority] *may reasonably require for the purposes of the assessment under regulation 105* [which sets out the formal process for determination of 'likely significant effects' and the 'appropriate assessment']…'.

1.10 It is therefore important to note that this report has two purposes:

a. To assist the Qualifying Body (Alderholt Parish Council) in preparing their plan by recommending (where necessary) any adjustments required to protect international sites, thus making it more likely their plan will be deemed compliant with the Conservation of Habitats and Species Regulations 2017 (as amended); and

b. On behalf of the Qualifying Body, to assist the Local Planning Authority (Dorset Council) to discharge their duty under Regulation 105 (in their role as 'plan-making authority' within the meaning of that regulation) and Regulation 106 (in their role as 'competent authority').

1.11 As 'competent authority', the legal responsibility for ensuring that a decision of 'likely significant effects' is made, for ensuring an 'appropriate assessment' (where required) is undertaken, and for ensuring Natural England are consulted, falls on the local planning authority and the Neighbourhood Plan examiner. However, they are entitled to request from the Qualifying Body the

[2] Alderholt Parish Council. Alderholt Neighbourhood Plan 2022 – 2034. Pre-Submission (Regulation 14) version: December 2023
[3] These don't replace the 2017 Regulations but are just another set of amendments

necessary information on which to base their judgment and that is a key purpose of this report.

1.12 Over the years the phrase 'Habitats Regulations Assessment' has come into wide currency to describe the overall process set out in the Conservation of Habitats and Species Regulations from screening through to Imperative Reasons of Overriding Public Interest (IROPI). This has arisen in order to distinguish the process from the individual stage described in the law as an 'Appropriate Assessment'. Throughout this report we use the term Habitats Regulations Assessment for the overall process.

1.1 In spring 2018 the 'Sweetman' European Court of Justice ruling[4], clarified that 'mitigation' (i.e., measures that are specifically introduced to avoid or reduce a harmful effect on a Habitat site that would otherwise arise) should **not** be taken into account when forming a view on likely significant effects. Mitigation should instead only be considered at the Appropriate Assessment stage. This HRA has been cognisant of that ruling.

The Layout of this Report

1.2 Chapter 2 of this report explains the methodology by which this HRA has been carried out, including the three essential tasks that form part of HRA. Chapter 3 provides details of the relevant Habitat sites. Chapter 4 provides detailed background on the main impact pathways identified in relation to the Neighbourhood Plan and the relevant Habitat sites. Chapter 5 undertakes the screening assessment of Likely Significant Effects (LSEs) of the Plan's policies. Chapter 6 undertakes the Appropriate Assessment of those Policies that could be screened out in Chapter 5. The conclusions arising from the HRA process so far are provided in Chapter 7.

Quality Assurance

1.3 This report was undertaken in line with AECOM's Integrated Management System (IMS). Our IMS places great emphasis on professionalism, technical excellence, quality, environmental and Health and Safety management. All staff members are committed to establishing and maintaining our certification to the international standards BS EN ISO 9001:2015 and 14001:2015, ISO 44001:2017 and ISO 45001:2018. In addition, our IMS requires careful selection and monitoring of the performance of all sub-consultants and contractors.

1.4 All AECOM Ecologists working on this project are members (at the appropriate level) of the Chartered Institute of Ecology and Environmental Management (CIEEM) and follow their code of professional conduct (CIEEM, 2017).

[4] People Over Wind and Sweetman v Coillte Teoranta (C-323/17)

2. Methodology

Introduction

2.1 The HRA has been carried out with reference to the general EC guidance on HRA (European Commission, 2001)[5] and general guidance on HRA published by the UK government in 2021 (Department for Environment, Food & Rural Affairs, 2021)[6].

2.2 Plate 1 below outlines the stages of HRA according to current Department for Levelling Up, Housing & Communities guidance[7]. The stages are essentially iterative, being revisited as necessary in response to more detailed information, recommendations, and any relevant changes to the Plan until no significant adverse effects remain.

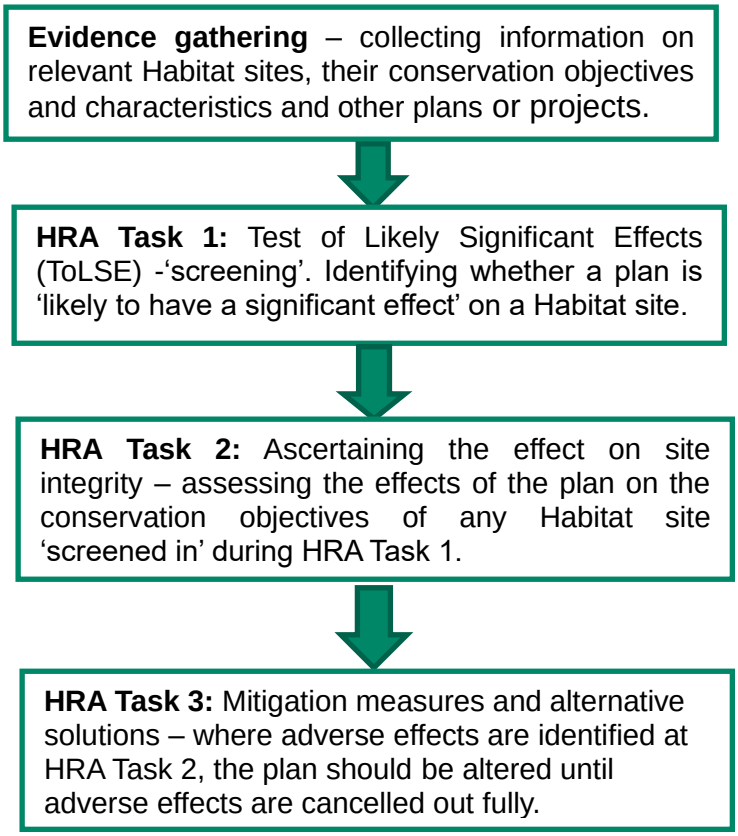


Plate 1. Four Stage Approach to Habitats Regulations Assessment (Department for Environment, Food & Rural Affairs, 2021)

[5] European Commission (2001): Assessment of plans and projects significantly affecting Natura 2000 Sites: Methodological Guidance on the Provisions of Article 6(3) and 6(4) of the Habitats Directive

[6] Available at: https://www.gov.uk/guidance/appropriate-assessment

[7] Available at: https://www.gov.uk/guidance/appropriate-assessmen t

HRA Task 1 – Likely Significant Effects (LSE)

2.3 Following evidence gathering, the first stage of any Habitats Regulations Assessment is a Test of Likely Significant Effect (ToLSE) test - essentially a risk assessment to decide whether the full subsequent stage known as Appropriate Assessment is required. The essential question is:

"*Is the project, either alone or in combination with other relevant projects and plans, likely to result in a significant effect upon Habitat sites?*"

2.4 The objective is to 'screen out' those plans and projects that can, without any detailed appraisal, be said to be unlikely to result in significant adverse effects upon Habitat sites, usually because there is no mechanism for an adverse interaction with Habitat sites.

2.5 In the Waddenzee case[8] the European Court of Justice ruled on the interpretation of Article 6(3) of the Habitats Directive, including that:

- An effect should be considered 'likely', *"if it cannot be excluded, on the basis of objective information, that it will have a significant effect on the site"* (para 44);
- An effect should be considered 'significant', *"if it undermines the conservation objectives"* (para 48); and
- Where a plan or project has an effect on a site *"but is not likely to undermine its conservation objectives, it cannot be considered likely to have a significant effect on the site concerned"* (para 47).

2.6 The ToLSE consists of two parts: Firstly, determining whether there are any policies that could result in negative impact pathways and secondly establishing whether there are any Habitat sites that might be affected. It identifies Habitat sites that could be affected by the Plan and also those impact pathways that are most likely to require consideration.

2.7 It is important to note that the ToLSE must generally follow the precautionary principle as its main purpose is to determine whether the subsequent stage of 'Appropriate Assessment' (i.e., a more detailed investigation) is required.

HRA Task 2: Appropriate Assessment (AA)

2.8 Where it is determined that a conclusion of 'no likely significant effect' cannot be drawn, the analysis has proceeded to the next stage of HRA known as Appropriate Assessment. Case law has clarified that 'Appropriate Assessment' is not a technical term. In other words, there are no particular technical analyses, or level of technical analysis, that are classified by law as belonging to Appropriate Assessment rather than determination of likely significant effects. It literally means '*whatever level of further assessment is appropriate to form a conclusion regarding effects on the integrity of relevant Habitat sites'.*

2.9 In 2018 the Holohan ruling[9] handed down by the European Court of Justice included among other provisions paragraph 39 of the ruling stating that '*As regards other habitat types or species, which are present on the site, but for*

[8] Case C-127/02
[9] Case C-461/17

which that site has not been listed, and with respect to habitat types and species located outside that site, … typical habitats or species must be included in the appropriate assessment, if they are necessary to the conservation of the habitat types and species listed for the protected area' [emphasis added].

2.10 During July 2019 the Department for Levelling Up, Housing and Communities (DLHC) published guidance for Appropriate Assessment (Department for Levelling Up, Housing and Communities, 2019)[10].

2.11 Paragraph: 001 Reference ID: 65-001-20190722 explains: '*Where the potential for likely significant effects cannot be excluded, a competent authority must make an appropriate assessment of the implications of the plan or project for that site, in view of the site's conservation objectives. The competent authority may agree to the plan or project only after having ruled out adverse effects on the integrity of the habitats site. Where an adverse effect on the site's integrity cannot be ruled out, and where there are no alternative solutions, the plan or project can only proceed if there are imperative reasons of over-riding public interest and if the necessary compensatory measures can be secured*'.

2.12 One of the key considerations during Appropriate Assessment is whether there is available mitigation that would address the potential effect. In evaluating significance, AECOM will rely on professional judgement as well as the results of bespoke studies, supported by appropriate evidence/data within this assessment.

HRA Task 3 – Avoidance and Mitigation

2.13 Where necessary, measures are recommended for incorporation into the Plan in order to avoid or mitigate adverse effects on Habitat sites. There is considerable precedent concerning the level of detail that a Neighbourhood Plan document needs to contain regarding mitigation for recreational impacts on Habitat sites. The implication of this precedent is that it is not necessary for all measures that will be deployed to be fully developed prior to adoption of the Plan, but the Plan must provide an adequate policy framework within which these measures can be delivered.

2.14 In evaluating significance, AECOM has relied on professional judgement and the Local Plan HRA regarding development impacts on the Habitat sites considered within this assessment.

2.15 When discussing 'mitigation' for a Neighbourhood Plan document, one is concerned primarily with the policy framework to enable the delivery of such mitigation rather than the details of the mitigation measures themselves since the Local Development Plan document is a high-level policy document. A Neighbourhood Plan is a lower level constituent of a Local Development Plan.

[10] Available at: https://www.gov.uk/guidance/appropriate-assessment

Confirming Other Plans and Projects That May Act 'In Combination'

2.16 It is a requirement of the Regulations that the impacts of any land use plan being assessed are not considered in isolation but in combination with other plans and projects that may also be affecting the Habitat site(s) in question.

2.17 In considering the potential for combined regional housing development to impact on Habitat sites the primary consideration is the impact of visitor numbers – i.e., recreational pressure and urbanisation.

2.18 When undertaking this part of the assessment it is essential to bear in mind the principal intention behind the legislation i.e., to ensure that those projects or plans (which in themselves may have minor impacts) are not simply dismissed on that basis but are evaluated for any cumulative contribution they may make to an overall significant effect. In practice, in combination assessment is therefore of greatest relevance when the plan or policy would otherwise be screened out because its individual contribution is inconsequential. The overall approach is to exclude the risk of there being unassessed likely significant effects in accordance with the precautionary principle. This was first established in the seminal Waddenzee[11] case.

2.19 For the purposes of this assessment, we have determined that, due to the nature of the identified impacts, the key other plans and projects with potential for in combination likely significant effects are those schemes that have the following impact pathways: Loss of functionally linked land, recreational pressure, air quality impacts, water quality impacts and water quantity level and flow. The following plans have been assessed for their in-combination impact to interact with the Alderholt Neighbourhood Plan:

- Christchurch and East Dorset Local Plan. Part 1 – Core Strategy (Adopted 2014)[12]
- Emerging Dorset Local Plan (Options Consultation, 2021)[13]
- New Forest National Park Local Plan 2016 – 2036 (Adopted 2019)[14]
- New Forest District Local Plan 2016-2036 (Adopted 2020)[15]
- Hampshire Minerals and Waste Local Plan (Adopted 2013) and currently embarking on a partial update[16]
- Bournemouth, Christchurch, Poole and Dorset Mineral Strategy (2014) and Sites Plan (2019)[17]
- Bournemouth, Christchurch, Poole and Dorset Waste Plan (2019)[18]

[11] Waddenzee case (Case C-127/02, [2004] ECR-I 7405)
[12] Available at: https://www.dorsetcouncil.gov.uk/documents/35024/290487/Christchurch+and+East+Dorset+Adopted+Core+Strategy.pdf/9ce14f8d-e447-fed2-c665-f50b37748ca5
[13] Available at: https://www.dorsetcouncil.gov.uk/planning-buildings-land/planning-policy/dorset-council-local-plan/about-the-dorset-council-local-plan-january-2021-consultation
[14] Available at:
[15] https://www.newforest.gov.uk/article/1510/Local-Plan-2016-2036-Part-1-Planning-Strategy
[16] https://www.hants.gov.uk/landplanningandenvironment/strategic-planning/hampshire-minerals-waste-plan
[17] https://www.dorsetcouncil.gov.uk/planning-buildings-land/planning-policy/minerals-and-waste-planning-policy/minerals-planning-policy/mineral-sites-plan

- Southwest Water Bournemouth Water. Final Water Resources Management Plan (August 2019)[19]
- Wessex Water. The Wessex Area Drainage and Wastewater Management Plan (DWMP). Final DWMP – 2023.[20]

2.20 It should be noted that, while the broad potential impacts of these other projects and plans has been considered, this assessment does not undertake full HRA on each of these plans. Instead, existing HRAs that have been carried out for surrounding authorities and plans were drawn upon.

2.21 Within this document, each policy within the NP is subjected to HRA screening (summarised in Table 8). LSEs are then scrutinised in more detail in the main body of the report and where necessary an AA is undertaken.

[18] https://www.dorsetcouncil.gov.uk/planning-buildings-land/planning-policy/dorset-county-council/waste-planning-policy/2019-waste-plan
[19] Available at: https://www.southwestwater.co.uk/siteassets/documents/about-us/wrmp/sww-bw-wrmp19---finalplan_aug2019.pdf
[20] Available at: https://corporate.wessexwater.co.uk/media/cldo1kua/wessex-dwmp-the-full-report.pdf

3. Physical Scope of the HRA

Introduction

3.1 There is no guidance that dictates the general physical scope of an HRA of a Plan document. Therefore, in considering the physical scope of the assessment, we were guided primarily by the identified impact pathways (called the source-pathway-receptor model).

3.2 Briefly defined, impact pathways are routes by which the implementation of a project can lead to an effect upon a Habitat site. An example of this would be visual and noise disturbance arising from the construction/decommissioning work or operational phase associated with a project. If there are sensitive ecological receptors within a nearby Habitat site (e.g. non-breeding overwintering birds), this could alter their foraging and roosting behaviour and potentially affect the site's integrity. For some impact pathways (notably air pollution) there is guidance that sets out distance-based zones required for assessment. For others, a professional judgment must be made based on the best available evidence.

Habitat Sites Relevant to the Neighbourhood Plan

3.3 In the case of the Alderholt NP, it has been determined that the Habitat sites identified in Table 1 require consideration. The background to these Habitat sites is discussed in Appendix A.

3.4 The locations of the below Habitat sites in relation to the Alderholt NP boundary and allocated sites are illustrated in Appendix A, Figure A1.

Table 1. Habitat site descriptions and distance from Alderholt NP area

Site Name/Designation	Site Description	Distance from Alderholt Neighbourhood Plan Area
Dorset Heathlands SPA Dorset Heathland Ramsar Dorset Heaths SAC	The Dorset heathlands designated for its extensive lowland heathland. Formerly a single tract divided only by river valleys it is now fragmented. The heathlands comprise a wide range of different habitat types related to variation in soils, hydrology, water chemistry and land use history. The SPA is also significant for breeding birds including European nightjar *Caprimulgus europaeus*, Dartford warbler *sylvia undata*, woodlark *Lullula arborea*, hen harrier *Circus cyaneus*, and merlin *Falco columbarius* and the SAC for southern damselfly *Coenagrion mercuriale* and great crested newt *Triturus cristatus.*	Within the Alderholt NP area
Avon Valley SPA Avon Valley Ramsar	The Avon Valley shows a greater range of habitats and a more diverse flora and fauna than any other chalk river in Britain, and includes one of the largest expanses of unimproved grassland in Britain. The site supports nationally important numbers of Bewick's swans *Cygnus columbianus* and internationally important numbers of over-wintering gadwall	1.6 km to the east of the Alderholt NP area

Site Name/Designation	Site Description	Distance from Alderholt Neighbourhood Plan Area
	Anas strepera. The site also supports a nationally important assemblage of breeding birds, associated with lowland open water and its margins.	
River Avon SAC	Five aquatic *Ranunculus* species occur in the river system, but stream water-crowfoot *Ranunculus penicillatus* ssp. *pseudofluitans* and river water-crowfoot *R. fluitans* are the main dominants. There is an extensive population of Desmoulin's whorl snail *Vertigo moulinsiana* along the margins and associated wetlands of the Rivers Avon, Bourne and Wylye. The River Avon system has a mosaic of aquatic habitats that support a diverse fish community, notably bullhead *Cottus gobio,* brook lamprey *Lampetra planeri,* sea lamprey *Petromyzon marinus* and Atlantic salmon *Salmo salar*.	1.7 km to the east of the Alderholt NP area
New Forest SPA New Forest Ramsar New Forest SAC	The New Forest embraces the largest area of 'unsown' vegetation in lowland England and includes the representation on a large scale of habitats formerly common but now fragmented and rare in lowland western Europe. Within the matrix of habitats are pasture woodland and scrub dominated by oak, beech and holly; heathland and associated grassland; wet heath, valley mire-fen and plantations dating from various periods since the early 18th century, and a range of acid to neutral grasslands. The site supports stag beetle, *Lucanus cervus* and great crested newt, *Triturus cristatus.* The site is important for breeding nightjar *Caprimulgus europaeus*, hobby *Falco subbuteao*, woodlark *Lullula arborea*, honey buzzard *Pernis apivorus*, wood warbler *Phylloscopus sibilatrix* and Dartford warbler *Sylvia undata* and wintering hen harrier *Circus cyaneus.*	8.6km to the north-east of the Alderholt NP area

4. Impact Pathways

Introduction

4.1 In carrying out an HRA it is important to avoid confining oneself to effectively arbitrary boundaries (such as Local Authority or parish boundaries), but to use an understanding of the various ways in which Land Use Plans can impact on Habitat sites to evaluate whether development is connected with Habitat sites, in some cases many kilometres distant. Briefly defined, impact pathways are routes by which a change in activity associated with a development can lead to an effect upon a Habitat site. As highlighted earlier, it is also important to bear in mind DLUHC (formerly MHCLG) guidance which states that the AA should be '*proportionate and sufficient to support the task of the competent authority in determining whether the plan or project will adversely affect the integrity of the site.'* (DLUHC, 2019, paragraph 003 Reference ID: 65-003-20190722.[21]).

