

DATED: 7 January 2025

BETWEEN:

- (1) ARUN DISTRICT COUNCIL
- (2) WEST SUSSEX COUNTY COUNCIL
- (3) ASHMARDEN LIMITED
- (4) LESLIE JAMES LANGMEAD and PATRICIA LANGMEAD
- (5) CLAUDIA LANGMEAD, OLIVIA LANGMEAD, VICTORIA LANGMEAD
and MELANIE JENKINS

Deed of Variation

**to an Agreement under Section 106 of the Town and Country Planning Act
1990 and other powers dated 22nd November 2018 relating to land south of
Summer Lane, Pagham**

THIS DEED OF VARIATION is made on

7 January

2024

BETWEEN:

- (1) **ARUN DISTRICT COUNCIL** of Arun Civic Centre, Maltravers Road, Littlehampton, West Sussex ("the Council");
- (2) **WEST SUSSEX COUNTY COUNCIL** of County Hall, Chichester, PO19 1RQ ("the County Council")
- (3) **ASHMARDEN LIMITED** of (Company number 00466772) of Basing Park, Privett, Alton, GU34 3NS ("Ashmarden"); and
- (4) **LESLIE JAMES LANGMEAD** and **PATRICIA LANGMEAD** of Basing Park, Privett, Alton, GU34 3NS ("the Second Owner").
- (5) **CLAUDIA LANGMEAD** of Basing Park, Privett, Alton GU34 3NS and **OLIVIA LANGMEAD** of Basing Park, Privett, Alton, Hampshire GU34 3NS and **VICTORIA LANGMEAD** of The Old Shop, Church Road, Privett, Alton GU34 3PA and **MELANIE JENKINS** of Church Farm Cottage, Privett, Alton GU34 3EB (together "the Third Owner")

"The Parties"

RECITALS

1. This Deed varies the Principal Deed as set out herein with regard to the obligations set out at paragraph 16 of Schedule 1 of the Principal Deed and associated definitions. Save where specifically varied, the Principal Deed shall continue to have full force and effect on the terms set out therein.
2. Words and phrases whose meanings are not varied by this Deed have the same meanings as in the Principal Deed.
3. On 22nd November 2018 the Council granted the Outline Planning Permission for the Development on the Land following the completion of the Principal Deed.
4. The Outline Planning Permission contains a condition (condition 30) requiring the submission to the Council and their approval of the Pagham Harbour SPA Habitat Enhancements Land Management Plan for an area of land adjacent to the Land which is defined within the Principal Deed as the Pagham Harbour SPA Habitats Enhancements Land.
5. The Condition Discharge Application has been submitted to the Council in order to discharge condition 30 on the Outline Planning Permission which will mean the Management Plan becoming the approved Pagham Harbour SPA Habitat Enhancements Land Management Plan under the Principal Deed.
6. The Council has resolved to discharge condition 30 on the Outline Planning Permission subject to entry by the Owners into this Deed.

7. The Principal Deed contains (at paragraph 16 of the First Schedule) a covenant by Ashmarden to implement the approved Pagham Harbour SPA Habitat Enhancements Land Management Plan on the Pagham Harbour SPA Habitat Enhancements Land. The Council is the local planning authority for the area where the Land is situated and is thus the party entitled to enforce that obligation.
8. Ashmarden is the freehold owner of the land which is registered at HM Land Registry under title number WSX340506.
9. The Second Owner is the freehold owner of the land registered at HM Land Registry under title number and WSX340728.
10. The Third Owner is the freehold owner of the land registered at HM Land Registry under title number WSX340729.
11. Ashmarden and the Second and Third Owners are the owners of the Pagham Harbour SPA Habitat Enhancement Land under titles WSX340506, WSX 340728 and WSX340729
12. The Council Ashmarden and the Second and Third Owner therefore enter into this Deed in order to give effect to the variations of the Principal Deed as are set out in this Deed.
13. The County Council as a local authority party to the Principal Deed also enters into this Deed to give its consent to the variation of the Principal Deed as set out in this Deed.

OPERATIVE PROVISIONS

1 Interpretation

- 1.1 In this Deed the following expressions shall have the meanings given to them in this Clause:

"Act"	means the Town and Country Planning Act 1990 (as amended)
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"Condition Discharge Application"	means the application to discharge condition 30 on the Outline Planning Permission which has been assigned reference number P/59/24/DOC by the Council
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"Condition Discharge Consent"	means a discharge decision notice for condition 30 on the Outline Planning Permission issued by the
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Council pursuant to the Condition Discharge Application

"Management Plan"	means the "Philips Ecology Brent Goose Mitigation Plan – November 2024 (Final 5633.BGMP vf34)" appended hereto at <i>Appendix 2</i> or any revision thereof as may be approved in writing by the Council
"Outline Planning Permission"	means outline planning permission P/140/16/OUT dated 22 nd November 2018 for a mixed use development comprising up to 400 dwellings, a care home with up to 70 beds, a local centre comprising up to 2000sqm of A1/A2/A3/D1/sui generis floorspace, provision of land for a 1FE primary school (with sufficient space to ensure that it is expandable to 2FE), provision of land for a scout hut, safeguarding of land to help link the site to the Pagham Harbour cycle route & other community uses including public open space & allotments on the Land
"Owners"	means together Ashmarden, the Second Owner and the Third Owner
"Plan B"	means drawing reference number DLA.2253.L.10.SO2 annexed hereto at <i>Appendix 1</i> and titled Plan B or any revision thereto that is approved in writing by the Council
"Principal Deed"	means the Agreement dated 22 nd November 2018 entered into pursuant to s106 of the Act between (1) the Council (2) the County Council (3) Claudia Langmead, Olivia Langmead, Melanie Jenkins, Victoria Langmead, Leslie James Langmead and Patricia Langmead (4) Hanbury (PM) Limited and (5) Ashmarden prior to the grant of the Outline Planning Permission
"Resident"	means the owners and occupiers of individual Dwellings to be constructed on the Land and/or the owners or occupiers of residential dwellings on the Pagham Harbour SPA Habitats Enhancement Land

and the term "Residents" shall be construed accordingly

"this Deed" means this Deed of Variation and supplemental Deed

Words and phrases whose meanings are not varied by this Deed have the same meanings as in the Principal Deed.

2 Effect of this Deed

- 2.1 This Deed is made pursuant to Section 106 and Section 106A of the Act and any obligations within this Deed (further to those within the Principal Deed) are planning obligations for the purposes of the Act which are enforceable by the Council.
- 2.2 This Deed varies the Principal Deed and is supplemental to the Principal Deed and not in substitution of it and should be read in conjunction with it. Save as varied by this Deed, the Principal Deed shall continue in full force and effect.

3 Commencement

This Deed shall have effect on the date hereof but the variations contained at clause 4 below shall be conditional on the issue of the Condition Discharge Consent.

4. Variation to the Principal Deed

4.1 The Parties and the Council hereby agree that:

- 4.1.1 Clause 2.54 of the Principal Deed which contains the definition of "*Pagham Harbour SPA Habitat Enhancements Land*" shall be deleted and replaced in its entirety by the following revised definition:

"Pagham Harbour SPA Habitat Enhancements Land"	means the area shown edged red on Plan B
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- 4.1.2 Clause 2.55 of the Principal Deed which contains the definition of "*Pagham Harbour SPA Habitat Enhancements Land Management Plan*" shall be deleted and replaced in its entirety by the following revised definition:

"Pagham Harbour SPA Habitat Enhancements Land Management Plan"	means the Philips Ecology Brent Goose Mitigation Plan – November 2024 (Final 5633.BGMP vf34) or any revision thereof as may be approved by the Council in writing
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	~~or any revision thereof as may be approved in writing by the Council from time to time~~
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- 4.1.3 Plan B appended hereto at **Appendix 1** shall from the date hereof be substituted for Plan 3 to the Principal Deed so that from the date hereof all references to Plan 3 within the Principal Deed shall be read and construed as references to the Plan B appended to this Deed at Appendix 1 and within Clause 2 of the Principal Deed the existing definition of Plan 3 shall be deleted and replaced in its entirety with the following revised definition:

"Plan B"	means the plan appended to the Deed of Variation at Appendix 1 with drawing reference DLA.2253.L.10.SO2 and titled "Plan B"
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- 4.1.4 The definition of "**Residents**" at Clause 2.80 of the Principal Deed shall be extended to read as follows:

"Resident"	means the owners and occupiers of individual Dwellings to be constructed on the Land and/or the owners or occupiers of residential dwellings on the Pagham Harbour SPA Habitats Enhancement Land and the terms "Residents" shall be construed accordingly
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- 4.1.5 A new clause 12.8 shall be added to the Principal Deed as follows:

12.8 *The Council hereby acknowledges that any person or party who holds an interest in the land defined as the Bird Scaring Buffer Zone and/or the "Adjoining Land" as defined on Plan B and no other land bound by this Deed shall only be required to comply with the requirements at paragraphs 4.5 to 4.7 of the Pagham Harbour SPA Habitat Enhancements Land Management Plan and no other obligations herein*

- 4.1.6 Paragraph 16.1 of the First Schedule to the Principal Deed (set out below) shall be deleted:

"Ashmarden covenants with the Council so as to bind the Pagham Harbour SPA Enhancements Land only as follows:

16.1 Following approval by the Council of the Pagham Harbour SPA Enhancement Land Management Plan Ashmarden covenants to implement the Pagham Harbour SPA Enhancements Land Management Plan as

approved and (unless otherwise agreed in writing with the Council) to adhere to the said plan for its duration.”

- 4.1.7 The following clause shall replace the deleted paragraph 16.1 of the First Schedule to the Principal Deed as follows:

“Ashmarden and the Owners covenant with the Council so as to bind the Pagham Harbour SPA Enhancements Land as follows:

16.1 Following approval by the Council of the Pagham Harbour SPA Enhancement Land Management Plan Ashmarden and the Owners (for the avoidance of doubt Ashmarden and the Second and Third Owners as defined in this Deed of Variation) covenant to implement the Pagham Harbour SPA Enhancements Land Management Plan as approved and (unless otherwise agreed in writing with the Council) to adhere to the said plan for its duration.”

- 4.2 The County Council hereby enters into this Deed to consent to the variations to the Principal Deed agreed between the Council and the Owners as set out at Clause 4.1 above and acknowledges that as from the date of this Deed the Principal Deed shall be read and construed and shall have effect as varied herein.

5. Miscellaneous

- 5.1 Nothing in this Deed confers any rights on any person pursuant to the Contract (Rights of Third Parties) Act 1999.
- 5.2 This Deed shall be registered by the Council as a local land charge but in the event that the Outline Planning Permission expires without the Development having been implemented this Deed shall terminate and the Council will procure that any entry relating to this Deed and the Principal Deed, in the aforementioned register is cancelled accordingly.
- 5.3 Where there is more than one person giving a covenant to undertake an obligation under this Deed then (subject to Clause 5.7) the obligation can be enforced against them jointly or against each individually.
- 5.4 References to any party to this Deed shall include the successors in title to that party and to any party deriving title through or under that party and in the case of the Council the successors to their statutory functions.
- 5.5 In so far as any clause or clauses of this Deed are found (for whatever reason) to be invalid, illegal or unenforceable then such invalidity, illegality or unenforceability shall not affect the validity or enforceability of the remaining provisions of this Deed.

5.6 This Deed and the obligations herein shall not be enforceable against:

- 5.6.1 any Resident or their mortgagees, nor against those deriving title from them; or
- 5.6.2 any statutory undertaker who has or takes in future an interest in the of the Pagham Harbour SPA Habitat Enhancements Land solely for the purpose of providing apparatus pursuant to its statutory undertaking; or
- 5.6.3 any legal chargee or mortgagee acquiring an interest in the of the Pagham Harbour SPA Habitat Enhancements Land after the date of this Deed unless it causes the breach after it becomes a mortgagee in possession of the land comprised in the legal charge or mortgage.

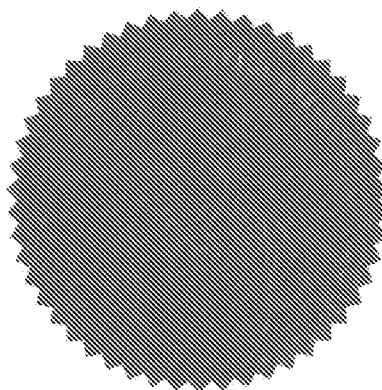
5.7 With the exception of breaches which have occurred during their ownership, no person shall be liable for the obligations herein when they have parted with their interest in the Pagham Harbour SPA Habitats Enhancement Land or do not hold any interest in the part of the Pagham Harbour SPA Habitats Enhancement Land to which any breach relates.

5.8 This Deed is governed by and shall be interpreted in accordance with the law of England and the parties submit to the non-exclusive jurisdiction of the courts of England.

5.9 This Deed shall be of no effect until this Deed has been dated

EXECUTED AS A DEED and delivered on the date hereof by:

Executed as a Deed by affixing
THE COMMON SEAL of }
ARUN DISTRICT COUNCIL }
in the presence of:- }



Authorised Signatory

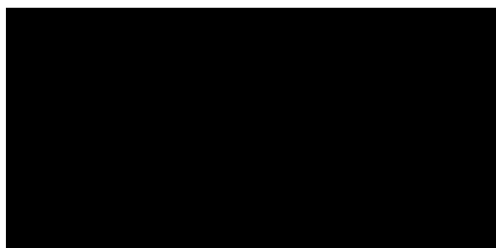
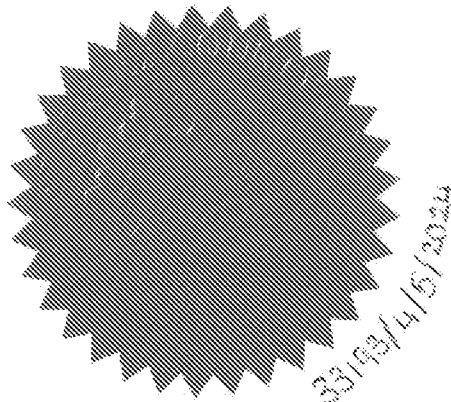
Signature [REDACTED]

Name.....*SYENA AHMED*

Job Title.....*LAWYER*.....

Seal Book No. *01225*

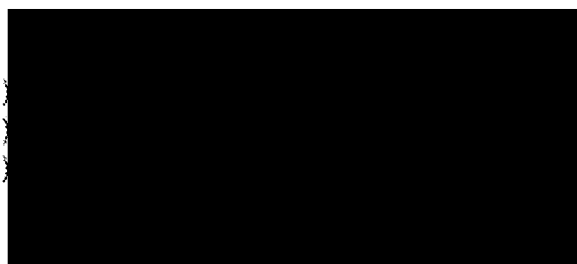
SEALED with the COMMON SEAL of
WEST SUSSEX COUNTY COUNCIL
in the presence of:-)



EXECUTED as a DEED on behalf of
ASHMARDEN LIMITED
Acting through:

MARGARET JENKINS

A Director



In the presence of:

Witness Signature:

Witness Name:

Witness Address:

Witness Occupation:



MARGARET JENKINS

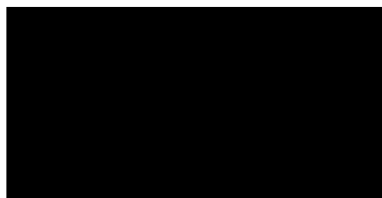
*34 LONDONING AVENUE PO7 5RL
ACCOUNTANT*

SIGNED as a DEED by:

TIMOTHY MICHAEL OLIVER

as duly authorised attorney for:

LESLIE JAMES LANGMEAD



In the presence of:

Witness Signature:

Witness Name:

Witness Address:

Witness Occupation:



J.M. FRODSHAM

*3 BARNFIELD COTTAGE GU32 1ES
MANAGER*

SIGNED as a DEED by:

MELANIE TENKINS,

as duly authorised attorney for:

PATRICIA LANGMEAD

In the presence of:

Witness Signature:

Witness Name:

Witness Address:

Witness Occupation:

TANIA FORTINSON

34 LANGDOWN AVENUE FOTSGL

ACCOUNTANT

SIGNED as a DEED by:

JOHN ROBERT FIELDER

as duly authorised attorney for:

CLAUDIA LANGMEAD

In the presence of:

Witness Signature:

Witness Name:

Witness Address:

Witness Occupation:

SCOTT WILSON

6 DALES RD, FONTWELL, ARUNDEL, BN18 0VY

PRIVATE HIRE DRIVER

SIGNED as a DEED by:

TIMOTHY MICHAEL SMITH

as duly authorised attorney for:

OLIVIA LANGMEAD

In the presence of:

Witness Signature:

Witness Name:

Witness Address:

Witness Occupation:

S.M. FRODSHAM

1 BARNFIELD COTTAGE GU32 1ES

MANAGER

SIGNED as a DEED by:

MELANIE JENKINS

as duly authorised attorney for:

VICTORIA LANGMEAD

In the presence of:

Witness Signature:

Witness Name:

Witness Address:

Witness Occupation:

MARIL ROBINSON
34 HANSDOWN AVENUE PO7 5BL
ACCOUNTANT

SIGNED and delivered

as a DEED by

MELANIE JENKINS

In the presence of:

Witness Signature:

Witness Name:

Witness Address:

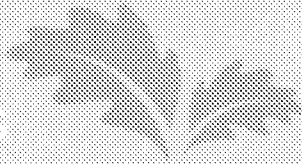
Witness Occupation:

MARIL ROBINSON
34 HANSDOWN AVENUE, PO7 5BL
ACCOUNTANT

Appendix 1

Plan B (Substituted into the Principal Deed in place of Plan 3)

Appendix 2
Approved Pagham Harbour SPA Habitats Enhancements Land Management Plan



PHILLIPS ECOLOGY

BRENT GOOSE MITIGATION PLAN

LAND SOUTH OF SUMMER LANE AND WEST OF PAGHAM ROAD

CONDITION 30 DISCHARGE REPORT

November 2024

Report conditions

<i>Report title</i>	Brent Goose Mitigation Plan - Land South of Summer Lane And West Of Pagham Road
<i>Client</i>	Northgate Properties Ltd
<i>Report status</i>	Final (5633.BGMP.vf34)

Disclaimers

This report has been prepared by Phillips Ecology for the sole use of the client named above. Survey work, assessment, and report writing have been undertaken with all reasonable skill and care, and unless otherwise explicitly stated, is appropriate only for the work, scheme, or project brief provided by the client and intended purposes. The report may not be relied upon by any other party without the express agreement of the client and Phillips Ecology. No other warranty, expressed or implied, is made as to the professional advice included in this report.

