

# Harras Moor

## REPORT TO INFORM HABITATS REGULATIONS ASSESSMENT – STAGE 1 ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS AND STAGE 2 APPROPRIATE ASSESSMENT

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Homes England

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Prepared on Behalf of Tetra Tech Limited.

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## GLOSSARY

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AA	Appropriate Assessment (Stage 2 HRA)
ALSE	Assessment of Likely Significant Effects (Stage 1 HRA)
BTO	British Trust for Ornithology
CIEEM	Chartered Institute of Ecology & Environmental Management#
DfT	Department for Transport
HRA	Habitats Regulations Assessment
JNCC	Joint Nature Conservation Committee
LSE	Likely Significant Effects
MCIEEM	Member of Chartered Institute of Ecology & Environmental Management
NPWS	National Parks and Wildlife Service
Natura 2000 site	A European site designated for its nature conservation value
NE	Natural England
RSPB	Royal Society for the Protection of Birds
SAC	Special Area of Conservation
SHLAA	Strategic Housing Land Availability Assessment
SIP	Site Improvement Plan
HRA	Habitats Regulations Assessment
SPA	Special Protection Area
TEP	The Environment Partnership
UK	United Kingdom

## 1.0 INTRODUCTION

### 1.1 BACKGROUND

Tetra Tech (Europe) was commissioned by Homes England in May 2021 to prepare a report to inform a Habitats Regulations Assessment (HRA) to inform a proposed development of 370 new homes with a mix of family homes, including a large proportion of larger executive homes.

This report to Inform HRA has been prepared by Tetra Tech Principal Ecologist Phil Preston MCIEEM and the conditions pertinent to it are provided in Appendix A.

This document provides information which can be used by the competent authority to complete their Habitats Regulations Assessment in relation to this project.

### 1.2 SITE LOCATION

The 'site' is located at Harras Moor in Whitehaven, Copeland Borough, Cumbria and is centered at Ordnance Survey National Grid Reference NX986180 – see Figure 1.

The habitats on site comprise mainly broad-leaved plantation woodland, scattered trees, scrub, semi-improved grassland, marshy grassland, species-poor semi-improved grassland, swamp, tall ruderal, bracken and various boundary features including hedgerows and fences. Details of habitats recorded including phase 1 habitat mapping are presented within the Harras Moor, Ecological Appraisal (Tetra Tech 2021).

### 1.3 DEVELOPMENT PROPOSALS

The proposal includes 370 new homes with a mix of family homes, including a large proportion of larger executive homes. See Appendix B for the proposed development masterplan (Dwg N<sup>o</sup>: A090070-410 003 Rev: G).

### 1.4 REQUIREMENTS FOR THE HABITATS REGULATIONS ASSESSMENT

The requirement for a HRA is established through Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora, hereby referred to as the 'Habitats Directive', in Articles 6(3) and 6(4). The Habitats Directive is transposed into national legislation by the Conservation of Habitats and Species Regulations 2017 (as amended by Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019). These are hereafter referred to as the 'Habitats Regulations'.

Under Regulation 63, any project which is likely to have a significant effect on a European site (either alone or in-combination with other projects) and is not directly connected with, or necessary for the management of the application site, must be subject to an HRA to determine the implications for the application site in view of its conservation objectives. This is determined during the Stage 1: Screening Assessment of a HRA (see below).

A Stage 2: Appropriate Assessment then needs to be carried out in respect of any plan or project which:

- either alone or in combination with other plans or projects would be likely to have a significant effect on a site designated within the European network; and
- is not directly connected with the management of the application site for nature conservation.

The term European site is defined fully in Regulation 8 of the Habitats Regulations and includes:

- Special Areas of Conservation (SACs);
- candidate SACs;
- Special Protection Areas (SPAs);
- potential SPAs;
- Ramsar sites (Wetlands of International Importance designated or proposed for their wetland features under the auspices of the Convention of Wetlands of International Importance);
- proposed Ramsar sites; and
- sites identified for Natura 2000 compensatory measures.

The final two categories are afforded the same level of protection as SACs and SPAs as a matter of Government policy, and the assessment provisions of the Habitats Regulations are applied to them.

## 1.5 CONSULTATION AND FIELD SURVEYS

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The Zone of Influence (Zoi) for a project is the area over which ecological features may be subject to significant effects as a result of the proposed project and associated activities. This is likely to extend beyond the project site, for example where there are hydrological links or sites beyond the site boundary that are sensitive to airborne impacts.

The zone of influence (Zoi) for this assessment has been defined as a 10 km radius from the application site. This zone of influence has been determined based on likely pathways of effect as a result of the development (as discussed below).

Information relating to each designated site (including distance from the application site) is presented in Section 3.0 and locations are shown on Figure 2.

A site walkover survey was undertaken on the site in July 2021 by Tetra Tech Senior Ecologist Patryk Gruba MCIEEM and Tetra Tech Assistant Ecologist Elizebeth Wilcox in relation to the Ecological Appraisal for this project (Tetra Tech, 2021).

Natural England were consulted in June 2021 in relation to HRA requirements of this project. In addition, Natural England were also consulted on the 1st of September in order to clarify likely mitigation measures appropriate for this project.

## 1.6 INFORMATION USED IN THIS ASSESSMENT

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The potential pathways to Likely Significant Effects (LSE) were identified following a review of the following information that is referred to in the report:

- The qualifying features of the Solway Firth SPA;
- The qualifying features of the River Derwent and Bassenthwaite Lake SAC;
- The qualifying features of the River Ehen SAC;
- The conservation objectives for the Solway Firth SPA;
- The conservation objectives for the River Derwent and Bassenthwaite Lake SAC;
- The conservation objectives for the River Ehen SAC;
- Habitats Regulations Assessment – Copeland Local Plan Preferred Options (David Archer Associates, 2020);
- Harras Moor Ecological Appraisal (Tetra Tech, 2021); and
- TEP (2019), Harras Moor, Whitehaven. Ecological Assessment. 5060.Eco.Harras.003.

