

## **Hunterston Construction Yard BNG Feasibility Assessment**



**May 2024**

# CONTROL SHEET

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## EXECUTIVE SUMMARY

EnviroCentre Limited was commissioned by Peel Ports to conduct a Biodiversity Net Gain (BNG) Feasibility Assessment of the former dry docks area located at the site known as Hunterston Construction Yard.

The site covers an area of approximately 41ha and comprises large areas of sea buckthorn scrub and derelict or vacant land, on the site of old dry docks and disused operational ground. Open mosaic habitat and grassland patches are also found throughout the site.

The BNG feasibility assessment of the habitats present within the site boundary displays a baseline totalling 80.94 habitat area units.

All the habitat on site, with the exception of a small beach and existing areas of developed land, are to be removed. As a result, a 100% loss of habitat units is expected on site.

Off-site habitat creation and enhancement can provide opportunities to offset the loss of the biodiversity on site. Recommendations include the enhancement and expansion of approximately 12ha of lowland mixed deciduous woodland to the north and south of Peel Ports, the enhancement of approximately 11 ha of mixed woodland located east of Peel Ports and the creation of 2ha of neutral grassland, 0.67ha of mixed scrub and a minimum of 50 individual trees within a plot of land located south of the lagoon within Peel Ports ownership boundary. Enhancements to a local network of small streams and watercourses and replacement of a further 1.64 ha of bramble scrub with mixed scrub are also recommended.

The above habitat creation/enhancements are expected to lead to approximately 4% **net gains** in habitat area units and 70% **net gains** in river habitat units. By following management suggestions and recommendations for further enhancements (outside of the metric), it may be possible to further compensate for the loss of biodiversity on-site.

Further enhancement recommendations and design suggestions include but are not limited to:

- A Biodiversity and Enhancement Management Plan (BEMP) to cover the outlined habitat creation and enhancements (including monitoring) over the course of 30 years.
- Avoiding the removal of overgrown vegetation and pioneer plant species in areas of disused developed land within Peel Ports to allow for new areas of OMHPDL.
- Grass-cutting regimes to be followed in areas of grassland to improve species-richness.
- Continued management of the lagoon and Southannan Sands SSSI, where LBAP priority habitats are found.
- The installation of bird and waterfowl nesting boxes within the woodland and lagoon to the north.
- Provision of hedgehog nests to be installed near bordering woodland habitats.
- The installation of log piles and woodcrete bug hotels to provide suitable shelter for invertebrates.
- Pollinator seed mixes suitable for SBL species of importance should be prioritised.
- Non-native species (including sea buckthorn) planting should be avoided.

Further BNG assessment would be required where landscape plans are revised or temporary habitat loss as a result of vehicle holding area and construction compound is required for more than two years.

Based on the combination of net gains from habitat and river units and by implementing further design and management recommendations the proposed landscaping development is likely to lead to localised biodiversity enhancements and, therefore, meet the criteria of Policy 3, NPF4.

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# 1 INTRODUCTION

## 1.1 Terms of Reference

EnviroCentre Limited was commissioned by Peel Ports to conduct a Biodiversity Net Gain (BNG) Feasibility Assessment of the former dry docks area located at the site known as Hunterston Construction Yard. It should be noted that the assessment covers terrestrial habitat losses and gains only. Whilst the proposed project may impact on sub-tidal habitats, these are not included in the metric and will need considered separately.

The 'site' is defined as the red line boundary as shown on the Site Location Plan in Appendix A.

The results and recommendations in this document relate to the site boundary as provided by the client at the time of the survey.

## 1.2 Scope of Report

The aim of the BNG Feasibility Report is to assess the baseline habitats on site and evaluate the proposed landscape change to conclude whether a net gain in biodiversity can be achieved. The objectives were as follows:

- Review habitat data collected to inform the Preliminary Ecological Appraisal (PEA) Report<sup>1</sup>;
- Assess the condition of all habitats on site;
- Establish the theoretical value of biodiversity within the site pre- and post-development based on current development and landscaping proposals via use of the Statutory Biodiversity Metric;
- Assess whether the project can deliver BNG for the design options being considered;
- Propose design and management suggestions, including use of any measures to avoid, minimise and compensate biodiversity loss, with the aim of maximising BNG, and where required, establish parameters of any biodiversity offsetting; and
- Identify the opportunities to deliver ecological enhancements outside of the BNG metric.

## 1.3 Site Description

The site is located on an artificial peninsula consisting of approximately 48ha in area, which extends into the Firth of Clyde and is centred at OS Grid Reference NS 18716 53019. The site is adjacent to the Offshore Wind Turbine Test Facility operated by SSE, but is otherwise vacant at present, although maintenance is ongoing.

The site comprises reclaimed land that has historically been used for industry and currently contains an access road, several gravel tracks, a disused operational ground with service infrastructure and a disused dry dock area, currently covered in concrete and occasionally inundated with sea water. The site is currently overgrown with patches of dense vegetation. The site boundaries comprise sea walls surrounding the site, with the southern boundary also comprising an accessed road that stretches from the site entrance to the A78. The first portion of the access road is bordered by broadleaved

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<sup>1</sup> Hunterston Construction Yard, Preliminary Ecological Appraisal (2023) EnviroCentre Report.

woodland; however, this changes to sandflats as the road approaches the site. The access road also crosses over the Burn Gill watercourse in the southeast of the site.