Where data, drawings, plans or other technical information has been provided to Phillips Ecology for the purposes of preparation of this report, either by the client, their agents or other parties (including but not limited to biological data sets, laboratory results, and mapping), it has been assumed that the information is correct. No responsibility can be accepted by Phillips Ecology for inaccuracies in such data supplied by other parties.

No part of this report may be copied or duplicated without the express permission of Phillips Ecology and the client. Where field investigations have been carried out, these have been restricted to a level of detail required to achieve the stated objectives of the work, under standard limitations of access to third party land and other limitations as described in the report.

It is the client's responsibility to note and comply as necessary with any recommendations made in this report, planning conditions derived from these, and any relevant licensing regimes. Phillips Ecology bears no responsibility for any failure to note and comply with legal requirements for works carried out by or in behalf of the client at the above site and for the project this report has been produced to support.

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1. Introduction

- 1.1 Hanbury (PM) Ltd commissioned an ecological assessment in support of a planning application (Ref: P140/16/OUT) for the Pagham South, West Sussex site in 2016 (the Site).
- 1.2 Planning permission was granted in November 2018 for the provision of residential development (up to 400 units) along with public open space, retail and community provisions (including a primary school) associated landscape and biodiversity measures and access.
- 1.3 As part of the original commission, Ecology Solutions were specifically instructed to assess implications of the Development Proposals on nearby designated sites of European/international importance, namely the Pagham Harbour Special Protection Area (SPA) / Ramsar site.
- 1.4 The findings of that assessment work were set out within the 'Information to enable a Habitats Regulations Assessment' document (December 2016), such that the competent authority (in this instance Arun District Council) had the necessary information before it in order to carry out its duties in considering the application in line with relevant planning policy and legislation, including specifically The Conservation of Habitats and Species Regulations 2017 (as amended - hereinafter referred to as the Habitats Regulations).
- 1.5 Considerations in respect of Brent Geese were required on the basis that this species is a qualifying interest feature of the Pagham Harbour SPA / Ramsar Site (and SSSI). Whilst no part of the Site extends to include land classified / designated as part of the SPA / Ramsar site, the Site comprises land which could represent a resource for the wintering Brent Goose population associated with the SPA / Ramsar site. The Site adjoins extensive farmland which represents an alternative resource for Brent Geese and indeed some of this land has been demonstrated to support them through detailed survey work undertaken. In addressing the tests of the Habitats Regulations, consideration should be given to potential implications of development proposals for qualifying interest features, on land which may be considered important for such species (i.e. the land is functionally linked to the SPA / Ramsar site).
- 1.6 The IHRA (December 2017) concluded that (Dark-bellied) Brent Geese would be likely to utilise the area from time to time. This conclusion was based upon an assessment of the suitability of habitats present within the Application Site, data obtained as part of a desk-based exercise (including data from the Sussex Ornithological Society - SOS) and third-party information (local residents) obtained through the public consultation exercise. By way of summary, detailed ornithological surveys undertaken in the winter period over 2014 / 2015 showed no use of the Application Site by Brent Geese and no data search information confirmed use of the Application Site, however local residents reported seeing them using the land.
- 1.7 On the evidence available, it was concluded that the Site was not likely to be of any significance for Brent Geese and that the Development Proposals would not constitute a loss of functionally linked SPA / Ramsar site habitat. Notwithstanding this, the IHRA did consider specific mitigation in respect of Brent Geese in addition to that proposed in respect of avoiding increased recreational impacts on the SPA / Ramsar site. That specific mitigation was based around mitigating disturbance impacts on Brent Geese using adjacent agricultural fields to the west of

the Site. Boundary treatments, including the delivery of vegetative screening and the setting back of the development were the primary measures.

- 1.8 However, during the determination period associated with the planning application, representations were made to Arun District Council by Pagham Parish Council (PPC), which included a report produced by an independent ecological consultant. SOS and the Royal Society for the Protection of Birds (RSPB) also submitted representations. The information submitted by PPC and SOS centred around an assertion that the Site is used regularly by Brent Geese and that it therefore should be classed as being functionally linked to the SPA / Ramsar site. The RSPB highlights its concerns regarding the potential importance of the Site for Brent Geese and provides details of what it considers to be suitable additional mitigation measures.
- 1.9 Whilst Ecology Solutions maintained that there was no evidence to allow a conclusion that the Development would give rise to an adverse effect on the integrity of the SPA / Ramsar site, in liaison with Natural England, additional mitigation was proposed on a precautionary basis. That additional mitigation was proposed in order to give the Competent Authority the comfort that, when undertaking its legal obligations under the Habitats Regulations, the relevant legal tests are not failed.
- 1.10 It is clearly established that with the implementation of the additional mitigation / avoidance measures directed specifically at Brent Geese, there would be no adverse effects on the population of Brent Geese associated with the SPA / Ramsar site.
- 1.11 An iterative mitigation strategy was produced, and the appropriateness of those measures described within the associated report were the subject of discussion with Natural England. The principals of the proposed mitigation were agreed, see Appendix 1. It was also agreed that further detail regarding the measures would be provided an agreed at a later date, and that this commitment could be secured by way of planning condition.
- 1.12 Condition 30 of the planning permission states:

"No development shall commence until the applicant has submitted and the local planning authority (in consultation with Natural England) has approved the detailed management and maintenance scheme for the adjacent Pagham Harbour SPA Enhancement Land (as defined and referred to within the Agreement under s106 of the Town and Country Planning Act associated with the permission) which shall provide for:

- a) The delivery of habitat enhancements (including some additional areas of additional planting) for Brent Geese so as to achieve no net loss of foraging habitat for Brent Geese due to the development proposals;
- b) The management of field boundary vegetation, associated with specific adjoining fields to enhance sight lines for Brent geese, making this field matrix more suited to use by them; and
- c) Cessation of bird scaring activities on said land.

Said measures and scheme to substantially accord with the details set out in Chapter 4 of the Ecology Solutions Ltd "Brent Goose Mitigation Plan" December 2017 submitted in support of the application."

- 1.13 This document has been produced in order to allow the discharge of Condition 30 associated with the planning permission.
- 1.14 It should be noted that in producing this Brent Goose Mitigation Plan (BGMP) consultation has been undertaken with Natural England advisors. Initial feedback was received by way of a consultation response dated 18 April 2023 (included at Appendix 2). The points raised within this letter were considered within a further revision to the BGMP and the amended report was provided to Natural England directly for further review. This was prior to a meeting held on 22 January 2024 with a Lead Advisor from Natural England's Sussex and Kent Area Team that was undertaken as part of the Discretionary Advice Service (DAS).
- 1.15 Following the submission of the revised BGMP that takes regard of the feedback received from Natural England, further comments were received from Arun District Council by way of letter (undated, received on 25th April 2024). The BGMP has been revised further in response to the comments received.
- 1.16 This version of the BGMP has taken account of the all the comments raised during consultations to date.

2. Proposed Mitigation Strategy

- 2.1 In order to mitigate losses to habitats favoured by Brent Geese, located within the Development Site, the following broad measures were agreed at the outline planning stage:
- Delivery of habitat enhancements for Brent Geese on land contained within the mitigation area to the west (nearer to the SPA / Ramsar) of the Application Site;
 - Management of field boundary vegetation associated with specific adjoining fields in a wider mitigation area, to enhance sight lines for Brent Geese, making this field matrix more suited to use by them;
 - Cessation of bird scaring initiatives on mitigation land;
 - All proposed measures to be the subject of a detailed management plan; and
 - Proposed measures are already governed by the planning application approved at the outline stage.
- 2.2 The above measures are discussed in detail below with respect to their purpose of increasing value to wintering Brent Geese.

Creation of a defined Brent Goose mitigation area

- 2.3 In liaison with Natural England, it was agreed that, in taking a precautionary stance to the assessment in relation to potential adverse effects on the population of Brent Geese arising from losses of supporting habitat, an appropriate mitigation initiative would be to secure and enhance an area of land for use by the species.

Location

- 2.4 In defining the land for use as part of this mitigation package, the developer has had due regard to the following:
- The land should be available for use, with appropriate landowner consent;
 - It should be feasible to deliver enhancement, over the current situation, including considerations as to the efficacy of maintaining foraging resources long-term;
 - The ability to deliver the mitigation land in close proximity to the SPA / Ramsar site;
 - Current management of the land in terms of suitability for Brent Geese and any existing Brent Geese scaring initiatives;
 - Avoiding indirect impacts which would lessen the likely value of the land for Brent Geese, such as public disturbance;
 - The land should be capable of enhancement and management for the benefit of Brent Geese, in the absence of any existing legal (or other) obligation aimed at maintaining or restoring habitat for Brent Geese. For example, the land should not form part of the SPA / Ramsar site, where, in such circumstances, Natural England could enforce

remedial or management measures aimed at maintaining the favourable conservation status of habitats and species for which the site is designated (e.g. the Brent Goose population).

- 2.5 In consultation with the relevant landowner an area of land has been agreed and defined for use within the mitigation package. The land is outside of the SPA / Ramsar site boundary and is not the subject of any current obligation in relation to maintaining or enhancing habitat for Brent Geese (or any other species). It is capable of being physically enhanced through habitat creation measures in some areas (as detailed later within this report). It is also feasible to secure ongoing (in perpetuity) agricultural management for arable land which will deliver foraging habitat for Brent Geese. The land is adjacent to the SPA / Ramsar site boundary, representing an optimal location for such mitigation habitat, given the protection afforded to the SPA / Ramsar site and recognised importance of that site for Brent Geese. In this location, there is a public right of way however access to members of the public can be effectively managed (e.g. avoided).

- 2.6 The proposed location of the mitigation land is shown graphically at Plan ECO.

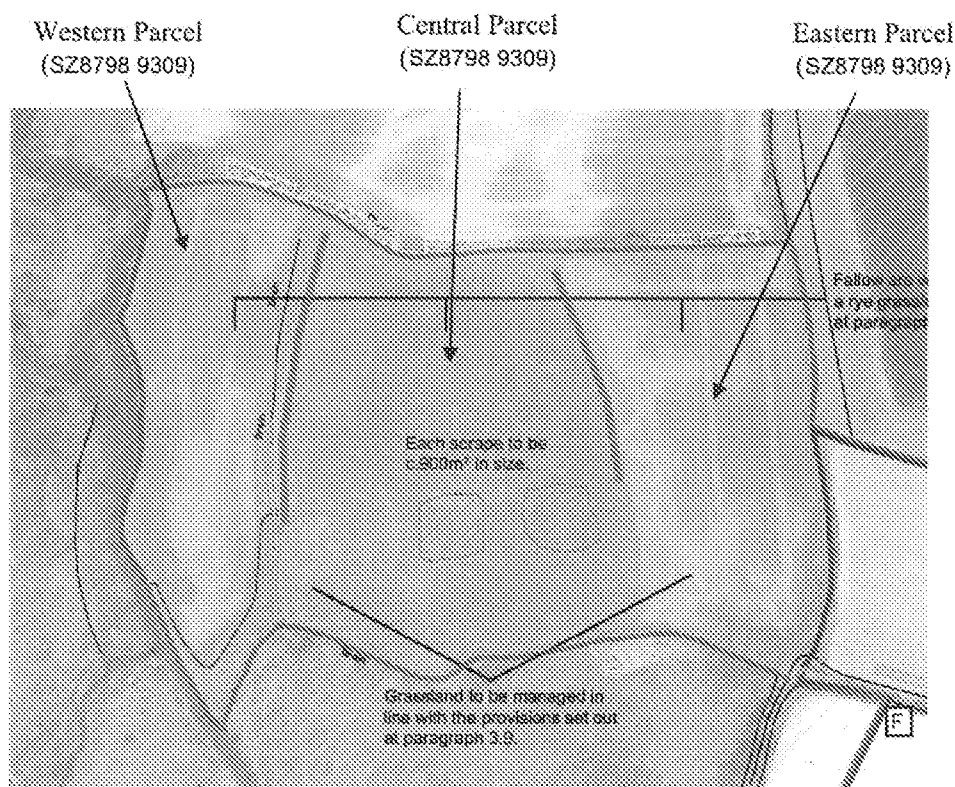
Defining an appropriate area

- 2.7 The Development Site itself has been calculated to be 25.62ha in size.
- 2.8 As discussed within previous submissions (e.g. the IHRA produced in support of the planning application) the evidence considered does not point to the Development Site being of high importance for Brent Geese, though use from time to time is possible.
- 2.9 The evidence available in relation to use of the Development Site by Brent Geese provided by third parties is not sufficient to allow conclusions regarding the relative importance of each field, or parts thereof. The data either lacks detail in terms of numbers, precise locations and dates / frequency, or where such detail is available, it does not actually point squarely at the Development Site itself being of significant importance. Given all the above, it is not possible to quantify with any degree of certainty the amount of land being lost which may be considered to be a valued resource by Brent Geese.
- 2.10 To a large extent, use of the Application Site by Brent Geese will be dependent upon the cropping regime, Winter Cereals or Clover based cover crops being of particular value. Other factors dictating use would include, proximity to built form / infrastructure with associated disturbance (e.g. vehicles, people, dogs) and the availability of resources elsewhere (such as within the protected SPA / Ramsar site or other suitable habitat in the local area).
- 2.11 Information has been provided relating to crop rotation for the main fields associated with the Development Site for the last several years. Relevant information is reproduced in Table 1 below for ease of reference. Information made available by the landowner, including a map showing field locations, is included at Plan 2. For those fields which form the Development Site, information is highlighted in bold.

Development Land Field	Gross Ha	2017	2016	2015	2014	2013	2012	2011
SZ8898 8755	4.08	LET	WW	POT	WW	VEG	MZ	WW
SZ8898 8433	7.49	LET	WW	POT	WW	VEG	MZ	WW
SZ8897 7598	14.05	LET	WW LET	WW LET SW	WW LET	WW LET	WW POT	WW LET
Mitigation Land								
SZ8897 2075	8.52	MZ	LET	SW	LET	WW	POT	WW
SZ8898 3407	5.2	LET	WW	LET	WW	POT	WW	LET
SZ8798 9309 (Central Parcel)	3.0	Fall	Fall	Fall	Fall	Fall	Fall	Fall
SZ8798 9309 (eastern and western fields)	3.79	WW	SB	MZ	SW	SW	SW	WW
SZ8898 3741	3.97	LET	WW	POT	WW	LET	WW	SC

Total Mitigation Area: 24.48

Table 1: Crop rotation within relevant fields 2011 – 2017. WW = Winter Wheat; SW = Spring Wheat; LET = Lettuces, SB = Spring Barley; POT = Potatoes; MZ = Maize; SC = Sweet corn VEG = Vegetables; FALL = Fallow.



2.12 Where fields are referred to as fallow, this area has not been subject to any seeding for crop production. The central parcel of field SZ8798 9309 has been partially fallow for a number of years. The field consists of a combination of areas which are planted and those that have not been in the past.

2.13 Taking a simplistic approach to calculating the loss of Brent Goose foraging habitat, one could assume the following:

Development Site				
Field Reference	Size of Field (ha)	Planted with winter wheat out of 7 years (2011 – 2017)	Actual Foraging availability for Geese	
8755	4.08	3	$4.08\text{ha} / 7 \times 3 =$	1.75
8433	7.49	3	$7.49\text{ha} / 7 \times 3 =$	3.21
7598	14.05	6	$14.05\text{ha} / 7 \times 6 =$	12.04
	25.62		Total:	17.00

2.14 Based on the above table, a total of 17.00ha of foraging resource need to be re-provided as part of the mitigation proposals.

Proposed Mitigation Fields				
Field Reference	Size of Field (ha)	Planted with winter wheat out of 7 years (2011 – 2017)	Historic Foraging availability for Geese (	
2075	8.52	2	$8.52\text{ha} / 7 \times 2 =$	2.43
3407	5.20	3	$5.20\text{ha} / 7 \times 3 =$	2.23
9309 (arable Area)	3.79	2	$3.79\text{ha} / 7 \times 2 =$	1.08
9309 (Fallow Area)	3.00	0	$3.0\text{ha} / 7 \times 0 =$	0.00
3741	3.97	3	$3.97 / 7 \times 3 =$	1.70
			Total:	7.45

Proposed Mitigation Fields- Uplift in Foraging Value				
Field Reference	Size of Field (ha)	Not Planted with winter wheat out of 7 years (2011 – 2017)	Actual Increase in Foraging availability for Geese (ha)	
2075	8.52	5	$8.52\text{ha} / 7 \times 5 =$	6.09
3407	5.20	4	$5.20\text{ha} / 7 \times 4 =$	2.97
9309 (arable Area)	3.79	5	$3.79\text{ha} / 7 \times 5 =$	2.71
9309 (Fallow Area)	3.00	7	$3.0\text{ha} / 7 \times 7 =$	3.00
3741	3.97	4	$3.97\text{ha} / 7 \times 4 =$	2.27
				17.03

Proposed Mitigation Fields- Under Management Plan i.e. converted cropping				
Field Reference	Size of Field (ha)	Winter Foraging Resource	Actual Increase in Foraging availability for Geese (ha)	
2075	8.52	100%	-	8.52
3407	5.20	100%	-	5.2
9309 (arable Area)	3.79	100%	-	3.79
9309 (Fallow Area)	3.00	100%	-	3.00
3741	3.97	100%	-	3.97
Total Foraging Resource Area (ha)				24.48
Net Increase in Foraging Value				17.03

3. Overview And Capital Works for Enhancement

- 3.1 The precautionary approach adopted uses the loss of 17.00ha of suitable foraging habitat (as defined within section 2) to guide this assessment, but with an acknowledgement that a level of discounting ought to be applied.
- 3.2 Discounting factors that need to be considered with regard to the loss of foraging resources and provision of replacement foraging are set out below.
- 3.3 The overall mitigation area equates to a total of 24.48ha.
- 3.4 **Location.** The location of the BGMP area is closer to the SPA / Ramsar site than the Development Site. Indeed, the BGMP area is adjacent to the SPA / Ramsar site. This is a recognised advantage to Brent Geese as the birds will expend less energy flying to and from the mitigation land from the SPA roost sites compared to the Development Site. This is considered to be a significant saving of energy that would not need to be recouped when compared to the Development Site and therefore less foraging resources would need to be secured by the BGMP. This is a point that is agreed with Natural England who state within the letter dated 23rd November 2017 (see Appendix 1):

"...the location of the proposed habitat mitigation is acceptable, as it is closer to Pagham Harbour Special Protection Area (the SPA) than the Pagham South allocation site. Therefore, if suitable foraging habitat is provided in this location, it should be preferred to the Pagham South site from a goose energetics point of view."

