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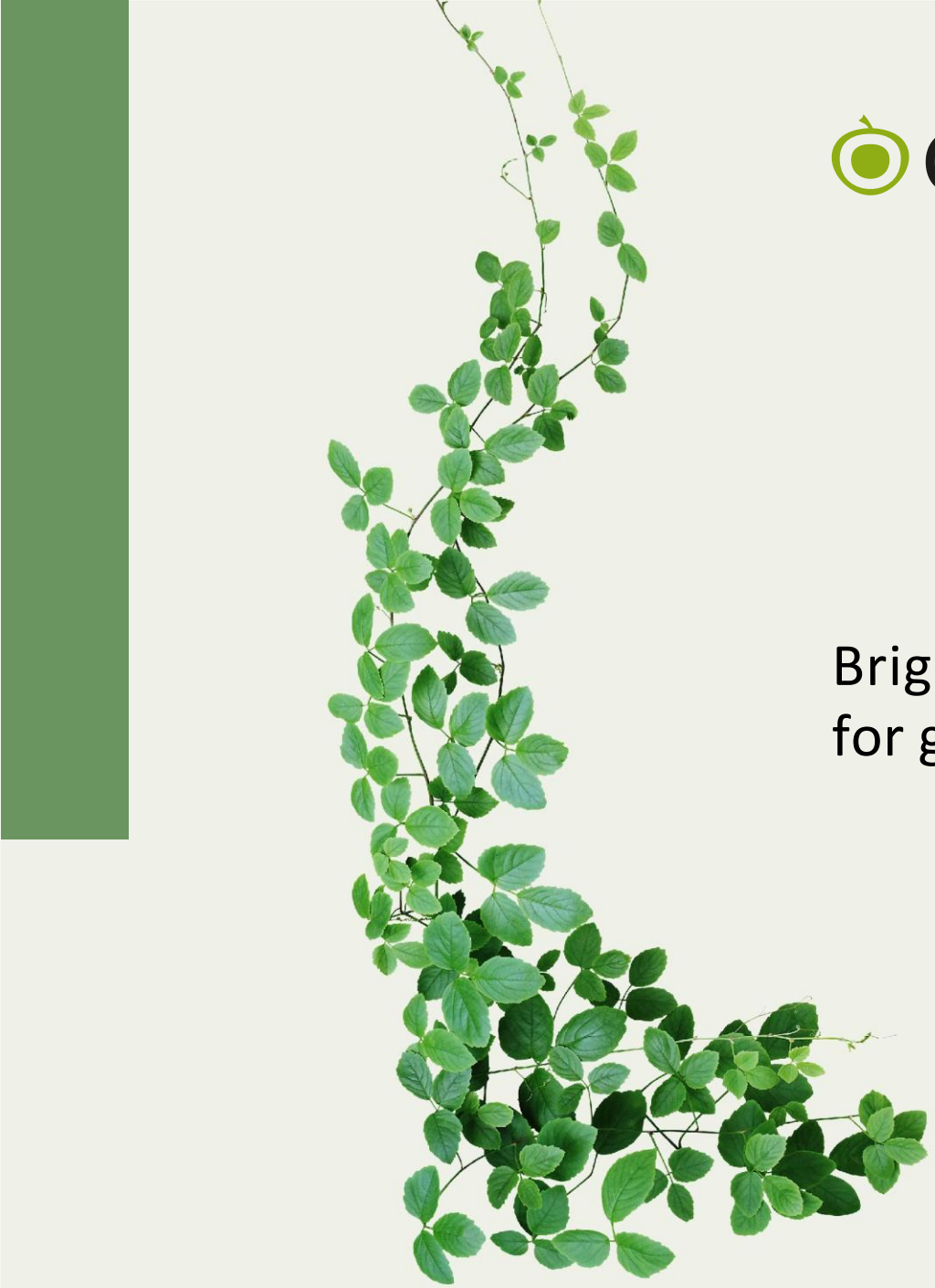

Client: Cumberland Council

Project: Iron Line

Report: Notable Plant Mitigation Strategy

QUALITY ASSURANCE

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Prepared by:	Laura Thomas	Laura Thomas
Authorised by:	Helen Bradshaw	Helen Bradshaw
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1.0 INTRODUCTION

Greengage Environmental Ltd (Greengage) was commissioned by Cumberland Council to produce a Notable Plants Method Statement (NPMS) for Hodbarrow Nature Reserve (excluding Hodbarrow lagoon) and a parcel of land immediately north of the nature reserve proposed for development as a Visitor Centre and car park, located on the south-west coast of Cumbria, hereafter referred to as 'the site'.

The approved planning application (planning reference: 4/25/2198/0F1) for the site seeks *"Erection of visitor centre with café/shop, group room, staff/volunteer, toilet facilities and vehicle parking; consolidation, repair and installation of interpretive sculpture to Towsey Hole Windmill; refurbishment of existing Tern Island Hide; new bird hides, pathways, gateway features, street furniture, and demarcation of spaces at existing car park; enhancement of wildlife habitats; associated landscaping and drainage infrastructure; and maintenance of byway with restricted vehicular access -The Iron Line Project."*

The approved planning application is subject to several planning conditions. This NPMS seeks to support the discharge of planning condition 8 which states:

"Prior to the commencement of development, a Notable Plants Method Statement that covers the protection of rare plants on-site, with detailed maps of the locations of plants and appropriate protection measures, must be submitted to and approved in writing by the Local Planning Authority. The development must be carried out in accordance with the approved details at all times thereafter.

Reason

To protect the ecological interests evident on the site in accordance with Policy N1PU and N3PU of the Copeland Local Plan 2021 – 2039."

This NPMS is designed for use by contractors, therefore, it is structured around the construction mitigation measures required at each phase of development ensuring that the required actions remain clear to follow. In general, works will be limited to well used desire lines or where there is dense scrub habitat where the National Vegetation Classification (NVC) surveys[1] determined to have low floristic importance. So habitats and the notable plant species they support are inherently protected through the designs. Chapter 4 lays out the mitigation method statements as part of the pre-works actions to protect notable plants associated with that phase of works. Maps of locations of notable plants is provided in the Appendix A.

For the purposes of this report, the planning application boundary encompasses the site shown in Appendix B. However, the actual development footprint occupies only a much smaller portion of that area (Appendix B).

Please note that the actions outlined in this NPMS relate solely to notable plants and habitats and set out mitigation measures to support the existing Construction Environmental Management Plan[2] produced by Story Contracting Ltd. For measures concerning other ecological receptors, reference should be made to the Construction Ecological Management Plan (CEcMP)[3] and Amphibian Mitigation and Management Plan (AMMP)[4].

1.1 SITE DESCRIPTION

Hodbarrow Nature Reserve (hereafter referred to as 'the nature reserve') including Hodbarrow Lagoon, covers approximately 105 hectares (ha) and comprises lagoons, grassland and scrub

across a former iron mine managed by the Royal Society for the Protection of Birds (RSPB) since 1986. The land immediately north of the nature reserve extends to approximately 2.1 ha and comprises hardstanding, dense scrub, lowland meadow and calcareous grassland, where the proposed Visitor Centre and car park will be located (hereafter referred to as the 'proposed Visitor Centre and car park'). In total, the site (excluding Hodbarrow Lagoon) to which this NPMS applies covers 57.69 ha.

Hodbarrow Nature Reserve lies within the Morecombe Bay and Duddon Estuary Special Protection Area (SPA), Morecombe Bay Special Area of Conservation (SAC), Duddon Estuary Ramsar (designated under the Convention on the Wetlands of International Importance especially as Waterfowl Habitat 1971 – the Ramsar Convention) and the Duddon Estuary Site of Special Scientific Interest (SSSI).

1.2 PROPOSED DEVELOPMENT

A summary of the approved proposals (4/25/2198/0F1) has been separated into the Visitor Centre and car park and improvements across the nature reserve:

- Development of a Visitor Centre and car park, which will involve:
  - Clearance of 0.29 ha of dense scrub habitat and 0.02 ha (of a total 7.83 ha) lowland calcareous grassland habitat to facilitate the proposed development;
  - Retention and protection of 0.0546 ha of existing lowland meadow and retention protection and enhancement of the remaining 0.5778 ha of lowland calcareous grassland;
  - Development of the land proposed for the Visitor Centre and car park which will comprise a two-story building, the ground floor will include a café, a shop, toilets, staff room and a total of 63 car parking spaces; and
  - 0.0358 ha of existing hardstanding will be broken up and removed to create other neutral grassland.
- Improvements across the nature reserve, which include:
  - restricting of vehicular access along the Byway Open to All Traffic (BOAT) which should decrease the degradation to habitats from anti-social driving of vehicles along the BOAT and onto habitats;
  - Some desire lines to be formalised with sensitive substrate/materials and fencing in some areas to restrict disturbance from footfall;
  - Maintenance and repairs to Towsey Hole Windmill;
  - Installation of art and education features across the site to engage visitors in wildlife and promote behavioural change;
  - Reinforcement of bunding along sea wall to restrict unauthorised access; and
  - The building of three hides, one overlooking the 'hidden lagoon' one overlooking the old quarry lagoon and the third on the old sea wall.

Design Process

Greengage have liaised with the design team on a weekly basis and engaged with the Council, Natural England and RSPB throughout the design process to support an earlier planning

application. Greengage have communicated the ecological constraints and opportunities to the design team which has been informed by the Phase II survey results[5] and Phase II survey addendum. [6] The designs have been adapted throughout the process as and when any new relevant ecological constraints were identified. The approved proposals for the updated planning application have followed the same principals as an earlier planning application and RSPB and Natural England have been kept up to date. The development process has sought to follow the mitigation hierarchy throughout the design stage.

The approved development design, permitted under permission 4/25/2198/0F1, has been adapted throughout the process and has followed the mitigation hierarchy throughout the design stage:

- Avoidance - Seek options that avoid harm to ecological features (for example, by locating on an alternative site).
- Mitigation - Negative effects should be avoided or minimised through mitigation measures, either through the design of the project or subsequent measures that can be guaranteed – for example, through a condition or planning obligation.
- Compensation - Where there are significant residual negative ecological effects despite the mitigation proposed, these should be offset by appropriate compensatory measures.
- Enhancement - Seek to provide net benefits for biodiversity over and above requirements for avoidance, mitigation or compensation.

2.0 NATIONAL VEGETATION CLASSIFICATION SURVEY RESULTS

A National Vegetation Classification (NVC) was just undertaken in in 2021 and 2022[7]. The NVC survey was updated on the 3rd and 4th of May 2025[8] which covered the same survey area as the 2021/2022 NVC survey (see Appendix A).

This includes the entire proposed Visitor Centre and car park and also 20 metres (m) either side of the path on-site and the area of the Byway Open to All Traffic (BOAT) on the nature reserve up to where it begins along the sea wall which was selected due to it being considered within the Zone of Influence (ZoI).

The BOAT along the sea wall area was not subject to detailed NVC survey, as works are restricted to the BOAT surface. Nevertheless, notable habitats adjacent to the BOAT were identified during the survey.

Whilst there are priority habitats across the site a NVC survey has been undertaken only on habitats that fall within the ZoI of the approved proposals. Therefore, there may be some priority habitats on the nature reserve that have not been identified through in-depth survey but these will not be impacted by the approved proposals and were therefore not considered further.

2.1 HABITATS

Proposed Visitor Centre and car park

The following NVC communities were recorded on the proposed Visitor Centre and car park and are described below. Further detail on each of NVC classifications is presented in the Phase II survey report (553023cp05Dec25FV02_Phase2Addendum).

Table 2.1 gives the NVC communities and their level of importance.

Table 2.1 Proposed Visitor Centre area - NVC communities identified.

NVC Classification (Code)	Status	Level of Importance
Festuca ovina – Carlina vulgaris (CG1)	Annex 1 habitat- Semi-natural dry grasslands and scrubland facies on calcareous substrates (H6210)	International
	HPI: Lowland calcareous grassland	
	LBAP: Calcareous grassland	
Briza media – Brachypodium sylvaticum grassland	Annex 1 habitat- Semi-natural dry grasslands and scrubland facies on calcareous substrates (H6210)	International
	HPI: Lowland Calcareous Grassland	
	LBAP: Calcareous Grassland	
Arrhenatherum	Lowland Meadow	Regional

NVC Classification (Code)	Status	Level of Importance
elatius grassland Centaurea nigra sub-community (MG1e)	HPI: Lowland Meadow	
	LBAP: Hay Meadows and Lowland Pastures	
Other habitat that does not qualify for priority status		
W24 *Rubus fruticosus – Holcus lanatus* underscrub.		

Assessment of Conservation Value

Whilst not a feature of the SAC designation, the Annex 1: H6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) and the *Briza media - Brachypodium sylvaticum* grassland is classified as having International Importance. The remaining habitats above have Site to Regional Importance.

20m buffer along BOAT and footpath

The following NVC communities were recorded within the 20m buffer either side the main paths on site and are described below. Further detail on each of NVC classifications is presented in Phase 2 survey report (553023cp05Dec25FV02_Phase2Addendum). The table below gives the NVC communities and their level of importance.