## 1.4 Proposal Description

The development incorporates upgrading of the HCY into a harbour facility with a large working platform. To facilitate this development specific construction elements will be undertaken which includes:

- The construction of a new quay and associated quayside infrastructure on the western edge of the site to berth vessels;
- Works to include removal of the existing dock entrance bund, and/or removal of existing land to facilitate the construction of appropriate berths;
- Demolition works of existing structures including removal of the base of the former dry dock.
- Infilling of the former dry dock basin to provide additional land for general industrial purposes;
- Ground improvement works including piling;
- Dredging (including future maintenance) to enable marine vessel access to quay areas;
- Provision of site utilities and any required foundations within storage areas; and
- Erection of temporary site offices and staff welfare buildings to accommodate site workforce.

The area of the construction works is approximately 40 ha which includes the dry dock working area, access road and contractor compound.

The Proposed Masterplan Option 3 displaying the proposed works and land use within the Hunterston Construction Yard and the wider Peel Ports ownership area, is displayed in Appendix B.

## 1.5 Legislation and Planning Policy

National policies and legislation of relevance to the BNG Feasibility Assessment, through which BNG is targeted, include:

- Nature Conservation (Scotland) Act 2004
- National Planning Framework 4
- Natural Environment and Rural Communities Act (2006) Section 41 (S. 41)<sup>2</sup>
- Scottish Biodiversity List (SBL)<sup>3</sup>
- Scottish Biodiversity Strategy to 2045
- Scottish Planning Policy (SPP: 2014)
- Planning (Scotland) Act 2019
- The North Ayrshire Local Development Plan; and
- The North Ayrshire Local Biodiversity Action Plan.

## 1.6 Report Usage

The information and recommendations contained within this report have been prepared in the specific context stated above and should not be utilised in any other context without prior written permission from EnviroCentre Limited.

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<sup>2</sup> <https://www.gov.uk/government/publications/habitats-and-species-of-principal-importance-in-england>

<sup>3</sup> <https://www.nature.scot/doc/scottish-biodiversity-list>

If this report is to be submitted for regulatory approval more than 12 months following the report date, it is recommended that it is referred to EnviroCentre Limited for review to ensure that any relevant changes in data, best practice, guidance or legislation in the intervening period are integrated into an updated version of the report.

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## 2 METHOD

### 2.1 Names and Qualifications of Surveyors

The habitat survey and condition assessments were undertaken by EnviroCentre Ecologist Luigi Cristofaro [BSc (Hons), MSc], who is a Qualifying Member of the Chartered Institute of Ecology and Environmental Management (CIEEM).

This Biodiversity Net Gain Feasibility Report was also written by Luigi Cristofaro and was reviewed by EnviroCentre Principal Ecologist Mhairi Mackintosh who is a Full Member of the Chartered Institute of Ecology and Environmental Management (MCIEEM).

### 2.2 Habitat Survey

A UK Habitat Classification (UKHab) Survey was undertaken to inform the PEA Report on the 27<sup>th</sup> October 2023 in accordance with the user manual<sup>4</sup>. This survey data has been utilised to inform the Biodiversity Net Gain Assessment as detailed below.

Full methodology for the UKHab survey is provided within the PEA Report<sup>1</sup>.

### 2.3 Condition Assessment

#### 2.3.1 Assessment Framework

For the purpose of the BNG assessment, the baseline habitats on site and any proposed habitats have been assessed using the Department for Environment, Food & Rural Affairs (DEFRA), Statutory Biodiversity Metric (2024) in line with the user guide and technical supplement<sup>5</sup>.

The principles of biodiversity net gain, as set out in the Biodiversity Net Gain Good Practice Principles<sup>6</sup>, have been considered throughout this process.

#### 2.3.2 Habitat Measurements

The Statutory Biodiversity Metric includes separate calculations for area and linear habitats. Overall, there are two broad categories of habitats for which scores are calculated:

- Area habitats (such as grasslands, woodlands and mudflats) measured in hectares;
- Linear features measured in kilometres.

Baseline habitat measurements were carried out in line with the results of the Habitat Survey. Measurements were predominantly made using online mapping tools (QGIS); however, habitats have been ground-truthed during the field survey.

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<sup>4</sup> UKHAB Ltd (2023). UK Habitat Classification Version 2.0 (Available at <https://www.ukhab.org>)

<sup>5</sup> Department for Environment, Food & Rural Affairs (DEFRA), Statutory Biodiversity Metric (2023). Available at: <https://www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides>

<sup>6</sup> CIEEM (2019) Biodiversity Net Gain Good Practice Principles for Development. Available at: <https://cieem.net/biodiversity-net-gain-guidance-published/>



All measurements were entered to the nearest 0.01ha in area and 1m in length.

## 2.4 Habitat Distinctiveness

Habitats are assigned to distinctiveness bands automatically within the Statutory Biodiversity Metric. These are pre-determined for each primary habitat or linear feature and consider species richness, rarity (at local, regional, national and international scales), and the degree to which a habitat supports species rarely found in other habitats.

Under the current Metric definitions, habitats are considered to be of High or Very High distinctiveness only if listed under S.41 of the NERC Act: a list of priority habitats in England. Following CIEEM advice on adapting distinctiveness data for use in Scotland<sup>7</sup>, categories have been assigned according to the SBL with reference to the existing S.41 criteria. Both S.41 and SBL priority habitats are derived from UK Biodiversity Action Plan (UKBAP) definitions<sup>8</sup>. These adapted definitions are shown in Table 2.1 below.