To demarcate the boundaries of the BGMP area, 2m high white fence posts with a red top will be erected on the boundaries, in the locations of the letters A,B,C,D, E, F and G on plan ECO.

- 3.5 **Energy Resources.** A report has been commissioned which quantifies the energy resource generated from the Development Site over the period 2011 to 2017. By establishing this base line, we are able to ensure that the proposed mitigation land is providing a net increase in energy resource. The report concludes that the proposed mitigation land will provide a net increase in energy resource of 150% over any given year. This comes about through a commitment to provide a winter foraging resources within the mitigation scheme on an annual basis. The Development Site did not consistently provide a foraging resource across the whole site every year, and thereby was not a reliable source of energy. The base line, and forecasts, have been calculated using the same methodology. By understanding the soil type, agricultural land quality and flood risk our consultant is able to establish the crop yields. Yield data is available from standard farm management handbooks, such as 'The Agricultural Budgeting and Costing Book', Agro Business Consultants, which is published twice a year and the 'John Nix Pocketbook for Farm Management, published annually. These provide industry standard data for yields of all crops grown in the UK. From these, it is possible to establish a range of yields (in tonnes/ha) and provide a metric to measure the provision of energy available from the crop i.e. the higher the yield the more energy resource which is available. The report itself is attached in appendix 6. Bird scaring measures will be ceased on the mitigation site,

- 2.15 As can be seen in the above tables the BGMP land when under the agreed management strategy will provide an net increase in foraging value when compared to the Development Land.
- 2.16 During this consultation process the proposed area of mitigation land was amended to include land A, B and C (edged blue). These fields are not within the flood plain and result in a mixture of habitats being provided.
- 2.17 The retention of the habitat enhancement land, which is still within Flood Zone 2 and 3 has been included to ensure sufficient variety of habitat adjacent to the rife. The habitat enhancement area will also provide areas of water, which is proven to be of benefit to Brent Geese.
- 2.18 The proposed mitigation package is discussed in detail within the following section.

more details are provided on this below, however it is clear that this will significantly improve the level of food resources available to the Brent Geese.

- 3.6 **Disturbance.** Related to the location of the Development Site and the BGMP area is the impact of disturbance on foraging Brent Geese. Regular disturbance can prevent birds from accessing part of an available foraging resource or cause birds to respond to disturbance by flying from the foraging grounds. The former prevents access to forage, whereas the latter causes additional energy expenditure thereby reducing the value of the resource. In comparing the Development Site and the BGMP area, it is accepted that the BGMP area is less susceptible to disturbance due to it being a greater distance from roads and built form that may dissuade Brent Goose from utilising areas of potential forage. There is a PROW that follows the green dashed line on plan ECO. The PROW will be screened by dense hedging and stock fencing to the north and south, which will be installed along the boundary of the footpath (marked dashed green). This will prevent dog walkers and dogs from straying off the footpath and disturbing the Brent Geese. The planting will be mature and of a height no less than six feet, whilst the fencing will be the height of standard animal/stock fencing (1.2m high). Both the planting and fencing will be installed on or before the 30th November 2024 and will be managed in line with paragraphs 3.61-3.68 and 3.67-3.72 to ensure site lines for the Brent Geese are maintained across the two fields.
- 3.7 **Cessation of Bird Scaring.** A common agricultural practice employed on the Development Site is bird scaring to prevent crop damage. Bird scaring has been shown to be very effective (up to 90%) at reducing bird numbers on fields. This causes any birds disturbed to expend energy when fleeing from stimulus or prevents them from accessing resources in the first instance. This effectively reduces the available total foraging resource area. The removal of bird scaring initiatives from the BGMP (and a 100m buffer zone around the BGMP) area during the wintering period will prevent extra energy expenditures by Brent Geese thereby significantly increasing the value of foraging resources provided when compared to the existing scenario at the Development Site. This buffer zone will be demarcated using 2m high white fence posts with blue tops, strategically located on the owners land to make clear the extent of the buffer zone. The location of these markers can be found on plan ECO.
- 3.8 **Certainty of Cropping.** There are currently no obligations on management of the Development Site to plant any particular crop at any point. As such, there is an inherent uncertainty of the availability of foraging resources at the Development Site. In times when no crop or an unsuitable crop is provided the Development Site provides no energy resources which potentially may lead to Brent Geese travelling further, expending more energy to reach other foraging areas. This will be significantly improved as part of the BGMP as suitable crop selections have been agreed that will provide forage and these will be provided each wintering period following the implementation of the plan. The certainty and regularity of the resource being available will represent a significant increase in value compared to the baseline scenario.
- 3.9 **Habitat Enhancements.** Following Natural England advice (see Natural England letter dated 23 November 2017), the area of fallow land to the west of the BGMP area will be

enhanced for use by Brent Geese with several measures employed. This will include a new management regime and overseeding to make an area of grassland that is suitable for Brent Geese foraging and the creation of permanent scrapes. The permanent grassland across the 6.79ha parcel will offer foraging resources that are recognised as providing greater value from an energetics perspective compared to cropland given the greater biomass of foraging resource provided. This is made clear within the Natural England consultation response dated 18th October 2018 (Appendix 4), where it states:

"...more geese can forage on a given area of permanent pasture (as it supports a greater biomass and is available throughout the season) the arable lost can be replaced with a smaller amount of grassland."

- 3.10 On this basis, the enhancement of grassland to deliver greater biomass of foraging resources is a significant factor when considering the requirement to ensure no net loss of foraging and the discounting that needs to be applied.
- 3.11 In addition, the scrapes, noting that these are of known importance as stated by Natural England, will serve to attract Brent Geese by providing an area of loafing where birds can conserve energy that is directly adjacent to foraging areas.

Summary

- 3.12 In summary, in calculating the area of (potential) foraging habitat to be lost (17.00ha), and comparing this to the overall provision provided within the BGMP (24.48ha) there is a net increase in foraging habitat of 17.03ha. It is clear that collectively the BGMP will deliver suitable mitigation for Brent Geese, as agreed with by Natural England (consultation response dated 13 February 2018).

Overview of Enhancement Measures

- 3.13 In coastal locations, Brent Geese are most likely to forage on short dense improved grassland swards with a high abundance of Perennial Rye-grass *Lolium perenne* and an area of between 5 and 6 ha, and located 4-5 km along the coast from coastal roosting sites (Vickery and Gill, 1999). Evidence also suggests that Clover within a grassland sward represents an important foraging resource (McKay, Milsom, Feare, et al. – 2001). In addition, as evidenced from land in the vicinity of Pagham, the species has increasingly taken to grazing on cultivated grasslands and fields planted with winter cereal crops (Scott and Rose, 1996).
- 3.14 The proposed mitigation package can be summarised as follows:
 - Securing an area of farmland adjacent to the SPA / Ramsar site which will be managed for the benefit of Brent Geese. This area will include grassland and arable land of value to Brent Geese;
 - Enhancement of part of this land for Brent Geese through the creation of wetland scrapes and appropriate grassland with suitable management;
 - An undertaking to plant a crop that is known to be grazed by Brent Geese. These are understood to include; Winter Cereals and Oil Seed Rape or a Clover dominated

cover crop to maintain winter foraging resources each year for Brent Geese within arable fields located in the mitigation area;

- Removal of specified field boundary vegetation in order to increase sight lines for Brent Geese, enhancing a wider area of habitat for the benefit of Brent Geese; and
- Cessation of bird scaring measures across the BGMP Land and buffer zone. (please see Plan ECO).
- Screening (hedgerow and stock proof fencing) of the PROW marked dashed green on ECO to prevent walkers and their dogs accessing the fields and causing visual disturbance to any Brent Geese that are present within the adjoining fields.
- The planting of a new hedgerow between points F&C on plan ECO.

3.15 Further detail in relation to the above broad measures is described further below.

3.16 It is noted that land proposed for grassland creation is subject to waterlogging during the winter, confirming its suitability for the creation of wet grassland within a matrix of enhanced habitat for Brent Geese. However, drainage improvements have been designed to ensure that a matrix of suitable habitat exists, maximising foraging resources. This is outlined further below.

Specific considerations regarding indirect impacts on protected species

3.17 In devising the above mitigation scheme, regard has been had to potential implications for other faunal species and these are considered below.

3.18 No field boundary vegetation management is proposed along the rife which runs along the western boundary of the mitigation area. It is noted that removal of scrub in this location could have adverse impacts on landscape grounds and possible implications for interest features of the SPA / Ramsar site and SSSI.

3.19 Water Voles are known to be present within the local area. It is possible that Water Voles may be present within the ditch habitat associated with the overall Mitigation Area, or that they may colonise in the future. The removal of field boundary scrub habitat will be undertaken in accordance with this management plan, such that no burrows would be impacted. The proposed management would in fact represent an enhancement for Water Voles, creating open sunny banks with a more diverse herb element over time.

3.20 Regarding bats, consideration has been given to the potential loss of foraging and navigating resources for bats. In the context of the site and its surroundings, any impacts are considered negligible. Optimal foraging and navigating opportunities will be fully retained at the eastern and western boundaries of the mitigation area and these link with other more mature boundary features in the local area. Any scrub removal (where relevant) will be targeted with a view to retaining opportunities for other species / groups. Further, the creation of a wet grassland area (with scrapes) area will represent an enhancement in terms of foraging opportunities for bats.

- 3.21 Due regard would be had for the presence of Badgers when undertaking any habitat management initiatives. Ahead of any vegetation cutting / removal a check will be made for the presence of any Badger setts in areas to be impacted by the works. Where any sett is identified, wheeled or tracked machinery will operate no closer than 20m from the sett, with work within that zone being undertaken using hand tools, retaining a 5m buffer around any active (or potentially active) sett entrances.
- 3.22 Birds may nest within vegetation subject to impacts which arise from these proposals. In the main, timing restrictions associated with the prescribed measures will mitigate the potential for an offence to be committed, however, additional safeguards are proposed for instances where works must be undertaken within the bird breeding season. Such instances are references below, with the requirement for specific checks for nesting birds to be undertaken by an appropriately experienced ecologist ahead of certain works.
- 3.23 No adverse impacts are likely to arise in respect of amphibians (including Great Crested Newts). Data search information does not suggest that Great Crested Newts would be present within the enhancement area associated with these mitigation proposals.
- 3.24 Common reptiles are known to be present within the wider area, although populations are small and restricted to suitable habitat typically at arable field boundaries. Timing restrictions associated with the prescribed measures as well as the application of a specific sensitive methodology for habitat clearance (detailed below) will mitigate the potential for and offence to be committed.

Summary of the Mitigation Area

- 3.25 An area of land approximately 6.79ha in size has been defined for habitat creation and long-term enhancement within this mitigation package. The mitigation area overall, extends to include additional, adjacent fields totalling an area of approximately 24.48ha. Overall, the land will be managed for the benefit of Brent Geese, delivering a significant enhancement over the current situation. The extent of the overall mitigation land is shown graphically on Plan ECO.
- 3.26 Currently, the land proposed to deliver the principal habitat creation and enhancement measures (as detailed at paragraph 3.53) comprises land under regular arable cultivation (including occasional Winter Wheat) and land which has been left fallow in recent years, comprising rank wet grassland vegetation with a high proportion of reeds (shown with an orange boundary on plan ECO). It is located adjacent to the SPA / Ramsar site boundary which borders the defined mitigation land to the south and west. This enhanced habitat will therefore be contiguous with the SPA / Ramsar site and is ideally located to deliver proposed mitigation.
- 3.27 Other fields included within the overall mitigation package are subject to arable farming subject to weather conditions and key points in the farming cycle.
- 3.28 The mitigation area is not subject to pressures from recreational impacts. Nearby PROW will be carefully managed to ensure that the mitigation areas are not affected, as laid out in para 3.6.

- 3.29 As noted above, these factors need to be considered as part of discounting the area of foraging resources to be provided as mitigation in light of the significant improvements over the current situation that the BGMP delivers.

Cessation of winter scaring initiatives

- 3.30 Bird scaring initiatives, that are known to be very effective, have historically been undertaken in respect of arable land in the overall mitigation area (see Plan ECO). Scaring has entailed the use of acoustic (pyrotechnic) measures and inflatable (e.g. "Scary-man") devices.
- 3.31 Before the start of the relevant wintering period and immediately prior to commencement of development, all winter bird scaring initiatives will cease in the overall mitigation area (See Plan ECO). This includes the principal habitat enhancement area; the land to the east; and a 100m buffer zone around the BGMP.
- 3.32 Bird scaring will not take place in the period October – March (inclusive). At the request of Natural England (consultation letter dated 18 April 2023), this period has been extended beyond the typical wintering period to ensure that any early arriving or late leaving Brent Geese are not affected.
- 3.33 This lack of scaring will therefore be relevant to a total of approximately 24.48ha of land which is contiguous with the SPA / Ramsar site.
- 3.34 It should be noted that the BGMP is significantly better placed in the wider landscape compared to the Development Site in respect of avoiding disturbance from surrounding scaring initiatives. The BGMP area is directly adjacent to the SPA / Ramsar boundary in the south and west and no bird scaring is considered to take place beyond this boundary. To the east of the BGMP is an existing reservoir that will not be subject to scaring activities. As such the majority of the surrounding land will not be subject to scaring initiatives. Furthermore, boundary vegetation of the overall BGMP area will retain screening boundary vegetation that will avoid the impacts of visual deterrents.
- 3.35 By comparison, the Development Site is subject to scaring activities as well as adjacent arable land. There are also a number of roads and access tracks running through or adjacent to the Development Site that provide routes for further disturbance.
- 3.36 It is considered clear that the BGMP area will represent a significantly less disturbed foraging area for wintering Brent Geese compared to the Development Site. The cessation of bird scaring across the overall mitigation area will significantly improve the value of the foraging resource from an energetics perspective when compared to the baseline position.
- 3.37 It should be noted that the Development site was land which was un-restricted in terms of bird scaring and crop cycles. Therefore, the mitigation strategy is already an enhancement on the historic foraging ground, where our conclusion was that Brent Geese were for the large part absent.

Initial preparations for habitat creation

- 3.38 It is possible that common reptiles utilise areas of the existing habitat. On this basis it is proposed that ahead of the scrape creation and grassland seeding, relevant areas will be subject to vegetation removal in a two staged process of habitat manipulation (cutting vegetation to c.15cm followed by a further cut to ground level) that persuades any reptiles present to move into nearby retained habitat at the field boundaries. This will temporarily remove potentially suitable habitat in areas where works are to take place and thereby avoid any issues with reptiles being present. This measure will also assist in the creation of the grassland, reducing pernicious weed species.
- 3.39 A 15m buffer will be retained at the southern, western and northern boundaries of the central parcel of field SZ8798 9309 as shown on page 9. This area has been identified for habitat creation to the south of the BGMP, such that existing grass / herbaceous vegetation is retained and can be utilised by any faunal species during the establishment phase of newly created habitats.
- 3.40 To avoid impacts on ground nesting birds, suitable habitat will be cut back / cleared, in early March or September, when nesting is possible, but less likely. This will avoid any disturbance to wintering Brent Geese potentially within the site or wider area. If target habitats are considered to be unsuitable for wintering birds at the time clearance is to be undertaken, the areas may also be cleared over winter. The aim of the clearance will be to provide suitable foraging habitat for brent geese, with short vegetation provided over the winter months. Such clearance can be undertaken mechanically (e.g. mowing) or by use of herbicide applications when plants are in early growth. Regard will be had to weather conditions, and no herbicide application will be undertaken when the ground is subject to water-logging. All herbicide applications will be localised and directed away from any boundary ditches or open water to ensure that materials do not spread beyond the target area. Prior to the use of any herbicide, consideration will be given to the need for any permissions needed. Ahead of any mechanical clearance during the nesting season or application of herbicide (and especially where applications are proposed within the main bird breeding season), check surveys will be undertaken by a suitably experienced ecologist. In the event that nesting birds are discovered, a cordon of 20m from the nest will be marked and no vehicle movements or herbicide applications will take place within these areas. Any such areas will be retained, with no preparatory works taking place (enhanced through future management only). Where necessary the locations of the scrapes would be altered to reflect any constraint posed. In reality the areas which could be affected are likely to be small and isolated, and are not considered a significant constraint to the overall strategy of habitat creation and enhancement.

Scrape creation

- 3.41 Two wetland scrapes will be created, each approximately 900m² in size (notional 30m x 30m).
- 3.42 The scrapes will have an undulating topography with a maximum depth of around 50cm and gently graded banks.

- 3.43 Spoil generated through the creation of the scrapes will be graded out across land within the farm boundary, but outside the floodplain.
- 3.44 The scrapes are to be allowed to naturally vegetate, retaining areas of bare ground to provide muddy conditions.
- 3.45 As a further precautionary measure, scrape creation will be undertaken during the active season for reptiles (when they will be more able to move away from machinery), though the site preparation works will limit suitable habitat to the boundaries of the enhancement area.
- 3.46 The locations of the proposed scrapes are shown at Plan ECO. As noted above, the precise locations may be subject to slight alteration where for example, ground nesting birds are recorded during preliminary checks.
- 3.47 The scrapes were suggested as an important component for providing enhanced Brent Geese habitat by Natural England within consultations on the development of the BGMP. Scrapes are known to be of importance to Brent Geese and waterfowl in general and the aim of delivering these features is to assist in attracting birds to the BGMP area and providing areas to congregate that are directly connected to foraging resources. On this basis, given the advantages of creating such features, it is not considered necessary to discount the areas of scrapes from the overall area of the BGMP.

