



**ABLE HUMBER PORTS LTD  
MONOPILE FACTORY, SOUTH  
KILLINGHOLME:  
BIODIVERSITY NET GAIN PLAN**

Report to Able Humber Ports Ltd

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# ABLE HUMBER PORTS LTD MONOPILE FACTORY, SOUTH KILLINGHOLME: BIODIVERSITY NET GAIN PLAN

## PROJECT BACKGROUND

Site Overview PB-B01	
<b>Project type</b>	Monopile Factory
<b>Development Name and Address</b>	Able Marine Energy Park, south of Station Road, South Humber Bank, South Killingholme
<b>BNG Project Name and Address</b>	As above
<b>Author Organisation</b>	Dr Steve Percival, Ecology Consulting
<b>Landowner</b>	Able Humber Ports Ltd
<b>Land Manager</b>	Able Humber Ports Ltd
<b>Responsible person/organisation for creating or enhancing the habitat</b>	Able Humber Ports Ltd
<b>Period covered by this management plan</b>	1 May 2025 – 30 April 2055
<b>Planning authority</b>	North Lincolnshire Council
<b>Planning reference (if applicable)</b>	PA/2021/1525
<b>BNG register reference (if applicable)</b>	N/A
<b>Central OS grid reference</b>	TA
<b>Metric revision/title</b>	Biodiversity metric version 3.0 (current at time of application)
<b>Are any Irreplaceable Habitats present onsite</b>	Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>



<b>Is the relevant date for the pre-development biodiversity value the same date as the planning application?</b>	Yes
<b>Date of baseline survey</b>	March 2021
<b>Details of any constraints during survey</b>	None
<b>Statement regarding Trading Rules</b>	Trading Rules satisfied as per agreement with North Lincs Council, to deliver 1% net gain (application -pre-dates statutory BNG metric).

## INTRODUCTION

1. The Planning Consent for the Able Monopile manufacturing facility at Land at Able Marine Energy Park, south of Station Road, South Humber Bank, South Killingholme, includes in Condition 26, the preparation and collation of Biodiversity Net Gain (BNG) documentation:

*“Within 3 months of the commencement of development, the applicant or their successor in title shall submit a biodiversity metric assessment and biodiversity management plan to the local planning authority for approval in writing.*

*The document shall include:*

- a) *An assessment of biodiversity loss based on the habitat and hedgerow baseline from Figure 6.4 of the submitted Environmental Statement;*
- b) *Details of measures required to provide at least 1% biodiversity net gain in accordance with the Defra biodiversity metric 3.0;*
- c) *Details of nestboxes to be installed;*
- d) *Prescriptions for the planting and aftercare of trees and native hedgerows of high biodiversity value;*
- e) *Proposed timings for the above works in relation to the completion of the factory.*

*Biodiversity units should be delivered on site, within the red line and blue line boundaries shown on submitted Location Plan. Those that cannot viably be delivered on site should be delivered locally, according to a local plan or strategy.”*

2. The original BNG calculations for the planning application were undertaken using v3.0 of the Metric (the version current at that time). NLC agreed that this version should be retained for this BNG plan. The Environmental Statement (ES) habitat mapping produced and subsequent consultation have been updated to the UKHAB/BNG classification using existing survey data.
3. The ecological assessment for the Monopile Factory in the ES explains the required mitigation for the project, including the mitigation already in place for the AMEP Development Consent Order (DCO) development and for the displacement of all the curlew from Killingholme Fields. This DCO mitigation was originally to be delivered in the



- adjacent Mitigation A area, but it has now agreed to be relocated to the Halton Marshes Wet Grassland Scheme (HMWGS). This scheme is now implemented and is delivering a biodiversity gain.
4. The impacts from the AMEP Monopile Factory requiring mitigation additional to that for the DCO, comprise:
    - Additional direct loss of neutral grassland habitat (7.1 ha);
    - Additional loss of hedgerow (630 m of species-poor hedge).
  5. For the purposes of the assessment, all land within the AMEP DCO boundary has been treated as zero biodiversity value developed land (as currently implemented). This covers 17.8 ha. of the proposal site.
  6. This report sets out the Biodiversity Net Gain, Habitat Management and Monitoring Plan for the Enabling Works. It is supported by the following additional documents:
    - Chapter 6 Ecology of the Environmental Statement for the AMEP Monopile Factory, Killingholme; and
    - Able Marine Energy Park (AMEP) Project: Note on the Proposed Monopile Factory Updated Biodiversity Net Gain Provision, April 2022. Ecology Consulting Report to Able UK Ltd.

