

Milborne St Andrew Neighbourhood Plan Habitats Regulations Assessment

Milborne St Andrew Parish Council

27 March 2019

Quality information

Prepared by

Isla Hoffmann Heap BSc (Hons)
MCIEEM
Senior Ecologist

Checked by

James Riley

Approved by

James Riley CEnv MCIEEM
Technical Director (Ecology and
Habitats Regulations Assessment)

Revision History

Revision	Revision date	Details	Authorized	Name	Position
0	22/02/2019	Draft report	JR	James Riley	Technical Director
1	05/03/2019	Addressing comments from Natural England	JR	James Riley	Technical Director

Prepared for:

Milborne St Andrew Parish Council

Prepared by:

Isla Hoffmann Heap BSc (Hons) MCIEEM
Senior Ecologist

E: [REDACTED]

AECOM Infrastructure & Environment UK Limited



T: [REDACTED]
aecom.com

© 2019 AECOM Infrastructure & Environment UK Limited. All Rights Reserved.

This document has been prepared by AECOM Infrastructure & Environment UK Limited ("AECOM") for sole use of our client (the "Client") in accordance with generally accepted consultancy principles, the budget for fees and the terms of reference agreed between AECOM and the Client. Any information provided by third parties and referred to herein has not been checked or verified by AECOM, unless otherwise expressly stated in the document. No third party may rely upon this document without the prior and express written agreement of AECOM.

Table of Contents

1. Introduction	6
Background to the Project	6
Legislation	6
Report Layout	7
2. Methodology	8
Introduction	8
A Proportionate Assessment	8
The Process of HRA	9
Task One: Test of Likely Significant Effect	10
Task Two: Appropriate Assessment	10
The Scope	11
The “In Combination” Scope	12
3. Pathways of Impact	13
Disturbance (including urbanisation and recreational pressure)	13
Breeding birds (February to August)	13
Non-breeding birds (September to January)	14
Other activities causing disturbance	15
Mechanical/abrasive damage and nutrient enrichment	17
Urbanisation	18
Loss of Functionally Linked Land Outside of the European Site Boundary	18
Dorset Heathlands SPA/Ramsar	19
Human Induced Changes in Hydrological Conditions	20
Heathland European Sites	20
Coastal European Sites	20
Atmospheric Pollution (Atmospheric Nitrogen Deposition)	21
Local Air Pollution	22
4. Test of Likely Significance	23
Introduction	23
Summary of Test of Likely Significance ‘In combination’	24
Dorset Heaths SAC and Dorset Heathlands SPA/ Ramsar site	24
Disturbance (Recreational Pressure)	25
Atmospheric Pollution	25
Hydrological changes	25
Poole Harbour SPA/Ramsar (including marine component)	26
Disturbance (Recreational Pressure)	26
Atmospheric Pollution	26
Hydrological Changes	27
Summary	27
5. Appropriate Assessment	28
In Combination	28
Disturbance (Recreational Pressure)	28
Hydrological Changes	29
6. Conclusions and Summary of Recommendations	31
Disturbance	31
Hydrological Change	31
Appendix A Figures	32
Appendix B European Designated Sites	33

Appendix C Screening Assessment of the Milborne St. Andrew Neighbourhood
Plan Policies..... 38

Tables

Table 1: Physical Scope of the HRA..... 11
Table 2: Main sources and effects of air pollutants on habitats and species 21

1. Introduction

Background to the Project

- 1.1 AECOM has been appointed by Locality to assist in producing a report to inform North Dorset District Council's Habitats Regulations Assessment (HRA) of the potential effects of Milborne St Andrew Neighbourhood Plan on the Natura 2000 Network and Ramsar sites. The objectives of the assessment are to:
- Identify any aspects of the Neighbourhood Plan that would cause an adverse effect on the integrity of Natura 2000 sites, otherwise known as European sites (Special Areas of Conservation (SACs), Special Protection Areas (SPAs), protected SPAs (pSPAs) and, as a matter of Government policy, Ramsar sites), either in isolation or in combination with other plans and projects; and
 - To advise on appropriate policy mechanisms for delivering mitigation where such effects were identified.
- 1.2 Neighbourhood Plans are required to be in conformity with the relevant Local Plan (North Dorset Local Plan (Part 1)). At the time of writing the North Dorset Local Plan Review - Issues and Options was under development¹. The HRA of the Milborne St Andrew Neighbourhood Plan is required to determine if there are any realistic linking impact pathways present between a European site and the Neighbourhood Plan and where Likely Significant Effects cannot be screened out, an analysis to inform Appropriate Assessment to be undertaken to determine if adverse effects on the integrity of the European sites will occur as a result of the Neighbourhood Plan in isolation or in combination.

Legislation

- 1.3 The need for HRA is set out within Article 6 of the EC Habitats Directive 1992, and interpreted into British law by the Conservation of Habitats & Species Regulations 2017 (as amended) (**Box 1**). The ultimate aim of the Habitats Directive is to “*maintain or restore, at favourable conservation status, natural habitats and species of wild fauna and flora of Community interest*” (Habitats Directive, Article 2(2)). This aim relates to habitats and species, not the European sites themselves, although the sites have a significant role in delivering favourable conservation status. European sites (also called Natura 2000 sites) can be defined as actual or proposed/candidate Special Areas of Conservation (SAC) or Special Protection Areas (SPA). It is also Government policy for sites designated under the Convention on Wetlands of International Importance (Ramsar sites) to be treated as having equivalent status to Natura 2000 sites.

Box 1: The legislative basis for Appropriate Assessment

Habitats Directive 1992

“Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives.”

Article 6 (3)

Conservation of Habitats and Species Regulations 2017 (as amended)

“105-(1) “Where a land use plan is likely to have a significant effect on a European site ... the plan making authority must make an appropriate assessment of the implications for the plan or project in view of that site's conservation objectives... The plan making authority may agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the European site.”

Regulation 105

¹ <https://www.dorsetforyou.gov.uk/planning-buildings-land/planning-policy/north-dorset/local-plan-review/local-plan-review.aspx> [accessed 28/01/2019]

- 1.4 The Habitats Regulations apply the precautionary principle to Natura 2000 sites (SAC and SPA). As a matter of UK Government policy, Ramsar sites are given equivalent status. For the purposes of this assessment candidate SACs (cSACs), proposed SPAs (pSPAs) and proposed Ramsar (pRamsar) sites are all treated as fully designated sites. In this report we use the term “European designated sites” to refer collectively to the sites listed in this paragraph.
- 1.5 Plans and projects can only be permitted having ascertained that there will be no adverse effect on the integrity of the site(s) in question. This is in contrast to the SEA Directive which does not prescribe how plan or programme proponents should respond to the findings of an environmental assessment; merely that the assessment findings (as documented in the ‘environmental report’) should be ‘taken into account’ during preparation of the plan or programme. In the case of the Habitats Directive, plans and projects may still be permitted if there are no alternatives to them and there are Imperative Reasons of Overriding Public Interest (IROPI) as to why they should go ahead. In such cases, compensation would be necessary to ensure the overall integrity of the site network.
- 1.6 There has also been a change (April 2018) as to which stage mitigation can be applied during a Habitats Regulations Assessment. The Court of Justice of the European Union published its ruling in the Case C323/17 (known as ‘People Over Wind’) with regards to the Habitats Directive. This judgement states that the Habitats Directive *“must be interpreted as meaning that, in order to determine whether it is necessary to carry out, subsequently, an appropriate assessment of the implications, for a site concerned, of a plan or project, it is not appropriate, at the screening stage, to take account of the measures intended to avoid or reduce the harmful effects of the plan or project on that site”*.
- 1.7 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.

Report Layout

- 1.8 **Chapter 2** of this report explains the process by which the HRA has been carried out. **Chapter 3** explores the relevant pathways of impact. **Chapter 4** summarises the Test of Likely Significant Effects of the policies and site allocations of the Plan considered ‘alone’ and ‘in-combination’. (The Test of Likely Significant Effects itself is undertaken in **Appendix C**). **Chapter 5** contains the Appropriate Assessment for any linking impact pathways that could not be screened out from potentially resulting in a Likely Significant Effect. **Chapter 6** contains the conclusion and a summary of recommendations.

2. Methodology

Introduction

- 2.1 This section sets out the approach and methodology for undertaking the Habitats Regulations Assessment (HRA). HRA itself operates independently from the Planning Policy system, being a legal requirement of a discrete Statutory Instrument. Therefore there is no direct relationship to the National Planning Policy Framework (NPPF) and the 'Tests of Soundness'.

A Proportionate Assessment

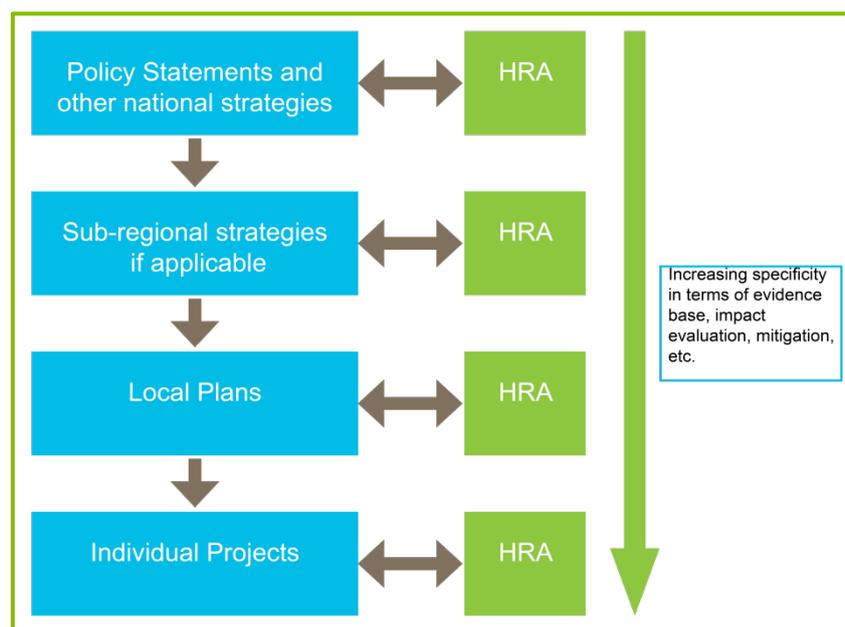
- 2.2 Project-related HRA often requires bespoke survey work and novel data generation in order to accurately determine the significance of effects. In other words, to look beyond the risk of an effect to a justified prediction of the actual likely effect and to the development of avoidance or mitigation measures.
- 2.3 However, the draft DCLG (now MHCLG) guidance² (described in greater detail later in this chapter) makes it clear that when implementing HRA of land-use plans, the Appropriate Assessment (AA) should be undertaken at a level of detail that is appropriate and proportional to the level of detail provided within the plan itself:
- 2.4 *"The comprehensiveness of the [Appropriate] assessment work undertaken should be proportionate to the geographical scope of the option and the nature and extent of any effects identified. An AA need not be done in any more detail, or using more resources, than is useful for its purpose. It would be inappropriate and impracticable to assess the effects [of a strategic land use plan] in the degree of detail that would normally be required for the Environmental Impact Assessment (EIA) of a project."*
- 2.5 More recently, the Court of Appeal³ ruled that providing the Council (competent authority) was duly satisfied that proposed mitigation could be "achieved in practice" then this would suffice to meet the requirements of the Habitat Regulations. This ruling has since been applied to a planning permission (rather than a Plan document)⁴. In this case the High Court ruled that for "a multistage process, so long as there is sufficient information at any particular stage to enable the authority to be satisfied that the proposed mitigation can be achieved in practice it is not necessary for all matters concerning mitigation to be fully resolved before a decision maker is able to conclude that a development will satisfy the requirements of reg 61 of the Habitats Regulations".
- 2.6 In other words, there is a tacit acceptance that AA can be tiered and that all impacts are not necessarily appropriate for consideration to the same degree of detail at all tiers as illustrated in **Box 2**.

² DCLG (2006) Planning for the Protection of European Sites, Consultation Paper

³ No Adastral New Town Ltd (NANT) v Suffolk Coastal District Council Court of Appeal, 17th February 2015

⁴ High Court case of R (Devon Wildlife Trust) v Teignbridge District Council, 28 July 2015

Box 2: Tiering in HRA of Land Use Plans



- 2.7 For a plan the level of detail concerning the developments that will be delivered is usually insufficient to make a highly detailed assessment of significance of effects. For example, precise and full determination of the impacts and significant effects of a new settlement will require extensive details concerning the design of the new housing sites, including layout of greenspace and type of development to be delivered in particular locations, yet these data will not be decided until subsequent stages.
- 2.8 The most robust and defensible approach to the absence of fine grain detail at this level is to make use of the precautionary principle. In other words, the plan is never given the benefit of the doubt (within the limits of reasonableness); it must be assumed that a policy/measure is likely to have an impact leading to a significant adverse effect upon an internationally designated site unless it can be clearly established otherwise.

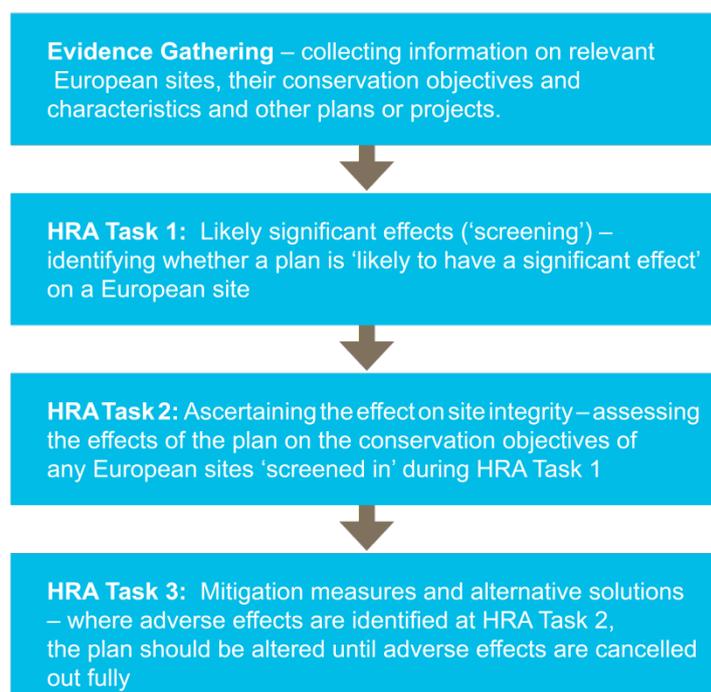
The Process of HRA

- 2.9 The HRA is being carried out in the continuing absence of formal central Government guidance. The former DCLG (now MHCLG) released a consultation paper on AA of Plans in 2006⁵. As yet, no further formal guidance has emerged from MHCLG. However, Natural England has produced its own informal internal guidance and Natural Resources Wales has produced guidance for Welsh authorities on “*the appraisal of plans under the Habitats Regulations*” as a separate guidance document aimed at complementing and supplementing the guidance/advice provided within Technical Advice Note 5: Nature Conservation and Planning⁶.
- 2.10 **Box 3** outlines the stages of HRA according to the draft MHCLG guidance (which, as government guidance applicable to English authorities is considered to take precedence over other sources of guidance). 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 likely significant effects remain.

