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BIODIVERSITY ENHANCEMENT MANAGEMENT PLAN (BEMP)

Client

Newett Homes

Project

Land off Penistone Road,

Fenay Bridge

Date

January 2026

CONTENTS

FIGURES

Rev	Issue Status	Prepared/Date	Approved/Date
-	Draft	DHS / 15.11.24	GP / 15.11.24 & IH / 18.11.24
A	Issue	GP / 18.12.24	GP / 18.12.34
B	Final	DHS / 30.05.25	GP / 02.06.25
C	Final	GP / 30.01.26	GP / 30.01.26

1.0 INTRODUCTION

1.1 The following Biodiversity Enhancement Management Plan (BEMP) has been prepared by FPCR Environment and Design Ltd. (FPCR) on behalf of Newett Homes to discharge Condition 22 of planning consent 2022/62/93154/W, which was granted on the 2nd of July 2024.

1.2 Condition 22 states:

> *"Prior to above ground works commencing, a Biodiversity Enhancement and Management Plan (BEMP) shall be submitted to, and approved in writing by, the Local Planning Authority. The BEMP shall detail the delivery of the Biodiversity Enhancements, as detailed within paragraph 4.33 of the Ecological Appraisal and also demonstrate how a minimum of 7.18 habitat units and 2.29 hedgerow units are to be achieved post-development and include details of the following:*
>
> *a. Description and evaluation of features to be managed and enhanced;*
>
> *b. Extent and location/area of proposed enhancement works on appropriate scale maps and plans;*
>
> *c. Ecological trends and constraints on site that might influence management;*
>
> *d. Aims and Objectives of management;*
>
> *e. Appropriate management Actions for achieving Aims and Objectives;*
>
> *f. An annual work programme (to cover an initial 5-year period capable of being rolled forward over a period of 30 years);*
>
> *g. Details of the management body or organisation responsible for implementation of the BEMP;*
>
> *h. Ongoing monitoring programme and remedial measures; and*
>
> *i. The BEMP will be reviewed and updated every 5 years and implemented for a minimum of 30 years*
>
> *The BEMP shall also set out (where the results from the monitoring show that the Aims and Objectives of the BEMP are not being met) how contingencies and/or remedial action will be identified, agreed and implemented so that the development still delivers the fully functioning biodiversity objectives of the originally approved BEMP.*
>
> *Thereafter the development shall be implemented in accordance with the approved details and be so retained thereafter.*
>
> *Reason: In order to ensure the development provides ecological enhancement and creation measures sufficient to provide a biodiversity net gain in accordance with Policy LP30 of the Kirklees Local Plan and the National Planning Policy Framework."*

1.3 As such, this BEMP will provide details of the areas of greenspace provision within the site, as well as specifications for biodiversity creation and enhancement works.

1.4 An Ecological Impact Assessment (EcIA) and Biodiversity Impact Assessment (BIA) have been undertaken, and were submitted to accompany application 2022/62/93154/W. More recently, an updated BIA has been produced to discharge condition 22 (FPCR, May 2025). These reports should be read in conjunction with this BEMP.

1.5 The approved BIA report goes on to outline habitat creation and management measures to be implemented as part of the proposals. However, since submission, the layouts have changed and so the BNG calculations have been updated to align with the new landscaping plans. As such, this BEMP is written so as to deliver the revised biodiversity enhancement measures, which differ in BNG values from those worded in the condition - see paragraph 1.13. This BEMP will detail the creation and management prescriptions for retained and enhanced habitat which are relied upon to demonstrate how target habitat type and condition will be achieved throughout the 30-year management period.

1.6 Existing lines of trees, mature trees and areas of medium distinctiveness grassland, scrub and woodland have been incorporated and retained within the scheme wherever possible. Trees to be retained will have their root protection areas adequately buffered. In addition, the scheme will include establishing new mixed scrub, other neutral grassland and trees.

1.7 The timetable of implementation and management operations provided within this document is relative to the point of implementation.

Site Location and Context

1.8 The Site is located to the west and east of Penistone Road, west of the village of Fenay Bridge (central grid reference: SE 18604 14821). The Site is approximately 3.4 hectares in size and comprises a species poor neutral grassland field to the east of Penistone Road alongside smaller areas of ruderal/ephemeral vegetation, individual and lines of trees. To the west of Penistone Road the Site comprises part of an arable field with small areas of other broadleaved woodland, mixed and bramble scrub, neutral grassland and ditches at the field peripheries. The boundary also extends to Fenay Beck.

