



**ECOLOGY SOLUTIONS**

Part of the ES Group

NURSERY FIELDS,  
WEST BERSTED

**Shadow Habitats  
Regulations Assessment**

**(Pursuant to Regulation 63  
of The Conservation of  
Species and Habitats  
Regulations 2017)**

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## **1. INTRODUCTION**

### **1.1. Background**

- 1.1.1. Ecology Solutions was commissioned by Landform Bersted Ltd to assess implications of proposed development at Nursery Fields, West Bersted (hereafter referred to as 'the application site') on nearby designated sites of European Importance, including Pagham Harbour Special Protection Area (SPA) and Ramsar site.
- 1.1.2. The proposals include development of up to 225 residential dwellings, associated infrastructure, open space and access.
- 1.1.3. The application site forms part of the West of Bersted Strategic Housing Site SD3, which was allocated in the Arun District Council Local Plan in 2018. For clarity, applications for SD3 will be coming forward separately and will be compatible with the application site proposals. As such, Arun District Council (as the competent authority) will need to undertake further Habitats Regulations Assessments of other forthcoming schemes within SD3.
- 1.1.4. In line with the Conservation of Habitats and Species Regulations 2017 (as Amended), consideration has been given to potential impacts to the following European Sites as part of this Shadow Habitats Regulations Assessment (sHRA) where appropriate:
  - Pagham Harbour SPA / Ramsar site (approx. 3.6km to the southwest of the application site boundary at its closest point);
  - Chichester and Langstone Harbour SPA / Ramsar Site (approx. 7.9km to the west of the application site boundary at its closest point);
  - Solent Maritime Special Area of Conservation (SAC) (approx. 7.9km to the west of the application site boundary at its closest point); and
  - The Solent to Dorset Coast potential SPA (pSPA) (approx. 1.9km south of the application site boundary at its closest point).
- 1.1.5. The findings of this assessment work are set out within this sHRA, such that the Competent Authority has all the necessary information before it in order to carry out their duties in considering the scheme, in line with relevant planning policy and legislation, including specifically the Conservation of Habitats and Species Regulations 2017 (hereafter referred to as the Habitats Regulations).

### **1.2. Site Characteristics**

- 1.2.1. The application site is located to the west of Bersted. The vast majority of the application site supports arable land, with other habitats including species-poor margin grassland, ditches and boundary treelines / hedgerows.
- 1.2.2. The application site is bordered by extensive arable land to the west, with existing development (associated with the town of Bersted) situated

to the east. A cemetery and nursery are also present to the immediate south, beyond which lies more residential development.

### **1.3. Purpose of this Report**

- 1.3.1. This report specifically assesses the potential effects of the proposed scheme on European designated sites within the local area (both alone and in combination with other plans / projects). Within this document specific regard is had to the test under Regulation 63 of the Habitats Regulations. Regulation 63 is described and considered further in Section 2 of this document.
- 1.3.2. The proximity of the application site to relevant European Sites is described in detail at Section 3 of this report and is also shown on Plan ECO1.
- 1.3.3. As part of this assessment, professional judgement has been applied in some instances in order to interpret information. Ecology Solutions is a member of the Chartered Institute of Ecology and Environmental Management (CIEEM) and the Institute of Environmental Management and Assessment (IEMA) and its professional ecologists are qualified to make such judgements where appropriate.
- 1.3.4. The purpose of this report is to provide the Competent Authority with the information required to consider the development proposals, in line with the tests set out in Regulation 63 of the Habitats Regulations. It is the opinion of Ecology Solutions, given all relevant available information, that in light of the package of avoidance and mitigation measures proposed as integral elements of development, as well as specific mitigation measures proposed in respect of European sites, the scheme would not adversely affect the integrity of any international / European designated sites, and as such that consent may safely be granted.

## 2. LEGISLATIVE AND PLANNING POLICY BACKGROUND

2.1. This section of the document outlines further details regarding the legislation and planning policy of particular relevance to the proposed scheme.

### 2.2. Legislation and relevant case law

2.2.1. The proximity of the application site to a European designated site means that the EC Directive on the Conservation of Natural Habitats and of Wild Flora and Fauna (Habitats Directive) and the EC Directive on Wild Birds (Birds Directive) are of relevance. The Directive is transposed in UK legislation through the Habitats Regulations 2017 (as amended).

2.2.2. The relevant Directive and UK legislation are discussed below.

#### Habitats and Birds Directives

2.2.3. Under the EC Directive on the Conservation of Natural Habitats and of Wild Flora and Fauna, commonly referred to as the Habitats Directive (Council Directive 92/43/EEC), Member States are required to take special measures to maintain the distribution and abundance of certain priority habitats and species (listed in Annexes I and II of the Directive).

2.2.4. In particular each Member State is required to designate the most suitable sites as Special Areas of Conservation (SACs). All such SACs will form part of the Natura 2000 network under Article 3(1) of the Habitats Directive.

2.2.5. Article 2 (3) sets out that Member States have a duty, in exercising their obligations under the Habitats Directive to:

*“... take account of economic, social and cultural requirements and local characteristics.”*

2.2.6. Under the EC Directive on Wild Birds (the Birds Directive) (Council Directive 2009/147/EEC, previously 79/409/EEC), Member States are required to take special measures to conserve the habitats of certain rare species of birds (listed in Annex I of the Directive) and regularly occurring migratory birds.

2.2.7. In particular each Member State is required to classify the most suitable areas of such habitats as Special Protection Areas (SPAs). This is designed to protect wild birds, and to provide sufficient diversity of habitats for all species so as to maintain populations at an ecologically sound level. All Bird Directive SPAs will also be part of the Natura 2000 network under Article 3(1) of the Habitats Directive.

2.2.8. Thus, there is an obligation under the Habitats Directive and the Birds Directive for member states to designate sites before turning to measures for their protection

2.2.9. The protection afforded to SACs and SPAs is delivered through Article 6 of the Habitats Directive. Article 6(2) requires Member States to take appropriate steps to avoid the deterioration of natural habitats and

disturbance of species for which the sites have been designated, in so far as the disturbance could be significant in relation to the objectives of the Directive. Article 6(3) and Article 6(4) require that a plan or project not directly connected with the management of the site, but likely to have a significant effect upon it, either individually or in combination with other plans or projects, must be subject to an Appropriate Assessment of its implications on the site, in view of the site's Conservation Objectives.

- 2.2.10. Having undertaken an Appropriate Assessment, the Competent Authority may agree to a plan or project where it can be concluded that it will not adversely affect the integrity of the site. In light of a negative assessment on the implications for the integrity of the site, Article 6(4) provides that the plan or project may still proceed where it can be demonstrated that there are no alternatives and there are imperative reasons of over-riding public interest as to why it must proceed. In the event that a plan or project is to proceed on the basis of imperative reasons of over-riding public interest, by direction of Article 6(4), compensatory measures must be put in place to ensure that the overall coherence of the Natura 2000 network is protected.

The Conservation of Habitats and Species Regulations 2017 (as Amended)

- 2.2.11. The Conservation of Species and Habitats Regulations 2017 (as Amended), commonly referred to as the Habitats Regulations, transpose the requirements of the Habitats Directive and the Birds Directive into UK legislation. The Habitats Regulations aim to protect a network of sites in the UK that have rare or important habitats and species in order to safeguard biodiversity. The Habitats Regulations 2017 consolidate all of the previous amendments made to the Habitats Regulations 2010.
- 2.2.12. Under the Habitats Regulations, Competent Authorities have a duty to ensure that all the activities they regulate have no adverse effect on the integrity of any of the Natura 2000 sites (e.g. SPAs and SACs). Regulation 63 of the Habitats Regulations requires that:

*"63(1) A competent authority, before deciding to undertake, or give any consent, permission or other authorisation for a plan or project, which:-*

*(a) is likely to have a significant effect on a European site or a European offshore marine site (either alone or in combination with other plans or projects) and*

*(b) is not directly connected with or necessary for the management of the site,*

*must make an appropriate assessment of the implications of the plan or project for that site in view of that site's conservation objectives.*

*63(3) The competent authority must for the purposes of the assessment consult the appropriate nature conservation body and have regard to any representations made by that body within such reasonable time as the authority specifies.*

*63(5) In the light of the conclusions of the assessment, and subject to regulation 64, the authority may agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the European site or the European offshore marine site (as the case may be).*

*63(6) In considering whether a plan or project will adversely affect the integrity of the site, the authority must have regard to the manner in which it is proposed to be carried out or to any conditions or restrictions subject to which it proposes that the consent, permission or other authorisation should be given."*

- 2.2.13. Regulation 63 of the Habitats Regulations therefore sets out a two-stage process. The first test is to determine whether the plan / project is likely to have a significant effect on the European site. The second test (if applicable) is to determine whether the plan / project will affect the integrity of the European site.
- 2.2.14. Some key concepts of the Habitats Directive and Habitats Regulations have been clarified through case law. The most pertinent cases in relation to the development proposals are the *Waddenzee* Judgement, the *Sweetman* Case, the *Dilly Lane* Case, the *Exminster Judgment* and the *People over Wind* Judgement. These are discussed below.

#### Waddenzee Judgement

- 2.2.15. In the *Waddenzee* case the European Court of Justice decided that an Appropriate Assessment is required for a plan or project where there is a probability or a risk that it will have a significant effect on the SPA. The Judgement states (at paragraph 3(a)) that:

*"...any plan or project not directly connected with or necessary to the management of the site is to be subject to an appropriate assessment of its implications for the site in view of the site's conservation objectives if it cannot be excluded, on the basis of objective information, that it will have a significant effect on that site, either individually or in combination with other plans or projects."*

- 2.2.16. Hence, the need for an Appropriate Assessment should be determined on a precautionary basis.
- 2.2.17. The Judgement gives clarity that the test of 'likely significant effect' should also be undertaken in view of the European site's Conservation Objectives. It is stated at paragraph 3(b) that:

*"where a plan or project not directly connected with or necessary to the management of a site is likely to undermine the site's conservation objectives, it must be considered likely to have a significant effect on that site."*

- 2.2.18. Paragraph 4 of the Judgement emphasises the requirement for the Appropriate Assessment to rely on objective scientific information:

*“...an appropriate assessment...implies that, prior to its approval, all the aspects of the plan or project which can, by themselves or in combination with other plans or projects, affect the site's conservation objectives must be identified in the light of the best scientific knowledge in the field. The competent national authorities, taking account of the appropriate assessment of the implications...for the site concerned in the light of the site's conservation objectives, are to authorise such an activity only if they have made certain that it will not adversely affect the integrity of that site. That is the case where no reasonable scientific doubt remains as to the absence of such effects.”*

### Sweetman Case

- 2.2.19. Further guidance in relation to the consideration of impacts in the light of the Habitats Regulations is provided in the *Sweetman* case. The case as set out by the Advocate General considered in detail the test for likely significant effect in paragraphs 50 and 51:

*“50. The test which that expert assessment must determine is whether the plan or project in question has ‘an adverse effect on the integrity of the site’, since that is the basis on which the competent national authorities must reach their decision. The threshold at this (the second) stage is noticeably higher than that laid down at the first stage. That is because the question (to use more simple terminology) is not ‘should we bother to check’ (the question at the first stage) but rather ‘what will happen to the site if this plan or project goes ahead; and is that consistent with “maintaining or restoring the favourable conservation status” of the habitat or species concerned’...*

*51. It is plain, however, that the threshold laid down at this stage of Article 6(3) may not be set too high, since the assessment must be undertaken having rigorous regard to the precautionary principle. That principle applies where there is uncertainty as to the existence or extent of risks. The competent national authorities may grant authorisation to a plan or project only if they are convinced that it will not adversely affect the integrity of the site concerned. If doubt remains as to the absence of adverse effects, they must refuse authorisation.”*

- 2.2.20. The Court of Justice of the European Union (CJEU) agreed with the Advocate General's conclusions, and held:

*“40. Authorisation for a plan or project, as referred to in Article 6(3) of the Habitats Directive, may therefore be given only on condition that the competent authorities – once all aspects of the plan or project have been identified which can, by themselves or in combination with other plans or projects, affect the conservation objectives of the site concerned, and in the light of the best scientific knowledge in the field – are certain that the plan or project will not have lasting adverse effects on the integrity of that site. That is so where no reasonable scientific doubt remains as to the absence of such effects.”*

- 2.2.21. Hence a plan or project may be authorised only if no reasonable scientific doubt remains as to the absence of effects. Reasonable

scientific doubt will exist if the evidence is not sufficiently conclusive, or if there are gaps in the information.

#### Dilly Lane Case

- 2.2.22. The Secretary of State's decision to allow an appeal in relation to applications for a total of 170 new homes on a greenfield site off Dilly Lane, Hartley Wintney was challenged in High Court by Hart District Council. The legal challenge was made on the grounds that the Secretary of State had erred in departing from her Inspector's conclusions as to the effects on the Thames Basin Heaths SPA.
- 2.2.23. A key issue for the case was whether mitigation measures should be disregarded when assessing whether the project would have a significant effect on the SPA. Mr Justice Sullivan (now Lord Justice Sullivan) ruled in favour of the Secretary of State after concluding that there was no absolute legal rule that mitigation measures should be disregarded during the first stage – 'the likely significant test':

*"55. The competent authority is not considering the likely effect of some hypothetical project in the abstract. The exercise is a practical one which requires the competent authority to consider the likely effect of the particular project for which permission is being sought. If certain features (to use a neutral term) have been incorporated into that project, there is no sensible reason why those features should be ignored at the initial, screening, stage merely because they have been incorporated into the project in order to avoid, or mitigate, any likely effect on the SPA."*

#### Exminster Judgment

- 2.2.24. Also of note is the Judgement handed down by Lord Justice Sales on 5 March 2015 in Dianne Smyth v The Secretary of State for Communities and Local Government [2015] EWCA Civ 174. That case concerned an Appeal by Mrs Smyth against the decision of Mrs Justice Patterson sitting in the High Court [2013] EWHC 3844 who dismissed an application made by Mrs Smyth to quash the appeal decision to grant planning permission to Bellway for the development of 65 residential dwellings on land at Sentry's Farm, Exminster, Devon. In that case the development site was located close to the Exe Estuary SPA ("the SPA"), which is also notified as a Site of Special Scientific Interest (SSSI). The SPA incorporates the Dawlish Warren SAC ("the SAC").
- 2.2.25. Amongst other matters, this case considered the weight that should be attributed to an experts professional judgment.
- 2.2.26. Lord Justice Sales makes clear that an experts experience can be classed as objective information, as set out in paragraphs 46 and 47 of the Judgment. These paragraphs state:

*46. Mr Jones submitted that Mr Goodwin's evidence amounted merely to assertion, unsupported by any objective evidence. I do not agree. Three points should be made. First, I consider that on a fair*

*reading of Mr Goodwin's proof of evidence it can be seen that he has drawn on specific information relevant to the SPA and the SAC, as well as the development site and proposed mitigation measures, in a manner which supports in an entirely conventional and acceptable way his expressions of opinion as an ecological expert. By way of example, at paras. 10.4 and 10.5 of his proof, he pointed out that, contrary to the suggestion made by GLE's representative at the inquiry, it was not appropriate to use the analogy of mitigation measures developed for heathland sites (a 400m exclusion zone), where ground nesting birds might be subject to predation by cats, since for the SPA "the designating bird features are wintering or passage species and access to large parts of the site is not possible in any event" (because it is marshland or cut off by water). He referred to the Interim Report and the Disturbance Study, as appropriate. Mr Goodwin demonstrated a good understanding of the particular ecological and mitigation features relevant to the SPA and the SAC. Contrary to Mr Jones's contention, Mr Goodwin's evidence was very far from being unsupported, free-standing assertion.*

*47. Secondly, in my view it is acceptable and to be expected that an expert will draw on his own background knowledge, experience and expertise in the field to inform the opinions which constitute his evidence to a relevant decision-maker (here, the Inspector). That is, indeed, in large part the point of looking to expert witnesses to provide assistance on technical matters. In this case, Mr Goodwin's own practical experience, the practical experience of ecologists generally and the knowledge shared between them all informed the expertise which he was able to bring to bear in giving his views regarding the effects of the development and the practical impact and viability of the mitigation options which he reviewed in his proof of evidence.*

- 2.2.27. Paragraph 84 of the judgment further clarifies that expert evidence can be considered as objective, stating:

*...Mr Goodwin's evidence set out careful reasoning by him, with reference back as appropriate to underlying facts, to explain his opinion and expressions of view. It was expert evidence in conventional form and of good quality. Mr Goodwin was entitled to draw on his own experience and expertise as well, in forming his opinion: see paras. [46]-[48] above.*

- 2.2.28. The Exminster case further considered the appropriate procedures for assessing in-combination impacts which may arise through combined development within the Zone of Influence of a European Site.
- 2.2.29. The Judgment specifically considered the safeguards which are in place to prevent such in-combination impacts, namely that each individual scheme which may come forward would itself need to deliver appropriate safeguarding measures and to be screened by the Competent Authority to ensure that any effects (alone or in combination) are avoided. This is considered in paragraphs 98 – 100 of the Judgment:

*“98. The development on its own would not give rise to any significant effects, and the in-combination effects were future effects when allocations of specific sites for the very substantial residential development under the three LDFs which were being developed were eventually brought forward, planning permission was obtained for them and then the new housing was built. Mr Goodwin had emphasised in his evidence (see para. [50] above) that there was an important safeguard associated with the JIA arrangements, in that as each new proposed site was brought forward and planning permission sought in future, the relevant local planning authority, in consultation with Natural England, would have to make a further assessment under Article 6(3) before permission was granted for the development of that site (i.e. a further screening assessment and, as necessary, an “appropriate assessment”, pursuant to the first and second limbs of Article 6(3), respectively; and see para. 8.5 of the Interim Report). Accordingly, the potential in-combination effects identified by the Council and by Mr Goodwin could not occur without further screening and appropriate assessments by a relevant competent authority, advised by Natural England.*

*99. In my view, this feature of the JIA arrangements meant that the Inspector was entitled to be satisfied, as he was, that those arrangements provided adequate protection for the SPA and the SAC on the appropriate strict precautionary approach identified in Waddenzee. There was no possibility of irreversible harmful effects on the SPA and the SAC arising from implementation of the development on the site at once, and there was sufficient scope to ensure that appropriate preventive safeguarding measures would be implemented before any other major residential developments gave rise to possible in-combination effects. The Inspector was entitled to be satisfied on the information he had about the viability and suitability of the JIA arrangements (from, in particular, Footprint Ecology in the Interim Report, Natural England and Mr Goodwin) that they provided assurance that future adequate preventive safeguarding measures would be put in place in proper time before any contemplated in-combination adverse effects might arise. That assessment was underpinned by the fact that before any further relevant development could take place which might give rise to in-combination effects, the relevant competent authority and Natural England would first have checked that adequate preventive safeguarding measures were indeed in place at that time to meet in full any in-combination effects (including those associated with the development at the Sentry’s Farm site).*

*100. The implications of this can be spelled out as follows. If (for example) planning permission were sought in future for a substantial new residential development in the vicinity of the SPA and the Sentry’s Farm site, the relevant competent authority would be obliged to subject it to screening and, as necessary, an “appropriate assessment” under Article 6(3); and if the in-combination adverse effects of that new site plus the Sentry’s Farm site were not clearly going to be avoided by the preventive safeguarding measures which would be in place before the new housing was built and occupied,*

*permission would have to be refused at that stage for the new development...”*

- 2.2.30. In light of the above, it is clear that developments which avoid adverse impacts when considered alone would not have the potential to give rise to any such adverse impacts when considered in combination, given the safeguards put in place by the Habitat Regulations.

#### People over Wind Case

- 2.2.31. The CJEU in *People over Wind v Coillte Teoranta* has revoked the position adopted under the *Dilly Lane* Decision that it was right and proper for mitigation or avoidance measures, which formed a feature of a plan / project, to be viewed as integral to the plan / project and not excluded when considering the likely significance test at Regulation 63(1).

- 2.2.32. The decision by the CJEU ruled that:

*“Article 6(3) of Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora 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.”*

- 2.2.33. In accordance with this ruling, avoidance or mitigation measures cannot be considered at the first stage of the test (the ‘Likely Significant Effect’ stage) and can only be considered at the Appropriate Assessment stage.

- 2.2.34. This ruling conflicts with and overrules a long line of domestic case law (notably the *Dilly Lane Decision* (oao) *Herts District Council v. Secretary of State for Communities and Local Government and Others* [2008] EWHC 1204 (Admin)), as summarised above, which previously held that it is appropriate to consider such measures at the ‘Likely Significant Effect’ stage.

- 2.2.35. In considering the above, it is logical to distinguish between measures which are specifically “*intended to avoid or reduce the harmful effects*” (i.e. mitigation measures for the purposes of a HRA) and measures which would come forward in any event (i.e. intrinsic elements of scheme design). Notwithstanding that these latter measures may, by default, avoid or reduce harmful effects on a European site(s), if they are integral elements of a development proposal, it remains appropriate to consider them at the first stage of the test.

#### Holohan Judgment

- 2.2.36. In the case of *Holohan v. An Bord Pleanála* the CJEU considered the correct assessment procedure to be adopted when considering potential impacts on a European Site.

- 2.2.37. In considering this case, the CJEU ruled, amongst other matters, that an Appropriate Assessment must ‘catalogue the entirety of habitat types and species for which a site is protected’ as well as any habitats and species for which the site has not been listed, should impacts on these features be liable to impact the sites Conservation Objectives.

## 2.3. Guidance and other Relevant Documents

- 2.3.1. Guidance on the interpretation of key terms and concepts contained within the European and UK legislation of relevance to European designated sites is provided through several documents issued by the European Commission and national organisations such as the Joint Nature Conservation Committee (JNCC) and NE. This guidance is discussed below.

### Managing Natura 2000 Sites (European Communities, 2000)

- 2.3.2. The document entitled ‘*Managing Natura 2000 Sites the Provisions of Article 6 of the Habitats Directive 92/43/CEE*’, published by the European Commission in 2000, provides guidelines to Member States on the interpretation of certain key concepts used in Article 6 of the Habitats Directive.

- 2.3.3. It should be noted that the section relating to Article 6(4) has subsequently been replaced through the publication of a further guidance document by the European Commission in 2007 entitled ‘*Guidance document on Article 6(4) of the Habitats Directive*’, which is considered below under the relevant heading.

- 2.3.4. This document states at section 2.3.3 that conservation measures must correspond to the ecological requirements of the habitats and species present for which the site is designated and that these requirements “*involve all the ecological needs necessary to ensure their favourable conservation status*”.