⁵ DCLG (2006) Planning for the Protection of European Sites, Consultation Paper

⁶ Welsh Government. Technical Advice Note 5, Nature Conservation and Planning (2009)
<http://gov.wales/topics/planning/policy/tans/tan5/?lang=en> [accessed 01/12/2016]

Box 3: Four-Stage Approach to Habitats Regulations Assessment



2.11 The following process has been adopted for carrying out the subsequent stages of the HRA.

Task One: Test of Likely Significant Effect

2.12 The first stage of any Habitats Regulations Assessment is a test of Likely Significant Effect - essentially a high level assessment to decide whether the full subsequent stage known as Appropriate Assessment is required. The essential question is:

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

2.14 In evaluating significance, AECOM have relied on professional judgment and experience of working with the other local authorities on similar issues. The level of detail concerning developments that will be permitted under land use plans is rarely sufficient to make a detailed quantification of effects. Therefore, a precautionary approach has been taken (in the absence of more precise data) assuming as the default position that if a likely significant effect (LSE) cannot be confidently ruled out, then the assessment must be taken the next level of assessment Task Two: Appropriate Assessment. This is in line with the April 2018 court ruling relating to 'People Over Wind' where mitigation and avoidance measures are to be included at the next stage of assessment.

Task Two: Appropriate Assessment

2.15 European Site(s) which have been 'screened in' during the previous task have a detailed assessment undertaken on the effect of the policies on the European site(s) site integrity. Avoidance and mitigation measures to avoid adverse significant effects are taken into account or recommended where necessary.

2.16 As established by case law, 'appropriate assessment' is not a technical term; it simply means whatever further assessment is necessary to confirm whether there would be adverse effects on the integrity of any European sites that have not been dismissed at screening. Since it is not a technical term it has no firmly established methodology except that it essentially involves repeating the analysis for the likely significant effects stage, but to a greater level of detail on a smaller number of policies and sites, this time with a view to determining if there would be adverse effects on integrity.

2.17 One of the key considerations during Appropriate Assessment is whether there is available mitigation that would entirely address the potential effect. In practice, the Appropriate Assessment takes any policies or allocations that could not be dismissed following the high-level Screening analysis and analyse the

potential for an effect in more detail, with a view to concluding whether there would actually be an adverse effect on integrity (in other words, disruption of the coherent structure and function of the European site(s)).

The Scope

2.18 There is no guidance that dictates the physical scope of an HRA of a plan. Therefore, in considering the physical scope of the assessment we were guided primarily by the identified impact pathways rather than by arbitrary “zones”, i.e. a source-pathway-receptor approach. Current guidance suggests that the following European sites be included in the scope of assessment:

- All sites within the Neighbourhood Plan area boundary; and
- Other sites shown to be linked to development within the Neighbourhood Plan boundary through a known “pathway” (discussed below).

2.19 Briefly defined, pathways are routes by which a change in activity within the plan area can lead to an effect upon a European site. In terms of the second category of European site listed above, DCLG guidance states that the AA should be “*proportionate to the geographical scope of the [plan policy]*” and that “*an AA need not be done in any more detail, or using more resources, than is useful for its purpose*” (CLG, 2006, p.6⁷).

2.20 Locations of European designated sites are illustrated in **Appendix A, Figure A1**, and full details of all European designated sites discussed in this document can be found in **Appendix B**, specifying their qualifying features, conservation objectives and threats to integrity. Table 1 below lists all those European designated sites included in this HRA.

2.21 **Note** that the inclusion of a European sites or pathway below does not indicate that an effect is expected but rather that these are pathways that will be investigated.

Table 1: Physical Scope of the HRA

European Designated Location Site	Reason for Inclusion/ Exclusion (pressures/ threats ⁸ associated with the European site that could link to the Plan.)	
Dorset Heathlands SPA/ Ramsar site	At its closest located 2.3 km from the Milborne St Andrew Neighbourhood Plan area.	<ul style="list-style-type: none"> – Disturbance (including recreational pressure) – Human induced changes in hydraulic conditions – Loss of functionally linked supporting habitat
Dorset Heaths SAC	At its closest located 2.3 km from the Milborne St Andrew Neighbourhood Plan area.	<ul style="list-style-type: none"> – Disturbance (including recreational pressure) – Human induced changes in hydraulic conditions
Cerne & Sydling Downs SAC	At its closest located 10.5 km from the Milborne St Andrew Neighbourhood Plan area.	<ul style="list-style-type: none"> – Atmospheric pollution from atmospheric nitrogen deposition.
Rooksmoor SAC	At its closest located 11.9 km from the Milborne St Andrew Neighbourhood Plan area.	<ul style="list-style-type: none"> – Atmospheric pollution from atmospheric nitrogen deposition.
Dorset Heaths (Purbeck and Wareham) and Studland Dunes SAC	At its closest located 13.1 km from the Milborne St Andrew Neighbourhood Plan area.	<ul style="list-style-type: none"> – Disturbance (recreational pressure) – Human induced changes in hydraulic conditions

⁷ Now MHCLG.

⁸ As identified in the Site Improvement Plans or RAMS for European sites.

Poole Harbour SPA/Ramsar (including marine component)	At its closest located 13.8 km from the Milborne St Andrew Neighbourhood Plan area.	<ul style="list-style-type: none"> – Disturbance (including recreational pressure) – Human induced changes in hydraulic conditions – Loss of functionally linked supporting habitat
Isle of Portland to Studland Cliffs SAC	At its closest located 14.4 km from the Milborne St Andrew Neighbourhood Plan area.	<ul style="list-style-type: none"> – Disturbance (including urbanisation and recreational pressure) – Human induced changes in hydraulic conditions
Solent and Dorset Coast pSPA	At its closest located 15.7 km from the Milborne St Andrew Neighbourhood Plan area.	The site is designated for foraging habitat for breeding Common tern, Sandwich tern and Little tern. Impact pathways associated with increased disturbance from marine activities such as shipping could result in a linking impact pathway. However the Neighbourhood Plan does not identify any policies or allocations that would result in the intensification of shipping activities that could affect the pSPA. As such there are no linking impact pathways present and this European site is not subject to HRA within this document.

The “In Combination” Scope

- 2.22 It is a requirement of the Regulations that the impacts and effects 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 European designated site(s) in question.
- 2.23 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 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 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 Waddenzee⁹ case.
- 2.24 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: Disturbance (including urbanisation and recreational pressure), changes in hydraulic conditions and loss of functionally linked land. The following plans have been assessed for their in combination effects alongside the Neighbourhood Plan:
- North Dorset District Council (2016) North Dorset Local Plan Part 1
 - North Dorset District Council (2016) North Dorset Local Plan Part 2
 - Wessex Water (2018). Draft Final Water Resources Management Plan and
 - Wessex Water (2017) Drought Plan
- 2.25 It should be noted that, while the broad potential impacts of these other projects and plans will be considered, we do not propose carrying out full HRA on each of these plans – we will however draw upon existing HRA that have been carried out for surrounding regions and plans.

⁹ Waddenzee case (Case C-127/02, [2004] ECR-I 7405)

3. Pathways of Impact

3.1 The following indirect pathways of impact are considered relevant to the HRA of the Plan:

- Disturbance (including urbanisation and recreational pressure)
- Human induced changes in hydraulic conditions
- Loss of functionally linked supporting habitat
- Atmospheric pollution from atmospheric nitrogen deposition.

Disturbance (including urbanisation and recreational pressure)

3.2 Recreational use of a European site has the potential to:

- Cause disturbance to sensitive species, particularly ground-nesting birds and (where relevant) wintering wildfowl.
- Cause damage through erosion and fragmentation;
- Cause eutrophication as a result of dog fouling; and
- Prevent appropriate management or exacerbate existing management difficulties;

3.3 Different types of European sites 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.

3.4 It should be emphasised that recreational use is not inevitably a problem. Many European sites also contain nature reserves managed for conservation and public appreciation of nature.

3.5 HRAs of Local Plans tend to focus on recreational sources of disturbance as a result of new residents¹⁰.

3.6 This section distinguishes between potential impacts on breeding birds (between March and August) and non-breeding birds (between August to May).

Breeding birds (February to August)

3.7 Concern regarding the effects of disturbance on birds stems from the fact that they are expending energy unnecessarily and the time they spend responding to disturbance is time that is not spent feeding (this will apply all year round)¹¹. Disturbance therefore risks increasing energetic output while reducing energetic input, which can adversely affect the 'condition' and ultimately survival of the birds. In addition, displacement of birds from one feeding site to others can increase the pressure on the resources available within the remaining sites, as they have to sustain a greater number of birds¹². Moreover, the more time a breeding bird spends disturbed from its nest, the more its eggs are likely to cool and the more vulnerable they, or any nestlings, are to predators.

3.8 Research into the effects of urban development on southern lowland heathlands has identified a number of pressures that threaten their habitat condition, arising from a range of factors that have been reviewed by a number of studies. Visitors surveys have revealed how much the open, remote and natural features of lowland heathland are appreciated by the local population and make them attractive for a range of

¹⁰ The RTP1 report 'Planning for an Ageing Population'(2004) which states that 'From being a marginalised group in society, the elderly are now a force to be reckoned with and increasingly seen as a market to be wooed by the leisure and tourist industries. There are more of them and generally they have more time and more money.' It also states that 'Participation in most physical activities shows a significant decline after the age of 50. The exceptions to this are walking, golf, bowls and sailing, where participation rates hold up well into the 70s'.

¹¹ Riddington, R. *et al.* 1996. The impact of disturbance on the behaviour and energy budgets of Brent geese. *Bird Study* 43:269-279

¹² Gill, J.A., Sutherland, W.J. & Norris, K. 1998. The consequences of human disturbance for estuarine birds. *RSPB Conservation Review* 12: 67-72

recreational uses, particularly walking and dog walking although horse riding, cycling, jogging, picnicking and bird watching are also identified as regular activities Clarke et al.,(2006), Liley et al., (2006), Pincombe & Smallbone, (2009a&b).

- 3.9 Studies undertaken across 16 sites in southern England, including the Dorset Heaths, woodlark population density was found to be significantly lower at sites with higher disturbance levels¹³. This supported previous findings that density of woodlark territories is significantly reduced on sites with open access compared to those with restricted access¹⁴. This pattern was thought to be due to birds not nesting (but nevertheless still foraging) in the most heavily visited areas. At sites with recreational access, woodlarks were found to be less likely to colonise suitable habitat in areas with greater disturbance; eight disturbance events per hour reduced the probability of colonisation to below 50%. However, the lower woodlark density at more highly disturbed sites resulted in greater breeding success, in terms of more fledged chicks per pair, i.e. high disturbance levels produced a strong density-dependent increase in reproductive output¹⁵. A model has been developed to predict the consequences for the woodlark population of a range of visitor access levels¹⁶. Recreational disturbance is thought to be having a major adverse effect on woodlark populations in Dorset already. Studies undertaken have not considered suitable sites where impacts have already displaced birds. Any further population impact is likely to depend on the spatial distribution of visitors as well as overall numbers. Under current access arrangements, a doubling of visitor numbers is predicted to reduce population size by 15%. If visitor levels doubled and visitors spread equally across sites, a 40% population decline is predicted¹⁷. If disturbance at 16 heathland sites were to be removed, it is predicted that the breeding population of woodlarks would increase by 13–48%¹⁸.

Non-breeding birds (September to January)

- 3.10 The potential for disturbance may be different in winter than in summer, in that there are often a smaller number of recreational users. In addition, the consequences of disturbance at a population level may be reduced because birds are not breeding. However, activity outside of the summer months can still cause important disturbance, especially as birds are particularly vulnerable at this time of year due to food shortages. Disturbance which results in abandonment of suitable feeding areas can have severe consequences for those birds involved and their ability to find alternative feeding areas. Evans & Warrington¹⁹ found that on Sundays total water bird numbers (including shoveler and gadwall) were 19% higher on Stocker's Lake LNR in Hertfordshire, and attributed this to observed greater recreational activity on surrounding water bodies at weekends relative to week days displacing birds into the LNR. However, in this study, recreational activity was not quantified in detail, nor were individual recreational activities evaluated separately; and

- Tuite et al²⁰ used a large (379 site), long-term (10-year) dataset (September – March species counts) to correlate seasonal changes in wildfowl abundance with the presence of various recreational activities. They found that shoveler was one of the most sensitive species to disturbance. The greatest impact on wildfowl numbers during these months was associated with sailing/windsurfing and rowing.

¹³ Mallord, J.W., Dolman, P., Brown, A. & Sutherland, W.J. (2007) Quantifying Density Dependence in a Bird Population Using Human Disturbance. *Oecologia*, 153, 49- 56.

Mallord, J.W., Dolman, P.M., Brown, A.F. & Sutherland, W.J. (2006) Linking Recreational Disturbance to Population Size in a Ground-nesting Passerine. *Journal of Applied Ecology*, 44, 185-195

¹⁴ Liley, D. & Clarke, R.T. (2002) Urban Development Adjacent to Heathland Sites in Dorset: The Effect on the Density and Settlement Patterns of Annex 1 Bird Species. *English Nature*, Peterborough.

¹⁵ Mallord, J.W., Dolman, P., Brown, A. & Sutherland, W.J. (2007) Quantifying Density Dependence in a Bird Population Using Human Disturbance. *Oecologia*, 153, 49- 56.

Mallord, J.W., Dolman, P.M., Brown, A.F. & Sutherland, W.J. (2006) Linking Recreational Disturbance to Population Size in a Ground-nesting Passerine. *Journal of Applied Ecology*, 44, 185-195

¹⁶ Mallord, J.W., Dolman, P.M., Brown, A.F. & Sutherland, W.J. (2006) Linking Recreational Disturbance to Population Size in a Ground-nesting Passerine. *Journal of Applied Ecology*, 44, 185-195

¹⁷ Mallord, J.W., Dolman, P., Brown, A. & Sutherland, W.J. (2007) Quantifying Density Dependence in a Bird Population Using Human Disturbance. *Oecologia*, 153, 49- 56.

Mallord, J.W., Dolman, P.M., Brown, A.F. & Sutherland, W.J. (2006) Linking Recreational Disturbance to Population Size in a Ground-nesting Passerine. *Journal of Applied Ecology*, 44, 185-195

¹⁸ Mallord, J.W. (2005) Predicting the Consequences of Human Disturbance, Urbanisation and Fragmentation for a Woodlark *Lullula Arborea* Population. UEA, School of Biological Sciences, Norwich.