Strategic Significance

1.9 The Site sits within the Fenay Beck corridor, as identified in Local Plan policy LP31 Strategic Green Infrastructure Network. Development proposals within and adjacent to the Strategic Green Infrastructure Network should ensure:

> *"(i) the function and connectivity of green infrastructure networks and assets are retained or replaced;*
>
> *(ii) new or enhanced green infrastructure is designed and integrated into the development scheme where appropriate, including natural greenspace, woodland and street trees;*
>
> *(iii) the scheme integrates into existing and proposed cycling, bridleway and walking routes, particularly the Core Walking and Cycling Network, by providing new connecting links where opportunities exist;*
>
> *(iv) the protection and enhancement of biodiversity and ecological links, particularly within and connecting to the Kirklees Wildlife Habitat Network.*
>
> *The council will support proposals for the creation of new or enhanced green infrastructure provided these do not conflict with other Local Plan policies"*

1.10 The location of the Site within the Fenay Beck Corridor is sufficient to increase the strategic significance of the pre- and post-intervention habitats within both the Site and the proposed offsite compensation areas to high (1.15 multiplier).

Proposals

1.11 The proposals comprise a residential development of 68 units plus associated access, landscaping and a LEAP area to the east of Penistone Road, with associated drainage within the smaller red line area to the west of Penistone Road.

Summary of approved Biodiversity Net Gain (BNG)

1.12 The approved scheme had a BNG baseline score 13.25 habitat units and 1.01 hedgerow units, and a post-intervention score of 7.18 habitat units and 2.79 hedgerow units.

Summary of revised BNG

1.13 As detailed above, the landscaping plans have been updated since submission.

1.14 At present, the revised on-site baseline consists of 13.28 habitat units and 1.01 hedgerow units. On-Site post development habitats were determined from the proposed landscape layout plan, which was updated in April 2025 (H22-0016_006B and H22-0016_007B). On-site post intervention will consist of 8.31 habitat units and 2.31 hedgerow units.

1.15 There is a minor discrepancy between the baseline area of the Site between revisions (3.42 in the submitted and 3.41 in the revised), this is likely due to a difference in rounding errors between the two assessments, however this has not resulted in a significant change to the calculations with a minor difference between the baseline units.

1.16 As "*7.18 habitat units and 2.29 hedgerow units are to be achieved post development*", proposals will deliver 1.13 habitat units and 0.02 hedgerow units above the required number, and will therefore be sufficient to discharge Condition 22.

2.0 MANAGEMENT DETAILS & RESPONSIBILITIES

2.1 During the construction phase, Newett Homes or their approved contractor(s) will be responsible for the creation of the habitats and landscaping for the development which will be subsequently maintained by Newett Homes or their appointed management company. Monitoring of the successful establishment will be the responsibility of Newett Homes or their appointed management company.

2.2 The contact details for Newett Homes are as follows:

2.3 The responsibility for long-term management of the habitats covered within this BEMP will be passed by Newett Homes to their appointed Management Company. Their contractor(s) will be suitably qualified and experienced, capable of delivering the management measures outlined in this report.

2.4 The condition assessments and associated monitoring reviews that have been prescribed should be undertaken by a suitably qualified and experienced ecologist, appointed by Newett Homes or their appointed Management Company.

Monitoring and Review

2.5 Management of created habitats on Site will run for a period of 30 years following initial creation (year 1). The habitat creation will be monitored annually for the first five years to ensure effective establishment. Following this, towards the end of each five-year period the management will be reviewed and amended as necessary to provide a five-year rolling programme until at least year 30.

2.6 Throughout the period of the scheme, the achievement of management objectives through the application of detailed prescriptions should be viewed as a dynamic process, responding to the establishment and development of the habitats and species.

2.7 The progress of habitat creation will therefore be monitored, and management prescriptions reviewed and altered where necessary to ensure habitat targets are met. This BEMP should be informed by updated and detailed surveys of the habitats to refine the identified objectives, targets and prescriptions as necessary.