## 2.0 METHODOLOGY

### 2.1 HABITATS REGULATIONS ASSESSMENT

The HRA process involves the following tasks split according to the guidance stages, the current report is concerned with Stage 1 – Screening and Stage 2 – Appropriate Assessment. Table 1 provides a summary of each stage of the HRA process.

**Table 1: HRA Stages**

Stage	Details
<b>Stage 1 ALSE</b>	<p>This is often called an Assessment of Likely Significant Effects (ALSE) and is essentially a risk assessment, typically utilising existing data, records and specialist knowledge. The purpose of the test is to decide whether 'full' Appropriate Assessment is required. The essential question is:</p> <p><i>“Is the project, either <b>alone</b> or <b>in-combination</b> with other relevant projects and plans, <b>likely</b> to result in a <b>significant [adverse] effect</b> upon European sites?”</i></p> <p>If it can be demonstrated that significant effects are unlikely without any form of mitigation, no further assessment is required. If this cannot be demonstrated works progress to stage 2.</p>
<b>Stage 2 Appropriate Assessment</b>	<p>If it cannot be satisfactorily demonstrated that significant effects are unlikely, a full “Appropriate Assessment” will be required. The essential question here is:</p> <p><i>“Will the project, either <b>alone</b> or <b>in-combination</b> with other relevant projects and plans, <b>actually</b> result in an <b>adverse effect upon the integrity</b> of any European sites?”</i></p> <p>If it is concluded that adverse effects will occur, mitigation measures will be required to either avoid the impact in the first place, or to reduce the ecological effect to such an extent that it is no longer significant.</p>
<b>Stage 3 Alternatives</b>	<p>Stage 3 involves the examination of alternative ways of achieving the objectives and avoiding adverse impacts on the integrity of the Natura 2000 sites</p>
<b>Stage 4 IROPI</b>	<p>Stage 4 is an assessment of compensatory measures, where, in the light of an assessment of Imperative Reasons of Overriding Public Interest, it is deemed that a plan or project should proceed.</p>

## 3.0 SCOPE OF ASSESSMENT

### 3.1 IDENTIFICATION OF NATURA 2000 SITES AND CHARACTERISATION

Projects can cause effects that lead to impacts on sites outside of the development footprint. These can be influenced by site variables such as prevailing wind conditions, surface and groundwater flow direction will all have an influence on the relative distance at which an impact can occur.

Additionally, the mobile nature of qualifying species must also be considered. This is because adverse effects on the qualifying species of a site, can occur even if they are not present within the application site. For instance, birds may forage in one area but roost at another, but both may not be within a site for which they are designated.

The following sites are located within 10 km of the site. The details of these sites are provided in Table 2 including the distance and directions from the site.

**Table 2: Summary of International Sites Screened in to this Report**

Natura 2000 and Ramsar Sites	Area (ha)	Distance and direction from site
Solway Firth SPA	135749.35	1.7 km west of site
River Ehen SAC	23.77	5.3 km south-east of site
River Derwent and Bassenthwaite Lake SAC	1793.57	7.9 km north-east of site

### 3.2 SOLWAY FIRTH SPA

#### 3.2.1 Description

The Solway Firth Special Protection Area (SPA) is a large estuarine/marine site on the west coast of Great Britain. The SPA has been designated in the inner Solway Firth for inshore non-breeding waterfowl and non-breeding gulls and is an important wintering grounds location. In 2020, the Upper Solway Flats and Marshes Special Protection Area (SPA) has officially been extended and renamed the Solway Firth SPA. The habitats within the SPA of significance to bird populations comprise intertidal mudflats, fringing saltmarshes and grazing marshes.

Table 3 presents information regarding qualifying features of this designated site (SNH, undated).

**Table 3: Solway Firth SPA Summary of Qualifying Features**

Relevant Directive	Feature	Extent	Importance
Article 4.1 of EC Directive 79/409  Non-breeding  Annex 1	Red-throated diver <i>Gavia stellata</i>	521 individuals	3.1% of the Great Britain population (non-breeding)
	Whooper swan <i>Cygnus cygnus</i>	250 individuals	4% of the population in Great Britain (non-breeding winter); 1.5% of the north west European population
	Golden plover <i>Pluvialis apricaria</i>	3,380 individuals	2% of the population in Great Britain (non-breeding)
	Bar-tailed godwit <i>Limosa lapponica</i>	4,800 individuals	8% of the population in Great Britain (non-breeding); 4% of east Atlantic flyway

	Barnacle goose <i>Branta leucopsis</i>	12,300 individuals	100% of the Svalbard population (non-breeding), all of which winter in Britain.
Article 4.2 of EC Directive 79/409	Pink-footed geese <i>Anser brachyrhynchus</i>	14,900 individuals;	14% of the Icelandic population, all of which winter in Great Britain
Migratory / Non-breeding	Pintail <i>Anas acuta</i>	1,400 individuals	6% of the Great Britain population; 2% of north west European
	Scaup <i>Aythya marila</i>	2,300 individuals	57% of the Great Britain population; 2% of north west European
	Oystercatcher <i>Haematopus ostralegus</i>	33,850 individuals	12% of the Great Britain population; 4% of the east Atlantic flyway
	Knot <i>Calidris canutus</i>	15,300 individuals	7% of the Great Britain population; 4% of the east Atlantic flyway
	Curlew <i>Numenius arquata</i>	6,700 individuals	7% of the Great Britain population; 2% of east Atlantic flyway
	Redshank <i>Tringa totanus</i>	2,100 individuals	3% of the Great Britain population; 2% of east Atlantic flyway
Article 4.2 of EC Directive 79/409	Ringed plover <i>Charadrius hiaticula</i>	981 individuals	1.3% of the biogeographic population
Passage / Non-breeding			
Article 4.2 of EC Directive 79/409	Shelduck <i>Tadorna tadorna</i>	1,600 individuals	2% of the Great Britain population;
Migratory / Non-breeding	Teal <i>Anas crecca</i>	1,400 individuals	1% of the Great Britain population;
	Shoveler <i>Anas clypeata</i>	120 individuals	1% of the Great Britain population;
	Goldeneye <i>Bucephala clangula</i>	300 individuals	2% of the Great Britain population;
	Grey plover <i>Pluvialis squatarola</i>	720 individuals	3% of the Great Britain population;
	Sanderling <i>Calidris alba</i>	260 individuals	2% of the Great Britain population
	Dunlin <i>Calidris alpina</i>	11,900 individuals	3% of the Great Britain population;
	Turnstone <i>Arenaria interpres</i>	600 individuals	1% of the Great Britain population
	Common scoter <i>Melanitta nigra</i>	1,588 individuals	1.6% of the Great Britain population;
	Goosander <i>Mergus merganser</i>	146 individuals	1.6% of the Great Britain population;
	Lapwing <i>Vanellus vanellus</i>	5037 individuals	0.8% of the Great Britain population;
	Cormorant <i>Phalacrocorax carbo</i>	581 individuals	1.6% of the Great Britain population;