¹⁹ Evans, D.M. & Warrington, S. 1997. The effects of recreational disturbance on wintering waterbirds on a mature gravel pitlake near London. *International Journal of Environmental Studies* 53: 167-182

²⁰ Tuite, C.H., Hanson, P.R. & Owen, M. 1984. Some ecological factors affecting winter wildfowl distribution on inland waters in England and Wales and the influence of water-based recreation. *Journal of Applied Ecology* 21: 41-62

- 3.11 More recent research has established that human activity including recreational activity can be linked to disturbance of wintering waterfowl populations^{21 22}.
- 3.12 Human activity can affect birds either directly (e.g. through causing them to flee) or indirectly (e.g. through damaging their habitat or reducing their fitness in less obvious ways e.g. stress). The most obvious direct effect is that of immediate mortality such as death by shooting, but human activity can also lead to behavioural changes (e.g. alterations in feeding behaviour, avoidance of certain areas and use of sub optimal areas etc.) and physiological changes (e.g. an increase in heart rate) that, although less noticeable, may ultimately result in major population-level effects by altering the balance between immigration/birth and emigration/death²³.
- 3.13 The degree of impact that varying levels of noise will have on different species of bird is poorly understood except that a number of studies have found that an increase in traffic levels on roads does lead 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 roads²⁴. A study on Holt Heath noted reduced levels of fitness due to occupation of sub optimal habitats alongside roads amongst heathland species.
- 3.14 A recent study on recreational disturbance on the Humber²⁵ assesses different types of noise disturbance on waterfowl referring to studies relating to aircraft (see Drewitt 1999²⁶), traffic (Reijnen, Foppen, & Veenbaas 1997)²⁷, dogs (Lord, Waas, & Innes 1997²⁸; Banks & Bryant 2007²⁹) 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. 2004³⁰ 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 both influence the response (Delaney et al. 1999³¹; Beale & Monaghan 2005³²). On UK estuaries 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)³³.

Other activities causing disturbance

- 3.15 Activities other than recreation may also lead to disturbance of wildlife.
- 3.16 Disturbing activities are on a continuum. The most disturbing activities are likely to be those that involve irregular, infrequent, unpredictable loud noise events, movement or vibration of long duration. The presence of people and dogs in and around the harbour and heaths generate a substantial disturbance effects because of the areas accessed and the impact of a potential predator on bird behaviour. Birds are least likely to be disturbed by activities that involve regular, frequent, predictable, quiet patterns of sound

²¹ Footprint Ecology. 2010. Recreational Disturbance to Birds on the Humber Estuary

²² Footprint Ecology, Jonathan Cox Associates & Bournemouth University. 2010. Solent disturbance and mitigation project – various reports.

²³ Riley, J. 2003. Review of Recreational Disturbance Research on Selected Wildlife in Scotland. Scottish Natural Heritage.

²⁴ 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

²⁵ Helen Fearnley Durwyn Liley and Katie Cruickshanks (2012) Results of Recreational Visitor Survey across the Humber Estuary produced by Footprint Ecology

²⁶ Drewitt, A. (1999) Disturbance effects of aircraft on birds. English Nature, Peterborough.

²⁷ 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.

²⁸ 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.

²⁹ 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.

³⁰ 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.

³¹ 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.

³² 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.

³³ 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.

or movement or minimal vibration. The further any activity is from the birds, the less likely it is to result in disturbance.

- 3.17 The factors that influence a species response to a disturbance are numerous, but the three key factors are species sensitivity, proximity of disturbance sources and timing/duration of the potentially disturbing activity.
- 3.18 The distance at which a species takes flight when approached by a disturbing stimulus is known as the 'tolerance distance' (also called the 'escape flight distance') and differs between species to the same stimulus and within a species to different stimuli.
- 3.19 Research into the effects of urban development on southern lowland heathlands has identified a number of pressures that threaten their habitat condition, arising from a range of factors that have been reviewed by a number of studies. Visitors surveys have revealed how much the open, remote and natural features of lowland heathland are appreciated by the local population and make them attractive for a range of recreational uses, particularly walking and dog walking although horse riding, cycling, jogging, picnicking and bird watching are also identified as regular activities³⁴. In Dorset a long term issue is arson on the heaths which is now much reduced from historic levels pre site designations but which remains at significant levels and with consequent risks.
- 3.20 The potential for apparent disturbance may be less in winter than in summer, in that there are often a smaller number of recreational users. In addition, the consequences of disturbance at a population level may be reduced because birds are not breeding. However, activity outside of the summer months can still cause important disturbance, especially as birds are particularly vulnerable at this time of year due to food shortages. Disturbance which results in abandonment of suitable feeding areas can have severe consequences for those birds involved and their ability to find alternative feeding areas. Several empirical studies have, through correlative analysis, demonstrated that out-of-season (October-March) recreational activity can result in quantifiable disturbance:
- Tuite et al³⁵ found that during periods of high recreational activity, bird numbers at Llangorse Lake decreased by 30% as the morning progressed, matching the increase in recreational activity towards midday. During periods of low recreational activity, however, no change in numbers was observed as the morning progressed. In addition, all species were found to spend less time in their 'preferred zones' (the areas of the lake used most in the absence of recreational activity) as recreational intensity increased;
 - Underhill et al³⁶ counted waterfowl and all disturbance events on 54 water bodies within the South West London Water Bodies Special Protection Area and clearly correlated disturbance with a decrease in bird numbers at weekends in smaller sites and with the movement of birds within larger sites from disturbed to less disturbed areas.
- 3.1 Human activity can affect birds either directly (e.g. through causing them to flee) or indirectly (e.g. through damaging their habitat). The most obvious direct effect is that of immediate mortality such as death by shooting, but 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 by altering the balance between immigration/birth and emigration/death³⁷. The impact of disturbance on birds changes during the seasons in relation to a number of very specific factors, for example the winter below freezing temperature, the

³⁴ Clarke R, Liley D, Underhill-Day J & Rose R (2006): Visitor Access Patterns on the Dorset Heathlands. English Nature Research Reports No. 683

Liley D, Clarke RT, Mallord JW, & Bullock JM (2006): The effect of urban development and human disturbance on the distribution and abundance of nightjars on the Thames Basin and Dorset Heaths. Unpublished report, Footprint Ecology / Natural England. © Natural England / Footprint Ecology Ltd.

Pincombe NEJ and Smallbone K (2009a): Visitor Access Patterns on Ashdown Forest. UE Associates Ltd and University of Brighton Report for Mid Sussex and Wealden District Councils.

Pincombe NEJ and Smallbone K (2009b): Visitor Access Patterns on European Sites surrounding Whitehill and Bordon, East Hampshire. UE Associates Ltd and University of Brighton Report for the Whitehill Bordon Eco-town and East Hampshire District Council.

³⁵ Tuite, C. H., Owen, M. & Paynter, D. 1983. Interaction between wildfowl and recreation at Llangorse Lake and Talybont Reservoir, South Wales. *Wildfowl* 34: 48-63

³⁶ Underhill, M.C. et al. 1993. Use of Waterbodies in South West London by Waterfowl. An Investigation of the Factors Affecting Distribution, Abundance and Community Structure. Report to Thames Water Utilities Ltd. and English Nature. Wetlands Advisory Service, Slimbridge

³⁷ Riley, J. 2003. Review of Recreational Disturbance Research on Selected Wildlife in Scotland. Scottish Natural Heritage.

birds fat resource levels and the need to remain watchful for predators rather than feeding. These considerations lead to birds apparently showing different behavioural responses at different times of the year.

- 3.2 The degree of impact that varying levels of noise will have on different species of bird is poorly understood except that a number of studies have found that an increase in traffic levels on roads does lead 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 roads³⁸.

Mechanical/abrasive damage and nutrient enrichment

- 3.3 Most types of aquatic or terrestrial European site can be affected by trampling, which in turn causes soil compaction and erosion:

- Wilson & Seney (1994)³⁹ examined the degree of track erosion caused by hikers, motorcycles, horses and cyclists from 108 plots along tracks in the Gallatin National Forest, Montana. Although the results proved difficult to interpret, it was concluded that horses and hikers disturbed more sediment on wet tracks, and therefore caused more erosion, than motorcycles and bicycles.
- Cole et al (1995a, b)⁴⁰ conducted experimental off-track trampling in 18 closed forest, dwarf scrub and meadow & grassland communities (each tramped between 0 – 500 times) over five mountain regions in the US. Vegetation cover was assessed two weeks and one year after trampling, and an inverse relationship with trampling intensity was discovered, although this relationship was weaker after one year than two weeks indicating some recovery of the vegetation. Differences in plant morphological characteristics were found to explain more variation in response between different vegetation types than soil and topographic factors. Low-growing, mat-forming grasses regained their cover best after two weeks and were considered most resistant to trampling, while tall forbs (non-woody vascular plants other than grasses, sedges, rushes and ferns) were considered least resistant. Cover of hemicryptophytes and geophytes (plants with buds below the soil surface) was heavily reduced after two weeks, but had recovered well after one year and as such these were considered most resilient to trampling. Chamaephytes (plants with buds above the soil surface) were least resilient to trampling. It was concluded that these would be the least tolerant of a regular cycle of disturbance.
- Cole (1995c)⁴¹ conducted a follow-up study (in 4 vegetation types) in which shoe type (trainers or walking boots) and trampler weight were varied. Although immediate damage was greater with walking boots, there was no significant difference after one year. Heavier trampers caused a greater reduction in vegetation height than lighter trampers, but there was no difference in effect on cover.
- Cole & Spildie (1998)⁴² experimentally compared the effects of off-track trampling by hiker and horse (at two intensities – 25 and 150 passes) in two woodland vegetation types (one with an erect forb understorey and one with a low shrub understorey). Horse traffic was found to cause the largest reduction in vegetation cover. The forb-dominated vegetation suffered greatest disturbance, but recovered rapidly. Higher trampling intensities caused more disturbance.

- 3.4 Walkers with dogs contribute to pressure on sites through nutrient enrichment via dog fouling and also cause greater disturbance to fauna as dogs are less likely to keep to marked footpaths and also tend to move in a more erratic manner. Sites being managed by nature conservation bodies and local authorities frequently resort to hardening eroded paths to restrict erosion but at the same time they are losing the

³⁸ 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

³⁹ Wilson, J.P. & J.P. Seney. 1994. Erosional impact of hikers, horses, motorcycles and off road bicycles on mountain trails in Montana. *Mountain Research and Development* 14:77-88

⁴⁰ Cole, D.N. 1995a. Experimental trampling of vegetation. I. Relationship between trampling intensity and vegetation response. *Journal of Applied Ecology* 32: 203-214

Cole, D.N. 1995b. Experimental trampling of vegetation. II. Predictors of resistance and resilience. *Journal of Applied Ecology* 32: 215-224

⁴¹ Cole, D.N. 1995c. Recreational trampling experiments: effects of trampler weight and shoe type. Research Note INT-RN-425. U.S. Forest Service, Intermountain Research Station, Utah.

⁴² Cole, D.N., Spildie, D.R. 1998. Hiker, horse and llama trampling effects on native vegetation in Montana, USA. *Journal of Environmental Management* 53: 61-71

habitats formerly used by sand lizards and burrowing invertebrates. Motorcycle scrambling and off-road vehicle use can cause more serious erosion, as well as disturbance to sensitive species. Boats can also cause some mechanical damage to intertidal habitats through grounding as well as anchor and anchor line damage.

Urbanisation

- 3.5 This impact is closely related to recreational pressure, in that they both result from increased populations within close proximity to sensitive sites. The list of urbanisation impacts can be extensive, but core impacts can be singled out:
- *Increased fly-tipping* - Rubbish tipping is unsightly but the principle adverse ecological effect of tipping is the introduction of invasive alien species with garden waste. Garden waste results in the introduction of invasive aliens precisely because it is the 'troublesome and over-exuberant' garden plants that are typically thrown out. Alien species may also be introduced deliberately or may be bird-sown from local gardens.
 - *Cat predation* - A survey performed in 1997 indicated that nine million British cats brought home 92 million prey items over a five-month period. A large proportion of domestic cats are found in urban situations, and increasing urbanisation is likely to lead to increased cat predation.
- 3.6 The most detailed consideration of the link between relative proximity of development to European sites and damage to interest features has been carried out with regard to the Thames Basin Heaths SPA and the Dorset Heathlands SPA, SAC and Ramsar.
- 3.7 With regards to the Dorset Heathland sites Natural England and its partners produced a 'Supplementary Planning Document' (SPD)⁴³ which identifies a framework for accommodating development while also protecting the interest features of the European sites. This included the recommendation of implementing a series of zones within which varying constraints would be placed upon development. While the zones relating to recreational pressure expanded to 5km (as this was determined from visitor surveys to be the principal recreational catchment for this European site), that concerning other aspects of urbanisation (predation of the chicks of ground-nesting birds by domestic cats, recreational pressure that cannot be readily diverted, fly tipping, increased incidence of fires and general urbanisation) was determined at 400m from the SPA boundary. The SPD concluded that the adverse effects of residential development located within 400m of the SPA boundary could not be mitigated, in part because this was the range within cats could be expected to roam as a matter of routine and there was no realistic way of restricting their movements, and as such, no new housing should be located within this zone.
- 3.8 **However, as the Parish of Milborne St Andrew is located more than 2km from the Dorset heathland European sites, it lies well beyond the 400m zone of influence relating to urbanisation. As such urbanisation is not a realistic linking impact pathway and is not discussed further within this document.**

Loss of Functionally Linked Land Outside of the European Site Boundary

- 3.9 While most European sites have been geographically defined in order to encompass the key features that are necessary for coherence of their structure and function, this is not the case for all such sites. Due to the highly mobile nature of both wildfowl and waterfowl birds and heathland birds, it is inevitable that areas of habitat of crucial importance to the maintenance of their populations are outside the physical limits of the European site for which they are an interest feature. However, this area will still be essential for maintenance of the structure and function of the interest feature for which the site was designated and land use plans that may affect this land should still therefore be subject to further assessment. In particular recent studies are raising serious considerations about nightjar foraging requirements as well as woodlark wintering grounds.

⁴³ <https://www.dorsetforyou.gov.uk/planning-buildings-land/planning-policy/joint-planning-policy-work/pdfs/heathlands/dorset-heathlands-planning-framework-supplementary-planning-document-2015-2020.pdf> [accessed 20/11/2018]

Dorset Heathlands SPA/Ramsar

3.10 Dorset Heathlands SPA/Ramsar qualifying features include breeding nightjar, woodlark and Dartford warbler and wintering merlin and hen harrier. Information relating to their habitat requirements is provided below:

- Nightjar show a preference for bare patches or areas of very short or sparse vegetation with widely scattered trees where they are able to see predators approaching. These patches may be on open heath, in patchy scrub and in the interface between heath and woodland, as well as in clearings in woodland or plantations. Nightjars are known to forage up to 6 kilometres away from their nesting territory.
- Bare ground is particularly important to Woodlark, especially where adjacent to structurally diverse vegetation and short heather. They may utilise scattered trees or large bushes to act as song-posts. Woodlark will often utilise areas adjacent to heathland for feeding, including areas of short grassland, stubble fields or weedy margins of arable fields, golf courses and bare areas in quarry sites.
- Dartford warbler favour large areas of open terrain, largely free of obstructions, in and around nesting, roosting and feeding areas in lowland heathland with gorse and heather. They benefit from availability of an unobstructed line of sight within nesting, feeding or roosting to enable birds to detect approaching predators, or to ensure visibility of displaying behaviour. However, they will utilise enclosed features such as clearings in conifer plantations.⁴⁴
- Merlin *Falco columbarius* forage/feed in moorland/heathland habitat.
- Hen harrier *Circus cyaneus* winters in the lowlands, particularly around the coast, on heathland and on farmland. It is one of the most endangered breeding birds of prey in the country; at its wintering grounds it feeds on small scrub and open habitat birds found on the heaths and surrounding countryside. As a bird which roosts on the ground it is particularly vulnerable to disturbance.

