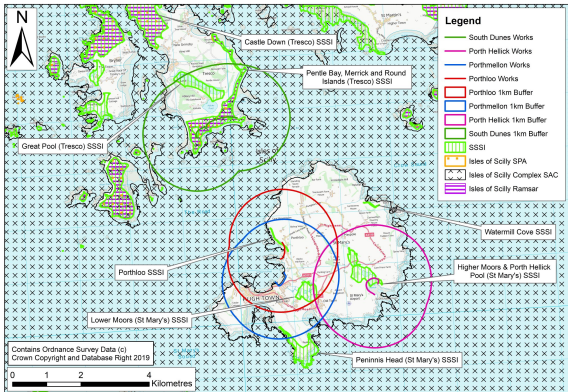


F Extended Phase I Habitat Maps and Habitat Regulations Screening Assessment



Isles of Scilly Sea Defences Habitat Regulations Screening Assessment

Final Report

June 2019



**Council of the
ISLES OF SCILLY**

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1 Introduction

1.1 Background

The Council of the Isles of Scilly is proposing to construct new coastal erosion and flood protection works at four sites on the Isles of Scilly. Three of these sites, at Porthloo, Porth Mellon and Porth Hellick, are on the island of St Mary’s. The fourth site, South Dunes, is on the south coast of Treco (see Figure 1-1).

JBA Consulting was commissioned to assess the ecological impacts of these works on European designated sites. This report comprises a Habitat Regulations Screening Assessment (Test of Likely Significant Effect), the first stage of the Habitat Regulations Assessment (HRA) process.

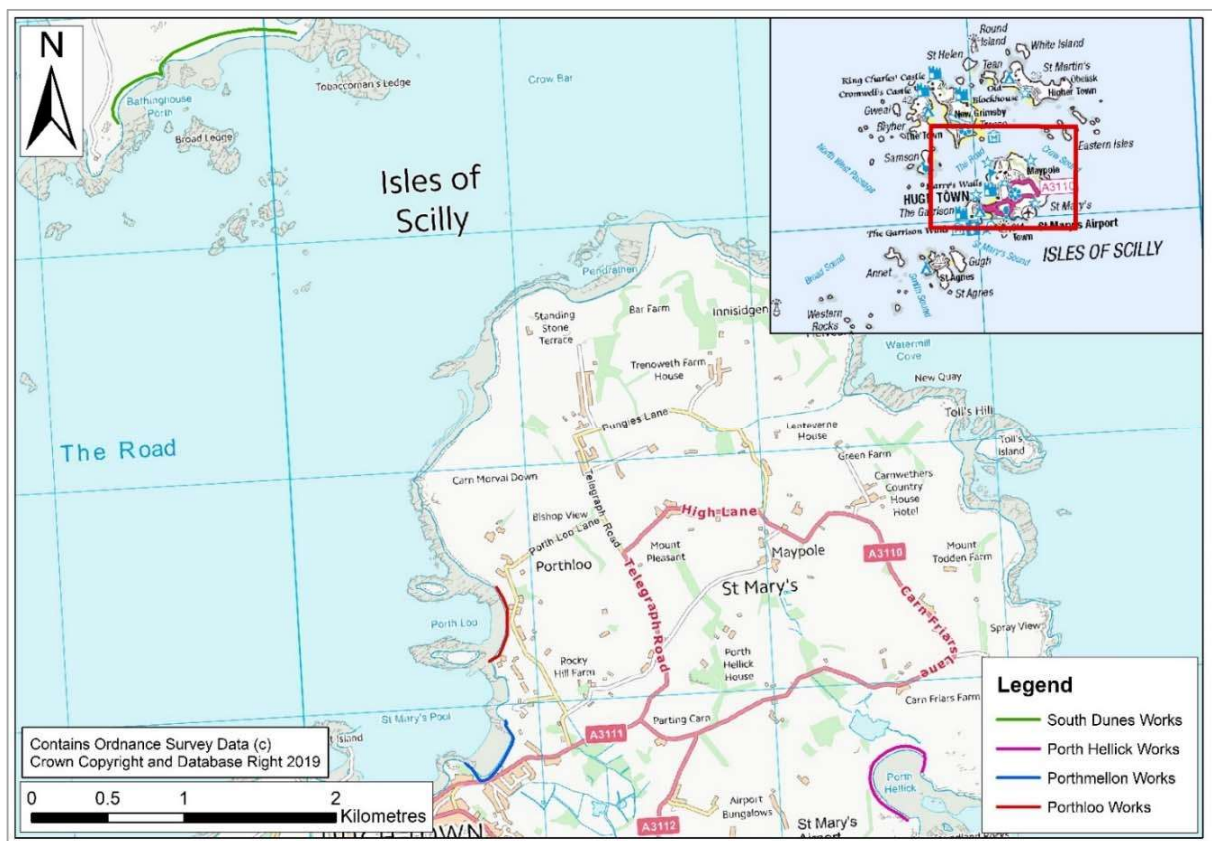


Figure 1-1: Site locations on the Isles of Scilly

1.2 Scheme locations

1.2.1 Porthloo

Porthloo is located about 600m north-east of Hugh Town, the islands’ main administrative centre. Porthloo is a natural bay, featuring a sand and pebble beach backed by a narrow band of sand dunes and an earth embankment. Landward of the dunes is a commercial boatyard and a small number of houses and businesses. Porth Loo Lane, which links Porthloo to Hugh Town and the wider island, is also located in this area. At the northern end of Porthloo Bay is a low rocky cliff that is designated as a Site of Special Scientific Interest (SSSI). To the south of Porthloo Bay is a freshwater lake at Lower Moors, which provides freshwater for the island.

Porthloo Bay is currently protected by existing coastal defences, which comprise a rock rubble revetment at the northern end of the bay and an engineered sand dune in the southern half of the bay.

1.2.2 Porth Mellon

Porth Mellon is located immediately to the north of Hugh Town. The bay consists of a sand and pebble beach backed by a narrow strip of sand dunes along most of its length; in the southern corner of the bay, these dunes are absent, and the back of the beach is a high earth bank covered by a variety of exotic plant species.

Behind the dunes and earth bank are several houses and commercial buildings and a small concrete slipway, that provides access to the beach for boats and other vehicles. Telegraph Road, which links Porth Mellon to Hugh Town and the wider island, is located immediately behind the dunes and vegetated bank, and landward of this is the Porthmellon Industrial Estate, which contains the islands' only recycling centre. Porth Mellon beach is popular with both locals and tourists and is especially popular during the World Pilot Gig Championships in May each year.

1.2.3 Porth Hellick

Porth Hellick is located on St Mary's south east coast. The cove features a large sand and gravel beach, and extensive rockpool areas are exposed at low tide. High cliffs form its eastern and western edges. There is an informal access point for vehicles onto the beach at the eastern end of the bay. The surrounding land area is primarily agricultural, and the cove is used by a small number of commercial fishermen.

At the back of the beach is a low sand and gravel bank. It is heavily vegetated with dense clumps of the non-native shrub *Fascicularia bicolor*; the bank and these shrubs effectively comprise the flood defence in this bay.

A short distance inland from the beach is Higher Moors and Porth Hellick SSSI, which is an important freshwater habitat for a range of plants and animals and provides freshwater for the island. St Mary's Airport is located 500m to the west. Porth Hellick is popular with both locals and tourists.

1.2.4 South Dunes

South Dunes is a wide sandy beach located on the south coast of Tresco backed by high sand dunes. The island's telecommunications cable comes ashore on the beach and there is a large cable junction box on the beach, which is protected from waves by a row of large wooden stakes. Inland of the beach, is the island's timber yard and wood store and a large area of coastal grassland and heath.