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## BIODIVERSITY METRIC (v.3.0)

7. The Biodiversity Net Gain metric v.3 spreadsheet accompanies this report, updated for the following changes since the previous April 2022 version:
  - The time since the off-site mitigation (at Halton Marshes wet grassland) was delivered has increased (it has now been established for six years rather than just three) – resulting in a higher ‘Final time to target’ multiplier for the BNG metric.
  - The on-site habitat enhancement has been updated from switch wet to modified grassland. This will deliver a higher biodiversity unit gain from same area, as there is less uncertainty in its delivery.
8. The neutral grassland within the development site has been ploughed in and is now tall ruderal vegetation, but the original baseline has been retained for the BNG calculations.
9. The total net unit change (including all on-site and off-site habitat retention, creation and enhancement) will now be as follows:
  - Habitat – 5.2 biodiversity units – 18% increase; and
  - Hedgerow – 0.6 biodiversity units – 25% increase.
10. No watercourses would be affected specifically as part of this development, so no metric for watercourses is included in this assessment.



## CONDITION ASSESSMENT OF BASELINE AND PROPOSED HABITATS

11. The habitat areas hedgerow lengths and condition assessments are summarised in Tables 1-6.

**Table 1. Habitat areas and condition – on-site baseline**

Broad Habitat	Habitat Type	Area (hectares)	Condition	Criteria
Grassland	Other neutral grassland	7.1	Poor	Species-poor, < 6-8 vascular species/m <sup>2</sup>
Urban	Developed land; sealed surface	18.0	N/A	-

**Table 2. Habitat areas and condition – on-site post-construction**

Broad Habitat	Habitat Type	Area (hectares)	Condition	Criteria
Grassland	Modified grassland	0.1	Good	Species-rich, > 6-8 vascular species/m <sup>2</sup>
Urban	Developed land; sealed surface	25.0	N/A	-

**Table 3. Habitat areas and condition – off-site baseline**

Broad Habitat	Habitat Type	Area (hectares)	Condition	Criteria
Cropland	Cereal crops	5.5	N/A	-

**Table 4. Habitat areas and condition – off-site post-construction**

Broad Habitat	Habitat Type	Area (hectares)	Condition	Criteria
Grassland	Floodplain wetland mosaic and CFGM	5.5	Good	Species-rich, retains wetness

**Table 5. Hedgerow lengths and condition – on-site baseline**

Habitat type	Length (km)	Condition	Criteria
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Native hedgerow	0.63	Moderate	Height/width > 1.5 m, low gappiness but higher disturbance at base and vegetation typical of high nutrient conditions.
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**Table 6. Hedgerow lengths and condition – on-site post-construction**

Habitat type	Length (km)	Condition	Criteria
Species-rich native hedgerow	0.35	Good (new)	Species-rich planting with undisturbed strip at base and low nutrient input

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## BNG METRIC ERRORS

- It should be noted that this application pre-dates the introduction of statutory BNG, and that NLC agree a 1% increase in BNG would be sufficient for this project.

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## HABITAT MAPS (BASELINE AND PROPOSED)

- Figure 1 shows the baseline habitats on the Monopile site, plotted using the UKHAB v.2 classification. Figure 2 shows the post-construction habitats.

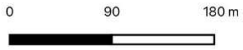


AMEP MONOPILE FACTORY:  
HABITAT MAP

FIGURE 1

PRE-CONSTRUCTION BASELINE

- KEY:
-  Red Line Boundary
- Habitats Baseline
-  Developed land; sealed surface
  -  Other neutral grassland
- Hedgerow Baseline
-  Native hedgerow
  -  To be created



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Baseline Habitat Map (UKHAB v2)

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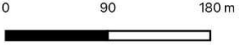


AMEP MONOPILE FACTORY:  
HABITAT MAP

FIGURE 2

POST-CONSTRUCTION BASELINE

- KEY:
-  Red Line Boundary
  - Habitats Proposed**
  -  Developed land; sealed surface
  -  Modified grassland
  - Hedgerows Proposed**
  -  Species-rich native hedgerow
  -  Lost to development



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Baseline Habitat Map (UKHAB v2)

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## BNG PLAN (WITH MANAGEMENT AND MONITORING PRESCRIPTIONS)

14. This section of the report sets out the biodiversity net gain plan with management and monitoring prescriptions for the next 30 years. The Site Baseline and Environmental Information Checklist is given in Appendix 1. The headline BNG results are in Appendix 2.
15. All of the biodiversity enhancement works will be implemented within six months of completion of monopile factory construction. It should be noted that the main biodiversity benefit has already been delivered through the Halton Marshes Wet Grassland, which has been operational since spring 2019.