Table 2.2 Plant communities 20m buffer either side of proposed pathways

NVC Classification (Code)	Status	Level of Importance
Arrhenatherum elatius grassland/ *Brachypodium pinnatum* grassland (MG1/CG4)	Annex 1 habitat- Semi-natural dry grasslands and scrubland facies on calcareous substrates (H6210)	International
	HPI: Lowland calcareous grassland	
	LBAP: Calcareous grassland	
Cynosurus cristatus – Centaurea nigra /Avenula pubescens grassland (MG5/ CG6)	Annex 1 habitat- Semi-natural dry grasslands and scrubland facies on calcareous substrates (H6210)	International
	HPI Lowland Calcareous Grassland and Lowland Meadows	
	LBAP: Hay Meadows and Lowland Pastures and LBAP: Calcareous Grasslands	
Festuca ovina–Carlina vulgaris (CG1)	Annex 1 habitat- Semi-natural dry grasslands and scrubland facies on calcareous substrates (H6210)	International

NVC Classification (Code)	Status	Level of Importance
	HPI: Lowland calcareous grassland	
	LBAP: Calcareous grassland	
Briza media – Brachypodium sylvaticum grassland	Annex 1 habitat- Semi-natural dry grasslands and scrubland facies on calcareous substrates (H6210)	International
	HPI: Lowland calcareous grassland	
	LBAP: Calcareous grassland	
Ammophila arenaria–Festuca rubra semi-fixed dune community (SD7)	Annex 1 H2130 Fixed coastal dunes with herbaceous vegetation (grey dunes)	International
	HPI: Coastal Sand Dunes	
Festuca rubra–Galium verum fixed dune grassland (SD8)	Annex 1 H2130 Fixed coastal dunes with herbaceous vegetation (grey dunes)	International
	HPI: Coastal Sand Dunes	
Arrhenatherum elatius grassland/ Centaurea nigra sub- community (MG1e)	HPI: Lowland Meadow	Regional
	LBAP: Hay Meadows and Lowland Pastures	
Juncus- Gallium rush-pasture (M23b)	HPI:	Regional
Potamogeton pectinalus-Myriophyllum spicatum community (A11)	HPI: Eutrophic Standing Waters	Regional
Pond	HPI: Ponds	Regional
Lake	HPI: Eutrophic Standing Waters	Regional
Other habitat that does not qualify for priority status		
Arrhenatherum elatius grassland *Festuca rubra* sub-community (MG1a)		
Lolium ley (MG7)		
Swamp (S10)		
Ulex europaeus–Rubus fruticosus scrub (W23)		
Rubus fruticosus – Holcus lanatus underscrub (W24)		
Pteridium aquilinum- Rubus fruticosus underscrub (W25)		
Argentina anserina–Carex nigra dune slack (SD17)		
Eleocharis palustris swamp (S19)		

Assessment of Conservation Value

The 'Fixed coastal dunes with herbaceous vegetation (grey dunes)' habitat is cited within the SAC designation and therefore has International Importance. In addition, the Annex 1: H6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) is also classified as having **International Importance**.

The remaining habitats have **Regional and Site Importance.**

2.2 NOTABLE PLANTS

Proposed Visitor Centre

A total of seven important plant species were observed during surveys within this area including taxa of regional to local conservation importance. An overview of these species, their conservation status and importance can be found in Table 2.3

Table 2.3 Notable plants within the area proposed for the Proposed Visitor Centre and car park

Species	Conservation Status	Importance
Common cudweed Filago germanica	• Near-Threatened in England • Rare across the region of north-west England • Cumbria RPR	Regional importance
Fern-grass Catapodium rigidum	• North-west England • Local in Cumbria	
Wild marjoram Origanum vulgare	• Least Concern in England • Local as a native plant in Cumbria	County importance
Carline thistle Carlina vulgaris	• Near-threatened in England • Local in Cumbria	Local importance
Quaking-grass Briza media	• Near-threatened in England • Widespread locally	
Wild strawberry Fragaria vesca	• Near-threatened in England and widespread	

Eyebright Euphrasia sp. was identified during the 2021/2022 surveys and not found during 2025 surveys which may be down to survey timing, ephemeral population/small population status and/or genuine decline following habitat loss and deterioration.

Assessment of Conservation Value

The notable plants on site range from **Local to Regional Importance**.

20m buffer along BOAT and footpath

A total of 25 of the 30 original important plant species identified in the 2021-2022 surveys were observed during surveys within this area, including taxa of international to local conservation importance. An additional three importance plant species were identified: seaside centaury *Centaurium littorale*, heath dog violet *Viola canina*, and variegated *horsetail Equisetum variegatum*. An overview of these species, their conservation status and importance can be found in Table 2.4

Table 2.4 Plant communities within 20m buffer of proposed paths

Species	Conservation Status	Importance
Irish dandelion *Taraxacum aesculosum*	• Nationally rare in Britain • Critically Endangered for England	High (international level importance)
Pillwort *Pilularia globulifera*	• Nationally scarce in Britain • Vulnerable in England • S.41 species • Listed on Cumbria Rare Plant Register (RPR)	High (national importance)
Seaside centaury *Centaurium littorale*	• Nationally scarce in Britain • Least Concern in Britain	
Heath dog violet *Viola canina*	• Vulnerable in England • GB red list: Near threatened • Listed on Cumbria RPR	High (regional importance)
Variegated horsetail *Equisetum variegatum*	• Nationally scarce in Britain • Least Concern in Britain	
Small-fruited yellow sedge *Carex oederi*	• Nationally scarce in Britain • Least Concern in England • Rare in the region of north-west England • Scarce on the Cumbria RPR	
Thread-leaved water-crowfoot *Ranunculus trichophyllos*	• Least Concern in England • Rare within the region of north-west England	
Fennel pondweed *Potamogeton pectinatus*	• Least Concern in England • Rare species in Cumbria	County importance
Spiked water milfoil *Myriophyllum spicatum*	• Least Concern in England	
Few-flowered spike-rush *Eleocharis quinqueflora*	• Least Concern in England • SCI plant for north-west England	
Heath speedwell *Veronica officinalis*	• Near-threatened in England	

Species	Conservation Status	Importance
	• Widespread in Cumbria	
Lesser spearwort *Ranunculus flammula*	• Least Concern in England • Widespread but local Cumbria • SCI plant for north-west England	
Marsh pennywort *Hydrocotyle vulgaris*	• Near-threatened in England • Widespread in Cumbria	
Northern marsh orchid *Dactylorhiza purpurella*	• Widespread in Cumbria and Northern Britain • SCI within north-west England	
Tormentil *Potentilla erecta*	• Near-threatened in England and widespread.	
Wild strawberry *Fragaria vesca*	• Near Threatened in England and widespread	

The moonwort *Botrychium lunaria*, yellow-horned poppy *Glaucium flavum*, a dandelion *Taraxacum naevosiforme*, Eyebright *Euphrasia sp*., and flea sedge *Carex pulicaris* were not able to be found during 2025 surveys which may be down to survey timing, ephemeral population/small population status and/or genuine decline following habitat loss and deterioration.

Assessment of Conservation Value

The notable plants on site range from **Local to High International Importance**.

Nature reserve

RSPB records of the nature reserve were reviewed for further notable species across the site covering areas outside of the NVC survey area; these are listed in the table below.

Table 2.5 RSPB records of notable plants on site

Species	Importance
Flowering plants	
Dark red helleborine *Epipactis atrorubens*	Nationally scarce
Bee orchid *Ophrys apifera*	Regionally important
Pillwort *Pilularia globulifera*	Near threatened, nationally scarce
Hound's-tongue *Cynoglossum officinale*	Near threatened
Common cudweed *Filago vulgaris*	Near threatened
Marsh helleborine *Epipactis palustris*	Regionally important
Hounds tongue *Cynoglossum officinale*	Near Threatened Regionally important plant communities. Present on reserve in1986

Species	Importance
Lesser thyme-leaved sandwort *Areanaria leptoclados*	Regionally important plant communities. Present on reserve in1986
Sea spleenwort *Asplenum marinum*	Regionally important plant communities. Present on reserve in1986
early marsh-orchid *Dactylorhiza incarnata*	Regionally important plant communities. Present on reserve in1986
Desmazeria marina	Regionally important plant communities. Present on reserve in1986
Ploughman's-spikenard *Inula conyza*	Regionally important plant communities. Present on reserve in1986
Wild lettuce *Lactuca virosa*	Regionally important plant communities. Present on reserve in1986
Fungi	
Violet Bramble Rust *Phragmidium violaceum*	Widespread and fairly common in Britain
Scarlet elf cup *Sarcoscypha austriaca*	Widespread but scarce
Yellow Brain *Tremella mesenterica*	Fairly common and widespread in Britain.
Waxcap species	Varied

Incidental findings

A range of internationally to regionally important floristic features were recorded along the BOAT along the sea wall (outside the detailed survey area), including irreplaceable, priority and Annex I coastal sand dune, priority and Annex I calcareous grassland, and a nationally significant population of seaside centaury alongside regionally significant populations of heath dog violet and variegated horsetail.

3.0 GENERAL BEST PRACTICE

Story Contracting Ltd have been instructed as the contractor. As per Story Contracting CEMP,[2] the following general best practice measures in relation to the protection of habitats and notable plants have been set out that the scheme will follow.

Both this NPMS and the Story Contracting CEMP are live documents and includes but is not limited to the measures detailed in these reports.

Some of the habitats and species on site are protected under international and national legislation (see Appendix C for protection legislation). See map in Appendix D which sets out some of the zones that are of importance or measures in place to protect these.

3.1 PRE-COMMENCEMENT

Site Walkover

Ahead of any works starting on site an ecological site walkover will be undertaken by a Suitably Qualified Ecologist (SQE) who possesses the plant identification skills required to identify notable plant species (for example 4 Field Identification Skills Certificate).

The SQE will provide an update to this NPMS on any ecological changes relevant to the approved planning permission within the three months ahead of arrival of the construction teams on site. They will make note of any invasive species within the development footprint or ZoI.

Invasive Species Removal

Invasive species previously recorded within the development footprint, including Montbretia *Crocosmia sp.,* Cotoneaster species (such as wall cotoneaster *Cotoneaster horizontalis*, small leaved cotoneaster *Cotoneaster microphyllus*), variegated yellow archangel *Lamium galeobdolon*, and sea buckthorn *Hippophae rhamnoides* will be removed by specialist contractors and disposed of in accordance with best practice guidance[9] before any works commence, to prevent accidental spread.

Ahead of the projected July/August 2026 start date, an SQE will undertake an updated site walkover to identify and map any invasive non-native species within the construction areas. A removal plan will then be prepared for any species found.

Where invasive non-native species occur outside but within 3m of the development a Work Exclusion Zone (WEZ) will be established using protective barriers (e.g. Heras fencing) and clear signage.

Throughout the works, contractors will follow biosecurity protocols and be asked to remain vigilant to invasive species. As the works will continue outside the optimal botanical survey season (April–September), some invasive non-native species, particularly non-woody species may not be identifiable during these times. To mitigate this risk:

- A toolbox talk will brief contractors on likely invasive non-native species, with photos and identifying features.
- Clearly marking and protecting areas containing notable plant species and invasive non-native species prior to the commencement of works.

- Contractors must remain vigilant and follow the correct reporting and containment protocols if any suspected invasive non-native species are encountered.
- Biosecurity protocols must be followed at all times through inspection of and cleaning plant, machinery, vehicles and tools and footwear.

Signage will display images and descriptions of invasive non-native species known or likely to be present.

Although Japanese knotweed *Reynoutria japonica* has not been recorded within the development footprint, it is present elsewhere on the nature reserve and must be treated as a high-risk species with a 10m WEZ. The former reserve manager also confirmed New Zealand *pigmyweed Crassula helmsii* in site ponds between 2018-2020, though no works are planned within these waterbodies.

Any imported soils, aggregates and construction materials must be responsibly sourced and certified free of invasive non-native species to prevent inadvertent introduction.

Protective Fences, Exclusion Barriers and Warning Signs

Appendix A sets out the notable habitats and plants that were identified during the National Vegetation Classification surveys in 2025 and in 2021 and 2022. Works will be limited to well used desire lines or where there is scrub habitat which were considered to have low floristic importance so habitats and the notable plant species they support are inherently protected through the designs. They will be protected during the works through signage or fencing.

Prior to commencement of development (inclusive of site clearance or de-vegetation works), temporary fencing will be erected around all nearby protected and retained features for that phase, including dune habitats and grasslands (hereafter referred to as Biodiversity Protection Zones (BPZ), to delineate exclusion areas for construction workers and machinery. Areas beyond which works are not to take place are to be clearly marked out. Please see Appendix D for BPZs.

Site Compound

The first stage of the works will be to establish the location of the site compound areas for the different phases of construction. The compounds will be located on existing roads, outside of BPZ and will be clearly signposted and fenced off. In compliance with industry standard practices for construction sites, the working area will be secure, and the general public will be separated from the works.

Zones for the stock piling of soil or storage of materials associated with the development will be clearly defined and located on existing areas of hardstanding. All materials such as loose materials, bricks, timber will be raised off the ground such as on pallets. Fuel, oil and other chemicals will be stored in appropriate containers that are impervious to the material being stored also stored on areas of existing hardstanding with bunding. Leaking and empty containers will be removed from the site immediately.

The site compound and piling zones will be agreed with the SQE in advance of arriving on site.

Ecological Clerk of Works

The Ecological Clerk of Works (ECoW) is responsible for ensuring that all construction activities comply with ecological legislation, planning conditions, and agreed mitigation measures, and for safeguarding protected species and habitats throughout the works.