Drainage

- 3.48 Existing field drains / ditches will be inspected regularly and cleared, when necessary, to increase capacity and improve rates of water flow, allowing more efficient drainage out of the mitigation land. Any clearance works should be undertaken prior to the 1st of September in order to minimise disturbance.
- 3.49 The above measures are to be implemented to improve the drainage across the mitigation land and help prevent water-logging which will increase crop yields to the benefit of Brent Geese.
- 3.50 In summary, the additional water storage capacity created by the improved ditch network will result in more efficient draining of the land and due to the increased storage volumes of the ditches the land will remain free of water for longer periods both leading up to and immediately after a flood event.

Over-seeding of Habitat Enhancement Land

- 3.51 Within the mitigation / enhancement area (edged orange on plan ECO and equating to 6.79ha) new grassland will be created. The land hatched orange will be over-seeded with a grassland lay comprising Perennial Rye-grass and Clover (a 50/50 split).
- 3.52 It is proposed that the central parcel (shaded solid orange) is seeded with a mix comprising a range of grass species, some of which are noted for being particularly tolerant of seasonally wet conditions. The following species will be included in the planting mix:

- Clover (10%);
- Perennial Rye-grass (40%);
- Common Bent *Agrostis capillaris* (15%);
- Red-fescue *Festuca rubra* (20%);
- Meadow Foxtail *Alopecurus pratensis* (5%);
- Sweet Vernal-grass *Anthoxanthum odoratum* (5%); and
- Tufted Hair-grass *Deschampsia cespitosa* (5%);

3.53 Where the above seed mix cannot be sourced as specified above, a suitable alternative mix will be selected. The alternative mix will include key species of known value to Brent Geese. Key species include; Clover and Perennial Rye-grass.

3.54 The following measures will be implemented during the creating / establishment phase:

- Initial clearance (e.g. mowing or herbicide application (as above));
- Excavated material (from scrape creation) spread to create areas less susceptible to water inundation;
- Initial cultivation to encourage seed germination (weed species);
- Second cultivation;
- Broadcast of seed mixture, ideally in spring or autumn; and
- The sward will be topped during the first growing season as needed to suppress weed growth.

Goose Foraging Habitat

3.55 For the life of this management plan, all the fields within the BGMP that are outside of the enhancement area (see Plan ECO) are to be planted with known foraging resources for Brent Geese including:

- Winter Wheat
- Winter Barley
- Oil Seed Rape
- A Rye Grass and Clover sward

- 3.56 These crops are known to be suitable for the BGMP area, having been historically grown onsite.
- 3.57 The provision of palatable forage for Brent Geese that will be made available during the winter period on an annual basis across the BGMP area will represent a significant enhancement over the current situation within the Development Site where currently, there is uncertainty over the cropping regime and whether suitable crops will be provided over any given winter period.
- 3.58 Some flexibility on crop rotation type (but not crop type itself) will be maintained, to ensure a sustainable approach to farming the land can be maintained for the life of the plan, however one or more of the above crop types will be established on the BGMP land for the duration of the winter months.
- 3.59 Where farming practices, environmental conditions or other issues effect availability / productivity of crop type and a change to the agreed crop type is considered necessary, this change will be formally submitted to the Local Planning Authority for written approval.

Enhancing sight lines for Brent Geese

- 3.60 Vegetation management is proposed at specified field boundaries to enhance sight lines for Brent Geese. This will open up the field structure making the relevant fields more suited to use by Brent Geese (which prefer to use large scale, open habitats). Such measures, in tandem with those proposed in respect of scaring (see above) effectively create enhanced habitat over a wide area.
- 3.61 Based on onsite assessments of the field levels, they are considered to be relatively flat and even across the plan area. As such, the proposed opening of sightlines will effectively deliver an increased openness to the site and thereby increasing suitability for use by Brent Geese.
- 3.62 As stated above, no field boundary vegetation management is proposed along the rife which runs along the western boundary of the overall mitigation area.
- 3.63 The locations for vegetation management specific to this management plan are shown on Plan ECO.
- 3.64 Specific areas are targeted in order to open sight lines, but also retain features which can continue to offer foraging, shelter and breeding opportunities for a range of other (e.g. bird) species. Mature trees will be retained, with the specific areas targeted, primarily consisting of dense scrub or hedgerows.
- 3.65 Any trees will be removed to ground level with brash chipped in situ and a proportion of any large logs stacked in order to provide biodiversity benefits (e.g. for saproxylic invertebrates).
- 3.66 Cutting of non-woody vegetation and any scrub re-growth will be undertaken in late summer / early autumn each year (September / early October) in order to further improve

sight lines for the winter period. Cutting will be above ground level and machinery (e.g. tractor with flail) will operate at an appropriate distance from the top of any ditch bank.

- 3.67 The provision of improved sightlines will influence Brent Geese behaviour, providing greater security to flocks present with the increased visibility and thereby reducing the likelihood of bird disturbance as well as greater access to foraging resources.

Hedgerow planting along the PROW

- 3.68 To minimise disturbance to Brent Geese from visual stimuli, hedgerows will be planted on both sides of the public right of way (PROW) in alignment with the BGMP. The following details are provided to ensure proper implementation and long-term management:

Species mix

- 3.69 The hedgerows will be composed entirely of native which are appropriate to the local area. The proposed species mix includes:
- Hawthorn *Crataegus monogyna* – 40%
 - Blackthorn *Prunus spinosa* – 25%
 - Hazel *Corylus avellana* – 15%
 - Field Maple *Acer campestre* – 10%
 - Dog Rose *Rosa canina* – 5%
 - Holly *Ilex aquifolium* – 5%

- 3.70 The hedgerows will extend along both sides of the PROW. These hedgerows will form a natural screen to reduce visual and noise disturbance to Brent Geese utilising the adjoining fields.

Size at Planting

- 3.71 Plants will be supplied as bare-rooted whips between 40-60 cm in height. This size ensures rapid establishment while allowing for cost-effective planting across the full length of the PROW.

Implementation and Management Details Concerning Height

- 3.72 Implementation: Planting will take place during the dormant season (October to March) to ensure optimal establishment. Hedgerows will be planted in double staggered rows with 30 cm spacing between plants and 40 cm between rows to promote dense growth. The hedgerows will be protected with biodegradable guards to minimise damage from deer or rabbits.
- 3.73 Management: The hedgerows will be maintained at a height of 1.8 - 2.0m to ensure sufficient screening whilst ensuring the hedgerow remains dense and structured. Annual trimming will take place early autumn each year (September / early October) in order to

improve sight lines for the winter period. Any gaps that appear in the hedgerow will be replanted with the same native species to maintain the integrity of the hedgerow.

4. Future Habitat Management

Bird scaring

- 4.1 The land within the BGMP area has historically been subject to bird scaring initiatives as part of its use as productive agricultural land. These are very effective and have been in place as part of standard agricultural practices to dissuade species from causing damage to crops.
- 4.2 The scaring currently used within the BGMP area and wider agricultural land consists of visual and auditory deterrents.
- 4.3 As described above, all winter bird scaring initiatives will cease throughout the agreed wintering period in the overall mitigation area as well as the buffer zone (See Plan ECO) prior to the commencement of development. No scaring will take place in the period October – March inclusive. This period has been selected to ensure that scaring initiatives cease when wintering Brent Geese may choose to utilise the mitigation area. Bird scaring will be redeployed outside of the above period to facilitate the establishment and growth of crops. This is to assist with optimising the provision of forage resources in the lead up to each forthcoming winter period.
- 4.4 This lack of scaring will be relevant to the whole of the overall mitigation area, a total of approximately 24.48ha of land (which is contiguous with the SPA / Ramsar site).
- 4.5 In addition to the cessation of bird scaring within the BGMP land, a 100m buffer zone will be established around the BGMP. Within this buffer, no forms of bird scaring, including acoustic, visual or other bird scaring devices will be permitted to ensure that wintering geese in the BGMP area are not disturbed. This buffer has been determined based on calculations provided by 24 Acoustics, which demonstrated that noise from bird scarers can adversely impact geese at distances shorter than this.
- 4.6 The buffer zone and restrictions on bird scaring devices have been agreed upon to optimise noise reduction. Bird scaring devices on the Adjoining Land (defined as any land within the red line of the plan in Appendix 8, but outside of the BGMP Land and Buffer zone, edged yellow) are required to follow strict noise guidelines, ensuring that their positioning and operation minimise the impact on the BGMP.
- 4.7 Under this agreement the Adjoining Land can only use acoustic bird scaring devices with a maximum noise output of 109db, measured at 1m from the device. Furthermore, these devices must be oriented away from the BGMP from October to March (inclusive) to avoid noise intrusion into the mitigation area. Devices must also be fitted with baffles to reduce the potential for noise reflecting back into the mitigation area.
- 4.8 These restrictions are supported by the noise assessment provided by 24 Acoustics (Appendix 7), which evaluates the noise levels generated by bird scaring devices and

provides guidance on the minimum buffer zone required to maintain sound levels below 69 dB at the BGMP boundary.

Grassland

- 4.9 The measures detailed below are proposed for the period following the initial creation / establishment phase (from the second full growing season):
- 4.10 Cutting will be undertaken in early spring and autumn, avoiding impacts on breeding birds and plant flowering seasons;
- 4.11 Cutting will be undertaken to maintain a sward height of 5 to 10cm during September and/or October;
- 4.12 At some boundary locations, cutting will be undertaken on rotation to maintain longer grassland over the winter period in order to provide shelter for over-wintering faunal species; and
- 4.13 In order to avoid disturbance of Brent Geese no cutting will be undertaken during the period October – March, inclusive.
- 4.14 Re-seeding will be undertaken in areas where seeding has failed. If evidence suggests that planting has failed due to water inundation / water-logging, then only a seed mixture suited to such conditions will be applied that also offers suitable foraging for Brent Geese. It is, however, considered that Rye Grass / Clover is appropriate in such situations.

Arable Crops

- 4.15 The yields of crops on any given year will be monitored to assess the productivity of the land. Where the strategy is considered to have resulted in a noticeable decrease in productivity (outside of impacts resultant from Brent Geese foraging), the cropping regime will be reviewed.
- 4.16 Cover crops will be maintained in good condition with respect to the foraging preferences of Brent Geese include managing sward height and vegetative ground cover and in line with the parameters set out at paragraph 3.9. where applicable.
- 4.17 Rotation cycles will provide a balance between cash crops (winter cereals, oilseed rape) and soil building practices (cover crops) while minimising pest and disease pressures. The implemented strategy will also consider soil health and nutrient cycling, thereby ensuring the long-term sustainability of delivering suitable foraging resources for Brent Geese. Whilst flexibility on the specifics of the cropping regime is needed to ensure the above can be delivered, any regime implemented will ensure that a crop agreed at paragraph 3.54 will be provided across arable land within the BGMP area.
- 4.18 Winter crops will be planted to ensure forage is available for the agreed winter period. The precise timing of planting will be dependent on environmental factors as planting too early can lead to excessive growth, which might increase the risk of crop damage over winter. Conversely, planting too late can result in insufficient establishment before the onset of

cold weather. Notwithstanding the above, the crop will be planted to ensure optimal growth with regard to providing winter foraging resource for Brent Geese.

- 4.19 Remedial actions will be considered subject to the detail of the apparent issues. However, where crops are failing regularly, consideration will be given to replacing cropping areas with alternative foraging resources (such as an alternative crop or Rye / Clover mix), with a focus on the overall availability and quality of foraging resources remaining similar after remedial actions are to be implemented.
- 4.20 It should be noted that improved grasslands with a Rye / Clover mix are typical of flood plain meadow grazing pastures and are resilient to damage from waterlogging. Furthermore, as stated above, it is recognised that providing areas of rye and clover grassland cover is of greater value from an energetics perspective given the greater biomass of foraging resource. On this basis, it is considered that such an approach can be effective to ensure no net loss of foraging resources. Indeed, the provision of such vegetation will, by virtue of the greater biomass provided, deliver increased resources from an energetics perspective.
- 4.21 It is acknowledged that farming is highly dependent on favourable weather conditions at key stages in the farming calendar. In some years it may be the case that conditions do not allow the management plan to be carried out in full. Such conditions include, but not limited to, extended period of drought or rainfall, that may affect the establishment and/or health of crops as well as access to and of treatments to the land. In addition, pests may affect crops, and subsequent treatments may necessitate management measures outside the agreed plan. This is accepted by all parties.

5. Triggers, Timings and Responsibilities

Triggers

- 5.1 The trigger for the implementation of measures set out within this BGMP is reliant on the timings of proposed development related to P/140/16/OUT. However, the measures within the BGMP will need to be fully established and wintering foraging habitat available for Brent Goose within the BGMP area prior to works commencing at the development site that result in any loss of winter foraging resources.

Timings

- 5.2 Consent of Reserved Matters of the Development Proposals P/153/21/RES was permitted in 2021. It is anticipated that the Discharge of Condition 30 will follow in Autumn 2024, with the expectation that the winter period 2024/25 will represent the first winter period where the BGMP will need to be fully implemented.
- 5.3 In light of the above, and assuming ADC have approved the discharge of condition 30, the mitigation area will be prepared in line with the contents of the BGMP by end of November 2024. On this basis the following timescales apply:

- Before the end of November 2024 (subject to the above):

- 5.4 Table 1 below includes a timetable for the implementation and ongoing management of works based on having the BGMP fully implemented for the 2024 wintering period.

Brent Goose Enhancement Measure	Works required	Timescale
Scrape creation	Excavation of scrapes and spreading of material	Completed. To be monitored annually.
Grassland seeding	Vegetation cut and overseeding with agreed seed mix within Habitat Enhancement Area	Between May - July 2025
Drainage improvements	Dredging of existing ditches	Existing ditch dredging complete, and will be monitored and dredged as necessary (but always prior to the start of October).
Sightline improvements	Scrub and hedgerow removal to open up views across the BGMP area	Completed
Cessation of bird scaring measures within the BGMP and 100m buffer.	removal / de-activation of bird scaring devices	Start of October 2024 (the agreed wintering period) and every winter thereafter for the duration of the mitigation plan.
Provision of demarcation posts for BGMP land and buffer area	Accurate positioning of posts to demarcate BGMP land and buffer area (see ECO for positions).	Prior to 1 st October 25 / the agreed winter period.
		To be completed on or before 30 November 2024. For the first 5 years, regular monitoring and watering will be undertaken to ensure adequate establishment. Monitoring and management will be carried out where necessary throughout the lifetime of the BGMP.
Screening of PROW	Both fencing and planting a screen to shield the PROW.	Replacement planting will be undertaken where necessary.
Arable land management	use of land for crop growing	Planted and cultivated as per paragraph 4.15, to cover agreed wintering period. Currently underway in line with current land use.

5.5 The management initiatives prescribed in this report will then be followed to ensure delivery of ecological benefits over subsequent years

5.6 Development works that remove available foraging habitat within the development site will not commence until the measures set out within the BGMP has been fully implemented for the next relevant wintering period.

Securing the mitigation measures

- 5.7 The measures described within this mitigation package are secured through an extant Section 106 obligation, which requires the measures (agreed through the discharge of this planning condition) to be implemented. The measures are to be implemented in perpetuity for the duration of the related development.
- 5.8 Any proposed amendments to this plan, whether temporary or permanent, will be formally submitted to the LPA for consultation and approval before being implemented.

Comparable Bird Mitigation Schemes

- 5.9 Other Brent Goose Mitigation schemes along the south coast have been brought to our attention, and we have undertaken a review of one nearby example to understand how our proposals compare.
- 5.10 The scheme in question is part of the application named Land South of Romsey Avenue Fareham – Ref: P/22/1864/RM. The land is an arable field with a consent for 225 new dwellings adjacent to the Portsmouth Harbour SPA. The site was recognised as a winter foraging site for Brent Geese and therefore the developer has been obligated to provide a “Bird Conservation Area Scheme”
- 5.11 The proposed Bird Conservation Area (BCA) (which was approved on 16th October 2023) sits within the red line boundary of the planning application and covers 42% of the total site, resulting in a 58% loss of foraging resource (see plan 1, Appendix 6)
- 5.12 The BCA was described by a senior ecologist at Fareham Borough Council as “satisfactory” and was ultimately deemed acceptable by Richard Wright (Planning Officer) and the Planning committee at Fareham Borough Council.
- 5.13 In contrast, our mitigation scheme significantly exceeds this standard, offering a more comprehensive and diverse range of habitats and resources for the Brent Geese. This precedent highlights that our proposal not only meets but surpasses the necessary requirements, providing a much-enhanced solution compared to similar developments.

Length of Delivery

- 5.14 The prescriptions are to be implemented for a period of 80 years (in perpetuity) following delivery, in line with the Section 106 obligation / Unilateral Undertaking.

Responsibilities

- 5.15 The responsibility for delivering the measures described in this report falls to the planning applicant / landowner, or any successor in title.

