



Cove Communities

Medmerry Holiday Park

Habitats Regulations Assessment

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EXECUTIVE SUMMARY

This report has been produced by RSK Biocensus on behalf of Cove Communities to provide the information required by the Competent Authority to undertake an Appropriate Assessment with regards the Conservation of Habitats and Species Regulations 2017 (as amended) (the 'Habitats Regulations'). This report relates to the proposed redevelopment of the Site.

Potential effects to Habitats Sites (formally known as 'European sites') within influencing distance of the Proposed Development were assessed. Potential impact sources were identified as:

- Damage to non-designated habitats functionally linked to Habitats Sites;
- Disturbance of birds during construction and operation;
- Potential spread or introduction of invasive species;
- Air pollution/ nitrogen deposition; and
- Water Pollution during construction.

The Habitats Sites: Chichester and Langstone Harbours Special protection Area (SPA) and Ramsar site, Pagham Harbour SPA and Ramsar site, Solent Maritime Special Area of Conservation (SAC), and Solent and Dorset Coast SPA have been scoped into the Habitats Regulations Assessment (HRA).

The HRA determined that, provided mitigation is implemented on site in accordance with a Construction Environmental Management Plan (CEMP) and Landscape Ecology Management Plan (LEMP) then significant adverse effects on the integrity of any Habitats Sites would not occur.

CONTENTS

1.0 INTRODUCTION	1
1.1 Overview.....	1
1.2 Purpose of this report	1
2.0 CONTEXT.....	3
2.1 The site.....	3
2.2 Consultation.....	3
2.2 Previous Reports.....	3
2.2 Development proposals.....	3
3.0 TECHNICAL APPROACH	4
2.1 Legislation	4
2.2 HRA Process	4
2.2 Zone of Influence.....	5
4.0 SCREENING	6
4.1 Natural England Site Improvement Plans	6
2.2 Local Policy	12
Policy NE6 Chichester, Internationally and Nationally Designated Habitats:	12
Assessment of Local Policy	13
4.3 Designated Sites	14
Medmerry Reserve (Compensatory Habitat).....	14
Chichester and Langstone Harbours SPA and Ramsar site	14
Pagham Harbour SPA and Ramsar site.....	15
Solent Maritime SAC	15
Solent and Dorset Coast SPA	16
4.3 Development in the wider region.....	16
4.3 Summary of potential impact pathways.....	18
5.0 APPROPRIATE ASSESSMENT	20
2.1 Damage or disturbance to non-designated habitats functionally linked to designated sites..	20
Baseline conditions.....	20
Assessment of impact.....	21
2.2 Disturbance of birds: Construction	21
Mitigation	23
2.2 Disturbance of birds: Operation.....	23
Mitigation	24
2.2 Potential spread or introduction of invasive species	24
2.2 Air pollution, nitrogen deposition	24
2.2 Water Pollution	25
Mitigation	25
2.2 In-combination effects	25
2.2 Mitigation	26
Embedded design mitigation	26
Construction methods.....	26
Operational methods	29
Landscape and Ecological Management Plan (LEMP)	29
6.0 CONCLUSIONS	31

REFERENCES.....32
FIGURES34

TABLES

Table 2. Potential impact pathways to relevant Habitats Sites7
 Table 2. Projects within 5km of the Proposed Development assessed for cumulative effects..... 16
 Table 3. Likely significance of potential effects 18

FIGURES

Figure 1. Site layout34
 Figure 2. International and nationally designated sites within 10 and 2 km.34

1.0 INTRODUCTION

1.1 Overview

- 1.1.1 This report has been produced by RSK Biocensus on behalf of Cove Communities to provide the Competent Authority (Chichester District Council) with the information required to undertake an Appropriate Assessment with regards the Conservation of Habitats and Species Regulations 2017 (as amended) (the **Habitats Regulations**). This relates to an application for the proposed redevelopment of Medmerry Holiday Park, Manhood Peninsula, West Sussex (grid reference: SZ81909585) (hereafter referred to as the **Proposed Development**).
- 1.1.2 This report comprises Stage 1 of the Habitats Regulations Assessment (HRA) process - the initial screening of the Proposed Development proposals, and Stage 2 – a Statement to Inform an Appropriate Assessment. Further details of the HRA process are provided in Section 3.2 below.

1.2 Purpose of this report

- 1.2.1 The European Council (EC) Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora 1992 (the **Habitats Directive**) requires member states to designate areas of their territory containing a representative sample of important habitats and species (classified under Directive 2009/147/EC on the Conservation of Wild Birds; the **Birds Directive**). These areas are known as Natura 2000 sites, and they include Special Areas of Conservation (SACs) and Special Protection Areas (SPAs).
- 1.2.2 Under the requirements of these directives, it is necessary to consider whether the Proposed Development may have significant effects upon the aforementioned areas of nature conservation importance. This requirement is translated into domestic law in England through the Conservation of Habitats and Species Regulations 2017 (as amended) (the **Habitats Regulations**).
- 1.2.3 In addition, any proposals affecting the following sites also require a HRA because these are protected by UK government policy: proposed SACs; potential SPAs; Ramsar sites both listed and proposed (designated under the 1971 Ramsar Convention for their internationally important wetlands); and areas secured as sites compensating for damage to a European site.
- 1.2.4 The Habitats Regulations place a duty upon **Competent Authorities** to consider the potential for effects upon sites of European importance prior to granting consent for projects or plans. Should likely significant effects be identified by the initial screening process, it is necessary to further consider the effects by way of an **Appropriate Assessment**. Overall, this process is known as a Habitats Regulations Assessment.
- 1.2.5 This document provides information to enable the screening of the Proposed Development, covering the following elements:

Describing the Proposed Development that may have the potential for significant effects upon applicable designated sites;

Undertaking an initial scoping for potential direct and indirect impacts upon applicable designated sites;

Assessing the likely significance of any potential effects identified as resulting from these impacts; and

Where Likely Significant Effects are identified, recommendation of appropriate mitigation measures.

2.0 CONTEXT

2.1 The site

- 2.1.1 The Site is located on the south coast of England in West Sussex on the Manhood Peninsula. It lies approximately 1 km southeast of Earnley and at a similar distance to the east of Bracklesham (Figure 1).
- 2.1.2 Habitats present within the Application Boundaries primarily consisted of grassland, scrub, hedgerows, hardstanding with buildings, with watercourses throughout. Coastal vegetated shingle and beach habitats are present within the southern margins.

2.2 Consultation

- 2.2.1 Formal consultation on matters concerning ecology and biodiversity have been carried out directly as part of the pre-application process with the Chichester District Council (CDC). It should additionally be noted that consultation and advice was given as part of the application process of the 2019 planning application (No: E/19/02840/FULEIA) but is not included within this report. Furthermore, consultation has been undertaken with the local RSPB Medmerry Reserve to seek advice on ecological impacts and to explore biodiversity offsetting strategies on a landscape scale.

2.3 Previous Reports

- 2.3.1 Previous detailed surveys and assessments undertaken by ABPmer (2019, 2021, 2022), RPS (2022) and by RSK Biocensus (2023), identified the presence and/or potential presence of various ecological constraints to the Proposed Development which may be relevant to the development, including nearby designated sites. Due to the potential for impacts on sensitive sites and species resulting from development, the requirement for a Habitats Regulations Assessment was identified.

2.4 Development proposals

- 2.4.1 A detailed description of the Proposed Development can be found in Section 3 of the ES as well as in key supporting documents and maps most notably those contained in Volumes 2 and 3 of the ES.
- 2.4.2 A description of the Proposed Development's rationale can be found in Section 3 of the ES.

3.0 TECHNICAL APPROACH

3.1 Legislation

- 3.1.1 The Habitats Directive 1992 was adopted as a means of protecting habitats and species listed within the Directive's Annexes. This led to the setup of Natura 2000, a network of protected areas across Europe with the aim to protect breeding and resting sites for threatened species in order to ensure the survival of Europe's vulnerable species. Natura 2000 sites include SPAs and SACs.
- 3.1.2 The Conservation of Habitats and Species Regulations 2017 (as amended) transposes the Habitats Directive into British Law, which states that a competent authority may agree to a plan or project only after having confirmed that it will not have a significant effect on a Natura 2000 site (either alone or in-combination with other plans or projects). The method of assessing the impact on Natura 2000 sites is termed Habitats Regulations Assessment (HRA).
- 3.1.3 In the UK, SACs and SPAs which were part of the Natura 2000 network before the UK left the EU, now form part of the UK National Site Network and are referred to as Habitats Sites. However, the protection of these sites remains the same (refer to: The European Union (Withdrawal) Act 2018 (as amended by the European Union (Withdrawal Agreement) Act 2020) and The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019).
- 3.1.4 The National Planning Policy Framework (NPPF) (MHCLG, 2021) states that Ramsar sites should be given the same protection as SPAs and SACs, and as such, have all been considered within this report. Additionally, as a compensatory habitat for a designated site, the Medmerry Reserve is treated as an internationally designated/protected under Paragraph 176 (c) of the NPPF and is considered in this report.