- 2.3.5. At section 3.5 the guidance states, in relation to deterioration and disturbance of habitats or species:

*“Deterioration or disturbance is assessed against the conservation status of species and habitats concerned. At a site level, the maintenance of the favourable conservation status has to be evaluated against the initial conditions provided in the Natura 2000 standard data forms when the site was proposed for selection or designation, according to the contribution of the site to the ecological coherence of the network. This notion should be interpreted in a dynamic way according to the evolution of the conservation status of the habitat or the species.”*

- 2.3.6. Section 4.4.1 sets out that in determining what may constitute a likely ‘significant’ effect one should take into account the Conservation Objectives for the designated site and other relevant baseline information. In the second paragraph of this section of the document it is stated:

*"In this regard, the conservation objectives of a site as well as prior or baseline information about it can be very important in more precisely identifying conservation sensitivities."*

- 2.3.7. Section 4.5.3 of the document sets out the duty of Member States to provide certain specific information in support of the inclusion of a site within the Natura 2000 network. This information is to be provided in a format specified by the European Commission (the Natura 2000 Standard Data Form).

- 2.3.8. A link is drawn between the Standard Data Form and the formation of the site's conservation objectives within the text box at the end of section 4.5.3 of the guidance where it is stated:

*"The information provided according to the standard data form established by the Commission forms the basis for a Member State's establishment of the site's conservation objectives."*

- 2.3.9. With regard to an assessment of the effects of a plan / project on the integrity of a designated site, the 'integrity of the site' is defined at Section 4.6.3 as:

*"... the coherence of the site's ecological structure and function, across the whole area, or the habitats, complex of habitats and / or populations of species for which the site is or will be classified."*

- 2.3.10. The guidance is clear, within the text box at the foot of page 39, that an assessment as to the implications of the plan / project on the integrity of the designated site should be limited to an assessment against the site's conservation objectives:

*"The integrity of the site involves its ecological functions. The decision as to whether it is adversely affected should focus on and be limited to the site's conservation objectives."*

- 2.3.11. Section 5 of Managing Natura 2000 Sites deals with Article 6(4) of the Habitats Directive. Note that this section has been expanded upon and replaced by further guidance issued by the European Commission entitled "Guidance document on Article 6(4) of the Habitats Directive 92/43/EEC" (2007). This document is dealt with below.

Assessment of Plans and Projects Significantly Affecting Natura 2000 sites - Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC (European Commission, 2001)

- 2.3.12. This document, published by the European Commission in 2001, gives guidance on carrying out and reviewing those assessments required under Article 6(3) and (4) of the Habitats Directive. It is provided as supplementary guidance and does not over-ride or replace any of that set out within 'Managing Natura 2000' (European Commission, 2000) which as stated at page 6 of the document, "is the starting point for the interpretation of the key terms and phrases contained in the Habitats Directive". The guidance provided is not mandatory and it is clearly set out that its use is "optional and flexible" and that it is for "Member States to determine the procedural requirements deriving from the directive".

- 2.3.13. The guidance sets out the key stages in following the tests contained within the Habitats Directive. Pertinent to an assessment under Regulation 61, stages one and two are relevant. Stage one is the screening stage assessing the likelihood of a plan / project resulting in a significant effect upon the European site. The second comprises the Appropriate Assessment.

- 2.3.14. Section 3.2.4 is concerned with Appropriate Assessment and specifically, the assessment against the Conservation Objectives of the European site. Box 9 provides a list of five example Conservation Objectives for differing broad habitat types. One such example, that for a coastal site, taken from Box 9 is provided below:

*“to maintain the status of the European features of this coastal site in favourable condition, allowing for natural change. Features include coastal shingle vegetation and lagoons (within a candidate special area of conservation (SAC), which is also an SPA).”*

Internal Guidance to decisions on ‘Site Integrity’: A framework for provision of advice to competent authorities (English Nature, 2004)

- 2.3.15. NE (English Nature at the time) has produced an internal guidance document on the provision of advice to competent authorities regarding the concept of ‘site integrity’ in undertaking an Appropriate Assessment.

- 2.3.16. This guidance sets out a definition for integrity. It states that integrity is considered at the site level and gives the following definition (taken from PPG9):

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

- 2.3.17. Integrity is further defined within section 3.0 where it is stated that:

*“In a dynamic context ‘integrity’ can be considered as a site having a sense of resilience and ability to evolve in ways that are favourable to conservation.”*

- 2.3.18. The need to maintain or restore the designated site to favourable conservation status is dealt with in the final paragraph of section 3.0. NE quotes guidance issued jointly by the Environment Agency (EA), English Nature (EN) and Countryside Council for Wales CCW).

- 2.3.19. The guidance provides a checklist within section 4.1, for assessing the likelihood of an adverse effect on integrity occurring as a result of the proposed plan / project. It is stated that if the answer to all of the questions posed within the checklist is “yes” then it is reasonable to conclude that there will be no adverse effect upon integrity. In the event that one or more of the answers is no, then the guidance suggests a series of further site-specific factors, listed at 4.2 to 4.7.

Common Standards Monitoring (JNCC, 2004)

- 2.3.20. Common Standards Monitoring (CSM) is a means by which condition objectives for habitats, species, or other features of designated sites (e.g. SSSIs and SPAs) are set based on key attributes of the features.
- 2.3.21. JNCC and the Country Conservation Agencies (e.g. NE) developed guidance on the setting and assessing of condition objectives, as required under the Birds and Habitats Directives and set out a framework for this in 1999. This framework is provided in the form of CSM guidance which comprises a suite of documents including an '*Introduction to the Guidance Manual on Common Standards Monitoring*' and several species / habitat specific documents. The Guidance Manual covers various relevant concepts and terms. It also provides a background to the setting of conservation objectives and sets out the desired approach to setting targets, monitoring, management and reporting on conservation measures in designated sites.
- 2.3.22. The Guidance Manual and CSM guidance for individual site attributes (e.g. its bird or reptile interest) set out specific criteria regarding the identification of interest features, targets and methods of assessment. There is in-built flexibility and allowances for 'judgements to be made' when assessing, for example, favourable condition.
- 2.3.23. It is understood that NE applies the CSM approach to European designated sites through an assessment of the SSSI unit condition. This is undertaken on a cycle of approximately six years. The assessment does not relate to the Conservation Objectives of the European site but provides a tool for tailoring future management of the SSSI such that favourable condition of the interest features can be maintained or restored as appropriate.

Guidance document on Article 6(4) of the 'Habitats Directive' (European Commission, 2007)

- 2.3.24. This document, published by the European Commission in 2007, is intended to provide clarification on key terms / concepts as referred to within '*Managing Natura 2000 Sites*' and replaces the section on Article 6(4) within that earlier document.
- 2.3.25. The document covers, in particular, the concepts of 'Alternative Solutions', 'Imperative Reasons of Overriding Public Interest', 'Compensation Measures', 'Overall Coherence' and the 'Opinion of the Commission'.
- 2.3.26. With regard to ensuring the quality of an Appropriate Assessment, and to define exactly what needs to be compensated, it is stated at section 1.3 that:

*"Assessment procedures of plans or projects likely to affect Natura 2000 sites should guarantee full consideration of all elements contributing to the site integrity and to the overall coherence of the network, both in the definition of the baseline conditions and in the stages leading to identification of potential impacts, mitigation*

*measures and residual impacts. These determine what has to be compensated, both in quality and quantity.”*

- 2.3.27. The need to use information contained within the Natura 2000 Standard Data Form, in tandem with the site's Conservation Objectives when undertaking an Appropriate Assessment is specifically referred to (under the second hyphenated point at section 1.3 on page 5).
- 2.3.28. Section 1.3.2 gives guidance on the application of Article 6(4) in respect of reasons of overriding public importance and Section 1.4.1 gives guidance on the application of Article 6(4) in respect of compensatory measures.

#### Natura 2000 Standard Data Forms

- 2.3.29. A standard reporting format has been developed for Natura 2000 sites (SPAs and SACs) to ensure that the relevant site selection information is reported and stored in a consistent manner which can be easily made available.
- 2.3.30. A standard reporting form for SPAs and SACs was developed by the European Commission and published in 1996. The form is used for all sites designated or proposed to be designated as SPAs and SACs under the relevant Directives, with the information to be stored on a central database.
- 2.3.31. Article 4 of the Habitats Directive provides the legal basis for providing the data. Article 4 states that information shall include a map of the designated site, its name, location, extent and the data resulting from application of the criteria specified in Annex III and that this shall be provided in a format established by the Commission. Under Article 4 (paragraph 3) of the Birds Directive Member States are required to provide the Commission with all relevant information to enable it to take any appropriate steps in order to protect relevant species in areas where the Directive applies.
- 2.3.32. Whilst it is the relevant country agency (i.e. NE) that is responsible for designating a site, it is the JNCC who are responsible for collating the lists of European and international designated sites, together with relevant supporting information. The Natura 2000 Data Forms for SPAs and SACs are therefore made available by JNCC.
- 2.3.33. Within the explanatory notes for Natura Standard Data Forms the following “main objectives” of the Natura data form / database are given:
  - 1. *“to provide the necessary information to enable the Commission, in partnership with the Member States, to co-ordinate measures to create a coherent Natura 2000 network and to evaluate its effectiveness for the conservation of Annex I habitats and for the habitats of species listed in Annex II of Council Directive 92/43/EEC as well as the habitats of Annex I bird species and other migratory bird species covered by Council Directive 79/409/EEC.”*

2. *“to provide information which will assist the Commission in other decision making capacities to ensure that the Natura 2000 network is fully considered in other policy areas and sectors of the Commission's activities in particular regional, agricultural, energy, transport and tourism policies.”*
3. *“to assist the Commission and the relevant committees in choosing actions for funding under LIFE and other financial instruments where data relevant to the conservation of sites, such as ownership and management practice, are likely to facilitate the decision making process.”*
4. *“to provide a useful forum for the exchange and sharing of information on habitats and species of Community interest to the benefit of all Member States.”*

#### Conservation Objectives

- 2.3.34. The formal European Site Conservation Objectives for SPAs and SACs are produced by NE. For clarity, a copy of the European Site Conservation Objectives for Pagham Harbour SPA are attached to this sHRA report and is summarised below (see section 4).

#### **2.4. Planning Policy**

##### National Planning Policy Framework (NPPF) and ODPM / DEFRA Circular (ODPM / DEFRA, 2005)

##### *ODPM / DEFRA Circular*

- 2.4.1. Paragraphs 170 and 176 of the National Planning Policy Framework (2018) are of direct relevance. Paragraph 170 makes reference to protecting and enhancing sites of biodiversity value *“in a manner commensurate with their statutory status or identified quality in the development plan”*. Paragraph 176 asserts that potential SPAs, possible SACs, listed or proposed Ramsar sites and sites providing compensatory measures for adverse effects should be afforded the same level of protection as classified SPAs and designated SACs (referred to in the NPPF as ‘habitats sites’).
- 2.4.2. Guidance on the determination of whether an effect on a European designated site is likely to be significant, together with the scope of Appropriate Assessments and ascertaining the effect on the integrity was previously provided within Circular 06/2005 *“Biodiversity and geographical conservation – statutory obligations and their impact within the planning system”* (DEFRA).
- 2.4.3. The Circular originally accompanied Planning Policy Statement 9 (PPS9) and is referenced in the NPPF (footnote 56).
- 2.4.4. Current planning practice guidance available on the Gov.UK website<sup>1</sup> notes that updated guidance in relation to the law affecting European

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<sup>1</sup> Ministry of Housing, Communities and Local Government. *Guidance - Natural Environment*. Available at: [www.gov.uk/guidance/natural-environment](http://www.gov.uk/guidance/natural-environment) (published 21 January 2016)

sites is being prepared by DEFRA and will, in due course, replace the advice set out in the Circular. On the basis that the Circular makes reference to a flow diagram based on similar information provided in European guidance, it is expected that any further guidance published in relation to the provisions in the NPPF could also include similar information to the Circular.

- 2.4.5. With respect to the significance test, the Circular states at paragraph 13 that:

*“The decision as to whether an appropriate assessment is necessary should be made on a precautionary basis”.*

- 2.4.6. The *Waddenzee* Judgement is specifically referred to at paragraph 13 of the Circular. With regards to the need to undertake an Appropriate Assessment; this is only required where it is not possible to conclude, on the basis of objective information, that the plan / project will not have a significant effect on the European site, either individually or in combination with other plans / projects.

- 2.4.7. Paragraph 14 clarifies that in considering the likely significance of an effect, the decision taker should assess whether the effect would be significant in terms of the site’s Conservation Objectives.

- 2.4.8. Paragraph 15 clarifies the importance of assessing the likely significant effect on each of the interest features for which the site is designated.

- 2.4.9. Guidance on the scope of an Appropriate Assessment was provided at paragraph 17:

*“If the decision-taker concludes that a proposed development (not directly connected with or necessary to the management of a site) is likely to significantly affect a European site, they must make an Appropriate Assessment of the implications of the proposal for the site in view of the site’s conservation objectives. These relate to each of the interest features for which the site was classified...The scope and content of an Appropriate Assessment will depend on the nature, location, duration and scale of the proposed project and the interest features of the relevant site. It is important that an Appropriate Assessment is made in respect of each interest feature for which the site is classified; and for each designation where a site is classified under more than one international obligation...”*

- 2.4.10. At paragraph 20 the definition of ‘integrity’ for the purpose of interpreting the tests contained within the Habitats Regulations is given as:

*“The integrity of a site is the coherence of its ecological structure and function, across its whole area that enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it was classified.”*

- 2.4.11. The Circular included a flow diagram setting out the series of steps competent authorities are required to take in considering proposals affecting internationally designated nature conservation sites. This was based on the information and flow charts given in guidance issued by

the European Commission (European Commission Environment DG, 2001). A copy of this flow diagram is included at Appendix 1 of this sHRA report.

### *National Planning Policy*

#### National Planning Policy Framework (February 2019)

- 2.4.12. Guidance on national policy for biodiversity and geological conservation is provided by the NPPF, published in March 2012, revised on 24 July 2018 and updated on 19 February 2019.
- 2.4.13. The key element of the NPPF is that there should be “a presumption in favour of sustainable development” (paragraphs 10 to 11). It is important to note that this presumption “*does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site*” (paragraph 177). ‘Habitats site’ has the same meaning as the term ‘European site’ as used in the Habitats Regulations 2017.
- 2.4.14. Hence the direction of Government policy is clear; that is, the presumption in favour of sustainable development is to apply in circumstances where there is potential for an effect on a European site, if it has been shown that there will be no adverse effect on that designated site as a result of the development in prospect.
- 2.4.15. A number of policies in the NPPF are comparable to those in PPS9, including reference to minimisation of impacts to biodiversity and provision of net gains to biodiversity where possible (paragraph 170).
- 2.4.16. The NPPF also considers the strategic approach that Local Authorities should adopt with regard to the protection, maintenance and enhancement of green infrastructure, priority habitats and ecological networks, and the recovery of priority species.
- 2.4.17. Paragraphs 174 to 176 of the NPPF comprise a number of principles that Local Authorities should apply, including encouraging opportunities to incorporate biodiversity in and around developments; provision for refusal of planning applications if significant harm cannot be avoided, mitigated or compensated for; applying the protection given to European sites to potential SPAs, possible SACs, listed or proposed Ramsar sites and sites identified (or required) as compensatory measures for adverse effects on European sites; and the provision for the refusal for developments resulting in the loss or deterioration of ‘irreplaceable’ habitats – unless there are ‘wholly exceptional reasons’ (for instance, infrastructure projects where the public benefit would clearly outweigh the loss or deterioration of habitat) and a suitable compensation strategy exists.
- 2.4.18. National policy therefore implicitly recognises the importance of biodiversity and that with sensitive planning and design, development and conservation of the natural heritage can co-exist and benefits can, in certain circumstances, be obtained.

### Arun Local Plan 2011-2031

- 2.4.19. The Arun Local Plan was adopted in July 2018 and covers the period 2011 up to 2031. It includes multiple policies of relevance to nature conservation.
- 2.4.20. Policy ENV SP1 – Natural Environment, relates to the preservation, restoration and enhancement of biodiversity and the natural environment, with particular emphasis on statutory sites, including European sites of importance.
- 2.4.21. Policy ENV DM1 – Designated Sites of Biodiversity or Geological Importance, relates to developments which may have an adverse effect on designated sites.
- 2.4.22. Policy ENV DM2 – Pagham Harbour. As the name suggests, this policy deals directly with development which may have an adverse effect of the Pagham Harbour SPA / Ramsar site. The policy outlines how no development within 400m of the SPA boundary will be permitted unless in the event of exceptional circumstances. It goes on to state that any development with 500m of the SPA boundary will be the subject of developer contributions towards the agreed strategic approach to access management at Pagham Harbour.
- 2.4.23. The policy also outlines the requirement to *‘create easily accessible new green spaces for recreation within or adjacent to the development site. These shall be capable of accommodating the predicted increases in demand for local walking, including dog walking. Good pedestrian links shall be provided between housing areas and new and existing green space in order to discourage car use.’*
- 2.4.24. Policy ENV DM3 – Biodiversity Opportunity Areas, states that development shall retain and sympathetically incorporate locally values and important habitats, including wildlife corridors. Moreover, development should be designed in order to minimise disturbance to existing habitats.
- 2.4.25. Policy ENV DM4 – Protection of Trees, focuses on the retention of trees and avoiding loss of matures trees where it is unreasonable to do so.
- 2.4.26. Policy ENV DM5 – Development and Biodiversity, outlines how sites should seek to achieve a ‘net gain’ in biodiversity, whilst also protecting existing habitats of value.

### 3. SITE LOCATIONS

- 3.1. As previously described, the closest European designated site to the application site is Pagham Harbour SPA / Ramsar Site which is located approximately 3.6km south-west of the application site boundary at its closest point. This SPA / Ramsar is underpinned by Pagham Harbour Site of Special Scientific Interest (SSSI) which shares a contiguous boundary. The relationship between Pagham Harbour SPA / Ramsar site is shown on Plan ECO1.
- 3.2. Other European / international designated sites are located at considerably greater distances. For completeness, consideration has been given to potential significant effects occurring on the Chichester and Langstone Harbours SPA / Ramsar site, the Solent Maritime SAC and the Solent to Dorset Coast pSPA.
- 3.3. The Chichester and Langstone Harbours SPA / Ramsar site and the Solent Maritime Special Area of Conservation (SAC) are located approximately 7.9km to the west of the Application Site at their closest point.
- 3.4. In relation to the Chichester and Langstone Harbours SPA / Ramsar site, it is considered that given the distances involved, the Development Proposals would not be likely to give rise to a significant effect on these sites, when the project is considered either alone or in combination with other plans or projects. This conclusion is also reflected within the 'Solent Recreation Mitigation Strategy' document (December 2017) published by the Solent Recreation Mitigation Partnership (SRMP), also known as Bird Aware. It states that:

*'The evidence showed that mitigation should be required from all dwellings built within 5.6 kilometres of the boundaries of the SPAs. This is the zone from which 75% of coastal visitors live. The zone boundary is defined by using straight line distances from the SPA boundary. This approach is the same as that adopted for Thames Basin Heaths and Dorset Heathlands SPAs.'*

- 3.5. In this instance, the application site falls well outside of the identified zone of influence. No further consideration is therefore required in relation to potential effects on the Chichester and Langstone Harbours SPA / Ramsar site.
- 3.6. Regard has also been given to additional SACs within proximity of the site boundary, including the Solent Maritime SAC (approximately 7.9km to the west of the site at its closest point). This SAC is underpinned by all or parts of the following of Sites of Special Scientific Interest (SSSI):
  - Bouldnor and Hamstead Cliffs SSSI
  - Chichester Harbour SSSI
  - Eling and Bury Marshes SSSI
  - Hurst Castle and Lymington River Estuary SSSI
  - Hythe to Calshot Marshes SSSI
  - King's Quay Shore SSSI
  - Langstone Harbour SSSI
  - Lee-on-The Solent to Itchen Estuary SSSI
  - Lincegrove and Hackett's Marshes SSSI

- Lower Test Valley SSSI
- Medina Estuary SSSI
- Newtown Harbour SSSI
- North Solent SSSI
- Thorness Bay SSSI
- Upper Hamble Estuary and Woods SSSI
- Yar Estuary SSSI

- 3.7. Given the significant distance of this SAC from the application site it is considered that the proposed development would not result in a significant adverse effect on this SAC, either alone or in combination with other plans or projects. Although recreational pressure has been identified as a potential pathway to harm the Solent Maritime SAC, the Interim Policy Statement on Development and Disturbance of Birds in Special Protection Areas and identified Compensatory Habitats document (April 2014) published by Chichester District Council states:

*'Through the Solent Disturbance and Mitigation Project (SDMP), Councils across the Solent have identified a "zone of influence" surrounding the Chichester & Langstone Harbours SPA/SAC site that extends to 5.6km from the Special Area of Conservation(SAC) boundary.*

- 3.8. As such, the Zol also extends to the Solent Maritime SAC. Once again, the application site falls well outside of the identified zone of influence. No further consideration is therefore required in relation to potential effects on the Solent Maritime SAC.
- 3.9. Furthermore, consideration has also been given to the The Solent to Dorset Coast potential SPA (pSPA) located approximately 1.9km south of the application site boundary. This pSPA is a marine-based designated site and is also afforded protection under the Habitat Regulations. However, given the nature of this designated site (pSPA marine component designated for foraging tern species), the significant distance between the pSPA and the application site, and the nature of the proposed development, its considered that development would not result in a significant adverse effects on this pSPA or its designated features (i.e. foraging Tern species), either alone or in combination with other plans or projects. As such, The Solent to Dorset pSPA is not considered further within this sHRA document.

#### **4. CONSERVATION STATUS OF PAGHAM HARBOUR SPA / RAMSAR SITE**

##### **4.1. SPA Qualifying Features**

- 4.1.1. The Pagham Harbour SPA covers an area of 629.01ha. The SPA is designated for its tidal and intertidal habitats and species. Pagham Harbour SPA (and Ramsar site) comprises an estuarine basin with an extensive central area of saltmarsh and intertidal mud-flats, surrounded by lagoons, shingle, open water, reed swamp and wet grassland. The mud-flats are rich in invertebrates and algae, which provide feeding areas for birds. Areas of lower saltmarsh are dominated by Common Cord-grass *Spartina anglica*, with patches of Glasswort *Salicornia* spp.
- 4.1.2. According to the Natura 2000 Standard Data Form Pagham Harbour SPA qualifies under Article 4.1 of the Birds Directive on account of it supporting breeding populations of Little Tern *Sterna albifrons*, Common Tern *Sterna hirundo*, together with over-wintering Ruff *Philomachus pugnax*. The site further qualifies under Article 4.2 of the Birds Directive on account of it supporting important populations of over-wintering Dark-bellied Brent Goose *Branta bernicla*.
- 4.1.3. The Natura 2000 Standard Data Form for the SPA is included in Appendix 2. The formal Conservation Objectives, a copy of which are included at Appendix 6, also cite the same qualifying interest features.