3.11 The long-term substantial loss, degradation and fragmentation of lowland heathland habitats has been the major factor associated with the decline of nightjar and woodlark⁴⁵. Whilst a portion of Wareham Forest is located within the European sites, there are also additional portions of woodland associated with Wareham Forest that provide woodland and heathland habitats that could support avian features associated with the European sites, of note are woodlark and nightjar.

3.12 The most suitable habitats for nesting nightjar and woodlark are heathland, acid grassland and plantation woodland (meaning any woodland that is cropped and replanted on a regular cycle, creating clearings in which the birds can nest). Woodland that is maintained as continuous-cover forestry is generally unsuitable for nesting nightjar and woodlark, unless they incorporate adequate clearings. Development that would affect areas of plantation woodland, heathland or acid grassland (irrespective of whether they are part of the European sites) could potentially affect nightjar and woodlark.

3.13 Research undertaken in the Breckland Forest area⁴⁶ has identified that nightjar are most likely to use conventionally managed plantation during the first c. 20 years of the c. 60 year forestry cycle, including the initial 2 year 'felled unplanted' period. Population densities are highest during the restock phase (plantation age of 0-5 years), although significant densities can also be supported during the pre-thicket (6-10 years) and thicket (11 – 20 years) stages. The same research identifies that woodlark are most likely to use conventionally managed plantation during its first seven years (including the initial 2 year felled unplanted period), particularly the restock phase (plantation age of 0-5 years). They *may* also be found during the pre-thicket (6-10 years) stage but the density of woodlark in pre-thicket plantation is very low. They are essentially absent from thicket (11-20 years) and mature plantation.

3.14 Due to the fact that nightjar and woodlark only use certain parts of the forestry cycle their absence from a given parcel of plantation, or the fact that the plantation is not in a suitable phase for colonisation, at a given point in time cannot be used as a basis to conclude nightjar and woodlark will not use the land. If the

⁴⁵ Research examples that support/explore this include: Rose, et al. 2000. Changes in heathland in Dorset, England between 1987 and 1996. Biological Conservation. 121: 93-105. & Langston et al. 2007. Nightjar *Caprimulgus europaeus* and Woodlark *Lullula arborea* – recovering species in Britain? Ibis. 149: 250-260.

⁴⁵ Research examples that support/explore this include: Rose, et al. 2000. Changes in heathland in Dorset, England between 1987 and 1996. Biological Conservation. 121: 93-105. & Langston et al. 2007. Nightjar *Caprimulgus europaeus* and Woodlark *Lullula arborea* – recovering species in Britain? Ibis. 149: 250-260.

⁴⁶ Dolman PM & Morrison C, 2012. Temporal change in territory density and habitat quality for Breckland Forest SSSI woodlark and nightjar populations, Unpublished report for Forestry Commission and Natural England.

birds are known to be present in the broad area (as they are here) than any conventionally managed plantation could support them. Therefore this assessment treats the entirety of Wareham Forest as functionally-linked land for birds of the Dorset Heathlands SPA.

- 3.15 **However, the Parish of Milborne St Andrew does not support habitat on which bird species associated with the heathland European sites would be heavily reliant as functionally linked supporting habitat as it is in an agricultural setting and while some SPA birds will make use of agricultural land particularly outside the nesting season it is, and will remain, an abundant habitat in the parish and the development sites are all focussed on the existing village. As such this impact pathway is not considered to be a realistic linking impact pathway to the heathland European sites and is not discussed further.**

Human Induced Changes in Hydrological Conditions

Heathland European Sites

- 3.16 Mires and Bogs are sensitive to changes in hydrology and maintenance of natural regimes, water quality, and avoidance of water table lowering are important factors. Areas that have suffered previous damaging activities require enhancement/restoration including ditch blocking, re-vegetation of bare peat, increased vegetation diversity in response to the discontinuation⁴⁷ of grazing and a reduction of erosion through gullyng.
- 3.17 Changes in hydrological conditions that could affect the SACs habitats brought about by additional housing requirements would be through increased water demand and its potential abstraction from reservoirs that are functionally linked to European sites. Reduction in water levels/ changes in the water table could affect the following habitats within the SAC: Northern Atlantic wet heaths with *Erica tetralix*; Temperate Atlantic wet heaths with *Erica ciliaris* and *Erica tetralix* and bog woodland.

Coastal European Sites

- 3.18 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 on European sites leading to unfavourable conditions. In addition, diffuse pollution, partly from urban run-off has been identified during an Environment Agency Review of Consents process and a joint Environment Agency and Natural England evidence review, as being a major factor in causing unfavourable condition of European sites.
- 3.19 The quality of the water that feeds European 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:
- 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; and
 - Increased discharge of treated sewage effluent can result both in high levels of macroalgal growth, which can smother the mudflats of value to SPA birds and in greater scour (as a result of greater flow volumes).

⁴⁷ https://www.highpeak.gov.uk/media/960/Habitats-regulation-screening-assessment-March-2010/pdf/Habitats_Regulation_Assessment_March_2014.pdf

3.20 At sewage treatment works, 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.

Atmospheric Pollution (Atmospheric Nitrogen Deposition)

3.21 The main pollutants of concern for European sites are oxides of nitrogen (NO_x), ammonia (NH₃) and sulphur dioxide (SO₂). NO_x can have a directly toxic effect upon vegetation. In addition, greater NO_x 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 lead to an increase in soil fertility, which can have a serious deleterious effect on the quality of semi-natural, nitrogen-limited terrestrial habitats.

Table 2: Main sources and effects of air pollutants on habitats and species

Pollutant	Source	Effects on habitats and species
Acid deposition	SO ₂ , NO _x and ammonia all contribute to acid deposition. Although future trends in S emissions and subsequent deposition to terrestrial and aquatic ecosystems will continue to decline, it is likely that increased nitrogen emissions may cancel out any gains produced by reduced sulphur levels.	Can affect habitats and species through both wet (acid rain) and dry deposition. Some sites will be more at risk than others depending on soil type, bed rock geology, weathering rate and buffering capacity.
Ammonia (NH ₃)	Ammonia is released following decomposition and volatilisation of animal wastes. It is a naturally occurring trace gas, but levels have increased considerably with expansion in numbers of agricultural livestock. Ammonia reacts with acid pollutants such as the products of SO ₂ and NO _x to produce fine ammonium (NH ₄ ⁺) containing aerosol which may be transferred much longer distances (can therefore be a significant trans-boundary issue.)	Adverse effects are as a result of nitrogen deposition leading to eutrophication. As emissions mostly occur at ground level in the rural environment and NH ₃ is rapidly deposited, some of the most acute problems of NH ₃ deposition are for small relict nature reserves located in intensive agricultural landscapes.
Nitrogen oxides (NO _x)	Nitrogen oxides are mostly produced in combustion processes. About one quarter of the UK's emissions are from power stations.	Deposition of nitrogen compounds (nitrates (NO ₃), nitrogen dioxide (NO ₂) and nitric acid (HNO ₃)) can lead to both soil and freshwater acidification. In addition, NO _x can cause eutrophication of soils and water. This alters the species composition of plant communities and can eliminate sensitive species.
Nitrogen deposition	(N) The pollutants that contribute to nitrogen deposition derive mainly from NO _x and NH ₃ emissions. These pollutants cause acidification (see also acid deposition) as well as eutrophication.	Species-rich plant communities with relatively high proportions of slow-growing perennial species and bryophytes are most at risk from N eutrophication, due to its promotion of competitive and invasive species which can respond readily to elevated levels of N. N deposition can also increase the risk of damage from abiotic factors, e.g. drought and frost.
Ozone (O ₃)	A secondary pollutant generated by photochemical reactions from NO _x and volatile organic compounds (VOCs). These are mainly released by the combustion of fossil fuels. The increase in combustion of fossil fuels in the UK has led to a large increase in background ozone concentration, leading to an increased number of days when	Concentrations of O ₃ above 40 ppb can be toxic to humans and wildlife, and can affect buildings. Increased ozone concentrations may lead to a reduction in growth of agricultural crops, decreased forest production and altered species composition in semi-natural plant communities.

levels across the region are above 40ppb. Reducing ozone pollution is believed to require action at international level to reduce levels of the precursors that form ozone.

Sulphur Dioxide SO ₂	Main sources of SO ₂ emissions are electricity generation, industry and domestic fuel combustion. May also arise from shipping and increased atmospheric concentrations in busy ports. Total SO ₂ emissions have decreased substantially in the UK since the 1980s.	Wet and dry deposition of SO ₂ acidifies soils and freshwater, and alters the species composition of plant and associated animal communities. The significance of impacts depends on levels of deposition and the buffering capacity of soils.
------------------------------------	---	---

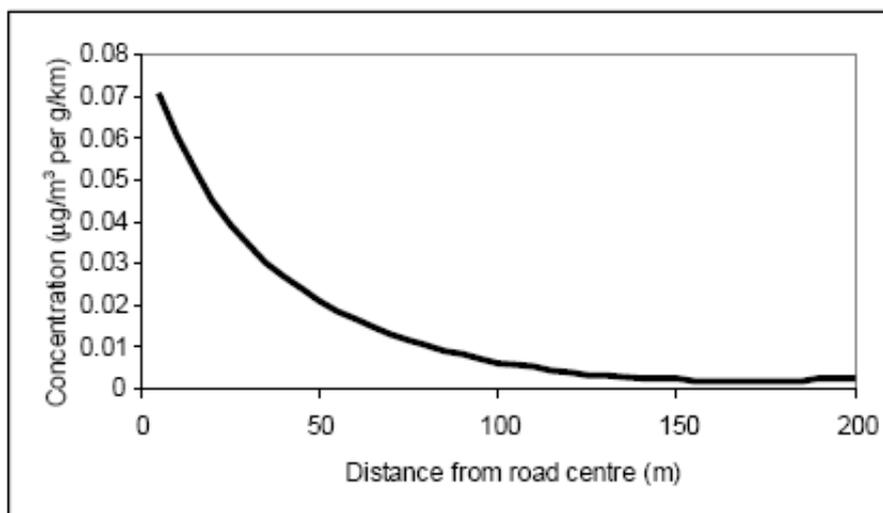
3.22 Sulphur dioxide emissions are overwhelmingly influenced by the output of power stations and industrial processes that require the combustion of coal and oil. Ammonia emissions are dominated by agriculture, with some chemical processes also making notable contributions. As such, it is unlikely that material increases in SO₂ or NH₃ emissions will be associated with Local Plans. NO_x emissions, however, are dominated by the output of vehicle exhausts. Within a 'typical' housing development, by far the largest contribution to NO_x (92%) will be made by the associated road traffic. Other sources, although relevant, are of minor importance (8%) in comparison⁴⁸. Emissions of NO_x could therefore be reasonably expected to increase as a result of greater vehicle use as an indirect effect of the LDF.

3.23 According to the World Health Organisation, the critical NO_x concentration (critical threshold) for the protection of vegetation is 30 µgm⁻³; the threshold for sulphur dioxide is 20 µgm⁻³. In addition, ecological studies have determined 'Critical Loads'⁴⁹ of atmospheric nitrogen deposition (that is, NO_x combined with ammonia NH₃) for key habitats within European sites.

Local Air Pollution

3.24 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"⁵⁰.

Figure 1: Traffic contribution to concentrations of pollutants at different distances from a road (Source: DfT)



3.25 This is therefore the distance that has been used throughout this HRA in order to determine whether European sites are likely to be significantly affected by development under the Neighbourhood Plan.

⁴⁸ 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>

⁴⁹ The Critical Load is the rate of deposition beyond which research indicates that adverse effects can reasonably be expected to occur

⁵⁰ www.webtag.org.uk/archive/feb04/pdf/feb04-333.pdf

4. Test of Likely Significance

Introduction

- 4.1 The initial scoping of European designated sites illustrated in **Table 1** identifies that some of the sites are potentially vulnerable to:
- Disturbance (recreational pressure)
 - Human induced changes in hydraulic conditions
 - Loss of functionally linked supporting habitat
 - Atmospheric pollution from atmospheric nitrogen deposition.
- 4.2 The full test of Likely Significant Effects for the Milborne St Andrew Neighbourhood Plan policies is presented both alone and in-combination in **Appendix C**. The assessment took into consideration the above potential vulnerabilities of the European sites included in Table 1.
- 4.3 After an initial investigation into linking impact pathways the following European sites have been screened out as having no linking impact pathway:
- Cerne & Sydling Downs SAC. This site is located 10.5km from the Neighbourhood Plan area and is sensitive to increased atmospheric pollution associated with significant increases in average daily traffic movements on roads within 200m of the site due to journeys for work. However, due to the small quantum of development to be provided within the Plan (42 net new dwellings), the distances involved (considerably further than 10.5km by road) and the location of the SAC with regard to major journey to work routes between the parish and main employment centres, it is unlikely that the plan will result in any changes in average daily traffic on this road. Therefore, this is not considered a realistic impact pathway that could result in likely significant effects on Cerne & Sydling Downs SAC. This site is not discussed further within this HRA.
 - Rooksmoor SAC. This site is located 11.9km from the Neighbourhood Plan area and is also sensitive to increased atmospheric pollution associated with significant increases in average daily traffic movements on roads within 200m of the site due to journeys for work. However, due to the small quantum of development to be provided within the Plan, the distances involved and the location of the SAC with regard to major journey to work routes between the parish and main employment centres, it is unlikely that the plan will result in any changes in average daily traffic on this road. Therefore, this is not considered a realistic linking impact pathway that could result in likely significant effects on Rooksmoor SAC. This site is not discussed further within this HRA.
 - Dorset Heath (Purbeck and Wareham) and Studland Dunes SAC: This SAC is located more than 13km from the Neighbourhood Plan area. It is sensitive to increased disturbance (recreational pressure) and human induced changes in hydrological inputs. However, due to the small quantum of development to be provided within the Plan and the distances involved, these are not considered realistic linking impact pathways that could result in likely significant effects on Dorset Heath (Purbeck and Wareham) and Studland Dunes SAC. This site is not discussed further within this HRA.
 - Isle of Portland Studland Cliffs SAC. This SAC is located more than 14km from the Neighbourhood Plan area. It is sensitive to disturbance from increased recreational pressure. However due to the small quantum of development to be provided within the Plan and the distances involved (with the parish lying well outside the likely core recreational catchment of the SAC), it is not considered that this impact pathway could act as a realistic linking impact pathway. This site is also sensitive to human induced hydrological changes. These changes relate to direct runoff from neighbouring land and as such it is not considered that this impact pathway could act as a realistic linking impact pathway. This site is not discussed further within this HRA.
 - Solent and Dorset Coast pSPA. As detailed in Table 1, the plan does not provide for any linking impact pathways to the pSPS, and as such is not discussed further within this HRA.