	Black-headed gull <i>Chroicocephalus ridibundus</i>	13,732 individuals	0.6% of the Great Britain population;
	Common gull <i>Larus canus</i>	12,486 individuals	1.8% of the Great Britain population;
	Herring gull <i>Larus argentatus</i>	3034 individuals	0.4% of the Great Britain population;

The Upper Solway Flats SSSI units underly Solway Firth SPA. The total area of Upper Solway Flats SSSI is 12,950.25ha and the underlying SSSI units are listed as: 25.25% Favourable, 74.49% Unfavourable-Recovering and 0.26% Unfavourable-No change (Natural England 2021a).

### 3.2.2 Conservation Objectives

The conservation objectives for the Solway Firth SPA are (Natural England, 2018a):

*“To avoid deterioration of the habitats of the qualifying species or significant disturbance to the qualifying species, subject to natural change, thus ensuring that the integrity of the site is maintained in the long-term and it continues to make an appropriate contribution to achieving the aims of the Birds Directive for each of the qualifying species.*

*This contribution will be achieved through delivering the following objectives for each of the site’s qualifying features:*

- a) Avoid significant mortality, injury and disturbance of the qualifying features, so that the distribution of the species and ability to use the site are maintained in the long-term;*
- b) To maintain the habitats and food resources of the qualifying features in favourable condition.”*

### 3.2.3 Main Threats

The following activities are considered likely to affect the qualifying features of the SPA according to the Advice to Support Management for the Solway Firth pSPA document (SNH, 2016):

- Fishing – mobile gear;
- Fishing – static gear;
- Harvesting – intertidal shellfish, bait and blue mussel fishery;
- Navigational and maintenance dredging;
- Ports and harbours;
- Recreational users (angling, boating, wildlife tours, wildfowling, jet skiing);
- Renewables (wind, tidal).

The list of potential threats and pressures is not exhaustive and any new or other activities not identified as main threats or pressures need to be considered on the case-by case basis (SNH, 2016)

## 3.3 RIVER EHEN SAC

### 3.3.1 Description

The River Ehen forms the outfall from Ennerdale Water and flows some 20 km before reaching the Irish Sea at Sellafield. For much of its upper length the River Ehen is oligotrophic (nutrient-poor) and flows over bryophyte-dominated shingle, pebbles and rock. Above Ennerdale Bridge the catchment is largely composed of acidic rocks of the Borrowdale Series and Skiddaw Slates. Downstream from Ennerdale Bridge the river is slightly enriched by streams flowing from Limestones and Millstone Grits of the Carboniferous Series.

Table 4 presents information regarding qualifying features of River Ehen SAC (Natural England, 2014a).

**Table 4: River Ehen SAC Summary of Qualifying Features**

Relevant Directive	Feature
Habitats Directive (92/43/EEC)	Freshwater pearl mussel <i>Margaritifera margaritifera</i>
Annex II Species that are a primary reason for selection.	Atlantic salmon <i>Salmo salar</i>

River Ehen (Ennerdale Water to Keekle Confluence) SSSI units underly River Ehen SAC. The total area of the River Ehen SSSI is 23.77ha and the underlying SSSI units are listed as: 100% Unfavourable-Declining (Natural England, 2021b).

### 3.3.2 Conservation Objectives

The conservation objectives for River Ehen SAC are as follows (Natural England, 2018b):

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

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

### 3.3.3 Main Threats and Pressures

A list of relevant pressures and threats to the River Ehen SAC as presented within the Site Improvement Plan (SIP) are detailed below (Natural England, 2014b):

- Water abstraction
- Low breeding success/poor recruitment
- Siltation
- Water Pollution
- Inappropriate weirs dams and other structures
- Agricultural management practices
- Invasive species
- Forestry and woodland management
- Public access disturbance
- Transportation and service corridors



## 3.4 RIVER DERWENT & BASSENTHWAITE LAKE SAC

### 3.4.1 Description

The Derwent is a large nutrient poor (oligotrophic) river system with high water quality and a natural channel.

Table 5 presents information regarding qualifying features of this designated site as published in 2005 (NE, 2015).

**Table 5: River Derwent & Bassenthwaite Lake SAC Summary of Qualifying Features**

Relevant Directive	Feature
Habitats Directive (92/43/EEC) Annex I Habitats that are a primary reason for selection.	Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or of the <i>Isoëto-Nanojuncetea</i> .
Habitats Directive (92/43/EEC) Annex I Habitats that are not a primary reason for selection.	Watercourses of plain to montane levels with the <i>Ranunculon fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation.
Habitats Directive (92/43/EEC) Annex II Species that are a primary reason for selection.	Marsh fritillary butterfly <i>Euphydryas aurinia</i> ;
	Sea lamprey <i>Petromyzon marinus</i> ;
	Brook lamprey <i>Lampetra planeri</i> ;
	River lamprey <i>Lampetra fluviatilis</i> ;
	Atlantic salmon <i>Salmo salar</i> ;
	Otter <i>Lutra lutra</i> ; and,
	Floating water-plantain <i>Luronium natans</i> .