##### **4.2. Ramsar site Qualifying Features**

- 4.2.1. Pagham Harbour Ramsar site qualifies under Ramsar criterion 6 on account of it supporting important populations of wintering Dark-bellied Brent Goose. Black-tailed godwit *Limosa limosa islandica*, are cited on the Ramsar Information Sheet as being identified subsequent to designation for possible future consideration under Criterion 6.
- 4.2.2. The Ramsar Information Sheet for the Ramsar site is included in Appendix 3.

##### **4.3. Condition of Habitats**

- 4.3.1. Habitat information for each of the management units of the Pagham Harbour SSSI is given within the 'condition assessment comment' included within the documents at Appendix 5. There are currently 23 management units, of which the majority are documented as being in 'favourable condition', with the condition of six units being documented as either 'unfavourable recovering' or 'unfavourable no change'.
- 4.3.2. Favourable condition for the SSSI is defined as being adequately conserved and meeting its 'conservation objectives'. Nonetheless, it is stated that there is scope for the enhancement of these SSSIs (SPA / SAC / Ramsar site).
- 4.3.3. The citation for the Pagham Harbour SSSI is included at Appendix 4.

#### 4.4. SPA Conservation Objectives

4.4.1. The Habitats Regulations require an appropriate assessment to be undertaken “in view of the site’s nature conservation objectives”. Further, in light of relevant case law and guidance (as discussed above), it is right and proper that a screening assessment for likely significant effects is also undertaken in view of the formal Conservation Objectives for the site. Conservation objectives are a statement of the measures required to maintain at, or restore to, favourable conservation status the natural habitats and / or the populations of species of wild fauna and flora for which the site has been selected. The conservation status of a species is defined as favourable when the population, range and natural habitats of the species are stable or increasing. Similarly, the conservation status of a habitat is favourable when the range, structure and function, and typical species thereof, are stable or increasing.

4.4.2. The Conservation Objectives for Pagham Harbour SPA are as follows:

*‘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.*

*This document should be read in conjunction with the accompanying Supplementary Advice document, which provides more detailed advice and information to enable the application and achievement of the Objectives set out above’*

4.4.3. The Conservation Objectives for the Pagham Harbour SPA / Ramsar site are included at Appendix 6. At the time of writing this sHRA, no such Supplementary Advice document was available.

#### 4.5. Pagham Harbour SSSI qualifying features

4.5.1. Pagham Harbour SSSI is designated on account of ecological and geological interest features. In relation to ecological matters, the site contains an extensive area of salt-marsh with tidal mudflats, shingle, open water, reed swamp and wet grassland. The site is of national importance for wintering wildfowl and waders and also for breeding birds within the harbour and the surrounding pasture. In addition, the site supports nationally important communities of plants and invertebrates.

4.5.2. Whilst the main purpose of this document is to address potential significant effects on the Pagham Harbour SPA / Ramsar site, given the underpinning nature of the SSSI designation and the consistency of site boundaries consideration is also give to effects on the SSSI where relevant.

## **5. ASSESSMENT OF THE IMPLICATIONS OF THE DEVELOPMENT PROPOSALS FOR THE CONSERVATION OBJECTIVES OF PAGHAM HARBOUR, AND MITIGATION / AVOIDANCE MEASURES**

- 5.1. Section 2 of this document sets out the legislation, guidance and case law of relevance to an assessment of the implications of a plan / project on a European site. Having regard to this legislation and supporting guidance, it is clear that the assessment is a two-stage process, the first being the 'likely significant effect', and the second being the 'integrity test'.
- 5.2. It is clear that the Conservation Objectives of a European site are the most important consideration in determining whether the plan / project will have an adverse effect on the site, including any effects on its integrity. Indeed, some guidance indicates that it is only the Conservation Objectives against which the plan / project should be tested in line with the Habitats Directive / Regulations. However, other European guidance implies that additional information is relevant.
- 5.3. It is evident that there is a clear hierarchical approach to assessing effects on European sites in line with the Habitats Directive / Regulations. The primary test is that against the Conservation Objectives (now updated to include specific reference to qualifying interest features) with other considerations following these. Such other considerations would include:
  - Other features of interest associated with the site; and
  - Other relevant baseline information for the site.
- 5.4. In line with the above, whilst the qualifying interest features of the site and other baseline information have informed this assessment, the greatest weight has been placed upon the formal Conservation Objectives for each European site, as set out by Natural England. Consideration has also been afforded to the Supplementary Advice produced by Natural England, where relevant.
- 5.5. This section includes a description of the potentially significant effects arising from the proposed scheme at the site on the integrity of Pagham Harbour SPA. As set out previously, given the separation of other sites, and noting that cumulative impact pathways have not been identified to give rise to potential adverse impacts, potential impacts on other European sites can be scoped out.
- 5.6. The potential effects are assessed within this section in order to address the test under Regulation 63 (1) in the first instance (the 'likely significant effect' stage). The assessment of potential significant effects is undertaken at this stage of the development proposals 'alone' (i.e. not 'in-combination').
- 5.7. In undertaking this assessment, consideration has been had to the best available scientific knowledge. Further consideration under the Habitats Regulations can therefore be undertaken consistent with the *Waddenzee* Judgement, which requires the use of the best scientific knowledge to inform a decision where no reasonable scientific doubt remains as to the presence and / or absence of effects that would adversely affect the integrity of the designated site (see section 2 above).

- 5.8. Furthermore, consideration is given to the *People over Wind* Judgement, which confirmed the view of the CJEU that avoidance or mitigation measures can only be taken into consideration at the Appropriate Assessment stage. This overrules the domestic *Dilly Lane* judgement in the High Court (see Section 2 above).
- 5.9. As set out in section 2, it is appropriate to distinguish between measures which are specifically “*intended to avoid or reduce the harmful effects*” (i.e. mitigation measures for the purposes of HRA) and measures which would come forward in any event (i.e. intrinsic elements of scheme design). Notwithstanding that the latter measures may, by default, avoid or reduce harmful effects on a European site(s), they are integral elements of a development proposal. It therefore remains appropriate to consider such measures at the first stage of the test (the ‘Likely Significant Effect’ stage) under Regulation 63.

### Identification of Potential Pathways

- 5.10. As outlined in detail in Section 4 above, the international / European designated site Pagham Harbour is designated as both an SPA and a Ramsar site. Given that the reasons for the classification of Pagham Harbour SPA and Pagham Harbour Ramsar site are essentially similar, it is reasonable to consider the potential impacts upon the designations together, as opposed to undertaking a separate assessment for each.
- 5.11. It is necessary to give specific consideration to the extent to which land associated with the development proposals could be classed as ‘supporting habitat’ for the SPA / Ramsar sites. Supporting habitat (which is sometimes referred to as ‘functionally linked land’) is that which, whilst not designated, plays an important role in the maintenance of populations of qualifying bird interest features at the SPA / Ramsar site. This would include, for example, land which provides an important foraging resource for such species. In some instances, adverse impacts on supporting habitat can lead to a conclusion that the plan / project is likely to have a significant effect on the European designated site.
- 5.12. As outlined in Section 4 above, Pagham Harbour SPA and Ramsar site are designated on account of the assemblage of wildfowl and wetland birds which are predominantly associated with open water habitats.
- 5.13. It is acknowledged that qualifying bird interest features associated with these international / European sites may utilise sites further inland for foraging. However, the extent to which land provides opportunities for these species depends on a number of factors, not least the current use of the land and management regime, in light of the specific requirements of the birds concerned. Of the qualifying species that Pagham Harbour supports, only over-wintering Dark-bellied Brent Geese are known to utilise inland arable sites for foraging. Other qualifying bird interest features (Tern sps, / Ruff) would not be reliant upon the land in question given the habitats present and the specific requirements of these species.
- 5.14. Guidance with regards to the consideration of off-site impacts on the integrity of European / internationally designated sites is outlined in the English Nature Internal Guidance note regarding integrity (as summarised in Section 2 above). Section 4.6 of this document relates specifically to consideration of

off-site impacts that affect a mobile species whilst it is off-site, and specifically states the following:

*“Any impact to the designated species (or habitat upon which they are dependent) which causes a significant decline in the size, distribution, structure or function of the population within the designated site, should be considered to have an adverse effect on the integrity of the site. However, a clear link needs to be made between the population being impacted and that of the population within the designated site.”*

- 5.15. With specific regard to the wintering habitats of Dark-bellied Brent Geese, this species is most likely to forage on short dense swards of dry, improved grasslands with a high abundance of perennial Rye-grass *Lolium perenne* and an area of between 5 and 6 ha, located up to 1.5 km inland and 4-5 km along the coast from coastal roosting sites (Vickery and Gill 1999). In addition, this species has increasingly taken to grazing on cultivated grasslands and winter cereal fields near the coast (Scott and Rose 1996).

- 5.16. A Solent Waders and Brent Goose Strategy (King, 2010) was established in 2010 and classifies which sites within the Arun District are known to be of particular importance to Dark-bellied Brent Geese outside of the SPA boundaries. This strategy was developed so that certain sites may be protected from development and appropriately managed. As the strategy states:

*“The suitability of sites for Brent Geese depends on distance from the coast, the size of the grazing area, the type of grassland management, visibility and disturbance. Brent Geese prefer large open sites where they have clear sight-lines and short, lush grass for grazing. They use a great deal of energy travelling between feeding areas, so tend to preferentially select sites adjacent to the coast. However, Brent Geese are often seen to fly over some apparently suitable sites to reach others, so there are undoubtedly more subtle factors controlling the desirability of sites.” (King, 2010, p.4)”*

- 5.17. As outlined above, the application site is located approximately 3.6km from Pagham Harbour at its closest point, and separated from the SPA by significant amounts of existing development. Whilst areas of arable land in the local vicinity support habitats which may be potentially more suitable to Dark-bellied Brent Geese (i.e. large open areas), the application site comprises two significantly smaller arable fields enclosed by tall hedgerows and treelines.

- 5.18. Research has shown that foraging Brent Geese have a strong preference for open land with unobstructed sightlines of at least 500 metres, to allow the early detection of predators when foraging or roosting. As a result, the presence of features which are a visual barrier restricting sightlines – such as treelines, hedgerows and buildings – can significantly reduce the suitability of parcels of land for Brent Geese, as birds do not feel sufficiently free of predation risk to forage within a site.

- 5.19. The application site comprises two fields which are enclosed and separated by tall treelines and hedgerows. These features provide significant visual barriers which restrict sightlines, effectively separating both the application site from the much larger fields to the west and south-west, and also

separating the two fields present within the application site itself. Descriptions of the treelines and hedgerows are provided in Section 3.7 of the Ecological Assessment submitted alongside this sHRA.

- 5.20. Photographs of the treelines and hedgerows along the boundaries of these fields are included at Appendix 7 of this Note, with the location of where each image was taken marked on Plan ECO2 for clarity. All of these images were undertaken in February 2021 and are therefore representative of these features during the wintering period (i.e. when Brent Geese are likely to be present at the European designated site). It is clear from the photographs that both the treelines and hedgerows along the application site boundary and those separating the two fields comprise very dense, tall linear features. They therefore represent significant visual barriers.
- 5.21. Plan ECO2 also notes the maximum unobstructed visual distance both within the two fields within the application site, and also within the extensive fields located to the south-west and west (within the wider allocation). As illustrated on the plan, sightlines within the application site are, at most, 200 metres in size, with a significant proportion of the fields having maximum sightlines which are less than this. In contrast, the sightlines within the wider allocated site exceed the minimum 500 metres which has been identified to be of importance for Brent Geese.
- 5.22. The lack of unrestricted and open land with clear sightlines within the application site prove a significant deterrent to the use of the site by foraging Brent Geese, particularly when much more extensive fields with clear lines of sight are located closer to the SPA / Ramsar site. As such, it is considered that the application site provides unsuitable habitat for Brent Geese.
- 5.23. The application site also abuts existing residential development to the east and south, and is regularly used by walkers / dog walkers, with Public Rights of Way (PRoW) and informal footpaths running directly through the application site. Plan ECO3 illustrates that there is one PRoW which passes east-west through the centre of the application site, which connects to further PRoW located along the north-western and south-western boundaries of the application site. These are in turn connected to areas of existing residential development to the north, east and south.
- 5.24. During the course of site visits undertaken by Ecology Solutions (throughout the summer and winter periods, including site visits undertaken between October 2020 and February 2021), a significant level of recreational activity has been recorded along these routes. In particular, the PRoW are regularly used by dog walkers, often with dogs noted to be off the lead.
- 5.25. When considered together with the compartmentalised and enclosed nature of the fields within the application site (which results in limited sightlines) and noting that the PRoW passes through and across both fields, it is considered that existing recreational activity would effectively prevent Brent Geese from utilising the habitats present within the application site for foraging due to disturbance.
- 5.26. Furthermore, the PRoW which lie beyond the north-western and south-western boundaries of the application site are also subject to regular use by existing residents in the local area. As a result, disturbance arising from

recreation is also likely to deter any birds from utilising the closest parts of the wider allocated site to the west of the application site boundary.

- 5.27. To inform the Ecological Assessment of the application site, a desk study undertaken with the Sussex Biological Records Centre (SxBRC) in April 2020. The results of the desk study contain no records, historical or otherwise, of Dark-bellied Brent Geese from within a 3km radius of the application site.
- 5.28. Page 46 of the Habitat Regulations Assessment undertaken for the Arun Local Plan shows the distribution of Brent Geese outside Pagham Harbour. Looking at the data set obtained, it is evident that the application site is of negligible value to this species. Indeed, the information strongly suggests that activity is more heavily focussed on land in and around the SPA / Ramsar site itself, and located at a considerable distance from the settlement boundary of Bersted.
- 5.29. However, As stated in paragraph 5.4.22 of the Local Plan HRA, one record of Brent Goose was returned from Bersted Brooks in a location approximately 350 metres to the east of the West Bersted strategic allocation from 2005. No abundance data was provided however, such that this could constitute a single bird, 10 birds or 100+ birds.
- 5.30. As such, further consideration has therefore been afforded to the latest version of the Local Plan HRA (dated February 2017) to investigate this further and ascertain whether this could have any implications in terms of the assessment.
- 5.31. Having considered the land which lies to the east of the allocated site in light of OS mapping and aerial photography, it appears most likely that this could have been an incidental record of Brent Geese, given that the land to the east of the application site comprises existing built form. Alternatively, this record may have come from a location to the north of the application site boundary. The closest distance between the application site and open fields to the north is approximately 600 metres, separated by existing residential development.
- 5.32. Given that the record cited in the Local Plan HRA is an isolated record (with no other records of Brent Geese within 3km returned as part of the desk study exercise with SxBRC), this does not provide any evidence which indicates that the application site or local area is of any historical importance for Brent Geese, neither would it be evidence of functionally linked land.
- 5.33. To provide further clarity regarding historical records, Ecology Solutions contacted Sussex Ornithological Society (SOS) in February 2021. All records of Brent Geese were requested from six 1km grid squares, which incorporate all land within the application site as well as to fields to the north, west and south. Appendix 8 attached to this document clarifies the total area covered by this additional data search.
- 5.34. SOS has subsequently confirmed in email correspondence that they do not hold any records of Brent Geese within any of these 1km grid squares from the last 25 years. Although it is acknowledged that desk study information must be treated with caution, it is therefore clear that there is no historical evidence to indicate that Brent Geese have used the application site,

adjoining fields or indeed wider land, such that it would be likely to (or indeed could) constitute functionally linked land associated with the European site.

- 5.35. Clarification has been sought from the landowner with regard to the historical cropping regime and planting during the winter period at the application site, to ascertain the extent to which the application site supports crops which are potentially suitable for foraging Brent Geese.
- 5.36. The cropping regime for the last three winters has been confirmed as follows:
- Winter 2018/19 – stubble
  - Winter 2019/20 – winter oil seed rape
  - Winter 2020/21 – winter wheat
- 5.37. As noted in above and outlined within the Solent Waders and Brent Goose Strategy (King, 2010), short swards of improved grassland and winter cereal crops provide alternative feeding areas for Brent Geese. Oil seed rape also provides potential foraging opportunities. However, ploughed fields, stubble and other crop types are unsuitable for this species.
- 5.38. It is therefore evident that the variation in land management at the application site over previous years means that the habitat is not always suitable for foraging Brent Geese, although on occasion it does support a suitable food crop. Importantly, the current winter wheat is ideal, yet (as outlined below) surveys to date show no evidence of use by Brent Geese. This further re-enforces that the characteristics of the application site in relation to sightlines and disturbance, render the application site unsuitable for foraging Brent Geese, despite the presence of a superficially suitable food source.
- 5.39. Whilst the arable habitats present within the application site are subject to a management regime that provides suitable food sources (albeit not every winter), there remain two overriding factors that effectively serve to prevent foraging Brent Geese from utilising the application site: poor sightlines due to tall, dense treelines and hedgerows both within the application site and along the boundary, combined with a significant level of disturbance from existing recreational use of PRoW within and adjacent to the application site.
- 5.40. Moreover, the updated desk study exercise has reconfirmed that there is no historical evidence of Brent Geese activity either within the application site or in the local area.
- 5.41. Notwithstanding the conclusion as outlined above, wintering bird survey work has been undertaken on a precautionary basis. The methodology, results and conclusions of these surveys are presented within the Wintering Bird Survey report at Appendix 9 of this sHRA.
- 5.42. There is no evidence either from the wintering bird surveys undertaken in January, February or March 2021, or indeed for site visits completed in October, November and December 2020, to indicate that the application site is utilised by foraging Brent Geese, despite the fact that it currently supports a winter wheat crop. In contrast, the February 2021 survey identified a flock of Brent Geese located a significant distance to the south-west of the application site, within the extensive fields located closer to the SPA / Ramsar site.

- 5.43. In the event that Dark-bellied Brent Geese utilise the wider area for foraging / loafing purposes (although it is again poignant to highlight that the desk study did not include any records of this species within 3km of the application site), the application site boundary is extremely well screened by existing hedgerows and treelines. In light of the above, it may therefore be concluded that the application site does not represent land which could be classed as important 'functionally linked land' or 'supporting habitat' for the Pagham Harbour SPA / Ramsar site.
- 5.44. In turn, it is therefore considered that the development proposals would not result in a significant adverse effect on Brent Geese (or indeed any other qualifying feature associated with the European designated site) through impacts on functionally linked land or supporting habitat.
- 5.45. It is important to note a previous planning application for the application site was submitted in 2020 (Ref: BE/148/20/OUT). This application was for similar proposals but has since been refused. Crucially, the application was not refused on the grounds of ecology or potential impacts on local European designated sites.
- 5.46. Whilst some initial concerns were raised by Natural England and the Ecology Officer regarding the potential for the site to constitute functionally linked land, these concerns fell away following the production of a Briefing Note (Feb 2021). Key extracts from the Officers report for BE/148/20/OUT are included at Appendix 10.
- 5.47. Given the proximity of the SPA/Ramsar site/SSSI to the application site, consideration has also been given to the potential for adverse impacts through noise, lighting and dust during the construction / operational phase. However, due to the substantial physical barriers provided by existing vegetation buffers (e.g. hedgerows and trees) in addition to off-site woodland and mature treelines to the south-west of the application site, and significant amount of existing built form to the south/south-west, it is predicted that there will be no impact from noise, light or dust deposition on habitats within the SPA/Ramsar site/SSSI. In this regard, it is noted that built form will be located in excess of 3.6km from SPA/Ramsar site/SSSI at its closest point.
- 5.48. In any event particulate levels will be monitored throughout the construction phase of the development to ensure that they do not exceed recommended guidelines and standard industry avoidance practices will be undertaken, in order to mitigate any potential impact on designated site but also surrounding habitat. Furthermore, standard industry practices will be employed in order to ensure that contamination of surface and groundwater is avoided. It is noted that measures in this regard will be further secured through an Environmental Construction and Management Plan (ECMP) which will be secured by condition (further details below).
- 5.49. Potential pathways for significant effects on the international / European designated sites are therefore considered to be limited to the following:
- Potential Hydrological Impacts / Toxic Contamination; and
  - Potential in-combination Recreational Pressure.
- 5.50. The potential pathways for effects are discussed in detail below.

## Hydrological impacts / Toxic Contamination

### *Vulnerability*

- 5.51. Estuarine habitats are susceptible to toxic contamination, sedimentation and erosion, with the latter two affecting the structure of the habitats present. Toxic contamination has the potential to kill off benthic, and other invertebrates as well as plant species. Via the uptake of toxins by these groups, knock on effects on organisms further up the food chain (e.g. birds) are also possible.

### *Consideration of Likely Significant Effects*

- 5.52. There is a potential hydrological link between the SPA/Ramsar site/SSSI in the form of drainage ditches which run through and border the application site. As such, specific consideration has been given to the proposed surface water and foul water drainage strategies associated with the proposals.
- 5.53. Noting the potential hydrological connectivity between the application site and SPA/Ramsar site/SSSI, it is considered that activities during the construction phase could potentially result in adverse effects on the designated sites (e.g. through contaminated surface water run-off).
- 5.54. In this regard, it is noted that an ECMP will form an intrinsic element of the proposed scheme. This ECMP will include a range of measures to ensure impacts on off-site habitats and features are avoided, not least measures to ensure that any contaminants and surface waters are appropriately dealt with during the construction phase. It is proposed that the production of an ECMP will be secured through an appropriately worded condition as attached to any planning consent. This will be sufficient to ensure that any potential adverse impacts may be fully avoided on the SPA/Ramsar site/SSSI.
- 5.55. For clarity measures secured by way of the ECMP would include the provision of spill kits to machine operators, use of interceptors / bunds where appropriate and agreed safe storage protocols for any chemicals on site. The ECMP will also secure a scheme for any disposal of contaminated waters (including run-off and contaminated drainage) that avoids potential adverse impacts arising on the SPA/Ramsar Site/SSSI. Appropriate measures will also be secured to control the emission of dust, dirt or harmful particulates which may otherwise have the potential to result in adverse impacts on off-site habitats (including the SPA/Ramsar Site/SSSI).
- 5.56. On the basis that the provision of an ECMP forms an intrinsic element of scheme design, as opposed to a specific measure coming forward as mitigation for potential impacts on the SPA/Ramsar Site/SSSI, it remains consistent with the People Over Wind ruling for the measures secured under this ECMP to be considered at the first stage of Regulation 63(1), as opposed to under Appropriate Assessment.
- 5.57. Consideration has also been given to potential toxic contamination of the hydrological system during the operational phase. With regard to potential changes in water discharge into the SPA, both the surface water drainage (storm water) and foul water strategies are key.