3.2 HRA Process

- 3.2.1 The HRA has been undertaken following general guidance provided by the European Commission Managing Natura 2000 Sites (EC 2002), Guidance document on Article 6(4) of the Habitats Directive (EC 2007) and Assessment of Plans and Projects Significantly Affecting Natura 2000 sites (EC 2001).
- 3.2.2 Regulation 102 of the Conservation of Habitats and Species Regulations 2017 (as amended) states that if a plan is likely to have a significant effect on one or more Habitats Sites and is not directly connected with or necessary to the management of the site, then an Appropriate Assessment of the implications for the site, in view of that site's conservation objectives, must be made before the plan can be approved.
- 3.2.3 The aim of a HRA is to determine, in view of a Habitats Site's conservation objectives and qualifying features, whether a project (either alone and/or in-combination), would have a significant adverse effect on the site. The four distinct stages of the HRA process are summarised below:
 1. **Stage 1: Screening** is the first stage of the process and identifies the likely impacts upon a Habitats Site that would result from a project (either alone or in-combination).

Mitigation cannot be taken into consideration at this stage of the HRA. If the screening exercise concludes that Likely Significant Effects (LSE) cannot be ruled out, then Appropriate Assessment (Stage 2 of the process, see below) must be undertaken. It is important to note that the burden of evidence is to demonstrate, on the basis of objective information, that there will be no significant effect; if the effect may be significant, or is not known, that would trigger the need for an Appropriate Assessment.

2. **Stage 2: Appropriate Assessment** looks at the implications of the effects of the proposals for the Habitats Site's conservation objectives (alone and in-combination). At this stage, it needs to be determined, *beyond reasonable scientific doubt*, whether or not there will be adverse effects on the integrity of the site. This stage also includes the development of mitigation measures to avoid or reduce any possible impacts.
3. **Stage 3: Assessment of alternative solutions** is the process that examines alternative ways of achieving the objectives of the Proposed Development that would avoid adverse impacts on the integrity of a Habitats Site, should the avoidance or mitigation measures detailed at the Appropriate Assessment stage be insufficient to cancel out adverse effects.
4. **Stage 4: Assessment where no alternative solutions exist and where adverse impacts remain.** An assessment is made as to whether or not the Proposed Development is necessary for Imperative Reasons of Overriding Public Interest (IROPI). If it is, this stage also involves detailed assessment of the compensatory measures needed to protect and maintain the overall coherence of the National Site Network.

3.2 Zone of Influence

- 3.3.1 The Zone of Influence (Zol) is defined by the potential effects arising from the Proposed Development and the available pathways for those effects to reach and affect interest features of Habitats Sites.
- 3.3.2 There is no standard radius that can be used to select which Habitats Sites are to be analysed and they should be evaluated on a case-by-case basis, with reference to the nature, size, and location of the Proposed Development and the sensitivities of the ecological receptors, and the potential for in-combination effects.
- 3.3.3 The size and extent of the Zol is governed by several variables including the nature of the works involved and environmental factors. For example, hydrological/hydrogeological connections may be wide-ranging, and a groundwater aquifer or river catchment may need to be considered in determining the Zol as the result of potential pollution events. An initial search radius of 15km from the Site was established to identify Habitats Sites that could be affected by the Proposed Development and to determine the potential impacts that may occur.
- 3.3.4 Sources of information used to identify the Zol include Defra Magic Map Application (Defra, 2023) Natural England Site Improvement Plans (Natural England, 2023a), local policy (CDC, 2021), and the features of the designated sites (Natural England, 2023b).

4.0 SCREENING

2.1 Natural England Site Improvement Plans

4.1.1 A review of the protected sites within 15km of the Site has been undertaken, to determine the potential impacts that may occur from development. Protected sites within 15km of the Application Boundaries are shown on Figure 2. The following Habitats Sites were identified as being present within the 15 km search area:

- Chichester and Langstone Harbours SPA;
- Chichester and Langstone Harbours Ramsar site;
- Pagham Harbour SPA;
- Pagham Harbour Ramsar site;
- Solent Maritime SAC;
- Medmerry Reserve (Compensatory Habitat);
- Solent and Dorset Coast SPA;
- Kingley Vale SAC;
- South Wight Maritime (SAC).

4.1.2 Threats and pressures to the integrity of the Habitats Sites have been identified based on Natural England's Site Improvement Plans for each site. The habitats located in the Solent to the West of the Site (Chichester and Langstone Harbour SPA and Ramsar site, and Solent Maritime SAC) are considered together within the Site Improvement Plan for the Solent (Natural England, 2023a). The Pagham Harbour SPA and Ramsar site, Kingley Vale SAC, and South Wight Maritime SAC are each listed under their own Site Improvement Plans (Natural England, 2023a).

4.1.3 A formal Site Improvement Plan was not available for the Solent and Dorset Coast SPA, though information on the pressures facing the habitat as a result of activities was collected through the Advice on Operations for the site (Natural England, 2023c).

4.1.4 The Medmerry Re-alignment is not a designated site, but compensatory habitat required for flood defence works elsewhere in the Solent Maritime SAC. Within the context of planning policy it receives the same level of protection as if it were a designated SAC (MHCLG, 2021). The Medmerry Reserve is not included in the above site improvement plans; however, as mitigation for the Solent Maritime SAC, can be considered sensitive the same threats and pressures. In addition, the site is located adjacent to Pagham Harbour SPA and Ramsar site, and is therefore likely to be sensitive to the same threats and pressures as those sites also.

4.1.5 The Zones of Influence are shown in Table 1 below for each pathway (i.e. threat or pressure) that has been identified.

Table 1. Potential impact pathways to relevant Habitats Sites

Pathway	Description	Zone of Influence	Threat or pressure				
			Solent	Pagham Harbour	South Wight Maritime	Kingley Vale	Solent and Dorset Coast
Public Access/ Disturbance; Direct Impact from third parties	Recreational activities that disturb birds, such as dog walking.	Local policy indicates a 5.6 km buffer around Chichester and Langstone Harbours SPA and Ramsar site (CDC 2021), which is the largest recreational zone of influence in the local area.	Threat	Pressure/threat	Pressure	N/A	Pressure
Coastal Squeeze	Effects on flood defence design, sea walls, and intertidal/wetland habitats.	N/A Medmerry holiday park is already developed land. Proposed development will not result in change in flood defence strategy.	Threat	N/A	N/A	N/A	Pressure
Fisheries: Commercial marine and estuarine	N/A – no potential effects on fisheries	N/A	Threat	Threat	Pressure	N/A	Pressure
Fisheries: Recreational marine and estuarine	N/A – no potential effects on fisheries	N/A	N/A	Threat	N/A	N/A	Pressure
Water Pollution	Water pollution can effect a range of habitats and bird species at the site	Broad Rife Water Body Catchment area, including Pagham Harbour	Threat	Threat	N/A	N/A	Pressure

Pathway	Description	Zone of Influence	Threat or pressure				
			Solent	Pagham Harbour	South Wight Maritime	Kingley Vale	Solent and Dorset Coast
	through eutrophication and toxicity.	SPA and Ramsar site and Medmerry Reserve (Compensatory Habitat)					
Change in species distributions	Influence on national trends of bird movements, possibly accelerated by decreasing habitat suitability.	N/A - The Proposed Development has no scope to affect species distributions on a national scale.	Threat	N/A	N/A	N/A	N/A
Climate change	Impacts of climate change on species as habitats are lost or restricted.	N/A – The Proposed Development has no scope to alter the effects of climate change.	Threat	N/A	N/A	N/A	N/A
Change to site conditions	The reduction in area of sensitive habitats within the sites.	N/A – Proposed Development has no scope to alter conditions within protected sites	Threat	N/A	N/A	N/A	N/A
Invasive species	Potential spread or introduction of invasive species into the Habitats Sites through vehicle and pedestrian movements, to the detriment of existing native habitats and species.	Potential spread of invasive species within the site and adjacent habitats up to 30 m.	Threat	N/A	Pressure/threat	N/A	Pressure