River Derwent & Bassenthwaite Lake SAC comprises a number of SSSIs: Bassenthwaite Lake SSSI, Braithwaite Moss SSSI, Buttermere SSSI and River Derwent and Tributaries SSSI. The total area of Bassenthwaite Lake SSSI is 676.31ha and the underlying SSSI units are listed as: 10.20% Favourable, 10.15% Unfavourable-Recovering and 79.65% Unfavourable-No change (Natural England, 2021c)

The total area of Braithwaite Moss SSSI is 33.86ha and the underlying SSSI units are listed as: 44.07% Unfavourable-Recovering and 55.93% Unfavourable-No change (Natural England 2021d).

The total area of Buttermere SSSI is 93.25ha and the underlying SSSI units are listed as: 100% Favourable (Natural England 2021e).

The total area of River Derwent and Tributaries SSSI is 1.209.06ha and the underlying SSSI units are listed as: 24.33% Favourable, 20.93% Unfavourable-Recovering, 54.44% Unfavourable-No change and 0.30% Unfavourable-Declining (Natural England 2021f).

### **3.4.2 Conservation Objectives**

The conservation objectives for the River Derwent & Bassenthwaite Lake SAC are as follows (Natural England, 2018c):

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

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

### **3.4.3 Main Threats and Pressures**

A list of relevant pressures and threats to the River Derwent & Bassenthwaite Lake SAC as presented within the Site Improvement Plan (SIP) are detailed below (Natural England, 2014c):

- Water pollution;
- Siltation;
- Invasive species;
- Physical modification;
- Water abstraction;
- Changes in species distribution;
- Change in land management
- Forestry and woodland management;
- Fisheries: Fish stoking
- Hydrological changes
- Air pollution: impact of atmospheric nitrogen deposition

## 4.0 STAGE 1 – ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS

### 4.1 DETERMINING WHETHER THE DEVELOPMENT PROPOSALS ARE DIRECTLY CONNECTED WITH OR NECESSARY TO THE MANAGEMENT OF THE INTERNATIONALLY DESIGNATED SITE(S)

The development proposals are not connected with and are not necessary for the management of any internationally designated sites listed in Section 3.0, although they do have the potential to affect them.

### 4.2 IDENTIFYING THE POTENTIAL EFFECTS ON INTERNATIONALLY DESIGNATED SITE(S)

This section considers the pathways of potential effects as a result of the development and assesses whether or not these pathways could result in a significant effect on qualifying features of the European designated sites listed in Section 3.0. Potential threats to the integrity of each designated site have been listed above in 3.0. Section 4.2 identifies relevant threats that have been listed which have potential to result from the operation of the application site.

#### 4.2.1 Listed Threats / Pathways of Effect Potentially Likely to Arise

Potential threats / pathways of effect to qualifying features of Solway Firth SPA, River Ehen SAC and River Derwent and Bassenthwaite Lake SAC are summarised below.

##### Construction Phase

- Habitat degradation – air quality and dust deposition
- Habitat degradation – Surface water run off of pollutants
- Disturbance of qualifying features – visual and auditory disturbance

##### Operation Phase

- Recreational pressure / urban edge effects - as a result of increased visitor numbers causing disturbance to qualifying features effects
- Habitat degradation – Surface water run off of pollutants
- Habitat degradation - discharge of pollutants via wastewater

Natural England have confirmed (via email dated 14th May 2021) that the application site is not considered to form functionally linked land for bird species forming qualifying features of the Solway Firth SPA. In addition, the site is not considered likely to form functionally linked land for qualifying features of the River Ehen SAC or River Derwent and Bassenthwaite lake SAC. Therefore, Loss of or disturbance to functionally linked land associated with all of the above designated sites as a result of the project is screened out of this assessment.

Potential pathways of effect are discussed in relation to each of the sites screened into this assessment. For the avoidance of repetition, pathways of effect are considered to apply to **all three** of the above designated sites associated with this assessment, unless otherwise specified.

## 4.3 CONSTRUCTION PHASE EFFECTS

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### 4.3.1 Habitat degradation – air quality and dust deposition

Guidance on the Assessment of the Impacts of Construction on Air Quality and the Determination of their Significance, (IAQM, 2020) has been produced in relation to ecological receptors. This states that assessment of the effects of construction- related air pollution only require detailed assessment when sensitive receptors (such as the designated sites included within this assessment) are located within a maximum of 200m from a road and 50m from construction works. The closest designated site (Solway Firth SPA) is 1.7km from the application site and the furthest site is 7.9km from the application site. It is therefore considered highly unlikely that construction related air pollution will have any negative effect upon the conservation status of qualifying features associated with all relevant designated sites. **Likely significant effects are therefore not anticipated at all three designated sites considered in this assessment as a result of this pathway of effect.**

Impacts of releases of construction related air pollution have therefore not been taken forward to Stage 2: Appropriate Assessment when considered alone.

### 4.3.2 Habitat degradation – Surface water run off of pollutants

The closest designated site (Solway Firth SPA) is 1.7km from the application site and the furthest site (River Derwent and Bassenthwaite Lake SAC) is 7.9km from the application site. In addition, there is no direct hydrological connectivity between the application site and relevant designated sites. It is therefore considered highly unlikely that pollution as a result of surface water run off during the construction phase of the project would occur. Likely significant effects are therefore not anticipated at **all three designated sites considered in this assessment** as a result of this pathway of effect.

Impacts of releases of construction related surface water run off pollution have therefore **not** been taken forward to Stage 2: Appropriate Assessment when considered alone.

### 4.3.3 Disturbance of qualifying features – visual and auditory disturbance

The closest designated site (Solway Firth SPA) is 1.7km from the application site and the furthest site (River Derwent and Bassenthwaite Lake SAC) is 7.9km from the application site. Due to the distances of these designated sites from the application site it is considered highly unlikely that qualifying features associated with relevant designated sites would be adversely affected as a result of visual and auditory disturbance during the construction phase. It is therefore considered highly unlikely that construction related visual and auditory disturbance will have any negative effect upon the conservation status of qualifying features associated with all relevant designated sites. Likely significant effects are therefore not anticipated at **all three designated sites considered in this assessment** as a result of this pathway of effect.

Impacts of releases of construction related visual and auditory disturbance have therefore **not** been taken forward to Stage 2: Appropriate Assessment when considered alone.