4.4 The following sections therefore focus on Dorset Heaths SAC, Dorset Heathlands SPA and Ramsar site and Poole Harbour European sites.

4.5 Given the distance from European sites and the small overall quantum of development in the Neighbourhood Plan, it is considered unlikely that these would affect a European site in isolation but only 'in combination' with other plans and projects. These impacts are discussed below.

Summary of Test of Likely Significance 'In combination'

4.6 Of the 19 Plan policies, only three were considered to result in a likely significant effect in combination:

- Policy MSA 1 – Meeting Local Needs – Amount and Location of New Development – Sites are allocated in the Neighbourhood Plan, which together with other limited infill and rural conversion, are projected to meet the housing need of about 2.8 dwellings per annum (42 net new dwellings) over the plan period (2018-2033).
 - Recreational pressure to European Sites from the growth in population associated with construction of 42 net new dwellings in combination with housing development elsewhere within 5km of the European sites
 - Human changes in hydraulic condition through the increased demand on water resources and increased waste water production associated with the construction of 42 net new dwellings in combination with housing development elsewhere around the European sites; and
 - Atmospheric pollution through the increase in road usage within 200m of European sites associated with the construction of 42 net new dwellings in combination with housing development elsewhere.
- Policy MSA 3 – Meeting Employment Needs – Business Requirements – The policy promotes the retention of current local businesses and supports their potential re-configuring to accommodate changing business needs. New small scale employment sites for A-class and B1-class development will be provided and an expansion of Deverel Farm complex to accommodate large-scale premises for B1, B2 and B8 employment.
 - Human changes in hydraulic conditions through the increase in demand on water resources and increased waste water production associated with the construction of new employment sites. Change in the drainage of those sites, increasing surface run off through a decrease in permeable land.
 - Atmospheric pollution through the increase in road usage within 200m of European sites associated with the construction of new small and large scale employment sites.
- Policy MSA 5 – Development of Camelco Site – The policy provides for new residential development, at least 32 net new dwellings as well as employment and community facilities.
 - Recreational pressure to European Sites from the growth in population associated with construction of 32 net new dwellings, and employment and community facilities.
 - Human changes in hydraulic condition through the increased demand on water resources and increased waste water production associated with the construction of 32 net new dwellings, employment and community facilities. Change in the drainage of sites, increasing surface run off through a decrease in permeable land.
 - Atmospheric pollution through the increase in road usage within 200m of European sites associated with the construction of 32 net new dwellings, employment and community facilities.

Dorset Heaths SAC and Dorset Heathlands SPA/ Ramsar site

4.7 Dorset Heaths SAC and Dorset Heathlands SPA/ Ramsar site are all located 2.3 km from the Milborne St. Andrew Neighbourhood Plan area at their closest. They have been identified to be vulnerable to increased **disturbance (recreational pressure), atmospheric pollution** and human induced **changes in hydraulic conditions**.

Disturbance (Recreational Pressure)

- 4.8 The Dorset Heathlands SPA and Dorset Heaths SAC are known to be vulnerable to increased recreational pressures. With regard to the SPA this includes areas of functionally-linked land outside the SPA boundary but in which nightjar and woodlark may nest during appropriate periods of the forestry cycle, notably Wareham Forest. As such a strategic avoidance and mitigation strategy has been devised in consultation with Natural England.
- 4.9 In isolation the small increase in residential development to be provided by the Neighbourhood Plan (approximately 42 net new dwellings) would be unlikely to result in a likely significant effect; however when considered in combination with the quantum of development to be provided by neighbouring authorities and any development within the Neighbourhood Plan area that is in addition to that allocated within the Neighbourhood Plan, potential for adverse effects on integrity exists. As such **Appropriate Assessment in combination is undertaken in Chapter 5.**

Atmospheric Pollution

- 4.10 Dorset Heaths SAC and Dorset Heathlands SPA/ Ramsar site are all located 3.8 km from the settlement of Milborne St. Andrew at their closest (or 2.3km from the Parish boundary).
- 4.11 South of Milborne St. Andrew the A35 runs east-west between Poole and Dorchester. The closest section of SAC/SPA/Ramsar site to the A35 is south west of the Bakers Arms Roundabout (A35, B3067 and A351). This lies approximately 70m south of the A35, which is within the distance (200m) where an effect may be detected but well beyond the zone within which NO_x concentrations and nitrogen deposition rates are likely to be significantly elevated due to proximity of the road (see Figure 2). Moreover, the total number of net new dwellings for the Plan period is very low (42 net new dwellings) and the location of this part of the SAC/SPA/Ramsar site is over 14km from the Neighbourhood Plan area. As such, the number of additional daily journeys to work generated by the new housing will be small, of which only a small fraction are likely to utilise the section of A35 past the SAC/SPA/Ramsar site given the distance involved.
- 4.12 It is considered that any resulting air quality changes from the changes in AADT for these links would be inconsequential even in combination with other projects and plans for the following reasons:
- Daily traffic flows are not fixed numerals but fluctuate from day to day. The AADT for a given road is an annual average (specifically, the total volume of traffic for a year, divided by 365 days). It is this average number that is used in air quality modelling, but the 'true' flows on a given day will vary around this average figure. Very small changes in average flow will lie well within the normal variation (known as the standard deviation or variance) and would not make a statistically significant difference in the total AADT; and
 - When converted into NO_x concentrations, ammonia concentrations or nitrogen deposition rates, the experience of AECOM's air quality modelling team is that very small changes in AADT (low single figures) would only affect the third or fourth decimal place. These are not normally reported in air quality modelling to avoid false precision. For this reason, pollution is generally not reported to more than 2 decimal places (0.01). Anything smaller is simply reported as less than 0.01 (< 0.01) i.e. probably more than zero but too small to model with precision.
- 4.13 Therefore this impact pathway **can be screened out from resulting in likely significant effects both in isolation and in combination as a result of atmospheric pollution.**

Hydrological changes

- 4.14 Dorset Heaths SAC and Dorset Heathlands SPA/ Ramsar site are all located at its closest 2.3 km from the Milborne St. Andrew Neighbourhood Plan area.
- 4.15 An in-combination assessment was carried out taking into account North Dorset District Plan, *Wessex Water (2017) Wessex Water Drought Plan*, and *Wessex Water (2018) Draft Final Water Resources Management Plan*. However *Wessex Water (in references to the aforementioned Wessex Waters reports)* take account of European designated sites and protect them. Protection has been carried out by regular abstraction monitoring. At some abstraction sources concerns have been raised that the existing licences do not adequately protect the environment – in response *Wessex Water* worked in partnership with the Environment Agency and Natural England to investigate the issues and identify mitigation measures where appropriate.

- 4.16 Wessex Water is aware of the future rise in population within in North Dorset and beyond. The Wessex Water (2018) Draft Final Water Resources Management Plan is a key plan that they can reduce demand whilst ensuring that they can provide a reliable and sustainable supply of water and how they will provide this taking into consideration climate change, population growth and environmental pressures. An HRA of the preferred solution has been carried out assessing the likely significance both alone and in-combination of the preferred option on European sites and was found to have no likely significant effect any European site Natural England was in agreement with the outcome of the HRA (in relation to all European sites relating to this Neighbourhood Plan.) As such this impact pathway **can be screened out from resulting in likely significant effects both in isolation and in combination as a result of hydrological changes.**

Poole Harbour SPA/Ramsar (including marine component)

- 4.17 Poole Harbour SPA and Ramsar site is located 13.8 km south-east of the Milborne St. Andrew Neighbourhood Plan area. It has been identified to be vulnerable to both increased **disturbance (recreational pressure)** and human induced **changes in hydraulic conditions** (increased nutrient inputs)

Disturbance (Recreational Pressure)

- 4.18 Poole Harbour SPA/Ramsar is located over 13km from the Milborne St. Andrew Neighbourhood Plan area. An assessment of the recreational impacts on this SPA/Ramsar where undertaken in the North Dorset Local Plan HRA⁵¹. Since a previous HRA (prior to Liley 2013), Poole Borough Council have started collecting money through CIL for mitigation measures relating to Poole Harbour and there has been a detailed study (commissioned by Natural England) looking at disturbance impacts in Poole Harbour⁵². It found that Poole Harbour is only likely to draw residents from North Dorset for particular specialist activities, such as birdwatching or water sports, and the distance is probably too great for regular use by a large number of residents. The visitor survey undertaken to inform the recreational avoidance and mitigation strategy for Poole Harbour⁵³ identified that the majority of visitors come from the Borough of Poole and Purbeck District, and as such it is these two authorities that have participated in formulating a recreational management strategy with Natural England Any increase in use associated with development in North Dorset is therefore likely to be small. The results of the disturbance study highlight dogs in particular as a cause of disturbance. The number of observations relating to water sports was relatively low – no windsurfers, four observations of kite surfers and twenty-eight observations of canoeists.
- 4.19 Additional, useful evidence can be drawn from the Solent. The Solent Disturbance and Mitigation Project has been considering the issues of cumulative development on the wintering bird interest of the three SPAs in the Solent. There are many similarities with Poole Harbour, and the evidence-base in the Solent has included detailed visitor work, both on-site and off-site (collected through a postal survey). The results/ of this work have led to Natural England to advise the local authorities of current issues and a likely significant effect of new development – within 5.6km of the SPA boundary. Informal advice from Natural England has suggested that they have few concerns relating to development in North Dorset and recreation in Poole Harbour. Correspondence between Natural England and North Dorset District Council confirms Natural England's view of no likely significant effect in relation to this issue. Therefore, due to the large distances involved and the small quantum of development to be provided by the Neighbourhood Plan, this impact pathway **can be screened out from resulting in likely significant effects both in isolation and in combination as a result of increased recreational pressure.**

Atmospheric Pollution

- 4.20 Poole Harbour SPA and Ramsar site is located at its closest 13.8 km south-east of Milborne St. Andrew Neighbourhood Plan area. The A35 runs east-west to Poole and Dorchester south of Milborne St. Andrew. The closest section of SPA/Ramsar site to the A35 is south east of the Bakers Arms Roundabout (A35, B3067 and A351), this lies approximately 20m south of the A35. However, the habitats present in this location are grazing marsh (according to mapping on www.magic.gov.uk) which is relatively tolerant of nitrogen deposition being a naturally high nitrogen habitat. For the same reasons as given for Dorset

⁵¹ Liley, D. (eds) (2013). Habitats Regulations Assessment of North Dorset Local Plan, Submission Version. Footprint Ecology

⁵² Liley, D. & Fearnley, H. (2012). Poole Harbour Disturbance Study. Report for Natural England. Footprint Ecology Ltd., Wareham, Dorset.

⁵³ <https://www.poole.gov.uk/planning-and-building-control/planning-policy-and-guidance/supplementary-planning-documents-and-guidance-notes/poole-harbour-recreation-spd/>

Heathlands SAC/SPA/Ramsar site it is considered that this impact pathway **can be screened out from resulting in likely significant effects both in isolation and in combination as a result of atmospheric pollution.**

Hydrological Changes

- 4.21 The WwTW at Snag Lane in Milborne St Andrew serves the Parish. The Parish of Milborne St. Andrew is within the catchment of the River Piddle which ultimately flows into Poole Harbour. This pathway therefore presents a potential impact on the SPA/Ramsar. The Neighbourhood Plan identifies that: 'Paragraph 2.18. ...Wessex Water have indicated that it is likely that further development within the village will exceed the current operating consents of the pumping station, and network capacity improvements will therefore be required.'
- 4.22 Whilst in isolation the increase in development within the Neighbourhood Plan is small, due to the fact that the Milborne St Andrew Wastewater Treatment Works (WwTW) is already at capacity and the sensitivity of Poole Harbour to increased nutrient inputs, **this impact pathway cannot be screened out in combination and will be subject to Appropriate Assessment** in Chapter 5.

Summary

- 4.23 The above discussion identifies two impact pathway that requires Appropriate Assessment in combination to determine potential for adverse effects on integrity as a result of the Milborne St. Andrew Neighbourhood Plan these are:
- **Disturbance** (including recreational pressure) in relation to Dorset Heaths SAC and Dorset Heathlands SPA/ Ramsar site; and,
 - **Hydrological changes** to Poole Harbour SPA and Ramsar site, and Dorset Heath (Purbeck and Wareham) and Studland Dunes SAC.
- 4.24 Appropriate Assessment is undertaken in Chapter 5.

5. Appropriate Assessment

The following impact pathways will be discussed in relation to the following European sites:

- **Disturbance** (including recreational pressure) in relation to Dorset Heaths SAC and Dorset Heathlands SPA/ Ramsar site; and,
- **Hydrological changes** to Poole Harbour SPA and Ramsar site, and Dorset Heath (Purbeck and Wareham) and Studland Dunes SAC.

In Combination

Disturbance (Recreational Pressure)

- 5.1 Due to the close proximity of the Dorset Heaths SAC and the Dorset Heathlands SPA and Ramsar site to the Neighbourhood Plan Area (2.3km at the closest), Appropriate Assessment is undertaken.
- 5.2 The entirety of the Milborne St. Andrew Neighbourhood Plan area is located within the 5km core recreational catchment for the Dorset Heaths European sites. As such all residential development provided by the Neighbourhood Plan has the potential to result in an adverse effect on integrity in combination. Policies that could link to this impact pathway are:
- 5.3 Policy MSA 1 (Meeting Local Needs – Amount and Location of New Development): Identifies for the provision of 2.8 dwellings per annum (42 net new dwellings) over the plan period (2018-2033).
- 5.4 Policy MSA 5 (Development of Camelco Site): The policy for this site allocation for new development of at least 32 net new dwellings as well as employment and community facilities.
- 5.5 It should be noted that the Neighbourhood Plan should be in conformity with the North Dorset Local Plan Part 1 which provides the following protective text for the Dorset Heaths European sites as follows:
- 5.6 Policy 4: Natural Environment

“Developers should demonstrate that their proposals will not have significant adverse effects, including cumulative effects, on internationally important wildlife sites. Where this cannot be demonstrated, appropriate mitigation measures will be required otherwise permission will be refused. Mitigation for specific sites will include:...

c) in relation to the Dorset Harbour SAC, Dorset Heaths (Purbeck and Wareham) and Studland Dunes SAC, Dorset Heathlands SPA and Dorset Heathlands Ramsar site, contributions from developments within 5km of the heathland designations towards the sustainable management of the heathland sites or contributions towards the provision of alternative accessible recreation space to reduce recreational pressure on the Dorset Heathlands.”
- 5.7 This is partially reflected in the Neighbourhood Plan states within Policy MSA 12 (Improving recreation opportunities and having due regard to European and internationally protected sites)... *“Development will be required to avoid having an adverse effect on the integrity of European and internationally important wildlife sites (Poole Harbour and Dorset Heathlands)... A suitable SANG project (or Heathlands Infrastructure Projects (HIPs)) and mechanism to secure timely delivery in the Parish must be agreed by Natural England prior to the approval of any housing developments of 10 or more dwellings.”*
- 5.8 The Dorset Heathlands Planning Framework SPD 2015-2020⁵⁴ provides for both Heathland Infrastructure Projects (HIPs) (including provision of SANG); and Strategic Access Management and Monitoring (SAMM). It uses developer contributions to find measures to avoid or mitigate the impacts of development on heathland sites. Measures to be funded through this approach include wardens, new access infrastructure, community work and the creation of new areas for recreation to draw people away from the heaths (SANG) and the monitoring of impacts. It is stated within the North Dorset Local Plan HRA that

⁵⁴ <https://www.dorsetforyou.gov.uk/planning-buildings-land/planning-policy/joint-planning-policy-work/pdfs/heathlands/dorset-heathlands-planning-framework-supplementary-planning-document-2015-2020.pdf> [accessed 19/11/2018]

'The current level of contribution to be secured through a Section 106 planning obligation is £1524.00 per new house and £952.00 per new flat'.

