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Biodiversity Net Gain Assessment

Yeorton Wind Ltd

23 January 2026

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DOCUMENT INFORMATION

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1.0	23/01/2026	Draft for Client Review	JW	IM
1.1	22/03/2026	Inclusion of hedgerow planting	JW	DW

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TABLES AND FIGURES

1. Introduction

Locogen Consulting Ltd. was commissioned by Yeorton Wind Ltd. ('the Client') to produce an Biodiversity Net Gain Assessment (BNGA) to discharge pre-commencement Condition 4 (see below) for planning permission reference 4/24/2057/0F1 granted by Cumberland Council on 20 February 2025. Condition 4 of the permission states:

"The site shall provide for a minimum of 10% Biodiversity Net Gain, details of how this is to be achieved shall be submitted to and approved in writing by the Local Planning Authority before any development commences. The development shall be carried out in accordance with the approved scheme and maintained in perpetuity thereafter. "

Reason

"*To ensure that a minimum of 10% Biodiversity Net Gain is achieved for the site in accordance with Policy N3 of the Copeland Local Plan 2021-2029."*

This report has been prepared by Jake Walker BSc (Hons) Principal Ecological Consultant.

The objectives of this report are to:

- Establish baseline conditions on-site for area and linear habitats;
- Provide Statutory Biodiversity Metric baseline and proposed calculations;
- Provide a baseline and proposed habitat plans; and
- Provide an outline habitat creation and management scheme to be implemented.

1.1 Site overview

The site is a parcel of agricultural land directly adjacent to the Energy Coast Business Park, approximately 2km south of Egremont, Cumbria. The site location and area subject to this BNGA is shown below in Figure 1. The development will use existing access roads during construction, as such these are already developed and will have a negligible impact on BNG baseline or proposed score, therefore site access has been omitted from the BNGA.

Figure 1: Site area subject to BNGA.

1.2 The development

The development, is for the repowering of the existing turbine within the site, replacing the current 46.5m turbine to a 77m blade tip wind turbine. This will require the construction of a new pad and turbine foundation.

2. Biodiversity Net Gain Requirement

2.1 Legislative Background

The requirement for BNG is set out in the Environment Act 2021[1]. The Act mandates that developments must result in a measurable biodiversity improvement, with a minimum of 10% net gain in biodiversity, to be achieved across the lifespan of the development.

Under the Environment Act 2021, the Statutory Biodiversity Metric is used to assess and quantify biodiversity losses and gains. The aim is to ensure that development projects contribute positively to the natural environment, enhancing habitats, and promoting ecological resilience. BNG must be achieved through the creation, restoration, or enhancement of habitats on site or via off-site measures, such as biodiversity credits, to offset any residual impacts.

[1] UK GOV (2021) *Environment Act 2021*. Available online: Environment Act 2021

2.2 Purpose of Biodiversity Net Gain

BNG is required to:

- Contribute to halting the decline of biodiversity in the UK.
- Provide long-term ecological benefits and resilience against climate change.
- Offset the negative impacts of development on ecosystems and wildlife.
- Comply with legal and planning policy requirements, aligning development projects with national and local environmental priorities.

This report aims to demonstrate how the development complies with the BNG requirements, using the Biodiversity Metric to quantify baseline and proposed habitats and showing how the project will achieve a net gain.

3. Methodology

3.1 Desktop study

DEFRA's interactive MAGIC map was used for a baseline assessment of available environmental information of over 300 datasets including Priority Habitats & Species inventories, Designations, Environmental & Historic Landscape Agreements, SSSI impact zones, and Wildlife Licenses.