Pathway	Description	Zone of Influence	Threat or pressure				
			Solent	Pagham Harbour	South Wight Maritime	Kingley Vale	Solent and Dorset Coast
Direct land take from development	Privately owned sea defences prevent natural movements of sediments through natural erosion.	N/A – Proposed Development has no scope to affect sea defences.	Threat	N/A	N/A	N/A	Pressure
Biological Resource Use	The impacts of gull egg collection and wildfowling on breeding and wintering birds.	N/A – No net change in provision of dwellings.	Threat	N/A	N/A	N/A	Pressure
Change in land management	Neglect or alteration of drains and ditches affecting water levels and salinity of land. Management strategies may cause noise or visual disturbance	N/A – No control over land management of Habitats Sites.	Threat	Threat	N/A	N/A	Pressure
Inappropriate pest/ deer control	The impacts of predators on breeding birds, and of deer on woodland habitats.	N/A – No control over land management of Habitats Sites.	Threat	N/A	N/A	Threat	N/A
Air Pollution: impact of atmospheric nitrogen deposition	Potential increase in air pollution due to increased vehicle use.	200m from vehicle exhausts (Natural England, 2018).	Pressure	N/A	N/A	Pressure	Pressure
Hydrological changes	Changing water levels in the Habitats Sites, as well as percolation of sea water through sea walls introducing salt into non-saline habitats.	N/A – No proposed hydrological changes.	Threat	N/A	N/A	N/A	Pressure

Pathway	Description	Zone of Influence	Threat or pressure				
			Solent	Pagham Harbour	South Wight Maritime	Kingley Vale	Solent and Dorset Coast
Extraction: non-living resources	Extraction of shingle and aggregates resulting in habitat loss and movement of coastal sediments.	N/A – No extraction proposed in scope of Proposed Development.	Threat	N/A	N/A	N/A	Pressure
Other: protection boundaries may not cover supporting habitats	Sites outside of the protective boundaries of designated sites, that provide supporting habitats, may be negatively impacted.	Potential impacts to supporting habitats, such as noise/disturbance during construction works, or operation of the Proposed Development within 500m.	Threat	N/A	N/A	N/A	N/A
Physical modification	Alterations in large scale structures, including topographical features such as spits and cliffs.	N/A – Not impacting physical attributes of Habitats Sites, including natural processes such as erosion.	N/A	Pressure/threat	Pressure/threat	N/A	Pressure
Site Management: Inappropriate coastal management; Undergrazing; Agriculture	Deterioration of coastal vegetation communities as fencing prevents grazing. Chemicals associated with agricultural management may result in damage to vegetation communities, resulting in loss of diversity.	N/A – No control over Habitats Sites' management.	N/A	N/A	Pressure/threat	Threat	Pressure

Pathway	Description	Zone of Influence	Threat or pressure				
			Solent	Pagham Harbour	South Wight Maritime	Kingley Vale	Solent and Dorset Coast
Other marine operations	Operations of ports and harbours, energy capture.	N/A – No marine operations proposed.	N/A	N/A	N/A	N/A	Pressure

4.1.6 Likely significant effects can be ruled out on any sites not within the zone of influence of the Proposed Development, or not listed as a threat or pressure for a particular site.

4.1.7 The impact pathways potentially resulting in the following effects will be considered further in this report:

Public Access/ Disturbance/ Direct Impact – up to 5.6km;

Water Pollution - Broad Rife Water Body Catchment area (including Pagham Harbour SPA and Ramsar site and Medmerry Reserve)

Potential spread of invasive species – up to 30m from the Application Boundaries

Air Pollution: impact of atmospheric nitrogen deposition – 200m from vehicle exhausts

Damage to non-designated habitats functionally linked to Habitats Sites via habitat loss or alteration and disturbance of birds – disturbance during construction and operation of the site, up to 500m from the Application Boundaries.

2.2 Local Policy

4.2.1 The Proposed Development is located within Chichester District Council. A local plan has been produced (CDC, 2021) which provides the Chichester District Council's policy for development in the region, including protection of designated sites. Policy NE6: Chichester's Internationally and Nationally Designated Habitats, has been included below:

Policy NE6 Chichester's Internationally and Nationally Designated Habitats:

4.2.2 Development will only be permitted where it would not lead to an adverse effect upon the integrity, either alone or in-combination, directly or indirectly, on internationally, European and nationally important habitat sites, including:

Water Neutrality in the Sussex North Water Resource Zone – Arun Valley SPA and SAC - Development proposals within the Sussex North Water Resource Zone will provide mitigation for any net per capita increase in water consumption, as defined in a water budget, in accordance with Policy NE17 (Water Neutrality).

Nutrient Neutrality in Chichester and Langstone Harbours SPA - Development proposals for any net increase in overnight accommodation that drain to Chichester or Langstone Harbours must demonstrate that they will be nutrient neutral for the lifetime of the development, either by their own means or through the provision of appropriate mitigation in accordance with Policy NE19 (Nutrient Neutrality).

Recreational Disturbance in Chichester and Langstone Harbours SPA, Solent and Dorset Coast SPAs, Pagham Harbour SPA and Medmerry Compensatory Habitat - Development proposals for any net increase in overnight accommodation within the Zones of Influence for Chichester Harbour SPA and Solent and Dorset Coast SPAs, and/or Pagham Harbour SPA and Medmerry Compensatory Habitat will be required to provide appropriate avoidance/mitigation measures in accordance with Policy NE7 (Development and Disturbance of Birds)

in Chichester, Langstone and Pagham Harbours and Solent and Dorset Coast SPAs and Medmerry Compensatory Habitat).

The Mens SAC, Ebernoe Common SAC and Singleton & Cocking Tunnels SAC - Development proposals on greenfield sites and sites that support, or are in close proximity to, suitable commuting and foraging habitats (including mature vegetative linear features such as woodlands, hedgerows, riverine and wetland habitats) within the following ranges (as shown on the policies map) should have due regard to the possibility that barbastelle and Bechstein's bats will be utilising the site. Such proposals will be required to incorporate necessary surveys and ensure that key features (foraging habitat and commuting routes) are retained, in addition to a suitable buffer (the scale of the buffer will need to be determined on a case-by-case basis, informed by bat activity survey work and would take account of the species involved and their sensitivity to disturbance/artificial lighting and the natural screening provided by existing surrounding vegetation.) to safeguard against disturbance:

- Key Conservation Area – 6.5km: all impacts to bats must be considered given that habitats within this zone are considered critical for sustaining the populations of bats within the SACs; and
- Wider Conservation Area – 12km: significant impacts on severance to flight lines to be considered.

Assessment of Local Policy

Water Neutrality in the Sussex North Water Resource Zone – Arun Valley SPA and SAC

- 4.2.3 The Site is not located within the Sussex North Water Resource Zone for Arun Valley SPA and SAC (CDC 2023a), so complies with Policy NE17 for water neutrality, in accordance with Policy NE6 (CDC 2021).

Nutrient Neutrality in Chichester and Langstone Harbours SPA

- 4.2.4 The Site is not located within the Zol for nutrient neutrality for the Chichester and Langstone Harbours SPA and Ramsar site (CDC 2023b), so complies with Policy NE19 for nutrient neutrality, in accordance with Policy NE6 (CDC 2021)

Recreational Disturbance in Chichester and Langstone Harbours SPA, Solent and Dorset Coast SPAs, Pagham Harbour SPA and Medmerry Compensatory Habitat

- 4.2.5 There is a potential impact of recreational disturbance which may affect Chichester and Langstone Harbours SPA and Ramsar Site, Solent and Dorset Coast SPA, (5.6 km zone of influence) Pagham Harbour SPA and Ramsar site, and Medmerry Compensatory Habitat (3.5 km zone of influence). The Site is situated within the zones of influence set out in Policy NE7 (CDC, 2021).

