Burn Road, Huddersfield

Ecological Design Strategy

2023

REV.B

RACHEL
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ECOLOGY

Client	Wiggit Construction Limited
Project Title	Burn Road, Huddersfield
Project Reference	RHE.3307
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Background

Rachel Hacking Ecology Ltd was commissioned in 2023 by Wiggett Construction to provide an Ecological Design Strategy (EDS) at Land off Burn Road, Huddersfield.

The site will be the subject of a planning application for a residential development, which includes associated access, parking and landscaping of gardens and public open spaces. An Extended Phase 1 Habitat Survey and a Biodiversity Impact Assessment had been carried out at the site. The proposed landscaping includes areas of marshy grassland around a retained stream, amenity-managed grassland, scattered trees, introduced shrub and hedgerow.

Aims and Objectives

The aim of the EDS is to reduce net loss deficit. The specific objectives are to:

- Purpose and conservation objectives for the proposed works, including but not limited to the creation of a permanent water body or marshy grassland habitat within open space.
- Review of site potential and constraints informed by up-to-date (within 12 months of the date of submission) ecological survey and assessment.
- Detailed design(s) and/or working method(s) to achieve stated objectives.
- Extent and location/area of proposed works on appropriate scale maps and plans.
- Type and source of materials to be used where appropriate, e.g. native species of local provenance.
- Timetable for implementation demonstrating that works are aligned with the proposed phasing of development.
- Persons responsible for implementing the works.
- Details of initial aftercare and long-term maintenance.
    i) Details for monitoring and remedial measures.

Review of the site constraints and potential

The site was the subject of a site visit, on 13th May 2023 to inform the extended Phase 1 Habitat Survey. The Biodiversity Impact Assessment was carried out July 2022 with an update carried out in October 2023 due to updates to the landscaping plan. The date of submission of the application is 22nd December 2021 the surveys and assessments were carried out within 12months of the submission date and have been updated as required to keep the survey data and assessments up-to date.

Roles and Responsibilities

The construction contractor, Wiggett Construction Ltd is responsible for the creation of the habitats and implementing the works. Wiggett construction Ltd will also be responsible for aftercare and maintenance for the 12 months after creation. The appointed residential management company will be responsible for the ongoing management (after 12 months) of the retained and new habitats including commissioning a Suitably Qualified Ecologist (SQE) to undertake annual monitoring.

Assuming Kirklees council do not want to adopt the open space areas, a residential management company will be responsible for monitoring and remedial measures and will employ a landscape management company to undertake maintenance works.

The maintenance of the private gardens will be the responsibility of the homeowners.

Timetable for implementation

The landscape planting will be implemented at the end of the construction programme to avoid damage from construction activities.

Objectives

1. Habitat Creation

The purpose for the creation of new habitats, is to replace the biodiversity units lost as a result of the development.

Protected species habitat creation will be provided by the following enhancements, which can all be seen on Trevor Bridge Associates drawing no.: 6724.03G LP Nov 23:

- The integration of one bat box per two dwellings at the site.
- The integration of sparrow terraces and swift bricks throughout the site, on a scale of one feature per two dwellings; and
- Provisions for hedgehog, including 13x13cm gaps at the base of all fences and boundaries and placement of two hedgehog boxes in suitable locations within the site.

A detailed landscaping plan has been produced for the site by Trevor Bridge Associates Ltd (reference: 6724.03G LP Nov 23), which details the creation of several habitats. The area of each habitat is indicated within the tables below and a map of the proposed habitat locations is provided within Appendix 1. A full assessment of the proposed habitats is included within the Biodiversity Impact Assessment for the site.