3.2 Field survey, Mapping, and Metric Calculations

Baseline habitat surveys were undertaken in 2023 by Jake Walker who is a Principal Ecological Consultant for Locogen Consulting Ltd. He holds a Class Survey Licence WLM-A34 (Bat Survey Level 1) registration number 2021-51430-CLS-CLS; and a Level 1 Class Survey Great Crested Newt Licence 2022-10177-CL08-GCN. Jake is also a Level 4 FISC surveyor and has over five years' experience in professional ecological consultancy and has provided specialist advice on a range of projects, both within residential and industrial development. He has extensive experience in protected species surveys and has provided ECoW services for a variety of projects.

Baseline surveys were undertaken in October 2023 as part of the initial Preliminary Ecological Appraisal (PEA). Due to the modified habitats on-site and land management practices its is considered that this still provided an accurate representation of the habitat type and condition. An updated ecological walkover on 22 January 2026 confirmed this.

UK HAB's habitat survey of the site was conducted following standard published guidelines[2.] This involved a walkover of the site, mapping all habitats present which fell into the appropriate Minimum Mapping Units (MMU). MMU's were decided upon pre-survey. Large scale MMU were adopted due to the size of the site. All habitats that met the following criteria were mapped. Area 400m2, Linear feature 20m.

Spatially accurate digital baseline and proposed habitat maps were created using QGIS3. Adapted UK HAB symbology was used to show habitat types, and linear features within the site.

The Statutory Biodiversity Metric (the Metric)[3], user guide[4] and condition assessment sheets[5] were used to determine baseline and proposed development biodiversity scores. UKHAB version 2.0 was used to determine habitats present.

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[2] UKHab Ltd (2023). *UK Habitat Classification Version 2.0* (at https://www.ukhab.org)

[3] DEFRA (2024) *The Statutory Biodiversity Metric*

[4] DEFRA (2024) *The Statutory Biodiversity Metric User Guide.* Available online: *https://assets.publishing.service.gov.uk/media/669e45fba3c2a28abb50d426/The_Statutory_Biodiversity_Metric_-_User_Guide__23.07.24_.pdf*

[5] DEFRA (2024) *The Statutory Biodiversity Metric – Technical Annex 1: Condition Assessment Sheets and Methodology.*

3.3 Limitations

There were no limitations or constraints regarding the BNGA.

4. Baseline habitat Assessment

4.1 Description of existing habitats and condition

The Site is predominantly comprised of species modified grassland, with a small parcel of other neutral grassland in the entrance of the field where agricultural improvement has not been as intensive – however, this is currently heavily poached and subject to regular disturbance. The small parcel of other neutral grassland is not a good representation of UK HAB classification, as such it does not achieve Criterion A and is poor condition.

The existing turbine has a small footprint, below the designated MMU. The existing crane pad is in-situ however, it has been colonised by grasses, this has resulted in an area that is grass dominant but some localised areas of bare ground. However, for the purpose of the PEA and BNGA the crane pad has been classed as modified grassland.

Modified grassland is the dominant habitat within the site. The grassland is indicative of grassland that has been subject to nutrient enrichment, it has thick sward which is generally homogonous in height and species poor; the grass is managed through sheep and cattle grazing. Grass species are restricted to a low number of fast-growing palatable grasses, with cocks' foot (*Dactylis glomerata*) and perennial ryegrass (*Lolium perenne*) dominant. Forb species are restricted to creeping buttercup (*Ranunculus repens*), creeping thistle (*Cirsium arvense*), mouse eared chickweed (*Cerastium fontanum*) and curled dock (*Rumex crispus*). The site is bounded by stock fencing along the east, south and west boundaries. The grassland does not support 6-8 species per m^2 as such it is classed as poor condition in the metric.

A native hedgerow bounds the western boundary of the site. However, it is generally species-poor with hawthorn (*Crataegus monogyna*) the dominant species. The hedgerow is lined with stock fencing along both aspects which has enabled dense bracken (*Pteridium aquilinum*) to dominate the understory. The hedgerow does not appear to be regularly managed and is beginning to develop into a line of trees, particularly towards the southern boundary of the site. The hedgerow achieved a good condition within the metric.