- 5.58. In this regard, it is noted that the provision and maintenance of a Sustainable Urban Drainage System (SUDS) will be secured either by way of legal agreement (S106) for the scheme or otherwise through an appropriately worded planning condition where relevant.
- 5.59. Given the mitigation incorporated into the scheme in relation to the surface water drainage strategy (see below), it is considered that there would be no likely significant effects on the SPA/Ramsar site/SSSI.
- 5.60. The proposed surface water strategy for the application site will be via infiltration, with surface waters directed, by way of gullies and swales, to an infiltration basin located within the application site.
- 5.61. The adoption of this infiltration strategy will ensure there will be no net change in infiltration volumes within the application site as a result of the development proposals, with the infiltration volume maintained (thereby allowing groundwater recharge). This will in turn prevent any potential changes in the quantity/concentration of ground waters feeding off-site habitats (such as the SPA/Ramsar site/SSSI).
- 5.62. The water treatment train will ensure that there will be no significant net decrease in water quality leaving the application site as a result of development proposals. Gullies will trap silt and oil to capture any contaminants from the main development footprint, with the grassed channels/swales providing further vegetative treatment of surface waters in order to ensure that water quality meets the appropriate regulatory standards. Any remaining pollutants within the water would be filtered by the sediment forebay/trap to the inlet of the basin, as well as by the existing ground substrate during the infiltration process, thereby ensuring that there would be no significant increase in pollutants entering the ground water.
- 5.63. The provision and maintenance of SUDS, which again forms an intrinsic element of scheme design as opposed to mitigation for European sites per se, will therefore ensure that potential impacts arising from surface water run-off in the operational phase of the development are fully avoided.
- 5.64. Regarding the treatment of wastewater, this is primarily managed by Southern Water for the Bersted area. Southern Water have confirmed that following necessary upgrades to the wastewater network, there will be sufficient capacity to accommodate the proposals, and that permitted final effluent ('clean' water) discharges from the Wastewater Treatment Works would not be adversely affected. Capacity at the receiving wastewater treatment works will be secured upon planning permission.
- 5.65. On the basis of the above, it is considered that the development proposals would not have a significant effect on the SPA/Ramsar site/SSSI as a result of hydrological impacts and that no additional specific mitigation measures are considered necessary.
- 5.66. On this basis, it may be concluded that the development proposals would not be likely to have a significant effect on the European / international designated sites via hydrological impacts, either considered alone or in combination with other plans or projects.

## In-Combination Recreational Pressure

### *Vulnerability*

- 5.67. Whilst more generally associated with disturbance of species, visitor pressure can in some instances cause degradation of habitats through erosion, soil enrichment from dog faeces / urine, littering and fire setting for example. This assessment has focussed upon the extent to which any effects could be deemed as significant.
- 5.68. Recreational pressure on a wildlife site has the potential to cause the degradation of its qualifying habitat features. Evidence suggests that such effects relate to erosion of habitat features through walking and cycling, trampling of vegetation, soil enrichment (through dog fouling), fly-tipping/littering and fires. In all but the case of fires, these potential pathways for impacts are directly related to the frequency of visits and management of visitors on site. In the case of fire damage, this is generally as a result of anti-social behaviour (arson) and is more prevalent in habitats in close proximity to residential areas.
- 5.69. Furthermore, some habitat types are more susceptible to damage as a result of an increase in recreational disturbance than others. Vegetation associated with some habitats can be fragile and therefore more vulnerable to disturbance and damage than other habitat types. However, sensitive habitats can be influenced by a range of other factors that are not related to recreational pressure, including scrub encroachment, natural erosion, grazing and hydrology.
- 5.70. Where existing tracks and public rights of way (PROW) are clearly defined on the ground (well work tracks) and where suitable visitor management initiatives (e.g. signage) and a maintenance plan are in place, adverse impacts from visitor pressure are as a consequence far more limited in extent. This is because erosion impacts, often associated with walkers, runners, horses and cyclists, are concentrated along specific routes, leaving the wider area free from such effects.

### *Consideration of Likely Significant Effects*

- 5.71. The proposed development will deliver up to 225 new residential units. Considering an average number of residents of 2.18 people per household<sup>2</sup> for Arun, the new development could give rise to approximately 512 additional people.
- 5.72. Some of these new residents would be expected to own pets, including dogs, and access to nearby recreational areas for dog walking will be required. Evidence from the Pet Food Manufacturers Association (PFMA) indicates that 23% of households in the south-east of England own a dog<sup>3</sup>. On this basis, it is assumed that the development proposals would result in an increase of approximately 54 dogs.

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<sup>2</sup> Figure for average household size (persons) for Arun District, taken from 2011 Census

<sup>3</sup> PFMA (2019). *Dog Population 2020*.

- 5.73. As outlined in detail in Section 3, the application site is significantly separated from international / European designated sites. The shortest distance from the application site to the Pagham Harbour SPA / Ramsar Site (when also taking into account local parking opportunities) is 5.1km by car or foot. It is therefore evident that local residents would have to travel a significant distance in order to reach the nearest part of the Pagham Harbour SPA / Ramsar Site. By definition, visitors would then need to access the sites themselves in order to have a potential effect upon them. On this basis, it is considered highly unlikely that new residents would visit the SPA / Ramsar Site in any significant numbers, even more so on a regular basis.
- 5.74. Furthermore, as noted above, the qualifying features of Pagham Harbour SPA / Ramsar site comprise populations and assemblages of wildfowl and wetland birds. Whilst recreational pressure can potentially result in degradation to the habitats which are associated with (and which support) these qualifying features, the qualifying features of this SPA and Ramsar site, in and of themselves, are not sensitive to physical damage and degradation.
- 5.75. It is considered that other factors relating to physical habitat damage and degradation are of far greater significance; for instance, the potential for estuarine habitats to change dynamically in light of restrictions imposed from coastal defences. In this light, it is considered that the potential for an adverse effect to the coastal SPAs / Ramsar sites from physical damage or degradation to habitats (arising as a result of an increase in recreational pressure) is limited.
- 5.76. As set out in Section 2 of this sHRA, the entirety of the application site lies within a Zone of Influence (Zol) of the Pagham Harbour SPA within which an existing evidence base has demonstrated the potential for in-combination recreational impacts to arise as a result of new residential development. In accordance with this evidence base, mitigation would be required, on a precautionary basis, to ensure that potential in-combination effects as a result of new residential development do not arise.
- 5.77. Arun District Council, in their adopted Local Plan 2011-2031, identifies a strategic approach to mitigating potential recreational impacts (Policy ENV DM2 as outlined in section 2 above). The strategic approach proposed includes the Pagham Harbour Access Management Contribution plan for the Pagham Harbour SPA. It is the intention of Arun District Council that applicants within identified recreational Zol make a financial contribution (per new unit) towards this plan, with combined funds then utilised for management of Pagham Harbour.
- 5.78. The applicant is fully committed to the payment of a developer contribution towards a strategic level mitigation / avoidance strategy. The final sum payable would be secured by way of a section 106 agreement. In this way the Competent Authority can be assured (i.e. no doubt remains) that appropriate mitigation / avoidance measures will be delivered ahead of any potential significant effect arising in relation to the development proposals.
- 5.79. The policy ENV DM2 also outlines the requirement to *'create easily accessible new green spaces for recreation within or adjacent to the development site. These shall be capable of accommodating the predicted increases in demand for local walking, including dog walking. Good pedestrian links shall be*

*provided between housing areas and new and existing green space in order to discourage car use.'*

- 5.80. The development proposals will include areas of open space and vegetation buffers. New access to existing Public Rights of Way (PRoW) will also be delivered at the northern corner of the application site, linking the development to local recreational opportunities to the immediate north and west of the application site.
- 5.81. As illustrated on Plan ECO4, the immediate PRoW offers a number of opportunities for 'on the doorstep' recreation, specifically for walkers, dog walkers and cyclists. The layout of the existing PROW also offers the opportunity for circular routes or longer distance routes to the west.
- 5.82. In order to promote the use of the local footpath network, all new residents at the application site shall be supplied with an information pack. This will include both a map and guide to local walking routes. This will serve to encourage all new residents to utilise the existing public rights of way in the vicinity of the new development, particular for regular walks (e.g. dog walking), in preference to habitats within the Pagham Harbour SPA / Ramsar site which lie within / adjacent to the international / European designated sites (i.e. diverting visitors away from the designated sites).
- 5.83. As stated above, the proposals will also be necessarily compatible with future phases of the wider strategic house site SD3, which when combined will deliver significant and new open space and recreational opportunities in the immediate vicinity.
- 5.84. It is considered that the provision of new recreational opportunities and a financial contribution towards agreed and properly targeted visitor access / management initiatives, would avoid any potential significant adverse effects on the SPA/Ramsar site/SSSI through increased recreational pressure when the project is considered both alone and in combination with other plans or projects.
- 5.85. Having undertaken an assessment of all possible effects on the SPA/Ramsar site/SSSI as a result of the development proposals, it is considered that the plan / project would not be give rise to an adverse effect on the integrity of the European site, when the plan / project is considered alone. At worst, the plan / project would give rise to effects which would be classed as *de minimis*.
- 5.86. Notwithstanding the above, in order to ensure compliance with adopted case law (*People Over Wind*), mitigation measures cannot be considered at the first stage of Regulation 63(1). The correct procedural approach is for such mitigation to be considered at the second stage of the test (i.e. to proceed to an Appropriate Assessment). Such an assessment is undertaken in Section 6 of this sHRA.

### Summary

- 5.87. Through adoption of appropriate mitigation measures (which form intrinsic elements of the scheme) in respect of potential hydrological impacts / toxic contamination, potential impacts arising from these pathways can be fully avoided. As such there would be no potential for any adverse effects to arise

through these pathways either alone or in combination with other plans or projects.

- 5.88. In respect of recreational impacts, given the scale of the scheme and noting that recreational opportunities will be delivered / facilitated by the proposals, it is not considered likely that significant recreational impacts may arise on the Pagham Harbour SPA / Ramsar site when considered alone. Nonetheless, noting the potential for adverse impacts in-combination, appropriate mitigation is proposed on a precautionary basis to mitigate any potential for minor increases in recreational pressure. This mitigation is considered in Section 6 of this report (Appropriate Assessment).

## 6. APPROPRIATE ASSESSMENT

- 6.1. As outlined in section 5 above, a range of measures are to be adopted to avoid potential impacts on off-site receptors (including the Pagham Harbour SPA/Ramsar site/SSSI). These measures include for the delivery and maintenance of SUDS as well as the adoption of an ECMP, form an integral element of scheme design, it is considered appropriate for these to be considered at the 'screening stage' of Regulation 63 as opposed to needing to be considered as part of an appropriate assessment.
- 6.2. Notwithstanding this position, should Arun District Council take an alternative view as to when these measures should be considered, the information provided in section 5 would provide them with all the relevant information they require when undertaking their own appropriate assessment as the Competent Authority.
- 6.3. In respect of potential impacts arising as a result of recreational pressure there remains, in the absence of avoidance or mitigation measures, potential for the proposed scheme to contribute towards an effect on Pagham Harbour SPA/Ramsar site/SSSI, when considered in combination with other plans or projects. As such, in this respect, Appropriate Assessment is required.
- 6.4. As set out in section 5, a comprehensive avoidance and mitigation strategy has been adopted by Arun District Council which is sufficient to ensure potential recreation impacts (in-combination) may be fully avoided on European Sites in the local area. For clarity, these strategic approaches specifically address potential recreational pressure at the Pagham Harbour SPA, identifying specific actions and measures which will be implemented at as part of the Pagham Harbour Access Management Contribution plan.
- 6.5. New developments which comply with these strategic approaches (i.e. through providing appropriately scaled financial contributions to fund Pagham Harbour Access Management Contribution) will therefore avoid giving rise to adverse recreational impacts on European sites.
- 6.6. The proposed development will provide financial contributions in accordance with that required for the Pagham Harbour SPA. The required contributions are set out below and based on 225 units being brought forward.

### **Pagham Harbour SPA**

$$225 \text{ (number of units within ZOI)} \times \text{£871 (mitigation cost per unit as per SPD)} = \text{£195,975}$$

- 6.7. The above contributions will be secured through legal agreement as part of the proposed development and will be provided prior to first occupation.
- 6.8. Taking into account the package of measures proposed, it is considered that the development proposals would avoid any potential adverse effects on the integrity of European sites when the project is considered alone. At worst, the plan / project would give rise to effects which would be classed as *de minimis*.

### **Specific consideration of the In-Combination Test**

- 6.9. It is considered by Ecology Solutions that the potential effects identified in relation to the development proposals will be avoided or mitigated through the implementation of the measures set out in this sHRA, such that there would be no significant residual adverse effects on Pagham Harbour SPA, or indeed any other European designated sites when the plan / project is considered alone. For clarity, the proposals, when considered alone, would not adversely impact the integrity of any European sites.
- 6.10. In light of the above, as made clear by Lord Justice Sales in the Exminster Judgment, in combination effects would not be possible.
- 6.11. Since development proposals are scrutinised so carefully by Competent Authorities and the relevant Statutory Authorities in light of the Habitats Regulations, recent case law and guidance, it is not likely that another plan / project would come forward without sufficient mitigation or avoidance measures to offset any perceived deleterious effects on a European designated site.
- 6.12. Plans / projects which come forward in the local area do so through the agreement, with Natural England and / or Arun District Council, of a package of measures designed to avoid adverse effects on relevant European designated sites, such that a lawful consent can be granted. In the case of the Pagham Harbour SPA/Ramsar site/SSSI, new residential schemes now have to come forward with an appropriate avoidance / mitigation package to avoid in combination (recreation) effects on European designated sites.
- 6.13. On the basis that all relevant development proposals will provide appropriate mitigation / avoidance measures, where necessary in line with a strategic package of measures (in relation to potential in combination effects), as agreed with Natural England, it is therefore concluded that there would not be any potential significant in-combination effects on any European sites.

### **Assessment Method for Determining Effects on Site Integrity**

- 6.14. Judgements of whether the integrity of the European sites are likely to be adversely and significantly affected should be made in relation to the features for which European sites are designated as well as their formal Conservation Objectives, and set against the definition of integrity.
- 6.15. English Nature (now Natural England) produced internal guidance on determining site integrity (English Nature, 2004), which includes "*a simple, pragmatic checklist for assessing the likely effect on integrity*". This asks the competent authority to pose a series of five questions, as follows:
- a) That the area of Annex I habitats (or composite features) will not be reduced?
  - b) That there will be no direct effects on the populations of the species for which the site was designated or classified?
  - c) That there will be no indirect effects on the populations of the species for which the site was designated or classified due to loss or degradation of their habitat (quantity/quality)?

- d) That there will be no changes to the composition of the habitats for which the site was designated (e.g. reduction in species structure, abundance or diversity that comprises the habitat over time)?
- e) That there will be no interruption or degradation of the physical, chemical or biological processes that support habitats and species for which the site was designated or classified?
- 6.16. The guidance suggests that if the answer to all of these questions is 'Yes' then it is reasonable to conclude that there is not an adverse effect on the integrity. If the answer is 'No' to one or more of the questions, then further site-specific factors need to be considered in order to reach a decision.
- 6.17. These site-specific factors are:
- Scale of impact;
  - Long-term effects and sustainability;
  - Duration of impact and recovery/reversibility;
  - Dynamic systems;
  - Conflicting feature requirements;
  - Off-site impacts; and
  - Uncertainty in cause and effect relationships and a precautionary approach.
- 6.18. This process has been used to assess the impact of the potential effects on the integrity of Pagham Harbour SPA.
- 6.19. The effects of the proposed development, together with avoidance and mitigation measures, are considered in relation to Natural England's site integrity checklist in Table 1 below.

|                                                                    | Qualifying Interest Features                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Pagham Harbour SPA</b>                                          | <p><b>Pagham Harbour SPA</b></p> <p>Qualifies under Article 4.1 of the Birds Directive for populations of:</p> <ul style="list-style-type: none"> <li>• Breeding Little Tern <i>Sterna albifrons</i>;</li> <li>• Breeding Common Tern <i>Sterna hirundo</i>; and</li> <li>• Over-wintering Ruff <i>Philomachus pugnax</i>.</li> </ul> <p>The site further qualifies under Article 4.2 of the Birds Directive on account of it supporting:</p> <ul style="list-style-type: none"> <li>• Important populations of over-wintering Dark-bellied Brent Goose <i>Branta bernicla</i>.</li> </ul> |
| <b>Has the Information for appropriate assessment shown that:-</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

|                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1) the area of Annex I habitats (or composite features) will not be reduced?                                                                                                                         | <b>Yes.</b> The proposed scheme will result in no losses through land take for either site. Mitigation has been put forward in respect of (very limited) potential for habitat damage through increased visitor pressures.                                                                                                                                                                                                                                                                                                                                                                                  |
| 2) there will be no direct effect on the population of the species for which the site was designated or classified?                                                                                  | <b>Yes.</b> The proposed scheme is sufficiently well removed from the SPA. No direct effects have been identified.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 3) there will be no indirect effects on the populations of species for which the site was designated or classified due to loss or degradation of their habitat (quantity / quality)?                 | <b>Yes.</b> The proposed scheme will have no significant adverse effects on the designating features, either alone or in combination.<br><br>A suite of intrinsic measures, including the provision of suitably designed SUDS and the securing of appropriate construction measures by way of an ECMP will be sufficient to ensure that potential hydrological / toxic contamination impacts are fully avoided / mitigated.<br><br>Mitigation has moreover been designed into the plan / project such that any impacts through increased visitor pressure are at worst considered to be <i>de minimis</i> . |
| 4) there will be no changes to the composition of the habitats for which the site was designated (e.g. reduction in species structure, abundance or diversity that comprises the habitat over time)? | <b>Yes.</b> As set out above the proposed scheme will have no significant adverse effects on the designating features, either alone or in combination.<br><br>Where necessary mitigation been designed into the plan / project (or otherwise comprises an intrinsic element of the scheme) such that any impacts are at worst considered to be <i>de minimis</i> .                                                                                                                                                                                                                                          |
| 5) that there will be no interruption or degradation of the physical, chemical or biological processes that support habitats and species for which the site was designated or classified?            | <b>Yes.</b> As set out above the proposed scheme will have no significant adverse effects on the designating features (direct or indirect), either alone or in combination.<br><br>Where necessary mitigation been designed into the plan / project (or otherwise comprises an intrinsic element of the scheme) such that any impacts are at worst considered to be <i>de minimis</i> .                                                                                                                                                                                                                     |

**Table 1:** Consideration of Natural England's integrity checklist

- 6.20. As stated previously, the Natural England guidance suggests that if the answer to all of these questions is 'Yes' then it is reasonable to conclude that there will not be an adverse effect on integrity. It follows that in this case there is no need to consider any further site-specific factors in order to reach a decision.
- 6.21. As the project alone or in combination would not contribute to an overall significant effect that may have an adverse effect on the integrity of the

Pagham SPA, the proposed scheme would by definition be acceptable, subject to securing the mitigation and avoidance measures proposed.

- 6.22. It is therefore concluded that the proposed scheme would by definition be acceptable under the tests of the Habitats Regulations and therefore in those terms it is considered that the Competent Authority could legally and safely grant a habitats approval under the Habitats Regulations 2017 for the proposed plan / project.

### **Summary Conclusion of Appropriate Assessment**

- 6.23. Having undertaken an Appropriate Assessment considering all of the potential significant effects that could arise from the proposed scheme, in light of the package of avoidance and mitigation measures proposed, Ecology Solutions conclude that the proposals would not be likely to give rise to a significant effect on the integrity of the Pagham Harbour SPA / Ramsar Site when the proposed scheme is considered, either alone or in combination with other plans or projects. No additional adverse impacts have been identified in relation to the underpinning SSSIs and no additional mitigation would be required.

## 7. SUMMARY AND CONCLUSIONS

- 7.1. As outlined in this Information to enable a Habitats Regulations (pursuant to Regulation 63 of The Conservation of Habitats and Species Regulations 2017), produced by Ecology Solutions, a detailed assessment of the implications of the development proposals for Nursery Fields, West Bersted, on local European sites has been undertaken. This assessment has given particular regard to the Pagham Harbour SPA / Ramsar site, in addition to Chichester and Langstone Harbour SPA / Ramsar Site, Solent Maritime SAC, and The Solent to Dorset Coast pSPA.
- 7.2. The findings of this work are set out within this document such that the Competent Authority, in exercising their duties under the Habitats Regulations, has all the necessary information before them in considering the development proposals.
- 7.3. Assessment under Regulation 63 of the Habitats Regulations in this instance has been undertaken given the application sites proximity to Pagham Harbour SPA. Consideration has been given to any additional impacts which could arise in relation to relevant component SSSIs, wherever relevant.
- 7.4. All relevant potential pathways for significant effects to arise on the European designated site as a result of the proposed scheme have been fully examined, initially in the absence of avoidance / mitigation measures (at the 'likely significant effect' stage) and subsequently taking into account the package of measures proposed (at the 'Appropriate Assessment' stage). This assessment has been undertaken with due regard to relevant legislation, case law and planning decisions, guidance and information provided by Natural England.
- 7.5. Where necessary, mitigation / avoidance measures which are integral to the scheme have been highlighted in order to address any perceived adverse effects on qualifying interest features associated with the designated sites. Moreover, the proposed development would provide a financial contribution in compliance with the strategic mitigation approaches proposed to avoid in-combination recreational impacts on the Pagham Harbour SPA.
- 7.6. Having considered all of the potential significant effects that could arise from the proposed scheme, in light of the avoidance and mitigation measures proposed, Ecology Solutions conclude that the proposals would not result in any adverse effects on the integrity of Pagham Harbour SPA (in view of the sites' conservation objectives), when the proposed scheme is considered alone or in combination with other plans or projects.
- 7.7. As such, the proposed scheme would, by definition, be acceptable subject to securing the mitigation and avoidance measures proposed. In those terms the competent authority could legally and safely grant a habitats approval under the Habitats Regulations 2017 for the proposed plan/project.