Habitat to be Created	Marshy Grassland		
Type and source of materials to be used where appropriate.	Emorsgate EM8 Meadow Mixture for Wetlands is proposed to create this habitat which is a suitable mix for the wetland areas surrounding the stream. EM8 is a species mix containing 17 different wildflowers and 6 different grass species. All are species suitable for seasonally wet soils and is based on the vegetation of traditional floodplain and water meadows.		
Area of the habitat	0.13ha	Habitat Units Provided	0.45
Target Condition	Moderate	Time to Achieve	4 Years
Objectives to achieve desired condition:	To achieve the desired condition within 4 years of creation there must be: - 6-8 vascular plant species per m^2 present, including at least 2 forbs. In addition, within 4 years, 5 of the following 6 statements must be achieved: - Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm). - Scattered scrub accounts for less than 20% of total grassland area. - Physical damage is evident in less than 5% of total grassland area. - Cover of bare ground is between 1% and 10%, - Cover of bracken *Pteridium aquilinum* is less than 20%. - There is an absence of invasive non-native plant species (as listed on Schedule 9 of the wildlife and countryside act).		
Detailed design(s) and/or working method(s) to achieve stated objectives	The marshy grassland will, ideally, be created following the removal of the existing grassland/vegetation and topsoil (to a minimum depth of 200mm) to reduce the nutrients available within the soil. The tilled substrate will provide the appropriate low nutrient conditions for the wildflower seed mixture. No additional topsoil will be introduced to the marshy grassland. The subsoil will be scarified, and the seed sown to the manufacturer's instructions, followed by the ground being lightly rolled. A detailed habitat creation methodology is included within the landscaping plan. The seed will be sown evenly across the desired locations to ensure there is the desired species diversity throughout. The other objectives required to achieve a moderate condition for this habitat will be achieved through ongoing management and monitoring and are detailed below.		
Initial Management (until established)	The first cut of the grassland will be once the grassland has reached a height of 100mm or after the flowering period. All arisings will be raked up and removed from the site. Any large undesired species should be removed by hand.		
On going management (once established)	The established grassland (2nd year after planting onwards) will be managed with two annual cuts between the end of June and September. All arisings to dry in-situ to, to allow the seeds to dry and disperse. The cuttings are them to be removed 2-3 days later (no longer than 7 days). <u>Specific Management for achievement of the desired habitat condition</u> - Sections of the grassland (at least 20%) will be left longer than 7cm.		

	- Scattered Scrub will be removed from the grassland as a part of the maintenance schedule so that it doesn't exceed 20% of the habitat area. - Bracken will be removed from the grassland as a part of the maintenance schedule so that it doesn't exceed 20% of the habitat area. - Invasive, non-native species will be eradicated from the site as a part of the maintenance schedule.
Timetable for implementation	The habitat creation is scheduled for the post construction Phase. The grassland will be sown in spring or autumn and kept well-watered.

Habitat to be Created	Modified Grassland – Turf		
Type and source of materials to be used where appropriate.	The modified grassland will be created by laying extra-quality meadow turf, this will be locally sourced where possible and approved by the landscape architect before laying.		
Area of the habitat	0.14ha	Habitat Units Provided	0.27
Target Condition	Poor	Time to Achieve	1 year
Objectives to achieve desired condition:	To achieve the desired condition within 1 year of creation the habitat must be established and be subject of an ongoing management regime.		
Detailed design(s) and/or working method(s) to achieve stated objectives	The soil will be prepared as described within the landscaping plan with weeds and stones removed and the soil brought to a fine tilth. The turf will then be laid and treated as described within the landscaping plan.		
Initial Management (until established)	The first cut of the grassland will be once the grassland has reached a height of 100mm or after the flowering period. All arisings will be raked up and removed from the site. Any large undesired species should be removed by hand.		
On going management (once established)	The established grassland (2nd year after planting onwards) will be managed with two annual cuts between the end of June and September. All arisings to dry in-situ to, to allow the seeds to dry and disperse. The cuttings are them to be removed 2-3 days later (no longer than 7 days). Once established, amenity grassland should be cut regularly but as infrequently as possible to maintain a neat appearance.		
Timetable for implementation	The habitat creation is scheduled for the post construction Phase. The grassland will be laid in suitable weather condition in autumn or early winter and the newly planted grassland areas kept well-watered.		

Habitat to be Created	Introduced Shrub		
Type and source of materials to be used where appropriate.	The shrub specimens should be located from local sources where possible.		
Area of the habitat	0.009ha	Habitat Units Provided	0.02
Target Condition	N/A	Time to Achieve	1 year
Objectives to achieve desired condition:	To achieve the desired condition within 1 year of creation the habitat must be established and be subject of an ongoing management regime.		
Detailed design(s) and/or working method(s) to achieve stated objectives	The soil will be prepared, and the specimens planted as described within the landscaping plan. The shrubs will provide a pollen and nectar source for invertebrates.		
Initial Management (until established)	Bark mulch will be applied to the shrub planting areas. All newly planted specimens must be watered and weeded regularly. The plants will be protected using canes and biodegradable guards.		
On going management (once established)	Once established the shrubs should be pruned and managed as required.		
Timetable for implementation	The habitat creation is scheduled for the post construction Phase. The planting can take place in suitable weather conditions and in spring or autumn.		