**Table 2.1: Distinctiveness Assessments**

Category	Definition
Very High	Priority Habitats featured on the SBL that are highly threatened, internationally scarce and require conservation action <i>e.g.</i> native pine woodlands; blanket bog
High	Priority Habitats featured on the SBL not requiring conservation action <i>e.g.</i> upland flushes, fens and swamps
Medium	Semi-natural habitats not classed as a Priority Habitat <i>e.g.</i> other neutral grassland
Low	Habitat of low biodiversity value <i>e.g.</i> agricultural temporary grass and clover ley; intensive orchard; rhododendron scrub
Very Low	Little or no biodiversity value <i>e.g.</i> hard standing or sealed surface

## 2.5 Habitat Condition

Habitat Condition is a measure of quality based on the biodiversity value of the habitat relative to others of the same type.

Most baseline habitats will be assigned a result of Good, Moderate or Poor based on the scoring instructions provided within the condition criteria set out in the technical supplement<sup>3</sup> In order to reflect the preliminary design stage, condition assessments of habitats to be created will illustrate best and worst-case scenarios.

Certain habitats are allocated a fixed condition score and do not require an assessment. These are marked 'No assessment required – condition fixed at 'Poor'' for some Low distinctiveness habitats, or 'No assessment required – condition N/A' for all Very Low distinctiveness habitats.

It must be noted that during a condition assessment, a habitat parcel may be deemed to contain areas of differing condition. Any differences within a habitat should trigger a new condition assessment to ensure accurate representation.

<sup>7</sup> CIEEM (2021) Biodiversity Net Gain in Scotland: Briefing Note for Local Planning Authorities. Available at: <https://cieem.net/resource/biodiversity-net-gain-in-scotland-briefing-note-for-local-planning-authorities/>

<sup>8</sup> Joint Nature Conservation Committee (2011) UK Biodiversity Action Plan: Priority Habitat Descriptions. Available at: <https://hub.jncc.gov.uk/assets/2728792c-c8c6-4b8c-9ccd-a908cb0f1432>

## 2.6 Strategic Significance

Strategic significance relates to the spatial location of a habitat parcel and works at a landscape scale. It utilises published local strategies and objectives to identify local priorities for targeting biodiversity and nature improvement.

Strategic significance definitions are detailed within Table 2.2. The North Ayrshire Local Development Plan<sup>9</sup>, North Ayrshire Local Biodiversity Action Plan<sup>10</sup> and the Scottish Biodiversity List were used to aid in the determination of ‘Strategic Significance’.

**Table 2.2: Strategic Significance Assessments**

Category	Definition
High Strategic Significance	Within area formally identified in local strategy, plan or policy
Medium Strategic Significance	Location ecologically desirable but not identified in a local strategy, plan or policy (As this may be based on professional judgment, detailed justification must be provided)
Low Strategic Significance	Not identified in a local strategy, plan or policy OR No strategy or plan is in place in the area

## 2.7 Risk Factors

The scores for post-development habitats are estimated by accounting for the characteristics above (distinctiveness, condition and spatial significance), as well as additional factors to account for the risk associated with creating, restoring or enhancing habitats. Temporal, difficulty and spatial risks are standardised components considered within the Statutory Biodiversity Metric as summarised below.

### 2.7.1 Temporal risk

*A score based on how long the habitat takes to establish and reach target condition and any advances or delays in habitat creation as recommended by the HM Treasury Green Book<sup>11</sup>.*

Where a time lag occurs between habitat loss and creation of new habitat, there will be a loss of biodiversity for a period of time. This is a pre-determined value measured in years and will vary between habitat types based on the average time taken to achieve ‘target condition’.

It is recognised that there will be situations where habitat creation occurs prior to habitat loss or may be delayed beyond the point at which the baseline losses occur. A review of the proposals and recommended habitat planting has been carried out as part of this BNG Feasibility Assessment. Where there is likely to be a significant advancement or delay in habitat creation, measured in years, this has been recorded within the metric and appropriate evidence provided.

<sup>9</sup> North Ayrshire Council (2019) *Local Development Plan* [Online] available from: <https://www.north-ayrshire.gov.uk/planning-and-building-standards/ldp/local-development-plan.aspx>

<sup>10</sup> North Ayrshire Council (209-2031) <https://www.north-ayrshire.gov.uk/Documents/CorporateServices/Finance/approved-lbap.pdf>

<sup>11</sup> HM Treasury. (2022) *The Green Book: appraisal and evaluation in central government* [Online] Available at: <https://www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-government>

### **2.7.2 Difficulty Risk**

*A pre-assigned score automatically generated by the Metric to reflect the difficulty in creating/restoring/enhancing the required habitat.*

The difficulty risk is pre-assigned based on available science/expert opinion and uncertainty in the effectiveness of management techniques used to restore or create habitat. There are two separate difficulty multipliers assigned to each habitat, one for creation and one for enhancement/restoration, recognising that the technical challenges will not necessarily be the same for both.

### **2.7.3 Spatial Risk**

*A score based on the distance between the site of habitat loss and the site where creation / enhancement is provided.*

Spatial risk has not been included in the preliminary post-development calculation as it is assumed that habitat compensation and retention will be delivered within the scheme's footprint or within the same ecological network as the loss occurs rather than off-site.

## **2.8 Disclaimer**

Habitat Conditions can change frequently, primarily as a result of management. The reported baseline conditions provide a snapshot of the habitats present at the time of survey.

Please note that the BNG Feasibility Assessment does not cover requirements arising from potential impacts on protected species and off-site designated sites.

## **2.9 Limitations**

### **2.9.1 Field Survey**

The field survey was undertaken outwith the optimal season for habitats (May-September) but general broad categories of habitats could be categorised outside this time. However, some flowering plant species may have been missed. A precautionary approach has therefore been taken in assessing habitat conditions.