- A SQE will act as the ECoW and oversee key phases of work with the highest ecological risk.
- The ECoW will undertake pre-works checks ahead of each phase of activities, checking for notable and invasive plant species and confirm BPZs. ECoW to make updates to CEcMP as required.
- The ECoW will determine which activities require their presence on site.
- Contractors must notify the ECoW in advance of planned works, machinery, and methods so an informed decision can be made.
- The ECoW will prepare a Precautionary Method of Works Statement (PMWS) for each new phase and provide it in sufficient time for the construction team to read and understand.
- When the ECoW is not required on site, an SQE will remain on call to respond to contractor questions.
- ECoW responsibilities relevant to each ecological receptor are detailed in the sections below.

Toolbox talk

Prior to commencement of construction on site, all personnel involved in the construction works will be briefed on ecological mitigation and relevant wildlife legislation. This will be delivered in the form of a toolbox talk provided to the site team by the ECoW. The toolbox talk will cover:

- A summary of the NVC survey findings and overview of the notable and invasive plant species identified on site, their distribution, ecological requirements, and conservation or legal status where relevant;
- Maps of the BPZ and buffer zones that will be kept throughout the construction. Contractors will be informed that no equipment will be stored and no activities are to be undertaken within the buffer zones and habitats;
- Details of the relevant legislation and responsibilities associated with the management of invasive non-native species and the protection of notable habitats/plant populations;
- The role of the ECoW and the contractors responsibilities;
- A description of the mitigation, avoidance and biosecurity measures required to prevent damage to retained notable plant populations and to avoid the spread of invasive species both within and beyond the site; and
- Identification guidance for notable and invasive plant species that may be encountered during the works, together with the procedures to be followed should previously unrecorded populations be discovered.

A record of this talk will be kept and all attendees will be asked to sign that they have understood the measures discussed.

Precautionary Method of Works Statement

Ahead of each phase of activities on site a Precautionary Method of Works Statement (PMWS) to outline the legislative considerations for habitats and species on site and within the surrounding area and detail how the works will be carried out to ensure compliance. This will be signed by the site operatives and remain on site for the duration of the construction works for the proposed visitor centre.

3.2 DURING THE WORKS

Roles and Responsibilities

Story Contracting Ltd have been instructed as the contractor. As per the Story Contracting CEMP[10], they will nominate an internal Biodiversity Champion. This person will be responsible for day-to-day implementation of this NPMS and shall liaise directly with the ECoW. They will commission and arrange for ECoW input and site attendance in advance, as required.

The Biodiversity Champion is responsible for ensuring subsequent toolbox talks are provided for any new site members and at the start of a new work phase.

Should management on the site change, the new personnel will be made aware of and action this NPMS.

4.0 MITIGATION

The works have been divided into sections below for ease of reference; however, these do not represent formal phases of the development. As discussed, works will generally be restricted to existing desire lines or areas of scrub habitat, which are considered to be of low floristic value. Notwithstanding this, the sections below identify the relevant areas of works and the associated species of interest (including, but not limited to those listed in Tables 2.2, 2.4 and 2.5) that contractors and the Ecological Clerk of Works (ECoW) will be required to be aware of and protect within the Zone of Influence (ZoI):

- Works associated with the proposed visitor centre and car park (species listed in Table 2.2);
- Works associated with the proposed drainage strategy (Irish dandelion);
- Works associated with the proposed bird hides (species listed in Tables 2.4 and 2.5);
- Works along the BOAT and path excluding the new sea wall (species listed in Tables 2.4 and 2.5);
- Works associated with Towsey Hole Windmill and the junction where the desire line from the windmill, the existing path, and the BOAT intersect (species listed in Tables 2.4 and 2.5);
- Works associated with the BOAT along the new sea wall (species listed in Tables 2.4 and 2.5, and incidental findings).

During all works, best practice construction methods, including the measures set out in Section 3, will be implemented site-wide. These measures are therefore not repeated within the individual work descriptions below.

Please note that the actions outlined in this document relate solely to notable plants and habitats. For measures concerning other ecological receptors, reference should be made to the CEcMP and AMMP.

4.1 WORKS ASSOCIATED WITH THE PROPOSED VISITOR CENTRE AND CAR PARK

Pre-works actions

Protection of Retained Habitats and Notable Plants

There will be approximately 1.5045 ha of scrub for retention and 0.6324 ha of retained Annex I and Priority grassland habitat. All retained habitats will be protected during the works through signage and fencing. See locations for fencing in Appendix D and locations of notable plants in Appendix A.

During works actions

As the ground will be kept bare throughout the works no additional actions are anticipated during the works. This will minimise the risk of notable plant species re-establishing within active working areas and reduce the potential for invasive non-native species to colonise disturbed ground.

4.2 WORKS TO FACILIATE DRAINAGE STRATEGY

Pre-works actions

Vegetation Translocation Method Statement and Notable Plant Mitigation Strategy

Irish dandelion, an internationally important plant species, is located along the scrub margins south of the access road to the proposed Visitor Centre and car park (see Appendix A) at the following grid references:

- SD 17575 78994 (1 plant);
- SD 1764 78981 (2 plants);
- SD 17658 78974 (1 plant);
- SD 17677 78975 (1 plant);
- SD 17728 78994 (1 plant); and
- SD 18152 78614 (1 plant).

A service trench must be installed where the first five grid references currently occur, alternative trenching to the north was explored but ruled out due to landownership constraints. As such a translocation method statement has been produced to mitigate impacts on the Irish dandelion colony.

The translocation receptor area will be the southern side of the access road which offers similar sunlight levels, likely soil conditions and orientation, improving translocation success. Throughout the steps below the Irish dandelion plants must be translocated under supervision of an ECoW.

- Timing:
  - Translocation should occur in the dormant season, ideally early autumn, avoiding periods of heavy rain or freezing temperatures to reduce compaction and plant damage.
- Receptor Site Preparation:
  - Identify the locations of the Irish dandelions from the locations detailed in the NVC surveys (you'll need to ref this report)
  - Clear scrub habitat on the same south side of the access road, immediately south of the existing Irish dandelions in an area outside of the area proposed for the service trench.
  - Prepare the receptor area by stripping 40 cm of topsoil and subsoil from the 1.5 m × 1.5 m quadrats marked adjacent to the existing specimens.
- Translocation Method:
  - As translocation is planned outside the flowering season, remove turfs with a 0.5 m buffer around each grid reference, resulting in 1.5 m × 1.5 m turves. Remove turf and soil to at least 40 cm depth using a turf stripper, preserving soil profile and minimising plant damage.
  - Translocated on the same day to avoid deterioration.
- Record a new 10-figure grid reference for each translocated turf for monitoring purposes.
- Remediation plans

- The LEMP includes the monitoring of the success of the Irish dandelion translocation. If in the event of failure of translocation. Seeds from retained Irish dandelions (for example at grid reference SD 18152 78614) will be collected between April and early June and the translocation area will be seeded with this.

During works actions

- Protective fencing and signage (see Appendix D) will be installed to safeguard the translocated areas with the Irish dandelion.

4.3 WORKS ASSOCIATED WITH THE NEW HIDES

Pre-works actions

Protection of surrounding habitats and notable plants

Works will be limited to well used desire lines or where there is dense scrub habitat which were deemed to have low floristic importance.

The best practice guidance set out in Chapter 3 above will be followed throughout including, protective fencing and signage around surrounding retained habitat for the duration of the works which no contractor will access will to prevent habitat degradation through trampling and the potential accidental spread of invasive species.

During works actions

As the ground will be kept bare throughout the works no additional actions are anticipated during the works. This will minimise the risk of notable plant species re-establishing within active working areas and reduce the potential for invasive non-native species to colonise disturbed ground.

4.4 WORKS ALONG THE BOAT AND PATH

Up to but not including the new sea wall

Pre-works actions

Protection of surrounding habitats and notable plants

Works will be limited to well-used desire lines or areas currently supporting scrub habitat. All surrounding retained habitats such grassland and sand dunes will be protected during the works through signage or fencing.

The best practice guidance set out in Chapter 3 above will be followed throughout including, protective fencing and signage around surrounding retained habitat for the duration of the works which no contractor will access will to prevent habitat degradation through trampling and the potential accidental spread of invasive species.

During works actions

As the works will be taking place on the existing path and BOAT no additional actions are anticipated during the works.

The BOAT and path junction

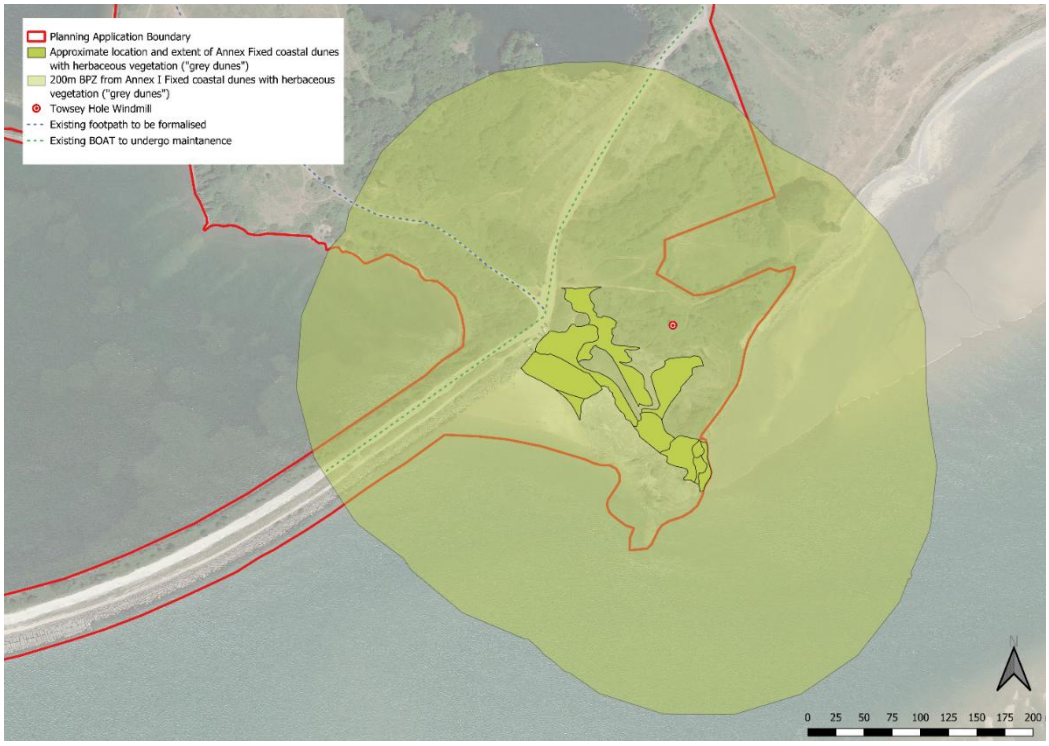
Pre-works actions

Protection of surrounding habitats and notable plants

Along the BOAT and adjacent vegetated areas, there is Annex I habitat: Fixed coastal dunes with herbaceous vegetation (grey dunes), supporting a number of high-conservation plant species (see Figure 3.4).

- Site compounds will be placed outside the BZP specific to the Annex I habitat: Fixed coastal dunes with herbaceous vegetation (grey dunes) in Figure 3.4
- No works are planned within the Annex I habitat: Fixed coastal dunes with herbaceous vegetation (grey dunes)
- Protective barriers and signage will be installed ahead of works to prevent habitat degradation (see Appendix D for locations).

Figure 4.1 200m Biodiversity Protection Zone from Annex I Fixed coastal dunes with herbaceous vegetation ("grey dunes") habitat



During works actions

As the works will be taking place on existing heavily used desire lines deemed to have low floristic importance no additional actions are anticipated during the works.

The BOAT along the new sea wall

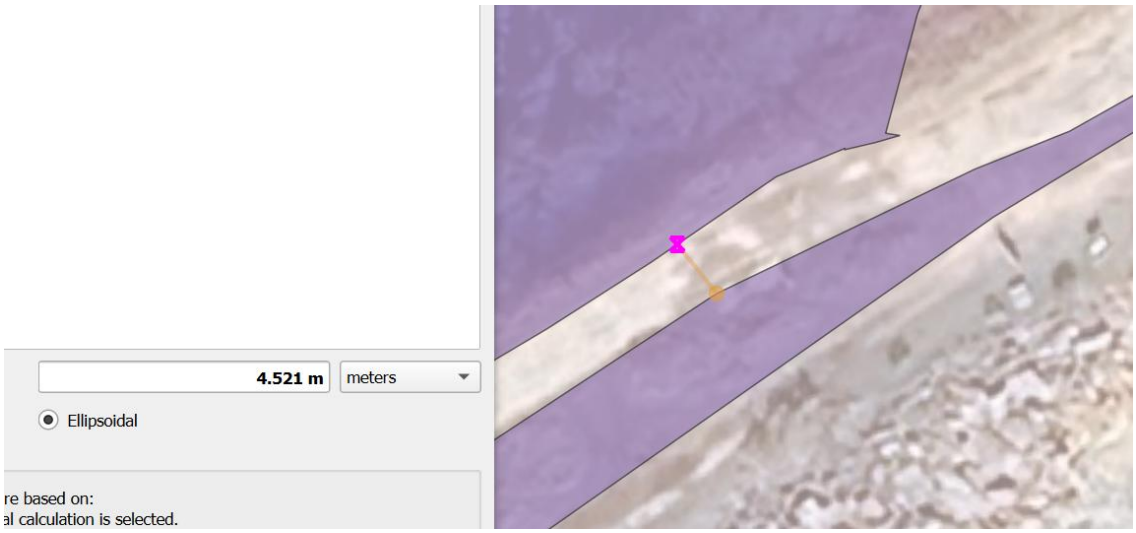
Protection of habitats and notable plants

- Protective fencing and signage (see Appendix D) will be installed to safeguard Annex I habitat, and notable plant species within the habitat, along the BOAT.