### New Native Hedgerows and Trees

#### Management Objectives

16. The management objectives for the new native hedgerow are:
  - Maintain existing and new native hedgerows to a naturalistic appearance and with predetermined ultimate height, shape and width;
  - Ensure continuity of form and density by under or inter-planting any gaps or sparse areas using species mixes to match as required; and
  - Ensure that leggy and unkempt growth is pruned back and maintained at a functional size.
17. The following mix of native woody species will be planted: hawthorn *Crataegus monogyna* (30%), blackthorn *Prunus spinosa* (30%), field maple *Acer campestre* (10%), hazel *Corylus avellana* (15%), dogwood *Cornus sanguinea* (5%), crab apple *Malus sylvestris* (5%) and buckthorn *Rhamnus cathartica* (5%). Plants to be planted at 0.33m separation in a double staggered row (6 plants per linear metre), with a minimum of five native woody species per 30 m length.
18. Trees will additionally be planted within the new hedgerow planting (Figure 2). This will use native tree species commonly found in the field boundary hedgerows in the region, including Oak *Quercus robur*, Beech *Fagus sylvaticus*, Hawthorn *Crataegus monogyna*, Hazel *Corylus avellana*, Crab Apple *Malus sylvestris* and Field Maple *Acer campestre*.

#### Annual Works

19. **General native hedge maintenance:** Prune new native hedges once or twice annually; once in June and again in November, if required. Single cuts will provide a more natural appearance.
20. **Pruning native hedges:** Prune any diseased or rotten wood (including the removal of main stems and limbs) back to sound wood. Remove all stems and limbs which are unsafe or are in danger of falling or breaking up during gales. Remove all cut material from the site. Do not site burn. Top out native hedgerows to the intended eventual height, and face up the sides, using an electric hedge cutting device, to form an even and tidy hedge alignment. Cut larger stems with a shrub pruning tool. Long rural native hedges can be flailed once annually if there is suitable access.



21. **Weed control:** weeding and spot herbiciding as required to control nettles, docks and cleavers.

#### *Occasional Works*

22. **Gapping up native hedges:** Remove failed plants for new native hedges and replace them with a plant of the same species, to a minimum size of an open ground whip, 0.9 to 1.2 m high, planted between December and mid-March inclusively, unless the plant is either Ilex, Ligustrum or other native evergreen species, when the height can be 500 mm minimum and supplied in a 3-litre pot. Gap up areas of less dense growth with additional plants as required to achieve a continuous hedge alignment, but take due allowance for natural growth.

#### **Proposed Modified Grassland (Wildflower Meadow)**

##### *Management Objectives*

23. The management objectives for wildflower grassland areas will be:
  - Ensure the satisfactory establishment of the grass sward; and
  - Maintain a healthy and biodiverse sward suitable for a range of wildlife.

##### *Annual Works*

24. **Cutting of wildflower areas:** Meadow grass and wildflower areas shall be strimmed only once a year to a height of 100 mm in late August. To ensure that soil fertility is reduced, rake up the arisings immediately, or in hot, dry weather, they can be left in situ for a maximum of two days to set seed before raking. In a warm and wet year, a second cut may be required, and if so, this should be carried out either in October or March as appropriate. The timing of all cutting operations should consider any protected species (such as reptiles) that may be present. There may be an additional requirement for monitoring or a watching brief by a qualified ecologist to ensure no protected species are present. Once cut and raked up, all arisings shall be collected and removed off-site as agreed.
25. **General care:** Hand-weed pernicious, ruderal, aggressive or invasive weeds to maintain the area's visual amenity. Do not use herbicides or fertiliser. Hibernacula should be left undisturbed. Arisings from tree surgery work can be retained on-site and create new hibernacula as required.