4.2 The Habitat sites that are described in Table 1and Appendix A are located within 10 km radius of the Alderholt NP area boundary (refer to Appendix A, Figure A1).

4.3 Based upon Natural England Site Improvement Plans, Supplementary Advice on Conservation Objectives and professional judgement, there are several pathways that require consideration regarding increased development within the Alderholt NP area and said Habitat sites. These are:

- Public access and recreation
- Noise and visual disturbance
- Urban impacts
- Loss of functionally linked habitat
- Changes in air quality
- Water resources; and
- Water quality

Background to Public Access and Recreation

4.4 There is growing concern over the cumulative impacts of recreation on key nature conservation sites in the UK, as most sites must fulfil conservation objectives while also providing recreational opportunity. Various research reports have provided compelling links between changes in housing and access levels and impacts on Habitat sites[22], [23].

4.5 Recreational use of a site has the potential to:

[21] Available at: https://www.gov.uk/guidance/appropriate-assessment#what-must-an-appropriate-assessment-contain

[22] Liley D, Clarke R.T., Mallord J.W., Bullock J.M. 2006a. The effect of urban development and human disturbance on the distribution and abundance of nightjars on the Thames Basin and Dorset Heaths. Natural England / Footprint Ecology.

[23] Liley D., Clarke R.T., Underhill-Day J., Tyldesley D.T. 2006b. Evidence to support the appropriate Assessment of development plans and projects in south-east Dorset. Footprint Ecology / Dorset County Council.

- Cause disturbance to sensitive species such as wintering wildfowl;
- Prevent appropriate management or exacerbate existing management difficulties;
- Cause damage through erosion, trampling and fragmentation; and
- Cause eutrophication as a result of dog fouling.

4.6 Different types of Habitat sites (e.g., coastal, heathland, chalk grassland) are subject to different types of recreational pressures and have different vulnerabilities. Studies across a range of species have shown that the effects from recreation can be complex.

Birds

4.7 Disturbance effects for birds can have an adverse effect in various ways, with increased nest predation by natural predators as a result of adults being flushed from the nest and deterred from returning to it by the presence of people and dogs likely to be a particular problem. A literature review on the effects of human disturbance on bird breeding found that 36 out of 40 studies reported reduced breeding success as a consequence of disturbance[24]. The main reasons given for the reduction in breeding success were nest abandonment and increased predation of eggs or young. Over years, studies of other species have shown that birds nest at lower densities in disturbed areas, particularly when there is weekday as well as weekend pressure[25].

4.8 Studies have shown that birds are affected more by dogs and people with dogs than by people alone, with birds flushing more readily, more frequently, at greater distances and for longer (Underhill-Day, 2005). In addition, dogs, rather than people, tend to be the cause of many management difficulties, notably by worrying grazing animals, and can cause eutrophication near paths. Nutrient-poor habitats are particularly sensitive to the fertilising effect of inputs of phosphates, nitrogen and potassium from dog faeces[26].

4.9 Underhill-Day (2005) summarises the results of visitor studies that have collected data on the use of semi-natural habitat by dogs. In surveys where 100 observations or more were reported, the mean percentage of visitors who were accompanied by dogs was 54.0%.

4.10 However, these studies need to be treated with care. For instance, the effect of disturbance is not necessarily correlated with the impact of disturbance, i.e., the most easily disturbed species are not necessarily those that will suffer the greatest impacts. It has been shown that, in some cases, the most easily disturbed birds simply move to other feeding sites, whilst others may remain (possibly due to an absence of alternative sites) and thus suffer greater impacts on their population[27]. A recent literature review undertaken for the RSPB[28] also

[24] Hockin, D., M. Oundsted, M. Gorman, D. Hill, V. Keller and M.A. Barker (1992) – Examination of the effects of disturbance on birds with reference to its importance in ecological assessments. *Journal of Environmental Management*, **36**, 253-286.
[25] Van der Zande, A.N., J.C. Berkhuizen, H.C. van Letesteijn, W.J. ter Keurs and A.J. Poppelaars (1984) – Impact of outdoor recreation on the density of a number of breeding bird species in woods adjacent to urban residential areas. *Biological Conservation,* **30**, 1-39.
[26] Shaw, P.J.A., K. Lankey and S.A. Hollingham (1995) – Impacts of trampling and dog fouling on vegetation and soil conditions on Headley Heath. *The London Naturalist*, **74**, 77-82.
[27] Gill et al. (2001) - Why behavioural responses may not reflect the population consequences of human disturbance. *Biological Conservation,* **97**, 265-268
[28] Woodfield & Langston (2004) - Literature review on the impact on bird population of disturbance due to human access on foot. *RSPB research report* No. 9.

urges caution when extrapolating the results of one disturbance study because responses differ between species and the response of one species may differ according to local environmental conditions. These facts have to be taken into account when attempting to predict the impacts of future recreational pressure on international sites.

4.11 It should be emphasised that recreational use is not inevitably a problem. Many Habitat sites are also National Nature Reserves or nature reserves managed by Wildlife Trusts and the RSPB. At these sites, access is encouraged and resources are available to ensure that recreational use is managed appropriately.

4.12 Where increased recreational use is predicted to cause adverse impacts on a site, avoidance and mitigation should be considered. Avoidance of recreational impacts at Habitat sites involves locating new development away from such sites.

Habitats

4.13 In order to understand the effects of human frequentation, trampling, and other human-induced impacts, fencing experiments have been traditionally carried out on coastal dunes. Since in touristic areas dune systems are subjected to different intensities of human frequentations rather than to opening or fencing, studies have explored the effects of accessibility on vascular plants cover.

4.14 In general, plant communities subject to trampling tend to be poorer in species and less structured, since only dominant and tolerant plant species persist. Furthermore, limiting trampling appears to produce positive changes in the dune vegetation assemblage after a period of only two years[29]

4.15 The degree of impact and sensitivity of SAC and SPA habitats and species are summarised below in Tables 6 and 7[30]. It shows that most habitats and bird species have a degree of direct negative impact resulting from recreational site users.

Table 2. Relative sensitivity of moorland features to recreation and urban impacts

Habitats	Direct Impact		Indirect Impact	
	Trampling	Disturbance	Fire	Management
Dry dwarf-shrub heath	XX		XXX	
Wet dwarf-shrub heath	XXX		XX	
Blanket mire	XXX		XXX	
Mountain	XXX		X	
Acid grassland	XX		XX	
Calcareous grassland	XX			XX
Flushes/ springs	XXX			
Rock ledges	XX			
Screes	XX			

[29] Santoro, R et.al. (2012) Effects of Trampling Limitation on Coastal Dune Plant Communities. Environmental Management DOI 10.1007/s00267-012-9809-6

[30] Anderson P (1990). Moorland Recreation and Wildlife in the Peak District. Peak Park Joint Planning Board, Bakewell. Taken from Calderdale Local Plan HRA and referenced in the Bradford Core Strategy HRA.

Habitats	Direct Impact				Indirect Impact	
Breeding birds			XXX		XXX	XX
Wintering birds (raptor roosts)			X			
Invertebrates	XX				XX	X
Key (degree of negative effects):	**Least**	**X**	**XX**	**XXX**	**Most**	

Source: Adapted from Anderson (1990)

Table 3. Relative sensitivity of moorland plants

	Species	Notes	SAC/ SPA Presence
Least Sensitive			
	Common bent/ crested dog's tail	As in some in-bye land[31]	Not major component of SAC Annex 1 habitats
	Wavy hairgrass/ sheep's fescue	On mineral soils	Often minor component of SAC dry heath habitat
	Heather	Young	Major component of Annex 1 dry heath and blanket bog habitats
	Mat-grass	Usually on drier, thin peats or peaty mineral soils	Often component of heavily grazed dry heath
	Purple moor-grass	Usually on wetter flushed peaty soils	Major component of wetter heath and blanket bog habitats
	Bracken	Young plants	Can be invasive on drier heath and acid grassland habitats
	Heather	Old – old plants are brittle and easily broken	Major component of Annex 1 dry heath and blanket bog habitats. Important for nesting SPA birds
	Crowberry/ bilberry	On peat	Major component of Annex 1 dry heath and blanket bog habitats
	Cotton-grass spp.	Cotton-grass mire on peat	Major component of Annex 1 blanket bog habitats
Most Sensitive	***Sphagna***	Flushes, mire on peat	Major component of blanket bogs and transition mire habitats

Source: Adapted from Anderson (1990)

4.16 The Dorset Household Survey[32] considered how different factors influence visitor rates to heathlands in south-east Dorset. The survey focused on the extent to which the presence or extent of different types of habitat and existing greenspace in the vicinity of where people live determines the amounts of visits people make to heaths.

4.17 The annual number of visits made per household to heaths correlated with the amount of heathland surrounding the home postcode, i.e., those people living

[31] In-bye land: part of a farm not comprising the hill and rough grazings.
[32] https://www.footprint-ecology.co.uk/reports/Clarke%20et%20al.%20-%202008%20-%20Access%20patterns%20in%20south-east%20Dorset.%20The%20Dorset%20h.pdf

in locations surrounded by lots of heathland visit heaths more often than those surrounded by less heathland. For those travelling to heaths on foot, the highest correlations were found with the area of heath within a distance of 1.5km. For car-borne visitors the highest correlation occurred using the area of heath within 5km and especially within 1.5km-5km.

4.18 There was an indication that people living close to the coast visit heaths less. When there is no heath within 500m of a household, the presence of coastal greenspace within any distance limit from 500m outwards up to 15km has a statistically significant reduction on both the likelihood of visiting any heath and the number of heath visits made in a year.

4.19 The 2018/ 19 New Forest Visitor Survey[33] found the following on the basis of the 5,236 interviews conducted:

- 83% of interviewees were on a short visit directly from home that day. Those staying away from home on holiday accounted for 14% of interviewees and a further 2% were staying with friends or family.
- For most interviewees the main activity was given as either dog walking (55%) or walking (26%).
- 90% had arrived by car/van or other motor vehicle.
- 4,871 interviewees (91%) gave a full, valid UK postcode that could be geocoded using the national database.
- The Bournemouth/Poole conurbation was the single built-up area from which the most interviewees originated (12%), with the South Hampshire built-up area second (9%).
- 20% of interviewees on a short visit or day trip from home that day gave postcodes within the National Park boundary. A further 40% came from outside the National Park but within the New Forest District. Other local authorities accounted for relatively small proportions of the interviewees in comparison.
- 62% of interviewees lived within a 5km radius of the New Forest SPA/SAC/Ramsar site boundary. The median distance for all interviewees from their home postcode to the interview location was 7.75km and 75% originated from within 21.4km; for those on a short visit/day trip from home, the equivalent values were 6.1km and 13.8km.

4.20 The following Habitat sites are considered sensitive to recreational pressure and disturbance arising from the Alderholt NP:

- Dorset Heathlands SPA/ Ramsar
- Dorset Heaths SAC
- Avon Valley SPA/ Ramsar
- New Forest SPA/ Ramsar/ SAC

[33] Available at: https://www.newforestnpa.gov.uk/app/uploads/2020/05/New-Forest-Visitor-Survey-report.pdf

Background to Noise and Visual Disturbance

4.21 As detailed in the section on recreational pressure above, human activity can affect birds either directly (e.g., by causing them to flee) or indirectly (e.g. by damaging their habitat). Human activity can also lead to behavioural changes (e.g., alterations in feeding behaviour, avoidance of certain areas etc.) and physiological changes (e.g., an increase in heart rate) that, although less noticeable, may ultimately result in major population-level effects[34].

4.22 Recreational pressure is not the only potential source of disturbance. Construction work taking place immediately adjacent to the designated site or functionally linked habitats could cause disturbance and displacement of designated birds. While any impact relating to demolition and construction activities will be temporary (birds would likely return once construction work ceases and the disturbance stimulus is removed) the resulting effect on population survival could be significant if it occurs during the winter / passage period and prevents birds from using feeding areas on which they rely. It should be noted that any operational activities are likely to be permanent and thus their impact could result in a more severe negative impacts on designated bird features.

4.23 The degree of impact that varying levels of noise will have on different species of bird is relatively poorly understood. Several studies have found that an increase in traffic levels on roads leads to a reduction in the bird abundance within adjacent hedgerows - Reijnen et al (1995) examined the distribution of 43 passerine species (i.e., 'songbirds'), of which 60% had a lower density closer to the roadside than further away. By controlling vehicle usage, they also found that the density generally was lower along busier roads than quieter roads[35].

4.24 A recent review on recreational disturbance on the Humber[36] assessed different types of noise disturbance on waterfowl referring to studies relating to aircraft (see Drewitt 1999[37]), traffic (Reijnen, Foppen, & Veenbaas 1997)[38], dogs (Lord, Waas, & Innes 1997[39]; Banks & Bryant 2007[40]) and machinery (Delaney et al. 1999; Tempel & Gutierrez 2003). These studies identified that there is still relatively little work on the effects of different types of water-based craft and the impacts from jet skis, kite surfers, windsurfers etc. (see Kirby et al. 2004[41] for a review). Some types of disturbance are clearly likely to invoke different responses. In very general terms, both distance from the source of disturbance and the scale of the disturbance (noise level, group size) will influence the response (Delaney et al. 1999[42]; Beale & Monaghan 2005[43]). On UK estuaries

[34] Riley, J. 2003. Review of Recreational Disturbance Research on Selected Wildlife in Scotland. Scottish Natural Heritage.
[35] Reijnen, R. et al. 1995. The effects of car traffic on breeding bird populations in woodland. III. Reduction of density in relation to the proximity of main roads. Journal of Applied Ecology 32: 187-202
[36] Helen Fearnley Durwyn Liley and Katie Cruickshanks (2012) Results of Recreational Visitor Survey across the Humber Estuary produced by Footprint Ecology
[37] Drewitt, A. (1999) Disturbance effects of aircraft on birds. English Nature, Peterborough.
[38] Reijnen, R., Foppen, R. & Veenbaas, G. (1997) Disturbance by traffic of breeding birds: evaluation of the effect and considerations in planning and managing road corridors. Biodiversity and Conservation, 6, 567-581.
[39] Lord, A., Waas, J.R. & Innes, J. (1997) Effects of human activity on the behaviour of northern New Zealand dotterel Charadrius obscurus aquilonius chicks. Biological Conservation, 82,15-20.
[40] Banks, P.B. & Bryant, J.V. (2007) Four-legged friend of foe? Dog-walking displaces native birds from natural areas. Biology Letters, 3, 611-613.
[41] Kirby, J.S., Clee, C. & Seager, V. (1993) Impact and extent of recreational disturbance to wader roosts on the Dee estuary: some preliminary results. Wader Study Group Bulletin, 68, 53-58.
[42] Delaney, D.K., Grubb, T.G., Beier, P., Pater, L.L.M. & Reiser, H. (1999) Effects of Helicopter Noise on Mexican Spotted Owls. The Journal of Wildlife Management, 63, 60-76.

and coastal sites, a review of WeBS data showed that, among the volunteer WeBS surveyors, driving of motor vehicles and shooting were the two activities most perceived to cause disturbance (Robinson & Pollitt 2002)[44].

4.25 Additionally, animals can be disturbed by the movement of ships. For instance, a DTI study of birds of the North West coast noted that: "*Divers and scoters were absent from the mouths of some busier estuaries, notably the Mersey... Both species are known to be susceptible to disturbance from boats, and their relative scarcity in these areas... may in part reflect the volume of boat traffic in these areas*"[45].

4.26 Three of the most important factors determining the magnitude of disturbance appear to be species sensitivity, proximity of the disturbance source and timing / duration of the disturbance. Generally, the most disturbing activities are likely to be those that involve irregular, infrequent and unpredictable loud noise events, movements or vibrations. Birds are least likely to be disturbed by activities that involve regular, frequent, predictable, quiet patterns of sound, movement and vibration. The further any activity is from the birds, the less likely it is to result in disturbance.

4.27 An increasing amount of research on visual and noise disturbance of waterfowl from construction (and other activities) is now available[46]. Both visual and noise stimuli may elicit disturbance responses, potentially affecting the fitness and survival of waterfowl and waders. Noise is a complex disturbance parameter requiring the consideration of multiple parameters, including its non-linear scale, non-additive effect and the source-receptor distance. A high level of noise disturbance constitutes a sudden noise event of over 60dB or prolonged noise of over 72dB. Bird responses to high noise levels include major flight or the cessation of feeding, both of which might affect the survival of birds particularly if other stressors are present (e.g., cold weather, food scarcity).