## PLANS

## **PLAN ECO1**

Application Site Location in Relation to Relevant  
European Designated Sites

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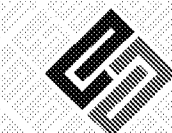
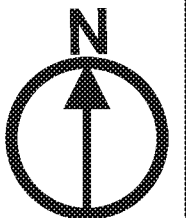
KEY:



APPLICATION SITE



PAGHAM HARBOUR SPECIAL PROTECTION AREA, RAMSAR SITE AND SITE OF SPECIAL SCIENTIFIC INTEREST



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7216: NURSERY FIELDS,  
WEST BERSTED

ECO1:  
APPLICATION SITE LOCATION  
IN RELATION TO RELEVANT  
EUROPEAN DESIGNATES SITES

May  
2021

## **PLAN ECO2**

### Sight Lines and Photograph Plan



- KEY:
- APPLICATION SITE BOUNDARY
  - SIGHTLINE WITHIN APPLICATION SITE
  - SIGHTLINE WITHIN WIDER ALLOCATION SITE
  - PHOTOGRAPH NUMBER & DIRECTION (as shown on Appendix 2)



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7216: NURSERY FIELDS, WEST BERSTED

|                                       |                    |
|---------------------------------------|--------------------|
| PLAN ECO2: SIGHTLINES AND PHOTOGRAPHS | Rev: A<br>Feb 2021 |
|---------------------------------------|--------------------|

## **PLAN ECO3**

Application Site PRow



- KEY:
-  APPLICATION SITE BOUNDARY
  -  PUBLIC RIGHT OF WAY (PRoW)



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7216: NURSERY FIELDS, WEST BERSTED

|                                 |                    |
|---------------------------------|--------------------|
| PLAN ECO3: PUBLIC RIGHTS OF WAY | Rev: A<br>May 2021 |
|---------------------------------|--------------------|

## **PLAN ECO4**

Alternative Recreational Opportunities in Vicinity of  
Application Site

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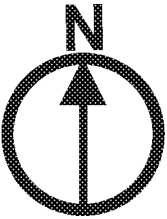
KEY:



APPLICATION SITE



NOTABLE PROW WITHIN  
IMMEDIATE PROXIMITY OF THE  
APPLICATION SITE



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7216: NURSERY FIELDS,  
WEST BERSTED

ECO4:  
ALTERNATIVE RECREATIONAL  
OPPORTUNITIES IN VICINITY OF  
THE APPLICATION SITE

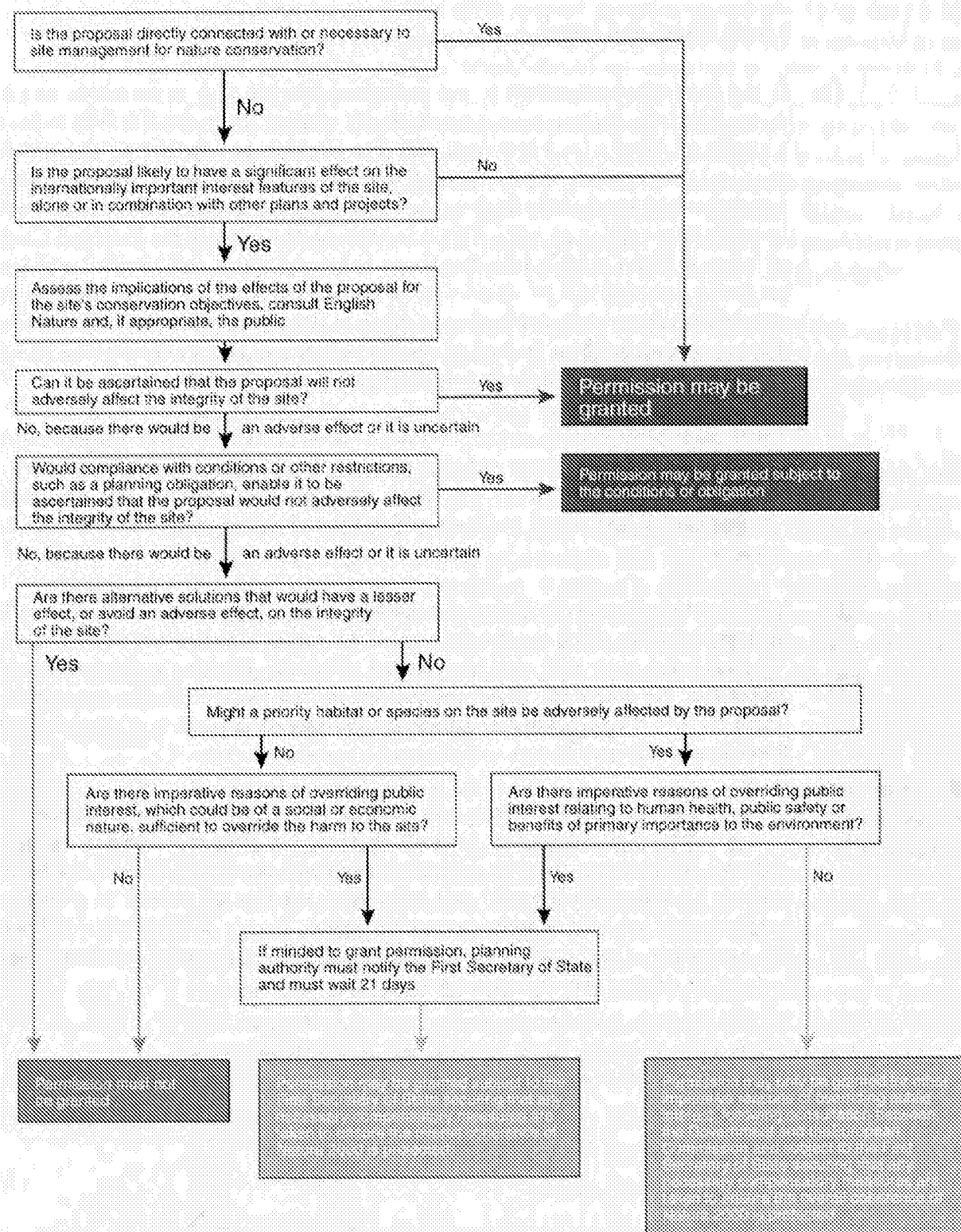
May  
2021

## **APPENDICES**

## **APPENDIX 1**

Flow Diagram from ODPM / Defra Circular

**Figure 1: Consideration of development proposals affecting Internationally Designated Nature Conservation Sites**



## **APPENDIX 2**

### **Pagham Harbour SPA Citation and Natura 2000 Standard Data Form**

EC Directive 79/409 on the Conservation of Wild Birds: Special Protection Area

PAGHAM HARBOUR (WEST SUSSEX)

The site qualifies under Article 4(2) as an internationally important wetland supporting in winter an average of 3045 dark-bellied brent geese Branta bernicla bernicla (2% of the European wintering population). The site also supports nationally important wintering populations: 270 pintail Anas acuta (1% of the British wintering population) 781 grey plovers Pluvialis squatarola (3%) and 340 black-tailed godwits Limosa limosa (7%).

The site qualifies also under Article 4(1) by supporting an average of 160 wintering ruff Philomachus pugnax (10% of the British wintering population), and breeding populations of little tern Sterna albifrons and common tern Sterna hirundo.

This citation / map relates to a site entered in  
the Register of European sites for Great Britain

Regi

Date

Sign

an bearing the responsibility to the Environment

# NATURA 2000

## STANDARD DATA FORM

FOR SPECIAL PROTECTION AREAS (SPA)  
FOR SITES ELIGIBLE FOR IDENTIFICATION AS SITES OF COMMUNITY IMPORTANCE (SCI)  
AND  
FOR SPECIAL AREAS OF CONSERVATION (SAC)

### 1. Site identification:

1.1 Type  1.2 Site code

1.3 Compilation date  1.4 Update

#### 1.5 Relationship with other Natura 2000 sites

|  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|
|  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|

1.6 Respondent(s)

1.7 Site name

#### 1.8 Site indication and designation classification dates

|                                       |        |
|---------------------------------------|--------|
| date site proposed as eligible as SCI |        |
| date confirmed as SCI                 |        |
| date site classified as SPA           | 198803 |
| date site designated as SAC           |        |

### 2. Site location:

#### 2.1 Site centre location

| longitude  | latitude   |
|------------|------------|
| 00 45 38 W | 50 45 48 N |

2.2 Site area (ha)  2.3 Site length (km)

#### 2.5 Administrative region

| NUTS code | Region name | % cover |
|-----------|-------------|---------|
| UK533     | West Sussex | 100.00% |

#### 2.6 Biogeographic region

☐  
Alpine

☒  
Atlantic

☐  
Boreal

☐  
Continental

☐  
Macaronesia

☐  
Mediterranean

### 3. Ecological information:

#### 3.1 Annex I habitats

Habitat types present on the site and the site assessment for them:

| Annex I habitat | % cover | Representativity | Relative surface | Conservation status | Global assessment |
|-----------------|---------|------------------|------------------|---------------------|-------------------|
|                 |         |                  |                  |                     |                   |

### 3.2 Annex I birds and regularly occurring migratory birds not listed on Annex I

| Population |                                 |          |           |        |       | Site assessment |              |           |        |
|------------|---------------------------------|----------|-----------|--------|-------|-----------------|--------------|-----------|--------|
|            |                                 | Resident | Migratory |        |       | Population      | Conservation | Isolation | Global |
|            |                                 |          | Breed     | Winter | Stage |                 |              |           |        |
| Code       | Species name                    |          |           |        |       |                 |              |           |        |
| A046a      | <i>Branta bernicla bernicla</i> |          |           | 1794 I |       | C               |              | C         |        |
| A151       | <i>Philomachus pugnax</i>       |          |           | 10 I   |       | C               |              | C         |        |
| A195       | <i>Sterna albifrons</i>         |          | 7 P       |        |       | C               |              | C         |        |
| A193       | <i>Sterna hirundo</i>           |          | 0 P       |        |       | C               |              | C         |        |

## 4. Site description:

### 4.1 General site character

| Habitat classes                                                                                | % cover     |
|------------------------------------------------------------------------------------------------|-------------|
| Marine areas. Sea inlets                                                                       | 0.6         |
| Tidal rivers. Estuaries. Mud flats. Sand flats. Lagoons (including saltwork basins)            | 39.2        |
| Salt marshes. Salt pastures. Salt steppes                                                      | 5.2         |
| Coastal sand dunes. Sand beaches. Machair                                                      |             |
| Shingle. Sea cliffs. Islets                                                                    | 20.2        |
| Inland water bodies (standing water, running water)                                            | 1.0         |
| Bogs. Marshes. Water fringed vegetation. Fens                                                  | 2.8         |
| Heath. Scrub. Maquis and garrigue. Phygrana                                                    |             |
| Dry grassland. Steppes                                                                         |             |
| Humid grassland. Mesophile grassland                                                           |             |
| Alpine and sub-alpine grassland                                                                |             |
| Improved grassland                                                                             | 30.3        |
| Other arable land                                                                              |             |
| Broad-leaved deciduous woodland                                                                | 0.7         |
| Coniferous woodland                                                                            |             |
| Evergreen woodland                                                                             |             |
| Mixed woodland                                                                                 |             |
| Non-forest areas cultivated with woody plants (including orchards, groves, vineyards, dehesas) |             |
| Inland rocks. Scree. Sands. Permanent snow and ice                                             |             |
| Other land (including towns, villages, roads, waste places, mines, industrial sites)           |             |
| <b>Total habitat cover</b>                                                                     | <b>100%</b> |

### 4.1 Other site characteristics

#### Soil & geology:

Alluvium, Clay, Gravel, Mud, Neutral, Nutrient-rich, Sand, Sedimentary, Shingle

#### Geomorphology & landscape:

Coastal, Estuary, Floodplain, Intertidal sediments (including sandflat/mudflat), Islands, Lagoon, Lowland, Open coast (including bay), Pools, Shingle bar, Subtidal sediments (including sandbank/mudbank)

### 4.2 Quality and importance

#### ARTICLE 4.1 QUALIFICATION (79/409/EEC)

##### During the breeding season the area regularly supports:

*Sterna albifrons* 0.3% of the GB breeding population  
(Eastern Atlantic - breeding) 5 year mean, 1992-1996

*Sterna hirundo* % of the GB breeding population  
(Northern/Eastern Europe - breeding) Count, as at 1996

##### Over winter the area regularly supports:

*Philomachus pugnax*  
(Western Africa - wintering)

1.4% of the GB population  
5 year mean, 1995-1999

#### ARTICLE 4.2 QUALIFICATION (79/409/EEC)

**Over winter the area regularly supports:**

*Branta bernicla bernicla*  
(Western Siberia/Western Europe)

0.6% of the population  
5 year peak mean 1991/92-1995/96

### 4.3 Vulnerability

Pagham Harbour comprises an extensive central area of salt marsh and tidal mudflats, with surrounding habitats including lagoons, shingle, open water, reed swamp and wet permanent grassland.

The majority of the site is a Local Nature Reserve managed by West Sussex County Council. Historical land drainage for agricultural purposes is being addressed through the Local Nature Reserve Management Plan and Management Agreements, while pollution from inadequate treatment of sewage discharges will be reviewed by the Environmental Agency.

## 5. Site protection status and relation with CORINE biotopes:

### 5.1 Designation types at national and regional level

| Code             | % cover |
|------------------|---------|
| UK04 (SSSI/ASSI) | 100.0   |

## **APPENDIX 3**

### Pagham Harbour Ramsar Information Sheet

# Information Sheet on Ramsar Wetlands (RIS)

*Categories approved by Recommendation 4.7 (1990), as amended by Resolution VIII.13 of the 8<sup>th</sup> Conference of the Contracting Parties (2002) and Resolutions IX.1 Annex B, IX.6, IX.21 and IX.22 of the 9<sup>th</sup> Conference of the Contracting Parties (2005).*

## Notes for compilers:

1. The RIS should be completed in accordance with the attached *Explanatory Notes and Guidelines for completing the Information Sheet on Ramsar Wetlands*. Compilers are strongly advised to read this guidance before filling in the RIS.
2. Further information and guidance in support of Ramsar site designations are provided in the *Strategic Framework for the future development of the List of Wetlands of International Importance* (Ramsar Wise Use Handbook 7, 2nd edition, as amended by COP9 Resolution IX.1 Annex B). A 3rd edition of the Handbook, incorporating these amendments, is in preparation and will be available in 2006.
3. Once completed, the RIS (and accompanying map(s)) should be submitted to the Ramsar Secretariat. Compilers should provide an electronic (MS Word) copy of the RIS and, where possible, digital copies of all maps.

---

## 1. Name and address of the compiler of this form:

### Joint Nature Conservation Committee

Monkstone House

City Road

Peterborough

Cambridgeshire PE1 1JY

UK

Telephone/Fax: +44 (0)1733 – 562 626 / +44 (0)1733 – 555 948

Email: [RIS@JNCC.gov.uk](mailto:RIS@JNCC.gov.uk)

FOR OFFICE USE ONLY.

DD MM YY

|  |  |  |
|--|--|--|
|  |  |  |
|--|--|--|

Designation date

|  |  |  |  |  |  |
|--|--|--|--|--|--|
|  |  |  |  |  |  |
|--|--|--|--|--|--|

Site Reference Number

---

## 2. Date this sheet was completed/updated:

Designated: 30 March 1988

---

## 3. Country:

UK (England)

---

## 4. Name of the Ramsar site:

Pagham Harbour

---

## 5. Designation of new Ramsar site or update of existing site:

**This RIS is for:** Updated information on an existing Ramsar site

---

## 6. For RIS updates only, changes to the site since its designation or earlier update:

### a) Site boundary and area:

**\*\* Important note:** If the boundary and/or area of the designated site is being restricted/reduced, the Contracting Party should have followed the procedures established by the Conference of the Parties in the Annex to COP9 Resolution IX.6 and provided a report in line with paragraph 28 of that Annex, prior to the submission of an updated RIS.

**b) Describe briefly any major changes to the ecological character of the Ramsar site, including in the application of the Criteria, since the previous RIS for the site:**

**7. Map of site included:**

Refer to Annex III of the *Explanatory Notes and Guidelines*, for detailed guidance on provision of suitable maps, including digital maps.

**a) A map of the site, with clearly delineated boundaries, is included as:**

- i) **hard copy** (required for inclusion of site in the Ramsar List): *yes* ✓ -or- *no* ☐;
- ii) **an electronic format** (e.g. a JPEG or ArcView image) *Yes*
- iii) **a GIS file providing geo-referenced site boundary vectors and attribute tables** *yes* ✓ -or- *no* ☐;

**b) Describe briefly the type of boundary delineation applied:**

e.g. the boundary is the same as an existing protected area (nature reserve, national park etc.), or follows a catchment boundary, or follows a geopolitical boundary such as a local government jurisdiction, follows physical boundaries such as roads, follows the shoreline of a waterbody, etc.

The site boundary is the same as, or falls within, an existing protected area.

For precise boundary details, please refer to paper map provided at designation

**8. Geographical coordinates (latitude/longitude):**

50 45 48 N                      00 45 38 W

**9. General location:**

Include in which part of the country and which large administrative region(s), and the location of the nearest large town.

Nearest town/city: Chichester

10 km south-east of Chichester.

**Administrative region:** West Sussex

**10. Elevation (average and/or max. & min.) (metres):    11. Area (hectares): 636.68**

Min.       -1

Max.       5

Mean       1

**12. General overview of the site:**

Provide a short paragraph giving a summary description of the principal ecological characteristics and importance of the wetland.

Pagham Harbour comprises an extensive central area of saltmarsh and tidal mudflats with surrounding habitats including lagoons, shingle, open water, reed swamp and wet permanent grassland.

The intertidal mudflats are rich in invertebrate and algae, and provide important feeding areas for birds. The lower saltmarsh is dominated by common cord-grass but also includes patches of glasswort. At higher levels sea-purslane is abundant. The area supports internationally important numbers of wintering pintail and nationally important numbers of dark-bellied brent goose, grey plover and black-tailed godwit.

**13. Ramsar Criteria:**

Circle or underline each Criterion applied to the designation of the Ramsar site. See Annex II of the *Explanatory Notes and Guidelines* for the Criteria and guidelines for their application (adopted by Resolution VII.11).

**6**

**14. Justification for the application of each Criterion listed in 13 above:**

Provide justification for each Criterion in turn, clearly identifying to which Criterion the justification applies (see Annex II for guidance on acceptable forms of justification).

**Ramsar criterion 6 – species/populations occurring at levels of international importance.**

**Qualifying Species/populations (as identified at designation):**

**Species with peak counts in winter:**

Dark-bellied brent goose, *Branta bernicla* 2512 individuals, representing an average of 1.1% of the population (5 year peak mean 1998/9-2002/3)

**Species/populations identified subsequent to designation for possible future consideration under criterion 6.**

**Species with peak counts in winter:**

Black-tailed godwit, *Limosa limosa islandica*, 377 individuals, representing an average of 1% of the population (5 year peak mean 1998/9-2002/3)

Contemporary data and information on waterbird trends at this site and their regional (sub-national) and national contexts can be found in the Wetland Bird Survey report, which is updated annually. See [www.bto.org/survey/webs/webs-alerts-index.htm](http://www.bto.org/survey/webs/webs-alerts-index.htm).

**15. Biogeography** (required when Criteria 1 and/or 3 and /or certain applications of Criterion 2 are applied to the designation):

Name the relevant biogeographic region that includes the Ramsar site, and identify the biogeographic regionalisation system that has been applied.

**a) biogeographic region:**

Atlantic

**b) biogeographic regionalisation scheme** (include reference citation):

Council Directive 92/43/EEC

**16. Physical features of the site:**

Describe, as appropriate, the geology, geomorphology; origins - natural or artificial; hydrology; soil type; water quality; water depth, water permanence; fluctuations in water level; tidal variations; downstream area; general climate, etc.

|                             |                                                                                                                                                                                                                                                  |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Soil & geology              | neutral, shingle, sand, mud, clay, alluvium, nutrient-rich, sedimentary, gravel                                                                                                                                                                  |
| Geomorphology and landscape | lowland, coastal, floodplain, shingle bar, subtidal sediments (including sandbank/mudbank), intertidal sediments (including sandflat/mudflat), open coast (including bay), enclosed coast (including embayment), estuary, islands, lagoon, pools |
| Nutrient status             | mesotrophic                                                                                                                                                                                                                                      |
| pH                          | circumneutral                                                                                                                                                                                                                                    |
| Salinity                    | brackish / mixosaline, fresh, saline / euhaline                                                                                                                                                                                                  |
| Soil                        | mainly mineral                                                                                                                                                                                                                                   |
| Water permanence            | usually permanent                                                                                                                                                                                                                                |

|                                   |                                                                                                                                                                                                                                                                                                                                                                       |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Summary of main climatic features | Annual averages (Bognor Regis, 1971–2000)<br>( <a href="http://www.metoffice.com/climate/uk/averages/19712000/sites/bognor_regis.html">www.metoffice.com/climate/uk/averages/19712000/sites/bognor_regis.html</a> )<br>Max. daily temperature: 13.7° C<br>Min. daily temperature: 7.7° C<br>Days of air frost: 24.0<br>Rainfall: 717.4 mm<br>Hrs. of sunshine: 1902.9 |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**General description of the Physical Features:**

Pagham Harbour is an estuarine basin that comprises an extensive central area of saltmarsh and intertidal mudflats, surrounded by lagoons, shingle, open water, reed swamp and wet permanent grassland.

**17. Physical features of the catchment area:**

Describe the surface area, general geology and geomorphological features, general soil types, general land use, and climate (including climate type).

Pagham Harbour is an estuarine basin that comprises an extensive central area of saltmarsh and intertidal mudflats, surrounded by lagoons, shingle, open water, reed swamp and wet permanent grassland.

**18. Hydrological values:**

Describe the functions and values of the wetland in groundwater recharge, flood control, sediment trapping, shoreline stabilization, etc.

Shoreline stabilisation and dissipation of erosive forces, Sediment trapping

**19. Wetland types:**

Marine/coastal wetland

| Code  | Name                                           | % Area |
|-------|------------------------------------------------|--------|
| G     | Tidal flats                                    | 33.3   |
| Other | Other                                          | 31     |
| E     | Sand / shingle shores (including dune systems) | 20.1   |
| H     | Salt marshes                                   | 5.2    |
| F     | Estuarine waters                               | 3.3    |
| J     | Coastal brackish / saline lagoons              | 2.4    |
| Sp    | Saline / brackish marshes: permanent           | 2.2    |
| Tp    | Freshwater marshes / pools: permanent          | 0.8    |
| W     | Shrub-dominated wetlands                       | 0.6    |
| A     | Shallow marine waters                          | 0.6    |
| M     | Rivers / streams / creeks: permanent           | 0.3    |
| 9     | Canals and drainage channels                   | 0.2    |

**20. General ecological features:**

Provide further description, as appropriate, of the main habitats, vegetation types, plant and animal communities present in the Ramsar site, and the ecosystem services of the site and the benefits derived from them.

This site comprises an extensive central area of saltmarsh and tidal mudflats with surrounding habitats including shingles, open water, reed swamp and wet permanent grassland. Pagham Harbour is of national importance for wintering, wildfowl and waders and also for breeding birds both within the Harbour and the surrounding grazing pasture. The site supports nationally important communities of plants and invertebrates.