##### *Occasional Works*

26. **Replacement of failed wildflower grassland areas:** Species-poor meadow grass and wildflower sward should be enhanced. In areas of low fertility, closely trim or mow the existing sward and remove all cuttings in August. Rake or scarify to disturb the ground, overseed with a suitable mix of wildflowers matching the microclimatic and soil conditions, and repeatedly tread over the area. After sowing, mow the grass to a height of 60 mm to ensure light and air reach emerging seedlings for a full growing season. In areas where soil fertility is too high, or the sward has failed, re-cultivating and re-seeding are required. Remove dead material and re-cultivate the topsoil to a depth of 100 mm. Small areas may be reseeded following the autumn cut by spreading the cut arisings onto the bare soil. For more wholesale degradation, cultivate the affected area until a fine, level tilth is achieved, removing stones greater than 20 mm in diameter. Do not use fertilisers or herbicides. Evenly seed with the original seed mix at the specified rate. Carefully rake in thoroughly to ensure that the seed is a few millimetres below the surface and roll using a very light roller or a cylinder mower, with the surface is even and



level. Water thoroughly to maintain the soil in a moist condition, remove stones, weed and mow until the grass is established.

### Nestboxes

27. A range of bird and bat boxes will be installed to improve the availability of nesting and roosting resources, all to be manufactured from high-quality, long-lasting material such as 'Woodcrete'. This will include:
- **Barn owl and kestrel boxes** – one for each species to be erected at a secure location within the site near to the new wildflower meadow.
  - **Songbird nest boxes** – 20 boxes of mixed type (5 x small hole for tits, 5 x larger hole for sparrows, 5 x larger boxes for starlings and 5 x open-fronted boxes for flycatchers/robins/thrushes). These will be erected within woodland patches and on trees within the existing hedgerows/field boundaries across the AMEP site and mitigation areas.
  - **Bat boxes** – 10 boxes – same locations as songbird nest boxes.

### Monitoring

28. To ensure that the BNG Plan delivers its objectives and achieves a net gain, a habitat monitoring programme will be implemented. This includes annual visits to assess the site's habitat condition, in years one, two, three, five, and then at five-year intervals through the operational lifetime of the development. A report will be produced after each visit, supplied to the LPA and made publicly available.

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## BIODIVERSITY UNITS TO BE DELIVERED ON-SITE

### Habitats: On-site

29. The biodiversity net gain measures will include a new strip of wet grassland alongside the modified drainage channel that forms the south-western boundary of the monopile development. This will deliver an additional net gain to the proposed mitigation on Halton Marshes.
30. There would be a 22 m wide grassland strip running alongside the re-engineered drainage channel, with a 7 m width required for vehicle access for drain management (so it was excluded from these calculations). That would leave a 15 m width forming the core area in which wet grassland would be established (Figure 2). A 550 m length would give an area of 0.83 ha. for the biodiversity net gain. 0.1 ha of this is allocated to the monopile factory net gain requirement (leaving 0.73 ha banked for other net gain). That would deliver a gain of 0.47 biodiversity units (assuming 10 years to reach its full conservation value), giving, together with the off-site measures set out below, a net gain of 8.4 habitat units (+30%).

### Hedgerows: On-site

31. There will be a loss of 630 m of hedgerow from the site (Figure 2). New hedgerow planting on site (350 m of native species-rich hedgerow) will, though, deliver a net gain of 0.63 hedgerow biodiversity units (+25%).



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## BIODIVERSITY UNITS TO BE DELIVERED OFF-SITE

### Habitats: Off-site

32. The provision of wet grassland off-site, combined with on-site measures, will deliver the required biodiversity units. This will be delivered through the Halton Marshes Wet Grassland Scheme (HMWGS), where an area of 5.5 ha will be needed to offset the habitat loss through the creation of wet grassland (Floodplain Wetland Mosaic).

### Hedgerows: Off-Site

33. No off-site hedgerow creation is needed to achieve the required net gain.

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## BIODIVERSITY NET GAIN CONCLUSION

34. The ES ecological assessment concluded that the proposed mitigation measures would ensure no significant residual effects of the development on any ecological receptor. That remains the case with the updated BNG calculations. The proposed measures would deliver an additional 18% habitat and 25% hedgerow biodiversity net gain, exceeding the 1% net gain requirement previously agreed with NLC.