- Compound location to be agreed with the SQE; a suitable option is the northern end of the BOAT near the caravan park.
- The BOAT is wide enough to allow 3.9 m of surface to be scarified for pothole infilling and surface restoration without removing surrounding vegetation.

Plate 4.1 The BOAT along the sea wall. The darker areas show vegetated habitats of importance which will be protected during the works.

Figure 4.2 Distance between vegetated habitats along the BOAT at the closest points as measured on QGIS



During Works actions

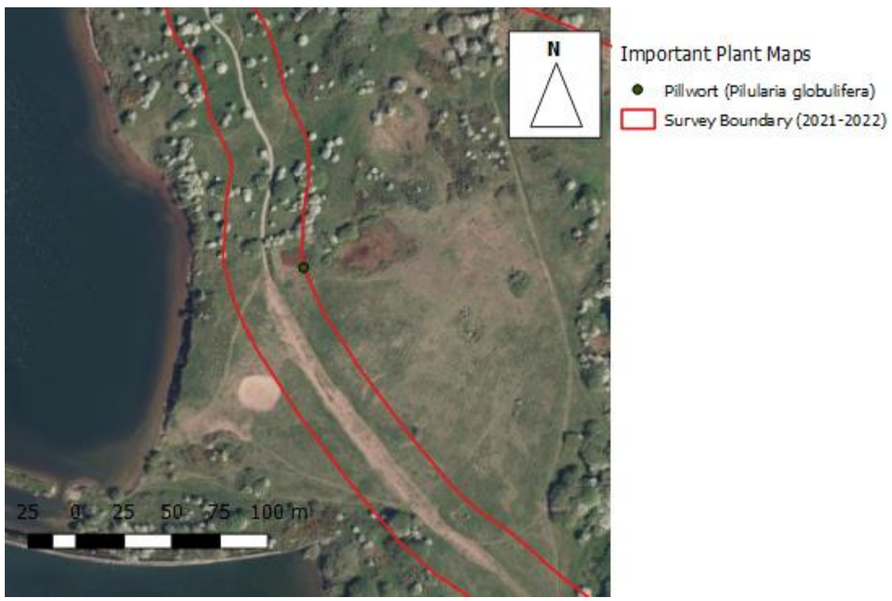
As the works will be taking place on the BOAT no additional actions are anticipated during the works.

APPENDIX A NATIONAL VEGETATION CLASSIFICATION SURVEY RESULTS

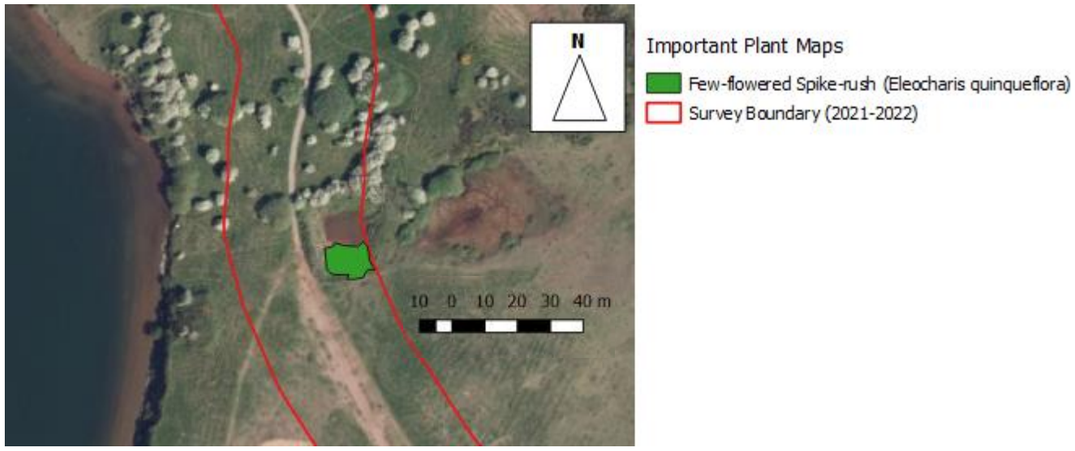
Appendix VI: Important Plant Distribution Maps

Irish Dandelion (*Taraxacum aesculosum*)

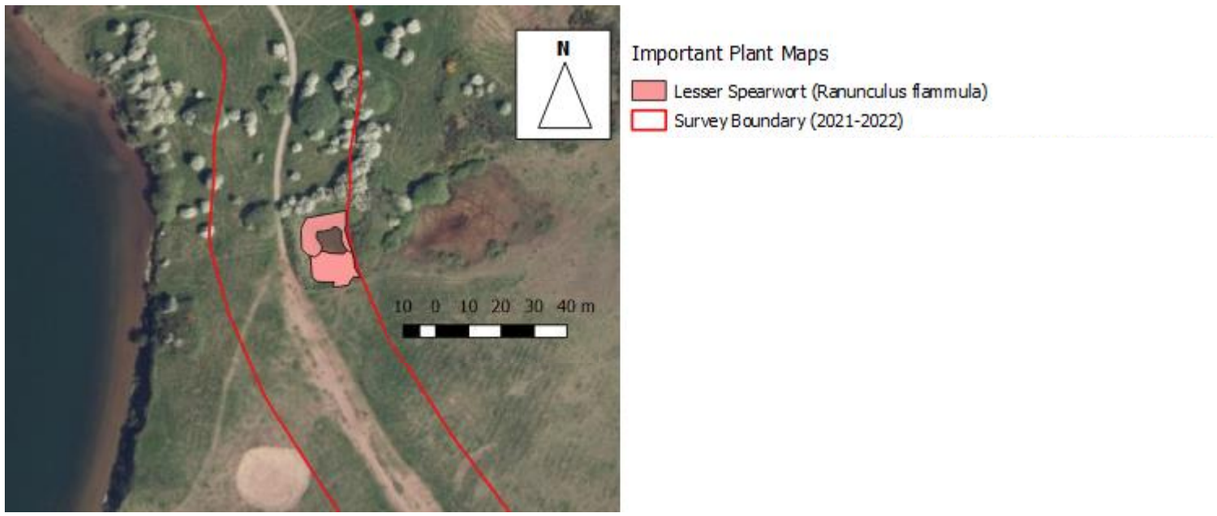
Pillwort (*Pilularia globulifera*)



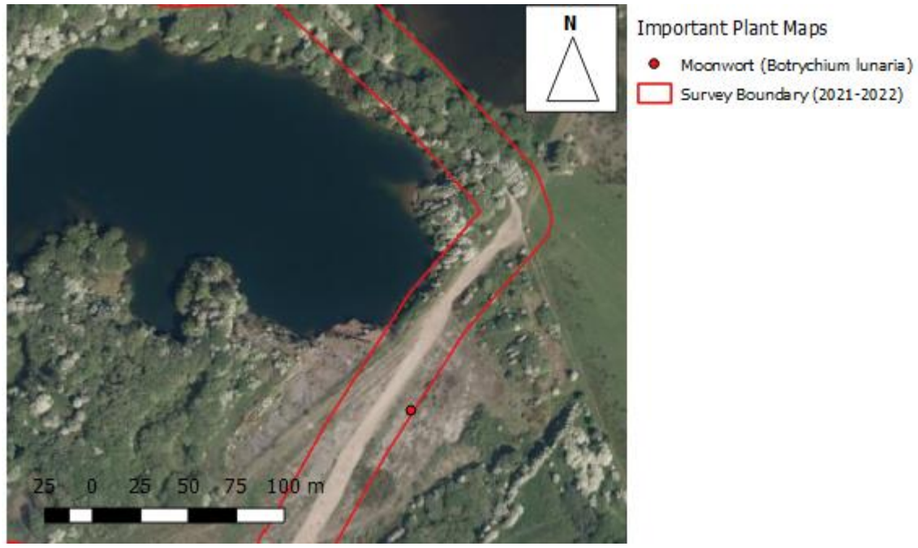
Few-flowered Spike-rush (*Eleocharis quinqueflora*)



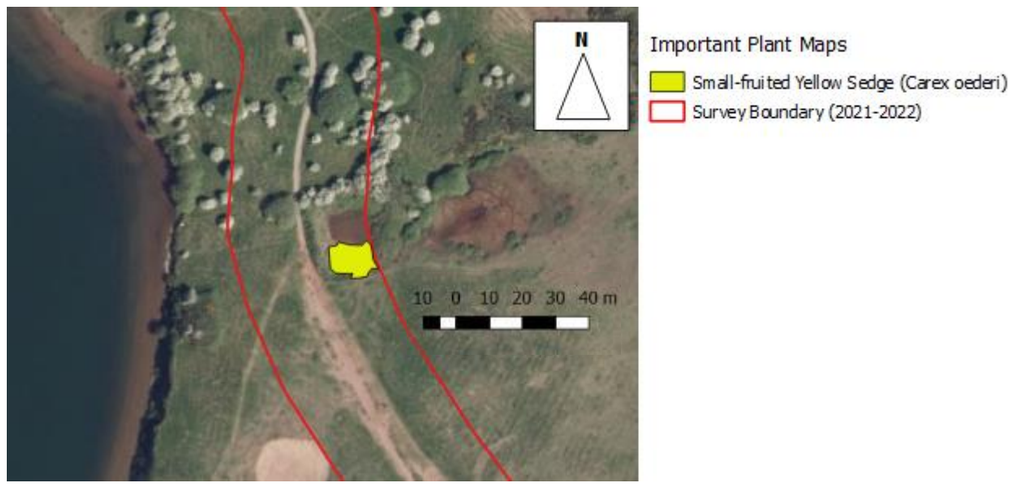
Lesser Spearwort (*Ranunculus flammula*)



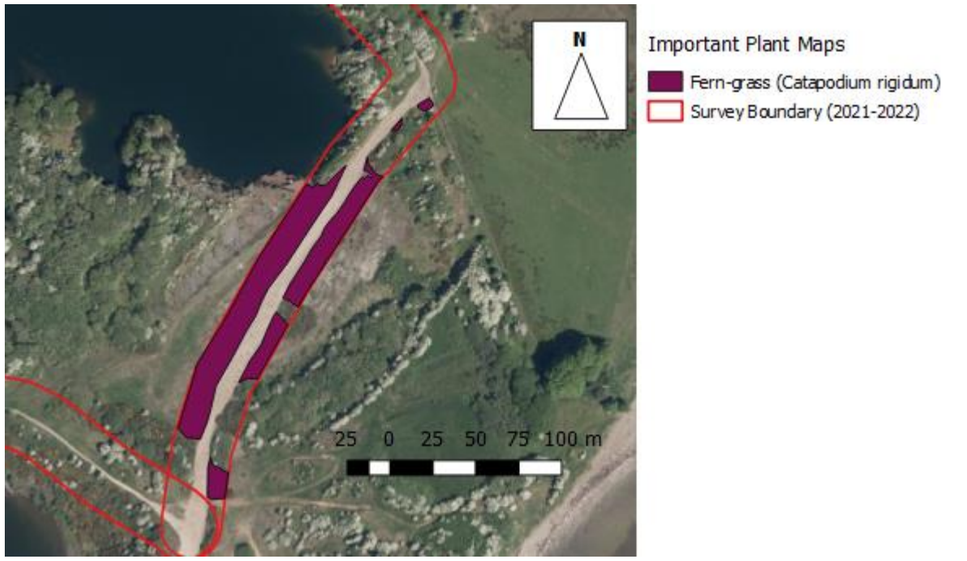
Moonwort (*Botrychium lunaria*)

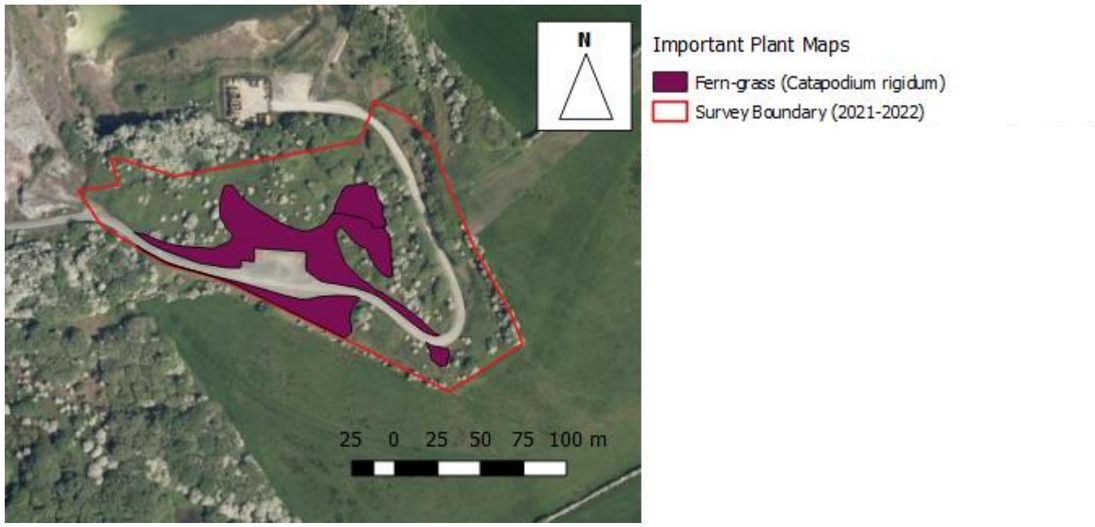


Small-fruited Yellow-sedge (*Carex oederi*)