1.3 Environmental Impact Assessment

An Environmental Statement (ES)¹ has been prepared for the proposed development. It includes a detailed description of the proposed sites and development proposals, including outline construction programmes and methodologies. It is recommended that this report is read in-conjunction with the ES.

2 Legislative context and HRA process

2.1 Legislative context

European Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora, known as the 'Habitats Directive' was adopted in 1992. The Directive promotes the maintenance of biodiversity by requiring Member States to take measures to maintain or restore certain natural habitats and wild species at a favourable conservation status, introducing robust protection for those habitats and species of European importance.

¹ JBA Consulting (2019), Isles of Scilly Sea Defences, Environmental Statement, Volume 1, May 2019

The Directive establishes the requirement for a European ecological network of protected sites by designated Special Areas of Conservation (SACs) for habitats listed on Annex I and for species listed on Annex II. These measures are also to be applied to Special Protection Areas (SPAs) classified under Article 4 of the Birds Directive. Together SACs and SPAs make up the Nature 2000 network of designated sites.

The Directive is transposed into law in England and Wales through the Conservation of Habitats and Species Regulations 2017 (as amended). The Regulations require that an HRA is undertaken by a competent authority prior to the issue of any consent to consider whether a proposed project is likely to have a significant effect on a Natura 2000 site. Government guidance also requires that Ramsar sites (which support internationally important wetland habitats and are listed under the Convention on Wetlands of International Importance (Ramsar Convention)) are included within a HRA (together, SACs, SPAs and Ramsar sites are known as 'European sites').

For all plans and projects, which are not wholly directly connected with, or necessary to, the conservation management of the site's qualifying features, a formal test for likely significant effects (either alone or in combination with other plans or projects) on a European site(s) is required. This assessment is based on available ecological information on the designated site(s), other plans, projects and policies relevant to the area and details of the proposed works.

2.2 The HRA process

There are four stages to the HRA process as outlined in Table 2-1. This study comprises Stage 1 of the process, namely a screening assessment to identify any likely significant effects of the project on a European site in the absence of measures intended to avoid or reduce impacts on the European site.

Table 2-1: The HRA process

HRA stage	Description
Stage 1: Screening	This process identifies the likely significant effects upon a European site of a project or plan, either alone or in combination with other projects or plans and determines whether these impacts are likely to be significant. Mitigation measures are not taken into account at this stage unless they are an integral part of the project and not primarily intended to reduce or avoid impacts on the European site. If no likely significant effect is determined, the project or plan can proceed. If a likely significant effect is identified, the assessment process moves to Stage 2.
Stage 2: Appropriate Assessment	Stage 2 is subsequent to the identification of likely significant effects upon a European site in Stage 1. This assessment determines whether a project or plan would have an adverse impact on the integrity of a European site, either alone or in combination with other projects or plans. This assessment is confined to the effects on the internationally important habitats and species for which the site is designated (i.e. the interest features of the site). If no adverse impact is determined, the project or plan can proceed. If an adverse impact is identified, the process moves to Stage 3.
Stage 3: Assessment where no alternatives and adverse impacts remain	Where a plan or project has been found to have adverse impacts on the integrity of a European site, potential avoidance/mitigation measures or alternative options should be identified. If suitable avoidance/mitigation or alternative options are identified, that result in there being no adverse impacts from the project or plan on European sites, the project or plan can proceed. If no suitable avoidance/mitigation or alternative options are

HRA stage	Description
	identified, as a rule the project or plan should not proceed. However, in exceptional circumstances, if there are 'imperative reasons of overriding public interest' for the implementation of the project or plan, consideration can be given to proceeding in the absence of alternative solutions. In these cases, compensatory measures will have to be put in place to offset any negative impacts.
Stage 4: Compensatory measures	Stage 4 comprises an assessment of the compensatory measures where, in light of an assessment of imperative reasons of overriding public interest, it is deemed that the project should proceed.

2.3 Guidance

This assessment is based upon the following guidance documents to implement the process set out above:

- 'The Habitats Regulations Assessment Handbook' (Tyldesley & Chapman, 2013)
- 'Assessment of plans and projects significantly affecting Natura 2000 sites' (European Commission, 2001)
- 'Planning for the Protection of European Sites: Guidance for Regional Spatial Strategies and Local Development Documents' (DCLG, 2006)
- 'Advice note ten: Habitats Regulations Assessment relevant to nationally significant infrastructure projects, Version 8' (The Planning Inspectorate, 2017)

3 Methodology

3.1 Ecological baseline

The ecological baseline for this assessment was taken from information published by the statutory authorities and site visits in the area of the proposed works. The site designation information was obtained from the Natural England and Joint Nature Conservation Committee (JNCC) websites.

3.2 Site survey

A site survey was undertaken by a suitably qualified ecologist in April 2019. The results of this survey were used to inform this assessment.

3.3 Identification of hazards and potential impacts

The identification of potential impacts is based on a combination of the site vulnerabilities identified in the site baseline and the description of the proposed works.

3.4 In-combination effects

The following sources were consulted over projects with potential in-combination impacts:

- Council of The Isles of Scilly online planning register (<http://www.scilly.gov.uk/planning-development/planning-applications>)
- The Isles of Scilly Local Plan and Habitat Regulations Assessment
- The Isles of Scilly Area of Outstanding Natural Beauty (AONB) Management Plan
- National Infrastructure Planning website (<https://infrastructure.planninginspectorate.gov.uk/>)

Projects were screened in for consideration as part of this assessment where they are inside or within 1km of any European site under construction and of a size and scale where they are likely to impact on that European site.

3.5 Screening assessment

Each hazard is assessed for the potential impacts on the qualifying interests of the designated sites. The assessment of potential likely significant effects is based on a precautionary assessment in the absence of mitigation and reduction measures.

4 Description of the proposed development

4.1 Site locations

The proposed works will take place at four sites on the Isles of Scilly. The sites are located at Porthloo (NGR: SV 9083111503 to SV 90817 11182), Porth Mellon (NGR: SV90847 10938 to SV 90687 10752) and Porth Hellick (NGR: SV 92532 10414 to SV 92602 10603) on St Mary's, and South Dunes (NGR: SV 89363 13548 to SV 90137 13873) on Tresco.

4.2 Proposed works

4.2.1 Porthloo

New flood defences are needed at Porthloo to reduce erosion of the coastline and to reduce the risk of flooding to homes and businesses, to Porth Loo Lane and to the freshwater lake at Lower Moors.

The new defence at Porthloo will comprise a rock revetment, which is sloping bank of large rock boulders, positioned in the northern half of the bay in an area currently protected by an area of rock rubble. The rock revetment will protect the coastline from erosion by waves during storms also reduce the risk of waves flowing over the beach and into the nearby homes and businesses. The rock revetment will be 110m long and around 17m wide, approximately 30% of which will be below ground level.

4.2.2 Porth Mellon

At Porth Mellon, a new flood defence is needed to reduce erosion of the earth bank in the southern corner of the bay. This bank protects several houses and businesses as well as Telegraph Road from flooding and erosion during storms.

The new defence will be rock revetment, positioned in front of the earth bank. The revetment would be made up of large rock boulders and would be 40m long and about 15m wide. Approximately 30% of this new structure would be below ground level.

4.2.3 Porth Hellick

At Porth Hellick, there are a number of low spots in the sand and gravel bank. This is particularly so at the eastern end of the bay, where the bank is much lower in an area used by local fishermen to access the beach with their boats. Due to these low spots, there is a risk that seawater will wash over the bank and into the Higher Moors area, affecting the sensitive ecology and the island's freshwater supply.

The new defence will involve raising the low spots in the bank using sand and gravel. At the eastern end of the bay, the bank will be raised and a new vehicle access ramp onto the beach will be constructed. To help stabilise the bank, *Fascicularia bicolor* plants will be planted in the areas to be raised, to match the other areas in the bay.