4.28 Generally, research has shown that above noise levels of 84dB waterfowl show a flight response, while at levels below 55dB there are no behavioural effects. These two thresholds are therefore considered useful as defining two extremes. The same authors have shown that regular noise levels should be below 70dB at the bird, as birds will habituate to noise levels below this level. Generally, noise is attenuated by 6dB with every doubling of distance from the source. For example, impact piling, which is a particularly noisy construction process of approx.. 110dB at 0.67m from source, will therefore reduce to 67 – 68dB by 100m from the source. Overall, the loudest construction noise will have fallen to below disturbing levels by 100m, and certainly by 200m, from the source even without mitigation.

4.29 Visual disturbance is generally considered to have a higher impact than noise disturbance as, in most instances, visual stimuli will elicit a disturbance response at greater distances than noise. For example, a flight response is triggered in most species when they are approached to within 150m across a

[43] Beale, C.M. & Monaghan, P. (2005) Modeling the Effects of Limiting the Number of Visitors on Failure Rates of Seabird Nests. Conservation Biology, 19, 2015-2019.
[44] Robinson, J.A. & Pollitt, M.S. (2002) Sources and extent of human disturbance to waterbirds in the UK: an analysis of Wetland Bird Survey data, 1995/96 to 1998/99: Less than 32% of counters record disturbance at their site, with differences in causes between coastal and inland sites. Bird Study, 49, 205.
[45] DTI (2006). Aerial Surveys of Waterbirds in Strategic Wind Farm Areas: 2004/05 Final Report
[46] Institute of Estuarine & Coastal Studies (IECS), University of Hull. (2013). Waterbird Disturbance Mitigation Toolkit – Informing Estuarine Planning & Construction Projects. 36pp.

mudflat. Visual disturbance can be exacerbated by workers operating equipment outside machinery, undertaking sudden movements and using large machinery. Some species are particularly sensitive to visual disturbance, including curlew (taking flight at 275m), redshank (at 250m), shelduck (at 199m) and bar-tailed godwit (at 163m).

4.30 For the purpose of this assessment, a precautionary buffer of 300m has been used for visual and noise disturbance impacts.

4.31 The following Habitat sites are considered susceptible to noise and visual disturbance within the context of the Alderholt NP, should works be within 300m of a Habitat site or functionally linked habitat:

- Dorset Heathlands SPA/ Ramsar
- Avon Valley SPA/ Ramsar
- New Forest SPA/ Ramsar

Background to Urban Impacts

4.32 The list of urbanisation impacts can be extensive, but core impacts can be singled out (note that this list does not imply that all these impacts are expected to occur):

Increased Fly-Tipping

4.33 Whilst fly-tipping is generally considered more of a localised and visual problem, a negative ecological effect of tipping is the introduction of pollutants, plastics and non-native plants to the environment. This can create physical and chemical hazards for wildlife and could potentially damage habitats.

4.34 Residents of Alderholt have weekly bin collections, alternating between recycling and general rubbish,[47] and access to a household recycling centre (tip) in Wimborne to prevent the spread of waste into the environment. This combined with the very open and public nature of the relevant Habitat sites makes it highly unlikely that there will be increased fly-tipping as a result of the Alderholt NP and this impact pathway is therefore not considered further in this HRA.

Cat Predation

4.35 A survey undertaken in 1997 indicated that nine million British cats brought home 92 million prey items over a five-month period[48]. A large proportion of domestic cats are found in urban settings, and residential development is likely to lead to increased cat predation if the development is located sufficiently close to Habitat sites designated for sensitive bird species (particularly ground nesting birds).

[47] https://gi.dorsetcouncil.gov.uk/mapping/mylocal/viewresults/200004746266
[48] Woods, M. et al. 2003. Predation of wildlife by domestic cats *Felis catus* in Great Britain. Mammal Review 33, 2 174-188

4.36 The average roaming distance of domestic cats is approx. 40-200m from home[49] and LSEs due to cat predation may be an issue where allocated sites are within 200m of an SPA/ Ramsar.

Wildfires/ Arson

4.37 Wildfires are a periodic threat across Habitat sites and can adversely affect habitats through direct damage to the vegetation and soils, which results in the reduction of habitat quality and associated wildlife alongside carbon release to atmosphere and watercourses.

4.38 The cause is generally accepted to be of human origin, with deliberate intent or careless behaviour near footpaths and car parks appearing to be the chief cause of ignition. Available research[50, 51] identifies the principle causes of 'wild' fires to be deliberate fire-setting; out-of-control campfires, out-of-control planned fires (e.g., part of moorland management for grouse); and out-of-control bonfires.

4.39 Kirby & Tantram (1999) concluded that fires occurred at higher densities on the fringes of larger conurbations and in sites within developed urban areas, where fire events present a serious risk to ecological integrity. A zone of 500m was used, based on the maximum likely access distance for average users of greenspaces[52, 53,] and it was found that the degree of development within this zone correlated with incidence of fires (on Dorset Heathlands). There is also evidence to suggest that a significant proportion of deliberate fire setting is by children of school age.

4.40 The age structure of Alderholt parish from the and 2021 Census data[54] indicates that the majority of residents in Alderholt are aged between 16-64 (57.9%), followed by 65+ (25.2%), leaving 16.9% of residents aged between 0-15 years.

4.41 The following Habitat sites are considered susceptible to urban impacts in terms of cat predation and wildfires/ arson as they are within the Alderholt parish boundary:

- Dorset Heathlands SPA/ Ramsar
- Dorset Heaths SAC

Background to Loss of Functionally Linked Habitat

4.42 While most Habitat sites have been geographically defined to encompass the key features that are necessary for coherence of their structure and function, and the support of their qualifying features, this is not always the case. A diverse array of qualifying species including birds, bats and amphibians are not confined to the boundary of designated sites.

[49] Available at: https://www.petplan.co.uk/pet-information/cat/advice/roaming
[50] J. C. Underhill-Day, (2005) 'A literature review of urban effects on lowland heaths and their wildlife', English Nature Research Reports, Number 623
[51] J.S. Kirby & D.A.S Tantram (1999) 'Monitoring heathland fires in Dorset: Phase 1' Report to Department of the Environment, Transport and the Regions: Wildlife and Countryside Directorate
[52] arrison, C, Burgess, J, Millward, A, Dawe, G. 1995. Accessible greenspace in towns and cities: A review of appropriate size and distance criteria. English Nature Research Report No. 153. English Nature, Peterborough.
[53] Box, J. & Harrison, C. 1993. Natural spaces in urban places. Town 19 Country Planning, 62(9): 231-235
[54] Available at: https://mapping.dorsetcouncil.gov.uk/statistics-and-insights/AreaProfiles/Parish/alderholt

4.43 For example, the highly mobile nature of both wildfowl and heathland birds implies that areas of habitat of crucial importance to the maintenance of their populations are outside the physical limits of Habitat sites. Despite not being part of the formal designation, this habitat is still integral to the maintenance of the structure and function of bird populations in the designated site and, therefore, land use plans that may affect such areas should be subject to further assessment. This has been underlined by a recent European Court of Justice ruling (C-461/17, known as the Holohan ruling[55]) which in paragraphs 37 to 40 confirms the need for an AA to consider the implications of a plan or project on habitats and species outside the Habitat site boundary, provided that those implications are liable to affect the Conservation Objectives of the site.

4.44 With regard to birds, functionally linked habitats typically provide habitat for foraging or other ecological functions essential for the maintenance of the designated population e.g., high-tide roosts for coastal waders and waterfowl. Functionally linked habitats may extend up to the maximum foraging distances established for relevant bird species. However, the number of birds foraging will tend to decrease further away from the protected site and thus the importance of the land to the maintenance of the designated population will decrease.

4.45 Natural England's Impact Risk Zones (IRZs)[56] identify the core foraging distances that wintering birds will travel from their SPAs / Ramsars and the guidance that underlies those zones will be utilised in this HRA. The relevant IRZs are shown in Table 4:

Table 4. Natural England's Impact Risk Zones (IRZs) for different groups of designated bird species.

Assemblage	Impact Risk Zone (IRZ, based on core foraging distance)
Wintering birds (except wintering waders and grazing wildfowl; wigeon and geese)	Up to 500m
Dabbling ducks such as teal, mallard and gadwall	Home ranges could extend beyond site boundaries at coastal sites, but less likely to do so at inland water bodies.
Wintering waders (except golden plover and lapwing), brent goose & wigeon	Maximum foraging distance is 2km
Wintering lapwing and golden plover	Maximum foraging distance is 15-20km. Golden plover can forage up to 15km from a roost site within a protected site. Lapwing can also forage similar distances. Both species use lowland farmland in winter and it is difficult to distinguish between designated populations and those present within the wider environment. Developments affecting functionally linked land more than 10km from the site are unlikely to impact significantly on designated populations.

[55] The Holohan ruling also requires all the interest features of the Habitat sites discussed to be catalogued (i.e., listed) in the HRA. That is the purpose of Appendix A.
[56] Knight M. (2019). Impact Risk Zones Guidance Summary – Sites of Special Scientific Interest Notified for Birds. Version 1.1. 8pp.

Assemblage	Impact Risk Zone (IRZ, based on core foraging distance)
Wintering white-fronted goose, greylag goose, Bewick's swan, whooper swan, pink-footed goose & wintering bean goose	Maximum foraging distance is 10km although studies have shown that pink-footed geese will fly 20km from their roosting site to feed[57]. A bespoke functional land IRZ has replaced the individual Birds 6/7 IRZs for sites supporting the following goose and swan species: pink-footed geese, barnacle goose, Bewick's swan, white-fronted goose and whooper swan. The IRZ is based on GIS distribution records of feeding pink-footed geese from a study undertaken for Natural England by the Wildfowl & Wetlands Trust[58] and the results of work undertaken by the British Trust for Ornithology to identify functionally connected habitat used by barnacle goose, Bewick's swan, white-fronted goose and whooper swan based on WeBS site and BirdTrack data and focuses on only the areas of land that we know are being used as functional habitat by designated populations

4.1 NatureScot (formerly Scottish Natural Heritage (SNH)) also produced guidance to help identify 'connectivity' between development proposals and Special Protection Areas (SPAs)[59]. The guidance provides information on dispersal and foraging distances for a range of bird species which are frequently encountered when considering plans and projects.

4.2 The connectivity distances of each species are drawn from a literature review that examined ranging behaviour. In most cases the core range should be used when determining whether there is connectivity between the proposal and the qualifying interests.

4.3 Of relevance to the Alderholt NP from this study is the hen harrier with a core foraging range from a nest site of 2km, with maximum range of 10km.

4.4 The following Habitat sites are considered susceptible to loss of functionally linked habitat arising from the Alderholt NP:

- Dorset Heathlands SPA/ Ramsar
- Avon Valley SPA/ Ramsar
- New Forest SPA/ Ramsar

Background to Changes in Air Quality

4.5 The main pollutants of concern for Habitat sites are oxides of nitrogen (NOx), ammonia (NH_3) and sulphur dioxide (SO_2). Other pollutants that are of relevant to human health (e.g. particulates such as PM_{10}) are not relevant to impacts on ecological receptors. NOx can have a directly toxic effect upon vegetation. In addition, greater NOx or ammonia concentrations within the atmosphere will lead to greater rates of nitrogen deposition to soils. An increase in the deposition of nitrogen from the atmosphere to soils is generally regarded to

[57] https://monitoring.wwt.org.uk/wp-content/uploads/2018/12/Mapping-feeding-Pinkfeet-in-England-Final-report-vFinal.Jan15-2.pdf [accessed 14/04/2021]
[58] Ibid
[59] https://www.nature.scot/sites/default/files/2022-12/Assessing%20connectivity%20with%20special%20protection%20areas.pdf

lead to an increase in soil fertility, which can have a serious deleterious effect on the quality of semi-natural, nitrogen-limited terrestrial habitats.

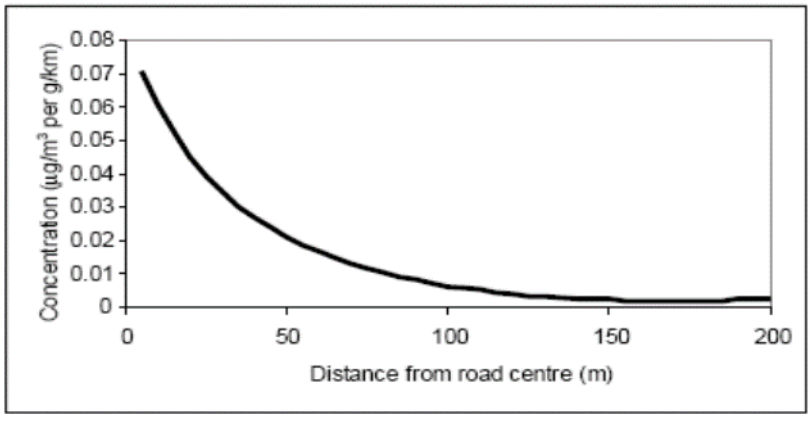
4.6 Sulphur dioxide emissions are overwhelmingly influenced by the output of power stations and industrial processes that require the combustion of coal and oil as well as (particularly on a local scale) shipping.

4.7 Ammonia emissions are dominated by agriculture, with some chemical processes also making notable contributions including some vehicles. NOx emissions are dominated by the output of vehicle exhausts (more than half of all emissions). Within a 'typical' housing development, by far the largest contribution to NOx (92%) will be made by the associated road traffic. Other sources, although relevant, are of minor importance (8%) in comparison[60]. Emissions of NOx and ammonia could therefore be reasonably expected to increase as a result of greater vehicle use as an indirect effect of the Alderholt NP.

4.8 According to the World Health Organisation, the critical NOx concentration (critical threshold) for the protection of vegetation is 30 μgm^{-3}; the threshold for ammonia is 1-3 μgm^{-3}. In addition, ecological studies have determined "critical loads"[61] of atmospheric nitrogen deposition (that is, NOx combined with ammonia NH_3). These are bespoke to particular habitats and are available on the Air Pollution Information System apis.ac.uk.

4.9 According to the Department of Transport's Transport Analysis Guidance, "Beyond 200m, the contribution of vehicle emissions from the roadside to local pollution levels is not significant"[62]. This is because traffic exhausts are situated only a few inches above the ground and are horizontal to it, such that the vast majority of emitted pollutants are never dispersed far and are very quickly deposited. This distance is also related to the mix of the exhaust gases, the small dimension of the exhausts and the velocity of the exhaust gases leaving the exhaust.

Plate 2: Traffic contribution to concentrations of pollutants at different distances from a road (Source: DfT)



[60] Proportions calculated based upon data presented in Dore CJ et al. 2005. UK Emissions of Air Pollutants 1970 – 2003. UK National Atmospheric Emissions Inventory. http://www.airquality.co.uk/archive/index.php
[61] The critical load is the rate of deposition beyond which research indicates that adverse effects can reasonably be expected to occur
[62] www.webtag.org.uk/archive/feb04/pdf/feb04-333.pdf

4.10 This is therefore the distance that has been used throughout this HRA in order to determine whether Habitat sites are likely to be significantly affected by traffic generated by development under the Spatial Strategy.

4.11 The following Habitat sites are considered susceptible to changes in air quality arising from the Alderholt NP:

- Dorset Heaths SAC
- New Forest SPA/ Ramsar/ SAC

Background to Water Resources

4.12 The water level, its flow rates and the mixing conditions are important determinants of the condition of Habitat sites and their qualifying features. Hydrological processes are critical in influencing habitat characteristics in wetlands and coastal waters, including current velocity, water depth, dissolved oxygen levels, salinity and water temperature. In turn these parameters determine the short- and long-term viability of plant and animal species, as well as overall ecosystem composition. Changes to the water flow rate within intertidal habitats can be associated with a multitude of further impact pathways, including substratum loss, smothering and changes in wave exposure, and often interact with coastal squeeze.

4.13 The unique nature of wetlands combines shallow water and conditions that are ideal for the growth of organisms at the basal level of food webs, which feed many species of birds, mammals, fish and amphibians. Overwintering, migrating and breeding wetland bird species are particularly reliant on these food sources, as they need to build up enough nutritional reserves to sustain their long migration routes or feed their hatched chicks.

4.14 Maintaining a steady water supply is of critical importance for many hydrologically dependent SPAs, SACs and Ramsars. For example, in many wetlands winter flooding is essential for sustaining a variety of foraging habitats for SPA / Ramsar wader and waterbird species. However, different species vary in their requirements for specific water levels. For example, some duck species (e.g. wigeon) have optimum water depth requirements of under 0.3m for successful foraging. In contrast, bittern require deep water surrounding nesting sites to help deter predators.

4.15 For both wetland and coastal habitats, a constant supply of freshwater is fundamental to maintaining their ecological integrity. However, while the natural fluctuation of water levels within narrow limits is desirable, excess or too little water supply might cause the water level to be outside of the required range of qualifying birds, invertebrates or plant species. There are two mechanisms through which urban development might negatively affect the water level in Habitat sites:

- The supply of new housing with potable water may require increased abstraction of water from surface water and groundwater bodies. Depending on the level of water stress in the geographic region, this may reduce the water levels in Habitat sites sharing the same catchment.

- The proliferation of impermeable surfaces in urban areas increases the volume and speed of surface water runoff. As traditional drainage systems often cannot cope with the volume of stormwater, sewer overflows are designed to discharge excess water directly into watercourses. Often this pluvial flooding results in downstream inundation of watercourses and the potential flooding of wetland habitats.

4.16 It is also noted that Alderholt is located within an area of serious water stress (see Plate 3 overleaf), meaning that there are existing pressures on water resources that may be exacerbated by increased water abstraction.