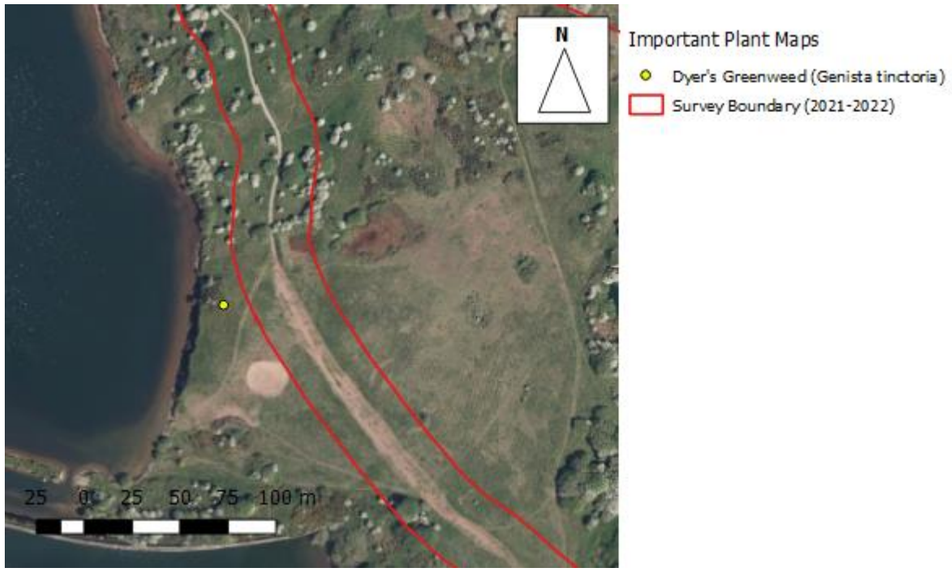
Fern-grass (*Catapodium rigidum*)



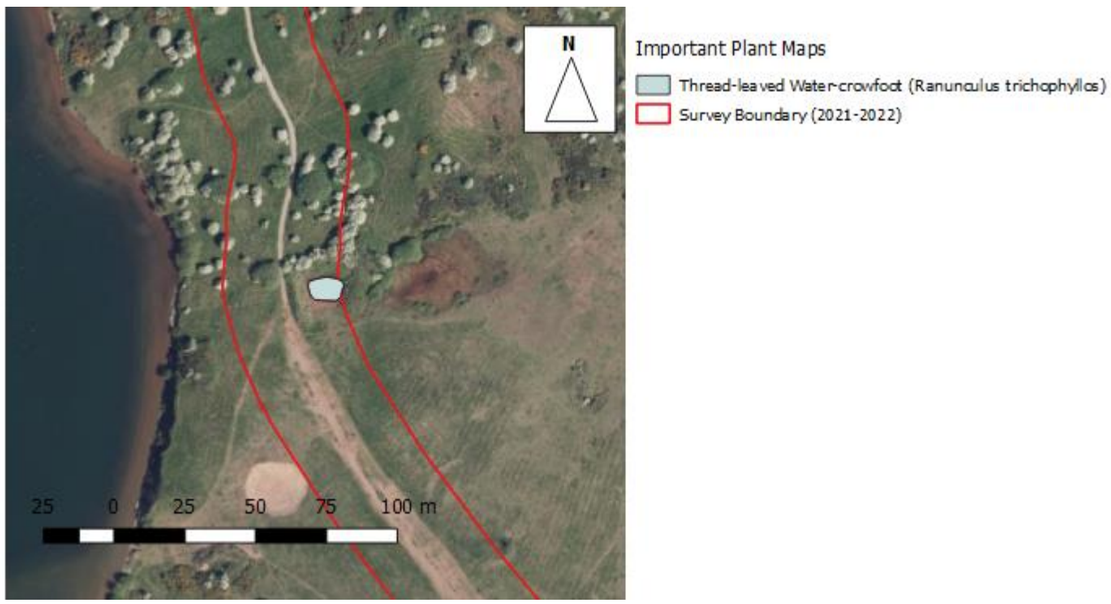


Slender Spike-rush (*Eleocharis uniglumis*)

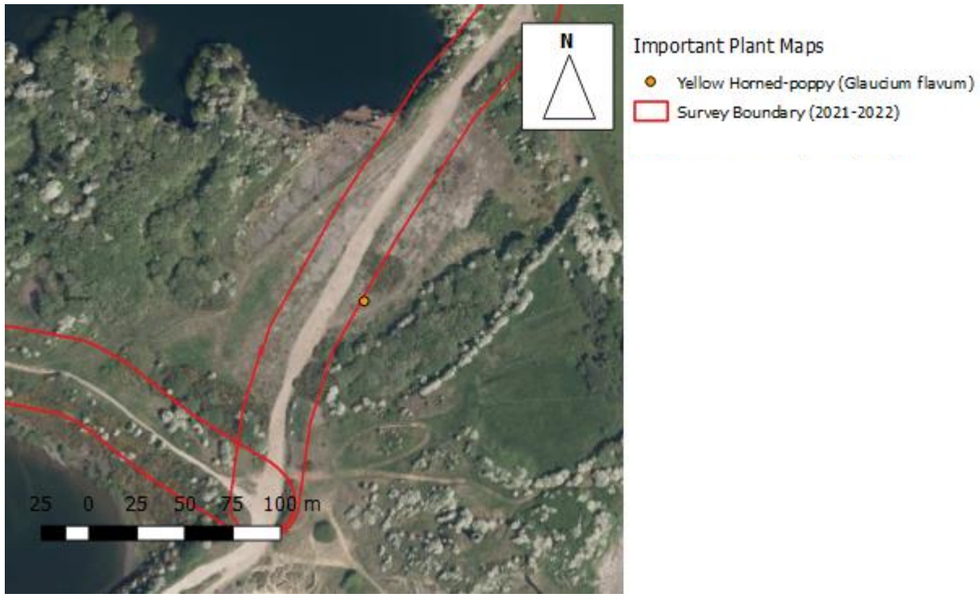
Dyer's Greenweed (*Genista tinctoria*)



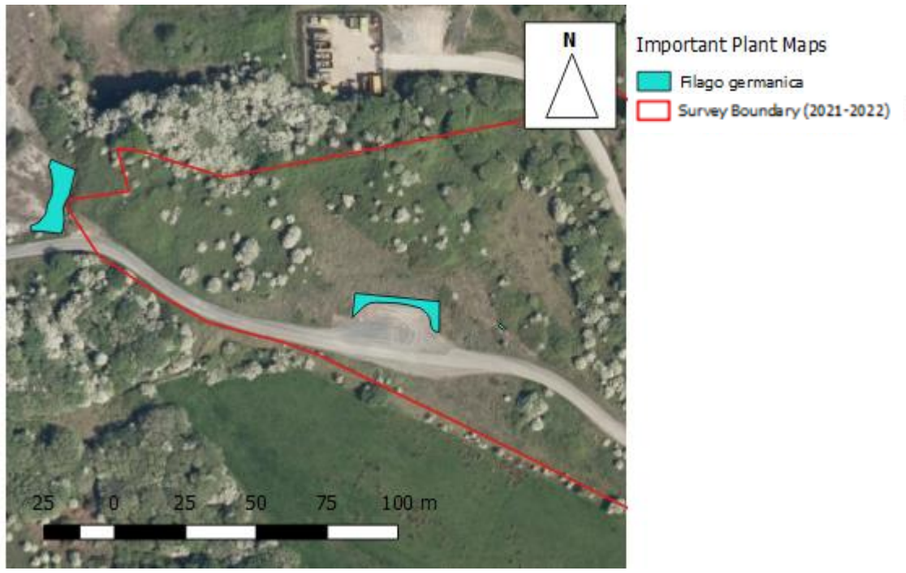
Thread-leaved Water-crowfoot (*Ranunculus trichophyllos*)



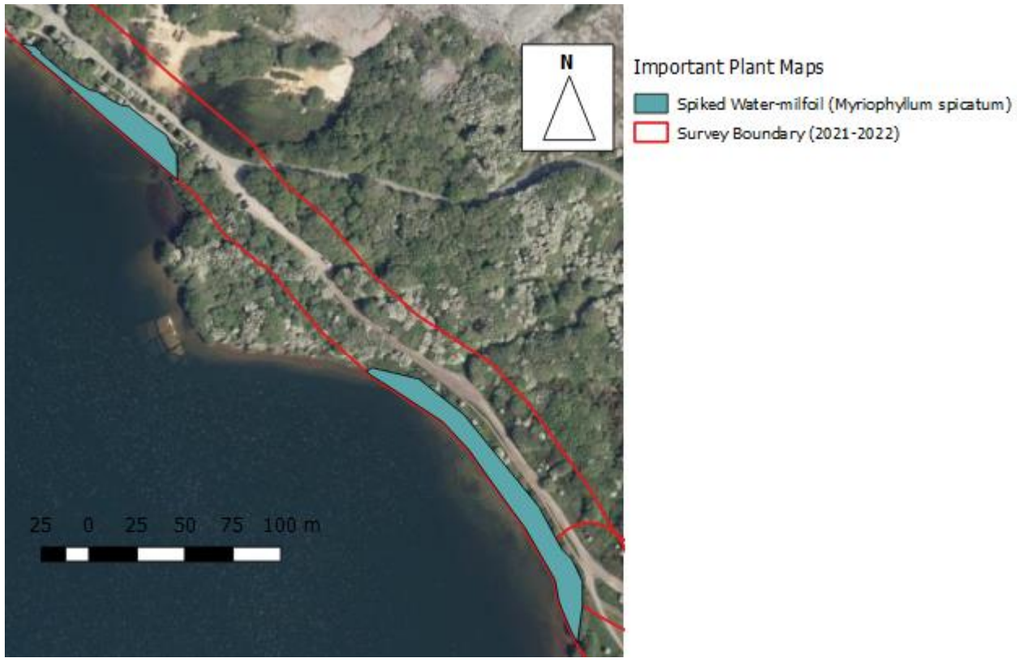
Yellow Horned-poppy (*Glaucium flavum*)



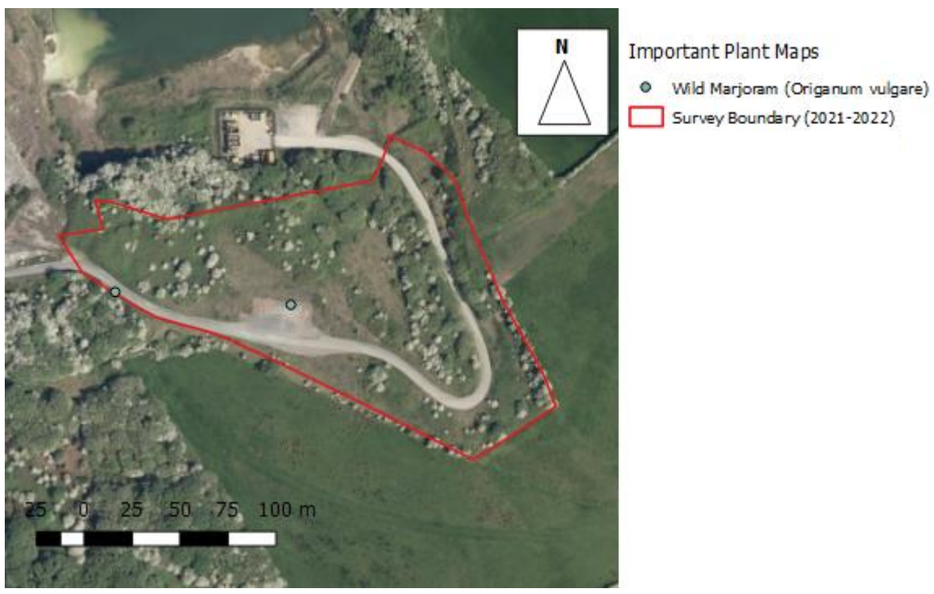
Common Cudweed (*Filago germanica*)