Tables 1 and 2 provide a detailed overview of the baseline area habitats, conditions and biodiversity score.

Table 1: Baseline area habitat calculations

	Existing area habitats				Distinctiveness	Condition	Strategic significance	Required Action to Meet Trading Rules	Ecological baseline
Ref	**Broad Habitat**	**Habitat Type**	**Irreplaceable habitat**	**Area (hectares)**	**Distinctiveness**	**Condition**	**Strategic significance**		**Total habitat units**
1	Grassland	Modified grassland	No	2.462	Low	Poor	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required ≥	4.92
2	Grassland	Other neutral grassland	No	0.008	Medium	Poor	Area/compensation not in local strategy/ no local strategy	Same broad habitat or a higher distinctiveness habitat required (≥)	0.03
		Total habitat area		**2.47**					**4.96**
		Site Area (Excluding area of individual trees, green walls, intertidal hard structures)		**2.47**					

Table 2: Baseline hedgerow calculations.

	Existing hedgerow habitats			Distinctiveness	Condition	Strategic significance	Required Action to Meet Trading Rules	Ecological baseline
Ref	**Hedge number**	**Habitat type**	**Length (km)**	**Distinctiveness**	**Condition**	**Strategic significance**		**Total hedgerow units**
1	H1	Native hedgerow	0.202	Low	Good	Area/compensation not in local strategy/ no local strategy	Same distinctiveness band or better	1.21
			0.20					**1.21**

5. Proposed development and habitat strategy

Due to the scale and type of development, much of the existing habitat will be retained, and overall habitat loss will be minimal. As discussed, no new access roads will be required to facilitate construction, the only source of habitat loss will be installation of a new crane pad, and turbine foundation. The crane pad will result in the loss of 0.105-ha of modified grassland from the site. The remainder of the grassland will be retained, and whilst there is potential that this may be disturbed during constriction (vehicle movements, storage etc.) the wider grassland will be restored post-construction and continue agricultural use. The existing grassland is of poor condition, this grassland has a time to target condition of one year, as such following guidance it can be classed as retained within the metric as restoration will achieve baseline condition within two years post construction.

There will be no loss of hedgerow from the proposed development, and the parcel of other neutral grassland will be subject to similar levels of disturbance, as such it has been classed as retained.

To enable the development to achieve a 10% net gain from baseline condition, it is proposed that 0.16-ha of moderate condition other neutral grassland will be created within the site. This is proposed to be sited along the western boundary adjacent to the existing hedgerow. This area will be fenced off from the wider site to preclude intensive grazing and seeded with a suitable meadow mix such as EM1 Basic General-Purpose Meadow Mixture.

To ensure that the Development achieves a 10% net gain in area and linear habitats, 40m (0.04km) of native species hedgerow will be planted within the Site. It is proposed that this is planted alongside the proposed other neutral grassland. The hedgerow will consist of native species, with hawthorn the dominant shrub type. Potential species composition is shown below in Table 3.

Table 3: Hedgerow species composition.

Species	Density (%)	Form
Hawthorn (*Crataegus monogyna*)	70	Bare root transplant
Blackthorn (*Prunus spinosa*)	20	Bare root transplant
Hazel (*Corylus avellana*)	5	Bare root transplant
Elder (*Sambucus nigra*)	5	Bare root transplant

Tables 4 below show the proposed habitat creation for development.

Table 4: Proposed area habitat creation.

Broad Habitat	Proposed habitat	Area (hectares)	Distinctiveness	Condition	Final time to target condition (years)	Difficulty multipliers Final difficulty of creation	Habitat units delivered
Urban	Developed land; sealed surface	0.105	V. Low	N/A - Other	0	Low	0.00
Grassland	Other neutral grassland	0.16	Medium	Moderate	5	Low	1.07

Table 5: Proposed linear feature creation.