4.2.4 South Dunes

At South Dunes, large waves during storms are eroding the dunes at the back of the beach. There is a risk that this could lead to a breach in the dunes, allowing seawater to flood the area behind the dunes; this could cut off the southern part of the island from the rest of the island and also prevent access to the island's only low tide boat access point at Carn Near, a short distance west of South Dunes and would also flood and prevent access to the island's heliport to the north west of the site. Flooding in this area could affect the sensitive plants and animals living there and the use of the timber yard. It could also risk saltwater getting into the island's freshwater supply at Abbey Lake.

To reduce erosion of the dunes, the bottom, or toe, of a 200m long section of the dunes will be protected with 'rock rolls'. These are rolls of gravel in a plastic mesh, which when stacked together, help stop waves from eroding away the dunes. The dunes would also be covered with planted matting to reduce the risk of wind erosion. This is a relatively new technique and is only designed to last up to 10 years. During this time, the Council will

regularly check the beach to make sure the rock rolls are performing as intended and are not having a negative impact on the dunes or the beach.

4.3 Project Summary

The following section presents a summary of the elements of each project that are relevant to this assessment. Detailed description of the proposed developments and associated construction methodologies and decommissioning requirements are provided in Section 1.7 and 1.8 of the Environmental Statement.

4.3.1 Construction programme

The outline construction programme for each scheme is provided in Table 4-1.

Table 4-1: Outline construction programme

Site	Start pre-commencement & mobilisation	Start of construction	Finish construction	Comment
Porthloo	February/March 2020; 8-12 weeks duration.	April/May 2020; 4 weeks duration.	June 2020	Works timed to avoid April and October due to boat use of existing slipway.
Porth Mellon	February 2020; 8-10 weeks duration.	April 2020; 2-3 weeks duration.	April 2020	Works timed to avoid period May to September inclusive to avoid main tourism use of the beach.
Porth Hellick	March 2020; 6 weeks duration.	April 2020; 3 weeks duration (excludes planting).	April/May 2020	Works timed to avoid period May to mid-November to avoid main tourism use of the beach and use by migrating birds.
South Dunes	May 2020; 3 weeks duration.	May/June 2020; 2 weeks duration (excludes planting).	June 2020	Works timed to avoid peak summer tourism period and period November to February inclusive when storm events most likely.

4.3.2 Porthloo

Table 4-2: Porthloo Project Summary

Project elements	Comment
Size and scale	The project is small-scale project and will affect a 110m section of coastline and beach in Porthloo Bay. Construction materials will be delivered to site via a 60-tonne landing craft, which will be positioned on Porthloo beach during low water. The construction compound and materials storage area will be established within the northern part of the boat yard.
Land-take	The above-ground permanent changes to the site will involve alterations to the 110m of coastline where rock armour will be installed. Construction works will have a larger footprint around the sea defences due to the transport of materials to site by barge and machine. This will likely be around a maximum of 25m out from the existing defences. However, there will be no land-take within the SAC boundary.
Distance from European site or key features of the site	The project location is adjacent to the Isles of Scilly Complex SAC and Porthloo SSSI.
Resource requirements (water abstraction etc.)	There are no requirements to take resources from a European site. Existing suitable rocks from within the work site may be reused and extra new material will be imported to site from commercial suppliers via barge/landing craft.
Emissions (disposal to)	Temporary: There will be some minor emissions of dust and construction

Project elements	Comment
land, water or air)	vehicle exhausts during construction works. There will be a small generator associated with the site cabin which will produce some exhaust fumes. Permanent: There will be no permanent changes in airborne emissions.
Excavation requirements	Temporary: There will be a small amount of excavation to create a berm at the base of the proposed rock armour; however, this will be outside of the SAC boundary.
Transportation requirements	Temporary: Levels of traffic to the site during the construction phase will increase traffic to the area. There will be a small number of vehicle movements of staff daily. Only tracked machines and dumpers will access the beach; they will transport materials from the landing craft to the construction compound and works area.
Duration of construction	Works will take place over 4 weeks in May and June 2020.

4.3.3 Porth Mellon

Table 4-3: Porth Mellon Project Summary

Project elements	Comment
Size and scale	The project is small-scale project and will affect a 40m section of coastline and beach in Porth Mellon Bay. Construction materials will be delivered to site via a 60-tonne landing craft, which will be positioned on Porth Mellon beach during low water. The works will only require a small workforce and a maximum of three single tracked machines up to 5 tonnes. A site compound will be established with a single welfare unit and parking for 6 vehicles landward of Porth Mellon beach.
Land-take	The above-ground permanent changes to the site will involve alterations to the 40m of coastline where rock armour will be installed. However, there will be no land-take within the SAC boundary.
Distance from European site or key features of the site	The project location is adjacent to the Isles of Scilly Complex SAC, and it is around 300m north west of Lower Moors (St Mary's) SSSI and around 700m north of areas mapped as 'coastal vegetated shingle' according to the Natural England's priority habitat database.
Resource requirements (water abstraction etc.)	There are no requirements to take resources from a European site. Existing suitable rocks within the work site may be reused and extra new material will be imported to site from commercial supplier via barge.
Emissions (disposal to land, water or air)	Temporary: There will be some minor emissions of dust and construction vehicle exhausts during construction works. There will be a small generator associated with the site cabin which will produce some exhaust fumes. Permanent: There will be no permanent changes in airborne emissions.
Excavation requirements	Temporary: There will be a small amount of excavation to create a berm at the base of the proposed rock armour. However, this will be outside of the SAC boundary.
Transportation requirements	Temporary: Levels of traffic to the site during the construction phase will increase traffic to the area. There will be a small number of vehicle movements of staff daily. Only tracked machines and dumpers will access the beach; they will transport materials from the barge to the construction compound and works area.
Duration of construction	Works will take place over a period of 2-3 weeks in April 2020.

4.3.4 Porth Hellick

Table 4-4: Porth Hellick Project Summary

Project elements	Comment
Size and scale	<p>The project is small-scale and will involve the re-establishment of a small section of existing sand and gravel bank with crushed Cornish granite stone and the construction of a new vehicular access ramp onto the beach. In addition, the scheme will involve the permanent planting of <i>Fascicularia bicolor</i> bushes, which will fill in a number of small gaps in the existing line of the species. The works will only require a small workforce and a maximum of three single tracked machines up to 5 tonnes.</p> <p>A site compound will be established with a single welfare unit and parking for 6 vehicles in a field to the north east of the works area.</p>
Land-take	<p>The above-ground permanent changes to the site will involve only small alterations to the eastern end of the bay and at several low spots in the existing sand and gravel bank where <i>Fascicularia bicolor</i> will be planted. Construction works will have a larger footprint around the sea defences due to the transport of materials by machine. This will likely be around a maximum of 25m out from the existing defences.</p> <p>The site compound and access track will require temporary land take for transport of materials and access onto the beach, which will be reinstated once works are complete.</p> <p>This land-take will not be within a designated site boundary.</p>
Distance from European site or key features of the site	<p>The project is located within the Higher Moors & Porth Hellick Pool (St Mary's) SSSI and around 1.5km northeast of Peninnis Head (St Mary's) SSSI, 1.3km South of Watermill Cove SSSI, and 150m South of 'Good quality semi-improved grassland.'</p> <p>It is not within any European designated site; however, the Isles of Scilly Complex SAC is located around 180m southwest of the project location.</p>
Resource requirements (water abstraction etc.)	<p>There are no requirements to take resources from a European site. Existing suitable rocks within the site may be reused and extra new material will be imported to site from commercial suppliers.</p>
Emissions (disposal to land, water or air)	<p>Temporary: There will be some minor emissions of dust and construction vehicle exhausts during construction works. There will be a small generator associated with the site cabin which will produce some exhaust fumes.</p> <p>Permanent: There will be no permanent changes in airborne emissions.</p>
Excavation requirements	<p>Temporary: There will be a small amount of excavation to plant the <i>Fascicularia bicolor</i> bushes, however this will be within the works area. This is considered as land take and discussed in that section.</p>
Transportation requirements	<p>Temporary: Levels of traffic to the site during the construction phase will increase traffic to the area. There will be a small number of vehicle movements of staff and material deliveries each day.</p> <p>Only the tracked excavator and dumpers will move off the existing unsurfaced track onto the beach.</p>
Duration of construction	<p>The works will take place over a period of 3 weeks in April 2020.</p>