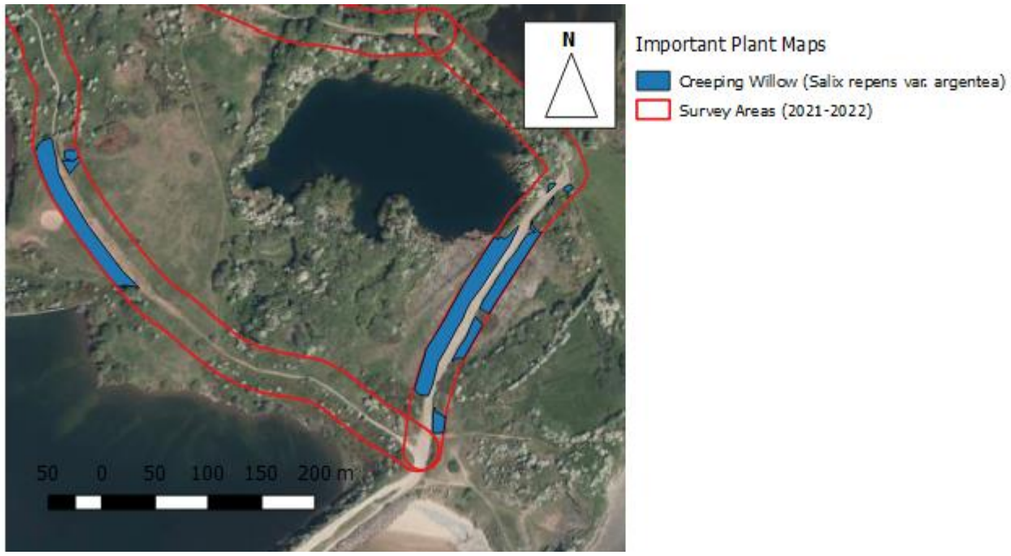
Spiked Water-milfoil (*Myriophyllum spicatum*)



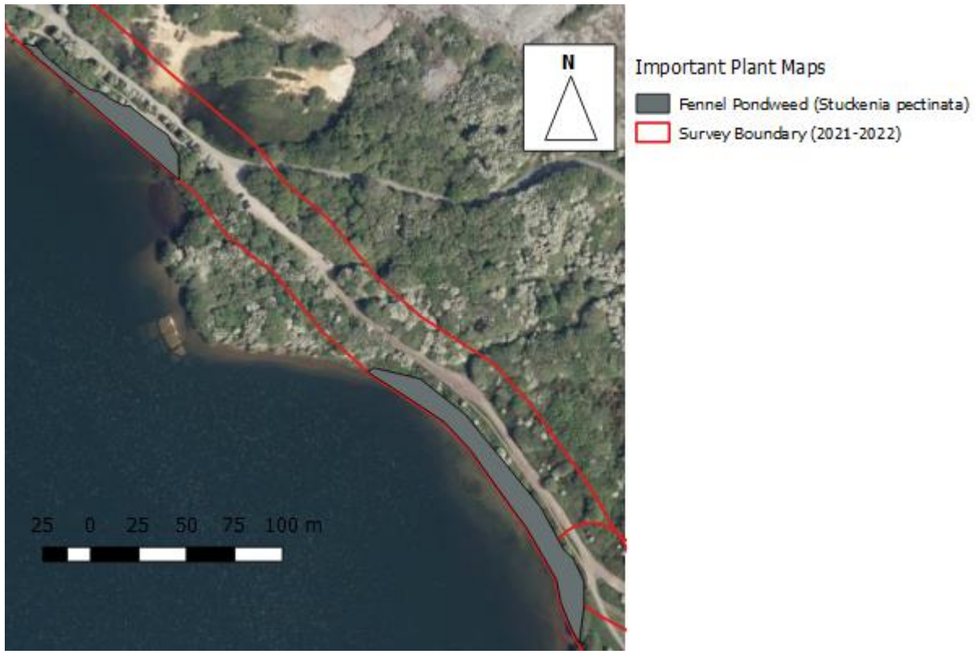
Wild Marjoram (*Origanum vulgare*)



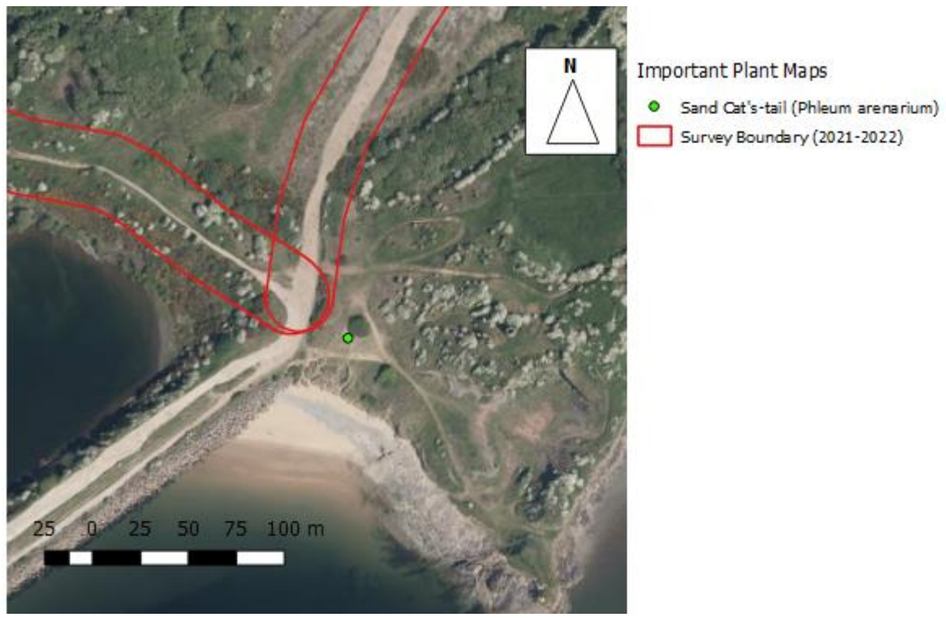
Creeping Willow (*Salix repens* var. *argentea*)



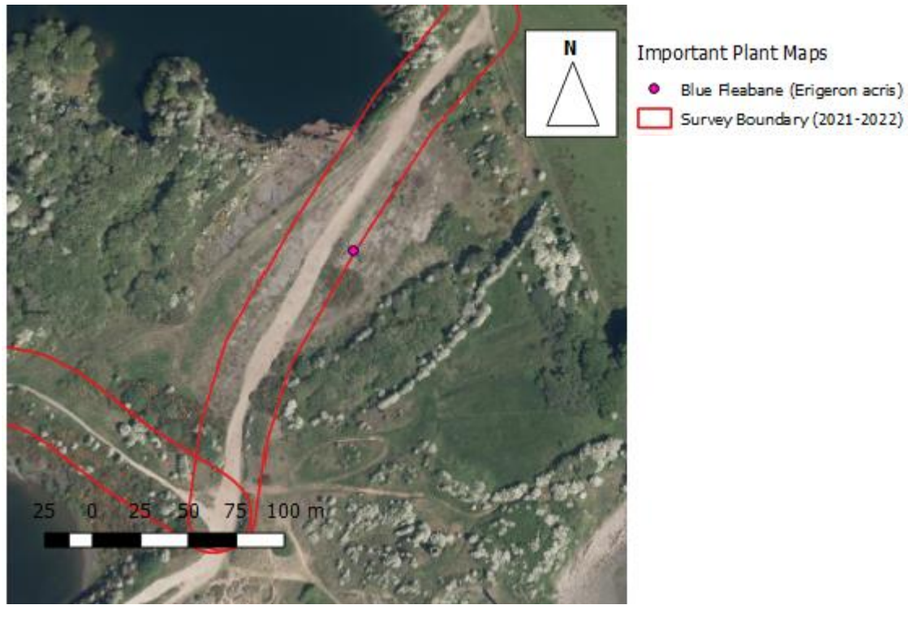
Fennel Pondweed (*Stuckenia pectinata*)



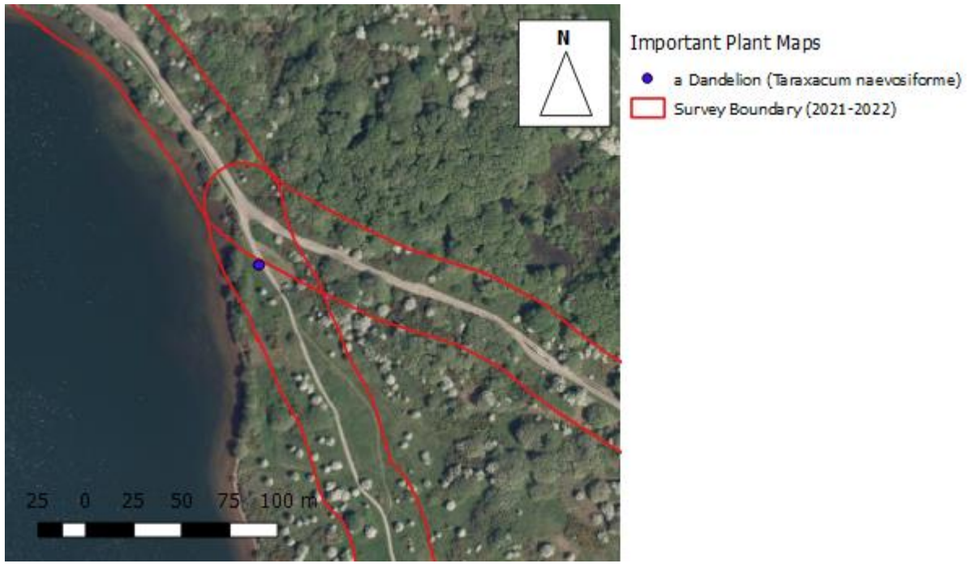
Sand Cat's-tail (*Phleum arenarium*)



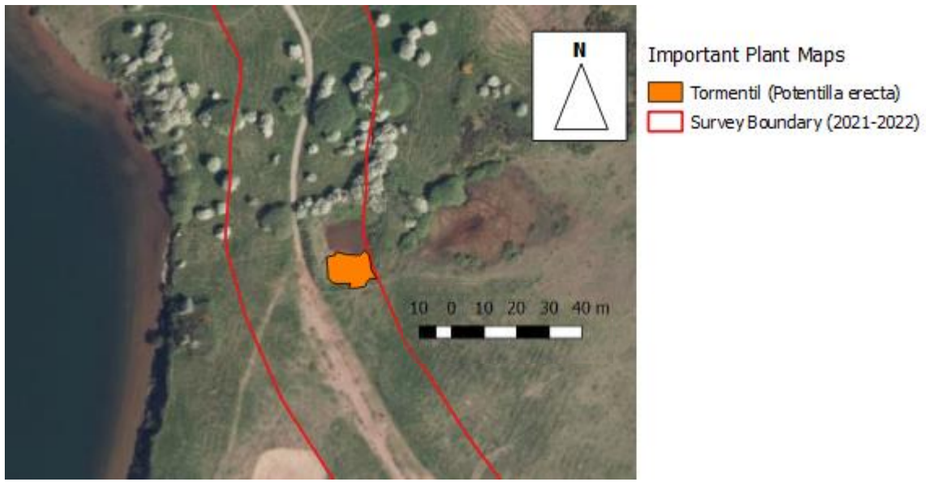
Blue Fleabane (*Erigeron acris*)



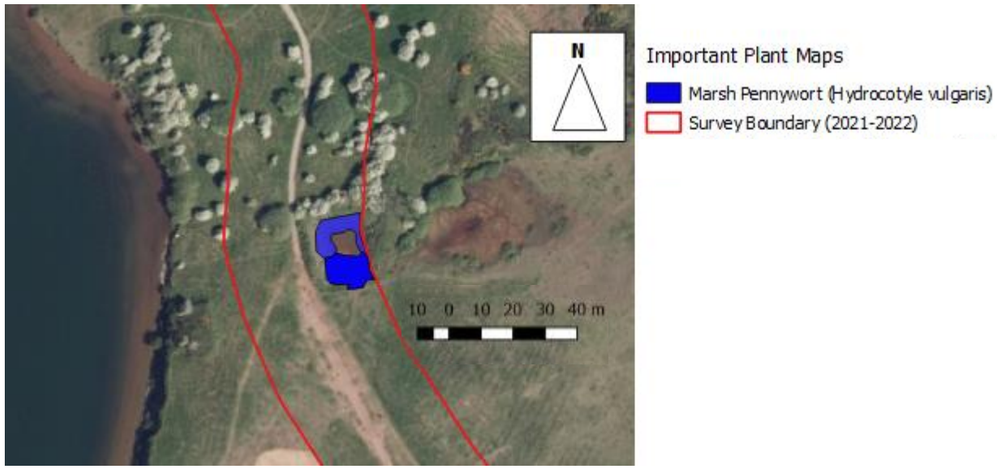
a Dandelion (*Taraxacum naevosiforme*)



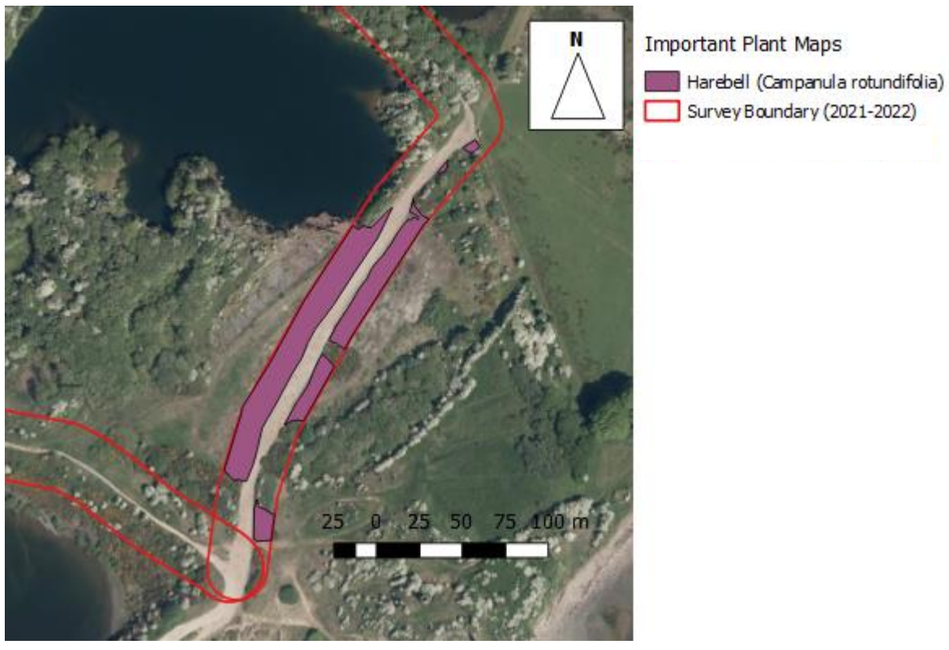
Tormentil (*Potentilla erecta*)