4.17 The following Habitat site is considered sensitive to changes in water resources arising from the Alderholt NP:

- River Avon SAC

4.18 Although the Site Improvement Plan (SIP062)[63] for Dorset Heaths SAC identifies 'drainage' as a current pressure, the habitats are groundwater fed and any increased water abstraction arising from the Alderholt NP will not affect such habitats.

[63] Available at: https://publications.naturalengland.org.uk/publication/5181909839642624

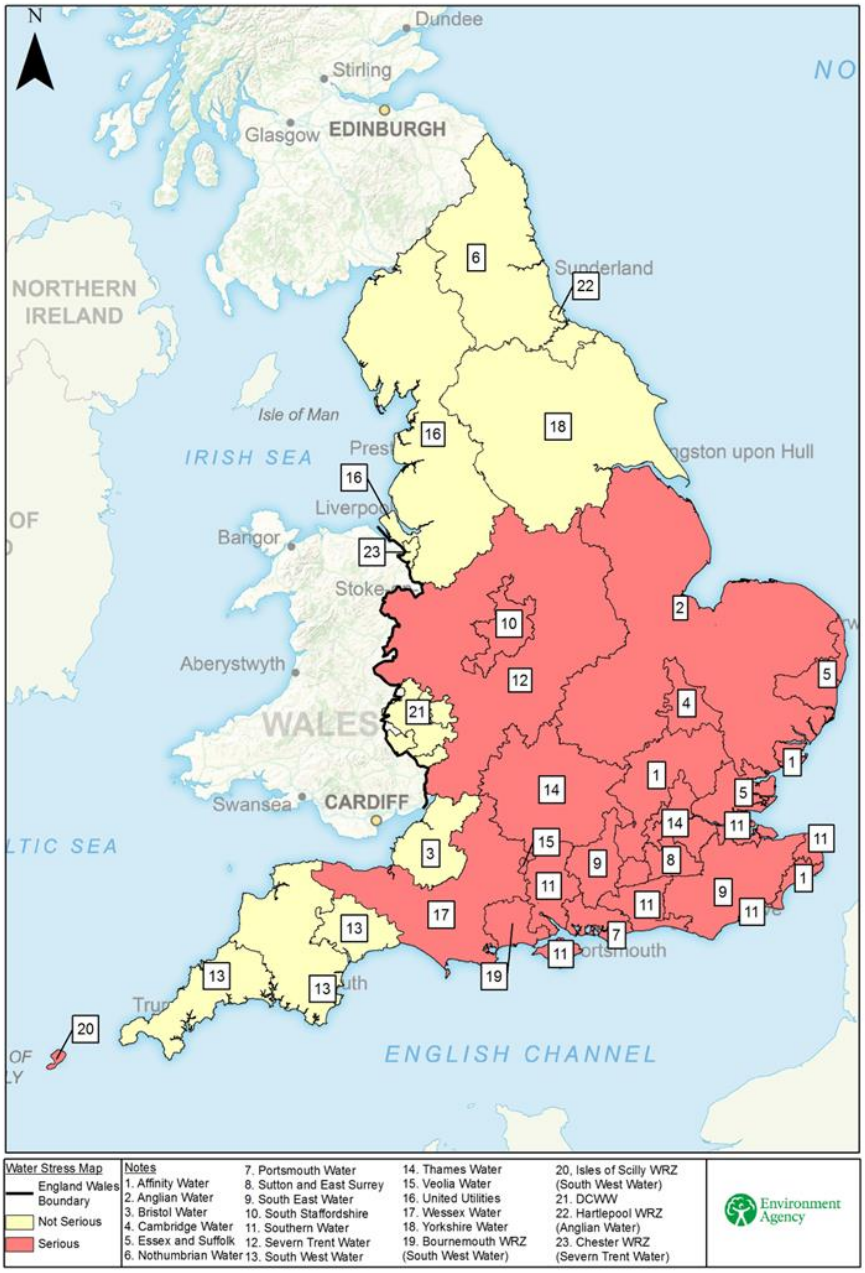


Plate 1: Areas of water stress in England and Wales[64]

Background to Water Quality

4.19 Increased amounts of housing or business development can lead to reduced water quality of rivers and estuarine environments. Sewage and industrial effluent discharges can contribute to increased nutrients and toxic contaminants in Habitat sites leading to unfavourable conditions.

4.20 The quality of the water that feeds Habitat sites is an important determinant of the nature of their habitats and the species they support. Poor water quality can have a range of environmental impacts:

[64] Figure adapted from Environment Agency. 2021. Water stressed areas – final classification https://www.gov.uk/government/publications/water-stressed-areas-2021-classification [Accessed on the 21/02/2023]

- At high levels, toxic chemicals and metals can result in immediate death of aquatic life, and can have detrimental effects even at lower levels, including increased vulnerability to disease and changes in wildlife behaviour. Eutrophication, the enrichment of plant nutrients in water, increases plant growth and consequently results in oxygen depletion. Algal blooms, which commonly result from eutrophication, increase turbidity and decrease light penetration. The decomposition of organic wastes that often accompanies eutrophication deoxygenates water further, augmenting the oxygen depleting effects of eutrophication. In the marine environment, nitrogen is the limiting plant nutrient and so eutrophication is associated with discharges containing available nitrogen.
- Some pesticides, industrial chemicals, and components of sewage effluent are suspected to interfere with the functioning of the endocrine system, possibly having negative effects on the reproduction and development of aquatic life.
- For sewage treatment works close to capacity, further development may increase the risk of effluent escape into aquatic environments. In many urban areas, sewage treatment and surface water drainage systems are combined, and therefore a predicted increase in flood and storm events could increase pollution risk.

4.21 The following Habitat site is considered sensitive to negative water quality changes arising from the Alderholt NP:

- Avon Valley SPA/ Ramsar
- River Avon SAC

4.22 Although the Site Improvement Plan (SIP062)[65] for Dorset Heaths SAC and SIP147[66] for the New Forest SAC identify water pollution as a pressure/ threat, the habitats concerned are groundwater fed therefore this Habitat site can be scoped out from this impact pathway.

Summary of Impact Pathways to be Taken Forward

4.23 Having considered the impact pathways in the previous section, those shown in Table 2 will be taken to the next stage in the HRA process, the LSEs screening.

Table 2. Impact pathways and relevant Habitat sites.

Impact pathway	Habitat site(s) potentially affected
Recreational pressure	Dorset Heathlands SPA/ Ramsar Dorset Heaths SAC Avon Valley SPA/ Ramsar New Forest SPA/ Ramsar/ SAC
Noise and visual disturbance	Dorset Heathlands SPA/ Ramsar Avon Valley SPA/ Ramsar New Forest SPA/ Ramsar
Urban impacts	Dorset Heathlands SPA/ Ramsar Dorset Heaths SAC

[65] Available at: https://publications.naturalengland.org.uk/publication/5181909839642624
[66] Available at: https://publications.naturalengland.org.uk/publication/5174614971908096

Impact pathway	Habitat site(s) potentially affected
Loss of functionally linked habitat	Dorset Heathlands SPA/ Ramsar Avon Valley SPA/ Ramsar New Forest SPA/ Ramsar
Atmospheric pollution	Dorset Heaths SAC New Forest SPA/ Ramsar/ SAC
Water resources	River Avon SAC
Water quality	Avon Valley SPA/ Ramsar River Avon SAC

5. Test of Likely Significant Effects (ToLSE) - Screening

Introduction

5.1 When seeking to identify relevant Habitat sites, consideration has been given primarily to identified impact pathways and the source-pathway-receptor approach, rather than adopting purely a 'zones'-based approach. The source-pathway-receptor approach is a standard tool in environmental assessment. In order for an effect to occur, all three elements of this mechanism must be in place, whereas the absence of one or more of the elements means there is no possibility for an effect. Furthermore, even where an impact is predicted to occur, it may not result in significant effects (i.e., those which undermine the Conservation Objectives of a Habitat site).

5.2 The likely zone of impact (also referred to as the likely Zone of Influence, ZoI) of a plan or project is the geographic extent over which significant ecological effects are likely to occur. The ZoI of a plan or project will vary depending on the specifics of a particular proposal and must be determined on a case-by-case basis with reference to a variety of criteria, including:

- the nature, size / scale and location of the plan;
- the connectivity between the plan and Habitat sites, for example through hydrological connections or because of the natural movement of qualifying species;
- the sensitivity of ecological features under consideration; and,
- the potential for in-combination effects.

Approach to Alderholt Neighbourhood Plan Policy Screening

5.3 There are 19 policies within the Alderholt NP. Policies were screened out of having LSEs on a Habitat site where any of the following reasons applied:

- they are environmentally positive;
- they will not themselves lead to any development or other change;
- they make provision for change but could have no conceivable effect on a Habitat site. This can be because there is no pathway between the policy and the qualifying features or a Habitat site, or because any effect would be positive;
- they make provision for change but could have no significant effect on a Habitat site (i.e., the effect would not undermine the conservation objectives of a Habitat site); or,
- the effects of a policy on any particular Habitat site cannot be ascertained because the policy is too general. For example, a policy may

be screened out if, based on absence of detail in the policy, it is not possible to identify where, when, or how the policy may be implemented, where effects may occur, or which sites, if any, may be affected.

5.4 Any 'criteria-based' policy (i.e., those that simply list criteria with which development needs to comply) or other general policy statements that have no spatial element were also screened out. Likewise, policies that simply 'safeguard' an existing resource (e.g., existing green infrastructure or mineral resources) by preventing other incompatible development, were also screened out.

5.5 The appraisal therefore focussed on those policies with a definable spatial component. Having established which policies required scrutiny by virtue of being spatially defined, consideration was given as to whether LSEs could be dismissed due to a lack of connectivity to any Habitat site for one of the following reasons:

- a potentially damaging activity may occur as a result of the policy but there is no pathway connecting it to a Habitat site (due to distance, for example);
- there are no Habitat sites vulnerable to any of the activities that the policy will deliver; or,
- the policy will not result in any damaging activities.

Results of Policy Screening

5.6 The results of the LSEs screening of policies included in the Alderholt NP are presented in Table 8, Appendix B. Where a policy is shaded green, there are no linking impact pathways to Habitat sites and LSEs can be excluded. Where the screening outcome is shaded orange, LSEs cannot be excluded, and the policy is screened in for AA.

5.7 Of the 19 Alderholt NP policies, four are considered to have the potential to result in LSEs, alone and therefore or in combination with other plans and projects, as such an Appropriate Assessment is required. These are:

- **Policy 9. The Trailway** - the dismantled railway corridor will be protected, and the provision of a recreational trailway along (or where this is not practicable, closely aligned) to its route will be supported. Any extension of this trainway west of Daggons Road may impact the Dorset Heathlands and as such would need to provide a project level HRA to demonstrate mitigation in increased recreation on Dorset Heathlands.
- **Policy 12. Alderholt Nursery, East of Ringwood Road** – the site is allocated for about 20 dwellings.
- **Policy 13. Paddock South of Daggons Road** – the site is allocated for about 15 dwellings and at least 0.2ha of employment land.
- **Policy 14. Land south of Blackwater Grove** – the site is allocated for about 15 – 20 dwellings and accessible greenspace.

5.8 The test of likely significant effects will focus on these policies with regards to the vulnerabilities of the Habitat sites within Table 1. The impact pathways

relating to the Habitat sites' vulnerabilities are listed below and will each be discussed:

- Recreational pressure;
- Noise and visual disturbance;
- Urban impacts;
- Loss of functionally linked habitat;
- Atmospheric pollution;
- Water resources; and
- Water Quality.

Recreational Pressure

Dorset Heathlands

5.9 Dorset Heathlands SAC is designated for its extensive lowland heathland, which forms one of the best developed and most significant tracts of heathland in the lowlands of the UK. The SPA is designated for breeding nightjar *Caprimulgus europaeus*, woodlark *Lullula arborea*, Dartford warbler *Sylvia undata* as well as wintering hen harrier *Circus cyaneus* and merlin *Falco columbarius.*

5.10 It is widely understood that the Dorset Heathlands Habitat sites are vulnerable to recreational pressure. As such, a strategic approach to avoiding and mitigating the potential impacts of increasing recreational pressure has been developed for the Dorset Heathlands. This is set out within the Dorset Heathlands Planning Framework Supplementary Planning Document (SPD)[67]. The SPD details that *"Natural England has advised the authorities of concerns arising from the increase in residential development across South East Dorset and the resultant pressures placed upon protected heathland by new occupants of these developments living in close proximity to the heathlands."* It also states that *"On the basis of the evidence, the proposed increase in residential development within 5 km of the Dorset Heathlands will inevitably result in greater urban pressures upon the heathlands. Therefore Natural England advises that the cumulative effect of a single dwelling up to 5 km from the Dorset Heathlands would have a likely significant effect on those designated sites."*

5.11 Given that the Dorset Heathlands Habitat sites are within the Alderholt NP area it is regarded that a net increase in new dwellings within the NP area has the potential to have a significant effect on increasing recreational pressure within the Habitat sites, both alone and in combination with other plans and projects and **will therefore be discussed further within the Appropriate Assessment.**

[67] Dorset Council. The Dorset Heathlands Planning Framework 2020-2025. Supplementary Planning Document. April 2020. Available at: https://www.dorsetcouncil.gov.uk/documents/35024/309543/Dorset+Heathlands+2020-2025+SPD+Adopted.pdf/bda03d74-cbc9-57c9-b3be-6253ba2825fb

Avon Valley SPA/ Ramsar & River Avon SAC

5.12 Avon Valley SPA/ Ramsar supports a nationally important assemblage of breeding wetland birds and is especially important for breeding waders associated with lowland wet grassland. The floodplain grassland and gravel pits provide feeding and roosting areas for nationally or internationally important populations of five species of wintering wildfowl – Bewick's swan *Cygnus columbianus,* gadwall *Anas strepera*, European white-fronted geese *Anser albifrons*, pochard *Aythya farina* and coot *Fulica atra.*

5.13 The River Avon SAC has a mosaic of aquatic habitats that support a diverse plant and fish community including bullhead *Cottus gobio,* brook lamprey *Lampetra planeri,* sea lamprey *Petromyzon marinus* and Atlantic salmon *Salmo salar.*

5.14 Recreational catchments vary from Habitat site to Habitat site but catchments for inland sites are often in the range of 2-7km while those for coastal sites are often larger. Various research reports have provided compelling links between changes in housing and access levels. The results of studies compiling visitor survey data for a range of Habitat sites[68] demonstrate that more housing consistently means more visitors to protected sites, across most habitats. This is particularly the case for on-foot visitors that originate from housing within 1.5 km, highlighting that additional housing development in close proximity to protected sites is likely to significantly increase recreation pressure. For those sites with car parks, levels of housing within 15 km of protected sites were also a significant predictor of visitor pressure but depended on habitat type.

5.15 Avon Valley SPA/ Ramsar is approximately 5.8km from the Alderholt NP area, which is within the 2-7km recreational catchment. **The Avon SPA / Ramsar is screened in for Appropriate Assessment in relation to recreational pressure.**

New Forest SPA/ Ramsar/ SAC

5.16 The New Forest is classified as a SPA/ Ramsar for its breeding and overwintering bird species of national and international importance. It is designated as a SAC for its habitats and non-avian species of national and international importance.

5.17 From the New Forest Visitor Survey 2018/ 19[69] the 75th percentile for all visitors was 21.4km and for those travelling from home it was 13.8km. The 75th percentile (i.e. the distance within which 75% of interviewees lived) from interview data, applied as a buffer of fixed distance around the Habitat site boundary, has become a standard approach to defining a zone of influence. The 13.8km recreational zone of influence is mirrored in the 2023 New Forest Strategic Access Management and Monitoring Strategy (SAMMS)[70].

5.18 The zone of influence defines where additional housing growth would trigger likely significant effects on the New Forest SAC/SPA/Ramsar from recreation and as such where mitigation would be required.

[68] 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. https://doi.org/10.1093/jue/juz019
[69] Available at: www.newforestnpa.gov.uk/app/uploads/2020/05/New-Forest-Visitor-Survey-report.pdf
[70] Available at New-Forest-SAMM-report-Footprint-Ecology.pdf (newforestnpa.gov.uk) [accessed 07/05/2024]

5.19 Footprint Ecology subsequently advised that the visitor survey data justifies a zone of influence being set at 13.8km extending to 15km for some high-risk developments[71].

5.20 The New Forest SPA/ Ramsar/ SAC lies approximately 8.9km from the Alderholt NP area boundary and therefore lies within the zone of influence. **The New Forest SPA/ Ramsar/ SAC is screened in for Appropriate Assessment in relation to recreational pressure.**

Noise and Visual Disturbance

Dorset Heathlands SPA/ Ramsar

5.21 As discussed in section 4, paragraph 4.22, construction work taking place immediately adjacent to the designated site or functionally linked habitats could cause disturbance and displacement of designated birds and Dorset Heathlands SPA/ Ramsar lies within the Alderholt parish boundary.

5.22 Three sites have been allocated for development:

- Alderholt Nursery, East of Ringwood Road (Policy 12);
- Paddock South of Daggons Road (Policy 13); and
- Policy 14. Land south of Blackwater Grove (Policy 14).

5.23 All three of these sites are well over the 300m buffer from the SPA/ Ramsar for visual and noise disturbance impacts. Review of aerial photography (www.magic.defra.gov.uk) shows the intervening habitat primarily comprises improved grassland/ pasture and arable land with hedgerows and lines of trees. Such habitats are not favoured by the qualifying species (see Loss of Functionally Linked Habitat below). The Alderholt NP will not cause a likely significant effect upon the Dorset Heathlands SPA/ Ramsar either alone or in combination with other plans and projects and can be screened out in terms of construction noise and visual disturbance.