4.3.5 South Dunes

Table 4-5: South Dunes Project Summary

Project elements	Comment
Size and scale	<p>The project is relatively small-scale and will affect a 150m section of coastline at South Beach.</p> <p>The works will only require a small workforce and a maximum of three single tracked machines up to 5 tonnes.</p> <p>A site compound will be established with a single welfare unit and parking for 6 vehicles and will utilise an existing compound area at Carn Near.</p>
Land-take	<p>The above-ground permanent changes to the site will involve only small alterations to the 150m section of coastline where rock rolls will be</p>

Project elements	Comment
	installed. No land-take will be required.
Distance from European site or key features of the site	The project location is within the Isles of Scilly SPA and Ramsar site and the Isles of Scilly Complex SAC. The project location is also within the Pentle Bay, Mettick and Round Islands (Tresco) SSSI, and is approximately 500m south of Great Pool (Tresco) SSSI and 2km south of Castle Down (Tresco) SSSI.
Resource requirements (water abstraction etc.)	There are no requirements to take resources from a European site. New material for rock rolls will be imported to site from commercial suppliers via an existing low tide jetty at Carn Near.
Emissions (disposal to land, water or air)	Temporary: There will be some minor emissions of dust and construction vehicle exhausts during construction works. There will be a small generator associated with the site cabin which will produce some exhaust fumes. Permanent: There will be no permanent changes in airborne emissions.
Excavation requirements	Temporary: A small amount of excavation will be undertaken to secure the rock rolls into the bottom of the dunes and the dunes will be allowed to re-establish themselves over the rock rolls.
Transportation requirements	Temporary: Levels of traffic to the site during the construction phase will increase traffic to the area. There will be a small number of vehicle movements of staff daily, and a very small number of material deliveries. Only the tracked excavator will move off the existing unsurfaced track.
Duration of construction	Works will take place over a period of 2 week period in May/June 2020.

4.4 Project Zone of Influence

Given the preceding information, the zone of influence for each project is taken to be 1km from the proposed works locations. These distances are used on a precautionary basis; impacts are likely to be temporary and localised. Only one European designated site is within the zone of influence for all four projects (Isles of Scilly Complex SAC). The Isles of Scilly SPA and Ramsar is also within the zone of influence of the South Dunes project. The assessment, therefore, only considers these three sites.

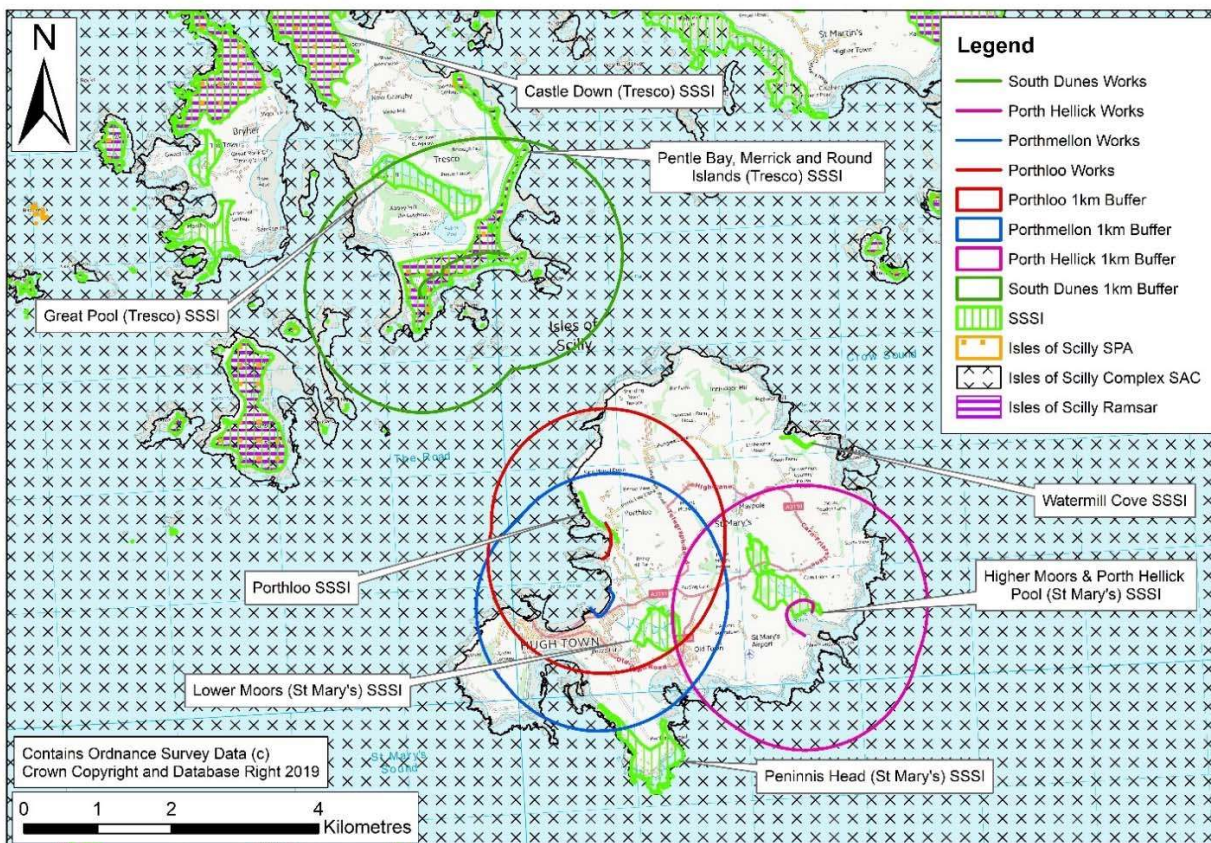


Figure 4-1: Statutory designated sites within 1km of each site

5 European site description

5.1 Isles of Scilly Complex SAC

5.1.1 Description and Qualifying Interests

The qualifying features of the Isles of Scilly Complex SAC are as follows:

Annex I habitats (as a primary reason)

- '1110 Sandbanks which are slightly covered by sea water all the time'
- '1140 Mudflats and sandflats not covered by seawater at low tide'
- '1170 Reefs'
- Annex II species (as a primary reason)
- '1441 Shore dock *Rumex rupestris*'

Annex II species

- '1364 Grey seal *Halichoerus grypus*'

5.1.2 Conservation Objectives

The conservation objectives are defined as follows (Natural England 2018):

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.*

5.1.3 Threats and Pressures

The Site Improvement Plan for the SAC sets out the key threats and pressures for the site (Natural England 2014) as invasive species, fisheries: commercial marine and estuarine, habitat fragmentation, public access/disturbance and water pollution.

Invasive species

Brown Rat *Rattus norvegicus* is present on some of the islands within the Isles of Scilly and within the SPA. This species is considered to be a threat to breeding seabird populations.

Fisheries: commercial marine and estuarine

Some practices by fisheries may impact on protected features through vessels using bottom towed gear. Compliance and recording is required to ensure good management of sites.