The Mens SAC, Ebernoe Common SAC and Singleton & Cocking Tunnels SAC

- 4.2.6 The Local Plan cites two zones of influence to these sites, namely a 6.5 km Key Conservation Area, and a 12 km Wider Conservation Area (CDC, 2021). Since the Site does not fall within either of these zones, the Proposed Development will have no Likely Significant Effects on these designated sites.
- 4.2.7 Of these local policies, the Application Boundaries lies outside the zones of influence for the following:
- Water Neutrality in the Sussex North Water Resource Zone;
 - Nutrient Neutrality in Chichester and Langstone Harbours SPA;
 - The Mens SAC, Ebernoe Common SAC, and Singleton and Cocking Tunnels SAC.
- 4.2.8 Recreational Disturbance in Chichester and Langstone Harbours SPA and Ramsar site, Solent and Dorset Coast SPA, Pagham Harbour SPA and Ramsar site, and Medmerry Compensatory Habitat, will be considered further.

2.3 Designated Sites

Medmerry Reserve (Compensatory Habitat)

- 4.3.1 The Medmerry Reserve is protected under the Conservation of Habitat and Species Regulations 2017 (as amended), and acts as compensation for predicted losses of SAC and SPA intertidal habitat elsewhere in the Solent over the next 20 years, due to rising sea levels causing coastal squeeze effects. Compensatory habitat is given the same protection as Habitats Sites by paragraph 118 of the National Planning Policy Framework (NPPF). Medmerry Reserve does not have any designated features but has been designed to create saltmarsh, mudflats, and coastal lagoons to replace the losses in the Solent and is being managed to support the assemblage of wintering and breeding birds for which the Solent sites are currently designated. Therefore, the qualifying features of the Solent Habitats Sites being compensated for will be listed under the Medmerry Reserve accordingly.

Chichester and Langstone Harbours SPA and Ramsar site

- 4.3.2 The combined designated features of the Chichester and Langstone Harbours SPA and Ramsar site are listed below:
- Bar-tailed godwit, *Limosa lapponica* – non-breeding;
 - Black-tailed godwit, *Limosa limosa* – non-breeding;
 - Common tern, *Sterna hirundo* – breeding;
 - Curlew, *Numenius arquata* – non-breeding ;
 - Dark-bellied Brent goose, *Branta bernicla bernicla* – non-breeding;
 - Dunlin, *Calidris alpina alpina* – non-breeding;
 - Grey plover, *Pluvialis squatarola* – non-breeding;

Little tern, *Sterna albifrons* – breeding;
 Pintail, *Anas acuta* – non-breeding;
 Red-breasted merganser, *Mergus serrator* – non-breeding;
 Redshank, *Tringa totanus* – non-breeding;
 Ringed plover, *Charadrius hiaticula* – non-breeding;
 Sanderling, *Calidris alba* – non-breeding;
 Sandwich tern, *Thalasseus sandvicensis* – breeding;
 Shelduck, *Tadorna tadorna* – non-breeding;
 Shoveler, *Spatula clypeata* – non-breeding;
 Teal, *Anas crecca* – non-breeding;
 Turnstone, *Arenaria interpres* – non-breeding;
 Waterbird assemblage – non-breeding;
 Wigeon, *Mareca penelope* – non-breeding;
 Estuary (Habitat).

- 4.3.3 The Chichester and Langstone Harbours SPA were designated due to populations of breeding and migratory birds. The harbours were also designated as a Ramsar site covering two estuarine basins, with tidal channels forming saltmarsh, grazing marsh, and mud-flats. These habitats are rich in invertebrates, providing dynamic foraging opportunities for birds.

Pagham Harbour SPA and Ramsar site

- 4.3.4 The combined designated features of the Pagham Harbour SPA and Ramsar site are listed below:

Common tern, *Sterna hirundo* – breeding;
 Dark-bellied Brent goose, *Branta bernicla bernicla* – non-breeding;
 Little tern, *Sterna albifrons* – breeding;
 Ruff, *Calidris pugnax* – non-breeding.

- 4.3.5 The Pagham Harbour SPA and Ramsar site comprises an estuarine basin made up of an extensive central area of saltmarsh and intertidal mud-flats, surrounded by lagoons, shingle, open water, reed swamp, and wet permanent grassland. These habitats provide foraging and breeding habitat for the bird species that use these sites.

Solent Maritime SAC

- 4.3.6 The designated features of the Solent Maritime SAC site are listed below:

Sandbanks which are slightly covered by sea water all the time;
 Estuaries;
 Mudflats and sandflats not covered by seawater at low tide;

Coastal lagoons;
 Annual vegetation of drift lines;
 Perennial vegetation of stony banks;
 Salicornia and other annuals colonising mud and sand;
 Spartina swards (*Spartinion maritimae*);
 Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*);
 Shifting dunes along the shoreline with *Ammophila arenaria* (White dunes);
 Desmoulin's whorl snail, *Vertigo moulinsiana*.

4.3.7 The Solent Maritime SAC encompasses a variety of Annex I habitats throughout the estuarine system, and was specifically designated due to the network of Estuaries, Spartina swards, and Atlantic salt meadows.

Solent and Dorset Coast SPA

4.3.8 The designated features of the Solent and Dorset Coast SPA are listed below:

Common tern, *Sterna hirundo* – breeding;
 Little tern, *Sterna albifrons* – breeding;
 Sandwich tern, *Thalasseus sandvicensis* – breeding.

4.3.9 The Solent and Dorset Coast SPA represents an important foraging area at sea for these three designated species, regularly supporting more than 1% of Great Britain's breeding populations of each species listed above.

2.4 Development in the wider region

4.4.1 A planning search was carried out to identify permitted and constructed projects in the wider receiving environment, in order to inform an assessment of likely cumulative effects. The majority of consented (permitted) applications pertain to one-off residential dwellings or farm buildings/structures. The scale of these applications are unlikely to have cumulative effects upon the ecological features identified within this report. Therefore, only developments of a particular size and nature have been considered further for the cumulative assessment. Table 2 **Error! Reference source not found.** shows local developments within a 5km search radius, of a minimum effect of two dwellings or equivalent.

Table 2. Projects within 5km of the Proposed Development assessed for cumulative effects

Name	Description	Reference	Distance from site
Land Adjacent To Cornerways Farm Road Bracklesham West Sussex PO20 8AQ	2 no. dwellings with associated works and access.	22/03100/FUL	Ca. 520m

Name	Description	Reference	Distance from site
Earnley Concourse Clappers Lane Earnley Chichester West Sussex PO20 7JN	Outline planning application with all matters except Access reserved. Demolition of Earnley Concourse buildings, Elm Lodge, Gate Cottage and the Ranch House and replacement with residential development of up to 32 no. dwellings with associated access and footway works, landscaping, open space, and drainage infrastructure.	19/02493/OUT - Appeal	Ca. 600m
43 & 45 East Bracklesham Drive Bracklesham West Sussex PO20 8JH	Redevelopment of the site with 2 no. detached houses and associated works (alternative scheme to planning permission ref: EWB/22/00705/FUL).	22/01852/FUL	Ca. 760m
Land South East Of Thorney Farm House Almodington Lane Almodington Earnley West Sussex	Proposed irrigation reservoirs.	18/00760/PNO	Ca. 900m
Toe End beach stabilisation scheme Breakwater North West of West Sands Caravan Park	Toe End beach stabilisation scheme extending the existing rock armour by 170m along the Toe End frontage, installation of a 180m long timber splash wall to the rear of the rock armour, replacement of two dilapidated groynes with new timber groynes (35m long) on the same location and shingle replenishment to replace eroded beach material.	16/01465/FULEIA	Ca. 2690m
Ferry Farm 3, Solar Park, Chichester Road, Selsey	Construction of a renewable energy project comprising solar photovoltaic (PV) panels and associated works including inverters, transformers, substation and on site collecting cable, access tracks, security fencing and gates, CCTV camera and poles, landscaping, and temporary construction compounds and off-site mitigation.	21/01816/FULEIA	Ca. 2750m
Management of Shingle Spit at Pagham.	Cut through spit at the mouth of Pagham Harbour creating a temporary alternative outflow channel to reduce/avoid flood and erosion risk to properties and businesses at Pagham Beach and Havem Church Farm over the autumn 2021.	21/01921/FULEIA	Ca. 5800m

Name	Description	Reference	Distance from site
Subcroft Farm, The Witterings	Erection of 280 no. residential dwellings (including affordable housing), associated highway and landscape works, open space and flexible retails and community floorspace.	22/02214/FULEIA	Ca. 2220m

2.3 Summary of potential impact pathways

4.5.1 *Table 3* below summarises the potential impact sources and Habitats Sites potentially affected, based on the Zone of Influence, potential impacts and designated features. For impact sources that may differ in effects during construction and operation stages of the Proposed Development, the likely significances of potential effects are assessed separately.