Avon Valley SPA/ Ramsar

5.24 The Avon Valley SPA/ Ramsar lies approximately 1.6km to the east, at its closest point, of the Alderholt NP area boundary and is approximately 2.3km from the closest allocated site (Alderholt Nursery, East of Ringwood Road). This is well beyond the 300m buffer for visual and noise disturbance impacts.

5.25 From review of aerial photography (www.magic.defra.gov.uk), the intervening habitat primarily comprises arable land and improved grassland/ pasture with hedgerows and lines of trees and as such could serve as functionally linked habitat for Bewick's swan, which often feed on fields during the day.

5.26 As shown in Table 4, section 4, this is within the maximum core foraging range of 10km for Bewick's swan. **The Avon Valley SPA/ Ramsar is screened in for Appropriate Assessment in relation to noise and visual disturbance.**

[71] Available at: https://www.newforestnpa.gov.uk/app/uploads/2021/08/New-Forest-zone-of-influence-report-2021.pdf

New Forest SPA/ Ramsar

5.27 The New Forest SPA/ Ramsar/ SAC lies approximately 8.9km from the Alderholt NP area boundary and as such, is well beyond the 300m buffer for visual and noise disturbance impacts.

5.28 Although the intervening habitat is suitable for both foraging hen harrier and hobby, male hen harriers typically have an average home-range size of 8km^2; the average home-range size for females is 4.5km^2 [72]. Hobbies generally keep a home range of about 7.5km^2 [73].

5.29 Based on the home range sizes and distance from the Alderholt NP area boundary, it is reasonable to conclude that the Alderholt NP will not cause a likely significant effect upon the Habitat site either alone or in combination with other plans and projects and can be screened out in terms of noise of visual disturbance.

Urban Impacts

Dorset heathlands

Cat predation

5.30 All three of the allocated sites are well beyond the 40-200m roaming distance as discussed in section 4, paragraph 4.36. It is therefore reasonable to conclude that the Alderholt NP will not cause a likely significant effect upon the Dorset Heathlands SPA/ Ramsar either alone or in combination with other plans and projects and can be screened out in terms of cat predation.

Wildfires/ arson

5.31 All three of the allocated sites are located beyond the 500m buffer as discussed in section 4, paragraph 4.39. The Kirby & Tantrum (1999) study[74] also reported a total of 4 incidents of fire on Cranborne Common, the component Site of Special Scientific Interest (SSSI) that lies within the Alderholt NP area boundary, between 1009-1997 indicating a low fire incidence compared to other areas within the Habitat site.

5.32 Given this, combined with the demographics of Alderholt i.e., a relatively low percentage of residents between 0-15 years (16.9%), it is reasonable to conclude that the Alderholt NP will not cause a likely significant effect upon the Dorset Heathlands SPA/ Ramsar/ SAC either alone or in combination with other plans and projects and can be screened out in terms of wildfire/ arson due to the low probability of a fire being started deliberately.

[72] Beatriz Arroyo, Fiona Leckie, Arjun Amar, Aly Mccluskie & Steve Redpath , Bird Study (2014): Ranging behaviour of Hen Harriers breeding in Special Protection Areas in Scotland, Bird Study. Available at: https://www.researchgate.net/publication/259784174_Ranging_behaviour_of_Hen_Harriers_breeding_in_Special_Protection_Areas_in_Scotland

[73] Available at: http://www.cheshireandwirralbirdatlas.org/species/hobby-breeding.htm

[74] J.S. Kirby & D.A.S Tantram (1999) 'Monitoring heathland fires in Dorset: Phase 1' Report to Department of the Environment, Transport and the Regions: Wildlife and Countryside Directorate

Loss of Functionally Linked Habitat

Dorset Heathlands SPA/ Ramsar

5.33 The site allocation at Alderholt Nursery, East of Ringwood Road (Policy 12) for about 20 dwellings is located approximately 1.2km from the Dorset Heathlands habitat sites. The allocated site is approximately 0.9ha in size and appears from aerial mapping (www.magic.defra.gov.uk) to comprise an existing dwelling with amenity grassland, old greenhouses and rough grassland and scrub. The site is bounded by trees and hedgerows.

5.34 The site allocation at Paddock South of Daggons Road (Policy 13) for 15 dwellings and at least 0.2ha of employment land is located approximately 930m from the Dorset Heathlands Habitat sites. The allocated site is approximately 1.0ha in size and appears from aerial mapping (www.magic.defra.gov.uk) to comprise improved grassland. The site is bounded by trees and hedgerows.

5.35 The site allocated at Land south of Blackwater Grove (Policy 14) for 15 – 20 dwellings is located approximately 635m from the Dorset Heathlands habitat sites. The allocated site is approximately 3.5ha in size and appears from aerial mapping (www.magic.defra.gov.uk) to comprise rough grassland with scrub and scattered trees. The site is bounded by trees and hedgerows, with extensive residential areas to the north and east.

5.36 The Dorset Heathlands SPA/ Ramsar are designated for Dartford warbler, nightjar, woodlark, hen harrier and merlin.

5.37 Dartford warbler are confined to southern Britain, in both coastal and inland locations. The latter comprise lowland heathlands but also upland sites on the moorland fringes[75]. The habitats within the allocated sites are unsuitable for this species and likely significant effects on Dartford warbler can therefore be screened out.

5.38 Nightjars are breeding summer visitors, present from May to mid-August. Across much of its range, the nightjar's breeding distribution is closely associated with lowland heathland and felled or recently planted conifer plantations[76]. The habitats within the allocated sites and surrounding land parcels are unsuitable for this species to nest. Natural England's Impact Risk Zone Guidance for SSSI Bird species[77] identifies that breeding nightjar have a foraging catchment of up to 2km. The entire urban area of the parish of Alderholt is located within 2km of the Dorset Heathland Habitats Sites and thus is located within the 2km foraging zone.

5.39 However, nightjar do not have highly specialised foraging requirements, foraging in a wide range of common and widespread habitats wherever they can obtain a supply of insects of sufficient size including heathland, plantation woodland, deciduous woodland, rough pasture, arable field margins and gardens. This is in contrast to their highly specific nesting habitat requirements both regarding suitable habitats for nesting (heathland, acid grassland and plantation clearings) and vegetation structure in those habitats. Therefore, as a

[75] Available at: https://www.bto.org/understanding-birds/welcome-birdfacts
[76] Ibid
[77] Natural England (2019). Impact Risk Zones Guidance Summary. Sites of Special Scientific Interest Notified for Birds. Version 1.1

general rule nightjar conservation is focused on their scarce and declining breeding habitats and less on their more common and widespread foraging habitats.

5.40 Moreover, it is not possible to survey for foraging (as opposed to nesting) nightjar on a particular development site as this would require trapping and radio-tracking nightjar across a significant part of the SAC to determine whether they forage on a given development site. With this in mind, whilst the habitats within the site allocations could potentially be used by nightjar for foraging, this is true of many common and widespread habitats around the SPA, and individual small parcels are highly unlikely to act as significant functionally linked land for this species, which is commonly available in the parish and the wider area surrounding the heathland Habitats Sites. It is considered that no likely significant effects to nightjar functionally linked land will result and can be screened out.

5.41 The woodlark is very much a bird of wooded heath[78]. The habitats within the allocated sites are unsuitable for this species and likely significant effects on woodlark can therefore be screened out.

5.42 The Habitat sites are designated for overwintering merlin. Merlin feed almost exclusively on small passerines, especially meadow pipits which can make up half of their diet. Meadow pipits favour treeless, open ground, such as heathland, downland and short grassland[79]. Although the allocated sites are within the maximum core foraging range of 5km[80], merlin show a preference for moors and heathlands. The habitats within the allocated sites are unsuitable for merlin and favoured prey species therefore likely significant effects on merlin can therefore be screened out.

5.43 The habitat sites are designated for overwintering hen harrier. Favoured wintering hen harrier habitat is characterised by generally lightly-managed vegetation including long grass, rush beds and heath which in addition to providing roost sites are likely to hold high populations of small birds and mammals, and hence are also productive foraging areas[81]. The habitats within the site allocated at Land south of Blackwater Grove could potentially support foraging hen harrier, which can be detected (unlike foraging nightjar) during conventional daytime non-breeding bird surveys. Hen harrier is assessed to have a medium sensitivity to human disturbance. in the UK, hen harrier is most likely to be disturbed at nest sites early on in the breeding season as well as at communal roosting areas and potentially foraging grounds during the nonbreeding season[82].

5.44 As a rule of thumb functionally linked land is usually considered significant where the parcel of land is over 2 ha in size and/or large enough to accommodate at least 1% of the SPA designation.

5.45 Both the parcels of land at Alderholt Nursery (policy 12) and Paddock South of Daggons Road (Policy 13) are <2ha in size. Given the information on foraging

[78] Ibid
[79] Available at: https://www.newforestnpa.gov.uk/discover/wildlife/heathland-birds/meadow-and-tree-pipit/#:~:text=Meadow%20pipits%20breed%20on%20any,with%20scattered%20trees%20and%20bushes.
[80] Available at: https://www.nature.scot/sites/default/files/2022-12/Assessing%20connectivity%20with%20special%20protection%20areas.pdf
[81] Available at: https://www.cbdc.org.uk/wp-content/uploads/2019/04/Hen-Harrier-SS-QC-OCT-2016_Revised_2019.pdf
[82] Available at: https://www.nature.scot/doc/naturescot-research-report-1283-disturbance-distances-review-updated-literature-review-disturbance#Whooper+swan,+Cygnus+cygnus

suitability and the size of the plots of land, it is considered unlikely that the locations of these site allocations would be considered functionally linked to the Dorset Heathlands SPA/ Ramsar and therefore would not cause any likely significant effects either alone or in combination with other plans or projects and can be screened out.

5.46 However, the Land south of Blackwater Grove (Policy 14) is >2ha and comprises habitat types that could potentially support foraging hen harrier[83]. **Development of this land could cause likely significant effects in terms of loss of functionally habitat specifically for hen harrier and Dorset Heathlands SPA/ Ramsar is screened in for Appropriate Assessment.**

Avon Valley SPA/ Ramsar

5.47 None of the habitats within any of the allocated sites are suitable for the qualifying features of the Habitat sites. Development of these sites will not cause any likely significant effects to the Avon Valley SPA/ Ramsar either alone or in combination with other plans and projects and can be screened out in terms of loss of functionally linked habitat due to unsuitably and/ or small size.

New Forest SPA/ Ramsar

5.48 The New Forest SPA/ Ramsar lies approximately 8.9km from the Alderholt NP area boundary. This is greater than the typical foraging ranges of both hen harrier and hobby (refer to paragraph 5.28). Development of these sites will not cause any likely significant effects to the New Forest SPA/ Ramsar either alone or in combination with other plans and projects and can be screened out in terms of loss of functionally linked habitat due to being located beyond the core foraging range of both species combined with habitat unsuitably for hobby and/ or small size.

Atmospheric Pollution

Dorset Heaths SAC and Dorset Heathlands Ramsar

5.49 The Dorset Heaths SAC is made up of numerous SSSI components. Of those within 10 km of the Alderholt NP area, the following are within 200m of a main road:

- St. Leonards and St. Ives Heaths SSSI, specifically Unit 30 which is adjacent to the A31; Units 6, 7 and 17 which are adjacent to the A338; Unit 31 which lies 139m from the A338; Unit 19 which lies adjacent to the A338.
- Slop Bog and Uddens SSSI, specifically Units 1, 4, 5, 6, 7, 8 and 9 which are all within 200m of, or adjacent to, the A31.

5.50 Details pertaining to the condition of the SSSI Units are shown in Table 6.

[83] As discussed earlier they could also support foraging nightjar but it is not considered that loss of this habitat would significantly affect the persistence of the nightjar population of the Habitats sites

Table 6. Site Unit Condition

SSSI Unit number	Site condition	Main habitat type
St. Leonards and St. Ives Heaths SSSI		
030	Unfavourable - Recovering	Dwarf shrub heath - lowland
006	Unfavourable - Recovering	Dwarf shrub heath - lowland
007	Unfavourable - Recovering	Dwarf shrub heath - lowland
017	Unfavourable - Recovering	Dwarf shrub heath - lowland
031	Unfavourable – No change	Dwarf shrub heath - lowland
019	Unfavourable – Declining	Dwarf shrub heath - lowland
Slop Bog and Uddens SSSI		
001	Unfavourable – Declining	Dwarf shrub heath - lowland
004	Unfavourable – Declining	Dwarf shrub heath - lowland
005	Unfavourable – Declining	Dwarf shrub heath - lowland
006	Unfavourable – No change	Dwarf shrub heath - lowland
007	Unfavourable - Recovering	Dwarf shrub heath - lowland
008	Unfavourable – Declining	Dwarf shrub heath - lowland
009	Destroyed	Built up areas and gardens.

Source: www.designatedsites.naturalengland.org.uk

5.51 The main habitat type for all Units (with the exception of one that has been destroyed) is 'Dwarf shrub heath – lowland'. According to Air Pollution Information System (APIS) the critical load for this habitat is 10 – 20 Kg/N/ha/yr[84].

5.52 For St. Leonards and St. Ives Heaths SSSI, the minimum nitrogen deposition for the identified Units is from 13.1 – 13.6 Kg/N/ha/yr. For Slop Bog and Uddens SSSI, the minimum nitrogen deposition for the identified Units is from 13.6 – 13.9 Kg/N/ha/yr. The habitat at these component SSSIs is therefore above the minimum critical load[85]. To address air quality issues a Dorset Heathlands Interim Air Quality Strategy has been devised.

5.53 However, at the distance of the almost 10km from the Alderholt NP area and with so relatively few net new dwellings, it is unlikely that the increase in population within the Alderholt NP area will extend to an increase in car journeys past these SSSI components alone. However, given the deposition of nitrogen is already over the critical load, increasing this deposition could cause deterioration of the habitats and increases in net new dwellings from the Alderholt NP may act in combination with other developments from neighbouring plans. **Therefore, the Alderholt NP could produce likely significant effects in combination with other plans and projects and will therefore be discussed further within the Appropriate Assessment.**

[84] Available at: https://www.apis.ac.uk/node/974
[85] Available at: https://www.apis.ac.uk/app

New Forest Ramsar/ SAC

5.54 As with the Dorset Heaths SAC, The New Forest Ramsar/ SAC is made up of numerous SSSI components. Of those within 10km of the Alderholt NP area, the following are within 200m of a main road:

- New Forest SSSI, specifically Units 238, 70, 120 and 127 which are immediately adjacent to the A31; Unit 313 which is bisected by the A31; Units 240, 90, 91, 92, 93 and 125 which are all within 200m of the A31.

5.55 Details pertaining to the condition of the SSSI Units are shown in Table 7.

Table 7. Site Unit Condition

Site Unit number	Site condition	Main habitat type
238	Unfavourable - Recovering	Dwarf shrub heath - lowland
070	Favourable	Dwarf shrub heath - lowland
120	Favourable	Dwarf shrub heath - lowland
127	Favourable	Fen, marsh and swamp - lowland
313	Unfavourable - Declining	Dwarf shrub heath - lowland
240	Favourable	Acid grassland - lowland
090	Favourable	Fen, marsh and swamp - lowland
091	Unfavourable - Recovering	Fen, marsh and swamp - lowland
092	Favourable	Fen, marsh and swamp - lowland
093	Unfavourable - Recovering	Fen, marsh and swamp - lowland
125	Unfavourable - Recovering	Fen, marsh and swamp - lowland

Source: www.designatedsites.naturalengland.org.uk

5.56 Table 7 shows that the Units identified comprise three main habitat types: 'Dwarf shrub heath', with a critical load for this habitat of 10 – 20 Kg/N/ha/yr[86]; 'Acid grassland', with a critical load for this habitat of 10 – 15 Kg/N/ha/yr[87]; and 'Fen, marsh and swamp', with a critical load for this habitat of 15 – 30 Kg/N/ha/yr[88].

5.57 For the New Forest SSSI the minimum nitrogen deposition for the identified Units is from 12.8 – 12.9 Kg/N/ha/yr[89]. The acid grassland and dwarf shrub heath habitats are therefore above the minimum critical load, whilst the annual nitrogen deposition for fen, marsh and swamp is well below the critical load.

5.58 However, at the distance of the almost 10km from the Alderholt NP area and with so relatively few net new dwellings, it is unlikely that the increase in population within the Alderholt NP area will extend to an increase in car journeys past the relevant SSSI components alone (i.e., those comprising acid grassland and dwarf shrub heath). However, given the deposition of nitrogen to those habitats is already over the critical load, increasing this deposition could cause deterioration of the habitats and increases in net new dwellings from the

[86] Available at: https://www.apis.ac.uk/node/974
[87] Available at: https://www.apis.ac.uk/node/963
[88] Available at: https://www.apis.ac.uk/node/975
[89] Available at: https://www.apis.ac.uk/app

Alderholt NP may act in combination with other developments from neighbouring plans. **Therefore, the Alderholt NP could produce likely significant effects in combination with other plans and projects and will therefore be discussed further within the Appropriate Assessment.**

Water Resources

River Avon SAC

5.59 The qualifying species in the River Avon SAC are sensitive to changes in the volume of water supplied to freshwater habitats. The Site Improvement Plan (SIP185)[90] identifies water abstraction as a pressure/ threat to the integrity of the SAC.

5.60 Water abstraction causes lower than natural river flows that affects a range of habitat factors including current velocity, water depth, wetted area, substrate quality, dissolved oxygen levels and water temperature. The maintenance of both flushing flows and base flows, based on natural hydrological processes, is vital to the sustaining the SAC chalk stream habitat as a whole and to fish species at low flows in particular.

5.61 The Alderholt NP may allocate a maximum of 55 new dwellings and 0.2ha of employment land, which will increase the demand for potable water and extent of impermeable surfaces across the parish.