Habitat fragmentation

Shore dock *Rumex rupestris*, present on the Isles of Scilly, lives on rocky or sandy beaches with a reliance on a freshwater source. Storms and sea level rise may cause habitat loss and thus habitat fragmentation which may threaten this species.

Public access/disturbance

There is the potential for disturbance on Grey Seal *Halichoerus grypus* colonies and breeding seabirds from the general public. Sea vessels also have the potential to negatively impact seagrass beds through scouring and anchoring.

Water pollution

Pollution and nutrient enrichment as well as reduced water quality can be caused by sewage and trade effluent entering the designated site. This could result in increases in phytoplankton, green algae and siltation.

5.2 Isles of Scilly SPA

5.2.1 Description and Qualifying Interests

The qualifying interests of the Isles of Scilly SPA are as follows:

Annex I species

- Storm Petrel *Hydrobates pelagicus*

Annex II species

- Lesser Black-backed Gull *Larus fuscus*
Annex II assemblage
- The site regularly supports a seabird assemblage of at least 20,000 seabirds.

5.2.2 Conservation Objectives

The conservation objectives are defined as follows (Natural England 2019):

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:

- *The extent and distribution of the habitats of the qualifying features*
- *The structure and function of the habitats of the qualifying features*

- *The supporting processes on which the habitats of the qualifying features rely*
- *The population of each of the qualifying features, and,*
- *The distribution of the qualifying features within the site.*

5.2.3 Threats and Pressures

The Site Improvement Plan for the SPA sets out the key threats and pressures for the site (Natural England 2014) as invasive species, fisheries: commercial marine and estuarine, habitat fragmentation, public access/disturbance and water pollution.

Invasive species

Brown Rat *Rattus norvegicus* is present on some of the islands within the Isles of Scilly and within the SPA. This species is considered to be a threat to breeding seabird populations.

Fisheries: commercial marine and estuarine

Some practices by fisheries may impact on protected features through vessels using bottom towed gear. Compliance and recording is required to ensure good management of sites.

Habitat fragmentation

Shore dock *Rumex rupestris*, present on the Isles of Scilly, lives on rocky or sandy beaches with a reliance on a freshwater source. Storms and sea level rise may cause habitat loss and thus habitat fragmentation which may threaten this species.

Public access/disturbance

There is the potential for disturbance on Grey Seal *Halichoerus grypus* colonies and breeding seabirds from the general public. Sea vessels also have the potential to negatively impact seagrass beds through scouring and anchoring.

Water pollution

Pollution and nutrient enrichment as well as reduced water quality can be caused by sewage and trade effluent entering the designated site. This could result in increases in phytoplankton, green algae and siltation.

5.3 Isles of Scilly Ramsar

5.3.1 Description and Qualifying Features

The Isles of Scilly Ramsar is designated under Ramsar Criterion 6: species/populations occurring at levels of international importance. The qualifying features of the site are as follows:

Species regularly supported during the breeding season

- European Storm-Petrel *Hydrobates pelagicus*
- Lesser Black-Backed Gull *Larus fuscus graellsii*

5.3.2 Conservation Objectives

The conservation objectives are defined as follows (Natural England 2018):

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.*

6 Screening assessment

6.1 Potential hazards to European Sites

The list of potential hazards to the European sites are based on the conservation objectives and site improvement plan included within Section 5 and the project descriptions (Section 4). These are:

- Direct habitat loss
- Noise and visual disturbance
- Water pollution
- Air pollution
- Sediment release (temporary during construction)
- Alteration to coastal processes

6.2 Potential in-combination effects

Other plans and projects with potential in-combination impacts were reviewed. No plans were identified that could potentially act in-combination with the proposed works at any of the four sites. All of the planning applications within 1km of each of the sites are all small-scale works that have no direct connection to the site. There are no Nationally Significant Infrastructure projects within 1km of the site.

The proposed works assessed in this HRA are included within the Local Plan. Other coastal management works included within the Local Plan include proposed works for repairs to existing structures. The rest of the proposed works within the Local Plan include dune management and management of cliff recession. In-combination impacts with these projects and between the assessed projects has already been assessed in the Local Plan HRA.

6.3 Assessment of Likely Significant Effects

Assessment of the potential hazards identified in Section 6.1 was undertaken to determine whether the proposed works at each of the four locations would be likely to have a significant effect on the qualifying features of the SAC, SPA and Ramsar. The results of this assessment are shown in the following tables.

Table 6-1: Assessment of likely significant effects - Porthloo

Designated Site	Interest Features	Potential Hazards	Assessment of Likelihood of Significant Effects
Isles of Scilly Complex SAC	Annex I habitats (as a primary reason) '1110 Sandbanks which are slightly covered by sea water all the time'; '1140 Mudflats and sandflats not covered by seawater at low tide'; and '1170 Reefs' Annex II species (as a primary reason) '1441 Shore dock <i>Rumex rupestris</i> ' Annex II species '1364 Grey seal <i>Halichoerus grypus</i> '	Direct habitat loss Noise and visual disturbance Water pollution	The proposed works will not result in the direct loss of habitat within the SAC, either permanent or temporary. All works will take place outside of the SAC, including the mooring of the delivery barge. No populations of Shore Dock were recorded within the works area and it is not considered that the species will be impacted upon. No likely significant effect The proposed works will not impact upon areas of the SAC where Grey Seal are known to reside and breed. No likely significant effect A range of potential pollutants will be brought to the site, including fuel in the landing craft and fuel for construction machinery, as well as chemicals associated with the welfare in the site compound. If these were released into the coastal waters, they could negatively impact the maritime habitats of the SAC. However, the risk of such contamination is significantly reduced through industry-standard construction management practices and through the prior approval of the construction methodology (likely to be a requirement of the planning approval). Therefore, given these existing controls and the relatively small-scale and duration of the construction works, this hazard is not likely to present a significant risk to the site. No likely significant effect
		Air pollution	The number of vehicle movements and duration of construction will be relatively small and so the potential release of pollutants to air will be limited. No likely significant effect
		Sediment release (temporary during construction)	Excavations will be undertaken to create a berm at the base of the proposed rock armour revetment. The excavation will be small in scale and take place above the MHWS tide level. No likely significant effect
		Invasive Species	Hottentot Fig <i>Carpobrotus edulis</i> was recorded at the forefront of the dunes along Porthloo beach. The proposed works have the potential to cause the spread of this species, with the absence of appropriate mitigation measures. Biosecurity measures will need to be put in place to stop the spread of this species. However, as this is a terrestrial species it is not considered that any potential spread of the species will have an impact upon the marine environment. No likely significant effect
		Alteration of coastal morphology processes	The works are small in scale and will take place above the Mean High Water Spring (MHWS) tide level. A coastal processes assessment was undertaken as part of an EIA; this concluded that the scheme is unlikely to have a significant impact upon coastal processes either on its own or in combination with the other schemes No likely significant effect