### **2.9.2 Biodiversity Net Gain Metric**

It should be noted that the accuracy of habitat area measurements is limited by the form of baseline data collection and resolution of development proposal plans. In this instance, baseline habitat areas have been calculated by cross referencing illustrative Habitats Plans with field survey work. Post-development habitat areas have been measured from the proposed indicative development layout.

### 3 BASELINE CONDITIONS

#### 3.1 Baseline Habitats

Eight UKHab habitats and boundary features (excluding fence lines), classified using primary and secondary codes, are present within the site. The following UKHab primary habitat types recorded include:

- Other Neutral Grassland
- Other Sea Buckthorn Scrub
- Developed Land. Sealed Surface
- Other Developed Land
- Artificial Unvegetated Unsealed Surface
- Sparsely vegetated Urban Land: Open mosaic habitats on previously developed land (OMHPDL)
- Built Linear Feature: Road and Walls

Full habitat descriptions are provided within the Preliminary Ecological Appraisal<sup>1</sup> and a Habitats Plan is shown in Appendix C.

#### 3.2 Baseline Assessment

A summary of habitats present, including assessment of condition, strategic significance, and irreplaceability, is provided in Table 3.1 below. Overall, the baseline site habitats total 80.94 habitat units.

**Table 3.1: Summary of the Baseline Biodiversity and Linear Unit Assessment**

Habitat	ha/km	Distinctiveness	Condition Score	Strategic Significance	Total Habitat Units	Trading Rules
Other Neutral Grassland	1.26ha	Medium	Moderate	Low	10.08	Same broad habitat or higher distinctiveness habitat required
Other Sea Buckthorn Scrub	21.27ha	V.Low	N/A	Low	42.54	Same distinctiveness or better habitat required
Developed Land, Sealed Surface	5.81ha	V.Low	N/A	Low	0	Compensation not required
Other Developed Land	4.05ha	V.Low	N/A	Low	0	Compensation not required
Artificial Unvegetated Unsealed Surface	6.24ha	Low	Poor	Low	0	Compensation not required
Sparsely Vegetated Urban Land (OMHPDL)	2.36ha	High	Moderate	Low	28.32	Same habitat required
Built Linear Feature	4.36km	V.Low	N/A	Low	0	Compensation not required

### 3.3 Off-Site Baseline

An area of approximately 283 ha off-site, but within the wider Peel Ports ownership boundary, is available for nature capital improvements. Within this area, sections of woodland, grassland, scrub and small watercourses totalling approximately 27 ha, have been identified as offering potential for biodiversity enhancement and habitat creation. Six UKHab habitats classified using primary codes, are present within this off-site area. The following UKHab primary habitat types recorded include:

- Other Neutral Grassland
- Other Lowland Dry Acid Grassland
- Bramble Scrub
- Other Mixed Woodland
- Lowland Mixed Deciduous Woodland
- Other Coniferous Woodland
- Small Streams and Watercourses

### 3.4 Off-Site Baseline Assessment

A summary of habitats present off-site, including assessment of condition, strategic significance, and irreplaceability, is provided in Table 3.2 below. Overall, the baseline off-site habitats total 143.68 habitat area units and 5.92 habitat river units.

**Table 3.2: Summary of the Off-Site Baseline Biodiversity and River Unit Assessment**

Habitat	ha/km	Distinctiveness	Condition Score	Strategic Significance	Total Habitat Units	Trading Rules
Other Neutral Grassland	0.63ha	Medium	Moderate	Low	5.04	Same broad habitat or higher distinctiveness habitat required
Other Lowland Dry Acid Grassland	0.1ha	Medium	Moderate	Low	0.80	Same broad habitat or higher distinctiveness habitat required
Bramble Scrub	4.31ha	Medium	N/A	Low	17.24	Same broad habitat or higher distinctiveness habitat required
Other Mixed Woodland	10.38h	Medium	Poor	Medium	45.67	Same broad habitat or higher distinctiveness habitat required
Other Coniferous Woodland	0.87ha	Low	Poor	Low	1.74	Same distinctiveness or better habitat required
Lowland Mixed Deciduous Woodland	11.09ha	High	Poor	Medium	73.19	Same habitat required
Small Streams and Watercourses	1.18km	High	Poor	Medium	2.92	Same habitat required

## 4 FEASIBILITY OF BIODIVERSITY NET GAIN

The current plan involves the complete removal of vegetation on the site in order to facilitate construction activities including removal of existing structures and in-filling of the dry dock; compensation for the loss of habitat is proposed to take place off-site. Table 4.1 lists the existing and likely post development on-site habitats proposed, with a calculation of net value on site post-development. Table 4.2 lists the existing and likely post development off-site habitats proposed.

**Table 4.1: Summary of Biodiversity Net Gain Assessment On-Site**

Habitat Type	Existing		Post-Development		Habitat Unit difference	Justification/Recommendation
	ha/km	Habitat Units	ha/km	Habitat Units		
Other neutral grassland	1.26ha	11.09	0.00ha	0.00	- 11.09	Removal of all grassland on site to facilitate development. Removed areas of neutral grassland should be replaced with the same broad habitat of same or higher distinctiveness.
Other Sea Buckthorn	21.27	46.79	0.00ha	0.00	- 46.79	Removal of all sea buckthorn scrub on site to facilitate development. Removed scrub should be replaced with habitat of same or higher distinctiveness.
Developed Land. Sealed Surface	5.81ha	0.00	5.81ha	0.00	0	Habitat retained
Other Developed Land	4.05ha	0.00	4.05ha	0.00	0	Habitat retained
Artificial Unvegetated Unsealed Surface	6.24ha	0.00	0.00ha	0.00	0	Habitat assumed to be likely transformed into Developed Land Sealed Surface. Compensation not required.
Sparsely Vegetated Urban Land (Open Mosaic on Previously Developed Land)	2.36ha	31.15	0.00ha	0.00	- 31.15	Removal of OMHPDL to facilitate development. Removed habitat should be replaced with the same habitat type. Alternatively, enhancement of existing areas of OMHPDL off-site is recommended.
Built Linear Features	4.36km	0.00	4.36km	0.00	0	These features may be lost to facilitate development. No compensation is required.