6. Ongoing Monitoring

- 6.1 The management and monitoring of this strategy will be undertaken by the landowner. Detailed records will be kept of the following (and which will be made available to ADC throughout the lifetime of the BGMP):
- Cropping Cycle (crops sown on each field);
 - Crop Yields (area of sown crops);
 - Any issues with crop provision (flooding, late sowing, pests etc.) and a brief explanation;
 - Hedgerow Establishment and Management (replacement of failed plants, length and location of vegetation cutting);
 - Ditch Works (length and location of maintenance works); and
 - General observations of goose activity over the winter months (Oct – March)
- 6.2 The records of the above will be provided in writing to the Local Planning Authority on years 1, 2, 3, 4 and 5 from the implementation of the plan and every 5 years thereafter for the lifetime of the BGMP. The submission will be made no later than the end of April for each preceding wintering period, and shall be accompanied by a monitoring report template, located at Appendix 4.
- 6.3 The information collected will inform of any requirements to implement remedial measures as set out within the BGMP. Photographic evidence of cropping will be provided to demonstrate that the resource has been successfully delivered. It should be noted that yields will be affected by Brent Goose foraging thereby reducing the overall yield. As such, reduced yields should be viewed as a marker of the overall strategy effectively delivering on its aims, subject to other related factors. As such, the focus of determining the effectiveness of strategy is focussed on monitoring of cropped area (in hectares).
- 6.4 An annual review meeting will be attended by ADC, the landowner and their ecologist for the first five years during the winter period. Should further meetings be required, these could be arranged at that time and scheduled accordingly. This meeting will assess the success of the scheme. A draft report template is included at Appendix 5 that includes the details to be recorded and submitted to the Local Planning Authority in line with the monitoring periods set out above.

7. References

- Vickery, J.A., & Gill, J.A. (1999). *Foraging strategies and habitat use of wintering Brent Geese*. Journal of Avian Biology.
- McKay, H., Milsom, T.P., Feare, C.J., et al. (2001). *The influence of cereal crop management on foraging Brent Geese*.
- Agro Business Consultants (Published Twice a Year). The Agricultural Budgeting and Costing Book.
- Nix, J. (Published Annually). The John Nix Pocketbook for Farm Management

DAVIES LANDSCAPE

Site Plan for the proposed development at the former Copper Mill, located on the site of the former Copper Mill.

The plan shows the layout of the site, including the proposed building footprint, parking areas, and landscaping. The site is bounded by the River Trent to the north and the A166 to the south.

Legend:

- Proposed Building Footprint
- Parking Areas
- Landscaping
- River Trent
- A166

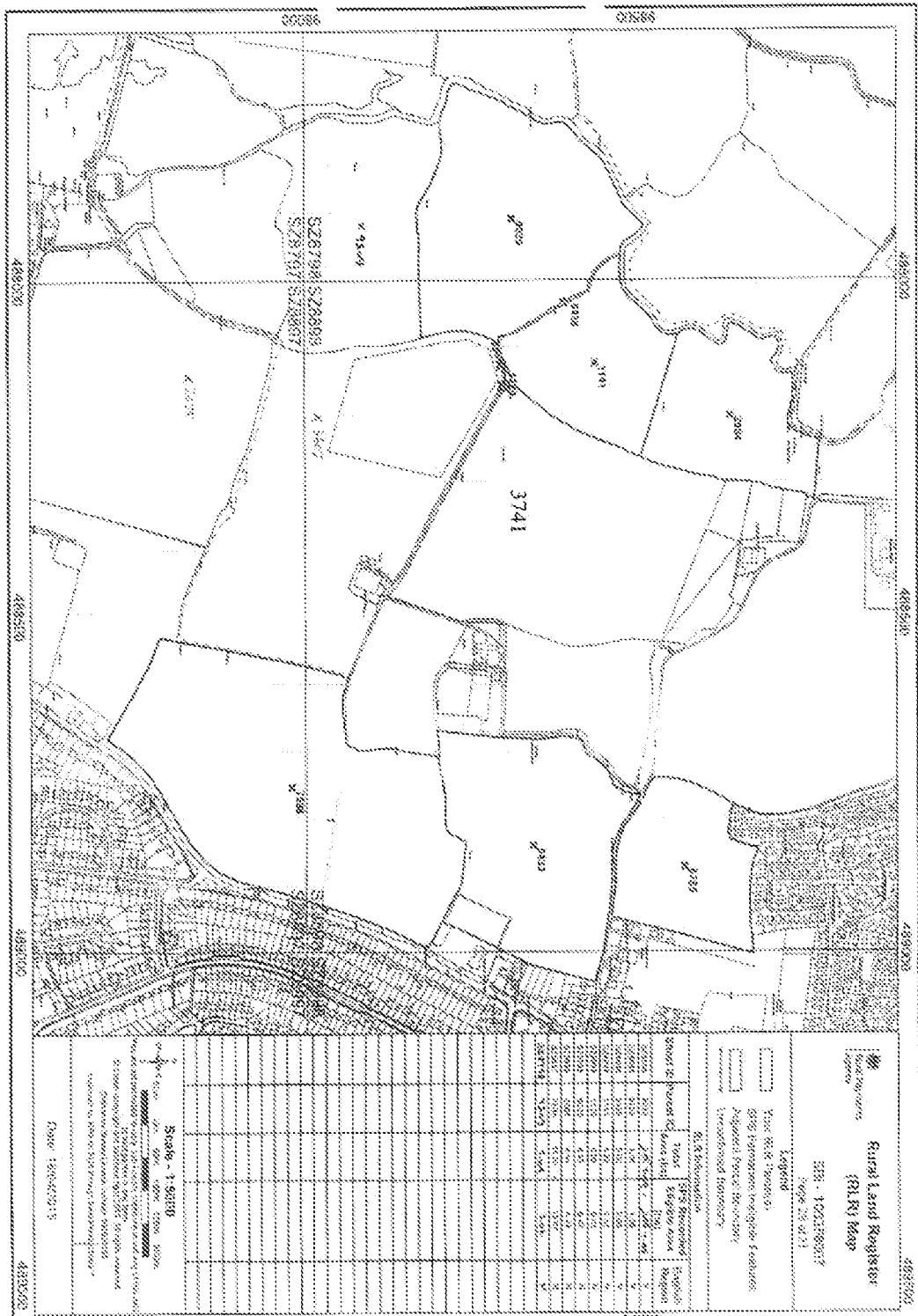
Table of Materials:

Material	Quantity
Gravel	1000 m³
Grass	1000 m²
Bricks	10000
Concrete	1000 m³
Timber	1000 m³

Table of Quantities:

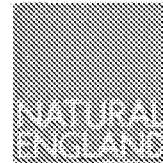
Quantity	Unit
1000	m³
1000	m²
10000	
1000	m³
1000	m³

please return the sheet to us if you want to make any changes to the purchase sheet or if



Appendix 1 Letter from Natural England Dated 23rd November 2017

Date 23 November 2017
Our ref: DAS/10602/230714
Your ref: Land 3 of Summer Lane, Pagham



Karl Goodburn
Ecology Solutions Ltd
Farncombe House
Farncombe Estate
Broadway
Worce WR12 7LJ

Customer Services
Hornbeam House
Crewe Business Park
Electra Way
Crewe
Cheshire
CW1 5GJ

BY EMAIL ONLY

Dear Karl

Discretionary Advice Service (Charged Advice)
DAS/10602/230714

Development proposal and location: Housing development on land south of Summer Lane, Pagham, West Sussex

Thank you for your consultation on the above dated 06 November 2017, which was received on the same date.

This advice is being provided as part of Natural England's Discretionary Advice Service. Ecology Solutions Ltd has asked Natural England to provide advice upon:

- Precautionary mitigation and avoidance measures in relation to loss of brent goose foraging habitat
- Appropriate mechanisms to deliver the mitigation/avoidance measures

This advice is provided in accordance with the Quotation and Agreement dated 10 November 2017.

The following advice is based upon the information provided at the meeting held on 13 November, including draft maps indicating potential areas for habitat creation. This advice builds on that contained in the letter dated 29 June 2016 (DAS/10602/187760), but does not repeat the advice given previously.

Advice on precautionary mitigation proposals:

- In principle, the location of the proposed habitat mitigation is acceptable, as it is closer to Pagham Harbour Special Protection Area (the SPA) than the Pagham South allocation site. Therefore, if suitable foraging habitat is provided in this location, it should be preferred to the Pagham South site from a goose energetics point of view.
- A combination of wet grassland and arable foraging habitat creation is acceptable, provided that bird scaring techniques are not employed. The arable field should either be in permanent winter cereal cultivation, or with clover introduced into the rotation.
- The wet grassland should be managed to provide optimum foraging habitat for brent geese, by maintaining a scrub-free, relatively short sward (see for example Hassall *et al* 2001¹). Scrapes should be created to provide permanent standing water, as studies in the Solent have found presence of water to be important. The grassland should be re-seeded, if necessary, with a

¹ Hassall, M., Riddington, R., Heiden, A. (2001) Foraging behaviour of brent geese, *Branta b. bernicla*, on grasslands: effects of sward length and nitrogen content. *Oecologia*, Vol. 127, Issue 1, P. 97-104

grassland mix incorporating clover, as this is a preferred food source²

- * In principle, the proposal to remove scrub and trees from the boundary ditch between the two fields to the north of the proposed habitat creation is acceptable. This will open up the sight lines and potentially make the fields more attractive to brent geese, when they are planted with a suitable crop. However, Natural England recommends that bird scaring techniques are not employed on these fields, to ensure that the work to improve sight lines is effective.
- * Advice from my land management colleague is that some light thinning of trees and scrub may be appropriate along the rife, but any more than that would be damaging on landscape and wider biodiversity grounds. Therefore, I recommend sight line work is focussed on the boundary ditch mentioned above.
- * The foraging habitat provided should not have access for people or dogs. The habitat proposed is acceptable in this respect as it is not bounded by any public footpaths/bridleways.
- * Justification of the area of permanent habitat provided in relation to the area of loss will need to be provided in order for Arun District Council to be able to assess the mitigation proposals. It is Natural England's view that a like for like area is not necessary as the Pagham South site is not planted with a suitable crop every year. For example, if the site is planted with winter wheat one year in three, in principle it could be replaced with an area of permanent habitat a third of the size. However, there will be a minimum field size that will be used by geese and the location of the replacement habitat is crucial. The proposed relatively small area of replacement habitat (though an actual area or ratio of habitat gain to loss was not available at the time of writing this letter) is only acceptable as it is located adjacent to the SPA, with open sight lines towards the SPA, creating a single enlarged area of permanent foraging habitat. In addition, the habitat creation is made acceptable by the inclusion of the suite of measures set out above.
- * The package of mitigation measures described above should be provided 'in perpetuity'. In practice, this is being defined as 80 years for the strategic approach to mitigating recreational disturbance. Therefore, the same timeframe should be used for the precautionary foraging habitat mitigation.
- * In conclusion, my view is that the package of mitigation measures described above would be sufficient to avoid a likely significant effect on the SPA from the loss of potential foraging habitat as a result of the application to develop on land south of Summer Lane, Pagham.

Advice on delivery mechanisms:

- * Arun District Council's advice should be sought on the approach to mitigation being proposed, and on the design of planning conditions to allow the desired flexibility. However, my view is that a Grampian condition to secure the area of habitat creation discussed above would be acceptable.
- * At the meeting on 13 November, we discussed the applicant's wish for flexibility in habitat creation, for example the ability to switch from the proposal discussed above, to paying into an alternative area if a strategic approach to providing alternative habitat is put in place. This may be acceptable, provided that Arun DC could devise an appropriate planning condition. However, I am not aware of any other proposals for goose foraging habitat creation that the applicant could contribute to in the foreseeable future. Arun DC will have to assess the acceptability of the mitigation proposed under the Habitats Regulations, therefore, they will have to be certain that the proposals will remove the risk of a likely significant effect on the SPA. As noted above, this certainty is dependent on the location of the habitat provided. Therefore, my recommendation would be to condition the current proposal, and for the applicant to seek a variation in the condition if an alternative became available in the future.
- * At the 13 November meeting, we also discussed phasing of mitigation delivery. My view is that

² McKay, HV; Milson, TP; Fearn, CJ; et al. (2001) Selection of forage species and the creation of alternative feeding areas for dark-bellied brent geese *Branta bernicla bernicla* in southern UK coastal areas. *Agriculture Ecosystems & Environment* Vol. 84 Issue 2 p. 99-113

the alternative habitat should be provided upon commencement of building works, as this is when the impact, ie loss of habitat, occurs. As we do not have survey data showing locations of foraging geese (because the mitigation is being provided on a precautionary basis due to brent goose sightings by local residents), we cannot say that one part of the application site is more important to geese than another. Therefore, it is not possible to say that a particular part of the site can be developed before replacement habitat needs to be provided. As the mitigation measures are relatively simple and straightforward, I would advise carrying them out at or before commencement (subject to seasonal constraints, eg vegetation clearance must be carried out outside the bird breeding season).

- My view is that provided the broad parameters are set out at this stage, and the precise location agreed, a detailed management plan for the mitigation proposals could form reserved matters.

For clarification of any points in this letter, please contact Alison Giacomelli on 0208 225 7683

This letter concludes Natural England's Advice within the Quotation and Agreement dated 10 November 2017.

commercialservices@naturalengland.org.uk

As the Discretionary Advice Service is a new service, we would appreciate your feedback to help shape this service. We have attached a feedback form to this letter and would welcome any comments you might have about our service.

☒ The advice provided in this letter has been through Natural England's Quality Assurance process

The advice provided within the Discretionary Advice Service is the professional advice of the Natural England adviser named below. It is the best advice that can be given based on the information provided so far. Its quality and detail is dependent upon the quality and depth of the information which has been provided. It does not constitute a statutory response or decision, which will be made by Natural England acting corporately in its role as statutory consultee to the competent authority after an application has been submitted. The advice given is therefore not binding in any way and is provided without prejudice to the consideration of any statutory consultation response or decision which may be made by Natural England in due course. The final judgement on any proposals by Natural England is reserved until an application is made and will be made on the information then available, including any modifications to the proposal made after receipt of discretionary advice. All pre-application advice is subject to review and revision in the light of changes in relevant considerations, including changes in relation to the facts, scientific knowledge/evidence, policy, guidance or law. Natural England will not accept any liability for the accuracy, adequacy or completeness of, nor will any express or implied warranty be given for, the advice. This exclusion does not extend to any fraudulent misrepresentation made by or on behalf of Natural England.

Yours sincerely

Alison Giacomelli
Specialist Services and Programmes

Annex 1 **European Protected Species**

A licence is required in order to carry out any works that involve certain activities such as capturing the animals, disturbance, or damaging or destroying their resting or breeding places. Note that damage or destruction of a breeding site or resting place is an absolute offence and unless the offences can be avoided (e.g. by timing the works appropriately), it should be licensed. In the first instance it is for the developer to decide whether a species licence will be needed. The developer may need to engage specialist advice in making this decision. A licence may be needed to carry out mitigation work as well as for impacts directly connected with a development. Further information can be found in Natural England's ['How to get a licence'](#) publication.

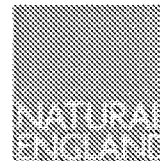
If the application requires planning permission, it is for the local planning authority to consider whether the permission would offend against Article 12(1) of the Habitats Directive, and if so, whether the application would be likely to receive a licence. This should be based on the advice Natural England provides at formal consultation on the likely impacts on favourable conservation status and Natural England's guidance on how the three tests (no alternative solutions, imperative reasons of overriding public interest and maintenance of favourable conservation status) are applied when considering licence applications.

Natural England's pre-submission Screening Service can screen application drafts prior to formal submission, whether or not the relevant planning permission is already in place. Screening will help applicants by making an assessment of whether the draft application is likely to meet licensing requirements, and, if necessary, provide specific guidance on how to address any shortfalls. The advice should help developers and ecological consultants to better manage the risks or costs they may face in having to wait until the formal submission stage after planning permission is secured, or in responding to requests for further information following an initial formal application.

The service will be available for new applications, resubmissions or modifications – depending on customer requirements. More information can be found on [Natural England's website](#).

Appendix 2 Consultation Response from Natural England dated 18th April 2023

Date: 18 April 2023
Our ref: 417052
Your ref: P/168/22/DOC



Customer Services
Hornbeam House
Crewe Business Park
Electra Way
Crewe
Cheshire
CW1 8GU

David Easton
Arun District Council
Civic Centre
Littlehampton
West Sussex
BN17 5LF

BY EMAIL ONLY

Dear Mr Easton

Planning consultation: Approval of details reserved by condition imposed under ref P/140/16/OUT

Location: Land West of Pagham Road and South of Summer Lane, Pagham.

Thank you for your consultation on the above dated 16 December 2022 which was received by Natural England on 16 December 2022.

Natural England is a non-departmental public body. Our statutory purpose is to ensure that the natural environment is conserved, enhanced, and managed for the benefit of present and future generations, thereby contributing to sustainable development

SUMMARY OF NATURAL ENGLAND'S ADVICE

FURTHER INFORMATION REQUIRED TO DETERMINE IMPACTS ON DESIGNATED SITES

As submitted, the Discharge of Condition 30 could have potential significant effects on Pagham Harbour Site of Special Scientific Interest, Special Protection Area (SPA) and Ramsar site. Natural England requires further information in order to determine the significance of these impacts and the scope for mitigation.

The following information is required:

- A cropping regime of the whole site that demonstrates that a sufficient area of alternative foraging opportunities will be provided, and confirmation that appropriate crops will be planted on the site.
- A management plan outlining how the mitigation site and the crops within it will be managed and monitored in perpetuity, which should also include details outlining when and how remedial works will occur if they are required. We would advise that any intervention and/or remedial works should be reflective of the need to ensure that a like for like foraging resource is available for Brent Geese in perpetuity.
- Clarity as to how the provision of new drains that appear to be hydrologically connected to Pagham Harbour will not result in an increased flood risk and inundation of the crops.

Please re-consult Natural England once this information has been obtained

In addition, we would also advise that:

- The cessation of bird scoring activities should be extended to October – March (inclusive)

- in order to ensure that Brent Geese that either arrive early, or leave late, are not affected.
- In addition to details of how the cropping regime for the mitigation site will be managed and monitored in perpetuity. Your authority should consider how the mitigation site will be appropriately enforced in order to ensure that the mitigation site maintains its functionality as a suitable foraging habitat for Brent Geese.

Natural England's further advice on designated sites/landscapes and advice on other issues is set out below.

Additional Information Required

The term functionally linked land (FLL) can be described as an area of land or sea that occurs outside of the boundaries of a designated site (such as Pagham Harbour SPA and Ramsar site), but nonetheless is considered to be either critical to or necessary for, the ecological or behavioural functionality of a qualifying feature for which that site has been designated. Therefore, when considering the potential impacts to designated sites associated with a proposed plan/project, consideration should also be given to whether the proposed site can be determined as being FLL or not, and whether there will be any potential impacts to FLL or not.