## APPENDIX 1. SITE BASELINE AND ENVIRONMENTAL INFORMATION CHECKLIST

Baseline and Environmental Information	Prompts for when these may be relevant.	Document Reference or Reason if not included
<b>Statutory / Non-statutory Designated Sites</b>	Will your proposals lead to direct or indirect effects on designated sites?	Yes – see HRA
<b>Protected and Notable Species</b>	Does the presence or proximity of specific species on or near your site present any constraints or opportunities to project design or management?	Yes – Species Protection Plan will be implemented for the construction phase
<b>Invasive Non-Native Species (INNS)</b>	Are any INNS present onsite that could affect the proposals?	No
<b>Biological Records Plan - Sites and Species</b>	Does the presence of designated sites or specific species on or near the site present any constraints or opportunities to proposals?	Yes – proximity of Humber Estuary SPA gives both constraints and opportunities
<b>Baseline Habitats Survey</b>	Is this current and important HMMP information located in a separate document? If so, provide details on where it is located.	No
<b>Public Access</b>	Has public access, or proposals to allow public access, influenced your management prescriptions? If so, how?	No
<b>Climate</b>	Are local climate conditions and, or, climate change likely to impact the target habitat retention, creation or enhancement?	No
<b>Geology and Topography</b>	Any geological or topographical constraints or opportunities?	On-site: No Off-site: No
<b>Agricultural Land Status</b>	Does the site support any land favourable for agricultural management? Could this affect the proposals?	On-site: No Off-site: Potentially suitable as grazing as part of grassland management
<b>Soils and Substrates</b>	Do soils and substrates present any constraints or opportunities?	On-site: No Off-site: No
<b>Contaminated Land</b>	If there is any contaminated land, will this present any constraints?	On-site: None identified Off-site: None identified
<b>Hydrology and Drainage</b>	Will the site hydrology present any constraints or opportunities?	On-site: No Off-site: No
<b>Flood Risk Zones</b>	Is the site within a flood risk zone? Will that present any site management risks?	On-site: Flood zone 3 with flood defence wall and mitigations as part of construction works Off-site: Flood zone 3 protected by flood defence wall. No issues
<b>Landscape Character and Designations</b>	Does the landscape character of the site present any constraints or opportunities?	On-site: No Off-site: No



<b>Baseline and Environmental Information</b>	<b>Prompts for when these may be relevant.</b>	<b>Document Reference or Reason if not included</b>
<b>Historic Land Use</b>	Does the historic land use present any constraints or opportunities?	On-site: No Off-site: No
<b>Historic Environment and Earth Heritage</b>	Are there any historic environment designations? What are the implications for your plan?	On-site: No Off-site: No
<b>Other – please specify</b>	Any other details - for example underground services or overhead powerlines, which may impact habitat management.	On-site: No Off-site: No



## APPENDIX 2. Biodiversity Net Gain v.3 Metric Headline Results

AMEP Monopile Factory		Return to results menu	
Headline Results			
<b>On-site baseline</b>	<i>Habitat units</i>	<b>28.40</b>	
	<i>Hedgerow units</i>	<b>2.52</b>	
	<i>River units</i>	<b>0.00</b>	
<b>On-site post-intervention</b> <small>(Including habitat retention, creation &amp; enhancement)</small>	<i>Habitat units</i>	<b>0.47</b>	
	<i>Hedgerow units</i>	<b>3.15</b>	
	<i>River units</i>	<b>0.00</b>	
<b>On-site net % change</b> <small>(Including habitat retention, creation &amp; enhancement)</small>	<i>Habitat units</i>	<b>-98.35%</b>	
	<i>Hedgerow units</i>	<b>24.99%</b>	
	<i>River units</i>	<b>0.00%</b>	
<b>Off-site baseline</b>	<i>Habitat units</i>	<b>11.00</b>	
	<i>Hedgerow units</i>	<b>0.00</b>	
	<i>River units</i>	<b>0.00</b>	
<b>Off-site post-intervention</b> <small>(Including habitat retention, creation &amp; enhancement)</small>	<i>Habitat units</i>	<b>44.10</b>	
	<i>Hedgerow units</i>	<b>0.00</b>	
	<i>River units</i>	<b>0.00</b>	
<b>Total net unit change</b> <small>(including all on-site &amp; off-site habitat retention, creation &amp; enhancement)</small>	<i>Habitat units</i>	<b>5.17</b>	
	<i>Hedgerow units</i>	<b>0.63</b>	
	<i>River units</i>	<b>0.00</b>	
<b>Total on-site net % change plus off-site surplus</b> <small>(including all on-site &amp; off-site habitat retention, creation &amp; enhancement)</small>	<i>Habitat units</i>	<b>18.19%</b>	
	<i>Hedgerow units</i>	<b>24.99%</b>	
	<i>River units</i>	<b>0.00%</b>	
<b>Trading rules Satisfied?</b>	<b>Yes</b>		