## 4.4 OPERATIONAL PHASE

### 4.4.1 Recreational pressure as a result of increased visitor numbers causing trampling effects

Natural England state (in relation to effects upon Solway Firth SPA, within their consultation email on the 14th May 2021):

*“Although recreational disturbance risks may be low we advise that your Authority should still undertake a Habitats Regulations Assessment to assess this. Natural England make no comment on the effects of recreational pressure on the River Ehen SAC and River Derwent and Bassenthwaite Lake SAC, however these designated sites are included in the discussion below”.*

Natural England's Accessible Natural Greenspace Standard (Natural England 2018d) indicates that people are prepared to travel the following distances to accessible natural greenspace of differing sizes:

- At least 2ha in size, no more than 300m (5 minute walk)
- At least 20ha in size, no more than 2 km
- At least 100ha in size, no more than 5 km
- At least 500ha in size, no more than 10 km

The River Ehen, although marginally greater in area than 20ha is considered to be located beyond the distance that people are likely to travel. **Likely significant effects upon qualifying features of the River Ehen are therefore not anticipated.**

In addition, while the application site is within the catchment radius for recreational pressure at River Derwent and Bassenthwaite Lake SAC, the SIP does not list recreational pressure as a threat or pressure to qualifying features of this designated site. Therefore, adverse impacts upon the conservation status of qualifying features of this designated site as a result of this pathway of effect are unlikely. **Likely significant effects upon the qualifying features of River Ehen and River Derwent and Bassenthwaite Lake SAC's are therefore not anticipated.**

Impacts upon the River Ehen SAC and River Derwent and Bassenthwaite Lake SAC as a result of recreational pressure during the operational phase of the application site have therefore **not** been taken forward to Stage 2: Appropriate Assessment when considered alone.

Solway Firth SPA is located within the distance that people are likely to travel from the application site (i.e. within 10 km as per the Accessible Greenspace Standard (Natural England 2018d) and therefore the effects of recreational pressure should be considered.

Public access/disturbance is listed as a pressure within the SIP for the Solway Firth SPA. The SIP states that this is considered to be relevant to the following qualifying features of this designated site:

Bewick's swan, Whooper swan, Pink-footed goose, Barnacle goose, Common shelduck, Eurasian oystercatcher, Golden plover, Red knot, Sanderling, Black-tailed godwit, Curlew, Common redshank, Turnstone, Common tern, Arctic tern, Waterbird assemblage

In order to determine Likely Significant Effects upon the above qualifying features an assessment of likely recreation pressure is presented below.

Assuming an average occupation rate of 2.4 people (Office for National Statistics 2020) per residential property (total number of properties = 370 units) within the operational application site, the local population has the potential to increase by 888 people. This assumes that all residents occupying the new development will migrate into the local area from surrounding regions.

The office for National Statistics

(<https://www.nomisweb.co.uk/reports/lmp/la/1946157078/report.aspx#tabrespop>) indicates that the

population of the Copeland Region is comprised of approximately 68,000 people. Therefore, based on the above it is anticipated that the population will increase by a maximum of 1.3%. It is recognised, however, that occupancy of the application site is highly unlikely to comprise entirely of new residents to the Copeland Region and will partially comprise residents that move to this area from within the Region.

In addition, the Department for Transport statistics document (DfT 2017) indicates that approximately 48% of the UK population walk for leisure purposes. Applying this statistic to the potential population of the application site indicates that an average of approximately 426 residents of the application site (0.6% of the population of the Copeland Region) are likely to visit outdoor spaces for leisure and recreation purposes.

It should be noted that car parking along the coast (which forms the eastern boundary of Solway Firth SPA) is limited and is associated with existing towns and villages such as Whitehaven (1.4 km west from the application site (by road)), Parton (1.8 km north from the application site (by road)) and Harrington (7.3 km north from the application site (by road)). These discrete parking areas are separated by approximately 1.5 km (Whitehaven to Parton) and 5.2 km (Parton to Harrington). It is anticipated that these parking areas would provide spaces for a small percentage of the total visiting population that would undertake recreational activities resulting in much lower visitor numbers than the potential total number of visitors (426) as described above. Such visitors are unlikely to visit the Solway Firth SPA coastal boundary at the same time, every time and this is considered likely to further reduce the potential impacts of recreational pressure as a result of the operational application site.

In addition, species listed within the SIP are closely associated with coastal foraging habitat available at low tide during winter. It is anticipated that some visitors from the operational application site may visit coastal SPA border during winter. However, as the mean high-water line is located in close proximity to the coastal cliffs (as indicated on OS mapping presented within [www.magic.defra.gov.uk](http://www.magic.defra.gov.uk)) it is unlikely that recreational users would walk along the beach at sensitive periods during high tide during passage (autumn/early spring) winter seasons. It is considered much more likely that walkers would use the coastal path which is located along the cliff top, further reducing the potential for disturbance of relevant qualifying features of the designated site.

**When the above information is taken into account it is considered unlikely that operational phase related recreational pressure will significantly impact upon the conservation status of qualifying features associated with Solway Firth SPA when this project is considered alone. Therefore, Likely significant effects are therefore not anticipated at any of the designated sites as a result of this pathway of effect when this project is considered alone only.**

Impacts of recreational pressure during the operational phase of the application site upon Solway Firth SPA when considered alone only have therefore **not** been taken forward to Stage 2: Appropriate Assessment when considered alone.

#### **4.4.2 Habitat degradation - discharge of pollutants via wastewater**

The Flood Risk Assessment report for the application site (Tetra Tech, 2021a) states that the foul water catchment within the application site will be connected to the existing foul water drainage network operated by United Utilities. United Utilities have confirmed that foul water discharge from the operational site is within the capacity of the existing network. Such discharge will be directed to an appropriate treatment plant via the existing network. It is therefore considered highly unlikely that foul water discharge will result in adverse effects upon the conservation status of qualifying features of relevant designated sites.

Impacts of habitat degradation via discharge of pollutants through waste water during the operational phase of the application site upon Solway Firth SPA, River Ehen SAC and River Derwent and Bassenthwaite Lake SAC have therefore **not** been taken forward to Stage 2: Appropriate Assessment when considered alone.