Habitat to be Created	Trees		
Type and source of materials to be used where appropriate.	As specified in the Biodiversity Impact Assessment and Proposed Landscape Strategy, 32 heavy standard trees are to be planted on site, where possible these plants should be sourced from local reputable sources.		
Area of the habitat	01.172ha	Habitat Units Provided	3.94
Target Condition	Moderate	Time to Achieve	27 years
Objectives to achieve desired condition:	To achieve the desired condition within 27 years of creation the trees must have a diameter at breast height of 30-90cm and be subject of an ongoing management regime.		
Detailed design(s) and/or working method(s) to achieve stated objectives	The soil and planting pits will be prepared as described within the landscaping plan. The trees will then be planted and treated as described within the landscaping plan.		
Initial Management (until established)	Bark mulch will be applied to the tree planting areas. All newly planted specimens must be watered and weeded regularly. The plants will be protected using canes and biodegradable guards. A full description is included within the landscaping plan.		
On going management (once established)	The established trees should be pruned and managed as required.		
Timetable for implementation	The habitat creation is scheduled for the post construction Phase. The planting can take place in suitable weather conditions and in spring or autumn.		

Habitat to be Created	Hedgerow		
Type and source of materials to be used where appropriate.	The plant specimens will be sourced from local sources where possible.		
Extant and location/area of the habitat (Native Hedgerows)	0.06km	Hedgerow Units Provided	0.12
Target Condition	Poor	Time to Achieve	1 year
Extant and location/area of the habitat (Ornamental Hedgerows)	0.26km	Hedgerow Units Provided	0.25
Target Condition	Poor	Time to Achieve	1 year
Objectives to achieve desired condition:	To achieve the desired condition within 1 year of creation the habitat must be established and be subject of an ongoing management regime.		
Detailed design(s) and/or working method(s) to achieve stated objectives	The soil will be prepared, and the specimens planted as described within the landscaping plan.		
Initial Management (until established)	Any plants that have failed will be replaced and the hedgerows pruned to keep them neat.		
On going management (once established)	Once established, the hedgerows should be pruned to keep them at the desired height and width.		
Timetable for implementation	The habitat creation is scheduled for the post construction Phase.		

2. Protection of species during the management

The purpose of protecting, protected species is to ensure that no offences are committed during the development and maintenance of the site.

The following protected species could be encountered during the maintenance works.

Nesting birds: The hedgerows, trees and introduced shrub will offer potential habitat for nesting birds, it is recommended that work to these habitats is carried out outside the nesting bird season (which is generally March-August). If any work will proceed to these habitats within the bird nesting season, then a nesting bird check will be required immediately prior to any work.

3. Protection of existing and retained habitats during works

The purpose of protecting the retained habitats is to ensure there is no degradation of these habitats as a result of the proposed development.

The 30 trees on site that are retained within the scheme, will be protected within root protection areas, and fenced during the works. Full details of the tree protection measures are included within the Arboricultural Impact Assessment.

The stream that flows through the site will be retained and protection measures including a buffer zone and fencing will be implemented during the construction works.

4. Ongoing Monitoring

The site should be the subject of ongoing monitoring, the purpose of which is to ensure the outcomes of the biodiversity impact assessment are fulfilled and to recommend remedial steps if required. The habitats should be monitored after 1 year, 2 years, and 4 years, (with an additional visit after 5 years should the habitats not meet the required conditions). A monitoring survey should then be carried out every 5 years. The following requirements should be achieved by the monitoring surveys.

Year 1: the following habitats, modified grassland (turf), vegetated gardens, introduced shrub, hedgerows should have reached the desired conditions by the first monitoring survey.

Year 2: the habitats established during year 1 should continue to meet the required condition assessment criteria, and the marshy grassland should be established.

Year 4: The marshy grassland should meet the final condition assessment criteria and the other habitats should be established.

Year 5 and ongoing monitoring visits: All habitats should meet the required condition assessments.

Remedial steps should be taken should the monitoring requirements above not be achieved, and recommendations made and reassessed during the next monitoring survey.

Remedial measures could include reseeding, replanting, or specific management/pruning. The specific requirements for the habitat should be assessed as a part of the monitoring and detailed to the management team responsible for the site at that time.

In order to monitor and manage the protected species habitats, residents leaflets will be provided, detailing the habitat provisions and why they are in place. Any breakages or missing boxes will be repaired/replaced as soon as practically possible. The leaflet must include the advice to retain the hedgehog holes within the fencing.

Appendix 1 Proposed Habitat Plan



Proposed Habitat Map

NORTH

- Introduced Shrub
- Marshy Grassland
- Sealed Surface
- Turf - Modified Grassland
- Vegetated Garden
- Native Hedgerow Planting
- Ornamental Hedgerow Planting
- BT1
- BT2
- New Tree
- Offsite Ash with PRFs
- Retained Tree

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Drawn By:
Kate Reed

Date:
18/09/2023

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metres