Having read the consultation letter submitted by Pagham Parish Council, Natural England recognises the work that has already been undertaken by the applicant and their efforts thus far to deliver an effective mitigation scheme. We would also reiterate our willingness to work closely with the applicant and your authority, to ensure that mitigation for Brent Geese is delivered effectively, whilst also potentially providing additional ecological benefits to other interest features of the Pagham Harbours designated sites.

During the consultation phase for the Outline planning application (P/140/16/OUT), Natural England provided ecological advice relating to the potential impacts and necessary mitigation required to address any potential adverse effects to Dark-bellied Brent Geese associated with the Pagham Harbour SPA and Ramsar site, that are understood to use the development site (our ref: 237833 13th February 2018 & 259977 18th October 2018). It is understood that the off-site measures discussed within these responses are to be secured and delivered through the discharge of Condition 36 attached to P/140/16/OUT, and that these measures include but are not limited to, off-site permanent habitat enhancements, ensuring there are appropriate sight lines, cessation of bird scaring activities and a commitment to planting winter cereals at an appropriate frequency and rotation.

In addition to securing these measures via a planning condition, your authority also considered them as part of an appropriate assessment (October 2018) and concluded that the measures contained within it were required to conclude that there would be no adverse effect on the integrity of the Pagham Harbour SPA and Ramsar site. In order to maintain that conclusion at this stage of the planning process, Natural England would strongly advise that any measures and supporting information that has been provided as part of this discharge of condition application, should allow your authority to determine beyond all reasonable scientific doubt that the proposed mitigation plan will deliver a functioning and viable area of alternative FLL for the Brent Geese.

Whilst the level of detail provided within the Brent Geese Mitigation Plan (BGMP 2017) was appropriate for the Outline stage of the application (with delivery of the mitigation subsequently secured by Condition 36). We believe that the level of detail provided in the most recently submitted BGMP (December 2022) is currently insufficient to demonstrate that an adverse effect on the integrity of the Pagham Harbours designated sites can be mitigated for – in perpetuity – due to the insufficient evidence and certainty provided within the BGMP (December 2022). It is also our opinion that in some instances it is also unapparent as to how the BGMP has been updated since the 2017 version of this document was submitted and how all of our previous advice has been incorporated into the design of the off-site mitigation land. As such, we would advise that Condition

30 should not be discharged at this stage. Further detailed advice relating to the greater detail that we believe is required to discharge Condition 30 is outlined below.

Habitat management

As outlined within our previous response (our ref: 259977, 18th October 2018) it is stated that 'the habitat management plan should set out the grassland/crop to be planted over the whole of the 18.5ha area, with the objective of maintaining the same amount of foraging resource as will be lost to the application site' and then goes on to say 'a greater area of either grassland or winter cereal/clover, than currently proposed (i.e., greater than 5ha) will be required to maintain the foraging resource'.

However, having reviewed Plan ECO2 within the current BGMP it is our view that the area labelled on the map as 'mitigation area with rye grassland/clover cover crop' does not currently appear to provide an area greater than 5ha, nor does it set out how the 18.5ha site will be planted in order to meet the objective of maintaining the same amount of foraging resource for the whole application site. It therefore remains our view that in order to avoid an adverse effect on the integrity of the Pagham Harbour SPA and Ramsar site, that the BGMP needs to ensure that there is no net loss in the availability of foraging resources available to the Brent Geese outside of the designated sites.

In order to demonstrate how the applicant intends to ensure that there is no net loss in the availability of foraging resources, we would advise that, as per our previous advice (our ref: 259977) the applicant should produce a cropping regime that demonstrates how the whole 18.5ha site will be appropriately cropped in any given year. We would also recommend that the southernmost field should also include winter wheat within the cropping regime (as previously suggested within the 2017 version of the BGMP), rather than just perennial rye grassland/clover cover crop as currently proposed.

As with any means of mitigation required to avoid an adverse effect on the integrity of a designated site, it is our view that mitigation should be secured in perpetuity, and in order to guarantee this, that where applicable, measures should be maintained and monitored for the lifetime of the development. Natural England recognises that the mitigation measures are to be secured through a S106 obligation, but it is our view that insufficient information pertaining to the future management of these measures has been provided. Point 4.5 of the BGMP states that 'the responsibility for delivering the measures described in this report falls to the planning applicant / landowner, or any successor in title' and that 'where appropriate Ecology Solutions would continue to advise in relation to such matters, during the implementation phase and in respect of future management'.

Nonetheless, it remains ambiguous as to who bears responsibility for the management of the foraging resources and ensuring that the fields remain within an appropriate regime, and as such, whether responsibility for the perpetual management of these measures can in fact be appropriately implemented. We would advise that there should be further clarity as to who shall be managing the site, and that a named organisation/individual should be identified for this purpose. We would also advise your authority, that you should consider how this mitigation measure will be appropriately and robustly enforced, to ensure that the mitigation is being delivered effectively as planned, in perpetuity.

Natural England welcomes the commitment within Point 3.4 of the BGMP to re-seed the grassland in the event of seeds failing (it should however be noted, that it is not explicitly stated what they shall be re-seeded with, however it is understood to be the seed mix outlined within Point 2.37). However, in the event of evidence indicating that the seed mixture is failing to due to flooding and water-logging, it is stated that a seed mixture such as Emorsgate EG8 will be used instead. Given the absence of Clover and Perennial Rye-grass within this mix (which collectively make up 50% of the seed mix described in Point 2.37), there is a risk that the foraging value provided by seeding with Emorsgate EG8 in lieu of a mix containing Clover and Perennial Rye-grass is seriously diminished. Given that the off-site land is required to ensure that there is no net loss in the availability of foraging resources available to the Brent Geese outside of the designated sites, it is not apparent as to how this ambition will be achieved in the absence of suitable crops being planted.

Site drainage and potential flooding of the site

Having reviewed the information available on the public planning portal, we are aware that Pagham Parish Council have provided photographic evidence of the mitigation sites during the winter months mostly inundated with water. It is also our understanding that the site sits wholly within the Flood Zone 3, and therefore has a high probability of flooding. With respect to the above points, there is a concern that the flooding of the site would lead to the Emorsgate EGS being deemed more 'appropriate' given the degree to which the site has been flooded and the conditions within it. However, it should be made clear that whilst we welcome some areas of permanent standing water within the site (such as those offered by the scrapes), the extent to which the site appears to have flooded raises question as to how it will be possible to achieve an appropriate cropping regime that includes Clover and Perennial Rye-grass.

It is currently recognised within the BGMP that drainage is required in order to address the issues associated with waterlogging during the winter period (Point 2.3), and that some further information is provided within Points 2.31 – 2.36 relating to how this is intended to be addressed. Nonetheless, it is our view that there is very little by way of detail within these points with regard to how the water will be drained away from the site, and how the provision of new drainage channels – that appear hydrologically connected to Pagham Harbour, yet do not appear to include any water control structures – will not inadvertently allow a greater influx of water in to the site. We would advise that further information outlining how water levels within the site will be appropriately managed in order to ensure the viability of a cropping regime that supports the Brent Geese should be provided.

Cessation of bird scaring activities

Despite the belief that further information needs to be provided in respect of a number of topics, we welcome the inclusion within the BGMP to cease bird scaring activities across the whole 18.5ha site. With regard to the cessation of winter scaring initiatives, we would however recommend that this cessation of bird scaring activities is extended to any and all measures that are designed to intentionally scare or displace birds from the whole 18.5ha mitigation site, rather just those included within the BGMP. We would advise that the period during which scaring measures are not permitted to take place should also be extended beyond October – February, to October – March (inclusive) in order to ensure that any Brent Geese that arrive – or remain on-site – during this period are not deterred from using the site.

Appropriate assessment considerations

Given the interconnectivity between the mitigatory measures associated with Condition 36 and your authority's conclusion that there is no adverse effect on integrity associated with the granting of planning permission for P/140/16/OUT, we would advise that the measures described within the BGMP should be considered in the same vein as an appropriate assessment. As such, we would reiterate that any and all mitigation required to avoid an adverse effect on integrity on the Pagham Harbour designated sites should be implemented prior to the commencement of development.

Brent Geese that are associated with the Pagham Harbour designated sites are not isolated to Pagham Harbour, but instead are likely to be supported by a wider network of different sites across the Solent for both roosting and foraging opportunities during their lifetime. Therefore, it may be that there are instances wherein they use alternative sites within the wider network, rather than the one being provided as part of this application. Nonetheless, we would still recommend that it should be clearly demonstrated that the conditions required to deliver a like-for-like area of functionally linked land – that is due to be lost to the proposed development – are actually achieved in practice.

In addition to ensuring that the required measures are in place prior to development commencing, we would strongly advise that the BGMP and any other management plans relating to mitigatory

measures should include a monitoring regime that assesses the ecological functioning of the off-site mitigation area (i.e. adequate food availability/foraging habitat as outlined in points a, b and c of condition 5B).

Whilst we appreciate that there are factors outside of the applicant's control that may affect the perceived efficacy of the proposed mitigation measures, we advise that there is insufficient consideration of the proposed measures and how the mitigation will be suitably managed in perpetuity (i.e. beyond the immediate implementation of the mitigation). For example, we would strongly support the inclusion of details within the BGMP pertaining to how failures of crops – or decline in potential yields – will be addressed, in order to ensure that a like for like foraging resource can be maintained – and continue to be attractive to Brent Geese – in perpetuity.

It is recognised that crop yields may naturally vary from year to year, however we would nonetheless advise that any intervention and/or remedial works required to address a decline in crop yields should be based upon whether the cropping regime is consistently failing to provide equal calories (on average) to those lost to the proposed development.

Given the importance of the off-site area in delivering a core component of the mitigation agreed and assessed as part of your appropriate assessment under P/140/16/OUT, we would advise that your authority should be satisfied that there are appropriate – and enforceable – mechanisms in place to ensure that any measures intended to maintain the suitability of the off-site mitigation area are delivered and monitored in perpetuity. Additionally, there should be mechanisms to ensure that any decline in on-site conditions will be resolved if necessary (in an appropriate and timely manner), in order to ensure and maintain no net loss of suitable foraging habitat for Brent Geese.

Please note that if your authority is minded to grant planning permission contrary to the advice in this letter, you are required under Section 281 (6) of the Wildlife and Countryside Act 1981 (as amended) to notify Natural England of the permission, the terms on which it is proposed to grant it and how, if at all, your authority has taken account of Natural England's advice. You must also allow a further period of 21 days before the operation can commence.

Further general advice on the protected species and other natural environment issues is provided at Annex A.

If you have any queries relating to the advice in this letter please contact me at

Please consult us again once the information requested above, has been provided.

Yours sincerely

Luke Hasler
Sussex & Kent Area Team

Annex A – Additional advice

Natural England offers the following additional advice:

Landscape

Paragraph 174 of the [National Planning Policy Framework \(NPPF\)](#) highlights the need to protect and enhance valued landscapes through the planning system. This application may present opportunities to protect and enhance locally valued landscapes, including any local landscape designations. You may want to consider whether any local landscape features or characteristics (such as ponds, woodland, or dry-stone walls) could be incorporated into the development to respond to and enhance local landscape character and distinctiveness, in line with any local landscape character assessments. Where the impacts of development are likely to be significant, a Landscape & Visual Impact Assessment should be provided with the proposal to inform decision making. We refer you to the [Landscape Institute Guidelines for Landscape and Visual Impact Assessment](#) for further guidance.

Best and most versatile agricultural land and soils

Local planning authorities are responsible for ensuring that they have sufficient detailed agricultural land classification (ALC) information to apply NPPF policies (Paragraphs 174 and 175). This is the case regardless of whether the proposed development is sufficiently large to consult Natural England. Further information is contained in [GOV.UK guidance](#). Agricultural Land Classification information is available on the [Magic](#) website on the [Data.gov.uk](#) website. If you consider the proposal has significant implications for further loss of 'best and most versatile' agricultural land, we would be pleased to discuss the matter further.

Guidance on soil protection is available in the Defra [Construction Code of Practice for the Sustainable Use of Soils on Construction Sites](#), and we recommend its use in the design and construction of development, including any planning conditions. For mineral working and landfilling separate guidance on soil protection for site restoration and aftercare is available on [Gov.uk](#) website. Detailed guidance on soil handling for mineral sites is contained in the Institute of Quarrying [Good Practice Guide for Handling Soils in Mineral Workings](#).

Should the development proceed, we advise that the developer uses an appropriately experienced soil specialist to advise on, and supervise soil handling, including identifying when soils are dry enough to be handled and how to make the best use of soils on site.

Protected Species

Natural England has produced [standing advice](#)¹ to help planning authorities understand the impact of particular developments on protected species. We advise you to refer to this advice. Natural England will only provide bespoke advice on protected species where they form part of a Site of Special Scientific Interest or in exceptional circumstances.

Local sites and priority habitats and species

You should consider the impacts of the proposed development on any local wildlife or geodiversity sites, in line with paragraphs 175 and 179 of the NPPF and any relevant development plan policy. There may also be opportunities to enhance local sites and improve their connectivity. Natural England does not hold locally specific information on local sites and recommends further information is obtained from appropriate bodies such as the local records centre, wildlife trust, geoconservation groups or recording societies.

Priority habitats and Species are of particular importance for nature conservation and are included in the England Biodiversity List published under section 41 of the Natural Environment and Rural Communities Act 2006. Most priority habitats will be mapped either as Sites of Special Scientific Interest, on the Magic website or as Local Wildlife Sites. List of priority habitats and species can be found on [Gov.uk](#).

Natural England does not routinely hold species data, such data should be collected when impacts on priority habitats or species are considered likely. Consideration should also be given to the potential environmental value of brownfield sites, often found in urban areas and former industrial land, further information including links to the open mosaic habitats inventory can be found [here](#).

Ancient woodland, ancient and veteran trees

You should consider any impacts on ancient woodland and ancient and veteran trees in line with paragraph

¹ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/614441/standing-advice-on-protected-species.pdf

Annex A – Additional advice

180 of the NPPF. Natural England maintains the Ancient Woodland [Inventory](#) which can help identify ancient woodland. Natural England and the Forestry Commission have produced [standing advice](#) for planning authorities in relation to ancient woodland and ancient and veteran trees. It should be taken into account by planning authorities when determining relevant planning applications. Natural England will only provide bespoke advice on ancient woodland, ancient and veteran trees where they form part of a Site of Special Scientific Interest or in exceptional circumstances.

Environmental gains

Development should provide net gains for biodiversity in line with the NPPF paragraphs 174(d), 179 and 180. Development also provides opportunities to secure wider environmental gains, as outlined in the NPPF (paragraphs 8, 73, 104, 120, 174, 175 and 180). We advise you to follow the mitigation hierarchy as set out in paragraph 180 of the NPPF and firstly consider what existing environmental features on and around the site can be retained or enhanced or what new features could be incorporated into the development proposal. Where onsite measures are not possible, you should consider off site measures.

Opportunities for enhancement might include:

- Restoring a neglected hedgerow.
- Creating a new pond as an attractive feature on the site.
- Planting trees characteristic to the local area to make a positive contribution to the local landscape.
- Using native plants in landscaping schemes for better nectar and seed sources for bees and birds.
- Incorporating swift boxes or bat boxes into the design of new buildings.
- Designing lighting to encourage wildlife.
- Adding a green roof to new buildings.

Natural England's [Biodiversity Metric 3.1](#) may be used to calculate biodiversity losses and gains for terrestrial and intertidal habitats and can be used to inform any development project. For small development sites the [Small Sites Metric](#) may be used. This is a simplified version of [Biodiversity Metric 3.1](#) and is designed for use where certain criteria are met. It is available as a beta test version.

Natural England's [Environmental Benefits from Nature tool](#) may be used to identify opportunities to enhance wider benefits from nature and to avoid and minimise any negative impacts. It is designed to work alongside [Biodiversity Metric 3.1](#) and is available as a beta test version.

Green Infrastructure

Natural England's [Green Infrastructure Framework](#) provides evidence-based advice and tools on how to design, deliver and manage green infrastructure (GI). GI should create and maintain green liveable places that enable people to experience and connect with nature, and that offer everyone, wherever they live, access to good quality parks, greenspaces, recreational, walking and cycling routes that are inclusive, safe, welcoming, well-managed and accessible for all. GI provision should enhance ecological networks, support ecosystems services and connect as a living network at local, regional and national scales.

Development should be designed to meet the [15 Green Infrastructure Principles](#). The Green Infrastructure Standards can be used to inform the quality, quantity and type of green infrastructure to be provided. Major development should have a GI plan including a long-term delivery and management plan. Relevant aspects of local authority green infrastructure strategies should be delivered where appropriate.

GI mapping resources are available [here](#) and [here](#). These can be used to help assess deficiencies in greenspace provision and identify priority locations for new GI provision.

Access and Recreation

Natural England encourages any proposal to incorporate measures to help improve people's access to the natural environment. Measures such as reinstating existing footpaths together with the creation of new footpaths and bridleways should be considered. Links to urban fringe areas should also be explored to strengthen access networks, reduce fragmentation, and promote wider green infrastructure.

Rights of Way, Access land, Coastal access and National Trails

Paragraphs 160 and 174 of the NPPF highlight the importance of public rights of way and access.

Annex A – Additional advice

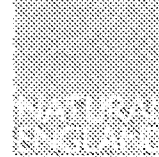
Development should consider potential impacts on access land, common land, rights of way and coastal access routes in the vicinity of the development. Consideration should also be given to the potential impacts on the any nearby National Trails. The National Trails website www.nationaltrail.co.uk provides information including contact details for the National Trail Officer. Appropriate mitigation measures should be incorporated for any adverse impacts.

Biodiversity duty

Your authority has a duty to have regard to conserving biodiversity as part of your decision making. Conserving biodiversity can also include restoration or enhancement to a population or habitat. Further information is available here.