## 4.5 ASSESSING THE SIGNIFICANCE OF ANY EFFECTS ON THE EUROPEAN DESIGNATED SITE(S)

A summary of the Stage 1: Screening Assessment of the project when considered alone is provided in Table 6. Where Stage 2 is required, all pathways are considered to have the potential to significantly affect the integrity of the European designated sites specified.

**Table 6: Summary of Stage 1: Screening**

Pathway	Solway Firth SPA	River Ehen SAC	River Derwent and Bassenthwaite Lake SAC
	Stage 2: Appropriate Assessment Required		
Construction Phase			
Habitat degradation – air quality and dust deposition	No	No	No
Habitat degradation – Surface water run off of pollutants	No	No	No
Disturbance of qualifying features – visual and auditory disturbance	No	No	No
Operational Phase			
Recreational pressure - as a result of increased visitor numbers causing disturbance to qualifying features effects	No	No	No
Habitat degradation – Surface water run off of pollutants	No	No	No
Habitat degradation - discharge of pollutants via wastewater	No	No	No

## 5.0 CONSIDERATION OF IN-COMBINATION EFFECTS

In-combination effects can be defined as the additional changes caused by a proposed development in conjunction with other similar developments, or as a combined set of developments, taken together.

The potential for Likely Significant Effects in combination with other plans and projects is considered with reference to the potential pathways where likely significant effects are possible.

### Operation Phase

- Recreational pressure / urban edge effects - as a result of increased visitor numbers causing disturbance to qualifying features effects

Although LSE is not anticipated when this pathway of effect is considered alone, it is noted that plans and projects identified below will also result in an increase in the local population of Copeland.

**Therefore, further assessment regarding potential recreational pressure upon Solway Firth SPA is required. The following section assesses the potential in combination effects of this pathway of effect.**

Where there is no pathway for effects, or likely significant effects are not anticipated, no assessment of in-combination effects is necessary. Pathways of effect relevant to Solway Firth SPA, River Ehen SAC and River Derwent and Bassenthwaite Lake SAC that have been screened out of consideration in combination with other plans and projects are:

### Construction Phase

- Habitat degradation – air quality and dust deposition
- Habitat degradation – Surface water run off of pollutants
- Disturbance of qualifying features – visual and auditory disturbance

### Operation Phase

- Habitat degradation – Surface water run off of pollutants
- Habitat degradation - discharge of pollutants via wastewater
- Recreation pressures (River Ehen SAC and River Derwent and Lake Bassenthwaite SAC only)

These pathways have been screened out of in-combination on the basis that LSE is not anticipated as a result of such effects when the project is considered alone. Therefore, there can be no effect upon the relevant designated site when considered in combination with plans and projects identified below. These pathways of effect are therefore not discussed further in this assessment.

In-combination assessment is restricted to plans and projects which are 'live' at the same time as this assessment being undertaken and include:

- Incomplete or non-implemented projects already commissioned;
- Plans/projects with consent but not started;
- Plans/projects subject to application for consent;
- Projects under appeal;
- Ongoing plans/projects subject to regular review;
- Draft plans by LPAs.



### 5.1.1 Planning Applications

A search of the online <https://www.copeland.gov.uk/planning/application-search> database identified the following planning applications, submitted within the last 5 years and within 10 km of the site. To target the most relevant applications, the data received was then filtered to show any relevant developments relating to housing developments which were either Approved, Pending or Other. As a precaution, Approved applications were included in the list considered, as whilst some may have already been built – and they therefore form part of the existing baseline conditions – others may have made a ‘material start’ on site, but not been completed.

**Table 7: In-combination applications within 10 km of the application site.**

Planning Application Number	Address	Description	Status	Distance from site	Potential for in-combination effects?
4/21/2263/DOC	Harras Road, Harras Park, Whitehaven, CA28 6SG	Outline Application (with some matters reserved) for residential development consisting of 9 serviced self-build plots.	Pending	0.46 km N	Scoped in
4/21/2189/OF1	Pow Beck House, Meadow Road, Whitehaven, CA28 8HL	The demolition of an existing two storey building formally Pow Beck care home. The erection of a new care home (Use Class C2) with associated landscaping comprising of 36 one and two bedroom flats over three storeys.	Pending	2.52 km S	Scoped in
4/20/2272/OF1	Land to the west of Meadow road at junction with Uldale road, Mirehouse, Whitehaven, CA28 9HY	Proposed Residential Development of consisting of 18 no. 2 and 3 bedroom homes including all associated external works and drainage works	Approved	1.91 km SW	Scoped in
4/19/2233/OO1	Land to the south of Elizabeth crescent, Whitehaven, CA28 6JQ	Residential development of up to 50 dwellings with full details of site entrance and associated junction improvements.	Pending	1.22 km N	Scoped in
4/20/2334/OR1	Former Romare Factory, Ivy Mill, Main Street, Hensingham, Whitehaven	Reserved Matters Application for 26 dwellings and associated infrastructure	Pending	0.16 km NW	Scoped in

Planning Application Number	Address	Description	Status	Distance from site	Potential for in-combination effects?
4/20/2514/0F1	Land at Low Road, Kells, Whitehaven, CA28 9HS	Residential site for up to 99 dwellings	Pending	1.54 km SW	Scoped in
4/20/2474/0R1	Land at Edgehill park, Crummock Avenue, Woodhouse, Whitehaven, CA28 9NQ	Reserved matter application for the erection of 335 dwellings including associated infrastructure pursuant to outline planning approval.	Approved	2.55 km SW	Scoped in
4/20/2432/0F1	Howbank Farm, Egremont, CA22 2QJ	Residential development for 114 dwellings in total	Pending	6.86 km SE	Scoped in
4/20/2472/0F1	Land to the North of Cleator Mills, Cleator, CA23 3AE	Residential development for 115 dwellings	Pending	5.60 km SE	Scoped in

Excluding the application site, the total number of new residential properties that would be developed with the Copeland region (if pending planning applications are approved) is 802 dwellings the majority of which are within the Whitehaven area in close proximity to the application site. Assuming the average occupation rate of 2.4 people per property applies to all of the above then this will equate to a maximum population increase of 1,925 people (2.8% of the Copeland region). Recreational pressure as a result of population increase is not considered to result in likely significant effects when this project has been considered alone. However, when the potential maximum population increase as a result of the application site is combined with that of surrounding projects the total potential max population increase is 2813 people ( $1925+888=2813 = 4.13\%$  of the Copeland region population). Even when the factors discussed above are considered, it can not be reasonably ruled out that the potential population increase as a result of the operational phase of the application site combined with surrounding projects will have an adverse effect upon the conservation status of qualifying features of the Solway Firth SPA as a result of recreational pressure. Therefore, impacts of recreational pressure during the operational phase of the application site upon Solway Firth SPA have therefore been taken forward to Stage 2: Appropriate Assessment when considered in combination with other projects.