- 5.9 The policy MSA 05 - development of the Camelco site allocation would require provision of financial contributions to strategic HIPs and SAMM.
- 5.10 Whilst Neighbourhood Plan policy MSA12 (Improving Recreation Opportunities, and having regard to European and internationally protected sites) states: *'b) Development will be required to avoid having an adverse effect on the integrity of European and internationally important wildlife sites (Poole Harbour and the Dorset Heathlands). In assessing the likely effects, consideration must be given to the likely effects of the developments alone and in-combination with any other planned development or pending applications in the Neighbourhood Plan area. A suitable SANG project (or Heathland Infrastructure Projects (HIPs)) and mechanism to secure timely delivery in the parish must be agreed by Natural England prior to the approval of any housing developments of 10 or more dwellings. Consideration should also be given to whether the SANG land could also include measures to reduce nitrogen levels in the Bere Stream, and to secure this if practical. Thereafter all new housing development resulting in a net gain of 1 or more dwellings will be expected to contribute proportionally towards this project in order to provide appropriate mitigation'* **it is recommended that Policy MSA 12 of the Neighbourhood Plan is amended to include reference to need for any net new residential development within 5km of the European site to ensure no adverse effects in integrity on the European site. This can be implemented either via the Dorset Heathlands Planning Framework SPD (i.e. the provision of HIPs and / or SANG) or via the provision of bespoke mitigation that is agreed with Natural England.**
- 5.11 **It is recommended that the following policies refer to the need to adhere to the above recommendation:**
- Policy MSA 1 (Meeting Local Needs – Amount and Location of New Development)
 - Policy MSA 5 (Development of Camelco Site)
- 5.12 **With this protective provision included within the policy text it can be concluded that this policy will not have an adverse effect on the integrity of the Dorset Heaths European sites in combination as a result of recreation pressure.**

Hydrological Changes

- 5.13 It has been acknowledged within the North Dorset Local Plan that there is the potential for development within the North Dorset Plan area to potentially impact on the Poole Harbour European sites. As the WwTW that serves Milborne St Andrew feeds into the River Piddle and thus the Poole Harbour European site and it is already noted that the WwTW is already at capacity, there is potential for the Neighbourhood Plan to link to this impact pathway in combination.
- 5.14 Any new development that will result in an increase in sewage outputs (such as residential and economic development) provided by the Neighbourhood Plan has the potential to result in an adverse effect on integrity in combination. Policies that could link to this impact pathway are:
- Policy MSA 1 (Meeting Local Needs – Amount and Location of New Development): Identifies for the provision of 2.8 dwellings per annum (42 net new dwellings) over the plan period (2018-2033).
 - Policy MSA 3 (Meeting Employment Needs – Business Requirements): This policy provides for increased employment development within Milborne St Andrew. No quantum is or specific type (beyond small scale A Class and B1, B2 and B8 type development) is identified.
 - Policy MSA 5 (Development of Camelco Site): The policy for this site allocation for new development of at least 32 net new dwellings as well as employment and community facilities.
- 5.15 It should be noted that the Neighbourhood Plan should be in conformity with the North Dorset Local Plan Part 1 which provides the following protective text for the Dorset Heaths European sites as follows:
- 5.16 Policy 4: Natural Environment
- "Developers should demonstrate that their proposals will not have significant adverse effects, including cumulative effects, on internationally important wildlife sites. Where this cannot be demonstrated,*

appropriate mitigation measures will be required otherwise permission will be refused. Mitigation measures for specific sites will include:...

d in relation to the Poole Harbour SPA and Poole Harbour Ramsar site, developments within the harbour catchment will be required to be nitrogen neutral to avoid increasing nitrogen inputs into Poole harbour. A package of measures including upgrade of sewage treatment works or through the transfer of land from intensive agricultural use to less intensive grassland or woodland uses is available.”

- 5.17 This is partially reflected in the Neighbourhood Plan states within Policy MSA 12 (Improving recreation opportunities and having due regard to European and internationally protected sites)... *“Development will be required to avoid having an adverse effect on the integrity of European and internationally important wildlife sites (Poole Harbour and Dorset Heathlands)...In assessing the likely effects, consideration must be given to the likely effects of the developments alone and in-combination with any other planned development or pending applications in the Neighbourhood Plan area. Consideration should also be given to whether the SANG land could also include measures to reduce nitrogen levels in the Bere Stream, and to secure this if practical. Thereafter all new housing development resulting in a net gain of 1 or more dwellings will be expected to contribute proportionally towards this project in order to provide appropriate mitigation.”*
- 5.18 **It is recommended that Policy MSA 12 is amended as follows:**
- **The sentence “In assessing the likely effects, consideration must be given to the likely effects of the developments alone and in-combination with any other planned development or pending applications in the Neighbourhood Plan area” within MSA 12 should be amended as follows: “In assessing the likely effects, consideration must be given to the likely effects of the developments alone and in-combination with any other project or plan”**
 - **Policy MSA 12, MSA 1, MSA3, and MSA5 of the Neighbourhood Plan is amended to include reference to adherence to the Nitrogen Reduction in Poole Harbour Supplementary Planning Document to which North Dorset Council is a signatory.**
- 5.19 **With this protective provision included within the policy text it can be concluded that this policy will not have an adverse effect on the integrity of the Poole Harbour European sites in combination as a result of changes to hydrological conditions.**

6. Conclusions and Summary of Recommendations

6.1 Both a Test of Likely Significant Effects and a subsequent Appropriate Assessment was undertaken of the Milborne St. Andrew Neighbourhood Plan both in isolation and in combination. This was undertaken in the context of the overarching policy provided by the North Dorset Local Plan Part 1. Key impact pathways considered in this HRA were:

- Disturbance (Recreational Pressure)
- Air Pollution
- Hydraulic changes

6.2 Following the test of Likely Significant Effects, Appropriate Assessment was undertaken of the following impact pathways:

- **Disturbance** (including recreational pressure) in relation to Dorset Heaths SAC and Dorset Heathlands SPA/ Ramsar site; and,
- **Hydrological changes** to Poole Harbour SPA and Ramsar site, and Dorset Heath (Purbeck and Wareham) and Studland Dunes SAC.

6.3 To ensure no adverse effects on the integrity of these European sites occurred as a result of the Milborne St. Andrew Neighbourhood Plan changes to policy wording were recommended as follows:

Disturbance

6.4 It is recommended that Policy MSA 12 of the Neighbourhood Plan is amended to include reference to need for any net new residential development within 5km of the European site to ensure no adverse effects in integrity on the European site. This can be implemented either via the Dorset Heathlands Planning Framework SPD (i.e. the provision of HIPS and / or SANG) or via the provision of bespoke mitigation that is agreed with Natural England.

6.5 It is recommended that the following policies refer to the need to adhere to the above recommendation:

- Policy MSA 1 (Meeting Local Needs – Amount and Location of New Development)
- Policy MSA 5 (Development of Camelco Site)

Hydrological Change

6.6 It is recommended that Policy MSA 12 is amended as follows:

- The sentence “In assessing the likely effects, consideration must be given to the likely effects of the developments alone and in-combination with any other planned development or pending applications in the Neighbourhood Plan area” within MSA 12 should be amended as follows: “In assessing the likely effects, consideration must be given to the likely effects of the developments alone and in-combination with any other project or plan”
- Policy MSA 12, MSA 1, MSA3, and MSA5 of the Neighbourhood Plan is amended to include reference to adherence to the Nitrogen Reduction in Poole Harbour Supplementary Planning Document to which North Dorset Council is a signatory.

6.7 It is considered that with the inclusion of the above recommendations, the Milborne St Andrew Neighbourhood Plan will not result in an adverse effect on the integrity of European sites either in isolation or in combination with other projects or plans.

Appendix A Figures

THIS DRAWING IS TO BE USED ONLY FOR THE PURPOSE OF ISSUE THAT IT WAS ISSUED FOR AND IS SUBJECT TO AMENDMENT

- LEGEND**
- Milborne St Andrew
 - Neighbourhood Plan Area
 - Ramsar
 - Special Area of Conservation (SAC)
 - Special Protection Area (SPA)
 - Potential Special Protection Area (pSPA)

Copyright
 Contains Ordnance Survey Data © Crown Copyright and database right 2019
 © Natural England material is reproduced with the permission of Natural England 2019

Purpose of Issue
FINAL

Client
MILBORNE ST ANDREW PARISH COUNCIL

Project Title
HRA FOR THE MILBORNE ST ANDREW NEIGHBOURHOOD PLAN

Drawing Title
EUROPEAN DESIGNATED SITES IN THE VICINITY OF THE PLAN AREA

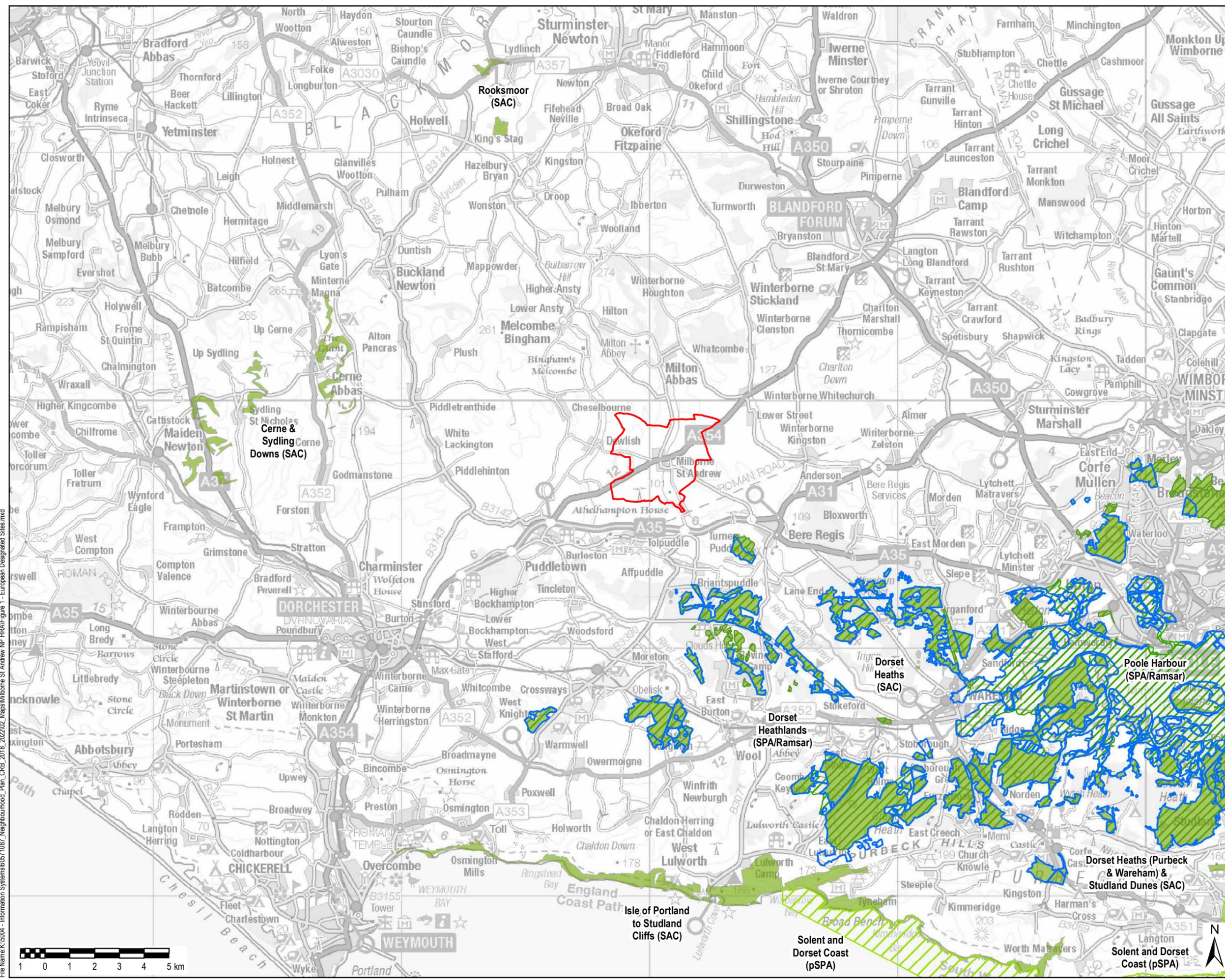
Drawn JW	Checked CN	Approved TS	Date 27/03/2019
AECOM Internal Project No. 60571087		Scale @ A3 1:140,000	

THIS DOCUMENT HAS BEEN PREPARED PURSUANT TO AND SUBJECT TO THE TERMS OF AECOM'S APPOINTMENT BY ITS CLIENT. AECOM ACCEPTS NO LIABILITY FOR ANY USE OF THIS DOCUMENT OTHER THAN BY ITS ORIGINAL CLIENT OR FOLLOWING AECOM'S EXPRESS AGREEMENT TO SUCH USE, AND ONLY FOR THE PURPOSES FOR WHICH IT WAS PREPARED AND PROVIDED.