Table 3. Likely significance of potential effects

Impact source	Zone of Influence	Habitats Sites potentially affected	Likely significance of potential effects
Damage to non-designated habitats functionally linked to Habitats Sites.	Potential damage to habitats up to 500 m from the working area. Likely to impact the Habitats Sites closest to the potential impact.	Chichester and Langstone Harbours SPA and Ramsar site; Pagham Harbour SPA and Ramsar site; Solent and Dorset Coast (SPA); and Medmerry Compensatory Habitat.	The majority of habitats expected to be affected by the re-development are already developed land, though some areas of grassland will be used, and others adjacent to the site may be degraded.
Disturbance of birds during construction:	Up to 500 m from the working area.	Solent and Dorset Coast (SPA); and Medmerry Compensatory Habitat.	There is potential for waterbirds associated with relevant Habitats Sites to be affected by visual disturbance and noise, during the temporary construction of the Proposed Development.
Disturbance of birds during operation:	Site lies within 5.6 km zone of influence for Chichester and Langstone Harbours SPA and Ramsar site. Site lies within 3.5 km zone of influence for Pagham Harbour	Chichester and Langstone Harbours SPA and Ramsar site; Pagham Harbour SPA and Ramsar site;	Additional disturbance may arise from recreational activities in and around these sites.

Impact source	Zone of Influence	Habitats Sites potentially affected	Likely significance of potential effects
	SPA and Ramsar site;	Solent and Dorset Coast (SPA); and Medmerry Compensatory Habitat.	
Potential spread or introduction of invasive species	Within or adjacent to working area (up to 30m)	Solent and Dorset Coast (SPA); Medmerry Compensatory Habitat; and Solent Maritime SAC.	There is potential to cause the spread or introduction of invasive species during the construction stage of the re-development, or through movement of vehicles.
Air pollution, nitrogen deposition	Nitrogen deposition within 200 m of the vehicle exhausts (Natural England, 2018).	Solent and Dorset Coast (SPA); and Medmerry Compensatory Habitat.	There is potential for vehicles used in construction and operation of the Site to have an effect via travel to and from site.
Water Pollution: construction	Broad Rife Water Body Catchment area	Pagham Harbour SPA and Ramsar site; Medmerry Compensatory Habitat; and Solent and Dorset Coast (SPA).	There is potential for pollutants generated by construction to be introduced into the environment to the detriment of designated sites. The Site is in the surface and groundwater catchment area of the Broad Rife, and is upstream of Pagham Harbour SPA and Ramsar site, Medmerry Compensatory Habitat and Solent and Dorset Coast (SPA).

5.0 APPROPRIATE ASSESSMENT

5.1 Damage or disturbance to non-designated habitats functionally linked to designated sites.

- 5.1.1 The Proposed Development will potentially impact habitats in close proximity to Habitats Sites, which are used by mobile species (in this case birds) primarily inhabiting these sites, without being themselves officially designated. This constraint is in relation to the concept of functionally-linked land (FLL) (Natural England, 2016). If any areas of land within the Application Boundaries were found to be functionally linked to nearby designated sites, then construction on any land which currently provides suitable habitat could potentially result in a restriction of foraging range for these birds. In particular, the presence of dark-bellied brent geese foraging within the Application Boundaries has raised concerns that this species may be potentially negatively affected, in the case of the loss of any functionally linked land.
- 5.1.2 FLL has been defined as areas of land that are regularly used by significant numbers of qualifying bird species (Bowland Ecology, 2021). A significant population was defined in this study as 0.5% of the national population or 1000 individuals. Regular use was defined as the number of birds exceeding the significance threshold in 2/3rds of the survey seasons (Stroud *et al.*, 2001). The Solent Waders and Brent Goose Strategy provides a methodology for assessing functionally linked land within the Solent SPA (SWBGS Steering Group 2018).

Baseline conditions

Non-breeding Birds

- 5.1.3 Previous surveys have shown that low numbers of bird species were recorded along the foreshore fronting the Proposed Development (Austin *et al.*, 2017). Additionally, the Stilt Pools, directly adjacent to the Site, and within the Medmerry Reserve, are identified within the Solent Waders and Brent Goose Strategy (SWBGS) as Low Use (C136) (Whitfield, 2017). This means that while the site has a record of birds of qualifying interests (including dark-bellied brent geese), this presence has only been recorded in low numbers (less than 100) (SWBGS Steering Group, 2018). Meanwhile, no land within the Application Boundaries itself was identified as qualifying according to this analysis technique.
- 5.1.4 Baseline coastal bird surveys of the surrounding fields of the Site, as well as the adjacent Stilt Pools (part of the adjacent Medmerry Reserve), were undertaken in three survey seasons in 2018/19, 2020/21, and 2021/22. As suitable habitat was identified within the Site and the Medmerry Reserve for dark-bellied brent geese and other non-breeding bird species, specific emphasis was placed on understanding field usage by dark-bellied brent geese.
- 5.1.5 Whilst grassland within the Site shows some suitability for dark-bellied brent geese, they were only recorded in one field, within one season, with a peak count of approximately 100 individuals. This does not account for 0.5% of the national population, and therefore is not

considered significant (Bowland, 2021). In addition, the usage of the site recorded as 1 in 16 survey visits does not meet the criteria for regular use (Stroud, 2001).

- 5.1.6 Based on the SWBGS Steering Group criteria (2018), the Site would not be categorised as low use, or a candidate site, having only one maximum count of 100 individuals, but not achieving any other criteria.
- 5.1.7 The Stilt Pools, directly adjacent to the Site, and within the Medmerry Reserve, are identified within the SWBGS as **Low Use**(C136), meaning the site has a record of birds of qualifying interests (including dark-bellied brent geese) but in low numbers (Whitfield, 2017). This site may therefore be considered functionally linked habitat.

Breeding birds

- 5.1.8 Species listed as breeding qualifying interests of the Habitats Sites within the Zone of Influence included Sandwich tern, common tern, and little tern.
- 5.1.9 Background data received from Sussex Ornithological Society returned records from the last ten years for grid squares SZ8195/6 and SZ8295/6 with 12,773 observations and evidence of breeding for 19 species. Sandwich tern, common tern, and little tern were not listed among them (RSK Biocensus, 2023).
- 5.1.10 Previous surveys have not recorded Sandwich tern, common tern, and little tern breeding within the Site, and the habitats within the Application Boundaries are unsuitable for breeding by these species. Breeding bird surveys conducted across the Site in 2023 by RSK Biocensus additionally confirmed no breeding of these species within the Site or within the adjacent Stilt Pools associated with the Medmerry Reserve.
- 5.1.11 WeBS online data from the British Trust for Ornithology (BTO) showed 5-year moving averages for common tern (13), Sandwich tern (11), and little tern (0) within the Medmerry Reserve. This data shows low activity within the reserve. Data from the SOS recorded 43 observations of common tern, 35 observations of little tern, and 85 observations of Sandwich tern between 2012-2023. Such data confirmed no records of breeding between 2012-2023 within the reserve, with this area most likely used for foraging only on an infrequent basis.

Assessment of impact

- 5.1.12 The Proposed Development provides a potential impact to functionally linked habitats within 500m of the site via construction and operation activities. However, habitat loss and alteration can be ruled out as a potential impact, since it is concluded that the Site does not comprise Functionally Linked Land to any Habitats Sites.
- 5.1.13 The potential impact sources to functionally linked habitats is addressed further in each section below.

3.2 Disturbance of birds: Construction

- 5.2.1 Construction will provide a potential source of impact to the Medmerry Compensatory Habitat site, and therefore habitats that are functionally linked to Chichester and Langstone Harbours SPA and Ramsar site, Pagham Harbour SPA and Ramsar site, and Solent and

Dorset Coast SPA, by causing visual and noise disturbance, considered to impact up to 500m from the Application Boundaries.