Proposed habitat	Length (km)	Distinctiveness	Condition	Final time to target condition (years)	Difficulty multipliers Final difficulty of creation	Habitat units delivered
Native hedgerow	0.04km	Low	Moderate	5	Low	0.13

6. Biodiversity Net Gain Calculation

The results of the biodiversity net gain calculation show that if the proposed habitat strategies detailed above are implemented and achieved, the proposed development will have a +10.92% gain in area units, and a +11.05% in linear units. Overall, there will be an increase in 0.54 area habitats units comparative to the baseline calculation. Figure 2 below details the headline results.

FINAL RESULTS		
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	*Area habitat units*	0.54
	Hedgerow units	0.13
	Watercourse units	0.00
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	*Area habitat units*	10.92%
	Hedgerow units	11.05%
	Watercourse units	0.00%
Trading rules satisfied?	Yes ✓	

Figure 2: Headline results.

7. Habitat creation and management plan

7.1 Other neutral grassland creation

Creation of the area of other neutral grassland should be undertaken in line with the following measures.

- To create areas of bare ground and a suitable seedbed, the existing grassland should be cut to a low height of (2.5-5cm) to reduce competition. The sward should then be scarified using either a power harrow or chain harrow aiming to create 30% to 50% bare ground.
- The seed mix will be directly sown using a surface broadcaster. Seed should be sown at the supplier recommended rate for the proposed seed mix.
- The area should be rolled immediately after to improve seed/soil contact.
- Sowing of the seed will take place within the first planting season post construction. Sowing should normally be undertaken between March-April or September-November. Sowing or ground preparation should not be undertaken in wet/waterlogged conditions or during periods of frost.

7.2 Other neutral grassland establishment and management

Management of the grassland will be undertaken through mechanical means and following standard meadow management techniques. It is anticipated that the landowner will take on management responsibilities. The following measures should be adopted.

Establishment

Initially, in the first year following sowing, checks should be made to assess and control annual weeds. These will be managed by topping and mowing prior to setting seed which will encourage lateral development of the grasses, or by carefully targeted applications of a suitable selective non-residual herbicide by way of spot spraying with a knapsack or weed wiping. Any topping of weeds (i.e. creeping thistle, curled dock) undertaken between April and August should be no lower than 200mm to prevent harm to any ground nesting birds.

Management

Following establishment, two cuts will be taken per year: an early cut in February, if necessary, to manage regrowth and a second later in the season between August and September (each cut reducing sward height to approximately 150mm). Cutting will not take place throughout the summer to allow the seeds of the later flowering species to fall prior to the cut.

The management will take a flexible approach, and the exact dates will be dependent upon weather conditions.

Cuttings will remain on-site for three to five days following the cut to allow seeds to disperse and then be removed from the Site in order to remove nutrients and promote the development of a species-rich sward. It is **essential** that cuttings are removed from the Site to prevent increased nutrient input and vigorous grass growth.

7.3 Native hedgerow

Planting specification

- Hedgerows will be planted between November-March when plants are dormant. Planting between November and before the end of January is preferred as this will enable newly planted whips to establish a network of feeder roots prior to spring. Planting will be undertaken under frost-free conditions and during a relatively dry period to avoid waterlogged soil.
- A 600 mm wide trench will be excavated, and topsoil cultivated to 450 mm depth prior to planting. The existing soil should be improved by digging in well rotten Farmyard Manure or other soil improver added.

- Alternatively, plants could be slot-planted; if slot planting existing vegetation should be removed prior to planting either through cultivation, herbicide use, or turf stripping.
- Bare rooted whips 60-90cm in length will be used, these will be sourced from a local provider.
- Hedgerows will be planted in double staggered rows, with at least 40cm between each row. Whips will be planted in densities of 6 per metre, with species grouped in groups of five.
- The bases of a new hedge whips will be protected from grazing via the installation of tree guards. Where possible biodegradable tree guards will be used. Non-biodegradable guards will be removed once the shrubs have sufficiently established.
- Whips will be supported with canes.
- A layer of mulch will be spread at the base of the new planted hedgerows. This will reduce weed competition and help retain moisture during establishment. The mulch layer will be applied immediately after planting. The use of herbicides in weed control should be avoided were possible.
- Immediately following planting, hedgerows should be trimmed to encourage bushy growth.