2.8 The aims of future on-going management should continue to maintain the target habitats as set out herein.

3.0 CONSERVATION OBJECTIVES

3.1 The following strategic objectives for the site are set out to provide a steer for the detailed management objectives and prescriptions including:

- Provision of specific features of faunal value located where most appropriate for the target species/group;
- to enhance biodiversity throughout the site and contribute towards an overall no net loss in biodiversity as a result from proposals; and
- provide measurable and achievable targets appropriate to each habitat to ensure condition targets are met as set out in the Management Target tables below in accordance with the Metric Guidance[1].

4.0 LEGISLATION, POLICY AND PROTECTED SPECIES

4.1 The Environment Bill was passed in November 2021 and a 10% biodiversity net gain was mandated in 2024, following the two-year transition period. This application was submitted prior to this statutory requirement coming into force.

4.2 Kirklees Local Plan, adopted on the 27th February 2019, includes Policy LP30 which required developments to:

i. result in no significant loss or harm to biodiversity in Kirklees through avoidance, adequate mitigation or, as a last resort, compensatory measures secured through the establishment of a legally binding agreement;

ii. minimise impact on biodiversity and provide net biodiversity gains through good design by incorporating biodiversity enhancements and habitat creation where opportunities exist;

iii. safeguard and enhance the function and connectivity of the Kirklees Wildlife Habitat Network at a local and wider landscape-scale unless the loss of the site and its functional role within the network can be fully maintained or compensated for in the long term;

iv. establish additional ecological links to the Kirklees Wildlife Habitat Network where opportunities exist; and

v. incorporate biodiversity enhancement measures to reflect the priority habitats and species identified for the relevant Kirklees Biodiversity Opportunity Zone.

4.3 All relevant EU and UK nature conservation law will be adhered to in relation to the protection of ecological features, ecological habitat creation and enhancements, and ongoing management. This will primarily include the protection afforded to nesting birds under the Wildlife and Countryside Act 1981 (as amended); and to badgers under the Protection of Badgers Act 1992. Reference is also made to bats protected under the Wildlife and Countryside Act 1981 (as amended) and Conservation of Habitats and Species Regulations 2017 (as amended). Where appropriate proposals also consider Habitats and Species of Principal Importance (HPI/SPI) as listed within Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006.

[1] Natural England (2019) The Biodiversity Metric 2.0 - Technical Supplement. Available at: Archive Site for Legacy Biodiversity Metrics

5.0 ECOLOGICAL PROTECTION AND MITIGATION MEASURES

5.1 Habitats, flora and fauna relevant to the context of this site are as follows:

- Several large trees were recorded onsite, the majority located along the north boundary of the Site;
- The planned drainage route connects to Fenay Beck, which is part of the Kirklees Wildlife Habitat Network;
- Records of five bat species were returned within 1km of the Site. The onsite grasslands provide some foraging habitat. Three trees within the onsite woodland were identified as having low bat roosting potential, which are all to be retained, while the lines of trees provide further commuting habitat. Bats are protected under EU and UK law by the Conservation of Habitats and Species Regulations 2017 (as amended) and the Wildlife and Countryside Act 1981 (as amended);
- A kingfisher *Alcedo atthis* (listed under Schedule 1 of the Wildlife and Countryside Act 1981 [as amended]) was noted along Fenay Beck in 2022 and the scrub, woodland and tree habitats onsite provide potential nesting and foraging habitat;
- Himalayan balsam *Impatiens glandulifera*, a Schedule 9 invasive species (INNS) as listed on Schedule 9 of The Wildlife and Countryside Act (WCA), was noted within the ditches onsite and within Fenay Beck; and
- Records of otter *Lutra lutra* were returned along Fenay Beck, and while an otter survey conducted in 2022 found no field signs in the surveyed area adjacent to the Site they are considered likely to be commuting through the area.

5.2 The landscape design has retained and extended habitats that will continue to allow fauna to travel through the site and utilise the foraging opportunities that shall be retained and created within the site.

5.3 Precautionary working methods to be undertaken during works will be included within a Construction and Environmental Management Plan for Ecology (CEMP: Ecology). This includes measures to avoid impacts on breeding birds, watercourses including Fenay Beck, and otters.

Ecological trends / constraints on the site that might influence management

5.4 Detailed below are some general risks which may influence management of the habitats described in this BEMP, namely: invasive non-native species, nesting birds, and other protected / notable species.