5.62 Bournemouth Water is responsible for the public water supply in Alderholt Parish. The company adopted their latest Water Resource Management Plan (WRMP) in 2019[91] (it is noted that at the time of writing this report, a draft WRMP 2024 is in preparation[92]). To demonstrate soundness and to enable adoption, an HRA of the current WRMP was undertaken. Similarly an Informal HRA has been undertaken of the Draft WRMP 2024[93] which has concluded no adverse effects with appropriate mitigation.

5.63 Overall, given that the 2019 WRMP does not include any new resource schemes or increased abstraction, LSE's of the Alderholt NP on the River Avon SAC regarding water resources can be excluded, both alone and in-combination.

Water Quality

River Avon SPA/ Ramsar/ SAC

5.64 Elevated levels of phosphate (P) lead to dominance by algae and a loss of characteristic plant species. Within Blashford Lakes high P levels could switch the system from a macrophyte dominated system to an algal dominated one resulting in poorer feeding conditions for gadwall.

5.65 Organic pollution, reducing dissolved oxygen levels (from microbial breakdown of organic material) effects biota and is also an issue. Water quality can also

[90] Available at: https://publications.naturalengland.org.uk/publication/6133502894407680
[91] Available at: https://pennon06z3kprod.dxcloud.episerver.net/SysSiteAssets/document-repository/environment/sww-bw-wrmp19---finalplan_aug2019.pdf
[92] Available at: https://www.bournemouthwater.co.uk/environment/a-precious-resource/water-resources-management-plan/
[93] Available at: https://pennon06z3kprod.dxcloud.episerver.net/SysSiteAssets/document-repository/wrmp24/sww_draft_wrmp24_chapter_13_sea_report_appendices_a-q.pdf

affect the habitat quality necessary to support Desmoulin's whorl snail and the SPA species. Diffuse pollution from agriculture, small point discharges and sewage treatment work (STW) discharges are contributing to elevated levels of nutrients (by 10-50ug/l P) and reduced dissolved oxygen levels in parts of the SAC.

5.66 On 16 March 2022, Natural England notified Dorset Council of their updated advice for development proposals that have the potential to affect water quality resulting in adverse nutrient impacts on internationally protected habitats sites. This advice applied to the catchments of five habitats sites, including the River Avon, which together cover a large part of the Dorset Council area. The advice was that Dorset Council should "*carefully consider the nutrients impacts of any new plans and projects (including new development proposals) on habitats sites and whether those impacts may have an adverse effect on the integrity of a habitats site that requires mitigation, including through nutrient neutrality*."

5.67 Nutrient neutrality is a means of ensuring that a plan or project does not add to existing nutrient burdens so there is no net increase in nutrients as a result of the plan or project (i.e. it "consumes its own smoke"). Where nutrient neutrality is properly applied and the existing land use does not undermine the conservation objectives, Natural England considers that an adverse effect on integrity alone and in combination can be ruled out[94].

5.68 Nearly all Sewage Treatment Works (STWs) within the catchment have been limited to 1mg/l P, and the locations in the Avon catchment that show improving water quality trends generally coincide with improvements to STWs in that reach of river, it is likely that further reductions of P will be necessary from STWs and also small point sources.

5.69 Wastewater treatment in the parish is delivered by Wessex Water through their Drainage and Wastewater Management Plan (DWMP) 2023[95]. The DWMP has included for increased investment for nutrient neutrality, and other phosphorus-related improvements. To demonstrate soundness and to enable adoption, an HRA of the current DWMP was undertaken which concluded *"the DWMP will have no adverse effects on the integrity of any* Habitats *(European) sites".*

5.70 Additional residential development increases the risk of effluent escape into aquatic environments in addition to consented discharges to the catchment. In many urban areas, sewage treatment and surface water drainage systems are combined, and therefore a predicted increase in flood and storm events could increase pollution risk.

5.71 The increase in net new dwellings within the Alderholt NP area could act in combination with an increase in net new dwellings outside of the NP area. Therefore, the Alderholt NP could produce likely significant effects in combination with other plans and projects and **will therefore be discussed further within the Appropriate Assessment.**

[94] WOOD, A., WAKE, H. and MCKENDRICK-SMITH, K. 2022. Nutrient Neutrality Principles. Natural England Technical Information Note. TIN186. Natural England.
[95] Available at: https://corporate.wessexwater.co.uk/media/cldo1kua/wessex-dwmp-the-full-report.pdf

6. Appropriate Assessment In-combination

Introduction

6.1 The law does not prescribe how an AA should be undertaken or presented, but it must consider all impact pathways that have been screened in, whether they arise alone or in combination with other projects and plans. That analysis is the purpose of this section. The law does not require the different effects to be examined separately provided all effects are discussed.

6.2 The HRA screening exercise undertaken in Table 8, Appendix B indicates that four policies, three of which refer to site allocations, were considered to pose LSEs to Habitats sites, either alone or in combination with other projects and plans, due to contributing to one or more of the following impact pathways: recreational pressure, noise and visual disturbance, loss of functionally linked habitat and atmospheric pollution.

Recreational Pressure

Dorset Heathlands

6.3 In the Regulation 14 Neighbourhood Plan, Policy 9, The Trailway states that *"The dismantled railway corridor will be protected, and the provision of a recreational trailway along (or where this is not practicable, closely aligned) to its route will be supported."* A section of the railway passes directly through Dorset Heathlands SPA/ Ramsar and Dorset Heaths SAC. Policies 12, 13 and 14 all specify locations for residential development. Based on the Regulation 14 Neighbourhood Plan, these four policies were all identified to have the potential to result in an increase in recreational pressure on the Dorset Heathlands Habitats sites.

6.4 The Dorset Heathlands Planning Framework 2020-2025 Supplementary Planning Document[96] was prepared jointly by Bournemouth, Christchurch and Poole Council (BCP Council) and Dorset Council with the advice of Natural England.

6.5 The purpose of this SPD is to set out the approach to avoid or mitigate harm arising from increased urban related pressures on the Dorset Heathlands. This SPD accords with the principles of the National Planning Policy Framework (NPPF) (2019) and it is a result of the co-operative approach to partnership working between the Councils, statutory bodies and other organisations. It is the purpose of the document to set out the approach that, together, the two Councils will follow. This forms a basis for how harm to the heathlands can be avoided.

6.6 As discussed in Section 4 of this report, various studies, have found that public access to lowland heathland, from nearby development, has led to an increase in wild-fires, damaging recreational uses, the introduction of incompatible plants

[96] Available at: https://www.dorsetcouncil.gov.uk/documents/35024/309543/Dorset+Heathlands+2020-2025+SPD+Adopted.pdf/bda03d74-cbc9-57c9-b3be-6253ba2825fb

and animals, loss of vegetation and soil erosion and disturbance by humans and their pets amongst other factors have an adverse effect on the heathland ecology.

6.7 Some of these effects are direct impacts on the designated sites but many, such as recreational use, will be ongoing for the duration of the development. In the case of additional housing, the effects arising are considered to be permanent requiring ongoing mitigation measures.

6.8 On the basis of the evidence, the proposed increase in residential development within 5 km of the Dorset Heathlands will inevitably result in greater urban pressures upon the heathlands. Therefore Natural England advises that the cumulative effect of a single dwelling up to 5 km from the Dorset Heathlands would have a likely significant effect on those designated sites.

6.9 The Councils are in agreement that avoidance or mitigation measures are required to enable the Councils to continue to grant permission for residential development within 5 km of these designated sites.

6.10 The site allocations put forward in Policies 12, 13 and 14 are all within the 5km buffer.

6.11 In order to enable development, the SPD puts forward 'The Dorset Heathlands Avoidance and Mitigation Strategy'. The strategy consists of two mutually dependent and supporting policy mechanisms:

- Restrictions on development within the 400 metres heathland area; and
- Mitigation associated with some types of development within the 400 metres to 5km heathland area.

6.12 Natural England advise that in order for an appropriate assessment to be able to conclude that there is no adverse effect on the integrity of the Dorset Heathlands it is necessary certain types of development, including new residential dwellings, require avoidance or mitigation measures to be implemented to allow development to be approved.

6.13 The mitigation element of the strategy is in two parts:

- Part 1: Strategic Access, Management and Monitoring (SAMM); and
- Part 2: Heathland Infrastructure Projects (HIPs).

6.14 SAMM focuses on wardening, raising awareness and monitoring the effectiveness of the strategy. SAMMs contributions secure the day-to-day costs of helping local people to behave in ways less harmful to the local heathlands they access. This is through raising awareness of the issues and value of the protected sites and includes (i) employing wardens to manage visitor pressures on the heathland; and (ii) delivering awareness and education programmes in local schools, on the heaths and through local communities. SAMMs also pay for the ongoing monitoring of a sample of heathland birds, visitor access patterns and the effects of new development and crucially whether this strategy is effective.

6.15 The SAMMs charge is calculated by dividing the total cost of providing SAMMs by the number of planned homes within the 5km heathland area for each

respective Council over the period 2020-2025. This currently stands at £406 per house and £277 per flat.

6.16 Heathland Infrastructure Projects (HIPs) are physical infrastructure projects that provide facilities to attract people away from the protected heathland sites. SANGs (Suitable Alternative Natural Greenspaces) are the most significant element of provision, having a key role in providing an alternative destination to the Dorset Heathlands.

6.17 Any additional residential development within 400 metre to 5km heathland area is likely to have a significant effect on the Dorset Heathlands either alone or in combination with other proposals. Therefore in accordance with the Habitats Regulations, the Councils will undertake a project level appropriate assessment when considering all planning applications where there is a net gain in homes within the 400 metre to 5km heathland area.

6.18 Following discussions with Natural England and Dorset Council, the level of development is clarified as up to 192 dwellings, including the three allocations in the Neighbourhood Plan. In addition, it is possible that additional dwellings may come forward through windfall (infill) development within the village envelope. Based on the 5 year average (2018-2023) this could be in the region of 5 dwellings per annum, or 30 dwellings for the period 2028 – 2034. These windfall sites would also require mitigation. At the current time, there is a single pending application for one dwelling on land at South Lodge, Daggons Road (P/FUL/2023/03371). Whilst this is outside of the village envelope, it could potentially be approved if mitigation can be secured prior to the Neighbourhood Plan coming into effect.

6.19 The submission Neighbourhood Plan identifies three specific Heathland Infrastructure Projects. A 2.4ha suitable alternative natural green space is proposed to the north of the village (at High Wood) as part of the heathland mitigation for the planned 44 houses at The Hawthorns. It is estimated that this should provide spare capacity to mitigate for a further 38 homes.

6.20 There is also a HIP at Alderholt Surplus Stores, Daggons Road (planning application reference 3/11/0558/REM) within the northern part of the site currently being developed and a HIP on Land South of Blackwater Grove proposed as part of NP Policy 14.

6.21 Whilst the above should be sufficient to mitigate the extant planning consents and site allocations, it is accepted that the mitigation measures need to come forward in a timely manner and may need to be revisited should the rate of past infill windfall development continue / increase further.

6.22 The Regulation 14 draft of the Neighbourhood Plan was provided to Natural England for comment. Their response, dated 14th February 2024, indicated that the plan at the time was not compliant with the Habitats Regulation 2017. In light of this several elements of the text were changed, notably adding text to Policy 7 requiring development to comply with the Dorset Heathland SPD, including provision of adequate Heathland Infrastructure Projects and financial contributions as required.

6.23 In the submission Neighbourhood Plan, the following paragraph is therefore inserted at the start of the HRA section of Policy 7:

6.24 *'The impact of proposed development on the national site network (including European sites), alone or in combination with other existing and proposed development, will be screened for likely significant effects under the Conservation of Habitats and Species Regulations (amended) (EU exit), 2019 and/or any equivalent relevant legislation or regulations. Where there is a probability or risk of a significant effect, the proposed development will be subject of an appropriate assessment (taking into account the lifetime of the development). Development proposals should, therefore, be accompanied by information reasonably required to undertake an appropriate assessment and demonstrate how the development will avoid or otherwise mitigate any adverse impact on the integrity of any relevant site(s) in the national site network.'*

6.25 Reference to "a project level Habitats Regulations Assessment" is deleted in the next paragraph of the submission Neighbourhood Plan to avoid duplication.

6.26 The second bullet of 4.1.11 in the submission Neighbourhood Plan is amended with the insertion of "*including any planning applications where there is a net gain in homes*".

6.27 The supporting text (4.1.12) of the submission Neighbourhood Plan is amended to read as follows:

6.28 *'The following Heathland Infrastructure Projects are currently identified, and, together with Strategic Access, Management and Monitoring, are expected to be sufficient to mitigate the likely impact on the heathland area arising from the amount of housing development anticipated during the plan period:*

- *HIP at Alderholt Surplus Stores, Daggons Road (planning application reference 3/11/0558/REM)*
- *High Wood SANG (planning application reference 3/20/1732/FUL)*
- *HIP on Land South of Blackwater Grove (Policy 14)*

6.29 *This mitigation will need to be delivered in a timely fashion, and landowners are expected to work together, potentially purchasing 'credits' from the respective HIP / SANG landowner to secure their delivery, or to agree suitable alternative provision with Natural England. Applicants should therefore assist Dorset Council with information regarding the contribution that their site will make towards the proportionate delivery of these mitigation projects'.*

6.30 Natural England confirmed on 28th March 2024, that these changes were appropriate and were sufficient to justify a conclusion that there would be no adverse effects on the integrity of designated habitats and Habitat sites.

6.31 With regard to Policy 9, the second part of 4.1.24 is amended in the submission Neighbourhood Plan to read: *"The route going east from the village towards Fordingbridge provides the most potential benefit for local trips, and should therefore be prioritised in bringing forward this project. A westerly link towards Verwood, whilst desirable, could increase recreational pressures on Cranborne Common (an important part of the Dorset Heathlands), and Natural England have advised that further work is needed to show how such harm could be avoided. As such this west-bound route, beyond the village, is not shown, pending further feasibility work."*

6.32 The second paragraph of Policy 9 of the submission Neighbourhood Plan will be amended to read: "*Any proposals to extend the trailway west of Daggons Road will need to be supported by a project-level Habitats Regulations Assessment, demonstrating that the impacts of any potential increase in recreational footprint on the Dorset Heathlands are adequately mitigated".*

6.33 The Trailway Project text in the submission Neighbourhood Plan will be amended by the addition of: "*This will include further feasibility work, particularly with regard to any westward extension towards Verwood, given the need to avoid harm to Dorset heathlands."*

6.34 Policy 13 in the submission Neighbourhood Plan will also be amended to refer to "*Future connections through land to the south to provide the potential for pedestrian / cycle links to the Trailway, if this is extended westwards from the village, should be included within the design of the layout." And update the supporting text accordingly to reference that this route 'may' run to the south and is subject to further feasibility work".*

6.35 Given the potential for conflict with Dorset Heaths SAC/SPA it may be advisable for the protection provided by Policy 9 to stop at Station Road/ Daggons Road. However, the need for project-specific assessment work if proposals to continue west is identified in the Neighbourhood Plan. If The Trailway is to be extended beyond this point then a project level Habitats Regulations Assessment would need to be undertaken demonstrating that the impacts of any potential increase in recreational footprint on the Dorset Heathlands could be adequately mitigated and would not result in an adverse effect on the integrity of the Habitats Site.

6.36 Since there is no actual proposal in Policy 9 to extend the Trailway west unless an HRA can confirm no adverse effect on integrity will result, it is considered that the amended text/ recommendation, and the confirmation from Natural England that this is adequate to alleviate their concerns, means there will be no adverse effects from recreational pressure on the integrity of the Dorset Heathlands as a result of the Alderholt NP either alone or in combination with other plans or projects.

Avon Valley SPA/ Ramsar

6.37 The Site Improvement Plan (SIP185)[97] specifically identifies recreational disturbance as being a result of *'Dog walkers disturbing wildfowl in areas outside public rights of way'.* Studies have shown that even dogs restrained on leads can disturb birds sufficiently to induce displacement[98].

6.38 The Monitor of Engagement with the Natural Environment (MENE) survey was undertaken between 2009 – 2019 and provides trend data for how people experience the natural environment in England[99].

6.39 The 2018/2019 survey has shown that over 68% of nature visits are taken within 3 km of home, with 17% within 3 – 8 km and 16% 9+km. Over 10 years

[97] Available at: https://publications.naturalengland.org.uk/publication/6133502894407680
[98] Available at: https://www.researchgate.net/publication/6055768_Four-legged_friend_or_foe_Dog_walking_displaces_native_birds_from_natural_areas/link/54dc75c20cf23fe133b18510/download
[99] Available at: https://assets.publishing.service.gov.uk/media/5d6cd601e5274a170c435365/Monitor_Engagement_Natural_Environment_2018_2019_v2.pdf

the average distance travelled by car decreased from 10.9 km to 7.8 km and the number of destinations reached on foot has increased from 61% to 64%.

6.40 On average dog owners are more likely to take more frequent visits to the natural environment than the rest of the population. Dogs are a motivation to visit the natural environment and 68% of us visit with dogs compared to 58% of people without a dog.

6.41 It is understood that Natural England has not previously been concerned about recreational pressure on this site arising from development, due in part to very limited public access. The gadwall population for which the SPA is also designated is focussed on Blashford Lakes Gravel Pits which is managed as a nature reserve so access is controlled.

6.42 The New Forest Local Plan HRA concluded *'The HRA therefore assumed that recreational users of the Avon Valley are overwhelmingly local and that a potential for a contribution to in combination recreational pressure on the Bewick's swan population only exists for any residential development or visitor accommodation within 1.0 km of Avon Valley SPA and Ramsar site. This approach was agreed with Natural England via the HRA Scoping Report, HRA Discussion Document, and associated consultation described earlier.'*

6.43 The Alderholt NP boundary is 1.6km from the Avon Valley SPA/ Ramsar, with the closest allocated site being beyond that. Based on the 1km distance discussed above it can be concluded that there will be no adverse effects of the Plan on the integrity of the Avon Valley SPA/ Ramsar either alone or in combination with other plans or projects.