Ecosystem services

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**21. Noteworthy flora:**

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in **12**. Justification for the application of the Criteria) indicating, e.g. which species/communities are unique, rare, endangered or biogeographically important, etc. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

**Nationally important species occurring on the site.****Higher Plants.**

*Petrorhagia nanteuillii*

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**22. Noteworthy fauna:**

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in **12**. Justification for the application of the Criteria) indicating, e.g. which species/communities are unique, rare, endangered or biogeographically important, etc., including count data. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

**Birds****Species currently occurring at levels of national importance:****Species with peak counts in spring/autumn:**

|                                                               |                                                                                                                      |
|---------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| Little egret , <i>Egretta garzetta</i> , West Mediterranean   | 60 individuals, representing an average of 3.6% of the GB population (5 year peak mean 1998/9-2002/3)                |
| Whimbrel , <i>Numenius phaeopus</i> , Europe/Western Africa   | 104 individuals, representing an average of 3.4% of the GB population (5 year peak mean 1998/9-2002/3 - spring peak) |
| Common greenshank , <i>Tringa nebularia</i> , Europe/W Africa | 20 individuals, representing an average of 3.3% of the GB population (5 year peak mean 1998/9-2002/3)                |

**Species with peak counts in winter:**

|                                                                            |                                                                                                        |
|----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| Slavonian grebe , <i>Podiceps auritus</i> , Northwest Europe               | 14 individuals, representing an average of 1.9% of the GB population (5 year peak mean 1998/9-2002/3)  |
| Northern pintail , <i>Anas acuta</i> , NW Europe                           | 462 individuals, representing an average of 1.6% of the GB population (5 year peak mean 1998/9-2002/3) |
| Grey plover , <i>Pluvialis squatarola</i> , E Atlantic/W Africa -wintering | 704 individuals, representing an average of 1.3% of the GB population (5 year peak mean 1998/9-2002/3) |
| Spotted redshank , <i>Tringa erythropus</i> , Europe/W Africa              | 5 individuals, representing an average of 3.6% of the GB population (5 year peak mean 1998/9-2002/3)   |

**Species Information****Nationally important species occurring on the site.****Invertebrates.**

*Nematostella vectensis*

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**23. Social and cultural values:**

Describe if the site has any general social and/or cultural values e.g. fisheries production, forestry, religious importance, archaeological sites, social relations with the wetland, etc. Distinguish between historical/archaeological/religious significance and current socio-economic values.

Aesthetic

Aquatic vegetation (e.g. reeds, willows, seaweed)

Archaeological/historical site

Environmental education/ interpretation

Fisheries production  
 Livestock grazing  
 Non-consumptive recreation  
 Scientific research  
 Sport fishing  
 Sport hunting  
 Tourism

**b)** Is the site considered of international importance for holding, in addition to relevant ecological values, examples of significant cultural values, whether material or non-material, linked to its origin, conservation and/or ecological functioning? No

If Yes, describe this importance under one or more of the following categories:

- i) sites which provide a model of wetland wise use, demonstrating the application of traditional knowledge and methods of management and use that maintain the ecological character of the wetland:
- ii) sites which have exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland:
- iii) sites where the ecological character of the wetland depends on the interaction with local communities or indigenous peoples:
- iv) sites where relevant non-material values such as sacred sites are present and their existence is strongly linked with the maintenance of the ecological character of the wetland:

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#### 24. Land tenure/ownership:

| Ownership category                  | On-site | Off-site |
|-------------------------------------|---------|----------|
| Non-governmental organisation (NGO) | +       | +        |
| Local authority, municipality etc.  | +       | +        |
| National/Crown Estate               | +       | +        |
| Private                             | +       | +        |

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#### 25. Current land (including water) use:

| Activity                                     | On-site | Off-site |
|----------------------------------------------|---------|----------|
| Nature conservation                          | +       |          |
| Tourism                                      | +       | +        |
| Recreation                                   | +       | +        |
| Current scientific research                  | +       |          |
| Bait collection                              | +       | +        |
| Arable agriculture (unspecified)             |         | +        |
| Permanent arable agriculture                 |         | +        |
| Livestock watering hole/pond                 | +       | +        |
| Permanent pastoral agriculture               | +       | +        |
| Hunting: recreational/sport                  | +       | +        |
| Sewage treatment/disposal                    | +       | +        |
| Flood control                                | +       | +        |
| Irrigation (incl. agricultural water supply) |         | +        |
| Transport route                              |         | +        |

|                   |  |   |
|-------------------|--|---|
| Urban development |  | + |
|-------------------|--|---|

## 26. Factors (past, present or potential) adversely affecting the site's ecological character, including changes in land (including water) use and development projects:

*Explanation of reporting category:*

1. Those factors that are still operating, but it is unclear if they are under control, as there is a lag in showing the management or regulatory regime to be successful.
2. Those factors that are not currently being managed, or where the regulatory regime appears to have been ineffective so far.

NA = Not Applicable because no factors have been reported.

| Adverse Factor Category | Reporting Category | Description of the problem (Newly reported Factors only) | On-Site | Off-Site | Major Impact? |
|-------------------------|--------------------|----------------------------------------------------------|---------|----------|---------------|
| No factors reported     | NA                 |                                                          |         |          |               |
|                         |                    |                                                          |         |          |               |

For category 2 factors only.

What measures have been taken / are planned / regulatory processes invoked, to mitigate the effect of these factors?

Is the site subject to adverse ecological change? NO

## 27. Conservation measures taken:

List national category and legal status of protected areas, including boundary relationships with the Ramsar site; management practices; whether an officially approved management plan exists and whether it is being implemented.

| Conservation measure                                                  | On-site | Off-site |
|-----------------------------------------------------------------------|---------|----------|
| Site/ Area of Special Scientific Interest (SSSI/ASSI)                 | +       | +        |
| Special Protection Area (SPA)                                         | +       |          |
| Land owned by a non-governmental organisation for nature conservation | +       |          |
| Management agreement                                                  | +       |          |
| Site management statement/plan implemented                            | +       |          |

### b) Describe any other current management practices:

The management of Ramsar sites in the UK is determined by either a formal management plan or through other management planning processes, and is overseen by the relevant statutory conservation agency. Details of the precise management practises are given in these documents.

## 28. Conservation measures proposed but not yet implemented:

e.g. management plan in preparation; official proposal as a legally protected area, etc.

No information available

## 29. Current scientific research and facilities:

e.g. details of current research projects, including biodiversity monitoring; existence of a field research station, etc.

### Contemporary.

#### Fauna.

Numbers of migratory and wintering wildfowl and waders are monitored annually as part of the national Wetland Birds Survey (WeBS) organised by the British Trust for Ornithology, Wildfowl & Wetlands Trust, the Royal Society for the Protection of Birds and the Joint Nature Conservation Committee.

### Completed.

#### Environment, Flora and Fauna.

Extensive research and surveys into tidal regimes, sediment movement and the distribution of all major animal and plant groups has been carried out in Pagham Harbour.

## 30. Current communications, education and public awareness (CEPA) activities related to or benefiting the site:

e.g. visitor centre, observation hides and nature trails, information booklets, facilities for school visits, etc.

There is an interpretative centre for the Local Nature Reserve.

A full time Education Officer is employed, the programme being particularly directed at schoolchildren.

## 31. Current recreation and tourism:

State if the wetland is used for recreation/tourism; indicate type(s) and their frequency/intensity.

### Activities, Facilities provided and Seasonality.

Land based recreation:

Walking including dog walking - all year.

Bird watching - all year.

Sea bathing - mostly summer.

Wildfowling: Only in agreed areas - 1 September to 20 February

Adjacent seasonal caravan parks - mainly summer.

## 32. Jurisdiction:

Include territorial, e.g. state/region, and functional/sectoral, e.g. Dept. of Agriculture/Dept. of Environment, etc.

Head, Natura 2000 and Ramsar Team, Department for Environment, Food and Rural Affairs, European Wildlife Division, Zone 1/07, Temple Quay House, 2 The Square, Temple Quay, Bristol, BS1 6EB

## 33. Management authority:

Provide the name and address of the local office(s) of the agency(ies) or organisation(s) directly responsible for managing the wetland. Wherever possible provide also the title and/or name of the person or persons in this office with responsibility for the wetland.

Site Designations Manager, English Nature, Sites and Surveillance Team, Northminster House, Northminster Road, Peterborough, PE1 1UA, UK

## 34. Bibliographical references:

Scientific/technical references only. If biogeographic regionalisation scheme applied (see 15 above), list full reference citation for the scheme.

### Site-relevant references

Barne, JH, Robson, CF, Kaznowska, SS, Doody, JP & Davidson, NC & Buck, AL (eds.) (1998) *Coasts and seas of the United Kingdom. Region 8 Sussex: Rye Bay to Chichester Harbour*. Joint Nature Conservation Committee, Peterborough. (Coastal Directories Series.)

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- Robinson, AWH (1995) The harbour entrances of Poole, Christchurch and Pagham. *Geographical Journal*, **121**(1), 33-50
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## **APPENDIX 4**

### Pagham Harbour SSSI Citation

**COUNTY:** WEST SUSSEX

**SITE NAME:** PAGHAM HARBOUR

**DISTRICT:** CHICHESTER: ARUN

**Status:** Site of Special Scientific Interest (SSSI) notified under Section 28 of the Wildlife and Countryside Act 1981. Part of this site is a Local Nature Reserve (under S21 of The National Parks and Access to the Countryside Act 1949)

**Local Planning Authority:** CHICHESTER DISTRICT COUNCIL; ARUN DISTRICT COUNCIL

**National Grid Reference:** SZ 875 970

**Area:** 615.9 ha 1521.9 acres

**Ordnance Survey Sheet 1:50,000:** 197

**1:10,000:** SZ 89 NW, NE, SE

**Date Notified (under 1949 Act):** 1954

**Date of Last Revision:** 1980

**Date Notified (under 1981 Act):** 1986

**Date of Last Revision:**

**Other Information:** This site lies within the South Coast Plain. Pagham Harbour is a proposed NCR site. This site contains Pagham Harbour GCR site and part of Bognor Regis (Palaeobotany) GCR site. This is also a proposed Ramsar/SPA site.

### **Reasons for Notification:**

This site comprises an extensive central area of salt-marsh and tidal mudflats with surrounding habitats including shingle, open water, reed swamp and wet permanent grassland. Pagham Harbour is of national importance for wintering wildfowl and waders and also for breeding birds both within the Harbour and the surrounding grazing pasture. The site supports nationally important communities of plants and invertebrates.

Pagham Harbour was reclaimed for agriculture in the late nineteenth century but was flooded again by a storm in the early twentieth century. The extensive intertidal mudflats are rich in algae and invertebrates and provide important feeding areas for birds.

Salt-marsh is a habitat threatened nationally through reclamation for agriculture. The lower part of the salt-marsh is dominated by the hybrid common cord-grass *Spartina anglica* with patches of the glassworts *Salicornia* spp. Above this zone sea-purslane *Halimione portulacoides* covers large areas with other species such as sea aster *Aster tripolium* in the periphery. At one part of the site within a mixed salt-marsh community greater sea-spurrey *Spergularia media* and sea lavender *Limonium vulgare* are found. The upper margin of the salt-marsh has developed a narrow strip of grassland dominated by sea couch *Elymus pycnanthus*.

Vegetated shingle is a nationally rare community. At Pagham, the type and extent of plant cover is dictated by the shifting nature of the substrates, the sea defence works, and by its relative exposure to the elements. In sheltered areas a diverse grass sward has developed with herbs such as early forget-me-not *Myosotis ramosissima*, biting stonecrop *Sedum acre* and the nationally endangered chiding pink *Petrorhagia nanteuilli*. This contrasts with the sparse vegetation of the shingle ridge where the uncommon sea-kale *Crambe maritima* and yellow-vetch *Vicia lutea* are found.

Pagham Harbour has a wide variety of wetland habitats. Brackish drainage ditches dissect the land where common reed *Phragmites australis* dominates. This forms fairly extensive swamps in some areas including the Severals to the west of the Harbour which are important for breeding and migrating reed and sedge warblers. Sidlesham ferry to the north-west provides high water feeding and roosting areas for waders while Pagham Lagoon in the east is a stormy weather sheltering site for sea duck. Here may also be found the nationally endangered starlet sea anemone *Nematostella vectensis*.

The small amount of woodland at Pagham Harbour is dominated by willow and oak. One of these areas supports a small heronry. In contrast, the ancient woodland at Norton Priory is drier with oak standards and a rich ground flora. Scrub is found both in the form of hedges and as more extensive patches with hawthorn *Crataegus monogyna* and gorse *Ulex europaeus* being the main constituents. The damp unimproved grassland surrounding the Harbour is used as a major wader roost and is grazed by large numbers of Brent Geese. Some fields of improved grassland are included in the site as they too, support nationally important populations of birds.

Pagham Harbour is an overwintering area for over 120 species of bird. The numbers of wintering pintail, ringed and grey plover and black-tailed godwit regularly reach 1% of British populations and the site is of international importance for wintering ruff and Brent Geese. The mudflats also provide food for a diverse breeding community of birds including oystercatcher, shelduck and redshank.

Notable invertebrates include the sand dart *Agrotis ripae*, Matthew's wainscot moth *Mythimna favicolor* and the long-winged conehead grasshopper *Conocephalus discolor*.

### Geology:

Pagham Harbour is a key site for coastal geomorphology. It is significant both as a classic shingle spit landform and for the links that have been demonstrated between the coastal near shore and offshore forms and sediments. The shingle spit system comprises a series of sub-parallel ridges and recurves, marking different phases of extension and frontal accretion. Shingle reaches the beach *via* the intertidal zone, and the so-called "Pagham delta" and the behaviour of the spits and delta are intimately linked with water and sediment circulation around the Selsey peninsula. The area also provides an excellent example of the role of weed rafting of shingle in coastal sediment budgets.

This site also includes, at the north-eastern end, part of a key site for plant fossils from the London Clay (divisions B<sub>1</sub> and B<sub>2</sub>). It is the only locality in the Hampshire Basin to yield abundant London Clay plants and the only site known to have yielded plants from the B<sub>2</sub> division of this formation. The site has yielded examples of some one hundred and thirty species (representing seventy families), including numerous type specimens. Dominant families include the Vitaceae, Menispermaceae and Burseraceae. The genera *Bognoria* and *Aldwichia* are only found here, as are some thirty species. An outstanding palaeobotanical site of great importance to studies of Tertiary floras.

## **APPENDIX 5**

### Pagham Harbour SSSI Condition Assessment

| Main Habitat                                                | Responsible Officer | Unit Number | Unit Id | Area (ha) | NNR Overlap Area (ha) | Latest Assessment Date | Assessment Description    | Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Adverse Condition Reasons |
|-------------------------------------------------------------|---------------------|-------------|---------|-----------|-----------------------|------------------------|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| <b>Pagham Harbour SSSI - WEST SUSSEX (ARUN, CHICHESTER)</b> |                     |             |         |           |                       |                        |                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                           |
| STANDING OPEN WATER AND CANALS                              | KRISTOFFER HEWITT   | 001         | 1008822 | 11.5833   | 0.00                  | 26/10/2010             | Unfavourable - Recovering | This unit was apparently affected by a pollution incident. Investigation did not reveal a source of pollution and there are no indications that there is a risk of a recurrence. Survey carried out by University of Brighton indicates that although there is still a rather impoverished flora and fauna, there are clear signs of recovery of the lagoon system. This includes relatively good overall populations of lagoon taxa, including 3 specialist lagoon species, and an absence of several taxa previously recorded that indicated organic enrichment. A previously recorded diverse gastropod community is not evident however. Further monitoring will be carried out to better understand the processes driving the biological |                           |
| NEUTRAL GRASSLAND - Lowland                                 | KRISTOFFER HEWITT   | 002         | 1008829 | 1.8925    | 0.00                  | 12/03/2009             | Unfavourable - Recovering | Improvements have been made under AMP and through direct management and water quality is now improving.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                           |
| NEUTRAL GRASSLAND - Lowland                                 | KRISTOFFER HEWITT   | 003         | 1017439 | 15.8196   | 0.00                  | 01/10/2008             | Favourable                | The grassland is notified for the breeding birds it supports. The most recent Pagham Harbour LNR breeding bird survey has identified the breeding bird interest as being in favourable condition.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                           |
| FEN, MARSH AND SWAMP - Lowland                              | KRISTOFFER HEWITT   | 004         | 1008840 | 9.4987    | 0.00                  | 12/04/2005             | Unfavourable - Recovering | A Management Agreement has now been signed, and a tender accepted for the works, so reed clearance should now take place in autumn 2005. This assessment has been made on the basis that management of the unit to achieve favourable condition has been secured through the WES agreement just signed, which addresses all reasons for unfavourable condition. It is not based on a full site assessment.                                                                                                                                                                                                                                                                                                                                    |                           |
| FEN, MARSH AND SWAMP - Lowland                              | KRISTOFFER HEWITT   | 005         | 1017443 | 10.339    | 0.00                  | 28/01/2010             | Favourable                | The unit, part of the Pagham Harbour Local Nature Reserve, is predominantly occupied by reed swamp dominated by common reed. The habitat is in good condition and well managed, and is considered to support suitable habitat for breeding and non-breeding bird assemblages. Woodland within the northern part of the unit is has not undergone any decline since the previous assessment and remains in good condition.                                                                                                                                                                                                                                                                                                                     |                           |

|                                               |                   |     |         |         |      |            |                           |                                                                                                                                                                                                                                                                                                                                         |  |
|-----------------------------------------------|-------------------|-----|---------|---------|------|------------|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| NEUTRAL GRASSLAND - Lowland                   | KRISTOFFER HEWITT | 006 | 1017441 | 12.9443 | 0.00 | 01/10/2008 | Favourable                | The grassland is notified for the breeding birds it supports and the wintering birds (brent geese). The Pagham harbour LNR breeding bird survey has identified the breeding bird interest as being in favourable condition and the WeBS counts indicates the brent geese numbers are in favourable condition.                           |  |
| NEUTRAL GRASSLAND - Lowland                   | KRISTOFFER HEWITT | 007 | 1008830 | 62.5501 | 0.00 | 01/10/2008 | Favourable                | The grassland is notified for the breeding birds it supports and the wintering birds (brent geese). The Pagham harbour LNR breeding bird survey has identified the breeding bird interest as being in favourable condition and the WeBS counts indicates the brent geese numbers are in favourable condition.                           |  |
| NEUTRAL GRASSLAND - Lowland                   | KRISTOFFER HEWITT | 008 | 1008831 | 26.2269 | 0.00 | 01/10/2008 | Favourable                | The grassland is notified for the breeding birds it supports and the wintering birds (brent geese). The Pagham harbour LNR breeding bird survey has identified the breeding bird interest as being in favourable condition and the WeBS counts indicates the brent geese numbers are in favourable condition.                           |  |
| NEUTRAL GRASSLAND - Lowland                   | KRISTOFFER HEWITT | 009 | 1008832 | 32.7494 | 0.00 | 28/01/2010 | Favourable                | The unit, part of the Pagham Harbour Local Nature Reserve, is predominantly occupied by lowland neutral grassland. The area is well managed, involving grazing and coppicing some of the ditches in sections to encourage the aquatic plant diversity. The unit is considered to support suitable habitat for breeding bird assemblage. |  |
| BROADLEAVED, MIXED AND YEW WOODLAND - Lowland | KRISTOFFER HEWITT | 010 | 1008825 | 2.616   | 0.00 | 29/04/2009 | Unfavourable - Recovering | WGS has been agreed for the wood and is underway, with works concentrating on removal of bracken, rhododendron and sycamore. Early results are very encouraging.                                                                                                                                                                        |  |

|                             |                   |     |         |         |      |            |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------------------------|-------------------|-----|---------|---------|------|------------|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NEUTRAL GRASSLAND - Lowland | KRISTOFFER HEWITT | 011 | 1008834 | 10.7349 | 0.00 | 28/01/2010 | Favourable | The unit is occupied by a mosaic of woodland, lowland neutral grassland and reed swamp dominated by common reed. The area appears to be well managed, and is considered to support suitable habitat for breeding bird assemblage. The woodland exhibits good structural diversity including oak, yew, alder and hawthorn, with bramble and gorse occupying the groundlayer, along with satisfactory levels of standing/ lying deadwood. In addition, a small area of habitat with affinities to dune heath was observed on the eastern margin of the unit adjacent to the public footpath, supporting a good cover of lichens and bryophytes such as Cladonia spp, Rhytidiadelphus squarrosus, Pseudoscleropodium purum and Dicranum scoparium. This area soon grades into neutral grassland towards the centre of the unit. The site is also subject to rabbit grazing, which is not considered to be having a significant adverse impact. |
| LITTORAL SEDIMENT           | KRISTOFFER HEWITT | 012 | 1008823 | 35.434  | 0.00 | 28/01/2010 | Favourable | The northern half of the unit is dominated by littoral sediment and upper saltmarsh, dominated by sea-purslane and common cord-grass (Spartina). The southern half of the site is mainly littoral sediment with some amounts of sea-purslane dominated salt marsh and small areas of shingle on the southern margin. The saltmarsh has not appeared to undergo any significant decline since the previous assessment, and is considered to provide suitable supporting habitat for aggregations of non-breeding                                                                                                                                                                                                                                                                                                                                                                                                                             |
| SUPRALITTORAL SEDIMENT      | KRISTOFFER HEWITT | 014 | 1017447 | 19.0505 | 0.00 | 12/09/2008 | Favourable | First CVSM assessment and the vegetated shingle came out well. The coastal geomorphology is also in favourable condition.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| EARTH HERITAGE              | KRISTOFFER HEWITT | 015 | 1016777 | 12.9243 | 0.00 | 10/06/2010 | Favourable | Site visited with SSSI officer Elaine Webster. SSSI interest feature assessed: SD1 - Rumex crispus - Glaucium flavum shingle community. The unit, part of the Pagham Harbour Local Nature Reserve, supports some strandline vegetation including Atriplex prostrata Spear-leaved Orache, Beta maritima Sea Beet, Sedum acre Biting Stonecrop and Suaeda maritima Annual Sea-blite. Since the previous assessment the shingle bar has shifted in position, as part of the natural dynamic processes of the shingle system. This change does not affect the assessment                                                                                                                                                                                                                                                                                                                                                                        |

|                                               |                   |     |         |         |      |            |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |
|-----------------------------------------------|-------------------|-----|---------|---------|------|------------|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| EARTH HERITAGE                                | KRISTOFFER HEWITT | 016 | 1017438 | 57.6464 | 0.00 | 10/06/2010 | Favourable | Site visited with SSSI Officer Elaine Webster. SSSI interest feature assessed: SD1 - Rumex crispus - Glaucium flavum shingle community. The unit, part of the Pagham Harbour Local Nature Reserve, supports shingle vegetation in its northern half including several positive indicator species, dominated by Crambe maritima with frequent Elytrigia atherica and occasional Glaucium flavum, Sedum acre, Cerastium diffusum and Solanum dulcamara. However, invasive red valerian Centranthus ruber is at risk of encroaching into the northern half of the unit and requires immediate attention. The council who are responsible for managing the Local Nature Reserve are aware of this problem. Much of this vegetation appears to have encroached from adjacent unit 14. |  |
| BROADLEAVED, MIXED AND YEW WOODLAND - Lowland | KRISTOFFER HEWITT | 017 | 1017442 | 1.0521  | 0.00 | 01/10/2008 | Favourable | The woodland is notified for the breeding birds it supports, in particular the small heronry. The Pagham Harbour LNR breeding bird survey has identified the breeding bird interest as being in favourable condition and the heronry in this unit is doing well.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |
| NEUTRAL GRASSLAND - Lowland                   | KRISTOFFER HEWITT | 018 | 1008833 | 13.0362 | 0.00 | 01/10/2008 | Favourable | The rough grassland is notified for the breeding birds it supports. The Pagham Harbour LNR breeding bird survey has identified the breeding bird interest as being in favourable condition.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |
| FEN, MARSH AND SWAMP - Lowland                | KRISTOFFER HEWITT | 019 | 1017444 | 2.412   | 0.00 | 01/10/2008 | Favourable | The grassland and fen is notified for the breeding birds it supports. The Pagham Harbour LNR breeding bird survey has identified the breeding bird interest as being in favourable condition.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |
| LITTORAL SEDIMENT                             | KRISTOFFER HEWITT | 020 | 1017445 | 250.291 | 0.00 | 01/10/2008 | Favourable | The intertidal sediment is notified for the wintering birds it supports. WeBS and other counts indicates the wintering wader and wildfowl numbers are in favourable condition. The saltmarsh was assessed on 22 July and was favourable, though it was noted that the Spartina is still dominant over large areas.                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |
| LITTORAL SEDIMENT                             | KRISTOFFER HEWITT | 021 | 1017446 | 3.2476  | 0.00 | 01/10/2008 | Favourable | The intertidal sediment is notified for the wintering birds it supports. WeBS and other counts indicates the wintering wader and wildfowl numbers are in favourable condition.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |

|                                   |                   |     |         |        |      |            |                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                |
|-----------------------------------|-------------------|-----|---------|--------|------|------------|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
| NEUTRAL<br>GRASSLAND -<br>Lowland | KRISTOFFER HEWITT | 022 | 1017440 | 8.0815 | 0.00 | 27/10/2008 | Unfavourable -<br>Recovering | The grassland and fen is notified for the breeding birds it supports and the wintering birds (mainly brent geese). The Pagham Harbour LNR breeding bird survey has identified the breeding bird interest as being in favourable condition and the WeBS and other counts indicates the brent geese and other wader/ wildfowl numbers are in favourable condition. Works are continuing on improvements to trhe new scrape to get better control of water levels and these will greatly improve its potential for breeding waders                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                |
| SUPRALITTORAL<br>SEDIMENT         | KRISTOFFER HEWITT | 023 | 1029561 | 9.4054 | 0.00 | 10/06/2010 | Unfavourable -<br>No change  | SSSI interest feature assessed: SD1 - Rumex crispus Glaucium flavum shingle community.The unit, under private ownership, supports shingle vegetation including several positive indicator species, dominated by Crambe maritima with frequent Elytrigia atherica and occasional Glaucium flavum Yellow-horned Poppy, Echium vulgare Viper?s-bugloss, Sedum acre Biting Stonecrop, Tripleurospermum maritimum Sea Mayweed, Cerastium diffusum Sea Mouse-ear and Solanum dulcamara Bittersweet.However the unit has been heavily invaded by red valerian Centranthus ruber which has established a dense and expanding cover, most likely as a result of garden invasives from the adjacent houses. It appears little action has been taken to remove this species over recent years, and requires immediate action to prevent further encroachment. This should be addressed preferably as part of a wider plan to address this invasive species for the SSSI as a whole.In addition, some of the neighbouring residents keep boats on the unit which has resulted in some degradation of existing | - LACK OF CORRECTIVE<br>WORKS - INAPPROPRIATE<br>WEED CONTROL, |

|                           |                   |     |         |         |      |            |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |
|---------------------------|-------------------|-----|---------|---------|------|------------|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| SUPRALITTORAL<br>SEDIMENT | KRISTOFFER HEWITT | 024 | 1029562 | 19.4761 | 0.00 | 10/06/2010 | Favourable | <p>Site visited with SSSI Officer Elaine Webster. SSSI interest feature assessed: SD1 - Rumex crispus - Glaucium flavum shingle community. The unit, part of the Pagham Harbour Local Nature Reserve, supports shingle vegetation including several positive indicator species, dominated by Crambe maritima with frequent Elytrigia atherica and occasional Glaucium flavum Yellow-horned Poppy, Echium vulgare Viper's-bugloss, Sedum acre Biting Stonecrop, Tripleurospermum maritimum Sea Mayweed, Cerastium diffusum Sea Mouse-ear and Solanum dulcamara Bittersweet. In addition there are patches of lichen cover (Cladonia spp and a black lichen which indicates minimal disturbance) scattered across the south-western end of the unit. Much of this vegetation is in good condition with these species occurring at appropriate levels of cover across the unit, especially within the south-western end of the unit. In addition, scattered Silene uniflora Sea Campion occurs within the central part of the unit near to the car park. However this appears to be adversely affected by rabbit grazing in this area which should be monitored. Also of concern is occasional invasive red valerian Centranthus ruber present particularly where the unit nears unit 23. Although not at a significant level of cover yet within this unit, this poses a serious risk to the condition of this unit and should be addressed as soon as possible, preferably as part of a wider plan to address this invasive species for the SSSI as a whole. The council who are responsible for managing the</p> |  |
|---------------------------|-------------------|-----|---------|---------|------|------------|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|

## **APPENDIX 6**

### Pagham Harbour Conservation Objectives

# European Site Conservation Objectives for Pagham Harbour Special Protection Area Site Code: UK9012041



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

**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.**

This document should be read in conjunction with the accompanying *Supplementary Advice* document, which provides more detailed advice and information to enable the application and achievement of the Objectives set out above.

## **Qualifying Features:**

A046a *Branta bernicla bernicla*; Dark-bellied brent goose (Non-breeding)

A151 *Philomachus pugnax*; Ruff (Non-breeding)

A193 *Sterna hirundo*; Common tern (Breeding)

A195 *Sterna albifrons*; Little tern (Breeding)

## **This is a European Marine Site**

This SPA is a part of the Pagham Harbour European Marine Site (EMS). These Conservation Objectives should be used in conjunction with the Conservation Advice document for the EMS. Natural England's formal Conservation Advice for European Marine Sites can be found via [GOV.UK](https://www.gov.uk).

### **Explanatory Notes: European Site Conservation Objectives**

These Conservation Objectives are those referred to in the Conservation of Habitats and Species Regulations 2017 (as amended) ('the Habitats Regulations'). They must be considered when a competent authority is required to make a 'Habitats Regulations Assessment' including an Appropriate Assessment, under the relevant parts of this legislation.

These Conservation Objectives, and the accompanying Supplementary Advice (where this is available), will also provide a framework to inform the management of the European Site and the prevention of deterioration of habitats and significant disturbance of its qualifying features

These Conservation Objectives are set for each bird feature for a [Special Protection Area \(SPA\)](#).

Where these objectives are being met, the site will be considered to exhibit a high degree of integrity and to be contributing to achieving the aims of the Wild Birds Directive.

**Publication date:** 21 February 2019 (version 3). This document updates and replaces an earlier version dated 30 June 2014 to reflect the consolidation of the Habitats Regulations in 2017.

## **APPENDIX 7**

### Photo Sheet



PHOTO 1: INTERNAL TREELINE (H6)



PHOTO 2: INTERNAL TREELINE (H1)



PHOTO 3: WESTERN BOUNDARY TREELINE (H4)



PHOTO 4: NORTHERN BOUNDARY TREELINE (H3)

## **APPENDIX 8**

### SOS Grid Square



## **APPENDIX 9**

### Wintering Bird Survey Report



**ECOLOGY SOLUTIONS**

Part of the ES Group

**NURSERY FIELDS,  
WEST BERSTED**

**Wintering Bird  
Survey Report**

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## **CONTENTS**

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| 1 | INTRODUCTION       | 1 |
| 2 | SURVEY METHODOLOGY | 2 |
| 3 | SURVEY RESULTS     | 3 |
| 4 | SUMMARY DISCUSSION | 4 |

## **PLANS**

|          |                                      |
|----------|--------------------------------------|
| FIGURE 1 | Wintering Bird Survey Vantage Points |
|----------|--------------------------------------|

## **APPENDICES**

|            |                                                                     |
|------------|---------------------------------------------------------------------|
| APPENDIX 1 | SPA Citation and Conservation Objectives / Ramsar Information Sheet |
|------------|---------------------------------------------------------------------|

## 1. INTRODUCTION

- 1.1. Ecology Solutions was commissioned by Landform Bersted Ltd in January 2021 to undertake a suite of specific wintering bird surveys at Nursery Fields, Bersted; hereafter known as the site.
- 1.2. The development proposals for the site are up to 225 residential dwellings, associated infrastructure, open space and access.
- 1.3. The purpose of the wintering bird surveys was to establish baseline data on the species, numbers and distribution of wintering birds which may utilise the site. The key focus is on species which are qualifying interest features of the Pagham Harbour Special Protection Area (SPA) and Ramsar site. The SPA citation and Conservation Objectives, in addition to the Ramsar Information Sheet are included at Appendix 1 of this report.
- 1.4. Of the qualifying species that Pagham Harbour supports, only over-wintering Dark-bellied Brent Geese *Branta bernicla* are known to utilise inland arable sites for foraging. Other qualifying bird interest features (Tern sps, / Ruff) would not be reliant upon the land in question given the habitats present and the specific requirements of these species.
- 1.5. Therefore, surveys sought to establish if the application site was of any particular value to important populations of over-wintering Dark-bellied Brent Goose.
- 1.6. The purpose of this report is to outline the results and conclusions of the specific survey work undertaken between January and March 2021, and incidental survey work undertaken between October – December (inclusive).
- 1.7. The results of the wintering bird surveys will be assessed within a Shadow Habitats Regulations Assessment (sHRA) associated with the application process and which will be submitted prior to determination of the application.
- 1.8. The application site is located to the west of Bersted. The vast majority of the application site supports arable land, with other habitats including species-poor margin grassland, ditches and boundary treelines / hedgerows.
- 1.9. The application site is bordered by extensive arable land to the west, with existing development (associated with the town of Bersted) situated to the east. A cemetery and nursery are also present to the immediate south, beyond which lies more residential development.
- 1.10. The Pagham Harbour SPA and Ramsar site lies approximately 3.6km to the southwest of application site boundary at its closest point.

## 2. SURVEY METHODOLOGY

- 2.1. The wintering bird survey methodology used at the site and local area has been guided by bird survey techniques identified in Bird Census Techniques (Bibby *et al.*, 2000).
- 2.2. Surveys were undertaken on a monthly basis between January, and March 2021 (inclusive). The survey work was based around Vantage Point (VP) survey methodology. Given the nature of the application site and its surroundings (fields separated by treelines and hedgerows), it is considered that this methodology is the most appropriate as it allowed an accurate count of the wintering birds present in the survey area.
- 2.3. As shown on Figure 1 of this report, a total of four VP were identified: two within the application site (to record birds utilising the two arable fields), and two observing the fields adjoining the application site to the west and south-west. This was considered to be the fewest number of VPs necessary to ensure adequate coverage of the survey area whilst minimising the likelihood of disturbing birds when moving between VPs.
- 2.4. To minimise the observer's effect on bird behaviour, all VP were located outside the survey area adjacent to existing boundary features. Observers positioned themselves inconspicuously so as to minimise their effects on bird movements.
- 2.5. The surveyor recorded the following information at each VP using binoculars and scopes where appropriate:
  - Maximum count of each species of bird recorded on the ground;
  - Plot on a map the main locations of birds present on the ground, with notes on species present;
  - Record any notable movements of birds recorded (also identified on a map);
  - Details regarding weather conditions, including cloud cover, temperature and wind speed/direction.
- 2.6. Surveys were undertaken during suitable weather conditions; specifically, good visibility (>1km) and light to moderate winds. Surveys were avoided where light levels are low, visibility was poor or there were high winds.
- 2.7. All surveys were undertaken over a four-hour period in total, covering the period two hours before and two hours after high tide. Surveys were undertaken by experienced ornithologists who were competent in the identification of wintering birds.
- 2.8. In addition to the 'formal' wintering bird surveys completed in January to March 2021 inclusive, a number of site visits were undertaken by a suitably qualified ecologist in October, November and December 2020. Although the purpose of the site visits was not to complete specific bird survey work at the application site, consideration was afforded to land both within and adjacent to the application site, with notes made in relation to a range of ecological features including both the habitats present and the use of the application site by faunal species.

### 3. SURVEY RESULTS

- 3.1. The dates and weather conditions of the wintering bird surveys completed are outlined in Table 1 below.

| Date       | Timing                                          | Weather Conditions                            |
|------------|-------------------------------------------------|-----------------------------------------------|
| 18.01.2021 | Commenced 0833, Completed 1233 (High Tide 1033) | 8C, good visibility, light winds              |
| 16.02.2021 | Commenced 1200, Completed 1600 (High Tide 1400) | 10C, good visibility, light to moderate winds |
| 03.03.2021 | Commenced 1120, Completed 1520 (High Tide 1320) | 10C, good visibility, light to moderate winds |

Table 1: Dates and weather conditions for wintering bird surveys

- 3.2. During the January survey, no Brent Geese were recorded from any vantage point either flying over or utilising the application site or wider allocated site to the west or south-west. In addition, no other species associated with Pagham Harbour SPA / Ramsar site were recorded during the course of the survey.
- 3.3. Similarly, during the February survey, no Brent Geese were recorded flying over or utilising the application site during the course of the survey. However, a flock of approximately 700 Brent Geese were observed in the far distance to the south-west of VP4. The birds were observed foraging on the ground in the far south-western corner of the wider allocated site. No other species associated with Pagham Harbour SPA / Ramsar site were recorded at any point during the survey.
- 3.4. During the March survey, again no Brent Geese were recorded flying over or utilising the application site during the course of the survey. A flock of approximately 180 Brent Geese were observed flying over the wider allocated site approximately 1km south of VP3, although no birds were recorded to land. Similar to the previous surveys, no other species associated with Pagham Harbour SPA / Ramsar site were recorded at any point during the survey within or in close proximity to the application site itself.
- 3.5. In addition to the above, site visits were undertaken by a suitably qualified ecologist on 15 October, 10 November and 18 December 2020. Visibility was recorded to be good on each occasion. During the course of each site visit, no individual or flocks of Brent Geese were recorded within or in close proximity to the application site boundary, nor was any evidence found to indicate their potential presence (such as collections of droppings or winter wheat that was short due to grazing).
- 3.6. It is important to note that the application site (and the immediately adjoining land to the west) currently supports a winter wheat crop. Mindful of the position adopted by Natural England that survey work should be completed when land is in suitable management for geese, it is therefore considered that the findings of the survey work are valid.

#### **4. DISCUSSION AND CONCLUSIONS**

- 4.1. It is important to note that the application site (and the immediately adjoining land to the west) currently supports a winter wheat crop. Mindful of the position adopted by Natural England (as expressed in the email dated 3 February 2021) that survey work should be completed when land is in suitable management for geese, it is therefore considered that the findings of the survey work are valid.
- 4.2. There is no evidence either from the wintering bird surveys undertaken in January, February or March 2021, or indeed for site visits completed in October, November and December 2020, to indicate that the application site is utilised by foraging Brent Geese, despite the fact that it currently supports a winter wheat crop. In contrast, the February 2021 survey identified a flock of Brent Geese located a significant distance to the south-west of the application site, within the extensive fields located closer to the SPA / Ramsar site.
- 4.3. It is therefore considered that the results obtained from the three wintering bird surveys serve to support the robust conclusion as outlined above that the application site does not provide any suitable habitat for foraging Brent Geese.

## PLANS

## **FIGURE 1**

Wintering Bird Survey Vantage Points



KEY:



APPLICATION SITE BOUNDARY



VANTAGE POINT NUMBER & DIRECTION

|                                                                                                                |                                                                                                                                                                          |
|----------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <br>Part of the ESR Group | <p>Farncombe House<br/>Farncombe Estate   Broadway<br/>Worcestershire   WR12 7LJ</p> <p>+44(0)1451 870767<br/>info@ecologysolutions.co.uk<br/>ecologysolutions.co.uk</p> |
| 7216: NURSERY FIELDS, WEST BERSTED                                                                             |                                                                                                                                                                          |
| FIGURE 1: WINTERING BIRD<br>SURVEY VANTAGE POINTS                                                              | Rev: A<br>May 2021                                                                                                                                                       |

## **APPENDICES**

## **APPENDIX 1**

### **SPA Citation and Conservation Objectives / Ramsar Information Sheet**

EC Directive 79/409 on the Conservation of Wild Birds: Special Protection Area

PAGHAM HARBOUR (WEST SUSSEX)

The site qualifies under Article 4(2) as an internationally important wetland supporting in winter an average of 3045 dark-bellied brent geese Branta bernicla bernicla (2% of the European wintering population). The site also supports nationally important wintering populations: 270 pintail Anas acuta (1% of the British wintering population) 781 grey plovers Pluvialis squatarola (3%) and 340 black-tailed godwits Limosa limosa (7%).

The site qualifies also under Article 4(1) by supporting an average of 160 wintering ruff Philomachus pugnax (10% of the British wintering population), and breeding populations of little tern Sterna albifrons and common tern Sterna hirundo.

This citation / map relates to a site entered in  
the Register of European sites for Great Britain  
Register reference number: UK001254

On

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# European Site Conservation Objectives for Pagham Harbour Special Protection Area Site Code: UK9012041



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

**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.**

This document should be read in conjunction with the accompanying *Supplementary Advice* document, which provides more detailed advice and information to enable the application and achievement of the Objectives set out above.

## **Qualifying Features:**

A046a *Branta bernicla bernicla*; Dark-bellied brent goose (Non-breeding)

A151 *Philomachus pugnax*; Ruff (Non-breeding)

A193 *Sterna hirundo*; Common tern (Breeding)

A195 *Sterna albifrons*; Little tern (Breeding)

## **This is a European Marine Site**

This SPA is a part of the Pagham Harbour European Marine Site (EMS). These Conservation Objectives should be used in conjunction with the Conservation Advice document for the EMS. Natural England's formal Conservation Advice for European Marine Sites can be found via [GOV.UK](https://www.gov.uk).

### **Explanatory Notes: European Site Conservation Objectives**

These Conservation Objectives are those referred to in the Conservation of Habitats and Species Regulations 2017 (as amended) ('the Habitats Regulations'). They must be considered when a competent authority is required to make a 'Habitats Regulations Assessment' including an Appropriate Assessment, under the relevant parts of this legislation.

These Conservation Objectives, and the accompanying Supplementary Advice (where this is available), will also provide a framework to inform the management of the European Site and the prevention of deterioration of habitats and significant disturbance of its qualifying features

These Conservation Objectives are set for each bird feature for a [Special Protection Area \(SPA\)](#).

Where these objectives are being met, the site will be considered to exhibit a high degree of integrity and to be contributing to achieving the aims of the Wild Birds Directive.

**Publication date:** 21 February 2019 (version 3). This document updates and replaces an earlier version dated 30 June 2014 to reflect the consolidation of the Habitats Regulations in 2017.

# Information Sheet on Ramsar Wetlands (RIS)

*Categories approved by Recommendation 4.7 (1990), as amended by Resolution VIII.13 of the 8<sup>th</sup> Conference of the Contracting Parties (2002) and Resolutions IX.1 Annex B, IX.6, IX.21 and IX.22 of the 9<sup>th</sup> Conference of the Contracting Parties (2005).*

## Notes for compilers:

1. The RIS should be completed in accordance with the attached *Explanatory Notes and Guidelines for completing the Information Sheet on Ramsar Wetlands*. Compilers are strongly advised to read this guidance before filling in the RIS.
2. Further information and guidance in support of Ramsar site designations are provided in the *Strategic Framework for the future development of the List of Wetlands of International Importance* (Ramsar Wise Use Handbook 7, 2nd edition, as amended by COP9 Resolution IX.1 Annex B). A 3rd edition of the Handbook, incorporating these amendments, is in preparation and will be available in 2006.
3. Once completed, the RIS (and accompanying map(s)) should be submitted to the Ramsar Secretariat. Compilers should provide an electronic (MS Word) copy of the RIS and, where possible, digital copies of all maps.

---

## 1. Name and address of the compiler of this form:

### Joint Nature Conservation Committee

Monkstone House

City Road

Peterborough

Cambridgeshire PE1 1JY

UK

Telephone/Fax: +44 (0)1733 – 562 626 / +44 (0)1733 – 555 948

Email: [RIS@JNCC.gov.uk](mailto:RIS@JNCC.gov.uk)

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Designation date

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Site Reference Number

---

## 2. Date this sheet was completed/updated:

Designated: 30 March 1988

---

## 3. Country:

UK (England)

---

## 4. Name of the Ramsar site:

Pagham Harbour

---

## 5. Designation of new Ramsar site or update of existing site:

**This RIS is for:** Updated information on an existing Ramsar site

---

## 6. For RIS updates only, changes to the site since its designation or earlier update:

### a) Site boundary and area:

**\*\* Important note:** If the boundary and/or area of the designated site is being restricted/reduced, the Contracting Party should have followed the procedures established by the Conference of the Parties in the Annex to COP9 Resolution IX.6 and provided a report in line with paragraph 28 of that Annex, prior to the submission of an updated RIS.

**b) Describe briefly any major changes to the ecological character of the Ramsar site, including in the application of the Criteria, since the previous RIS for the site:**

**7. Map of site included:**

Refer to Annex III of the *Explanatory Notes and Guidelines*, for detailed guidance on provision of suitable maps, including digital maps.

**a) A map of the site, with clearly delineated boundaries, is included as:**

- i) **hard copy** (required for inclusion of site in the Ramsar List): *yes* ✓ -or- *no* ☐;
- ii) **an electronic format** (e.g. a JPEG or ArcView image) *Yes*
- iii) **a GIS file providing geo-referenced site boundary vectors and attribute tables** *yes* ✓ -or- *no* ☐;

**b) Describe briefly the type of boundary delineation applied:**

e.g. the boundary is the same as an existing protected area (nature reserve, national park etc.), or follows a catchment boundary, or follows a geopolitical boundary such as a local government jurisdiction, follows physical boundaries such as roads, follows the shoreline of a waterbody, etc.

The site boundary is the same as, or falls within, an existing protected area.

For precise boundary details, please refer to paper map provided at designation

**8. Geographical coordinates (latitude/longitude):**

50 45 48 N                      00 45 38 W

**9. General location:**

Include in which part of the country and which large administrative region(s), and the location of the nearest large town.

Nearest town/city: Chichester

10 km south-east of Chichester.

**Administrative region:** West Sussex

**10. Elevation (average and/or max. & min.) (metres):    11. Area (hectares): 636.68**

Min.       -1

Max.       5

Mean       1

**12. General overview of the site:**

Provide a short paragraph giving a summary description of the principal ecological characteristics and importance of the wetland.

Pagham Harbour comprises an extensive central area of saltmarsh and tidal mudflats with surrounding habitats including lagoons, shingle, open water, reed swamp and wet permanent grassland.

The intertidal mudflats are rich in invertebrate and algae, and provide important feeding areas for birds. The lower saltmarsh is dominated by common cord-grass but also includes patches of glasswort. At higher levels sea-purslane is abundant. The area supports internationally important numbers of wintering pintail and nationally important numbers of dark-bellied brent goose, grey plover and black-tailed godwit.