Appendix 3 Consultation Response from Natural England dated 18th October 2018

Date: 18 October 2018
Our ref: 259977
Your ref: P/140/16/GUT



Claire Potts
Arun District Council
Maltravers Road
Littlehampton
West Sussex
BN17 5LF

Customer Services
Hembsay House
Cresse Business Park
Electra Way
Cresse
Oreham
CV11 2BU

BY EMAIL ONLY

Dear Claire

Planning consultation: Habitats Regulations Assessment (HRA) of the Outline application for access only - mixed use development comprising of up to 400 dwellings, a care home with up to 70 beds, a Local Centre comprising up to 2000sqm of A1/A2/A3/D1/ sui generis floorspace, provision of land for a 1FE primary school (with sufficient space to ensure that it is expandable to 2FE), provision of land for a scout hut, safeguarding of land to help link the site to the Pagham Harbour Cycle Route & other community uses including public open space & allotments with some matters reserved.

Location: Land South of Summer Lane & West of Pagham Road Pagham

Thank you for your consultation dated 24 September 2018, which was received by Natural England on the same date. Thank you for allowing additional time for us to respond.

Conservation of Species and Habitats Regulations, 2017, consultation under Regulation 63

Natural England is a non-departmental public body. Our statutory purpose is to ensure that the natural environment is conserved, enhanced, and managed for the benefit of present and future generations, thereby contributing to sustainable development.

SUMMARY OF NATURAL ENGLAND'S ADVICE

Natural England concurs with the HRA Report (EPR, September 2018) that the proposal is likely to have a significant effect on Pagham Harbour SPA/Ramsar through increased recreational disturbance, loss of supporting habitat, and water quality impacts, in combination with other plans or projects.

We agree with the conclusions of the Appropriate Assessment, that mitigation measures are available to avoid an adverse effect on the integrity of the SPA/Ramsar. However, our view is that to avoid an adverse effect on the integrity of the SPA/Ramsar there should be no net loss of functionally linked land. To achieve this, a greater area within the brent geese mitigation land needs to be planted with goose forage. Therefore, the detailed habitat management plan for the brent geese mitigation area must ensure no net loss of foraging resources, to enable Arun District Council to be certain that impacts on brent geese can and will be avoided.

Therefore, the following mitigation measures should be secured:

- * Financial contribution to the Pagham Harbour Strategic Access Management and Monitoring (SAMM) Strategy

- Greenspace totalling 2.92ha within the development site, managed to provide recreational space for people and their dogs. A costed management plan should be produced, with a suitable management company identified.
- Measures to minimise disturbance to brent geese foraging within fields adjacent to the application site.
- A detailed habitat management plan for the brent goose mitigation area should be produced, which sets out the habitat management over the whole 18.5ha area. This plan must ensure no net loss of foraging habitat available to brent geese. The plan should be costed and set out who will carry out the management work.
- Development should be phased to align with Southern Water's delivery of any necessary sewerage network reinforcement.
- A detailed surface water drainage strategy addressing both flood risk and water quality should be produced, including a management and maintenance plan, with a suitable management company identified.

We advise that appropriate planning conditions or obligation is attached to any planning permission to secure these measures.

Natural England has previously commented on the proposal for 400 dwellings on land south of Summer Lane, Pagham (the proposal) on a number of occasions, the latest being dated 13 February 2018. In this letter, we advised that the incorporated mitigation measures were sufficient to avoid a likely significant effect on Pagham Harbour Special Protection Area (SPA) and Ramsar site.

However, since this advice was given, the Court of Justice of the European Union (the CJEU) has published a ruling on the interpretation of the Habitats Directive in the case of *People Over Wind and Sweetman vs Coillte Teoranta* (ref: C-323/17). The case relates to the treatment of mitigation measures at the screening stage of a HRA when deciding whether an Appropriate Assessment of a plan/project is required. The Court's ruling went against established practice in the UK that mitigation measures can, to a certain degree, be taken into account at the screening (likely significant effect) stage.

In the light of this, we welcome the fact that your authority has engaged ecological consultants who have carried out a HRA of the proposal (the HRA Report), and which considers mitigation at the Appropriate Assessment stage. We provide the advice enclosed on the assumption that your authority intends to adopt this HRA to fulfil your duty as competent authority.

Screening of likely significant effects

Potential pathways for impacting Pagham Harbour SPA/Ramsar comprise disturbance to birds, loss of supporting habitat for foraging dark-bellied brent geese, and deterioration in water quality.

Disturbance

Natural England agrees with the conclusion, in paragraph 4.23 of the HRA Report, that disturbance impacts from the proposal, in combination with other plans or projects, are likely to have a significant effect on Pagham Harbour SPA/Ramsar.

Loss of supporting habitat

As stated in our letter of 13 February 2018, Natural England's view is that the records and anecdotal information submitted by Sussex Ornithological Society (SOS) and Pagham and Aldwick Greenfields Action Movement (PAGAM) demonstrate that brent geese use the application site and surrounding fields. We consider that this is sufficient to demonstrate that there is an impact pathway in terms of loss of supporting habitat, and therefore, a likely significant effect on the SPA/Ramsar.

The HRA of the Arun Local Plan concluded that an adverse effect on the integrity of the SPA/Ramsar could be avoided as the Plan required that further survey and assessment was carried

Water quality

Appropriate Assessment

Disturbance

Natural England's view is that the Strategic Access Management and Monitoring (SAMM) strategy is sufficient to address the impacts of recreational disturbance from the proposal in combination with other residential development proposed in the zone of influence of Pagham Harbour. Monitoring carried out as part of the Bird Aware Scheme project¹, which contains very similar mitigation measures, is demonstrating that their rangers are having a positive effect in reducing disturbance. We can, therefore, have confidence that financial contributions to a similar scheme for Pagham will also be effective.

In addition to financial contributions to the SAMM strategy, the applicant is providing 3.92ha of greenspace within the application site, in accordance with Policy ENV DM2 of the Arun Local Plan. As noted in our letter dated 13 February 2018, Natural England's view is that whilst on-site greenspace may take some daily dog walks, it will not replace visits to Pagham Harbour. However, as the greenspace is being provided as a mitigation measure under the Habitats Regulations, the mitigation needs to be suitably secured to meet the tests required by the Appropriate Assessment.

3. Storage and information

¹ Liley, D. & Pamer, C. (2017). First year results of monitoring bird disturbance around the Solent, in the presence/absence of rangers. <http://www.birdwatchuk.org/CMS/index.aspx?id=26773&id=0>

the on-site recreation space and inform them of the sensitivities of the Harbour and brent geese foraging. Details of the signage and information packs should be agreed at the reserved matters stage. Signage and information should be agreed with the SAMM Project steering group (made up of Arun and Chichester District Councils, Natural England and the RSPB). This is so that consistent messages are given on the application site and through the SAMM project.

4. Screening

The indicative layout of the proposal shows the onsite greenspace in the western part of the application site. Records show brent geese foraging in the fields to the west of the application site. Therefore there is a risk of disturbance to geese using the adjacent fields. To minimise this risk, the landscaping plan noted under point 2, above, should include details of thick hedging, reinforced by fencing, along the western boundary of the site.

Natural England's view is that the package of mitigation measures described above are sufficient to avoid an adverse effect on the integrity of Pagham Harbour SPA/Ramsar from recreational disturbance.

Loss of supporting habitat

As noted above, it is clear that brent geese make use of the application site. However, detailed counts are not available to enable the mitigation habitat to be designed to feed a particular number of geese. An alternative method is to calculate the energy provided by the arable cropping of the application site, and ensure the same amount of energy is provided within the mitigation area. Therefore, Natural England's view is that for Arun District Council to be certain that an adverse effect on the integrity of Pagham Harbour SPA/Ramsar will be avoided, the objective of the Brent Goose Mitigation Strategy must be to achieve no net loss of foraging resource.

As stated in our letter dated 13 February 2016, Natural England's view is that the proposed brent goose mitigation area is suitable in terms of its location as it represents an advantage over the application site in that it is closer to the roost, and undisturbed by footpaths. The letter went on to state that the creation of permanent pasture in the southernmost field, alongside winter wheat/clover in the west, is appropriate, but that a winter wheat crop in the eastern part of the field would be an improvement. Furthermore, the letter stated that the cessation of bird scaring activity over the 18.5ha mitigation area is only an improvement over the current situation if crops favoured by brent geese were not planted less frequently than currently. Therefore, we recommended that the Habitat Management Plan proposed for the mitigation area should include an agreed cropping regime for the fields outside the permanent habitat creation area, but within the area of cessation of bird scaring activities, and a commitment to planting winter cereals at an appropriate frequency in the rotation.

However, as mitigation measures must now be considered through an Appropriate Assessment, Natural England's advice is that your Authority must be certain that they will be deliverable and effective. Our view is, therefore, that the Habitat Management Plan should set out the grassland/crop to be planted over the whole of the 18.5ha area, with the objective of maintaining the same amount of foraging resource as will be lost to the application site. As more geese can forage on a given area of permanent pasture (as it supports a greater biomass and is available throughout the season) the arable lost can be replaced with a smaller amount of grassland. However, a greater area of either grassland or winter cereal/clover, than currently proposed (ie greater than 5ha) will be required to maintain the foraging resource².

The Habitat Management Plan should be costed and set out who will be carrying out the habitat management work. Provided that the Habitat Management Plan is required to ensure no net loss of

² Natural England is working with Bournemouth University and WWF Consulting on a wildflower energetics model. Initial calculations indicate that the calories provided by the area of winter wheat to be lost will not be replaced by the 5ha of permanent habitat in the mitigation area.

foraging resource. Natural England's view is that this will avoid an adverse effect on integrity from impacts on brant geese foraging on land outside the SPA/Ramsar.

Water quality

Regarding potential impacts from foul sewerage, Natural England would not accept an increase in the discharge consent for Pagham WwTW as this is likely to result in water quality impacts to Pagham Harbour SPA/Ramsar. Therefore, it is clear that not all the Pagham allocations in the Arun Local Plan can be accommodated at Pagham WwTW, and that improvements to existing sewerage infrastructure will be necessary. However, as the impact will not occur until first occupation, Natural England accepts that the proposed condition requiring that development is phased to align with Southern Water's delivery of sewerage network reinforcement is sufficient to ensure an adverse effect on the integrity of Pagham Harbour is avoided.

As the application documents stated that there was no direct hydrological link between the application site and the SPA/Ramsar, Natural England had not commented on any mitigation measures for surface water drainage. Nevertheless, as the applicant has committed to including Sustainable Drainage Systems (SuDS) in their scheme, we support the recommendation in paragraph 5.7 of the HRA Report. A detailed SuDS strategy should be required by planning condition, and which should include measures to address water quantity and quality. Natural England advises that this strategy should set out the management and maintenance requirements, and identify a suitable management company to carry out the work.

Therefore, Natural England's view is that provided the above mentioned conditions are attached to any planning permission, an adverse effect on integrity from water quality impacts will be avoided.

We would be happy to comment further should the need arise but if in the meantime you have any queries please do not hesitate to contact us.

For any queries relating to the specific advice in this letter only please contact Alison Giacomelli on [REDACTED] For any new consultations, or to provide further information on this consultation please send your correspondences to [REDACTED]

Yours sincerely

Alison Giacomelli
Sussex and Kent Area Team

Appendix 4 Example Monitoring Report Template

 5633, LAND WEST OF PAGHAM ROAD AND SOUTH OF SUMMER LANE,
 PAGHAM

BRENT GOOSE MITIGATION PLAN: MONITORING REPORT

1. The purpose of this report is to present the details of management and monitoring work undertaken as part of delivering the Brent Goose Mitigation Plan (BGMP) as secured under planning permission P140/16/OUT.
2. As set out within the BGMP, records will be provided to the Local Planning Authority on years 1, 2, 3, 4 and 5 from the implementation of the plan and every 5 years thereafter for the lifetime of the BGMP. The information collected will inform of any requirements to implement remedial measures as set out within the BGMP.
3. This report relates to monitoring undertaken in year:
4. The next monitoring report is due:
5. Confirmation that no bird scaring has taken place of the winter period (October- March inclusive)
6. Cropping Cycle implemented since start of BGMP / last report (fields reference and crop):
7. The date each field was planted / drilled:
8. Crop Yields since start of BGMP / last report:
9. Any issues with the crop provision (failure, pests, flooding etc)
10. Details of vegetation clearance to improve sight lines or grassland / hedgerow management (to include dates, locations, and lengths of vegetation removal or replanting):

11. Ditch / scrape management works (to include dates, locations, and lengths of vegetation removal):

--

12. General observations of Brent Goose usage of the BGMP area (estimated numbers, locations, dates observations were made):

--

13. Areas where Remedial Measures need to be adopted (provide details of any observed issues with the implementation of the BGMP and what remedial measures are proposed):

--

14. Other comments:

--

15. Please list any other supporting documentation / plans submitted as part of this report below:

--

Appendix 5 Brent Goose Mitigation Plan – Forage Availability



September 2014

Hanbury (PM) Ltd

**Land south of Summer Lane and west of Pagham
Road, Pagham**

Brent Goose Mitigation Plan – Forage Availability

Beechwood Court,
Long Tail, Woodroate,
RG8 0SZ

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5458 – Pagham Green Quercus Forage

1 Introduction

- 1.1 Reading Agricultural Consultants Limited (RAC) is instructed by Hanbury (PFA) Ltd to advise on the potential level of foraging resource available for Brent Geese provided from land to the west of Fagham for which outline planning permission was granted in November 2010 (reference P140/16/OUT) when compared to adjacent land that is proposed as mitigation site for foraging habitat for Brent Geese.
- 1.2 The full background to the creation of a defined Brent Goose mitigation area is set out in 'Brent Goose Mitigation Plan, Condition 30 Discharge Report', prepared by Ecology Solutions in September 2024.
- 1.3 The purpose of this instruction is to investigate whether the proposed mitigation site is capable of providing at least the same level of energy resource for Brent Geese over the winter period as the development site has done over the period of interest (which is referenced in the Brent Goose Mitigation Plan as 2011-2017).

2 Methodology

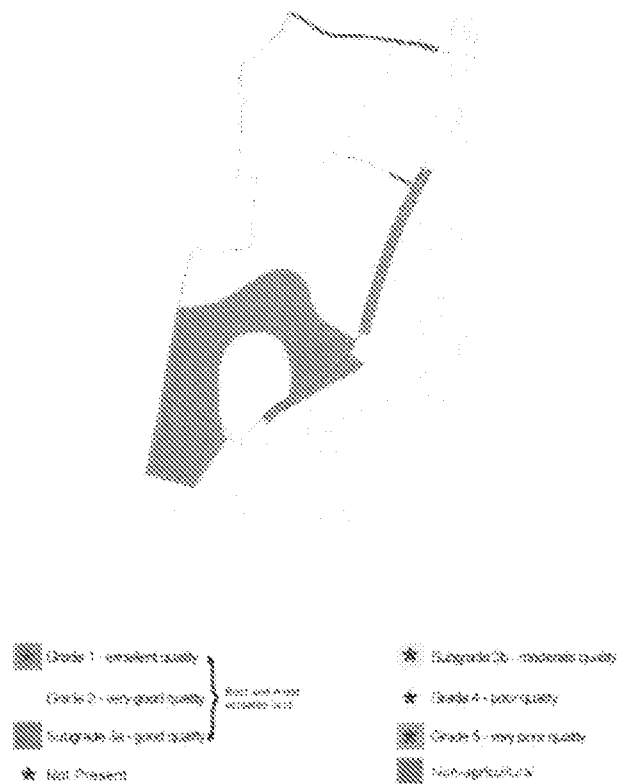
- 2.1 In order to measure the winter foraging resource provided on both sites, it is proposed to use crop yields, measured in tonnes per hectare, as the metric.
- 2.2 There is no measure available of the forage resource provided by a young cereal plant over the winter period. The only available quantitative data relates to crop yields and, whilst it is recognised that the crop yields themselves do not necessarily represent the level of food provided for the geese over winter, there is a clear correlation between a healthy and well established plant over winter and the resulting yield in the following summer.
- 2.3 There is also no historic yield data available for either the site proposed for development or the mitigation area. However, yield data is available from standard farm management handbooks, such as 'The Agricultural Budgeting and Costing Book', Agro-Business Consultants, which is published twice a year and the 'John Ilex Pocketbook for Farm Management', published annually. These provide industry standard data for yields of all crops grown in the UK, as well as data on prices, outputs and inputs for all crops and livestock systems. From these, it is possible to establish a range of yields (in tonnes/ha) that reflect soil type, agricultural land quality and flood risk.

- 2.4 Cropping data is available for each of the fields in the development and mitigation areas for the period 2011-2017. Each field can be categorised as high, average or poor yield, depending on soil type, agricultural land quality and flood risk. Detailed soil survey data is available for all of the development area plus several other sites in close proximity on similar soil types to the development and mitigation areas.
- 2.5 The likely yield of winter wheat for each year 2011-2017 can be calculated on a field by field basis for the development area, and then summed and averaged for the development area as a whole to provide a proxy of foraging resource on the site.
- 2.6 A similar exercise can be undertaken for the mitigation area but on the assumption that all the arable fields within the mitigation area will be sown with winter wheat as a foraging resource, as is committed under the mitigation strategy.
- 2.7 A comparison will then be made of the yields from the development area with those expected from the mitigation area to determine whether the mitigation area will provide the equivalent foraging resource for geese.

3 Yields from the Development Site

- 3.1 The Development Site extends to approximately 25 ha of mostly arable land to the west of Aggham.
- 3.2 It is largely level and lies at elevations of between 2m and 4m above Ordnance Datum.
- 3.3 Climate at the site is warm and moderately moist with large to very large crop moisture deficits. The Field Capacity Day (FCD) regime is slightly shorter than is typical for lowland England and is favourable for providing opportunities for agricultural land work.
- 3.4 The bedrock geology is the Lonsan Clay Formation, mainly comprising silty clay, clayey silt and occasionally silt, with some sandy clay layers also present. Superficial River Terrace deposits are mapped across the site and include sand, silt and clay.
- 3.5 The Soil Survey of England and Wales soil association mapping shows the Park Gate association across the site. Park Gate soils are characterised by stoneless, silty clay loams. Profiles are mottled throughout their subsoil layers and are variably affected by groundwater.
- 3.6 The site was surveyed in detail by RAC in 2026, with the report of survey submitted with the outline planning application.
- 3.7 Agricultural land quality at the Development Site is mostly affected by soil droughtiness which limits most of the site to very good quality Grade 2. In the south of the site, the land is imperfectly to poorly drained and the profiles are limited to good quality Subgrade 3a by soil wetness.
- 3.8 The distribution of agricultural land quality is shown in Figure 1, with Grade 2 land occupying 18.7 ha (75% of agricultural land on the site) and Subgrade 3a occupying 6.3ha (25% of agricultural land).