**Table 4.2: Summary of Biodiversity Net Gain Assessment Off-Site**

Habitat Type	Existing		Post-Development		Habitat Unit difference	Justification/Recommendation
	ha/km	Habitat Units	ha/km	Habitat Units		
Other neutral grassland	0.63ha	5.04	2.63ha	24.3	+ 19.26	Enhancement of the existing neutral grassland to good conditions by adopting appropriate management regime and increasing presence of native species. Approximately

						2.32 ha of this habitat are proposed to be created within the biodiversity park in Plot 1 (Masterplan Proposed Option 3).
Other Lowland Dry Acid Grassland	0.8ha	0.88	0.1ha	1.08	<b>+ 0.28</b>	Enhancement of the existing acid grassland to good conditions by adopting appropriate management regime and increasing presence of native species.
Bramble Scrub	4.31ha	17.24	0.00ha	0.00	<b>- 17.24</b>	Removal of 2.63ha bramble scrub in order to create new areas of more valuable habitat.
Mixed Scrub	0.00ha	0.00	2.31ha	21.35	<b>+ 21.35</b>	Mixed scrub to be located within areas previously occupied by bramble and scattered within area of neutral grassland.
Other Mixed Woodland	10.38ha	45.67	10.38ha	90.47	<b>+ 44.8</b>	Mixed woodland between Peel Ports eastern boundary and the A78 to be enhanced by removing Invasive Non-Native Species (INNS) and improving woodland understorey vegetation. enhancing this habitat can provide greater woodland habitat connectivity in the locale and provide suitable habitat for LBAP species such as the tree sparrow ( <i>Passer montanus</i> ), as well as suitable woodlands for education and recreation as outlined in the LBAP.
Other Coniferous Woodland	0.87ha	1.91	0.00ha	0.00	<b>- 1.91</b>	Small strip of conifers found to the north of Peel Ports along the railroad track around the artificial lagoon. These conifers could be removed to extend the adjacent deciduous woodland, providing more suitable and priority habitat for LBAP species such as the tree sparrow.
Lowland Mixed Deciduous Woodland	11.09ha	73.19	11.96ha	88.64	<b>+ 15.45</b>	Lowland mixed deciduous woodland is a SBL priority habitat found to the south and north of Peel Ports. These woodlands can be enhanced by removing invasive species and improving the woodland understorey vegetation, The woodland to the north should be expanded to include the area currently occupied by a strip of coniferous woodland. Expanding and enhancing this habitat can provide greater woodland habitat connectivity in the locale and provide suitable habitat for LBAP

						species such as the tree sparrow, as well as suitable woodlands for education and recreation as outlined in the LBAP.
Individual Trees	0.00ha	0.00	0.2ha	0.88	<b>+ 0.88</b>	At least 50 scattered individual trees to be planted around areas of neutral grassland and scrub to provide greater opportunities for wildlife, including LBAP bird species and improve habitat connectivity.
Small Streams and Watercourses	1.18km	2.92	1.18km	8.87	<b>+ 3.45</b>	Small, partially culverted, watercourses running within the woodland to the south and to the east of Peel Ports alongside the A78. These watercourses could be enhanced by improving the presence of aquatic marginal vegetation, lower the turbidity and reduce the presence of man-made structures.

#### 4.1 Proposed Development Biodiversity Calculations

Based on the proposed development plans, there is likely to be a 100% **net loss** in habitat units on site. Based on the proposed off-site habitat enhancement plans, the off-site habitat area units are predicted to increase by 83.04, providing an overall 3.30 habitat area units increase project wide, or approximately a 4% **net gains**. Based on the proposed enhancement plans for watercourses and streams, the project is predicted to deliver a net increase of 5.94 river habitat units, or approximately 70% **net gains** in river habitat units.

The above figures are representative of habitat creation and enhancement taking place over the course of 10 years for grassland and scrub and 20-30 years for areas of woodland.

Due to the loss of and lack of suitable compensation for OMHPDL, the trading rules are not currently satisfied. However, due to the developed and urbanised nature of the habitats present within the wider Peel Ports ownership boundary, it is predicted that OMHPDL may naturally re-occur over the years in disused plots of land.

Based on the combined habitat units gains and losses from off-site area and river habitats, the project manages to significantly off-set the losses derived from the on-site works and provide biodiversity net gains to specific habitat types. Because of this and in combination with design and managements suggestions (section 4.2) and further recommendations (section 4.3), it is considered that the project meets the criteria set by Policy 3, NPF4. Furthermore, the enhancements and slight expansion of woodlands areas to the south, east and north of Peel Ports, is likely to improve the connectivity of woodlands in the locale for a number of wildlife species, and therefore, help meeting the criteria on nature networks set out by Policy 3a, NPF4.

The proposed habitat creation/enhancements are displayed in the Proposed Habitat Creation Plan in Appendix D.