- 5.2.2 Different types of disturbance stimuli are characterised by different avifaunal reactions, which can additionally vary based on the level of reaction. The results of the coastal bird surveys suggest that most of the fields within the Site have limited use by birds. The Stilt Pools, adjacent to the Site to the east, have a larger abundance and diversity of species. At its closest, the construction footprint is approximately 100 m from the Stilt Pools with most construction activity being more than 200 m away.
- 5.2.3 The production of the Waterbird Disturbance Mitigation Toolkit (Informing Estuarine Planning & Construction Projects) (IECS, 2013) has been developed to assist developers in relation to waterbird disturbance within or adjacent to Natura 2000 sites (i.e., SPAs, SACs, and Ramsar sites), however the principals can be applied to circumstances for development in sensitive areas for bird species. The general threshold for no effects are an approach distance of 300m and/or a low noise threshold figure of 55DbA (Cutts, Phelps & Burdon, 2009; IECS, 2013). A 70dBA noise threshold has however been developed over a period of years, based on published data as well as findings from primary observations (Cutts & Allen, 1999; Cutts, Phelps & Burdon, 2009; Cutts & Hemingway, 2010).
- 5.2.4 The toolkit has made it possible to derive a table utilizing noise levels, standard decay rates for noise and distance of the receptor from the source (Image 1). Acceptable noise levels (e.g., to 70dBA) are shaded green with dark green (<55dBA) unlikely to have any affect whilst the pale green might occasionally induce a low behavioural response that would not lead to significant impacts on the populations. Anything above these thresholds and then mitigation will likely be required. Additionally, the toolkit has been able to prescribe low, moderate, and high level disturbances to visual impacts and have concluded that for most waterbird species, the threshold for visual disturbance lies within c.100-150m. It also describes that birds can become particularly habituated to visual and noise impacts, such that their impacts are lessened.
- 5.2.5 Whilst construction related activities have the potential to cause infrequent, mild behavioural responses from noise and visual stimuli, this is most likely to occur in heavily localised areas of the construction works (i.e., within 100 m). As all of the works will take place further than 100 m from the Stilt Pools, with a significant buffer maintained from the construction footprint (Field D), behavioural responses are likely to be rare and infrequent and would more likely be associated with larger disturbance events which would cause birds to temporarily flush. According to the table described in Image 1, almost all sources of noise would be at an acceptable dose (70dBA) at 100m (the closest distance from the development to the Stilt Pools), apart from those which exceed 120dBA, which would give a dose of between 72dBA to 78dBA (yellow-orange threshold) at the Stilt Pools. However, large noise source events above 120dBA dBA would be atypical of a development such as this, where the built structures are pre-fabricated and there is minimal piling involved. During most activities from construction there would be no or minimal behavioural responses from bird species, but even in unlikely and infrequent high disturbance events, birds would be expected to temporarily redistribute to another nearby adjacent foreshore and return when disturbance has lessened. That being said, there is an argument for the relative habituation of waterbirds to anthropogenic activities in the local area due to the

existing noise ambient levels and recreational pressure, with birds expected to become further habituated to construction activities.

Metres from Source	dB(A)										
	0.67	120	110	100	95	90	85	80	75	70	65
1.33	114	104	94	89	84	79	74	69	64	59	54
2.67	108	98	88	83	78	73	68	63	58	53	48
5.33	102	92	82	77	72	67	62	57	52	47	42
10.67	96	86	76	71	66	61	56	51	46	41	36
20.67	90	80	70	65	60	55	50	45	40	35	30
42.67	84	74	64	59	54	49	44	39	34	29	24
85.33	78	68	58	53	48	43	38	33	28	23	
170.67	72	62	52	47	42	37	32	27	22		
341.33	66	56	46	41	36	31	26	21			
682.66	60	50	40	35	30	25	20				
1365.32	54	44	34	29	24						

Image 1. Noise disturbance thresholds including distances from source and standard decay rates (taken from IECS, 2013).

Mitigation

- 5.2.6 To mitigate potential impacts of disturbance to birds during the proposed demolition and construction works, a CEMP will be produced to provide detailed measures to control noise on site, including measures such as screening if appropriate. This is detailed further in Section 5.8 of this report.

3.2 Disturbance of birds: Operation

- 5.3.1 There is a potential to disturb birds during the operation of the site, by recreational activities within the Application Boundaries. This is considered to potentially affect the Medmerry Compensatory Habitat site, and therefore habitats that are likely functionally linked to Chichester and Langstone Harbours SPA and Ramsar site, Pagham Harbour SPA and Ramsar site, and Solent and Dorset Coast SPA, by causing visual and noise disturbance, considered to impact up to 500m from the Application Boundaries.
- 5.3.2 The existing site already provides an existing source of disturbance to the surrounding area. The proposals do not provide a net increase in dwellings on the Site, and as such it is considered that the level of disturbance from the Proposed Development will not be significantly increased. While it is noted that there won't be an increased number of units, the increase in space taken within the Site and the increase in amenity facilities has the potential to lead to a minimal increase in the amount of noise, visual, and light disturbance. However, such amenity facilities proposed, do not involve activities that are likely to produce large amounts of noise, over and above the 55 dBA threshold of significant

disturbance (IECS, 2013). An open amenity area is proposed as part of the project design and could include the irregular installation of a projector to show films or sporting events. The noise output for this area has been measured as part of the noise impact assessment (see **Chapter 15: Noise and Vibration**). This concluded that the calculated level of noise from the open amenity area would be between 43-44dBA which falls below the 55dBA no impact threshold as described within the Waterbird Disturbance Mitigation Toolkit (IECS, 2013) and Image 1.

- 5.3.3 However, even with the minimal increase in light, noise, and visual stimuli, it is acknowledged that additional mitigation measures can be incorporated into the design to further reduce the potential for impacts from disturbance.

Mitigation

- 5.3.4 Access to the east of the site (the field closest to the Medmerry Reserve) will be restricted from the public, providing a buffer of approximately 125m between the Proposed Development and the reserve. Amenity space will be created on site which will encourage occupiers to remain within the Site. In addition, landscape screening will be introduced to further reduce the potential for disturbance. This is outlined further in Section 5.7 of this report.

2.3 Potential spread or introduction of invasive species

- 5.4.1 There is potential to introduce or spread invasive species within the Solent and Dorset Coast SPA and the Medmerry Compensatory Habitat site during construction works, notably through movements of vehicles and site staff.
- 5.4.2 Surveys in 2019 and 2023 identified an extensive stand of Japanese knotweed within bramble scrub on building rubble on the southern margin of the Site, adjacent to the existing tennis courts. Japanese knotweed is a highly injurious plant listed under Schedule 9 of The Wildlife and Countryside Act 1981 (as amended) and is additionally listed under The Invasive Alien Species (Enforcement and Permitting) Order 2019. It is therefore in breach of this legislation to cause Japanese knotweed to spread or grow in the wild, with risks and mitigation needing to be considered as part of the Proposed Development. Mitigation
- 5.4.3 A CEMP will be produced to include an invasive species management plan for the site, and detail biosecurity measures for the construction operations. This is described further in Section 5.7 of this report.

5.5 Air pollution, nitrogen deposition

- 5.5.1 The main source of air pollution from the Proposed Development will be the form of transport exhaust fumes (cars, vans and construction vehicles). Individual vehicles are not considered to provide a significant level of nitrogen deposition, rather the cumulative effects of many vehicles, for example 1000 vehicles using a road per day on average (Annual Average Daily Traffic (AADT)) or 200 heavy goods vehicles (HGV), is considered significant. Nitrogen deposition is considered to provide an impact up to 200m from the source, returning to background levels after 200m (Natural England, 2018).

- 5.5.2 It is anticipated that the access to the Site will be along Drove Lane. The Medmerry RSPB Reserve is, in part, located adjacent to the Drove Lane access route. The number of vehicles used during the construction works will not exceed the 1000 vehicles AADT, or 200 HGV AADT thresholds. Drove Lane serves only the Proposed Development and some adjacent commercial units. Therefore, the combined traffic along this road is likely to be considerably less than 1000 AADT. During operation, the change caused by the Proposed Development will not result in a significant increase in the AADT along this access, and is not expected to exceed the 1000 vehicles AADT threshold. The assessment of air pollution undertaken within **Chapter 12: Air** additionally identified negligible effects in relation to pollution
- 5.5.3 Beyond Drove Lane, the access joins the A286, which is not located within 200m of any Habitats Sites. The A286 joins the A27, at which point traffic is considered likely to disperse, with no significant effects. It is therefore considered that there are no Likely Significant Effects from air pollution caused by the Proposed Development.