Drawing Number
FIGURE 1

Rev
01



File Name: K15004 - Information Systems\60571087_Neighbourhood_Plan_CRB_2018_2022\02_Maps\Milborne St Andrew NP_HRA\Figure 1 - European Designated Sites.mxd



Appendix B European Designated Sites

Table B.1: Interest Features, Conservation Objectives and Site Vulnerabilities/Threats to Site Integrity

Site Name	Qualifying Features	Conservation Objectives ⁵⁵	Potential Integrity/Vulnerabilities ⁵⁶	Threats ⁵⁶	to	Site
Dorset Heathlands SPA	<i>Annex II</i> Breeding: Nightjar <i>Caprimulgus Europaeus</i> , Dartford warbler <i>Sylvia undata</i> , Woodlark <i>Lullula Arborea</i> Wintering : Hen harrier <i>Circus Cyaneus</i> , Merlin <i>Falco columbarius</i>	<i>'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.'</i>	Inappropriate habitat management Outdoor sports and leisure activities, recreational activities Grazing Invasive non-native species Human induced changes in hydraulic conditions Biocenotic evolution, succession Habitat fragmentation Wild fires/ arson			
Dorset Heathlands Ramsar	<i>Ramsar criterion 1:</i> Contains particularly good examples of (i) northern Atlantic wet heaths with cross-leaved heath <i>Erica tetralix</i> and (ii) acid mire with <i>Rhynchosporion</i> , largest example in Britain of southern Atlantic wet heaths with Dorset heath <i>Erica ciliaris</i> and cross-leaved heath <i>Erica tetralix</i> . <i>Ramsar criterion 2:</i> Supports one nationally rare and 13 nationally scarce wetland plant species, At least 28 nationally rare wetland invertebrate species. <i>Ramsar criterion 3:</i> 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: Poole Harbour, Avon Valley and The New Forest. <i>Species occurring at levels of international importance:</i> Southern damselfly <i>Coenagrion mercuriale</i> .	Not Applicable	Acid rain Pollution (unspecified)			
Dorset Heaths SAC	<i>Annex I</i> Northern Atlantic wet heaths with <i>Erica tetralix</i> . European dry heaths. Depressions on peat substrates of the <i>Rhynchosporion</i> . Molinia meadows on calcareous, peaty or clayey-silt-laden soils <i>Molinia caeruleae</i> Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i> Alkaline fens Old acidophilous oak woods with <i>Quercus robur</i> on sandy plains <i>Annex II species</i> Southern damselfly Great Crested Newt <i>Triturus cristatus</i>	<i>'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.'</i>	Inappropriate habitat management Outdoor sports and leisure activities, recreational activities Grazing Invasive non-native species Human induced changes in hydraulic conditions Habitat fragmentation Invasive non-native species Wild fires/ arson Air pollution Grazing			
Poole Harbour SPA	A wetland of international importance by regularly supporting at least 20,000 waterfowl: Breeding common tern <i>Sterna hirundo</i> , sandwich tern <i>Sterna sandvicensis</i> , and Mediterranean gull <i>Larus melanocephalus</i> . Wintering little egret <i>Egretta garzetta</i> , Icelandic population of black-tailed godwit <i>Limosa limosa</i> , Eurasian spoonbill <i>Platalea leucorodia leucorodia</i> , avocet <i>Recurvirostra avocetta</i> , and shelduck <i>Tadorna tadorna</i> . Waterbird assemblages 25,176 individuals	<i>'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.'</i>	Water pollution Air pollution, air-borne pollutants Fisheries Coastal squeeze Outdoor sports and leisure activities, recreational activities Deer			

⁵⁵ Taken from Natural England's Access to Evidence site [<http://publications.naturalengland.org.uk/category/6490068894089216>]

⁵⁶ Taken from Natura 2000- Standard Data Forms [<http://jncc.defra.gov.uk/protectedsites/>]

Poole Harbour Ramsar	<p><i>Ramsar criterion 1:</i> Best and largest example of a bar-built estuary with lagoonal characteristics in Britain.</p> <p><i>Ramsar criterion 2:</i> Two species of nationally rare plant, One nationally rare alga, At least three British Red data book invertebrate species.</p> <p><i>Ramsar criterion 3:</i> Mediterranean and thermo Atlantic halophilous scrubs, dominated by shrubby seablight <i>Suaeda vera</i>; calcareous fens with great fen sedge <i>Cladium mariscus</i>; transitions from saltmarsh through to peatland mires. Nationally important populations of breeding waterfowl including: Common tern, and Mediterranean gull; and Nationally important populations of wintering; Avocet</p> <p><i>Ramsar criterion 5:</i> Internationally important assemblages of waterfowl. 24709 waterfowl (5 year peak mean 1998/99-2002/2003)</p> <p><i>Ramsar criterion 6:</i> Internationally important populations of common shelduck, black tailed godwit, and avocet.</p>	Not Applicable	Eutrophication Introduction of non- native animal species
Isle of Portland to Studland Cliffs SAC	<p><i>Annex I</i> Vegetated sea cliffs of the Atlantic and Baltic Coasts Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) - Important orchid sites</p> <p><i>Annex II</i> Early gentian <i>Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site</i> Annual vegetation of drift lines</p>	<p><i>'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;</i> <i>The extent and distribution of qualifying natural habitats and habitats of qualifying species</i> <i>The structure and function (including typical species) of qualifying natural habitats</i> <i>The structure and function of the habitats of qualifying species</i> <i>The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely</i> <i>The populations of qualifying species, and,</i> <i>The distribution of qualifying species within the site.'</i></p>	Undergrazing Inappropriate scrub control Invasive non-native species Outdoor sports and leisure activities, recreational activities Water pollution Habitat fragmentation Inappropriate management
Solent and Dorset Coast pSPA:	<p><i>Foraging populations associated with:</i> Common tern Sandwich tern Little tern <i>Sterna albifrons</i>;</p>	<p><i>'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;</i> <i>The extent and distribution of the habitats of the qualifying features</i> <i>The structure and function of the habitats of the qualifying features</i> <i>The supporting processes on which the habitats of the qualifying features rely</i> <i>The population of each of the qualifying features, and,</i> <i>The distribution of the qualifying features within the site. '</i></p>	Water pollution Outdoor sports and leisure activities, recreational activities

Dorset Heaths (Purbeck and Wareham) and Studland Dunes SAC	<p><i>Annex I</i> Embryonic shifting dunes Shifting dunes along the shoreline with <i>Ammopila arenaria</i> Atlantic decalcified fixed dunes (Calluno-Ulicetea) Humid dune slacks Oligotrophic waters containing very few minerals of sandy plains <i>Littorelletalia uniflorae</i> Northern Atlantic wet heaths and <i>Erica tetralix</i> Temperate Atlantic wet heaths with <i>Erica ciliaris</i> and <i>Erica tetralix</i> European dry heaths Depressions on peat substrates of the <i>Rhynchosporion</i> Bog woodland <i>Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site</i> Molinia meadows on calcareous, peaty or clayey-silt-laden soils <i>Molinion caeruleae</i> Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i> Alkaline fens Old acidophilous oak woods with <i>Quercus robur</i> on sandy plains <i>Annex II species</i> Great crested newt Southern damselfly</p>	<p><i>'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.'</i></p>	<p>Inappropriate habitat management Outdoor sports and leisure activities, recreational activities Grazing Invasive non-native species Human induced changes in hydraulic conditions Habitat fragmentation Invasive non-native species Wild fires/ arson Air pollution Grazing</p>
Studland to Portland SAC	<p><i>Annex I habitat:</i> Reefs</p>	<p><i>'Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; The extent and distribution of qualifying natural habitats The structure and function (including typical species) of qualifying natural habitats, and The supporting processes on which the qualifying natural habitats rely'</i></p>	<p>Commercial fisheries</p>
Rooksmoor SAC	<p><i>Annex I habitat:</i> Molinia meadows on calcareous, peaty or clayey-silt-laden soils <i>Molinion caeruleae</i> <i>Annex II species:</i> Marsh fritillary butterfly <i>Euphydryas aurinia</i></p>	<p><i>'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.'</i></p>	<p>Inappropriate scrub control Undergrazing Inappropriate cutting/ mowing Air pollution from atmospheric nitrogen deposition.</p>

Cerne & Sydling Downs SAC	<i>Annex I habitat:</i> Semi-natural dry grasslands and scrubland facies on calcareous substrates <i>Festuco-Brometalia</i> (* important orchid sites) <i>Annex II species:</i> <ul style="list-style-type: none">Marsh fritillary butterfly <i>Euphydryas aurinia</i>	<i>'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;</i> <i>The extent and distribution of qualifying natural habitats and habitats of qualifying species</i> <i>The structure and function (including typical species) of qualifying natural habitats</i> <i>The structure and function of the habitats of qualifying species</i> <i>The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely</i> <i>The populations of qualifying species, and,</i> <i>The distribution of qualifying species within the site.'</i>	Habitat fragmentation Overgrazing Undergrazing Inappropriate weed control Fertiliser use Direct impact from 3 rd party (unintentional agricultural runoff) Inappropriate scrub control Atmospheric pollution from atmospheric nitrogen deposition.
------------------------------	--	---	--

Appendix C Screening Assessment of the Milborne St. Andrew Neighbourhood Plan Policies

Where a policy in the below table is coloured orange in the Test of Likely Significant Effects column, this policy has been identified as containing a potential linking impact pathway to a European designated site. Where a policy is coloured green in the Test of Likely Significant Effects column, this policy has been identified as not containing a potential linking impact pathway to a European designated site and is not assessed further.

Policy	Description	Test Of Likely Significant Effects
<p>Policy MSA1 – Meeting Local Needs – Amount and Location of New Development</p>	<p>Sufficient sites are allocated in the Neighbourhood Plan, which together with other limited infill and rural conversion, should more than meet the projected housing need of about 2.8 dwellings per annum over the plan period (2018 – 2033).</p> <p>The release of unallocated greenfield sites outside the settlement boundary for open market housing should be resisted unless it can be demonstrated that there is a local need for additional housing that will not otherwise be met, or that sites' development would deliver substantial community benefits to justify its release. In either case, the site's development should align with all of the following objectives (as detailed in Figure 2):</p> <ul style="list-style-type: none"> • Support a working, active village • Promote a walkable village; • Retain important green spaces; • Strengthen the village form and character; • Create attractive places to live; • Minimise flood risk; • Minimise the risk of traffic problems. 	<p>Potential linking impact pathways present, therefore this policy could potentially result in a LSE.</p> <p>This policy provides for 2.8 new dwellings per year during the Plan period which equates to 42 net new dwellings during the Plan period. In addition to a quantum of residential growth, this policy provides objectives with which new development must adhere.</p> <p>Potential linking impact pathways present:</p> <ul style="list-style-type: none"> • Recreational pressure • Human changes in hydraulic conditions; and • Atmospheric pollution • Loss of functionally linked land outside of the European site
<p>Policy MSA2 – Meeting Housing Needs – Dwelling Types</p>	<p>The type and size of housing permitted should primarily provide:</p> <ul style="list-style-type: none"> • affordable homes for rent, based on the current local need identified in the affordable housing register; • starter and shared-ownership affordable homes suitable for single adults, couples and young families; • one, two and three-bedroom open market homes (including semi-detached and terraced properties); • homes specifically designed for residents with more limited mobility and requiring an element of care. <p>Where appropriate, conditions will be attached to planning permissions for new dwellings in order to restrict their future extension, so that the adverse impacts of any reduction in the availability of smaller, more affordable homes (including</p>	<p>No linking impact pathways present, therefore this policy has no potential to result in a LSE.</p> <p>This policy is a development management policy relating to the type of housing that will be within a development. This policy does not allocate any sites or a quantum of housing for development.</p>

	<p>open market dwellings) can be considered.</p> <p>Larger open-market homes (with the equivalent space for four or more bedrooms) will require special justification and should be designed to allow for potential future subdivision (e.g. into flats / annexed accommodation or workspace / studio).</p>	
<p>Policy MSA3 – Meeting Employment Needs – Business Requirements</p>	<p>The existing employment premises at Milborne Business Centre, Deverel Farm, Barnes Croft and the local garage / car sales centre on the main road should be retained in employment use, and allowed to reconfigure to accommodate changing business needs insofar as this is compatible with the local area (in terms of traffic movements, heritage and other environmental impacts including the living conditions of nearby residents).</p> <p>The provision of new employment sites for small-scale A-Class uses or small-scale B1-type workshop / studios within or adjoining the settlement boundary will be supported, provided that the development would not give rise to levels of noise and disturbance, including from traffic movements, that would cause unacceptable harm to the living conditions of residents, or cause harm to designated heritage or other environmental assets.</p> <p>The expansion of Deverel Farm complex to accommodate large-scale premises for B1, B2 and B8 type uses and incidental parking and external storage areas, will be supported provided all of the following criteria are met:</p> <p>a) Any new or extended buildings or external storage areas would not be clearly visible from public rights of way to the detriment of the local landscape character;</p> <p>b) Any external lighting is controlled to avoid creating unacceptable levels of light pollution;</p> <p>c) Any necessary measures are included to avoid potential harm to the groundwater protection zone from potential pollution;</p> <p>d) Proposals for development that is likely to generate a significant level of traffic are accompanied by a traffic assessment to establish any measures that would be reasonably required to address accessibility and safety issues, including improvements to pedestrian and cycle routes into the village.</p>	<p>Potential linking impact pathways present, therefore this policy could potentially result in a LSE.</p> <p>This policy provides for increased employment development within Milborne St Andrew. No quantum is or specific type (beyond small scale A Class and B1, B2 and B8 type development) is identified.</p> <p>Potential linking impact pathways present:</p> <ul style="list-style-type: none"> • Human changes in hydraulic conditions; • Loss of functionally linked land outside of the European site; and • Atmospheric pollution
<p>Policy MSA4 –</p>	<p>Development proposals to improve the provision of community facilities</p>	<p>No linking impact pathways present,</p>

<p>Supporting Community Facilities</p>	<p>(including those listed below) in a manner in keeping with the character of the area will be supported.</p> <ul style="list-style-type: none"> a) Village Shop b) Post Office c) First School and Pre-School d) Village Hall and Playing Fields e) Parish Church and Cemetery f) Public House g) Sports Pavilion and Grounds h) Allotments <p>Every effort should be made to work with the local community and relevant authorities to investigate potential solutions to avoid any loss of these valued assets.</p> <p>The area adjoining the allotments (as shown on the Policies Map) is reserved for the future expansion of the allotments or alternative informal recreation use. Developer contributions may be sought where reasonable and necessary for improvements to the above social infrastructure.</p>	<p>therefore this policy has no potential to result in a LSE.</p> <p>This policy is a development management policy relating to supporting community facilities. Outdoor facilities such as playing fields, sports facilities and allotments have the potential to divert recreational activities away from sensitive European sites.</p>
<p>MSA Project 1 – Community Land Trust</p>	<p>The Parish Council will support local volunteers to set up and run a Community Land Trust for the benefit of the village.</p>	<p>No linking impact pathways present, therefore this policy has no potential to result in a LSE.</p> <p>This policy is a development management policy relating to supporting volunteers associated with a Community Land Trust for the benefit of the village.</p>
<p>Policy MSA5 – Development of Camelco Site</p>	<p>The Camelco site, as shown on the Policies Map, is allocated for mixed use of housing, employment and community facilities, and subject to all of the following requirements:</p> <ul style="list-style-type: none"> a) The site is made good through the removal of redundant structures (unless their retention would be of demonstrable benefit), and measures are taken to ensure that any evidence of potential contamination before or during construction are investigated and remediation agreed by the Local Planning Authority b) A new vehicular access is provided onto the A354, designed to create 	<p>Potential linking impact pathways present, therefore this policy could potentially result in a LSE.</p> <p>This policy provides for new residential (at least 32 net new dwellings), employment and community facilities. This policy also provides objectives with which new development at the Camelco Site must adhere.</p>