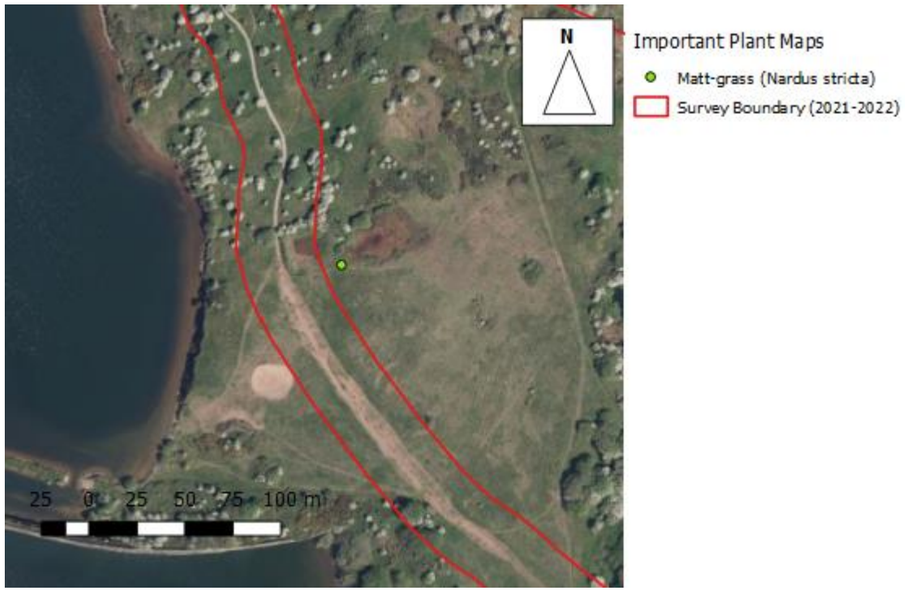
Marsh Pennywort (*Hydrocotyle vulgaris*)



Harebell (*Campanula rotundifolia*)

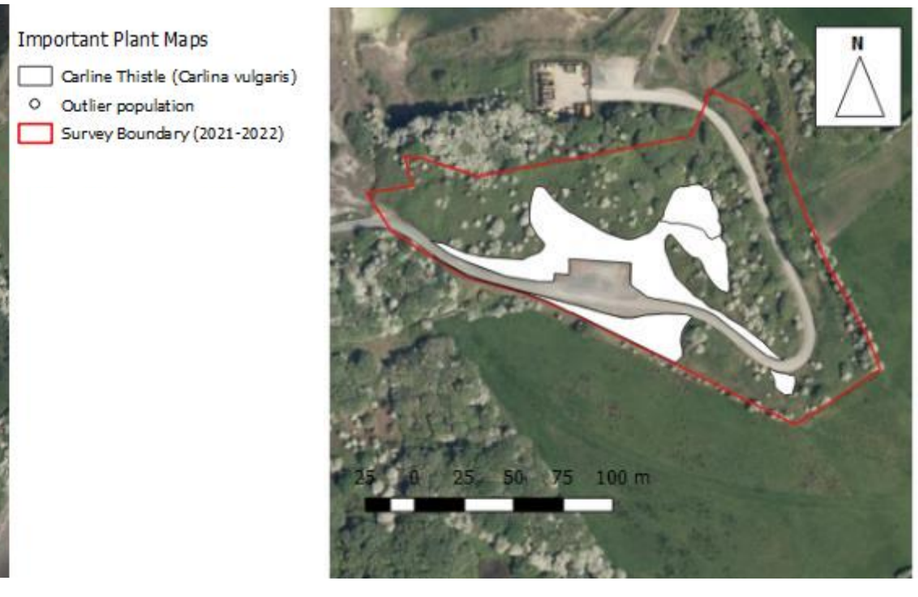


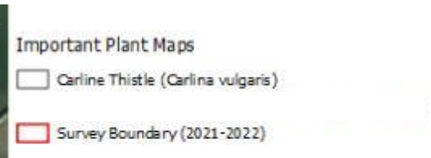
Matt-grass (*Nardus stricta*)



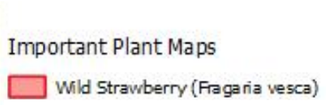
Flea Sedge (*Carex pulicaris*)

Carline Thistle (*Carlina vulgaris*)





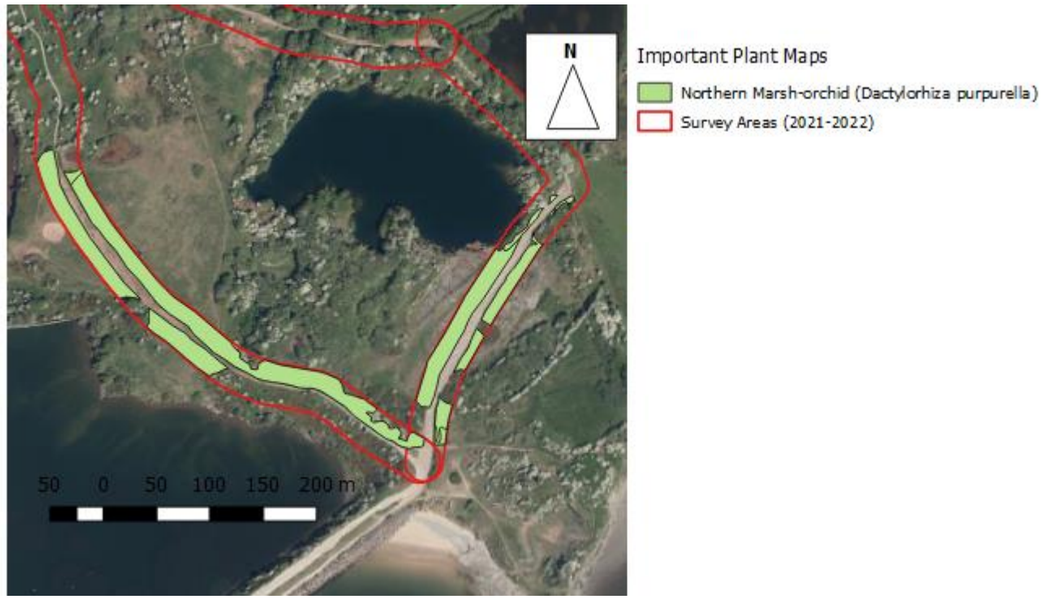
Wild Strawberry (*Fragaria vesca*)



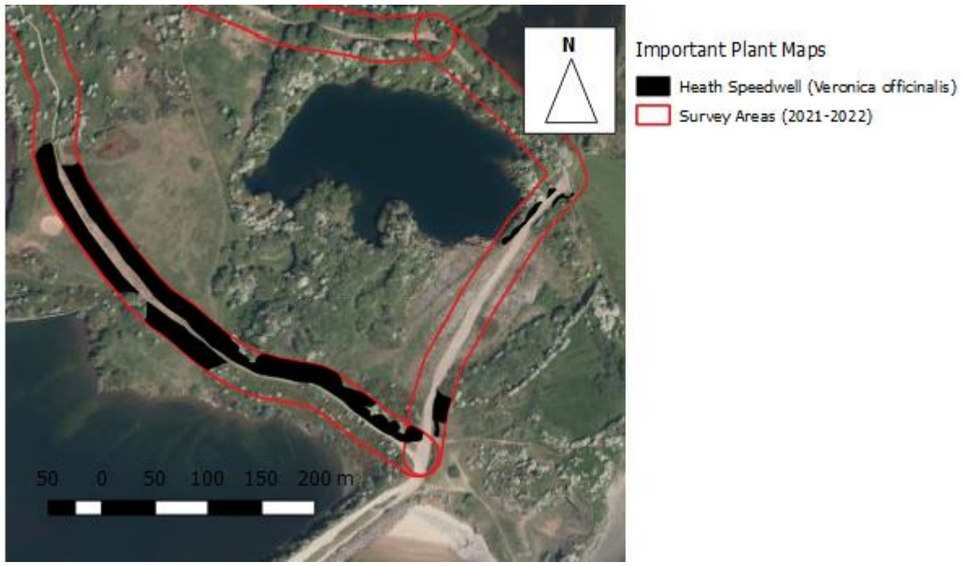
Eyebright (*Euphrasia* sp.)

Quaking-grass (*Briza media*)

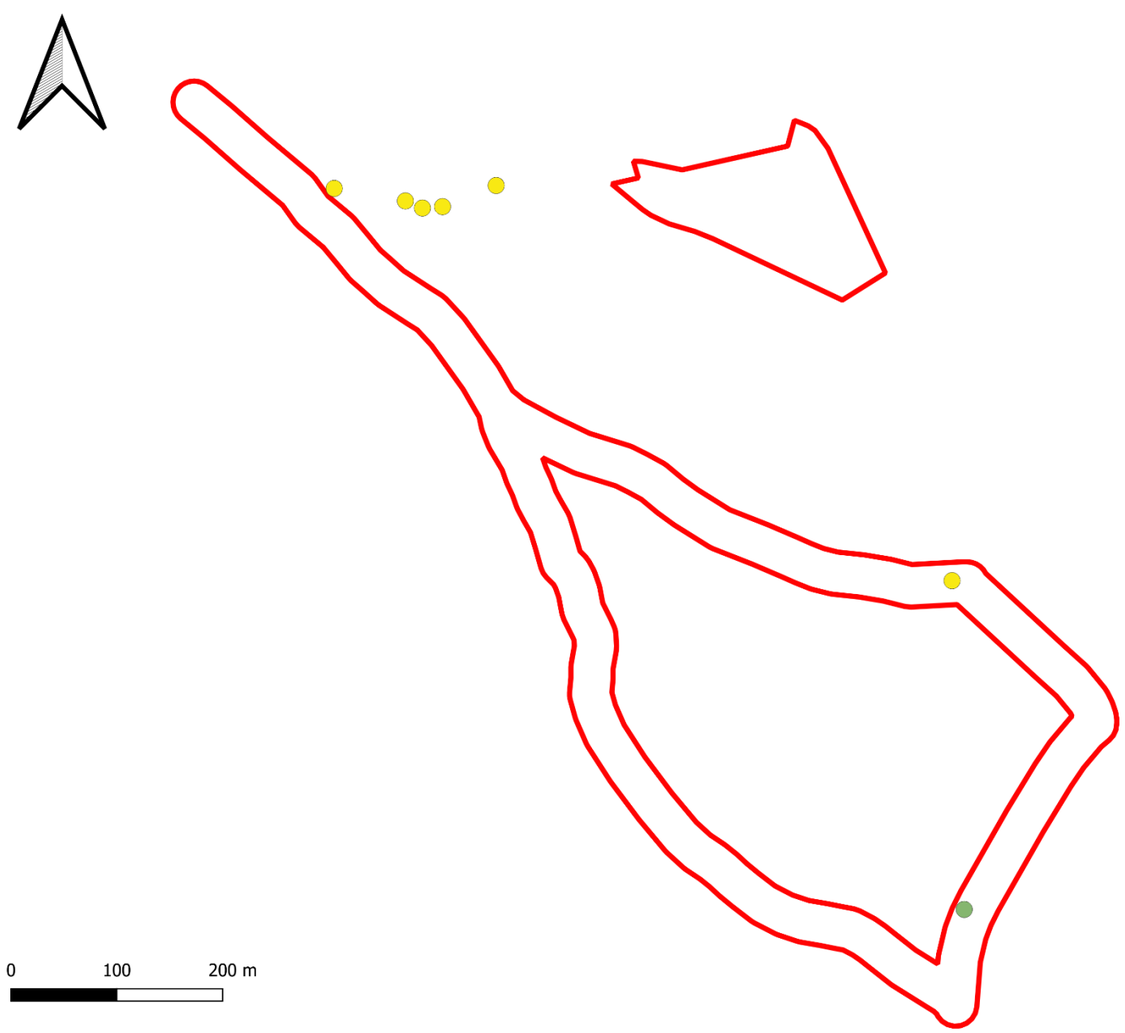
Northern Marsh-orchid (*Dactylorhiza purpurella*)



Heath Speedwell (*Veronica officinalis*)