Figure 1. Agricultural Land Classification of the Development Site



- 3.9 There is one uniform topsoil type present across the site, which is a brown, slightly stony, medium silty clay loam. There is some compaction in the topsoil but this layer remains permeable.
- 3.10 In the north of the site, the upper subsoil comprises dark yellowish brown, slightly stony, medium silty clay loam. The lower subsoil is dark yellowish brown, stoneless, heavy silty clay loam. There is some evidence of wetness at depth although most of the soil profiles are well drained and permeable throughout.
- 3.11 The south of the site includes the same topsoil as above, over a brown, heavy silty clay loam subsoil. Most of the soil profiles are imperfectly drained and poorly permeable immediately

beneath the topsoil. These soils are subject to a soil wetness limitation, and classified as Subgrade 3a.

- 3.12 Two samples were taken for laboratory analysis of pH, nutrients, organic matter content and particle size analysis (to confirm hand texturing in the field). One sample was from the northern field and one from the large southern field. They show that the topsoil is acidic (pH of between 5 and 6.7), with low levels of organic matter (1%) but optimum levels of nutrients (generally index 2).
- 3.13 Of the fields within the Development Site:
- * The northern field (ID 8733) extends to 4.08ha of Grade 2 land, which would produce high yields of winter wheat;
 - * The central field (ID 8433) extends to 7.49ha of Grade 2 land, which would produce high yields of winter wheat;
 - * The southern field (ID 7596) extends to 14.05ha of Grade 2 and Subgrade 3a land, which would produce average yields of winter wheat.
- 3.14 The identities and areas of each field are shown on the Rural Land Register Map, attached at Appendix 1.
- 3.15 The cropping for the years 2011-2017 (the reference years in the Brant Goose Mitigation Plan) is shown in Table 1 below.

Table 1: Cropping on the Development Site

ID	Ha	2011	2012	2013	2014	2015	2016	2017
8733	4.08	WW	M2	VEG	WW	POT	WW	LET
8433	7.49	WW	M2	VEG	WW	POT	WW	LET
7596	14.05	WW/LET	WW/POT	WW/LET	WW/LET	WW/SW/LET	WW/LET	LET

WW Winter wheat; M2 Maize; VEG Vegetables; POT Potatoes; SW Spring wheat

- 3.16 The expected levels of yields of feed winter wheat during this period is set out in Table 2, using data from the John Ix Farm Management Pocketbook for each year. There has only been slight variation in expected yield levels during the reference period.

Table 2: Yields of Feed Winter Wheat (t/ha)

Yield levels	2011	2012	2013	2014	2015	2016	2017
High	9.75	9.75	9.75	9.75	9.75	9.75	9.75
Average	8.55	8.55	8.55	8.55	8.4	8.5	8.5
Low	6.75	6.75	6.75	6.75	6.75	6.75	7.25

- 3.17 This gives the following expected yield from the Development Site, as shown in Table 3. Where two crops are grown in Field 7598 (such as winter wheat and lettuce), it is assumed that half of the field is sown with each crop.

Table 3: Yields of Winter Wheat from the Development Site (tonnes)

ID	2011	2012	2013	2014	2015	2016	2017
2755	40	0	0	40	0	40	0
3453	73	0	0	73	0	73	0
7598	59	59	59	59	59	60	0
Total	172	59	59	172	59	173	0

- 3.18 This gives a total of 674 tonnes of winter wheat produced from the Development Site over the seven-year reference period, at an average of 96 tonnes per annum.

4 Forecast yields from the Mitigation Site

- 4.1 The Mitigation Site comprises parts of two fields to the immediate west of the Development Site, known as Thirties and Poorhouse and Bounds, plus the enhanced habitat area further west, which comprises a wetland area including scrapes and a grassland sward. The total area extends to 13.05ha and is showed edged red in Figure 2. It comprises an area extending to 12.4ha which will provide a winter foraging resource under a cropping regime and 0.65ha in the west which will be a further foraging resource in the form of grassland sward.

Figure 2: The Mitigation Site



- 4.2 The climate is the same as at the Development Site.
- 4.3 The bedrock geology (the London Clay Formation) is the same as at the Development Site. Most of the superficial geology is also the same, comprising superficial River Terrace deposits, but the western field includes sedimentary Raised Marine Deposits, comprising clay, silt, sand and gravel.

- 4.4 The Park Gate soil association is similarly mapped across the east of the Mitigation Site. Park Gate soils are characterised by stoneless, silty clay loams. Profiles are mottled throughout their subsoil layers and are variably affected by groundwater.
- 4.5 The western field is mapped as the Newchurch 1 association, which comprises deep, stoneless, calcareous clayey and fine silty soils that are developed on marine alluvium.
- 4.6 The Mitigation Site has not been surveyed in detail but the eastern fields are shown as Provisional Grade 2 land, in common with the Development Site.
- 4.7 The eastern fields have been intensively cropped over the last decade, including growing winter wheat, spring barley, potatoes, lettuce, sweetcorn, courgettes, cabbage, peas and coriander. Historic Google Earth images and the Environment Agency flood maps do not show any evidence of flooding or poor drainage on this part of the site, and it is therefore reasonable to expect these fields would be classified as mostly very good quality Grade 2 land if surveyed in detail.
- 4.8 The western field is shown to be at risk of flooding, and it is apparent from the flood risk and soil type that the land would be classified as subgrade 3b at best.
- 4.9 It is therefore to be expected that the eastern fields would produce at least average yields of winter wheat (8.5t/ha) but more likely these yields would be high (at 8.73t/ha). The western field would provide a further foraging resource in the form of grassland sward which, given the soil type and flood risk, is assumed to be equivalent to a low yield of winter wheat (6.73t/ha).
- 4.10 The Mitigation Site would be expected to produce an output of 167t of winter wheat per annum, of which an equivalent of 48t would be generated from the western field. This is more than 170% of the average winter wheat crop produced on the Development Site during the reference period, thereby showing a clear net increase in foraging resource.
- 4.11 Bird scaring was used extensively on the development site. The landowner has committed in the mitigation strategy that no bird scaring will take place on the mitigation site, thus benefiting the crops on the mitigation land and significantly improving the foraging resource for the geese.

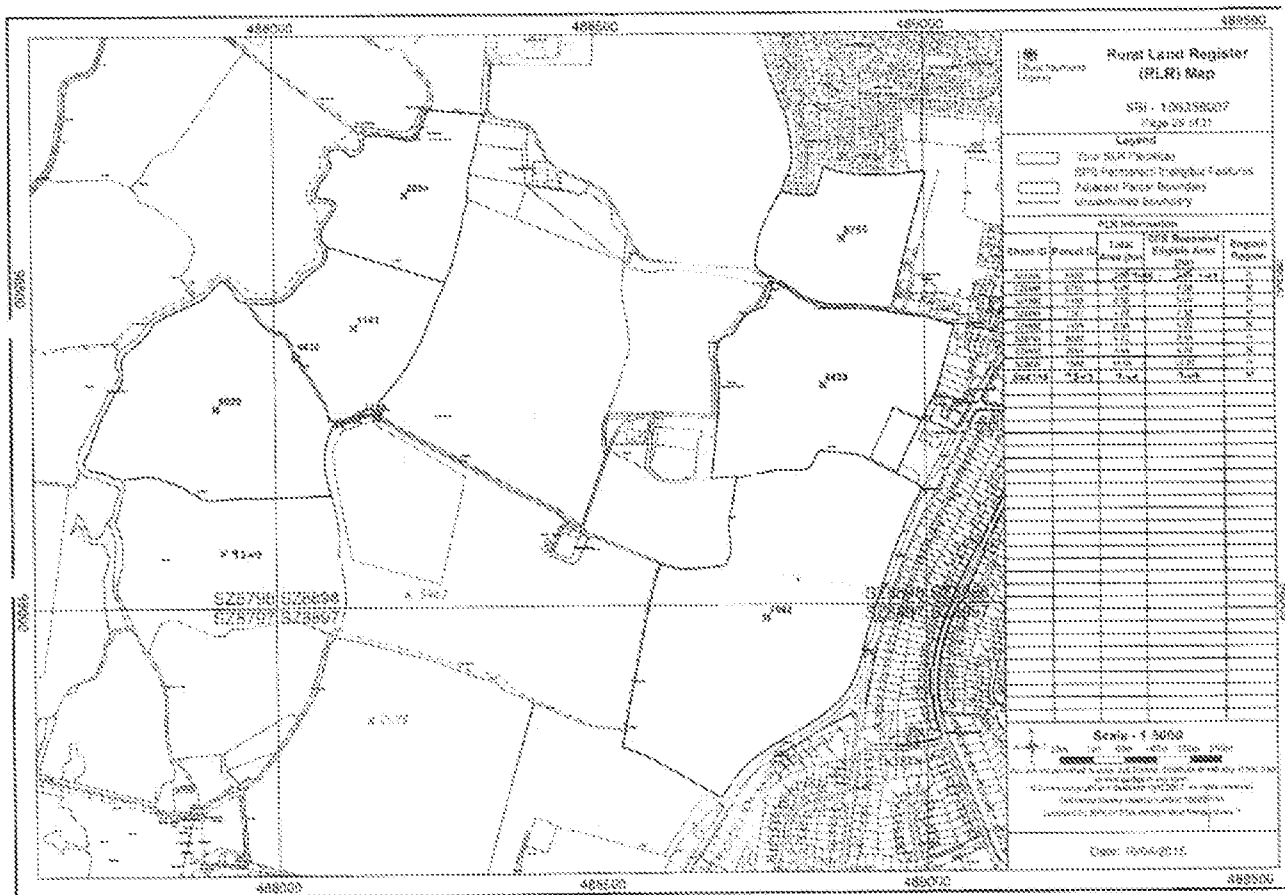
- 4.12 A summary of the yields obtained from the Development Site against those expected from the Mitigation Site is shown below in Table 4.

Table 4: Yields of Winter Wheat from the Development and Mitigation Sites (tonnes)

Development Site	Total from 2013-2017 inclusive
8755	120
8433	219
7988	335
Total	674
Mitigation Site	Total for Years 1 to 7
Eastern Field	854
Western Field	215
Total	1,169
Net provision	+495

- 4.13 It is therefore apparent from this piece of work that the mitigation strategy will provide an increase in the winter foraging resource available to Brent Geese over that which was provided at the Development Site.

Appendix 1: Rural Land Register Map



Please return this sheet to us if you want to make any changes to the data on this sheet.

9488 - Regent Brent Goose Forage

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• **Topic: The Role of the Teacher**

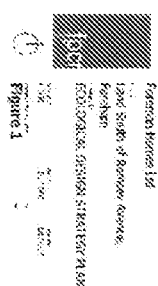


Figure 1

Appendix 7 24 Acoustics note – Noise Impact on Brent Goose Mitigation Zone.



Olly Shaw
Northgate Properties Ltd
6 Northgate, Chichester
West Sussex
England
PO19 1BA

Date: 18th October 2024
Reference: R10660-1 Rev 2

Dear Olly

RE: Bird Scarers at Pagham Site - Noise Impact on Brent Goose Mitigation Area

Further to our recent correspondence I am pleased to provide an indicative assessment of the potential impact of noise from bird scarers at the Brent Goose Mitigation Area.

Site Description and Proposals

The Brent Goose Mitigation area is located in rural Pagham and is surrounded by waterways and agricultural farmland to the east, west and north. A static caravan park and residential properties are located to the south of the mitigation area. The operator of the surrounding agricultural land is considering the use of bird scarers in order to encourage successful seeding/planting operations. Figure 1 shows the site location.

In order to protect the Brent Goose Mitigation area, a buffer zone has been proposed where the installation of bird scarers shall not be permitted. Additionally, bird scarers will be oriented to face away from the mitigation area to ensure optimised noise emission directivity.

Comments have been received from Natural England and Arun District Council requesting further information on the scale of the buffer zone and likely noise levels within the mitigation area from bird scaring devices.

Assessment Criteria

Based on Natural England's typical requirements for nesting/wintering birds, noise from bird scaring activity should preferably not exceed 69 dB $L_{Aeq,10min}$.

Calculations and Noise Assessment

A number of estimations have been undertaken to determine the noise level from a range of bird scaring devices at the boundary of the mitigation area. Source noise levels for bird scaring devices have been taken from manufacturers' data, test/research papers, regulatory body guidance and from 24 Acoustics' in-house database. Manufacturer's noise levels are specified with various parameters, however, peak noise levels (for comparison with $L_{Aeq,10min}$ criteria) are generally between 90 and 155 dBA depending on the product and noise generation method (speaker system or gas powered).

Prepared by:
Armstrong House
3 Bassett Avenue
Southampton
SO16 7DP



Prepared by: 24Acoustics
44, Grosvenor Avenue, Brighton

Northgate Properties Ltd



Indicative calculations have been undertaken to determine a suitable range of buffer zone distances, relative to typical bird scarer noise levels, to ensure the maximum bird scarer noise level criteria of 69 dB L_{max} at the mitigation zone boundary is not exceeded. Table 1 below summarises the results of the calculations.

Bird Scaring Device Noise Level dB L_{max} at 1m	Bird Scarer Minimum Distance from Mitigation Area Boundary to Not Exceed 69 dB L_{max}
105	100m

Table 1: Bird Scarer L_{max} Noise Levels and Minimum Distance from Mitigation Area

The assessment indicates that, with bird scaring devices rated at 105 dB L_{max} (at 1m) or lower, a minimum buffer zone of 100m will ensure that noise from bird scaring activities do not exceed 69 dB L_{max} at the mitigation zone boundary. Bird scarers producing higher noise levels will require greater buffer zone distances.

Achieving the relevant noise level criteria will be subject to the specification and selection of the bird scaring device.

Yours sincerely,
For 24 Acoustics Ltd

Kiel Edwards BSc AMICA
Consultant

Northgate Properties Ltd



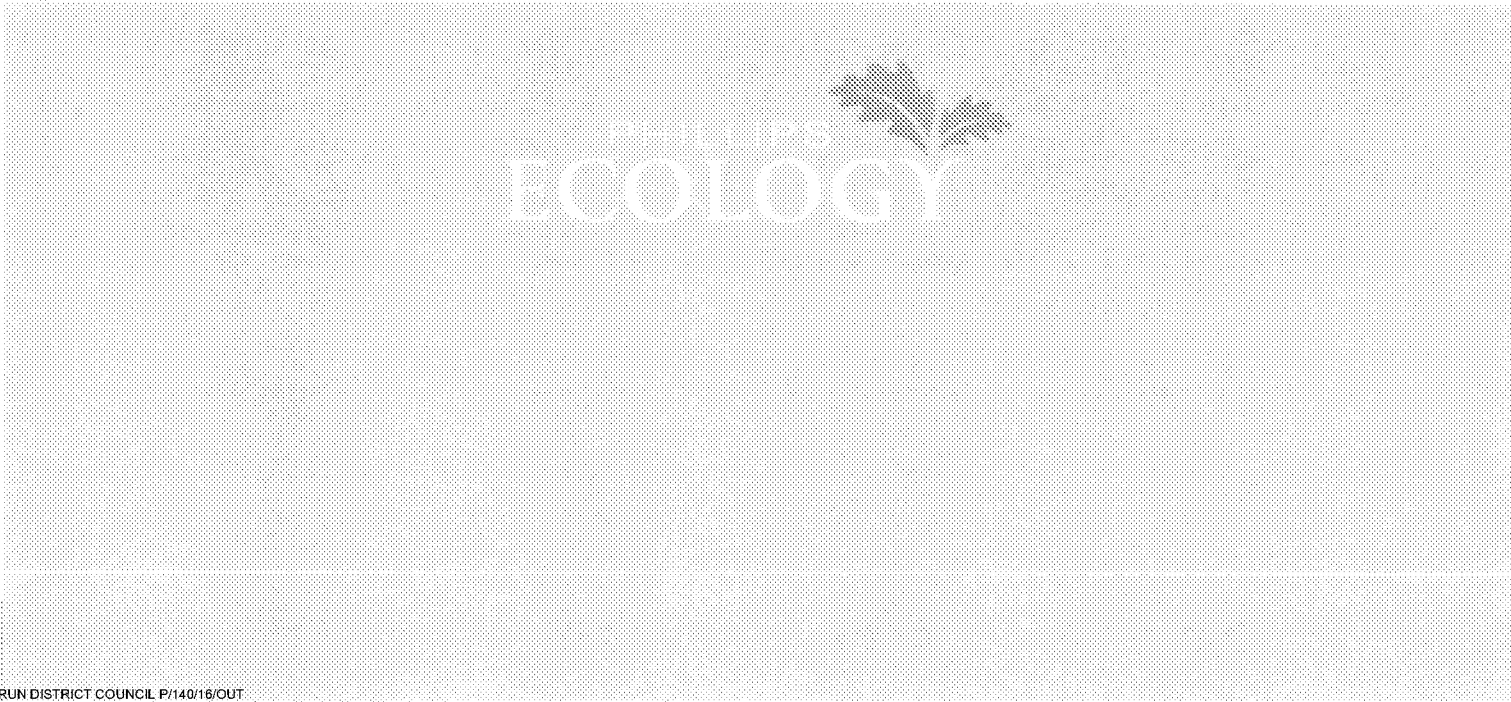
Figure 1: Brent Goose Mitigation Zone Location Plan



Appendix 8 – Adjoining Land

The plan below shows the land restricted in the level of bird scaring over the winter period (Oct to March inclusive) Land outside of the area edged yellow but inside of the area edged red is restricted as per para 4.7.





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