Invasive non-native species

5.5 As discussed in the paragraphs above, invasive non-native species have been recorded on Site: Himalayan balsam is known to be present in the ditches and along the Beck. When managing habitats where this species is present, care must be taken to ensure no spread of the species in the wild, which would be an offence under the Wildlife and Countryside Act. This would include ensuring that vehicle tyres and equipment are clean of any vegetation and soil before leaving the Site.

Protected / notable species

5.6 As noted in Paragraph 4.3, *"All relevant EU and UK nature conservation law will be adhered to in relation to the protection of ecological features, ecological habitat creation and enhancements, and ongoing management. This will primarily include the protection afforded to nesting birds under the Wildlife and Countryside Act 1981 (as amended); and to badgers under the Protection of Badgers Act 1992."*

5.7 For example, any management of scrub or trees would ideally be undertaken outside of the nesting bird season, which runs from March to September. During this period, it is an offence under the Wildlife and Countryside Act 1981 to intentionally damage or destroy an active nest. Where management is required during the nesting season, pre-management checks should be carried out, and works should stop in a given area if nests or nesting behaviour is observed (e.g. birds carrying nesting materials or food into dense vegetation).

5.8 Similarly, care must be taken when managing habitats which may support other protected or notable species. For example, when carrying out scrub management or grass cutting, care must be taken to avoid impacts to species such as hedgehog or reptiles, should they be present. Impacts could be avoided by carrying out a check of the area prior to machinery entering.

Habitat Establishment and Maintenance of Habitat Condition

5.9 In section 9.0, we have detailed the ideal times of year when habitat creation should take place. However, habitat establishment may inevitably be affected by climate change and unexpected weather events such as drought. Similarly, establishment may also be affected by human disturbance e.g. damage to young trees, trampling grasslands, and eutrophication by dog waste.

5.10 Monitoring measures are described in Section 10.0. During the detailed monitoring visits, a suitably qualified ecologist will assess the habitats in terms of their establishment and condition. They will also flag any remedial actions which are required to ensure habitats reach desired condition e.g. replanting failed whips, re-sowing, spot treatment, and watering regimes during drought. Where human disturbance is noted as a factor affecting habitat establishment, appropriate control measures will be flagged, such as signage or the provision of dog waste bins.

6.0 GENERAL MEASURES

6.1 Habitat Creation will be in accordance with details as set out in the Detailed Plot Landscape Plans H22-0016_006B, H22-0016_007B, and BNG FB018 (this plan details the location of the attenuation tank). Native species of local provenance should be used wherever possible.

6.2 If plants/trees are unobtainable, alternatives are to be agreed with the Ecologist/Landscape Architect in writing prior to ordering.

6.3 All planting works should take place in the first available planting season and be installed in accordance with the details and specification set out in this plan.

6.4 Planting is to remain materially undamaged, sturdy, healthy and vigorous, planted upright or well balanced with best side to front. Trees and shrubs are to be of good shape and without elongated shoots, grown in a suitable environment and hardened off before being delivered to the site.

6.5 All planting will be watered sufficiently to ensure that the full depth of topsoil is wetted. Water will be applied evenly and without damaging or displacing plants or soil. Watering will continue as necessary to ensure the successful establishment and continued thriving of planting.

6.6 If water supplies are restricted or likely to become restricted by emergency legislation, planting will not be carried out until instructed. If planting has been carried out, instructions will be obtained on watering.

6.7 Bare root deciduous planting shall be carried out from late October to late March; herbaceous plants (including aquatic and marginal) shall be carried out from September/October or March/April. Container grown plants will be planted at any time of year if ground and weather conditions are favourable. Bare root deciduous planting will be carried out only during suitable ground and weather conditions. Planting shall not be carried out in waterlogged or frozen ground

6.8 Tree and shrub planting will be protected from rabbits with spiral guards, as conditions on site require. These will be removed once plants are established.

6.9 Any tree works are to be undertaken only by a suitably skilled and qualified arboriculturalist.

6.10 Grassland seed mix is best sown in the autumn or spring but can be sown at other times of the year if there is sufficient warmth and moisture in the soil. Moisture may be supplied artificially by watering but must be thorough enough to penetrate at least 100mm and continued after sowing if dry weather follows.

6.11 Areas to be sown should be first ploughed or rotovated and raked or harrowed to produce a medium fine, firm tilth. Fertiliser will not be applied at any point as this will lead to dominance of nutrient loving species such as broad-leaved grasses, nettles and docks.