Table 6-2: Assessment of likely significant effects - Porth Mellon

Designated Site	Interest Features	Potential Hazards	Assessment of Likelihood of Significant Effects
Isles of Scilly Complex SAC	Annex I habitats (as a primary reason) '1110 Sandbanks which are slightly covered by sea water all the time'; '1140 Mudflats and sandflats not covered by seawater at low tide'; and '1170 Reefs' Annex II species (as a primary reason) '1441 Shore dock <i>Rumex rupestris</i> ' Annex II species '1364 Grey seal <i>Halichoerus grypus</i> '	Direct habitat loss	The proposed works will not result in the direct loss of habitat within the SAC, either permanent or temporary. All works will take place outside of the SAC, including the mooring of the delivery barge. No populations of Shore Dock were recorded within the works area and it is not considered that the species will be impacted upon. No likely significant effect
		Noise and visual disturbance	The proposed works will not impact upon areas of the SAC where Grey Seal are known to reside and breed. No likely significant effect
		Water pollution	A range of potential pollutants will be brought to the site, including fuel in the landing craft and fuel for construction machinery, as well as chemicals associated with the welfare in the site compound. If these were released into the coastal waters, they could negatively impact the maritime habitats of the SAC. However, the risk of such contamination is significantly reduced through industry-standard construction management practices and through the prior approval of the construction methodology (likely to be a requirement of the planning approval). Therefore, given these existing controls and the relatively small-scale and duration of the construction works, this hazard is not likely to present a significant risk to the site. No likely significant effect
		Air pollution	The number of vehicle movements and duration of construction will be relatively small and so the potential release of pollutants to air will be limited. No likely significant effect
		Sediment release (temporary during construction)	Excavations will be undertaken to create a berm at the base of the proposed rock armour installation and re-grading of the embankment. The excavation will be small in scale and take place above the MHWS tide level. No likely significant effect
		Alteration of coastal morphology processes	The works are small in scale and will take place above the MHWS tide level. A coastal processes assessment was undertaken as part of an EIA; this concluded that the scheme is unlikely to have a significant impact upon coastal processes either on its own or in combination with the other schemes. No likely significant effect

Table 6-3: Assessment of likely significant effects - Porth Hellick

Designated Site	Interest Features	Potential Hazards	Assessment of Likelihood of Significant Effects
Isles of Scilly Complex SAC	Annex I habitats (as a primary reason) '1110 Sandbanks which are slightly covered by sea water all the time'; '1140 Mudflats and sandflats not covered by seawater at low tide'; and '1170 Reefs' Annex II species (as a primary reason) '1441 Shore dock <i>Rumex rupestris</i> ' Annex II species '1364 Grey seal <i>Halichoerus grypus</i> '	Direct habitat loss Noise and visual disturbance Water pollution	<p>The proposed works will not result in the direct loss of habitat within the SAC, either permanent or temporary. All works will take place outside of the SAC. No populations of Shore Dock were recorded within the works area and it is not considered that the species will be impacted upon. No likely significant effect</p> <p>The proposed works may result in noise and visual disturbance to Grey Seal populations within the SAC due to the use of machinery during the works; however, given the distance from the SAC and where Grey Seals are known to breed and the small-scale of the works, the works are not likely to have a significant effect. No likely significant effect</p> <p>A range of potential pollutants will be brought to the site, including fuel in the landing craft and fuel for construction machinery, as well as chemicals associated with the welfare in the site compound. If these were released into the coastal waters, they could negatively impact the maritime habitats of the SAC. However, the risk of such contamination is significantly reduced through industry-standard construction management practices and through the prior approval of the construction methodology (likely to be a requirement of the planning approval). Therefore, given these existing controls and the relatively small-scale and duration of the construction works, as well as the distance between the works area and the SAC, this hazard is not likely to present a significant risk to the site. No likely significant effect</p>
		Air pollution	<p>The number of vehicle movements and duration of construction will be relatively small and so the potential release of pollutants to air will be limited. No likely significant effect</p>
		Sediment release (temporary during construction)	<p>Small localised excavations will be undertaken to reinstate the sand and gravel bank and construct the new vehicle access ramp at the eastern end of the bay and to plant the <i>Fascicularia bicolor</i> bushes. These excavations will all take place above the MHSW tide level. Due to the distance between the works area and the SAC, it is not anticipated that the sediment will impact the SAC. No likely significant effect</p>
		Invasive Species	<p>Hottentot Fig <i>Carpobrotus edulis</i> was recorded at the forefront of the dunes along Porthloo beach. The proposed works have the potential to cause the spread of this species, with the absence of appropriate mitigation measures. Biosecurity measures will need to be put in place to stop the spread of this species. However, as this is a terrestrial species it is not considered that any potential spread of the species will have an impact upon the marine environment. No likely significant effect</p>
		Alteration of coastal morphology processes	<p>The works are small in scale and will take place above the MHSW tide level. A coastal processes assessment was undertaken as part of an EIA; this concluded that the scheme is unlikely to have a significant impact upon coastal processes either on its own or in combination with the other schemes. No likely significant effect</p>

Table 6-4: Assessment of likely significant effects - South Dunes

Designated Site	Interest Features	Potential Hazards	Assessment of Likelihood of Significant Effects
Isles of Scilly Complex SAC	Annex I habitats (as a primary reason) '1110 Sandbanks which are slightly covered by sea water all the time'; '1140 Mudflats and sandflats not covered by seawater at low tide'; and '1170 Reefs'	Direct habitat loss	The proposed works will not result in the direct loss of habitat within the SAC, either permanent or temporary. Whilst works will take place within the SAC boundary, given the nature of the works, which intend to support and protect the existing dune system, and relatively small-scale of the works, not significant effects on the interest features are likely. No populations of Shore Dock were recorded within the works area and it is not considered that the species will be impacted upon. No likely significant effect
	Annex II species (as a primary reason) '1441 Shore dock <i>Rumex rupestris</i> ' Annex II species '1364 Grey seal <i>Halichoerus grypus</i> '	Noise and visual disturbance Water pollution	The proposed works will not impact upon areas of where Grey Seal are known to reside and breed. No likely significant effect A range of potential pollutants will be brought to the site, including fuel for construction machinery, as well as chemicals associated with the welfare in the site compound. If these were released into the coastal waters, they could negatively impact the maritime habitats of the SAC. However, the risk of such contamination is significantly reduced through industry-standard construction management practices and through the prior approval of the construction methodology (likely to be a requirement of the planning approval). Therefore, given these existing controls and the relatively small-scale and duration of the construction works, this hazard is not likely to present a significant risk to the site. No likely significant effect
		Air pollution	The number of vehicle movements and duration of construction will be relatively small and so the potential release of pollutants to air will be limited. No likely significant effect
		Sediment release (temporary during construction)	Small localised excavations will be undertaken to place the rock rolls. These excavations will take place above MHWS but will be located within the SAC boundary. However, given the nature of the works, which intend to support and protect the existing dune system, and relatively small-scale of the works, not significant effects on the interest features are likely. No likely significant effect
		Invasive Species	Hottentot Fig was recorded in large areas at the forefront of the dunes. The proposed works have the potential to cause the spread of this species, with the absence of appropriate mitigation measures. Biosecurity measures will need to be put in place to stop the spread of this species. However, as this is a terrestrial species it is not considered that any potential spread of the species will have an impact upon the marine environment. No likely significant effect
		Alteration of coastal morphology processes	The works are small in scale and will take place above the MHWS tide level. A coastal processes assessment was undertaken as part of an EIA; this concluded that the scheme is unlikely to have a significant impact upon coastal processes either on its own or in combination with the other schemes. No likely significant effect
Isles of Scilly SPA and Ramsar	Annex I species Storm Petrel <i>Hydrobates</i>	Direct habitat loss	The works will not result in any direct habitat loss and will not impact at all on habitat suitable for birds associated with SPA. No likely significant effect