Establishment

Following planting, the hedgerow should enter into a five year after programme to ensure successful establishment. This is outlined below in Table 6.

Table 6: Five-year aftercare programme.

Operation	Target	Frequency per annum	Season	Y1	Y2	Y3	Y4	Y5	Y6 onwards
Hedgerows			-						
Check of stock for failure/damage		1	September	✓	✓	✓	✓	✓	
Replacement of dead stock	December immediately following inspection of stock	1	December	✓	✓	✓	✓	✓	
Maintain mulch layer (75mm)	Maintain mulch zone to suppress weed growth and reduce competition	Biennially	-		✓		✓		
The planted hedgerows should be inspected during periods of warm weather and drought. If it is considered that the ground conditions are too dry, the planted shrubs and trees should be watered on a regular basis until weather conditions are considered suitable for watering to cease	As necessary	Throughout growing season	March - August	✓	✓	✓	✓	✓	
Removal of guards	As necessary	1	-	✓	✓	✓	✓	✓	
Reduce hedgerow height by a third immediately post planting		1	-	✓					
Light pruning to encourage bushy growth and achieve required hedge height and form; removing half of the previous year's growth.	To achieve the required height and form	1	Jan-Feb: late winter cuts allowing for seed to be available throughout winter		✓				.

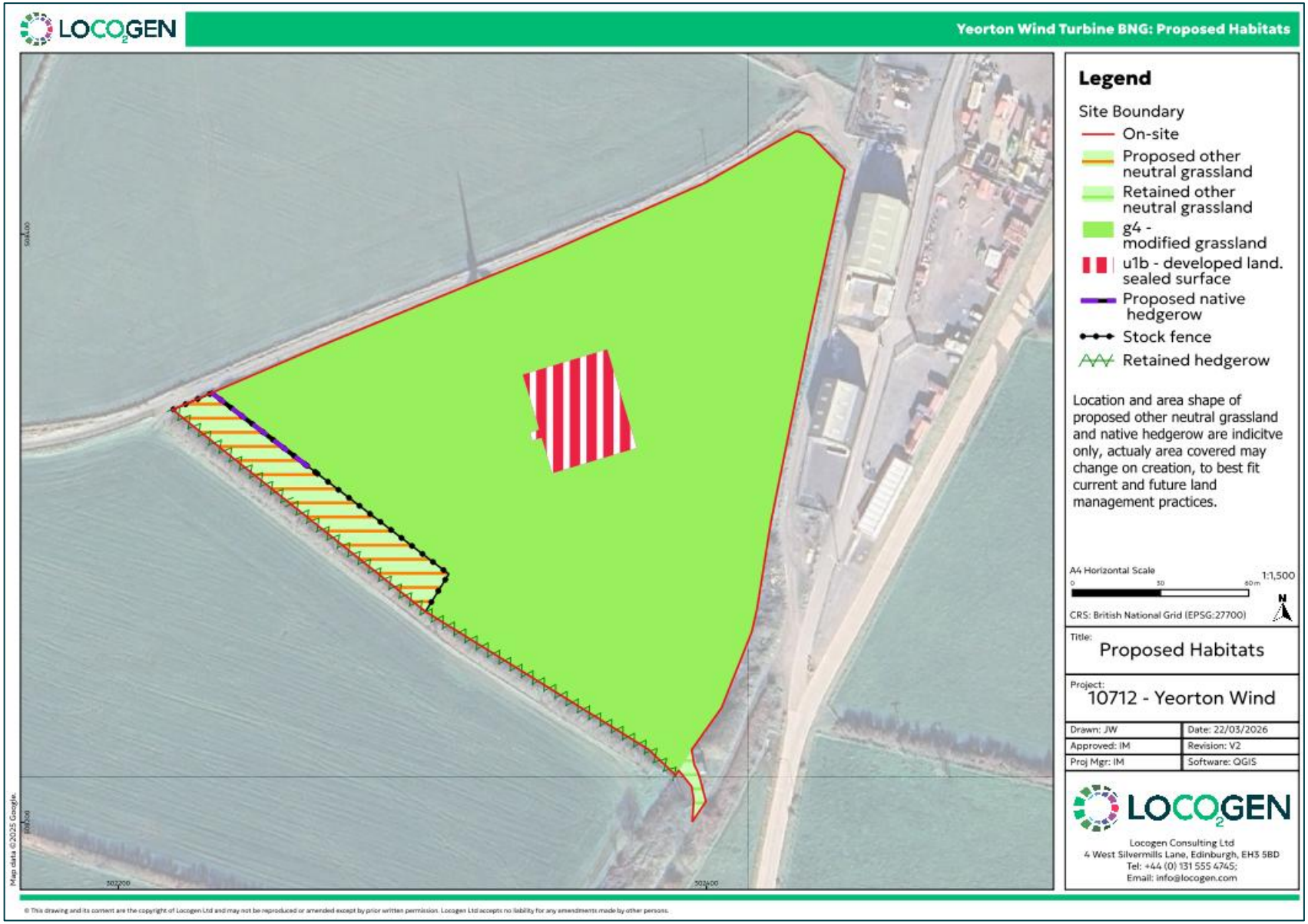
Shape the plants by trimming both lateral and lead branches reducing the seasons growth by 50%. Newly planted hedgerows should be trimmed using hand-held machinery (not flail cutters) for the first three years until established.	To achieve required height and form	1	Jan-Feb: late winter cuts allowing for seed to be available throughout winter			✓	✓	✓	
Hedgerows to enter into the wider hedgerow management schedule. Cut on a 2-3 year rotational basis, maintained at a height of 3m.		1	Jan-Feb: late winter cuts allowing for seed to be available throughout winter						✓