### **5.1.2 Local Development Plan**

A Habitats Regulations Assessment of the local plan for Copeland Borough Council has been completed (David Archer Associates, 2020). The HRA for the Copeland Local Plan recognises that policies relating to development and/or deliverable/developable Strategic Housing Land Availability Assessment (SHLAA) sites have the potential to increase recreational pressure upon the Solway Firth SPA. Therefore, when the application site is considered in combination with the local plan, LSE is anticipated in relation to the Solway Firth SPA.

### **5.1.3 In Combination Summary**

Planning applications for developments of a type considered to have potential to recreational pressure as a result of population increase. The majority of these applications do not provide detailed information regarding the potential for recreational impacts.

However, due to the scale of the developments considered (and the associated population increase) along with recognition of the potential for increase in recreational pressure as a result of new development within the local plan HRA, potential adverse effects upon the conservation status of qualifying features of the Solway Firth SPA are likely when the application site is considered in combination with other relevant plans and projects.

Therefore, LSE is anticipated when this project is considered in-combination with all other relevant plans and projects within the zone of influence as a result of recreational pressure.

## **6.0 APPROPRIATE ASSESSMENT**

The Stage 1 HRA considers potential for effects of the site alone and in-combination with other relevant plans and projects without mitigation. However, at the HRA Stage 2 Appropriate Assessment (AA) stage any appropriate mitigation adopted can be considered in the assessment to avoid or prevent LSEs / effects on the integrity of Natura 2000 / Ramsar sites. The following assessment considers only pathways of effects which would result in causing LSE upon the qualifying features of the Solway Firth SPA.

Pathways of effect which are taken into consideration at the appropriate assessment stage are the potential effects of recreational pressure as a result of increased visitor numbers causing disturbance to qualifying features effects. Likely Significant Effects are not anticipated when this project is considered alone. Therefore, the appropriate assessment stage considers recreational effects in combination with other relevant plans and projects (as noted above).

### **6.1.1 Recreational pressure - as a result of increased visitor numbers causing disturbance to qualifying features effects**

It is recognised at Stage 1 that recreational pressure as result of the in-combination effects of population rise associated with the application site in combination with other relevant plans and projects may cause disturbance to qualifying features of the Solway Firth SPA which may in turn result in adverse effects upon the conservation status of relevant qualifying features of this designed site and the integrity of the SPA.

In order to mitigate against such an increase in recreational pressure Natural England have indicated that the provision of homeowners packs for each new property will be appropriate for this project. It is noted that homeowner packs have not been produced to inform this HRA; however, consultation with

Natural England on the 1<sup>st</sup> of September 2021 has confirmed that the homeowner's packs should include (but not be limited to) the following information:

- Introduction letter to the pack, setting out the issue and providing a contents page of included documents.
- Description of the European designated sites and their features, this should include a map explaining the boundaries of European designated sites.
- An explanation of the sensitivities of features to recreational disturbance and key sensitive times for the features of the European designated sites.
- List any access restrictions in the local area (i.e. under the Countryside and Rights of Way Act 2000, Marine and Coastal Access Act 2009 or Byelaws).
- Suggestions of alternative recreational sites (i.e. parks, walking or cycling routes).
- Code of conduct (i.e. not disturbing flocks of feeding / roosting birds, suggested distances to keep from birds).
- Suggested areas for responsible bird watching and opportunities for people to enjoy the local natural environment.

In addition, Natural England have provided an example homeowner pack which was considered appropriate for new developments relevant to Morecambe Bay SPA. While Morecambe Bay is not relevant to this project it is considered appropriate to adopt this example homeowner pack as a template for production of a similar document to be produced for the application site.

In addition to the above, RSPB have noted in their consultation 24/08/21 that homeowner packs may not form an appropriate mitigation. This is on the basis that such packs would only be readily available for new owners of the properties within the newly built application site. Therefore, over time any information available within the homeowner pack may become lost and the effects of such mitigation diminished. To counter this, information signage will be installed within the operational application site at appropriate locations. Such signage would include similar information to that presented within the homeowner packs, would be visible to occupants and would be maintained by the developer or their grounds maintenance contractor.

Details of other relevant projects and their commitment to the provision of homeowner's packs is currently unknown. However, based on the location of relevant projects within the borough of Copeland it is assumed that at least the larger scale developments will be required to provide similar mitigation to reduce the effects of recreational pressure.

With the application of the above mitigation, the effects of recreational pressure resulting from the operational application site and surrounding developments are considered likely to be reduced.

Therefore, Likely significant effects as a result of the operational application site considered in combination with surrounding plans and projects are not anticipated. Nor is it considered likely that the effects of recreational pressure will have an adverse effect upon the integrity of Solway Firth SPA as a result of this pathway of effect.

## 7.0 CONCLUSION

The Stage 2: Appropriate Assessment found that with the application of mitigation for relevant pathways to LSE during construction and operation alone and in-combination, there would be no impact on the integrity of any European site.

As such, it is considered that the 'Competent Authority' can permit the proposed development and does not require Stage 3 or Stage 4 assessments to be undertaken.