Designated Site	Interest Features	Potential Hazards	Assessment of Likelihood of Significant Effects
	<p><i>pelagicus</i> Annex II species Lesser Black-backed Gull <i>Larus fuscus</i> Annex II assemblage The site regularly supports a seabird assemblage of at least 20,000 seabirds.</p>	<p>Noise and visual disturbance</p> <p>Water pollution</p> <p>Air pollution</p> <p>Sediment release (temporary during construction)</p> <p>Invasive Species</p> <p>Alteration of coastal morphology processes</p>	<p>The open dune habitat behind the works does provide suitable habitat for nesting Storm Petrel. The proposed works will require the delivery of materials via existing tracks through this habitat. However, no pairs have been recorded in this area of Tresco. In addition, given the small-scale of the proposed works and short construction duration, any risks to the interest features is further reduced. No likely significant effect</p> <p>A range of potential pollutants will be brought to the site, including fuel for construction machinery, as well as chemicals associated with the welfare in the site compound. If these were released into the coastal waters, they could negatively impact the beach habitats and affect the site interest features. However, the risk of such contamination is significantly reduced through industry-standard construction management practices and through the prior approval of the construction methodology (likely to be a requirement of the planning approval). Therefore, given these existing controls and the relatively small-scale and duration of the construction works, this hazard is not likely to present a significant risk to the site. No likely significant effect</p> <p>The number of vehicle movements and duration of construction will be relatively small and so the potential release of pollutants to air will be limited. No likely significant effect</p> <p>Small localised excavations will be undertaken to place the rock rolls. These excavations will take place above the MHWS tidal level but will be within the SPA. However, given the relatively small-scale and duration of the construction works, this hazard is not likely to present a significant risk to the site. No likely significant effect</p> <p>Hottentot Fig was recorded in large areas at the forefront of the dunes. The proposed works have the potential to cause the spread of this species, with the absence of appropriate mitigation measures. Biosecurity measures will need to be put in place to stop the spread of this species. However, as this is a terrestrial species it is not considered that any potential spread of the species will have an impact upon the marine environment and therefore on the bird features of the SPA. No likely significant effect</p> <p>The works are small in scale and will take place above MHWS. A coastal processes assessment was undertaken as part of an EIA, this concluded that the scheme is unlikely to have a significant impact upon coastal processes either on its own or in combination with the other schemes No likely significant effect</p>

7 Screening statement and conclusion

A Habitat Regulations screening assessment has been undertaken to assess the likelihood of significant affects on European designated sites as a result of the proposed developments (alone and in-combination).

The assessment identified three European sites within the 1km zone of influence around the proposed developments. It also identified a series of potential hazards to these sites as a result of the proposed works.

However, given the location, nature and scale of the works proposed at each development site and the very limited scale and duration of the construction works required, the assessment has not identified any likely significant effects on the European sites.

As such, no further assessment is required.

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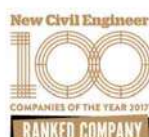
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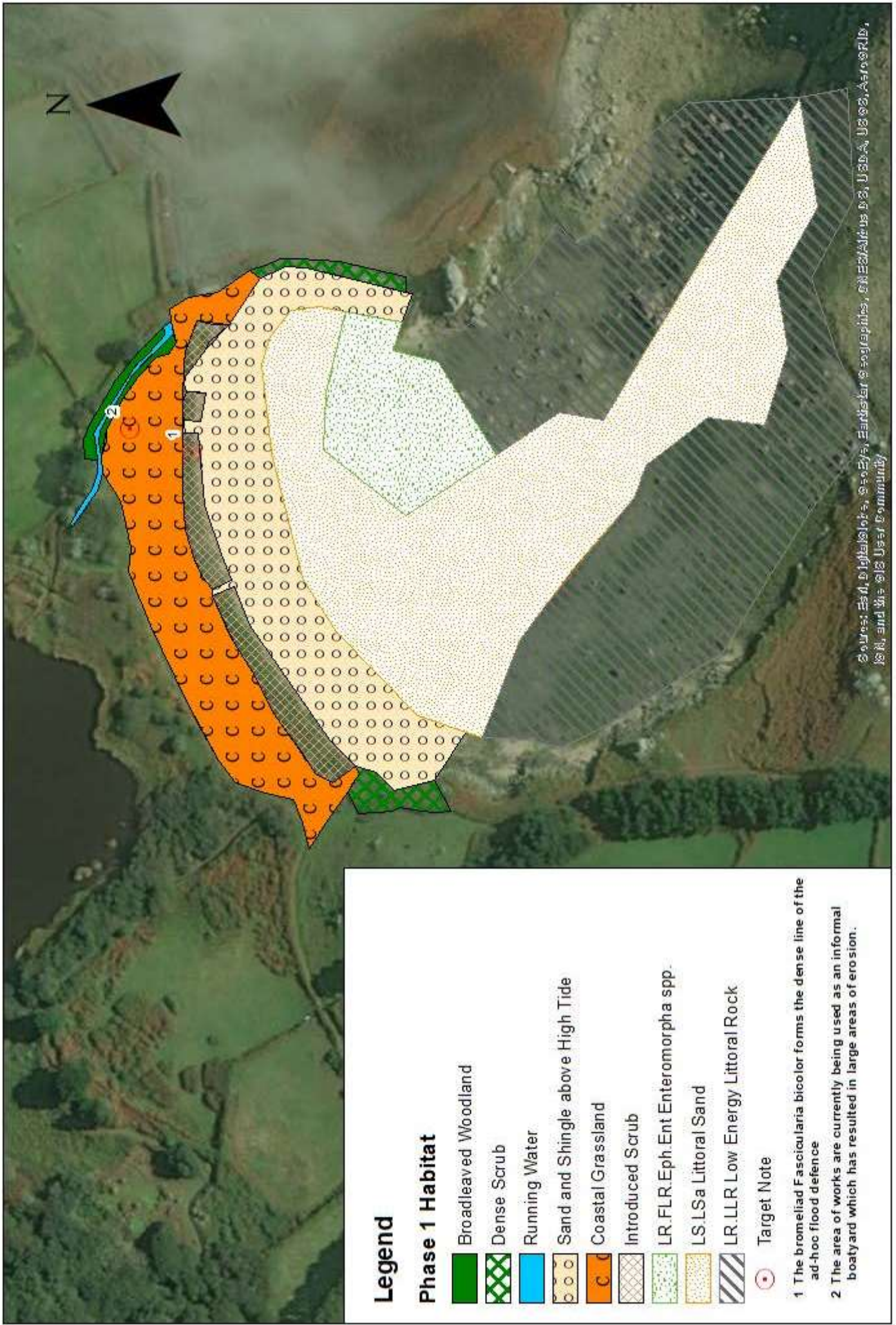
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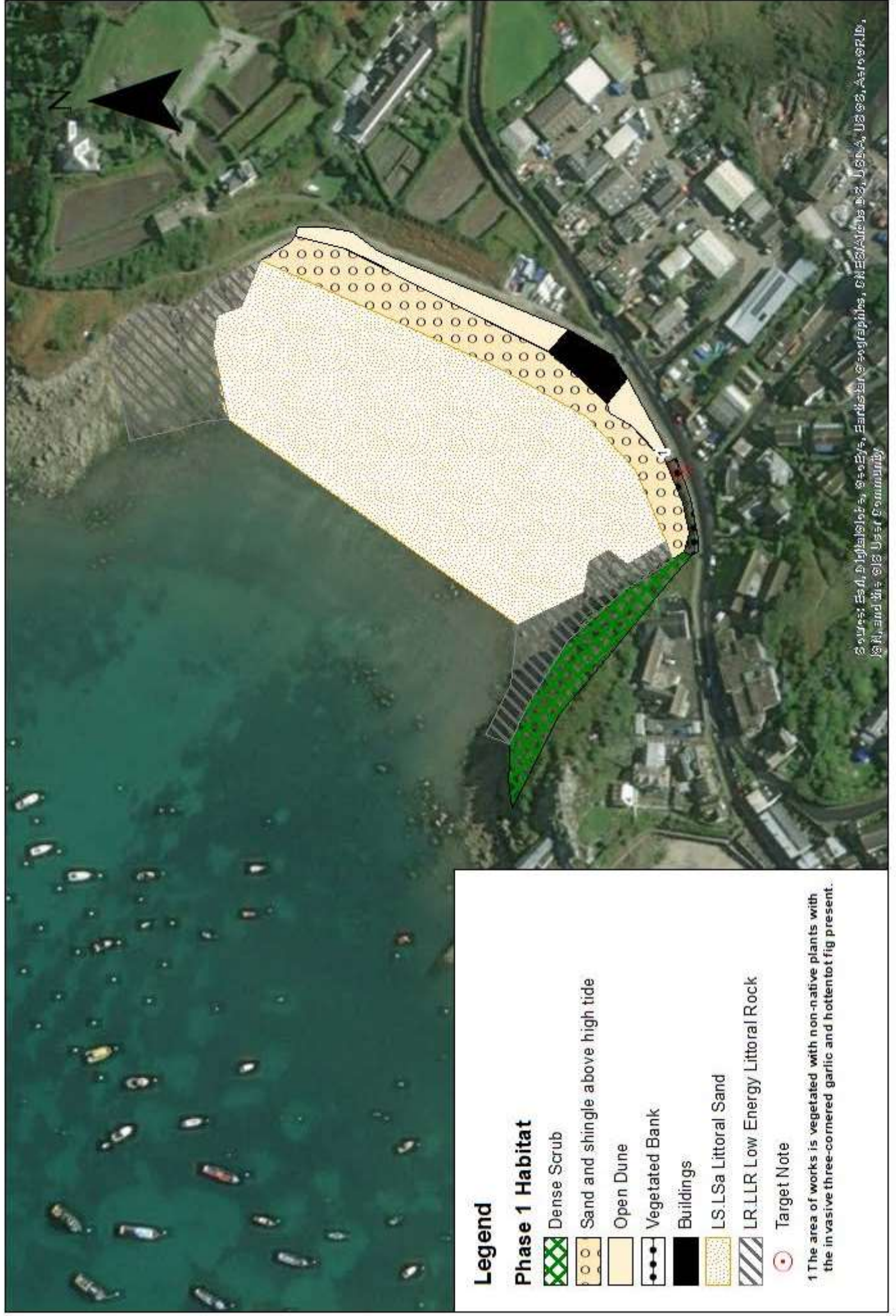
Legend