## 4.2 Design and Management Suggestions

The following management suggestions are designed to minimise methods to avoid and compensate for biodiversity loss, with the aim of maximising BNG opportunities:

- A Biodiversity and Enhancement Management Plan (BEMP) to cover the outlined habitat creation and enhancements (including monitoring) over the course of 30 years.
- Habitat creation should be implemented to encourage long term habitat connectivity to the wider landscape. Therefore, parcels of land to be selected for habitat creation should result in improved habitat connectivity in the wider area. For example, tree planting within Plot 1 could help creating a corridor connecting the woodland patches to the south, north and east of Peel Ports, while the presence of grassland and scrub could provide connectivity with similar patches of grassland and scrub found in the locale.
- Non-native species (including sea buckthorn) planting should be avoided. Sourcing vegetation (seeds and plants) of local provenance is key to achieving the best biodiversity outcome when enhancing sites.
- Appropriate and good quality seed mixed should utilised when creating new areas of grassland<sup>12</sup>.
- The extent of area units gained via habitat creation and/or enhancement is relative to the number of years needed to reach the required targets. Therefore, limiting and preventing delays in applying recommended enhancement measures (e.g. removal of INNS), is key to achieving the outlined targets and potentially gaining further net gains.
- The enhancement of woodland areas from poor to good conditions should prioritise the removal of INNS and improvement of the ground vegetation cover by encouraging the presence of native species. Further improvements include:
  - Improving canopy coverage by infill planting of native species.
  - Increasing the number of native tree and shrub species within the woodlands through gradual thinning of non-native species (eg sycamore).
  - Increasing the presence of deadwood throughout the woodlands.
- The enhancement of grassland areas from moderate to good conditions should focus on grass cutting management regimes in the late summer after flowering or graze over winter, to prevent rank vegetation from hindering the growth of new wildflowers<sup>13</sup>. Increased species richness should be promoted by planting plugs of native species. Area of good quality grassland should have ten or more vascular plant species per m<sup>2</sup>. A full list of suitable and key species for other neutral and acid grasslands can be found on UKHab 2.0<sup>4</sup>.
- The enhancement of watercourses from poor to moderate conditions should focus on improving the presence of native aquatic marginal vegetation species and on reducing direct impacts by man-made structures on the watercourse. A list of key species for aquatic marginal vegetation can be found on UKHab 2.0<sup>4</sup>.
- As a number of SBL butterfly and moth species were previously identified as using the site and surrounding areas, wildflower planting in areas of grassland should focus on providing suitable resources for these species<sup>14</sup>.

## 4.3 Recommendations for Further Biodiversity Gain

Under The below recommendations aim to further improve the existing biodiversity net gains outlined above and to provide greater opportunities for wildlife species:

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<sup>12</sup> Recommended seed mixes: <https://www.scotiaseeds.co.uk/shop/coastal-wildflowers-mix/>

<sup>13</sup> NatureScot. Species Rich Grassland Leaflet (Accessed April 2024).

<sup>14</sup> Recommended seed mixes: <https://www.scotiaseeds.co.uk/shop/bee-bird-butterfly-mix/>

- As loss of OMHPDL on-site could not be compensated via off-site gains, measures should be taken to allow for future compensation. Overgrown vegetation and pioneer plant species found in disused developed land within the wider Peel Ports ownership boundary should not be removed whenever possible. This measure can be undertaken temporarily in plots of land and in-between developments.
- As loss of OMHPDL on-site can result in impacts on invertebrate communities, actions to reduce the impacts and improve invertebrate biodiversity within the wider Peel Ports area are recommended. These include:
  - Provision of log piles off-site within areas of grassland, woodland and scrub, to enhance invertebrate as well as small mammal, reptile and amphibian sheltering and basking opportunities.
  - Woodcrete and reed insect blocks or 'bug hotels'<sup>15</sup> could be installed around PEEL Ports, particularly near woodlands and OMHPDL, to provide shelter for insects which may be present.
  - Pollinator-friendly flowering mixes should be utilised in areas of grassland in order to provide greater opportunities for a range of pollinators.
- Continued management of the lagoon to the north (currently managed by the RSPB) and the Southannan Sands SSSI should be a priority focus in order to prevent further biodiversity losses and improve biodiversity in the locale. Local authorities and conservation groups should be involved in the active management of these areas. Southannan Sands SSSI, in particular, contains LBAP priority habitats such as intertidal mudflats which should be preserved and managed. Provision of artificial hedgehog nests<sup>16</sup> to be installed near bordering woodland habitat, to provide hibernation, resting and breeding opportunities.
- Within the off-site woodlands to be retained and enhanced, as well as the lagoon to the north, installation of a range of bird nesting boxes to provide permanent nesting opportunities are recommended. All bird boxes must be installed at a minimum height of 2m. Suitable boxes include:
  - Vivara Pro Woodstone House Sparrow Nest Boxes<sup>17</sup> or similar to be integrated into any newly built garages or flats that are adjacent to existing vegetation/vegetation planting.
  - Eco Starling Nest Boxes<sup>18</sup> or similar to be installed on retained trees or new residential units.
  - Schwegler Wren Roundhouses<sup>19</sup> or similar are to be installed within scrub/woodland vegetation.
  - 1MR Schwegler Avianex boxes<sup>20</sup> to be installed on retained trees with a DBH greater than 150mm.
  - Duck/waterfowl nesting boxes to be installed within the lagoon.<sup>21</sup>
- Within the off-site woodlands to be retained and enhanced, a range of bat boxes to provide permanent roosting opportunities are also recommended. Boxes should be installed on retained trees at least 3m high. Suitable boxes include:
  - 1FD Schwegler<sup>22</sup> bat boxes
  - Large Multi Chamber WoodStone Bat Box<sup>23</sup>