	<p>adequate visibility to allow safe access/egress and to help slow traffic entering the village. The existing vehicular entrance onto Lane End should be retained, to provide an alternative route and the potential to connect the two access points to create a permeable layout.</p> <p>c) Pedestrian access from the village centre to the site should be improved, including the provision of a safe pedestrian crossing point of the A354 adjoining the site, a 2m footway along the frontage of the site and a safe and attractive link through the site to the Sports Field and Allotments. Developer contributions will also be sought towards pedestrian improvements to the A354 in the village centre, as identified in Table 3.</p> <p>d) Sufficient space should be provided to allow the west-bound busses to pick up and set down without interrupting the movement of traffic along the A354, along with a new bus shelter.</p> <p>e) The design of the development fronting onto the A354 is of high quality to create a welcoming entrance point onto the village from the east, including suitable planting and design. The location and design of any housing and garden areas along this frontage will need to take into account possible disturbance from the main road and existing business centre.</p> <p>f) At least 32 dwellings are provided, and the dwellings provided are of a type and size that accords with Policy MSA2, and their detailed design accords with Policy MSA14</p> <p>g) Community building/s and associated land and parking of suitable size and specification to accommodate a branch surgery and pre-school, are provided within the site in line with the requirements identified in section 4.10 to 4.13 (or to an alternative specification of equal community benefit, in agreement with the relevant service providers and Parish Council). These should be designed flexibly to allow B1 employment use should the need for the surgery or pre-school be delayed or delivered elsewhere</p> <p>h) In addition to the community buildings, at least 5% of the site area should comprise buildings and associated parking for small-scale A-Class or B1-type workshop / studios appropriate to a rural area (these may have residential uses above)</p> <p>i) The employment and community buildings should be co-located and their parking provision designed to allow shared / flexible use and minimise disruption to nearby residential occupants</p>	<p>Potential linking impact pathways present:</p> <ul style="list-style-type: none">• Recreational pressure• Human changes in hydraulic conditions; and• Atmospheric pollution <p>It is noted that this policy provides for SANG, however, no details of extent, location or how the site will be managed in perpetuity are included.</p>
--	---	---

	<ul style="list-style-type: none"> j) At least 180m² of equipped play space plus at least 430m² of informal amenity green space should be provided within or very close to the site, with the total provision of public open space delivered being in line with Policy MSA12 (a) k) A landscape scheme is secured that provides substantial landscape planting using native species along the southern and south-eastern site boundaries, and pockets of amenity space within the development of sufficient in size to support mature trees, to visually integrate the site in this edge-of-village location and soften the visual impact of the development in long-distance views from Weatherby Castle. The management of these spaces should be secured so that they provide an on-going benefit l) A certified biodiversity mitigation and enhancement plan is secured so that the loss of hedgerow and wildlife habitats likely to support protected species is avoided as far as possible, and that mitigation and, if necessary, compensatory measures are agreed, to provide an overall biodiversity gain m) A Suitable Accessible Natural Greenspace (SANG) will be required to be provided within a safe and reasonable walking distance of the site, and its future management secured (which will include additional measures as necessary to provide appropriate mitigation in line with the requirements set out in Policy MSA12 (b)). The SANG may include a variety of features such as grassland, community woodland and ponds. Improved access to the countryside via the provision of Link 1 (see Table 10 and Figure 10) should also be delivered if feasible n) Archaeological investigation is undertaken prior to the site's development, and recording undertaken, to a level agreed as necessary by the County Archaeologist o) A surface water and drainage plan is secured to manage surface water run-off and foul water disposal from the site, including the consideration of any necessary off-site network capacity improvements that may be required to accommodate this development. 	
<p>Policy MSA6 – Settlement Boundary</p>	<p>The settlement boundary for the village of Milborne St Andrew is amended as shown on the Policies Map.</p>	<p>No linking impact pathways present, therefore this policy has no potential to result in a LSE.</p> <p>This policy is a development management</p>

		policy relating to the settlement boundary.
Policy MSA7 – Creating safer roads and pedestrian routes	<p>Where development has the potential to connect via new or existing public rights of way to more than one road, pedestrian routes should be provided through the development, so that more people are likely to walk rather than drive around the village. The design of any such paths should:</p> <ul style="list-style-type: none"> a) be suitable for use of people with mobility difficulties, wheelchairs or buggies; b) be suitably overlooked and landscaped so as to be safe and attractive and be designed in a manner in keeping with the rural character of the area, taking into account the potential to enhance biodiversity through the provision of wildlife corridors; c) enable reasonable direct links to nearby community facilities; and d) allow for future onwards connections where there is reasonable prospect that an adjoining site may be developed. <p>Where development would give rise to increased pedestrian movements within and around the village, proportionate developer contributions should be sought for improvements to the highway infrastructure as identified in Table 3 and to be implemented through MSA Project 2.</p>	<p>No linking impact pathways present, therefore this policy has no potential to result in a LSE.</p> <p>This policy is a development management policy relating to creating safer roads and pedestrian routes.</p>
MSA Project 2 – Traffic Management in Milborne St Andrew	The traffic management measures outlined in Table 3 will be pursued by the Parish Council in conjunction with the Highways Authority, and be designed in accordance with the Rural Roads Protocol.	<p>No linking impact pathways present, therefore this policy has no potential to result in a LSE.</p> <p>This policy is a development management policy relating to traffic management within the Village.</p>
Policy MSA8 – Parking Provision	<p>Parking provision for new or extended dwellings (including conversions) should meet the car parking spaces requirements set out in Table 5. Development, including plot sub-division, that would result in the loss of parking will be resisted if this will result in a level of provision below the expected standards.</p> <p>The design of parking provision will need to respect the character of the area, use permeable, non-migrating surfacing materials, and avoid large areas of hard-standing that would be visible from the street or other public areas.</p>	<p>No linking impact pathways present, therefore this policy has no potential to result in a LSE.</p> <p>This policy is a development management policy relating to parking provision.</p>
Policy MSA9 – Reinforcing Local	Development should respect and enhance local landscape character, including the retention and reinforcement of the following key characteristics:	No linking impact pathways present, therefore this policy has no potential to result

<p>Landscape Character</p>	<p>a) the general lack of light pollution b) the hedge-lined rural lanes; c) the Bere Stream corridor, which has a rural character, in places being lined with trees (willows and alders) and in others farmed up to its edges; d) the important groups of trees, woodlands and copses dotting the landscape and within and on the edge of the village itself, softening the visual impact of the village in wider views – these include (but are not limited to):</p> <ul style="list-style-type: none"> • Milborne Wood • Longthorns Wood • Stileham Bank treed upper edge • Wooded hilltop of Weatherby Castle • Milborne Business Centre woodland • Woodland adjoining the Coffin Path • the historic tumuli, barrows and ancient hillforts. 	<p>in a LSE.</p> <p>This policy is a development management policy relating to local landscape character. .</p>
<p>Policy MSA10 – Protecting Local Wildlife</p>	<p>Development should enhance biodiversity, through an understanding of the wildlife interest that may be affected by development, and the inclusion of measures that will protect the existing ecological network (as shown on Figure 8) and secure an overall biodiversity gain. A certified Biodiversity Mitigation and Enhancement Plan will be required where a development would involve:</p> <p>a) the loss of a hedgerow (in whole or part), copse / woodland area or mature tree specimen; b) works within 10 metres of the Bere Stream or other areas identified as part of the existing ecological network, or within the potential ecological network (as shown in Figure 8) c) works involving the development of a greenfield site, or a brownfield site in excess of 0.1ha; or d) works involving a rural barn (including barn conversions) or other roof space where bats may be present.</p> <p>Works that would support the ecological improvement of the network of existing</p>	<p>No linking impact pathways present, therefore this policy has no potential to result in a LSE.</p> <p>This policy is a development management policy relating to local wildlife.</p>

	and potential ecological sites will be supported.	
Policy MSA11 – Local Green Space	The sites listed in Table 7 (and as shown in Figure 9) are designated as Local Green Spaces, and, other than in very special circumstances, no development will be permitted within or immediately adjoining them that would harm their reason for designation.	<p>No linking impact pathways present, therefore this policy has no potential to result in a LSE.</p> <p>This policy is a development management policy relating to local green spaces.</p>
Policy MSA12 – Improving Recreation Opportunities, and having regard to European and internationally protected sites	<p>a) Development will be required to protect and where possible enhance opportunities for informal outdoor recreation (including the use of public right of way network). The amount of open space provided in relation to new housing development should be in line with requirements set in Table 8 (which reflects the FIT and allotment standards set in the Local Plan). Such provision should be made within the site, particularly for development of 10 or more dwellings where amenity green space could be planted with one or more tree specimens to reinforce the village character, unless it is not practical to do so. Where the full requirement is not provided on-site, development will be expected to provide new, and/or enhance existing, recreation opportunities off-site elsewhere within the Neighbourhood Plan area. This may be through the projects as outlined in Tables 9 and 10, or through alternative projects that have the clear support of the Parish Council.</p> <p>b) Development will be required to avoid having an adverse effect on the integrity of European and internationally important wildlife sites (Poole Harbour and the Dorset Heathlands). In assessing the likely effects, consideration must be given to the likely effects of the developments alone and in-combination with any other planned development or pending applications in the Neighbourhood Plan area. A suitable SANG project (or Heathland Infrastructure Projects (HIPs)) and mechanism to secure timely delivery in the parish must be agreed by Natural England prior to the approval of any housing developments of 10 or more dwellings. Consideration should also be given to whether the SANG land could also include measures to reduce nitrogen levels in the Bere Stream, and to secure this if practical. Thereafter all new housing development resulting in a net gain of 1 or more dwellings will be expected to contribute proportionally towards this project in order to provide appropriate mitigation.</p>	<p>No linking impact pathways present, therefore this policy has no potential to result in LSE.</p> <p>This is a positive policy that details the need for SANG provision.</p> <p>There is a section within the policy which states “<i>development will be required to avoid having an adverse effect on the integrity of European and internationally important wildlife sites</i>”. This is a protective policy.</p>
MSA Project 3 – Identifying where and	The Parish Council will work with local landowners, the Local Planning Authority and Natural England to identify a Suitable Alternative Natural Greenspace	No linking impact pathways present, therefore this policy has not potential to result

<p>how the SANG will be delivered</p>	<p>project for delivery within the Parish that will address the impact of further housing on European Sites and internationally protected heathland sites.</p>	<p>in LSE. This policy describes a collaborative approach to identifying SANG for delivery within the Parish..</p>
<p>MSA Project 4 – Conservation Area Appraisal</p>	<p>The Parish Council will work with the Local Planning Authority to re-appraise the Conservation Area, with the aim of identifying features of significant including buildings that merit Local Listing.</p>	<p>No linking impact pathways present, therefore this policy has no potential to result in a LSE. This policy is a development management policy relating to heritage conservation areas.</p>
<p>Policy MSA13 – Locally Important Character Features</p>	<p>Care should also be taken to retain and improve existing features that are particularly iconic to the character of the village, including consideration of their setting and visual prominence. These include:</p> <ul style="list-style-type: none"> a) The Square as the village centre b) The mix of uses and related building types on the A354 that reflect the working status of the village c) The many Listed Buildings and locally important historic buildings (to be identified through the Conservation Area Appraisal project, with consideration in the interim given to those identified in para 6.24 and on Figure 11) d) The Stag (on Stag House on the junction with Chapel Street) and Gate Piers in the Grove, as a local landmarks e) The Bere stream running through Milborne St Andrew and associated bridges f) The flint walls that run throughout the village and line many of the roads 	<p>No linking impact pathways present, therefore this policy has no potential to result in a LSE. This policy is a development management policy relating to locally important character features. .</p>
<p>Policy MSA14 – Character and Design Guidance</p>	<p>New development should be visually attractive as a result of layout, landscaping, and good architecture including the use of appropriate materials and workmanship, it should respond to local character and history to reinforce the area’s sense of place, and create places that are safe, inclusive and accessible, with a high standard of amenity.</p>	<p>No linking impact pathways present, therefore this policy has no potential to result in a LSE. This policy is a development management policy providing guidance on character and</p>

	<p>The density of housing areas should be below 20dph in order to maintain the village character. Development proposals that exceed this density will not be supported unless it is clearly demonstrated that the resulting design will reinforce the village character, and that the scheme will provide sufficient parking (in line with Policy MSA8), private garden areas (proportionate to the dwelling size) and amenity green space within the development. Rear garden depths should be at least 10m. Where smaller rear gardens are proposed, the applicant should provide more detail on how outdoor clothes lines, garden shed and sitting out areas are accommodated without excessive shadowing, and sectional drawings should be provided to clearly demonstrate how overlooking and loss of privacy to the private amenity space will be avoided (both to the proposed dwelling and to neighbouring properties).</p> <p>A mix of building styles is encouraged. Clusters of similar building types and designs that clearly identify an area as part of a housing estate will not be supported. Affordable housing should be indistinguishable from open market homes by its design, materials and siting (enclaves of affordable housing should be avoided).</p> <p>Designs should accord with the guidance provided in Table 10 in order to reinforce the underlying character and appearance of the village, unless a different approach is clearly justified and the resulting design would not detract from the character of the village.</p> <p>Sustainable technology (such as solar panels), bin stores, meter boxes and similar utility requirements should be clearly shown on the planning application drawings to demonstrate how these are successfully integrated into the property and will not be prominent in the street scene.</p> <p>High boundary walls and fences should be avoided on the street frontage. If necessary for security and privacy reasons, measures should be taken to include planting in front to soften their visual impact.</p>	<p>design.</p>
<p>Policy MSA15 – Minimising Flood Risk</p>	<p>All development proposal upstream of March Bridge (at the junction of Church Hill and The Causeway) that are likely to give rise to increased surface water run-off which will ultimately discharge to the Bere Stream, should be supported by a site-specific Surface and Foul Water Drainage Strategy that sets out details</p>	<p>No linking impact pathways present, therefore this policy has no potential to result in a LSE.</p>

	<p>of how surface water and foul water drainage will be managed. This should demonstrate all of the following criteria are met:</p> <ul style="list-style-type: none">a) That there is no net increase in flood risk on and off-site as a result of the proposed development, including at times of max groundwater levels (measured as 137cm at Delcombe woods bore hole);b) That any surface water connections do not link into the foul drainage network;c) That existing private drainage (if to be used) is in good structural working order. If private drainage systems are discovered to be unsound and contributing to ground water ingress to the public sewer system, remedial measures should be identified and delivered; andd) That any infiltration techniques, if used, are appropriate to the local geological and groundwater conditions.	<p>This policy is a development management policy relating to minimising flood risk upstream of March Bridge.</p>
--	--	---