**13. Ramsar Criteria:**

Circle or underline each Criterion applied to the designation of the Ramsar site. See Annex II of the *Explanatory Notes and Guidelines* for the Criteria and guidelines for their application (adopted by Resolution VII.11).

**6**

**14. Justification for the application of each Criterion listed in 13 above:**

Provide justification for each Criterion in turn, clearly identifying to which Criterion the justification applies (see Annex II for guidance on acceptable forms of justification).

**Ramsar criterion 6 – species/populations occurring at levels of international importance.**

**Qualifying Species/populations (as identified at designation):**

**Species with peak counts in winter:**

Dark-bellied brent goose, *Branta bernicla* 2512 individuals, representing an average of 1.1% of the population (5 year peak mean 1998/9-2002/3)

**Species/populations identified subsequent to designation for possible future consideration under criterion 6.**

**Species with peak counts in winter:**

Black-tailed godwit, *Limosa limosa islandica*, 377 individuals, representing an average of 1% of the population (5 year peak mean 1998/9-2002/3)

Contemporary data and information on waterbird trends at this site and their regional (sub-national) and national contexts can be found in the Wetland Bird Survey report, which is updated annually. See [www.bto.org/survey/webs/webs-alerts-index.htm](http://www.bto.org/survey/webs/webs-alerts-index.htm).

**15. Biogeography** (required when Criteria 1 and/or 3 and /or certain applications of Criterion 2 are applied to the designation):

Name the relevant biogeographic region that includes the Ramsar site, and identify the biogeographic regionalisation system that has been applied.

**a) biogeographic region:**

Atlantic

**b) biogeographic regionalisation scheme** (include reference citation):

Council Directive 92/43/EEC

**16. Physical features of the site:**

Describe, as appropriate, the geology, geomorphology; origins - natural or artificial; hydrology; soil type; water quality; water depth, water permanence; fluctuations in water level; tidal variations; downstream area; general climate, etc.

|                             |                                                                                                                                                                                                                                                  |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Soil & geology              | neutral, shingle, sand, mud, clay, alluvium, nutrient-rich, sedimentary, gravel                                                                                                                                                                  |
| Geomorphology and landscape | lowland, coastal, floodplain, shingle bar, subtidal sediments (including sandbank/mudbank), intertidal sediments (including sandflat/mudflat), open coast (including bay), enclosed coast (including embayment), estuary, islands, lagoon, pools |
| Nutrient status             | mesotrophic                                                                                                                                                                                                                                      |
| pH                          | circumneutral                                                                                                                                                                                                                                    |
| Salinity                    | brackish / mixosaline, fresh, saline / euhaline                                                                                                                                                                                                  |
| Soil                        | mainly mineral                                                                                                                                                                                                                                   |
| Water permanence            | usually permanent                                                                                                                                                                                                                                |

|                                   |                                                                                                                                                                                                                                                                                                                                                                       |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Summary of main climatic features | Annual averages (Bognor Regis, 1971–2000)<br>( <a href="http://www.metoffice.com/climate/uk/averages/19712000/sites/bognor_regis.html">www.metoffice.com/climate/uk/averages/19712000/sites/bognor_regis.html</a> )<br>Max. daily temperature: 13.7° C<br>Min. daily temperature: 7.7° C<br>Days of air frost: 24.0<br>Rainfall: 717.4 mm<br>Hrs. of sunshine: 1902.9 |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**General description of the Physical Features:**

Pagham Harbour is an estuarine basin that comprises an extensive central area of saltmarsh and intertidal mudflats, surrounded by lagoons, shingle, open water, reed swamp and wet permanent grassland.

**17. Physical features of the catchment area:**

Describe the surface area, general geology and geomorphological features, general soil types, general land use, and climate (including climate type).

Pagham Harbour is an estuarine basin that comprises an extensive central area of saltmarsh and intertidal mudflats, surrounded by lagoons, shingle, open water, reed swamp and wet permanent grassland.

**18. Hydrological values:**

Describe the functions and values of the wetland in groundwater recharge, flood control, sediment trapping, shoreline stabilization, etc.

Shoreline stabilisation and dissipation of erosive forces, Sediment trapping

**19. Wetland types:**

Marine/coastal wetland

| Code  | Name                                           | % Area |
|-------|------------------------------------------------|--------|
| G     | Tidal flats                                    | 33.3   |
| Other | Other                                          | 31     |
| E     | Sand / shingle shores (including dune systems) | 20.1   |
| H     | Salt marshes                                   | 5.2    |
| F     | Estuarine waters                               | 3.3    |
| J     | Coastal brackish / saline lagoons              | 2.4    |
| Sp    | Saline / brackish marshes: permanent           | 2.2    |
| Tp    | Freshwater marshes / pools: permanent          | 0.8    |
| W     | Shrub-dominated wetlands                       | 0.6    |
| A     | Shallow marine waters                          | 0.6    |
| M     | Rivers / streams / creeks: permanent           | 0.3    |
| 9     | Canals and drainage channels                   | 0.2    |

**20. General ecological features:**

Provide further description, as appropriate, of the main habitats, vegetation types, plant and animal communities present in the Ramsar site, and the ecosystem services of the site and the benefits derived from them.

This site comprises an extensive central area of saltmarsh and tidal mudflats with surrounding habitats including shingles, open water, reed swamp and wet permanent grassland. Pagham Harbour is of national importance for wintering, wildfowl and waders and also for breeding birds both within the Harbour and the surrounding grazing pasture. The site supports nationally important communities of plants and invertebrates.

Ecosystem services

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**21. Noteworthy flora:**

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in **12**. Justification for the application of the Criteria) indicating, e.g. which species/communities are unique, rare, endangered or biogeographically important, etc. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

**Nationally important species occurring on the site.****Higher Plants.**

*Petrorhagia nanteuillii*

---

**22. Noteworthy fauna:**

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in **12**. Justification for the application of the Criteria) indicating, e.g. which species/communities are unique, rare, endangered or biogeographically important, etc., including count data. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

**Birds****Species currently occurring at levels of national importance:****Species with peak counts in spring/autumn:**

|                                                               |                                                                                                                      |
|---------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| Little egret , <i>Egretta garzetta</i> , West Mediterranean   | 60 individuals, representing an average of 3.6% of the GB population (5 year peak mean 1998/9-2002/3)                |
| Whimbrel , <i>Numenius phaeopus</i> , Europe/Western Africa   | 104 individuals, representing an average of 3.4% of the GB population (5 year peak mean 1998/9-2002/3 - spring peak) |
| Common greenshank , <i>Tringa nebularia</i> , Europe/W Africa | 20 individuals, representing an average of 3.3% of the GB population (5 year peak mean 1998/9-2002/3)                |

**Species with peak counts in winter:**

|                                                                            |                                                                                                        |
|----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| Slavonian grebe , <i>Podiceps auritus</i> , Northwest Europe               | 14 individuals, representing an average of 1.9% of the GB population (5 year peak mean 1998/9-2002/3)  |
| Northern pintail , <i>Anas acuta</i> , NW Europe                           | 462 individuals, representing an average of 1.6% of the GB population (5 year peak mean 1998/9-2002/3) |
| Grey plover , <i>Pluvialis squatarola</i> , E Atlantic/W Africa -wintering | 704 individuals, representing an average of 1.3% of the GB population (5 year peak mean 1998/9-2002/3) |
| Spotted redshank , <i>Tringa erythropus</i> , Europe/W Africa              | 5 individuals, representing an average of 3.6% of the GB population (5 year peak mean 1998/9-2002/3)   |

**Species Information****Nationally important species occurring on the site.****Invertebrates.**

*Nematostella vectensis*

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**23. Social and cultural values:**

Describe if the site has any general social and/or cultural values e.g. fisheries production, forestry, religious importance, archaeological sites, social relations with the wetland, etc. Distinguish between historical/archaeological/religious significance and current socio-economic values.

Aesthetic

Aquatic vegetation (e.g. reeds, willows, seaweed)

Archaeological/historical site

Environmental education/ interpretation

Fisheries production  
 Livestock grazing  
 Non-consumptive recreation  
 Scientific research  
 Sport fishing  
 Sport hunting  
 Tourism

**b)** Is the site considered of international importance for holding, in addition to relevant ecological values, examples of significant cultural values, whether material or non-material, linked to its origin, conservation and/or ecological functioning? No

If Yes, describe this importance under one or more of the following categories:

- i) sites which provide a model of wetland wise use, demonstrating the application of traditional knowledge and methods of management and use that maintain the ecological character of the wetland:
- ii) sites which have exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland:
- iii) sites where the ecological character of the wetland depends on the interaction with local communities or indigenous peoples:
- iv) sites where relevant non-material values such as sacred sites are present and their existence is strongly linked with the maintenance of the ecological character of the wetland:

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## 24. Land tenure/ownership:

| Ownership category                  | On-site | Off-site |
|-------------------------------------|---------|----------|
| Non-governmental organisation (NGO) | +       | +        |
| Local authority, municipality etc.  | +       | +        |
| National/Crown Estate               | +       | +        |
| Private                             | +       | +        |

---

## 25. Current land (including water) use:

| Activity                                     | On-site | Off-site |
|----------------------------------------------|---------|----------|
| Nature conservation                          | +       |          |
| Tourism                                      | +       | +        |
| Recreation                                   | +       | +        |
| Current scientific research                  | +       |          |
| Bait collection                              | +       | +        |
| Arable agriculture (unspecified)             |         | +        |
| Permanent arable agriculture                 |         | +        |
| Livestock watering hole/pond                 | +       | +        |
| Permanent pastoral agriculture               | +       | +        |
| Hunting: recreational/sport                  | +       | +        |
| Sewage treatment/disposal                    | +       | +        |
| Flood control                                | +       | +        |
| Irrigation (incl. agricultural water supply) |         | +        |
| Transport route                              |         | +        |

|                   |  |   |
|-------------------|--|---|
| Urban development |  | + |
|-------------------|--|---|

## 26. Factors (past, present or potential) adversely affecting the site's ecological character, including changes in land (including water) use and development projects:

*Explanation of reporting category:*

1. Those factors that are still operating, but it is unclear if they are under control, as there is a lag in showing the management or regulatory regime to be successful.
2. Those factors that are not currently being managed, or where the regulatory regime appears to have been ineffective so far.

NA = Not Applicable because no factors have been reported.

| Adverse Factor Category | Reporting Category | Description of the problem (Newly reported Factors only) | On-Site | Off-Site | Major Impact? |
|-------------------------|--------------------|----------------------------------------------------------|---------|----------|---------------|
| No factors reported     | NA                 |                                                          |         |          |               |
|                         |                    |                                                          |         |          |               |

For category 2 factors only.

What measures have been taken / are planned / regulatory processes invoked, to mitigate the effect of these factors?

Is the site subject to adverse ecological change? NO

## 27. Conservation measures taken:

List national category and legal status of protected areas, including boundary relationships with the Ramsar site; management practices; whether an officially approved management plan exists and whether it is being implemented.

| Conservation measure                                                  | On-site | Off-site |
|-----------------------------------------------------------------------|---------|----------|
| Site/ Area of Special Scientific Interest (SSSI/ASSI)                 | +       | +        |
| Special Protection Area (SPA)                                         | +       |          |
| Land owned by a non-governmental organisation for nature conservation | +       |          |
| Management agreement                                                  | +       |          |
| Site management statement/plan implemented                            | +       |          |

### b) Describe any other current management practices:

The management of Ramsar sites in the UK is determined by either a formal management plan or through other management planning processes, and is overseen by the relevant statutory conservation agency. Details of the precise management practises are given in these documents.

## 28. Conservation measures proposed but not yet implemented:

e.g. management plan in preparation; official proposal as a legally protected area, etc.

No information available

## 29. Current scientific research and facilities:

e.g. details of current research projects, including biodiversity monitoring; existence of a field research station, etc.

### Contemporary.

#### Fauna.

Numbers of migratory and wintering wildfowl and waders are monitored annually as part of the national Wetland Birds Survey (WeBS) organised by the British Trust for Ornithology, Wildfowl & Wetlands Trust, the Royal Society for the Protection of Birds and the Joint Nature Conservation Committee.

### Completed.

#### Environment, Flora and Fauna.

Extensive research and surveys into tidal regimes, sediment movement and the distribution of all major animal and plant groups has been carried out in Pagham Harbour.

## 30. Current communications, education and public awareness (CEPA) activities related to or benefiting the site:

e.g. visitor centre, observation hides and nature trails, information booklets, facilities for school visits, etc.

There is an interpretative centre for the Local Nature Reserve.

A full time Education Officer is employed, the programme being particularly directed at schoolchildren.

## 31. Current recreation and tourism:

State if the wetland is used for recreation/tourism; indicate type(s) and their frequency/intensity.

### Activities, Facilities provided and Seasonality.

Land based recreation:

Walking including dog walking - all year.

Bird watching - all year.

Sea bathing - mostly summer.

Wildfowling: Only in agreed areas - 1 September to 20 February

Adjacent seasonal caravan parks - mainly summer.

## 32. Jurisdiction:

Include territorial, e.g. state/region, and functional/sectoral, e.g. Dept. of Agriculture/Dept. of Environment, etc.

Head, Natura 2000 and Ramsar Team, Department for Environment, Food and Rural Affairs, European Wildlife Division, Zone 1/07, Temple Quay House, 2 The Square, Temple Quay, Bristol, BS1 6EB

## 33. Management authority:

Provide the name and address of the local office(s) of the agency(ies) or organisation(s) directly responsible for managing the wetland. Wherever possible provide also the title and/or name of the person or persons in this office with responsibility for the wetland.

Site Designations Manager, English Nature, Sites and Surveillance Team, Northminster House, Northminster Road, Peterborough, PE1 1UA, UK

## 34. Bibliographical references:

Scientific/technical references only. If biogeographic regionalisation scheme applied (see 15 above), list full reference citation for the scheme.

### Site-relevant references

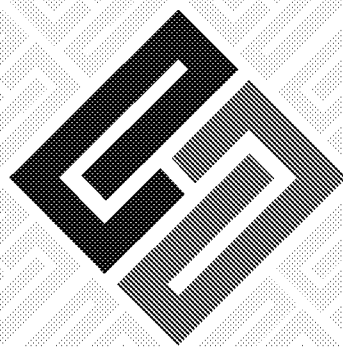
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Please return to: **Ramsar Secretariat, Rue Mauverney 28, CH-1196 Gland, Switzerland**  
Telephone: +41 22 999 0170 • Fax: +41 22 999 0169 • email: [ramsar@ramsar.org](mailto:ramsar@ramsar.org)



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## **APPENDIX 10**

Key Extracts from Officers Report for Planning  
Application BE/148/20/OUT

Recommendation Report for Outline Consent

|           |                                                                                                                                                                                                                                                           |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| REF NO:   | BE/148/20/OUT                                                                                                                                                                                                                                             |
| LOCATION: | Nursery Fields<br>Land to the North of Chalcraft Lane<br>West Bersted<br>PO21 5TS                                                                                                                                                                         |
| PROPOSAL: | Outline application with all matters, except for site access, reserved for the development of up to 225 residential units with associated infrastructure, open space and vehicular and pedestrian access. This application affects a Public Right of Way. |

|                              |
|------------------------------|
| <b>SITE AND SURROUNDINGS</b> |
|------------------------------|

|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DESCRIPTION OF APPLICATION      | <p>Outline application with all matters, except for site access, reserved for the development of up to 225 residential units with associated infrastructure, open space and vehicular and pedestrian access.</p> <p>Land Use, Building Heights, Phasing and Green Infrastructure Parameter Plans have been provided with the application. These indicate the general siting and quantum of different land uses, maximum building heights, the general siting, quantum and type of green infrastructure, connections and density/timescales for the phases of development. An Illustrative Masterplan for the site has also been provided but this is an indicative layout only and detailed layout (along with scale, external appearance and landscaping) is a reserved matter.</p> <p>The site access proposed under this application would serve both the Chalcraft Nursery scheme (approved under BE/81/20/OUT) and the Nursery Fields application site.</p> |
| SITE AREA                       | 13.46 hectares.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| RESIDENTIAL DEVELOPMENT DENSITY | 16.6 dph.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| TOPOGRAPHY                      | The southern third of the site is predominantly flat with levels varying by only about 0.5m. The northern two thirds of the site gently slope northwards with levels varying by up to 2.5m between the bottom and top parts of this section. There are ditches bordering the three parcels of land.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| TREES                           | <p>The site consists three parcels of land which are bounded by hedgerows and trees.</p> <p>There are provisional Tree Preservation Orders (TPOs) on a number of these trees as follows;</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

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**TREE OFFICER:**

No objection, subject to details to be submitted at Reserved Matters stage. The principle of development (as shown on Parameter Plan) is achievable without undue detriment to retained on and off site trees. However, advise that any PRoWs should be retained as is or returned to grass, and any upgrades to footway/cycleway must ensure a 2m+ buffer beyond the Root Protection Area of any retained trees. Advise that if PRoW 136 is to be upgraded to allow better connectivity through the site then the developers should apply for a formal diversion of this PRoW to avoid the important cluster of trees that are the subject of PRoW. These matters would need to be satisfactorily addressed at Reserved Matters stage. Planning condition is recommended to secure, prior to commencement of development, an Arboricultural Impact Assessment and Arboricultural Method Statement inclusive of a Tree Protection Plan, defining which trees are to be retained and which trees are to be removed and how it is proposed to protect the retained trees, including the Root Protection Areas and any mitigation for any adverse impacts on tree roots.

**LANDSCAPE & GREENSPACE OFFICER:**

No objection, subject to details to be submitted at Reserved Matters stage. Imperative existing footpaths through and around site are retained and enhanced within the green infrastructure network where appropriate. 'Viewing mounds' have been indicated on the plans to allow for far-reaching views to the Cathedral City of Chichester and the South Downs National Park, and these features are supported. High quality trees on site will need to be protected and retained as valuable and attractive features within the new development, as should areas of hedgerows and vegetation on and adjoining the site. High quality well-designed Public Open Space will be fundamental to this scheme, and needs to accord with the Council's Open Space SPD (Jan 2020). The illustrative plans show that approximately 60,000sqm of POS will be included, which exceeds the minimum standard set out in the Council's SPD. The formation of three key 'green fingers' reflects the endorsed Masterplan and is supported. Detailed consultation will be required with the Council with regard the childrens' play areas including LAP, LEAP and NEAP features. The potential impact on the location will require landscaping be provided as mitigation towards screening and softening of the development. Consideration of all aspects of green infrastructure both existing and new will be fundamental in the success of the setting creation to these proposals. Further details required at reserved matters stage to include, robust and detailed Landscape Scheme, including replacement tree scheme, reinforced boundary planting strategy and Public Open Space (POS), and a detailed Planting Scheme.

**PUBLIC RIGHT OF WAY OFFICER:**

Support upgrade of PRoW 136 through the site to a cycleway, will provide a useful link. Support upgrade of PRoW 134 to a bridleway, rather than just a cycleway. Wider aspiration is to create a bridleway link north west toward Lagness and Chichester, so would welcome financial contributions from this development towards improvements outside the red line site boundary to achieve this wider aspiration for the area.

**ECOLOGY OFFICER:**

No objection. Ecological Assessment (July & Oct 2020) shows 5 trees on site which could support bat roosting, these must be retained and protected from disturbance, and if not possible, then further Bat Surveys/potential Mitigation Strategy would be required. Hedgerows and trees must be retained for protected species and enhanced for bats, dormice etc. Recommend planning conditions to secure 'buffer strip' and protective fencing around hedges and trees, and infilling hedgerow gaps to improve connectivity. External lighting scheme must take into account impact on bats and should be submitted as part of this application. Prior to works on site, Badger Survey should be undertaken, and if any found on-site, then a Badger Mitigation Strategy submitted to Natural England. EA shows reptiles have been found on-site, and although some mitigation measures have been proposed, a full Reptile Mitigation Strategy is required prior to determination of this application. The Construction Environment Management Plan (CEMP), should include details of precautionary measures regarding protective fencing for hedgerows

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and trees and any badger and hedgehog activity. Recommend planning condition to protect wild nesting birds. In line with Local Plan Policy ENV DM5, information on Biodiversity Net Gain (BNG) needs to be provided as part of the planning application prior to determination. While some biodiversity enhancements have been recommended through the Ecological Assessment, further information needs to be provided demonstrating additional enhancements to be included within the scheme and what level of BNG is achieved from these measures. Further to additional BNG information provided in an updated EA (Oct 2020), it is confirmed these ecological enhancements are now suitable and can be secured by condition.

**NATURAL ENGLAND:**

Response dated 08/01/2021:

The Local Authority may need to check the proposed mitigation measures and any likely significant effects of the development on the designated SPA/Ramsar site through an appropriate assessment. It is a matter for the competent Authority to decide whether an appropriate assessment is necessary. In accordance with the Conservation of Habitats and Species Regulations (2017, as amended), Natural England must be consulted on any appropriate assessment the Authority decide to undertake.

Response dated 25/03/2021:

In respect of the Appropriate Assessment undertaken and the additional information (Ecologist's Briefing Note, Feb 2021) provided in support of the application, concur with the Authority's conclusions about functionally linked land and that recreational disturbance will be mitigated against by financial contributions (SAMM tariff) towards the Pagham Bird Aware scheme. In respect of water quality, refer the LPA to the Local Plan HRA conclusions about water quality and the need to ensure the application follows these conclusions.

**WSCC INFRASTRUCTURE TEAM:**

Infrastructure costs based on 2,500 dwellings on the wider West Bersted Strategic Allocation site = 9% proportional contribution for application site. \* All contributions are to be BCIS index-linked at time of payment.

(Officer note: see full details of infrastructure financial and non-financial requirements set out under Section 106 Details part of this report).

**SUSSEX NHS COMMISSIONER:**

Financial contribution towards the expansion of the existing off-site healthcare facilities at Grove House Surgery. All contributions are to be BCIS index-linked at time of payment. Without this essential infrastructure, planning permission should not be granted, and WSS CCG would not be able to sustain sufficient and safe services in the area and would therefore have to object to the application.

**SUSSEX POLICE:**

Financial contribution required towards additional police personnel and vehicles.

**WSCC FIRE & RESCUE:**

Financial contribution required towards improvements to existing services inc. fire safety equipment and alarms. Request planning conditions to secure fire hydrants on site.

**COMMENTS ON CONSULTATION RESPONSES:**

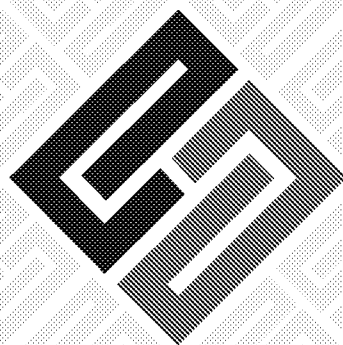
Comments noted and considered under Conclusions section of this report.

**POLICY CONTEXT**

Designation applicable to site:

Strategic housing allocation - West of Bersted (SD3)

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