3.2 Water Pollution

- 5.6.1 There is potential for water pollution to occur as a direct result of construction works, in nearby designated sites including the Solent and Dorset Coast SPA, Pagham Harbour SPA and Ramsar site, and Medmerry Compensatory Habitat. Compounds or materials arising as a result of construction works may enter the surface and groundwater systems.

Mitigation

- 5.6.2 A CEMP will be produced containing pollution prevention and control measures, including the adoption of standard good practice pollution prevention and control measures during construction, in accordance with best practice guidance. This is described further in Section 5.7 below.

5.5 In-combination effects

- 5.7.1 The potential in-combination impacts on Habitats Sites arising from the Proposed Development has been considered with regards to those other developments outlined Section 4.4 above. No projects have been identified that are considered likely to act cumulatively upon the ecology of Habitats Sites during the construction and operational phases of the Proposed Development.
- 5.7.2 The projects identified within proximity to the Site have all been subject to their own relevant detailed biodiversity impact assessments and mitigation measures. This includes assessments and mitigation measures associated with the increased risk of recreational pressure from residential developments. The proper planning and implementation of environmental controls, monitoring and mitigation for projects of that scale greatly minimises the risk of significant residual impacts upon ecological features of conservation importance. The enforcement of planning policies set out within the Chichester Local Plan would ensure that projects alone would not, without any scientific doubt, cause any significant impacts to Habitats Sites, and would enforce any mitigation and compensatory measures where necessary, which would offset impacts on a landscape scale (e.g., payments towards the Bird Aware Solent Recreation Mitigation Strategy). Consequently,

the risk of in-combination effects on any of the Habitats Sites within the Zone of Influence is unlikely to be significant, especially considering the low-impact nature of the Proposed Development and other developments assessed for cumulative effects.

3.2 Mitigation

- 5.8.1 Provided that mitigation measures outlined below are implemented, then significant adverse effects on Habitats Sites can be avoided.

Embedded design mitigation

- 5.8.2 The proximity of the Medmerry Reserve and more specifically the Stilt Pools, makes them sensitive to construction and operational related developmental changes. As a result, the field to the east of the Site bordering the Stilt Pools is to be retained in order to maintain a buffer between the park and the Medmerry Reserve, to prevent and avoid construction and recreational related disturbance. Access to this area will be prohibited during the operation phase of the Proposed Development and signage boards will be deployed in sensitive ecological areas in order to educate visitors on ecological sensitivities. This will help in ensuring that recreational disturbance is prevented.
- 5.8.3 In order to further prevent and avoid an increase in recreational disturbance associated with the Proposed Development, the project design has incorporated an increase in amenity facilities within the Site itself. The intention of this is to increase the number of activities that can exclusively take place within the Application Boundaries, thus reducing the need for holiday makers to explore neighbouring designated sites.
- 5.8.4 The Proposed Development has been designed to minimise the extent of habitat loss required. As such, new areas for development have been minimised as much as possible, with the main aspect of the Proposed Development focusing on re-developing and utilising urban areas of the existing Medmerry holiday park site, to minimise disturbance to semi-natural habitats.
- 5.8.5 The construction phase of the Proposed Development has been designed as such to limit the disturbance to habitats and species as much as possible. The designs of the holiday let accommodation have been chosen so that they are mostly pre-fabricated with only a small amount of assembly on the Site required. Not only does this negate the requirement for loud, high-powered machinery, but it also reduces the space required for materials and reduces construction time. The phased approach to the Proposed Development additionally reduces the likelihood of significant disturbance effects and intra-cumulative effects (effects of multiple construction activities combining to create a bigger effect within the Proposed Development) from construction related activities.

Construction methods

- 5.8.6 Best practice construction measures will be adopted to minimise potential construction impacts on ecological features. These will be detailed within a CEMP to be produced under a condition of planning and based upon standards set out within the BSI Standards Publication on Biodiversity - code of practice for planning and development (BS 42020:2013). The CEMP will include measures to minimise working areas to avoid unnecessary habitat removal/alteration and disturbance, and measures to avoid/minimise

the generation of additional noise, dust, light spill, vibration, and pollution. In general, the CEMP would be proportionate and tailored to the ecology of the Site, based on the following considerations:

- Identification of biodiversity protection zones and areas where invasive species have been identified;
- Inclusion of details for the implementation of method statements to achieve biodiversity outcomes and mitigation measures;
- Identification of practical measures and sensitive working practices to avoid construction related impacts;
- The location and timing of sensitive works to avoid harm to biodiversity features;
- The times during construction when particular specialists are required to be present to oversee works;
- Responsible persons and lines of communication;
- Defining the role and responsibilities of an Ecological Clerk of Works (ECoW); and
- Use of protective barriers and warning signs to avoid and prevent harm to ecology and biodiversity.

Ecological Clerk of Works

5.8.7 An Ecological Clerk of Works (ECoW) will be appointed to address issues relating to ecological features during construction, as described within the CEMP. Their responsibilities will include:

- Undertake a pre-construction survey/check to ensure that significant effects to and newly colonised ecological features will be avoided;
- Inform and educate site personnel of sensitive ecological features within the Site and how effects on these features could occur;
- Oversee management of ecological issues during the construction period and advise on ecological issues as they arise;
- Provide guidance to contractors to ensure legal compliance with respect to protected habitats and species on-site and off-site;
- Liaise with officers from consenting authorities and other relevant bodies and contractors with regular updates in relation to construction progress; and
- Monitoring post-construction/implementation success of mitigation methods and aftercare of sensitive habitats and features.

Lighting strategy

5.8.8 In general, artificial light creates a barrier to crepuscular species, so the use of artificial lighting during construction would be avoided wherever possible. As would be described within the CEMP, construction activities within the Site would take place during daylight hours where possible to minimise disturbances to crepuscular species. Some works may

occur at night due to necessity; however, the ECoW would limit night-time works to sections of the Site that avoid sensitive features (i.e., the Medmerry Reserve (specifically the Stilt Pools)). Where lighting would be required, directional lighting (i.e., lighting which only illuminates work areas and not nearby habitat features) would be used to prevent overspill. This can be achieved by the design of the luminaire and by using accessories such as hoods, cowls, louvers, and shields to direct the light to the intended areas only.

Noise prevention

- 5.8.9 Noise will be controlled to reduce the impact of disturbance to wintering birds and other animals in the local area for the duration of the construction.
- 5.8.10 All plant and machinery will comply with specific noise legislation (The Noise Emission in the Environment for use Outdoors Regulations 2001 (as amended)) and will be turned off when not in use.
- 5.8.11 The contractors shall control noise on the working areas in accordance with BS 5228, Noise Control on Construction and Open Sites. Site inspections by the appointed contractor shall include checks to ensure that plant is being operated with any specified acoustic covers in place. Excessively noisy plant shall be removed from the Site for repair or maintenance. Quieter construction methods will be used, where required and where considered reasonable and feasible.
- 5.8.12 Equipment will be switched off when not in use (including during breaks and down times of more than 30 minutes).
- 5.8.13 If required, acoustic barriers or screens will be erected around construction works in sensitive areas or for works that are likely to create a significant amount of noise (usually above 50dBA).

Additional construction measures

- 5.8.14 Additional measures to be implemented during the construction phase of the Proposed Development described within the CEMP will include:

No removal of habitats or movement of construction machinery will occur outside of the development works area during the construction phase, clearly marking out the works footprint for site staff;

Production of an Invasive Species Management Plan to be included within the CEMP. This will include measures to eradicate and control invasive species, such as Japanese knotweed which is present on the Site;

All edible and putrescible waste will be stored and disposed of in an appropriate and timely manner. Construction materials will be stored and stockpiled according to strategies set out within the CEMP;

Standard good practice pollution prevention guidance including managing the input of dust, cement, stilt, hydrocarbons, and other chemicals to watercourses and other habitats. Measures such as stilt traps, plant inspection, best practice re-fuelling of machinery, and drainage monitoring will be implemented as part of the CEMP. Crucially, the site drainage system will not outflow to the existing drainage network directly but will discharge via silting ponds, preventing

hydrological impacts. An emergency plan for the construction phase to deal with accidental spillages would be contained within the CEMP; and

Delineation of buffer zones of sensitive habitats (i.e., the Medmerry Reserve) in order to safeguard these habitats from construction related disturbance.