7.0 ENHANCED HABITATS FOR FAUNA

7.1 The following section describes proposed enhancements for target fauna. The objective of these proposals being to maintain and enhance the existing nature conservation value of the site for local species, including bats, birds and hedgehog.

7.2 Sensitive management of created habitats as described below will enhance the nature conservation value of the site for fauna by encouraging a long flowering season and therefore a source of nectar/pollen, fruits, seeds and nuts, providing sources of water on site, and creating and maintaining a variety of microhabitats suitable to provide shelter and hibernation opportunities.

7.3 Deadwood piles could be created in areas of open space to provide a habitat niche for amphibians and small mammals as well as deadwood for invertebrates such as saproxylic beetles.

Bats

7.4 Provision of scrub, tree and hedgerow planting within the Site will increase the foraging opportunities for bats on site.

7.5 Bat boxes will be installed on buildings throughout the Site, providing additional roosting opportunities. Box location and placement should follow the following criteria:

- Located on properties at the boundaries of the Site, adjacent to suitable habitat such as offsite woodland and trees;
- Located away from artificial lighting;
- Installed at a minimum height of 2.5m; and
- Facing a south, south-east or south-westerly aspect.

7.6 Where possible, integrated bat boxes such as the such as a Vivara Pro WoodStone® Build-in Bat Tube (Photo 6), Ibstock Enclosed Bat Box Type C or similar should be used, as agreed with an ecologist.

Birds

7.7 Provision of scrub planting and hedgerows within the green infrastructure adjacent to grassland areas will provide increased nesting opportunities within the Site and deter encroachment of domestic cats into sensitive areas. As the soft landscaping matures it is anticipated it will support a greater variety of urban edge and woodland bird species than currently present.

7.8 Bird boxes will be installed on buildings throughout the Site. These will cater for a variety of species that rely on buildings for nesting, including common swift *Apus apus*, and house sparrow *Passer domesticus*. Box location and placement should follow the following criteria:

- at least two to four metres clear below and in front of box;
- away from doors, windows, tall trees, and bushes;
- do not locate in cold windy or shady alleys.

7.9 House sparrow boxes should ideally be installed on gable ends. Outbuildings such as garages can also have house sparrow terraces installed. Boxes should be away from windows and doors and must be located within five metres of vegetation such as trees and shrubs within gardens.

7.10 Boxes should include:

- Schwegler 1sp sparrow terrace or similar;
- Schwegler 17 swift box or similar;
- Equivalent boxes could be used if approved by an ecologist.

7.11 Swift boxes should be placed at a height of 6-7m, the wall should be clear of obstructions such as pipes as swifts need a clear flight line. As swift are a colony species multiple boxes should be placed together over at least 6 properties.

7.12 The above provide suitable nesting opportunities for common swift, house martin, swallow, house sparrow, starling as well as garden birds.

Hedgehog & other mammals

7.13 Newly created garden fences and boundary treatments will all feature a 'hedgehog highway'' to maintain connectivity for this species. Holes and/or channels measuring 13cm wide by 15cm high will be incorporated into garden fences and walls. These holes are sufficient for a hedgehog to pass through but too small for most pets. A hedgehog highway sign should then be installed above to encourage householders to retain the access and discourage homeowners blocking these.

7.14 Proposals will lead to a greater variety of foraging resources and refugia for hedgehog with the inclusion of additional habitats including hedgerows, additional tree and scrub planting.

8.0 HABITAT RETENTION AND ENHANCEMENT

8.1 The proposed layout and landscape plans show all habitats east of Penistone Road to be lost with the exception of the line of trees (LOT) along the northern boundary (LOT5, which includes trees T6 and T5 although a single tree T2 will be removed) and individual tree T7, which are to be retained and protected. The central tree, T12, has been removed. LOT1 and LOT2 (trees T8-T11, T13-T17 and trees T58-T73), both lines of self-seeded young ash trees suffering with ash dieback, have been removed. Retained trees and lines of trees will be maintained in their current condition as currently no regular management is undertaken.

8.2 Habitats to the west of Penistone Road will largely only be temporarily impacted with the construction of the surface water attenuation tank and drainage route and biodiversity enhancements. Arable crop within the attenuation tank area will be lost and replaced with grasscrete (recorded as artificially unvegetated; unsealed surface). The surrounding area of arable crop will also be lost and replaced with other neutral grassland (see section 9.0 below).