<sup>15</sup> NHBS Limited. Available to purchase at: <https://www.nhbs.com/schwegler-clay-and-reed-insect-nest>

<sup>16</sup> NHBS Limited. Available to purchase at: <https://www.nhbs.com/hedgehog-nest-box>

<sup>17</sup> NHBS Limited. Available to purchase at: <https://www.nhbs.com/vivara-pro-woodstone-house-sparrow-nest-box>

<sup>18</sup> NHBS Limited. Available to purchase at: [www.nhbs.com/Eco-Starling-Nest-Box](http://www.nhbs.com/Eco-Starling-Nest-Box)

<sup>19</sup> NHBS Limited. Available to purchase at: <https://www.nhbs.com/1ZA-Schwegler-Wren-Roundhouse>

<sup>20</sup> NHBS Limited. Available to purchase at: <https://www.nhbs.com/1mr-schwegler-avianex>

<sup>21</sup> Buttercupfarm: <https://www.buttercupfarm.co.uk/aviaries-birdhouses-dovecotes-and-wildlife-habitats/bird-houses/duck-waterfowl-nesting-boxes.html>

<sup>22</sup> NHBS Limited. Available to purchase at: <https://www.nhbs.com/1fd-schwegler-bat-box>

<sup>23</sup> NHBS Limited. Available to purchase at: <https://www.nhbs.com/large-multi-chamber-woodstone-bat-box>

# APPENDICES

# **A SITE LOCATION PLAN**





**Legend**

 Terrestrial Site Boundary

Do not scale this map

**Client**  
Peel Ports

**Project**  
Hunterston Construction Yard

**Title**  
Site Area Plan

**Status**  
FINAL

<b>Drawing No.</b> 176482-GIS008	<b>Revision</b> A	<b>Date</b> 15 Nov 2023
<b>Drawn</b> LC	<b>Checked</b> JEP	<b>Approved</b> MM

**Scale**  
1:8,000 @ A3

Rev	Date	Amendment	Initials
A	15 Mar 2024	Removed Survey Area Buffers	LC



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# **B PROPOSED MASTERPLAN OPTION 3**

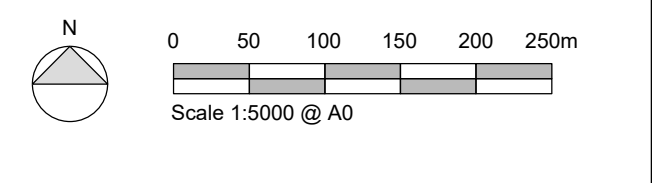


**NOTES** AEWTP024B

- All dimensions and levels are to be checked on site.
- Any discrepancies are to be reported to the architect before any work commences.
- This drawing shall not be scaled to ascertain any dimensions. Work to figured dimensions only.
- This drawing shall not be reproduced without express written permission from AEW.
- Title overlay drawings and ownership boundaries are produced using all reasonable endeavours. AEW cannot be responsible for the accuracy or scale discrepancy of base plans supplied to them.
- All works are to be undertaken in accordance with Building Regulations and the latest British Standards.
- All proprietary materials and products are to be used strictly in accordance with the manufacturers recommendations.

**CDM 2015**

Client notified of duties: CDM\_PD\_Date  
Principal Designer: CDM\_PD\_Name  
Unless noted below, all known hazards have been highlighted on the drawing.



Existing railway line retained  
Lagoon provides an opportunity for active management for Biodiversity  
Gatehouse  
Northern access point  
Plot 2 site plan tbc.  
Potential improvements to help with viability

Plot 7/7a/7b to be used as construction compounds in the short-term  
Plot 10C to be used as a construction compound in the short-term

Solar Farm / Carbon Offset Area Under Review  
Southern access point

- Plot 1:** Green space / Biodiversity park  
2.67 ha / 6.60 acres approx.
- Plot 2:** 8.95 ha / 22.11 acres approx.
- Plot 3:** 2.26 ha / 5.59 acres approx.
- Plot 3A:** 0.21 ha / 0.51 acres approx.
- Plot 3B:** 2.30 ha / 5.68 acres approx.
- Plot 4: retained secure plot** 8.97 ha / 22.17 acres approx.
- Plot 5:** 14.24 ha / 35.18 acres approx.
- Plot 6:** 14.23 ha / 35.16 acres approx
- Plot 7:** Temporary construction compound: 0.66 ha / 1.65 acres approx.
- Plot 7A:** Temporary construction compound 1.54 ha / 3.80 acres approx.
- Plot 7B:** Temporary construction compound 0.91 ha / 2.24 acres approx.
- Plot 8:** 11.35 ha / 28.05 acres approx.
- Plot 10A:** 10.48 ha / 25.90 acres approx.
- Plot 10B:** 3.10 ha / 7.65 acres approx.
- Plot 10C:** 6.17 ha / 15.25 acres approx.
- Plot 12:** 4.27 ha / 10.55 acres approx.
- Plot 13 (Cable Access):** 0.92 ha / 2.28 acres approx.
- Plot 14:** 26.52 ha / 65.53 acres approx.
- Plot 16:** 13.55 ha / 33.48 acres approx.
- Plot 17A:** 4.86 ha / 12.02 acres approx.
- Plot 17A temporary construction compound:** 0.95 ha / 2.36 acres approx.
- Plot 17B:** 4.12 ha / 10.18 acres approx.
- Plot 18:** 0.76 ha / 1.88 acres approx.