Operational methods

- 5.8.15 Operational methods will act to prevent pollution from litter, dog excrement, fuels, silty water etc. This will be mitigated for by enacting a sufficient waste management plan (which includes elements of recycling), implementation of litter and dog waste bins, waste education signage, litter picking, and pollution prevention, described within the CEMP. Any environmental incidents will be followed by appropriate remedial measures in consultation with relevant external agencies as well as an emergency plan to deal with any accidental spillages (included within the CEMP).

Landscape and Ecological Management Plan (LEMP)

- 5.8.16 Proposed enhancement measures to be included as part of the proposed Development will be outlined in a Landscape and Ecological Management Plan (LEMP). This will set out the long-term objectives and targets for the enhancement measures, along with prescriptions for management and monitoring methods and responsibilities to achieve such aims. The plan will incorporate the enhancement of retained habitats and the creation of new habitats of ecological value. The measures that will be contained within the LEMP will uphold the principle of providing a biodiversity net gain and will include:

Details of the current condition and status of the Site and an outline of features that are of ecological interest;

Identification of specific objectives and measurable targets relating to the management of the Site and enhancement of its wildlife interest;

Activities which will be undertaken to manage the land to achieve the objectives and targets; and

The mechanisms to monitor progress and plan review to ensure the management plan remains up-to-date and relevant throughout its duration.

- 5.8.17 It is proposed that the LEMP would be a working document which will evolve following discussions between the developers, the landowners, the ECoW and organisations with responsibility for, and an interest in, key wildlife species including Chichester Council, Natural England, and RSPB Medmerry.

- 5.8.18 Habitat enhancement and creation would target ecological features of conservation concern. Proposals include the creation of 4.2ha of lowland meadow in two fields within the Application Boundaries. Appropriate management such as an annual hay cut at the end of summer and aftermath grazing will allow for the development of this habitat. Not only does this establish a priority habitat that is decreasing in its extent nationally, but it will also provide suitable habitat for a range of species. In particular, establishing lowland meadows will provide further suitable habitat for dark-bellied brent geese, where grass would be kept at shorter swards in the winter, which would better facilitate grazing by geese.

5.8.19 Other habitat creation and enhancement proposals to be included in the LEMP are outlined in the Environmental Statement for the Proposed Development (**Chapter 6: Biodiversity**).

6.0 CONCLUSIONS

- 6.1.1 The Habitats Sites: Chichester and Langstone Harbours SPA and Ramsar site, Pagham Harbour SPA and Ramsar site, Solent Maritime SAC, Solent and Dorset Coast SPA and the Medmerry Reserve (Compensatory Habitat) are potentially affected by the Proposed Development.
- 6.1.2 The Appropriate Assessment determined that, provided mitigation is implemented on site to include a CEMP and LEMP, then significant adverse effects on the integrity of Habitats Sites would not occur.

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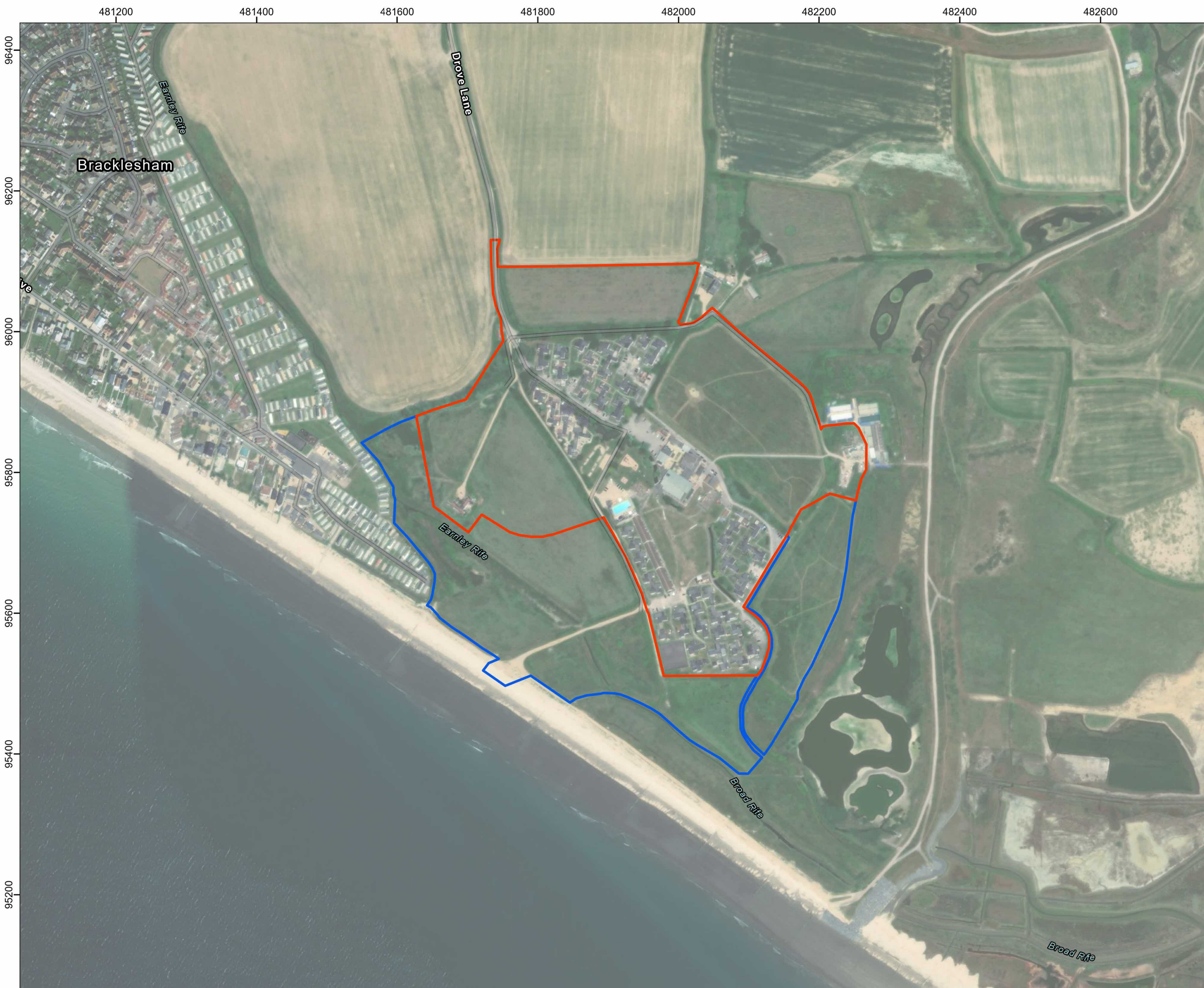
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FIGURES

Figure 1. Site layout

Figure 2. International and nationally designated sites within 10 and 2 km.



- Legend:**
- Site Boundary
 - Off-site Enhancement Area

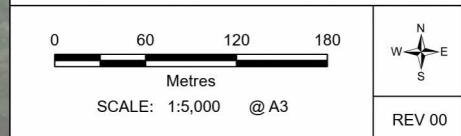


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Medmerry Holiday Park



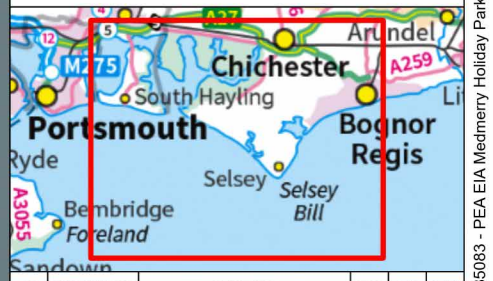
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Site Layout



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- Legend:**
- Site Boundary
 - Off-site Enhancement Area
 - 2km Site Buffer
 - 10km Site Buffer
 - Special Protection Areas
 - Special Areas of Conservation
 - Ramsar
 - Sites of Special Scientific Interest
 - Marine Conservation Zones
 - Medmerry RSPB Reserve



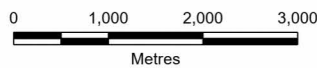
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Medmerry Holiday Park




RSK
biocensus
EXPERTS IN ECOLOGY

TITLE: Figure 2:
International and Nationally Designated Sites within 10 and 2km



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Metres
SCALE: 1:80,000 @ A3



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