8.3 Table 1 below details the habitats to be enhanced.

Table 1: Habitat Enhancement

Parcel Ref (Refer to Figure 1)	Habitat Type	Distinctiveness	Condition	Extent (hectares)	BNG Habitat Units Created
3 & 5	Other neutral grassland	Medium	Poor > moderate	0.2827	2.21
4	Bramble scrub > Mixed scrub	Medium	Poor > moderate	0.0163	0.14

Mixed scrub

8.4 A small area of bramble scrub in 'Poor' condition to the west of Penistone Road will be enhanced to mixed scrub in 'Moderate' condition, through planting up with additional native species as set out in Table 2 below. This will increase species diversity ensuring at 80% of species are native, with least three native woody species present and no single species comprising more than 75% of the cover. Enhanced scrub habitat management and condition assessment rationale will be as per newly created scrub in moderate condition (see section 9.41 below).

Table 2: Enhancement species list for mixed scrub

Common name	Latin name	Comments
Common dogwood	*Cornus sanguinea*	15% whip
Hazel	*Corylus avellana*	15% whip
Hawthorn	*Crataegus monogyna*	35% whip
Holly	*Ilex aquifolium*	5% 3 cl
Crab apple	*Malus sylvestris*	10% whip
Bird cherry	*Prunus padus*	10% whip
Rowan	*Sorbus aucuparia*	10% whip

Other neutral grassland

8.5 The retained and existing areas of other neutral grassland to the west of Penistone Road were both found to be in 'Poor' condition and will be enhanced to 'Moderate' condition (Table 3 below).

Table 3: Other neutral grassland enhancement

Condition Assessment Criteria/Objective	Targeted	Enhancement Approach
The area is clearly and easily recognisable as a good example of this type of habitat and there is little difference between what is described in the relevant habitat classifications and what is visible on site.	Yes	The existing areas of grassland proposed for enhancement, located to the west of Penistone Road will be enhanced In Year 1. The grasslands will be cut short and chain harrowed before the prescribed seed mix (as specified in Section 6) is applied. The seed mixes used include a range of appropriate native grass and wildflower species which are appropriate for the creation of a good quality other neutral grassland community.
The appearance and composition of the vegetation on site should very closely match the characteristics for the specific Priority Habitat [i.e. as described by either the Phase 1 Habitat Classification or the UK Habitat Classification], with species typical of the habitat representing a significant majority of the vegetation.	No	N/A
Wildflowers, sedges and indicator species for the specific Priority grassland habitat are very clearly and easily visible throughout the sward and occur at high densities in high frequency. See relevant Habitat Classification for details of indicator species for specific habitat	Yes	The existing areas of grassland proposed for enhancement, located to the west of Penistone Road will be enhanced In Year 1. The grasslands will be cut short and chain harrowed before the prescribed seed mix is applied. The seed mixes used include significantly more than 9 species, including numerous, neutral grassland indicator species.
Undesirable species and physical damage is below 5% cover.	Yes	A cut should be undertaken in early spring with all arisings removed. Should large numbers of pernicious weeds (in this case nettles) persist these should then be dug out by hand.
Cover of bare ground greater than 10% (including localised areas, for example, rabbit warrens).	Yes	Scarification by hand (on smaller areas) to increase bare ground above threshold.
Cover of bracken less than 20% and cover of scrub and bramble less than 5%.	Yes	Regular mowing regime to control encroachment.

9.0 HABITAT CREATION, MANAGEMENT OBJECTIVES AND PRESCRIPTIONS

9.1 Habitat creation proposals are focused within the areas of green space onsite. Details of locations and species to be included can be found in the Detailed Plot Landscape Plans H22-0016_006B and H22-0016_007B. A detailed breakdown of the habitats can be found in the updated BIA Report (FPCR, 2025), and also shown on Figure 2.

9.2 The following sections detail the management/habitat creation principles that will be employed to ensure that the created and retained habitats achieve the target conditions that have been set for the habitat types proposed.

9.3 The landscape areas subject to this plan include the following components:

- individual tree planting;
- mixed native scrub planting;
- species-rich other neutral grassland / wildflower meadow;
- modified amenity grassland creation;
- species rich native hedgerow and ornamental non-native hedgerow planting;
- bulb planting; and
- non-native shrub planting.