Phase 1 Habitat

-  Broadleaved Woodland
-  Dense Scrub
-  Running Water
-  Sand and Shingle above High Tide
-  Coastal Grassland
-  Introduced Scrub
-  LR.FLR.Eph.Ent Enteromorpha spp.
-  LS.LSa Littoral Sand
-  LR.LLR Low Energy Littoral Rock

Target Note

- 1 The bromeliad *Fascicularia bicolor* forms the dense line of the ad-hoc flood defence
- 2 The area of works are currently being used as an informal boatyard which has resulted in large areas of erosion.



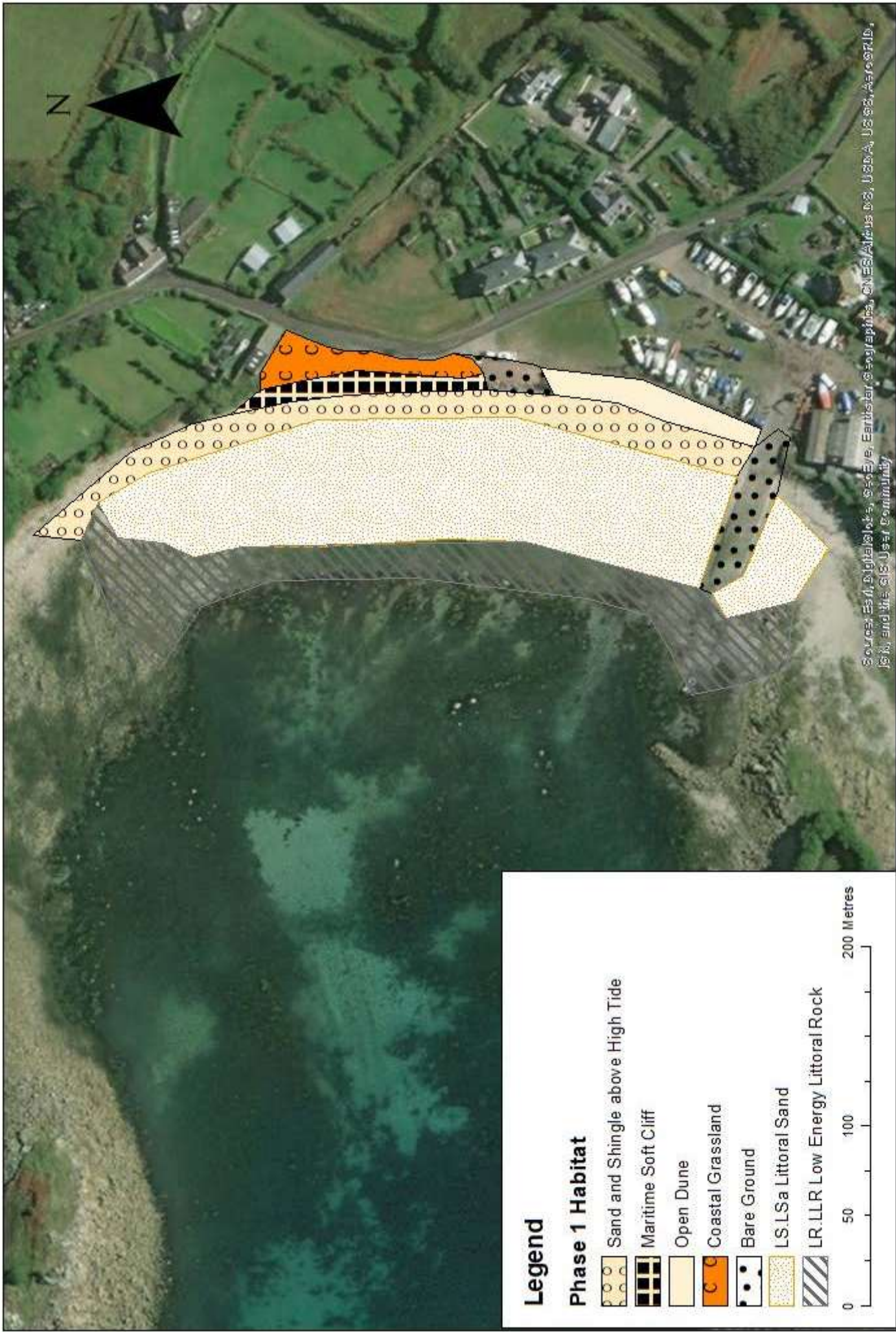
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Phase 1 Habitat

-  Dense Scrub
-  Sand and shingle above high tide
-  Open Dune
-  Vegetated Bank
-  Buildings
-  LS.LSa Littoral Sand
-  LR.LLR Low Energy Littoral Rock

 Target Note

1 The area of works is vegetated with non-native plants with the invasive three-cornered garlic and hottentot fig present.



Sources: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Legend

Phase 1 Habitat






-  Sand and Shingle above High Tide
-  Maritime Soft Cliff
-  Open Dune
-  Coastal Grassland
-  Bare Ground
-  LS.LSa Littoral Sand
-  LR.LLR Low Energy Littoral Rock





Legend

Phase 1 Habitat

-  Sand and shingle above high tide
 -  Open Dune
 -  LS.LCS.Sh.BarSh littoral shingle
 -  LS.LSa Littoral Sand
 -  Target Note
- 1 Hottentot Fig prevalent throughout dune top and beginning to colonise open dune face
- 2 Dunes are heavily eroded in the area of the works creating a steep open face with little vegetation

Source: Bird, Dight, Slope, & Sooby, Earthstar & Geographics, 08/2014; USGS, USGS, AstroGRID, (S.N.) and the GIS User Community