New Forest SPA/ Ramsar/ SAC

6.44 The site allocations put forward in Policies 12, 13 and 14 are all well within the 13.8km zone of influence for development and could therefore result in an increase in recreational pressure, both alone and in combination, on the New Forest Habitat sites.

6.45 The New Forest National Park Recreation Management Strategy 2010 - 2030[100] set out a long-term vision for how recreation will be managed and promoted in the New Forest National Park, which encompasses the New Forest Habitat sites, over the next 20 years. In 2020 this was updated in the Mitigating Recreational Impacts on New Forest Designated Sites SPD[101]. In 2023, the New Forest SAMMS was published[102].

6.46 The Strategy and the SPD identify a series of actions for the National Park Authority and key partners. These are designed to improve and develop the way in which recreation contributes to the sustainability and well-being of the New Forest National Park and all those people who live and work here - as well as for those people who come to visit and enjoy its special qualities. All documents have been developed through extensive consultation and discussion with partners and interested groups and has been shaped by the views of the public.

[100] Available at: https://www.newforestnpa.gov.uk/documents/recreation-management-strategy-steering-group/recreation-management-strategy-2/
[101] https://www.newforestnpa.gov.uk/app/uploads/2020/07/Revised-Habitat-Mitigation-Scheme-SPD-.pdf
[102] Available at New-Forest-SAMM-report-Footprint-Ecology.pdf (newforestnpa.gov.uk) [07/05/2024]

6.47 A series of priority actions are outlined which address some of the major challenges facing the National Park. These are grouped around the following key themes:

- **Active engagement** with users, land managers and providers of recreation to further the first and second purposes of the National Park.
- Appropriate communication structures and events will be set up, as required, to enable **active discussion** between user groups, land managers and recreation providers to address matters of conflict (actual or perceived) and mutual interest.
- **A programme of survey and research** will be implemented to inform future discussions and decisions about the management of recreation. The Strategy will be reviewed after five years in the light of this evidence.
- **The majority of recreational activity will be focussed on gateway locations**. The potential for enhancing facilities within the New Forest National Park will be explored at these sites and around a core network of sustainable access routes.
- **The provision of new areas of green infrastructure** will absorb the anticipated growth in levels of recreational demand from new housing and increased populations in adjacent urban areas. This will be achieved by working with neighbouring Authorities to improve the provision of new and enhanced facilities within or close to the growth areas.
- **Capacity for further growth in visitor numbers within the National Park will be managed** by having a maximum number of car park spaces and limiting the provision of new facilities outside villages.

6.48 For actions within the Park Recreation Management Strategy that require additional funding external contributions may be required as set out in the New Forest SAMMS. It was therefore recommended that the following policy wording be added ***'All net new housing in the Neighbourhood Plan area may need to make a financial contribution to delivery of the New Forest Recreation Management Strategy, or appropriate mitigation measures as outlined in the New Forest National Park Revised Habitat Mitigation Scheme. This will need to be determined in discussion with Dorset Council as competent authority.'*** This text has been added to Policy 7 and to supporting text.

6.49 Dorset Council when initially consulted on this HRA noted that there was a SAMM strategy for the New Forest in development. The New Forest SAMMS report[103] has now been published. Therefore it is appropriate for the recommended wording above to be amended to *'… as outlined in the New Forest National Park Revised Habitat Mitigation Scheme* ***or any alternative mitigation strategy devised for the site'***. This would cover the SAMM report or any later replacement.

6.50 With that wording in place, the Neighbourhood Plan will contain a sufficient policy framework to protect the New Forest Habitat sites from recreational

[103] Available at New-Forest-SAMM-report-Footprint-Ecology.pdf (newforestnpa.gov.uk) 07/05/2024]

pressure such that no adverse effect on the integrity of the SAC/SPA would arise either alone or in combination with other plans or projects.

Noise and Visual Disturbance

Avon Valley SPA/ Ramsar

6.51 The site allocations put forward in Policies 12, 13 and 14 are all within the maximum core foraging range of 10km for Bewick's swan. While the development sites themselves are unsuitable for birds associated with the Avon Valley SPA/Ramsar site, review of aerial photography shows suitable foraging habitat adjacent to and in the wider area surrounding the allocated sites.

6.52 Bewick's swan are winter visitors, typically arriving in October and depart through March, therefore construction works carried out during this time could potentially be disturbing to foraging Bewick's swan.

6.53 It was recommended that the following text (or similar) is inserted into the Neighbourhood Plan: ***'To meet the requirements of the Habitats Directive, developers must provide evidence that proposals will not result in adverse effects on site integrity of the Avon Valley SPA/ Ramsar, either through evidence that the habitat is unsuitable, or through the provision of overwintering bird surveys and if necessary appropriate mitigation to reduce noise and visual disturbance.'*** Text intended to address this recommendation has been added to Policy 7 of the submission Neighbourhood Plan. The text is quoted in full in paragraph 6.56. This will ensure that a sufficient policy framework exists to ensure no adverse effect on the integrity of the SPA/Ramsar.

Loss of Functionally Linked Habitat

Dorset Heathlands SPA/ Ramsar

6.54 Policy 14. Land south of Blackwater Grove is allocated for 15 – 20 dwellings and is approximately 3.6ha in size. Review of aerial photography shows the site comprises rough grassland, scrub and trees which could provide suitable foraging habitat for hen harrier.

6.55 Natural England has published guidance on Impact Risk Zones (IRZs) for SSSIs[104] (the individual management constituents of Habitat sites). The guidance note specifies the impact distances of different types of development (e.g. rural residential development) as well as the extent to which different bird populations depend on functionally linked habitat. Functional habitat linkage may extend up to the maximum foraging distance for designated species, however it should be noted that the number of birds foraging in off-site habitats will decrease with distance from the designated site boundary.

6.56 A review of the IRZ guidance note highlights that the Dorset Heathlands SPA/ Ramsar is designated for species that may forage in lowland farmland at some distance from the site boundary, specifically non-breeding hen harrier.

[104] Guidance document available at: https://s3.eu-west-1.amazonaws.com/data.defra.gov.uk/Natural_England/Designations/SSSI_Impact_Risk_Zones/SSSI+IRZ+User+Guidance+v4.1+COMBINED+7Mar2023.pdf

6.57 To address the disturbance issue (for non-breeding Bewick swan) and the loss of functionally linked land issue (for hen harrier) the group have added the following wording to Policy 7 (Meeting Local Needs: Housing) of the Neighbourhood Plan: '*Developers must provide evidence that housing and associated development on greenfield sites will not result in adverse effects on site integrity of the Avon Valley SPA/ Ramsar, which may occur through disturbance to Bewick's swan if using adjacent habitats, or Dorset Heathlands SPA through direct loss of the habitats which may be favoured by the hen harrier. This can be done either through evidence that the habitat is unsuitable, or through the provision of overwintering bird surveys and if necessary appropriate mitigation to reduce habitat loss, noise and visual disturbance'.*

6.58 Overall, it is considered that with this amendment to the policy in place, there will be no adverse effects from recreational pressure on the integrity of the Dorset Heathlands as a result of the Alderholt NP.

Air Quality

6.59 The test of likely significant effects concluded that although the Alderholt NP is unlikely to cause significant effects with regards to air quality alone, there is a linking impact pathway in combination. In other words, there is a main road within 200 m of a component part of the SAC or Ramsar site and therefore the potential to cause a likely significant effect in combination with other plans and projects. The following Habitat sites have been screened in for air quality impacts:

- Dorset Heaths SAC and Dorset Heathlands Ramsar; and
- New Forest SAC/ Ramsar

6.60 The Christchurch and East Dorset Local Plan (adopted 2014) intends to deliver about 8,490 net new dwellings between 2013 – 2028, which could increase the number of car journeys past the above Habitat sites and given that the sites are above their critical nitrogen deposition loads, this has the potential to cause an impact on the integrity of the Habitat sites.

6.61 Policy KS2 Settlement Hierarchy, Alderholt is recognised as a 'Rural Service Centre' i.e., a *'Main providers for the rural areas where residential development will be allowed of a scale that reinforces their role as providers of community, leisure and retail facilities to support the village and adjacent communities.'*

6.62 The 'vision' for Alderholt in the Emerging Dorset Local Plan states '*Due to the relatively unconstrained nature of Alderholt, there is the opportunity for a level of development that could alter significantly the way the settlement functions'*. The plan also states in paragraph 18.4.1 *'Small-scale development at Alderholt could be allocated aimed at meeting the needs of the existing settlement over the plan period. It is estimated that this need would be for approximately 300 new homes over the plan period, along with improved community facilities. The delivery of this level of development could be helped through the preparation of a neighbourhood plan.'* The number of new homes proposed in the Alderholt NP is well below this figure, at 55 new dwellings.

6.63 However, the Adopted Local Plan has undertaken a Habitats Regulations Assessment of its own[105] which concluded no LSE with mitigation measures in place. This was ensured by including several policies within the Plan aimed at restricting and mitigating air quality impacts:

- *Core Strategy objectives and policies which seek to restrict emissions from transport (Objectives and 6 and policy KS9) should help to mitigate potential impacts on the above sites resulting from air pollution. In addition, the LTP3 policy LTP F-5 (air quality and noise) requires authorities to work with environmental health officers to monitor, manage and mitigate the impacts of air pollution from transport and policy LTP N-8 (design and construction of major infrastructure) refers to the need to avoid impacts on Natura 2000 sites. Policy LTP GEN-3 states that the LTP3 will seek to develop transport improvements in ways that minimise environmental impacts and avoid negative impacts on the conservation objectives of environmental designations, including European sites. In addition, transport proposals (whether part of the LTP or the Core Strategy) fall under the requirements of Part IV of the Habitats Regulations, and would therefore need to be assessed at the project stage.'*

6.64 In March 2021, the Dorset Heathlands Interim Air Quality Strategy (Phase 2: Interim Measures for 2020 – 2025) [106] was published. The document agrees a strategic approach between Bournemouth, Christchurch and Poole Council, Dorset Council and Natural England to address sources of airborne nitrogen pollution in the vicinity of the Dorset Heathlands by contributing to meeting the Conservation Objectives for air quality, and in doing so, facilitating delivery of planned development.

6.65 The Dorset Heathlands Air Quality Strategy is being delivered in three phases. Phase 1 (2015 to 2020) implemented projects that have air quality benefits stemming from projects implemented for other reasons. Phase 2 (2020 to 2025) delivers projects ahead of the preparation of the formal Local Plan. Phase 3 (2025 onwards) will provide projects that area aligned to new policies set out in the Dorset County Local Plan. Types of measures included in Phase 2 include measures directly targeting vehicle emissions adjacent to heathland, including modal shift towards more sustainable modes of transport, reducing vehicle speeds adjacent to the heathlands, encouraging zero emissions vehicles and heathland management along roads. The strategy also looks at wider issues relating to nitrogen inputs from agricultural land and other certain activities that emit nitrogen near to the heathlands. Monitoring of heathland habitat will also take place to inform management. This is funded by the Communities Infrastructure Levy that is funded by developer contributions (currently set at £50 per dwelling (subject to change). Any development that comes forward will be subject to Dorset's Community Infrastructure Levy.

6.66 The emerging draft Dorset Local Plan went to consultation in 2021. This draft Local Plan includes policy text that states: "*ENV2: Habitats and species. International and European sites. Proposals for development must not adversely affect the integrity of International or European sites either alone or*

[105] Available at: https://www.dorsetcouncil.gov.uk/documents/35024/308866/Habitats+Regulations+Assessment.pdf/d365fe1c-2d39-9cb4-0e0f-38be3c8ccb72
[106] Available at d82e7a73-ee8c-cace-dbc7-74d2446ea456 (dorsetcouncil.gov.uk) [accessed 08/05/2024]

in-combination with other plans and projects… In relation to Dorset Heaths SAC, Dorset Heaths (Purbeck and Wareham) and Studland Dunes) SAC and Dorset Heathlands SPA/Ramsar, contributions from development within 5km of the heathland designations towards the sustainable management of the heathland sites."

6.67 However, it is noted that the Emerging Dorset Local Plan has yet to be adopted and therefore does not constitute formal policy. Moreover, policy ENV2 is a broad policy that does not explicitly reference the need for adherence to any iteration of the Dorset Heathlands Air Quality Strategies (Phase 1, 2 or 3). Furthermore, the current Local Plan (the East Dorset Local Plan) was adopted prior to any Dorset Heathlands Air Quality Strategy being adopted and therefore also does not reference the need for adherence to the Dorset Heathland Air Quality Strategy. However, the Air Quality Strategy is listed on Dorset Council's website and as such will be taken into account when the LPA consider any individual planning applications.

6.68 **Therefore, for full robustness it is recommended that the Aderholt Neighbourhood Plan is amended to explicitly mention the need for any new development to accord with the Dorset Heathland Air Quality Strategy**. With the inclusion of this provision, it can be concluded that the Alderholt Neighbourhood Plan (combined with the Dorset Council Council's supporting strategies – i.e. the Dorset Heathlands Air Quality Strategy) provides a sufficient policy framework to ensure the NP will not contribute to a significant adverse effect on the integrity of any Dorset heathland Habitats Sites with regards to air quality either alone or in-combination with other plans and projects.

Water Quality

River Avon SPA/ Ramsar/ SAC

6.69 As the quantum of development to be provided by the Alderholt NP is below that specified in Emerging Dorset Local Plan impact pathways relating to increase water demand provided by the additional business/housing, that could result in an increase in water abstraction and increased effluent will be addressed at a higher tier level within the Adopted Local Plan.

6.70 On 16th March 2022 a letter was sent to Chief Planners by Natural England[107] which identified Habitat sites where a new requirement for nutrient neutrality had been identified. Natural England's advice to planners is that the affected Habitat sites are suffering from excessive nutrient enrichment (known as hypernutrification) and this is resulting in negative effects on the interest features of the sites, such as through smothering macroalgal growth, a process called eutrophication. In Table 1 of the River Avon SAC is identified to be suffering from excessive phosphorus levels.

6.71 In Natural England's view any further 'in combination' release of nutrients from development, through discharge of treated sewage effluent, will contribute to the continuing failure of the SPA/SAC to achieve its conservation objectives. This is an important consideration since a plan cannot legally be adopted, or a project consented, if it will have an adverse effect on the integrity of a Habitat

[107] Available at: https://publications.naturalengland.org.uk/publication/4792131352002560

site 'in combination' with other plans and projects. While the amount of growth in the Neighbourhood Plan is relatively small it is nonetheless captured by the new requirement to undertake calculations to determine if the growth it is allocating is likely to be nutrient neutral.

6.72 Using the nutrient neutrality calculator tool provided by Natural England[108] for the River Avon SAC, the 55 dwellings allocated in the Neighbourhood Plan would result in a net surplus of 6.25 kg/yr phosphorus. Therefore, offsetting or mitigation for this net increase would be required. Note that due to the early stage of development proposals on these sites assumptions have been made in this HRA to derive the above figures for phosphorus surplus. As such, the calculations would need repeating for each planning application.

6.73 It is also necessary for the Neighbourhood Plan to contain a sufficient policy framework is in place to ensure planning applications for the allocated sites can demonstrate they can achieve nutrient neutrality through mitigation if necessary, in order to gain Neighbourhood Plan support. **Therefore, in the HRA of the Regulation 14 Neighbourhood Plan it was recommended that a new policy requirement should be added to Policy 7 of the Neighbourhood Plan which states that '*All developments will need to demonstrate nutrient neutrality for phosphorus in relation to the River Avon SAC. This should be done through using the Natural England River Avon nutrient budget calculator, and securing the delivery of offsetting measures as necessary to achieve neutrality*.'** This text has now been added to the submission Neighbourhood Plan.

6.74 With that requirement in place, the Neighbourhood Plan will contain a sufficient policy framework to protect the SAC/SPA from nutrient pollution and ensure no adverse effect on integrity either alone or in combination with other plans or projects.

[108] Available at: Nutrient Neutrality - Dorset Council

7. Conclusions

7.1 The Alderholt Neighbourhood Plan (CBNP) has a total of 19 policies. Of these policies four in the Regulation 14 draft had the potential to cause a likely significant effect and were discussed with regards to their impacts upon Habitat sites. These were:

- **Policy 9. The Trailway** - the dismantled railway corridor will be protected, and the provision of a recreational trailway along (or where this is not practicable, closely aligned) to its route will be supported.
- **Policy 12. Alderholt Nursery, East of Ringwood Road** – the site is allocated for about 20 dwellings.
- **Policy 13. Paddock South of Daggons Road** – the site is allocated for about 15 dwellings and at least 0.2ha of employment land.
- **Policy 14. Land south of Blackwater Grove** – the site is allocated for about 15 – 20 dwellings and 2ha of accessible greenspace.

7.2 The test of likely significant effects focused on the above policies with regards to the vulnerabilities of the Habitat sites within Table 1. The impact pathways relating to the Habitat sites vulnerabilities are listed below:

- Recreational pressure;
- Noise and visual disturbance;
- Urban impacts;
- Loss of functionally linked habitat;
- Atmospheric pollution/ air quality;
- Water resources; and
- Water quality.

7.3 The policies were found to have a potential likely significant effect upon the Habitat sites within Table 1 with regards to the following impact pathways; recreational pressure, noise and visual disturbance, loss of functionally linked habitat; air quality; and water quality in combination with other plans and projects. These pathways and the policies were discussed within the Appropriate Assessment.

7.4 The overarching Local Plan – Christchurch and East Dorset (2014) was considered to provide protective policies (e.g. Policy ME1 Safeguarding Biodiversity and Geodiversity) for Habitat sites. As the Alderholt NP is required to comply with policies within the Local Plan it could be concluded that the Alderholt NP would not adversely impact Habitat sites either alone or in-combination with other plans and projects.