9.4 Habitats to be created are shown in Table 4 below, with their creation measures detailed in the following section.

Table 4: Onsite habitat creation

Area Habitat Type	Distinctiveness	Condition	Extent (hectares)	BNG Habitat Units Created
Other neutral grassland	Medium	Moderate	0.4986	3.21
Other neutral grassland	Medium	Poor	0.142	0.63
Introduced shrub	Low	N/A	0.0038	0.01
Mixed scrub	Medium	Poor	0.0026	0.1
Vegetated garden (including front gardens and bulb planting)	Low	N/A	0.7428	1.65
Street tree	Low	Moderate	0.0199	0.03
Developed land, sealed surface	Very low	N/A	1.3045	0.00

Linear Habitat Type	Distinctiveness	Condition	Extent (km)	BNG Habitat Units Created
Species rich native hedgerow	Medium	Moderate	0.331	1.71
Ornamental non-native hedgerow	Very Low	Poor	0.394	0.00

Species rich native hedgerows

9.5 New species rich native hedgerow will be planted around the POS areas of the Site (around the LEAP, along the southern boundary, and to the west of Penistone Road). They will be planted with hazel *Corylus avellana*, hawthorn *Crataegus monogyna*, holly *Ilex aquifolium*, blackthorn *Prunus spinosa*, and guelder rose *Viburnum opulus*. In total, 331m of new planting is proposed.

Creation

9.6 The hedgerow would be planted in double staggered rows, at 5 per meter. Planting will be undertaken between November and March during the plants dormant period and protected from rabbits with tree guards as conditions on site require.

9.7 A mulch layer comprising 75mm of composted fine bark will be applied immediately after planting but leaving 150mm clear around stems.

Management

9.8 Any protective spiral guards used will be removed once shrubs are established.

9.9 The base of the hedgerows would be kept weed-free for at least three years to ensure a good plant establishment and growth rate.

9.10 Like-for-like replacement of failed saplings will be undertaken until the hedgerow is mature and established.

9.11 Until new planting is established, formative pruning will be undertaken to keep the hedgerows tidy and encourage dense, bushy growth, with competitive species cut back using hand tools. Trees within the hedgerow will however where possible be allowed to develop to mature standards to provide further nesting and foraging opportunities for local wildlife and a more varied habitat structure.

9.12 Once established new hedgerows will be part cut on a 3-year rotation a with each section cut every three years in late November (after the leaves have started to drop) or early February, allowing the remaining two-thirds to flower/fruit.

9.13 Hedgerows should never be disturbed during the bird nesting season (March – August) unless preceded by a nesting bird check by a suitably experienced ecologist, with works then proceeding in strict accordance with any specific ecological advice provided following the check.

9.14 The hedgerow should be managed in the long term via initial cutting to a height of 1.5-3m to suit circumstances. The aim is to achieve a dense foliage in an 'A' shaped profile with a wide, healthy hedgerow base to maximise the extent of cover they provide and increase their capacity to support breeding birds and small mammals.

9.15 Any diseased or rotten wood will be pruned back to sound wood. All diseased material will be removed from the site. Disease-free cut material will where possible be composted on site or used to create dead wood piles within woodland areas or will otherwise be removed from site. None will be burned on site.

9.16 A strip of at least 1m of grassland closest to the hedge should be left uncut in most years. To control scrub and bramble development these areas may need cutting every 2-3 years between

October and February. This will be done on a rotational basis so that no more than half the area is cut in any one year leaving part as an undisturbed refuge.

9.17 For the hedgerows that are adjacent to mixed scrub planting on the landscaping plan, these areas will be managed together as a wide based hedgerow.

Ornamental non-native hedgerows

9.18 New ornamental non-native species hedgerow planting will be established around the peripheries of the front gardens, either as low ornamental hedges comprised of 100% Japanese spindle *Euonymus japonicus* 'Jean Hugues', or as instant beech hedgerows comprised of 100% beech *Fagus sylvatica*. In total, 394m of new planting is proposed.

Creation

9.19 The hedgerow would be planted in double staggered rows, at 5 per meter. Planting will be undertaken between November and March during the plants dormant period and protected from rabbits with tree guards as conditions on site require.