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## FIGURES

**Figure 1 – Site Location Plan**

**Figure 2 – Natura 2000 designated sites within 10 km**





# Site Location Plan

Harras Moor

Homes England

## Legend

Site boundary



## Notes:

Drawn by: BB  
Checked by: EW  
Office: Southampton

Figure No. 1  
Revision No. A

0 300 600 900 Meters  
Scale 1:20,000 @A3

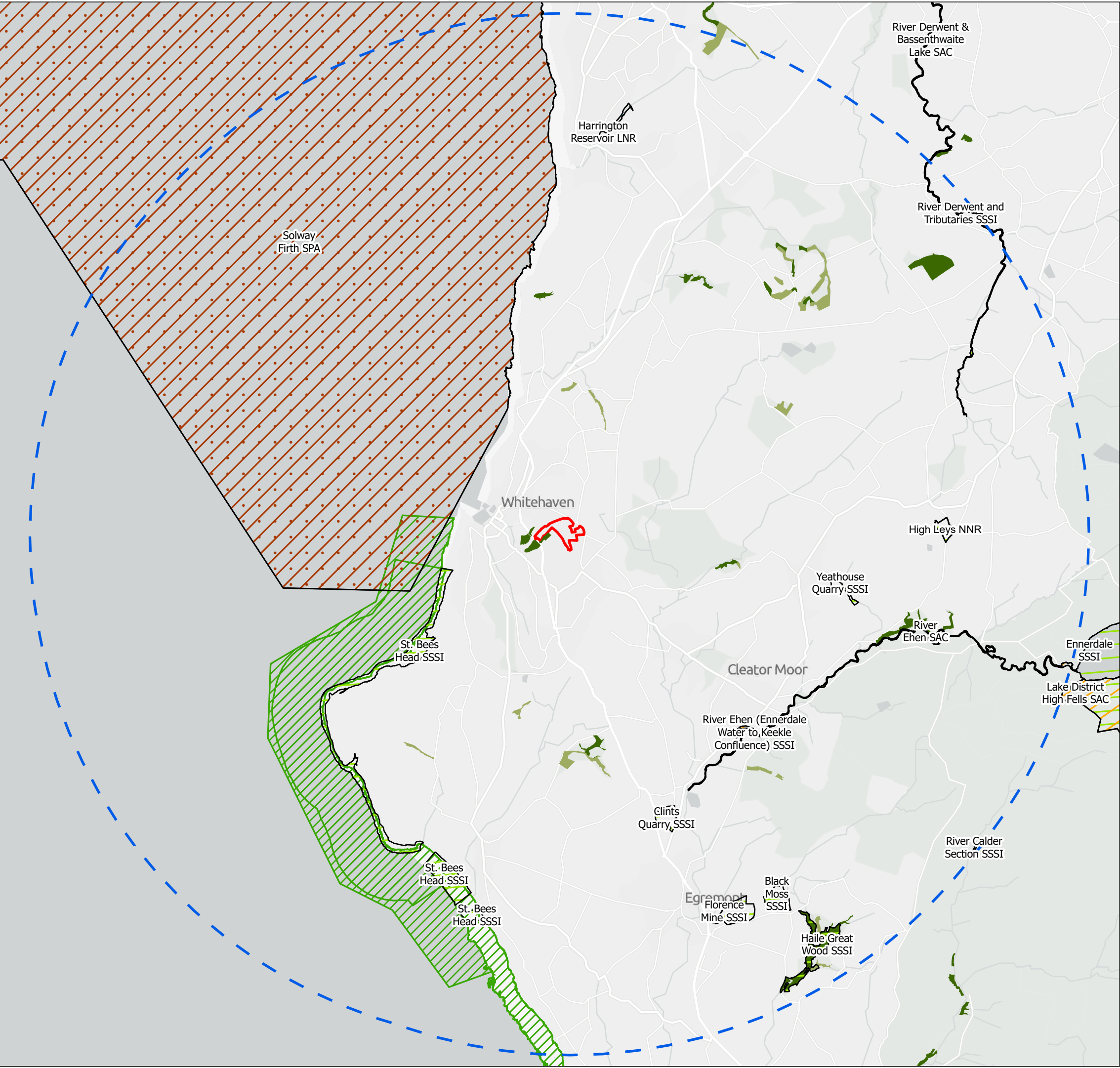
04 August 2021  
NGR: 298633E 517973N

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# Designated Sites Map

Harras Moor

Homes England



## Legend

- Site boundary
- Site boundary 10km buffer
- Special Protection Areas (SPA)
- Special Areas of Conservation (SAC)
- Sites of Special Scientific Interest (SSSI)
- National Nature Reserves (NNR)
- Local Nature Reserves (LNR)
- Ancient & Semi-Natural Woodland
- Ancient Replanted Woodland
- Potential Special Protection Areas (pSPA)
- Marine Conservation Zones

## Notes:

Drawn by: SB  
Checked by: LB  
Office: Southampton

Figure No. 2  
Revision No. A

0 1,000 2,000 3,000 Meters  
Scale 1:74,000 @A3

13 August 2021  
NGR: 298633E 517973N

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## APPENDIX A – REPORT CONDITIONS

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The whole of the report must be read as other sections of the report may contain information which puts into context the findings in any executive summary.

The performance of environmental protection measures and of buildings and other structures in relation to acoustics, vibration, noise mitigation and other environmental issues is influenced to a large extent by the degree to which the relevant environmental considerations are incorporated into the final design and specifications and the quality of workmanship and compliance with the specifications on site during construction. Tetra Tech accept no liability for issues with performance arising from such factors.

**APPENDIX B – PROPOSED SITE LAYOUT (DWG N°: A090070-410  
003 REV: G)**



Legend

- Site boundary
- Proposed residential block
- Proposed frontage
- Primary street
- Secondary street
- Private drive
- Public open space
- Proposed pedestrian linkages
- Proposed attenuation pond
- Proposed vehicular access
- Potential pedestrian access
- Proposed Planting
- Existing Trees and Woodland
- Local Equipped Area of Play



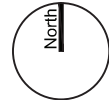
Project title:  
Harras Moor

Drawing title:  
Draft Illustrative Masterplan

Dwg N<sup>o</sup>: A090070-410 003 Rev: G

Drawn:KC Checked:SP Date: 08/05/18

Scale @ A2: 1:2500



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