Appendix III: Updated important plant map



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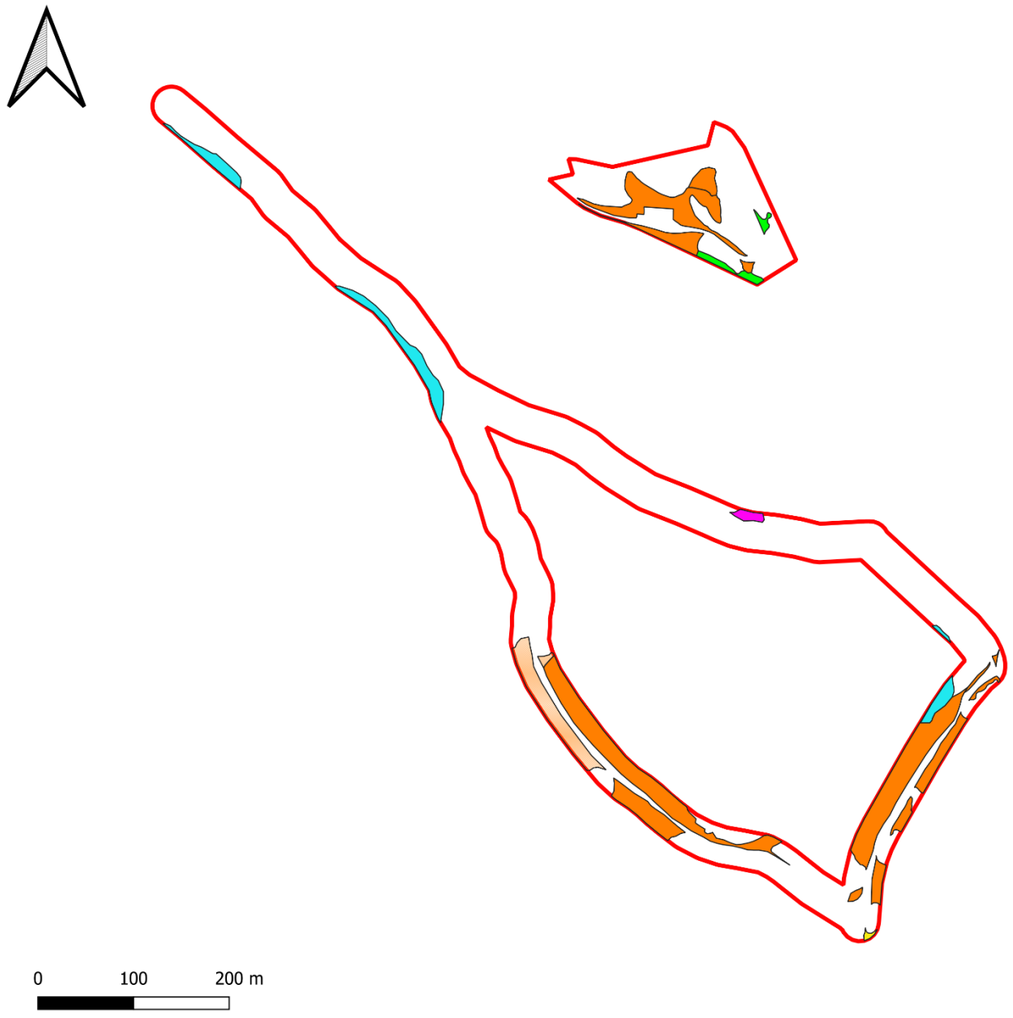
Appendix IV: Priority habitats plan



RSPB Hodbarrow: priority habitats plan

Legend

- Lowland meadows
- Lowland meadows + lowland calcareous grassland
- Lowland calcareous grassland
- Purple moor grass and rush pastures
- Coastal sand dunes
- Eutrophic standing water
- Survey boundary

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APPENDIX B PLANNING APPLICATION BOUNDARY AND DEVELOPMENT FOOTPRINT

IRON LINE

Planning Application Boundary

Title: Figure B

Sources: Google Satellite

Greengage

1:7,000

0 100 200 300 400 500 m

APPENDIX C RELEVANT LEGISLATION

The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

The Conservation of Habitats & Species Regulations replace The Conservation (Natural Habitats, etc.) Regulations 1994 (as amended)[11], and transpose Council Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Fauna and Flora ('EU Habitats Directive')[12], and Council Directive 79/409/EEC on the Conservation of Wild Birds ('Birds Directive')[13] into UK law (in conjunction with the Wildlife and Countryside Act).

Regulation 43 and 47 respectively of the Conservation of Habitats & Species Regulations makes it an offence (subject to exceptions) to deliberately capture, kill, disturb, or trade in the animals listed in Schedule 2 (European protected species of animals), or pick, collect, cut, uproot, destroy, or trade in the plants listed in Schedule 5 (European protected species of plant). Development that would contravene the protection afforded to European protected species requires a derogation (in the form of a licence) from the provisions of the Habitats Directive.

Regulation 63 (1) states: 'A competent authority, before deciding to undertake, or give any consent, permission or other authorisation for, a plan or project which —

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

(b) is not directly connected with or necessary to the management of that site;

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

Wildlife and Countryside Act 1981 (as amended)

The Wildlife and Countryside Act 1981 (as amended) is the principal mechanism for the legislative protection of wildlife in Great Britain. This legislation is the means by which the Convention on the Conservation of European Wildlife and Natural Habitats[14] (the 'Bern Convention') and the Birds Directive and EU Habitats Directive are implemented in Great Britain.

The Natural Environment and Rural Communities Act 2006

The Natural Environment and Rural Communities Act 2006 states that every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity. Biodiversity Action Plans provide a framework for prioritising conservation actions for biodiversity.

Section 41 of the Natural Environment and Rural Communities Act requires the Secretary of State to publish a list of species of flora and fauna and habitats considered to be of principal importance for the purpose of conserving biodiversity. The list, a result of the most comprehensive analysis ever undertaken in the UK, currently contains 1,149 species, including for example, hedgehog (Erinaceus europaeus), and 65 habitats that were listed as priorities for conservation action under the now defunct UK Biodiversity Action Plan[15] (UK BAP). Despite the devolution of the UK BAP and succession of the UK Post-2010 Biodiversity Framework[16] (and Biodiversity 2020 strategy[17] in England), as a response to the Convention on Biological Diversity's (CBD's) Strategic Plan for Biodiversity 2011-2020[18] and EU Biodiversity Strategy (EUBS)[19], this list (now referred to as the list

of Species and Habitats of Principal Importance in England) will be used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under section 41 of the Natural Environment and Rural Communities Act 2006 'to have regard' to the conservation of biodiversity in England, when carrying out their normal functions.

APPENDIX D BIODIVERSITY PROTECTION ZONES

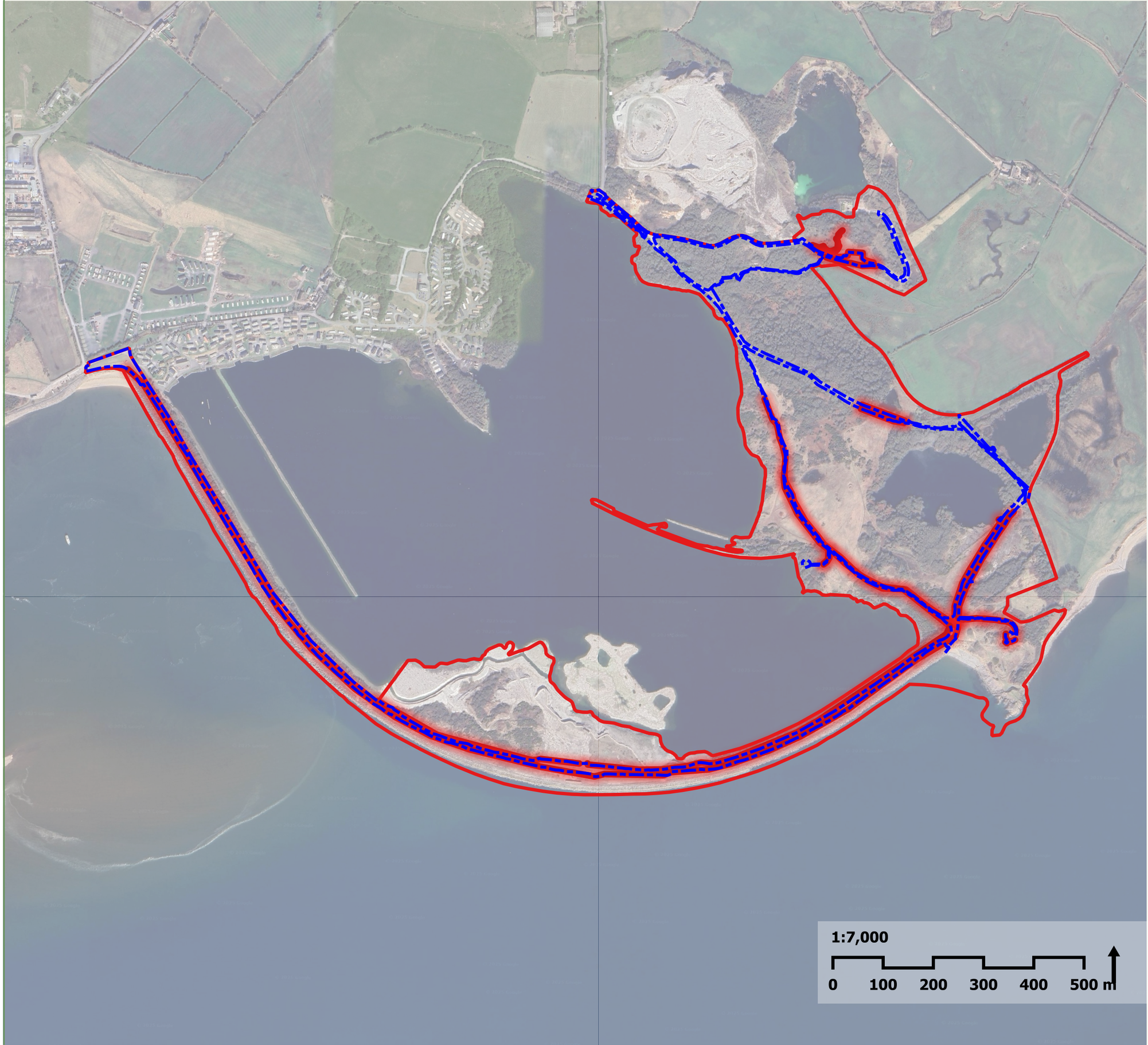
IRON LINE

Planning Application Boundary

Approximate development footprint boundary

Biodiversity Protection Zones (BPZ) Fencing/Signage

Works within these areas must be confined to the development footprint. Exact locations to be agreed with ECoW on-site when setting up the BPZ fencing.



Title: Figure D

Sources: Google Satellite

Greengage

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[1] *Styles Ecology (2021) Phase 2 Habitat Survey (NVC) Report RSPB Hodbarrow, Millom, Cumbria*
[2] *Story Contracting Ltd (2025) Construction Environmental Management Plan (CEMP) ref: SCL-CEMP-Millom-Ironline*
[3] *Greengage Environmental Ltd (2026) Construction Ecological Management Plan (Ref: 551959lt13May26FV05_CEcMP)*
[4] *Greengage Environmental Ltd (2026) Amphibian Mitigation and Management Plan (Ref: 551959lt13May6FV06_AmphibianPlan)*
[5] *Greengage Environmental Ltd (2023) Phase 2 survey (ref: 551959ltJun23FV02_Phase2Surveys)*
[6] *Greengage Environmental Ltd (2025) Phase 2 survey Addendum (ref: 553023lt05Dec25FV03_Phase2Surveys)*
[7] *Greengage (2023) Phase II Survey Report. Ref. 551959ltJun23FV02_Phase2Surveys, dated May 2023.*
[8] *Greengage Environmental Ltd (2025) Phase 2 survey Addendum (ref: 553023lt05Dec25FV03_Phase2Surveys)*
[9] *Defra (2022) https://www.gov.uk/guidance/prevent-the-spread-of-harmful-invasive-and-non-native-plants*
[10] *Story Contracting Ltd (2025) Construction Environmental Management Plan (CEMP) ref: SCL-CEMP-Millom-Ironline*

[11] *HM Government, (1994); The Conservation (Natural Habitats, &c.) Regulations. HMSO*
[12] *CEC (Council of the European Communities), (1992); Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora*
[13] *The European Parliament And Of The Council, (30 November 2009); Directive 2009/147/EC On The Conservation Of Wild Birds (Codified Version)*
[14] *CEC (Council of the European Communities), (1979); Convention on the Conservation of European Wildlife and Natural Habitats (Bern, 19.IX.1979). EC*
[15] *UK Biodiversity Action Plan (2007). UKBAP Priority Species and Habitats. http://www.ukbap.org.uk/newprioritylist.aspx*
[16] *JNCC and Defra (on behalf of the Four Countries' Biodiversity Group) (2012). UK Post-2010 Biodiversity Framework. July 2012. Available from: http://jncc.defra.gov.uk/page-6189*
[17] *Defra (2011). Biodiversity 2020: A strategy for England's wildlife and ecosystem services*
[18] *Convention on Biological Diversity (CBD) (2010). Decision X/2 Strategic Plan for Biodiversity 2011-2020, including Aichi Biodiversity Targets. Available at https://www.cbd.int/decision/cop/?id=12268*
[19] *European Commission (2012). Our life insurance, our natural capital: an EU biodiversity strategy to 2020 European Parliament resolution of 20 April 2012 on our life insurance, our natural capital: an EU biodiversity strategy to 2020 (2011/2307(INI))*