- Peel Ports Ownerships**
- CES Ownership Boundary**
- COL Lease Boundary**
- TPO Zones (Subject to more accurate overlay)**
- Railway**
- Conveyor**
- Exit corridor**
- Right to upgrade sea wall protection area**
- Cable link from Plot 16 to Jetty**
- Dry dock land to be reclaimed**
- Future new quay**
- Existing quay**
- Indicative Incoming Cable**

REV	Date	Drawn by	Checked by	Purpose of Issue
P17	16/10/23	ES	AL	Plot 15A southern plot boundary reverted
P16	13/10/23	ES	AL	
P15	16/08/23	ES	AL	Plot 10A & 10C revised
P14	11/05/23	ES	AL	Plot 10A, 10B & 10C revised, Plot 9, 11 & 15 omitted
P13	11/05/23	ES	AL	Plot 10B revised
P12	07/06/23	ES	AL	Plot 10 split into 3, plot 3B added, plot 8 and 9 revised, plot 11 and 11A combined, incoming cable revised
P11	10/02/23	ES	AL	Plot 17A temporary construction compound added
P10	06/11/22	ES	AL	Plot 13A and 18 added, plots 12A and 12B merged, plots 8A, 8B and 10 merged, plot 17B and 13 enlarged, marine yard development updated including existing roads shown, indicative cabling shown, plot 1 and 2 revised to reflect site plan, estate road revised
P9	21/12/21	ES	AL	Plot 13 updated, plot 15 updated, plot 15 provisional cable corridor added, estate road revised to omit security gate house, CES footprint, COL lease and Peel Ports ownership boundary updated
P8	08/11/21	ES	DOH	Plot 13A updated, plot 5 and 6 extended to eastern roadside
P7	26/10/21	ES	AL	Plots 8A, 8B, 7B, 12A, 12B, 13A, 14, 15, 17A, 17B updated
P6	08/10/21	ES	DOH	Marine requirements added
P5	10/05/21	ES	AL	Plot 7A, 17A, 17B and 14 revised
P4	03/09/21	ES	AL	Southern Gateway added, plots 12A & 12B combined, plots 17 and 18 added, Plots 1, 2, 4, 7A, 8, 8A, 8B & 8C revised in accordance with new estate road
P3	23/06/21	ES	AL	Intracore Farm Road added
P2	08/07/21	MC	AL	Internal roads from drawing 50815_Fig03a Masterplan IFL Day overlaid
P1	22/06/21	MC	AL	Schedule Updated

REV	Date	Drawn by	Checked by	Purpose of Issue
S2				For Comment

drawing stage: **Stage 2 - Feasibility**

client: **Peel Ports**

project: **Hunterston PARC**

drawing title: **Proposed Masterplan Option 3**

date: 22/06/21  
scale: 1:5000  
sheet: MC  
checked: AL



# C HABITATS PLAN





**Legend**

- Terrestrial Site Boundary
- g3c - Other Neutral Grassland
- h2c - Sea Buckthorn Scrub
- u1b - Developed Land. Sealed Surface
- u1b6 - Other Developed Land
- u1c - Artificial Unvegetated Unsealed Surface
- u1f - Sparsely Vegetated Urban Land
- t2h - Beach
- u1e - Road
- u1e - Track
- u1e - Wall
- u1e - Fence

Do not scale this map

**Client**  
Peel Ports

**Project**  
Hunterston Construction Yard

**Title**  
Habitats Plan

**Status**  
FINAL

<b>Drawing No.</b> 176482-GIS009	<b>Revision</b> -	<b>Date</b> 15 Nov 2023
<b>Drawn</b> LC	<b>Checked</b> JEP	<b>Approved</b> MM

**Scale**  
1:6,000 @ A3

Rev	Date	Amendment	Initials
-	-	-	-

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# **D PROPOSED HABITAT CREATION PLAN**





219700

221000

The artificial saline lagoon should be a primary focus for continued managed by Peel Ports, in conjunction with local authorities and the RSPB.

The lowland mixed deciduous woodland could be expanded and enhanced to provide greater coverage of an important SBL habitats, which provides opportunities for a number of wildlife species, including LBAP birds.

The Southannan Sands SSSI, contains important LBAP primary habitats such as mudflats which should be preserved. As a result, this area should be a primary focus for continued managed by Peel Ports, in conjunction with local authorities.







Plot of land within Peel Ports to be used for the development of an area of grassland with scattered trees and mixed scrub. Other areas of mixed scrub and enhanced neutral and acid grassland are found in the vicinity.

All the small watercourses should be enhanced by improving the coverage of native marginal aquatic vegetation species and reducing the presence of man-made structures, as well as reducing the water turbidity.

The mixed woodland could be enhanced by removing INNS and improving ground vegetation cover in order to increase the opportunities for wildlife species, including important LBAP priority species.

The lowland mixed deciduous woodland could be enhanced by removing INNS to improve the habitat conditions of an important SBL habitats, which provides opportunities for a number of wildlife species, including LBAP birds.

**Legend**

-  g1a - Lowland Dry Acid Grassland
-  g3c - Other Neutral Grassland
-  w1f - Lowland Mixed Deciduous Woodland
-  w1h - Other Woodland Mixed
-  h3c - Mixed Scrub
-  Individual Trees

Do not scale this map

**Client**  
Peel Ports

**Project**  
Hunterston Construction Yard

**Title**  
Proposed Habitat Creation Plan

**Status**  
FINAL

<b>Drawing No.</b> 176482-GIS014	<b>Revision</b> A	<b>Date</b> 15 Nov 2023
<b>Drawn</b> LC	<b>Checked</b> MM	<b>Approved</b> MM

**Scale**  
1:10,000 @ A3

Rev	Date	Amendment	Initials
A	02 May 2024	Changes to the proposed habitats creation/enhancement	LC for



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