7.5 However, policy wording recommendations were made to cover recreational pressure, noise and visual disturbance and loss of functionally linked habitat, air quality and water quality. As a result of the changes made for the submission Neighbourhood Plan it can be concluded that a sufficient policy

framework exists to ensure no adverse effect on integrity of any Habitats Sites either alone or in combination with other projects or plans.

Appendix A - Habitat Sites Background

A.1 Dorset Heathlands SPA/Ramsar and Dorset Heaths SAC

Qualifying Features

7.6 With regards to the SPA[109]:

- Hen harrier *Circus cyaneus* (non-breeding)
- Merlin *Falco columbarius* (non-breeding)
- Nightjar *Caprimulgus europaeus* (breeding)
- Woodlark *Lullula arborea* (breeding)
- Dartford warbler *Sylvia undata* (breeding)

7.7 With regards to the SAC[110]:

- Northern Atlantic wet heaths with *Erica tetralix*; Wet heathland with cross-leaved heath
- European dry heaths
- Molinia meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*); Purple moor-grass meadows
- Depressions on peat substrates of the *Rhynchosporion*; Depressions on peat substrates
- Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae*; Calcium-rich fen dominated by great fen sedge (saw sedge)*
- Alkaline fens; Calcium-rich spring-water-fed fens
- Old acidophilous oak woods with *Quercus robur* on sandy plains; Dry oak-dominated woodland

7.8 Annex I priority habitats are denoted by an asterisk (*).

- Southern damselfly *Coenagrion mercuriale*
- Great crested newt *Triturus cristatus*

7.9 With regards to the Ramsar[111]:

- Ramsar Criterion 1:

[109] Available at: https://publications.naturalengland.org.uk/publication/5808199001178112
[110] Available at: https://publications.naturalengland.org.uk/publication/5711678738006016
[111] Available at: https://jncc.gov.uk/jncc-assets/RIS/UK11021.pdf

  - Contains particularly good examples of (i) northern Atlantic wet heaths with cross-leaved heath *Erica tetralix* and (ii) acid mire with *Rhynchosporion.*
  - Contains the largest example in Britain of southern Atlantic wet heaths with Dorset heath *Erica ciliaris* and cross-leaved heath *Erica tetralix*.

- Ramsar Criterion 2:
  - Supports 1 nationally rate and 13 nationally scarce wetland plant species, and at least 28 nationally rare wetland invertebrate species.
- Ramsar Criterion 3:
  - Has a high species richness and high ecological diversity of wetland habitat types and transitions and lies in one of the most biologically-rich wetland areas of lowland Britain, being continuous with three other Ramsar sites: Pool Harbour, Avon Valley and The New Forest.

Conservation Objectives

7.10 With regard to the SPA[112] and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change.

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

- The extent and distribution of the habitats of the qualifying features
- The structure and function of the habitats of the qualifying features
- The supporting processes on which the habitats of the qualifying features rely
- The population of each of the qualifying features, and,
- The distribution of the qualifying features within the site.

7.12 With regard to the SAC[113] and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed above), and subject to natural change.

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

- The extent and distribution of qualifying natural habitats and habitats of qualifying species
- The structure and function (including typical species) of qualifying natural habitats

[112] Available at: https://publications.naturalengland.org.uk/publication/5808199001178112
[113] Available at: https://publications.naturalengland.org.uk/publication/5711678738006016

- The structure and function of the habitats of qualifying species
- The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely
- The populations of qualifying species, and,
- The distribution of qualifying species within the site.

Current Pressures and Threats

7.14 The Site Improvement Plan[114] identifies the following pressures and threats to the SPA/ SAC:

- Inappropriate scrub control
- Public access/disturbance
- Under-grazing
- Forestry and woodland management
- Drainage
- Water pollution
- Invasive species
- Habitat fragmentation
- Conflicting conservation objectives
- Wildfire/arson
- Air quality
- Deer
- Inappropriate habitat management
- Inappropriate illumination
- Pest control
- Changes in hydrology

7.15 The Site Improvement Plan (2014) should be read in conjunction with the Supplementary Advice on Conservation Objectives (2017)[115].

7.16 The Information Sheet on Ramsar Wetlands (RIS)[116] does not identify any additional threats and pressures.

[114] Available at: https://publications.naturalengland.org.uk/publication/5181909839642624
[115] Available at: https://publications.naturalengland.org.uk/publication/5808199001178112
[116] Available at: https://jncc.gov.uk/jncc-assets/RIS/UK11005.pdf

A.2 Avon Valley SPA/ Ramsar

Qualifying Features

7.17 With regards to the SPA[117]:

- Bewick's swan *Columbianus bewickii*
- Gadwall *Anas strepera*

7.18 With regards to the Ramsar[118]:

- Ramsar Criterion 1:
    - The site shows a greater range of habitats than any other chalk river in Britain, including fen, mire, lowland wet grassland and small areas of woodland.
- Ramsar Criterion 2:
    - The site supports a diverse assemblage of wetland flora and fauna including several nationally rare species.
- Ramsar Criterion 6:
    - Species / populations with peak counts in winter occurring at levels of international importance:
        - Gadwall *Anas strepera*
        - Northern pintail
        - Black-tailed godwit *Limosa limosa islandica*

Conservation Objectives[119]

7.19 With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed above), and subject to natural change.

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

- The extent and distribution of the habitats of the qualifying features
- The structure and function of the habitats of the qualifying features
- The supporting processes on which the habitats of the qualifying features rely
- The population of each of the qualifying features, and,
- The distribution of the qualifying features within the site.

[117] Available at:
[118] Available at: https://jncc.gov.uk/jncc-assets/RIS/UK11005.pdf
[119] Available at: https://publications.naturalengland.org.uk/publication/5741820348727296

Current Pressures and Threats

7.21 The Site Improvement Plan[120] identifies the following pressures and threats to the SPA:

- Water pollution
- Changes in species distributions
- Public access/ disturbance
- Inappropriate weed control
- Change in land management
- Habitat fragmentation

7.22 The Information Sheet on Ramsar Wetlands (RIS)[121] identifies the following additional factors (past, present or potential) adversely affecting the site's ecological character:

- Drainage/land-claim for agriculture
- Sedimentation/siltation
- Introduction/invasion of non-native plant species

A.3 River Avon SAC

Qualifying Features

7.23 Qualifying habitats[122]:

- Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation. (Rivers with floating vegetation often dominated by water-crowfoot)

7.24 Qualifying species:

- Bullhead *Cottus gobio*
- Brook lamprey *Lampetra planeri*
- Sea lamprey *Petromyzon marinus*
- Atlantic salmon *Salmo salar*
- Desmoulin's whorl snail *Vertigo moulinsiana*

Conservation Objectives[123]

7.25 With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed above), and subject to natural change.

[120] Available at: https://publications.naturalengland.org.uk/publication/6133502894407680
[121] Available at: https://jncc.gov.uk/jncc-assets/RIS/UK11005.pdf
[122] Available at: https://publications.naturalengland.org.uk/publication/6048472272732160
[123] Available at: Ibid

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

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

Current Pressures and Threats

7.27 The Site Improvement Plan[124] identifies the following pressures and threats to the SAC:

- Physical modification
- Siltation
- Water pollution
- Water abstraction
- Changes in species distributions
- Invasive species
- Hydrological changes
- Inappropriate weed control
- Habitat fragmentation

A.4 New Forest SPA/ Ramsar/ SAC

Qualifying Features

7.28 With regards to the SPA[125]

- Nightjar *Caprimulgus europaeus* (breeding)
- Hen harrier *Circus cyaneus* (wintering)
- Hobby *Falco subbuteao* (breeding)
- Woodlark *Lullula arborea* (breeding)

[124] Available at: https://publications.naturalengland.org.uk/publication/6133502894407680
[125] Available at: https://jncc.gov.uk/jncc-assets/SPA-N2K/UK9011031.pdf

- Honey buzzard *Pernis apivorus* (breeding)
- Wood warbler *Phylloscopus sibilatrix* (breeding)
- Dartford warbler *Sylvia undata* (breeding)

7.29 With regards to the Ramsar[126]:

- Ramsar Criterion1:
  - Valley mires and wet heaths are found throughout the site and are of outstanding scientific interest. The mires and heaths are within catchments whose uncultivated and undeveloped state buffer the mires against adverse ecological change. This is the largest concentration of intact valley mires of their type in Britain.
- Ramsar Criterion 2:
  - The site supports a diverse assemblage of wetland plants and animals including several nationally rare species. Seven species of nationally rare plant are found on the site, as are at least 65 British Red Data Book species of invertebrate.
- Ramsar Criterion 3:
  - The mire habitats are of high ecological quality and diversity and have undisturbed transition zones. The invertebrate fauna of the site is important due to the concentration of rare and scare wetland species. The whole site complex, with its examples of semi-natural habitats is essential to the genetic and ecological diversity of southern England.

7.30 With regards to the SAC[127]:

- Alkaline fens. (Calcium-rich spring-water-fed fens)
- Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae).* (Alder woodland on floodplains)*
- *Asperulo-Fagetum* beech forests. (Beech forests on neutral to rich soils)
- Atlantic acidophilous beech forests with *Ilex* and sometimes also *Taxus* in the shrub-layer (*Quercion robori-petraeae* or *Ilici-Fagenion*). (Beech forests on acid soils)
- Bog woodland*
- Depressions on peat substrates of the *Rhynchosporion*
- European dry heaths
- *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*). (Purple moor-grass meadows)

[126] Available at: https://jncc.gov.uk/jncc-assets/RIS/UK11047.pdf
[127] Available at: https://publications.naturalengland.org.uk/publication/5727577884852224

- Northern Atlantic wet heaths with *Erica tetralix*. (Wet heathland with cross-leaved heath)
- Old acidophilous oak woods with *Quercus robur* on sandy plains. (Dry oak-dominated woodland)
- Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or of the *Isoeto-Nanojuncetea*. (Clear-water lakes or lochs with aquatic vegetation and poor to moderate nutrient levels)
- Oligotrophic waters containing very few minerals of sandy plains: *Littorelletalia uniflorae.* (Nutrient-poor shallow waters with aquatic vegetation on sandy plains)
- Transition mires and quaking bogs. (Very wet mires often identified by an unstable 'quaking' surface)

7.31 Annex I priority habitats are denoted by an asterisk (*).

- Great crested newt *Triturus cristatus*
- Southern damselfly *Coenagrion mercuriale*
- Stag beetle *Lucanus cervus*

Conservation Objectives

7.32 With regard to the SPA[128] and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed above), and subject to natural change.

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

- The extent and distribution of the habitats of the qualifying features
- The structure and function of the habitats of the qualifying features
- The supporting processes on which the habitats of the qualifying features rely
- The population of each of the qualifying features, and,
- The distribution of the qualifying features within the site.

7.34 With regard to the SAC[129] and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed above), and subject to natural change.

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

[128] Available at: https://publications.naturalengland.org.uk/publication/5816333400801280
[129] Available at: https://publications.naturalengland.org.uk/publication/5727577884852224

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

Current Pressures and Threats

7.36 The Site Improvement Plan[130] identifies the following pressures and threats to the SPA/ SAC:

- Drainage
- Inappropriate scrub control
- Fish stocking
- Deer
- Air Pollution: impact of atmospheric nitrogen deposition
- Public access/ disturbance
- Change in land management
- Changes in species distributions
- Water pollution
- Forestry and woodland management
- Inappropriate ditch management
- Invasive species
- Vehicles
- Inappropriate cutting/ mowing
- Direct impact from 3rd party

7.37 The Information Sheet on Ramsar Wetlands (RIS)[131] does not identify any additional threats and pressure

[130] Available at: https://publications.naturalengland.org.uk/publication/5174614971908096
[131] Available at: https://jncc.gov.uk/jncc-assets/RIS/UK11047.pdf

Appendix B Policy Screening

Table 8. Alderholt Neighbourhood Plan Policy Screening based on the policies as presented in the Regulation 14 Neighbourhood Plan

Policy Name	Brief Policy Description	Potential Likely Significant Effect?
General Design Guide		
Policy 1. Settlement pattern, layout and densities	This policy relates to the pattern, layout and density of residential developments that would be supported.	**No likely significant effects.** The policy is a development management policy and does not allocate specific sites for development. There are no pathways linking this policy to any Habitat sites.
Policy 2. People-friendly streets and paths	This policy sets out the measures to be included to ensure that streets and paths within the village are designed to provide direct and attractive routes between neighbouring streets and local facilities for pedestrians and cyclists.	**No likely significant effects.** The policy is a development management policy. There are no pathways linking this policy to any Habitat sites.
Policy 3. Parking Provision	This policy relates to the design and provision of parking within the developments, including provision of parking and storage for bicycles.	**No likely significant effects.** The policy is a development management policy. There are no pathways linking this policy to any Habitat sites.
Policy 4. Respecting local character in the design	This policy relates to conserving and enhancing the distinctive local character and heritage of the village, with particular consideration given to the building form, design and colour palette in its immediate context and in the wider Character Area.	**No likely significant effects.** The policy is a development management policy. There are no pathways linking this policy to any Habitat sites.
Policy 5. Environmental performance and sustainability	This policy sets out the measures to be included to ensure new buildings are energy efficient with low carbon heating.	**No likely significant effects.** The policy is a development management policy. There are no pathways linking this policy to any Habitat sites.
Policy 6. Landscaping	This policy relates to sensitive landscaping and ensuring ensure that the biodiversity net gain and rural character of the area is maintained for the	**No likely significant effects.**

Policy Name	Brief Policy Description	Potential Likely Significant Effect?
	lifetime of that development.	The policy is a development management policy. There are no pathways linking this policy to any Habitat sites.
Future Development Areas		
Policy 7. Meeting Local Needs - Housing	This policy relates to the type and size of dwellings that would be supported. This policy highlights that some development brought forward will require their own assessment and that residential developments must satisfy the requirements of the Dorset Heathlands SPD.	**No likely significant effects.** The policy is a development management policy and does not allocate specific sites for development. There are no pathways linking this policy to any Habitat sites.
Policy 8. The Village "High Street"	This policy relates to design specifications of development on the road frontage within the Village High Street.	**No likely significant effects.** The policy is a development management policy. There are no pathways linking this policy to any Habitat sites.
Policy 9. The Trailway	The dismantled railway corridor will be protected, and the provision of a recreational trailway along (or where this is not practicable, closely aligned) to its route will be supported.	**Potential likely significant effects.** A section of the dismantled railway runs directly through The Dorset Heathlands SPA/ Ramsar and Dorset Heaths SAC. The provision of a recreational trailway has the potential to result in the following adverse effects on Habitat sites: • Public access and disturbance • Urban impacts
Policy 10. Meeting Local Needs - Employment	This policy sets out the criteria that the development of employment sites must meet.	**No likely significant effects.** The policy is a development management policy and does not have any linking impact pathways.
Policy 11. Revised Village Envelope	The village envelope boundary, which defines the extent of the village (in policy terms) and the wider countryside including the smaller hamlets, has been updated.	**No likely significant effects.** The policy is a development management policy and does not have any linking impact pathways.

Policy Name	Brief Policy Description	Potential Likely Significant Effect?
Policy 12. Alderholt Nursery, East of Ringwood Road	This site has been allocated for the development of about 20 dwellings.	**Potential likely significant effects.** This policy identifies the location and quantum of development and has the potential to result in the following adverse effects on Habitat sites: • Public access and disturbance • Noise and visual disturbance • Urban impacts • Loss of functionally linked habitat • Changes in air quality • Changes in water quality and quantity
Policy 13. Paddock South of Daggons Road	This site has been allocated for the development of about 15 dwellings and at least 0.2ha of employment land.	**Potential likely significant effects.** This policy identifies the location and quantum of development and has the potential to result in the following adverse effects on Habitat sites: • Public access and disturbance • Noise and visual disturbance • Urban impacts • Loss of functionally linked habitat (nightjar) • Changes in air quality • Changes in water quality and quantity
Policy 14. Land south of Blackwater Grove	This site has been allocated for the development of about 15 - 20 dwellings and accessible greenspace.	**Potential likely significant effects.** This policy identifies the location and quantum of development and has the potential to result in the following adverse effects on Habitat sites: • Public access and disturbance

Policy Name	Brief Policy Description	Potential Likely Significant Effect?
		• Noise and visual disturbance • Urban impacts • Loss of functionally linked habitat (nightjar and hen harrier) • Changes in air quality • Changes in water quality and quantity
Safeguarded Areas and Features		
Policy 15. Safeguarding Local Facilities	This policy aims to avoid the loss of retail premises, leisure and other local facilities.	**No likely significant effects.** The policy is a safeguarding policy and does not have any linking impact pathways.
Policy 16. Important Local Green Spaces	This policy identifies 12 areas that are designated as Local Green Spaces and are to be protected from inappropriate development.	**No likely significant effects.** The policy is a safeguarding policy and does not have any linking impact pathways.
Policy 17. Key landscape features	This policy identifies specific landscape features that should be protected and, where appropriate and practicable, reinforced:	**No likely significant effects.** The policy is a safeguarding policy and does not have any linking impact pathways.
Policy 18. Important Views	This policy identifies important views that are to be respected. Development that would significantly intrude and impact on their enjoyment, by virtue of scale, massing, design or location, will be resisted.	**No likely significant effects.** The policy is a safeguarding policy and does not have any linking impact pathways
Policy 19. Non-designated Heritage Assets around Alderholt	This policy states that Development should conserve and respect the contribution made by the non-designated historic buildings and features to the character of the area, taking into account the balanced judgement required under national policy[132]	**No likely significant effects.** The policy is a safeguarding policy and does not have any linking impact pathways

[132] The NPPF states that, in weighing applications that directly or indirectly affect non-designated heritage assets, a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset. This can be found in paragraph 203 of the September 2023 NPPF.

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