Management

Following establishment, the hedgerow should enter into the same management routine as the current hedgerow within the Site, this is expected to consist of the following:

- Hedgerows will be cut on a two-year rotational basis (due to dominant hawthorn)
- Hedgerows will be cut between late September and February January – February. Hedgerows should be cut on different sides each year. This will provide a varied structure for the benefit of wildlife and to allow plants to flower and set seed/fruit.
- Hedgerows will be allowed to grow to minimum 3m in height and be managed to this height throughout the operational period.

APPENDIX A: BASELINE AND PROPOSED HABITATS


LOCOGEN
Yeorton Wind Turbine BNG: Proposed Habitats
Legend
Site Boundary
On-site
Proposed other neutral grassland
Retained other neutral grassland
g4 - modified grassland
u1b - developed land. sealed surface
Proposed native hedgerow
Stock fence
Retained hedgerow
Location and area shape of proposed other neutral grassland and native hedgerow are indicitve only, actualy area covered may change on creation, to best fit current and future land management practices.
A4 Horizontal Scale
1:1,500
0
30
60 m
CRS: British National Grid (EPSG:27700)
N
Title:
Proposed Habitats
Project:
10712 - Yeorton Wind
Drawn: JW
Date: 22/03/2026
Approved: IM
Revision: V2
Proj Mgr: IM
Software: QGIS
LOCOGEN
Locogen Consulting Ltd
4 West Silvermills Lane, Edinburgh, EH3 5BD
Tel: +44 (0) 131 555 4745;
Email: info@locogen.com
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Contact

Locogen Consulting Ltd.

0131 555 4745
hello@locogen.com
locogen.com

4 West Silvermills Lane
Edinburgh
EH3 5BD