9.20 A mulch layer comprising 75mm of composted fine bark will be applied immediately after planting but leaving 150mm clear around stems.

Management

9.21 Ornamental non-native hedgerows are to be within the plot ownership and therefore no management prescriptions are applied.

9.22 As they are to be within residential plot ownership they will not be relied upon to deliver biodiversity units.

Individual Trees

9.23 In total 44 new street trees are proposed. The majority of trees onsite are to be non-native or native cultivars with the exception of seven silver birch, three pedunculate oak and five small-leaved lime which are planted around the areas of public open space (POS).

9.24 Table 5 outlines the species to be included within the scheme.

Table 5: Species proposed for street trees creation

Species	Scientific Name
Extra heavy standard trees	
Silver birch	*Betula pendula*
Hornbeam	*Carpinus betulus*
Beech 'Purpurea'	*Fagus sylvatica* 'Purpurea'
Sweet cherry 'Plena'	*Prunus avium* 'Plena'
Bird cherry 'Watereri'	*Prunus padus* 'Watereri'
Pedunculate oak	*Quercus robur*
Small-leaved lime	*Tilia cordata*

Species	Scientific Name
Select and heavy standard trees	
Field maple 'Streetwise'	*Acer campestre* 'Streetwise'
Hornbeam 'Frans Fontaine'	*Carpinus betulus* 'Frans Fontaine'
Beech 'Dawyck'	*Fagus sylvatica* 'Dawyck'
Crab apple 'Evestre'	*Malus* 'Evestre'
Japanese flowering crab apple	*Malus floribunda*
Cherry 'Sunset Boulevard'	*Prunus* 'Sunset Boulevard'
Callery pear 'Chanticleer'	*Pyrus calleryana* 'Chanticleer'

Creation

9.25 Scattered trees and those planted in small groups will be secured with short double staking and rabbit protection spirals where necessary.

9.26 Planting holes will be backfilled with shrub planting compost. They should also be lightly dressed with bone meal and a slow release fertiliser to promote root growth and early establishment.

9.27 Planting of bare-rooted trees should where possible be undertaken between November and March to encourage establishment.

9.28 All trees will watered in after planting with a spread of bark mulch to a 50mm depth.

Management

9.29 Newly planted trees should be watered during periods of prolonged dry weather between April and October.

9.30 Trees should be regularly inspected with the base of trees (minimum of 1m diameter) kept weed and grass free, with mulch cover maintained. Over-vigorous weeds such as brambles and nettles are to be removed.

9.31 For the first five years at the end of each growing season trees will applied with a slow-release fertiliser to promote root growth and establishment. Within this period all dead and dying specimens are to be replaced with a tree of either the same species or similar species as those existing. This is to allow some flexibility and to avoid problems encountered with 'Same Tree Disease'.

9.32 Long-term tree management will include the regular checking and adjustment of tree supports by the Management Contractor. Any stakes or ties showing signs of damage should be removed and replaced as necessary and mulch levels will be topped up where necessary. Any stakes, which show movement or instability, shall be secured or repositioned. Tree stakes/ties/guards will be removed once trees have established well (after approximately 5 years), and surfaces disturbed will be made good, with any resulting holes filled with suitable topsoil.

9.33 Appropriate precautionary measures must be undertaken to protect trees against damage from mowing equipment.

9.34 Works will seek to retain tree heights where possible with trees left unmanaged unless otherwise dictated for reasons of public safety or to benefit the tree health.

9.35 Any tree works are to be undertaken only by a suitably skilled and qualified arboriculturalist.

9.36 Trees will be inspected annually in late autumn/winter by a suitably qualified arboriculturalist for signs of stress, disease or damage and appropriate remedial action taken.

9.37 Any branches requiring removal should ideally be cut leaving 50-80mm of main stem and ensuring that all cuts are clean to encourage healing and water shedding.

9.38 Any diseased wood will be pruned back to sound wood. Any diseased wood will be removed from the site to discourage the further spread of disease. No burning will be undertaken on site.

9.39 Non-diseased arisings may be placed within boundary areas to provide piles of dead wood or recumbent dead logs to maximise invertebrate and bryophyte biodiversity. Where possible standing dead wood will be left in-situ to provide additional dead wood habitats.

Condition Assessment Rationale

9.40 Street trees are automatically allocated a condition score of '2' or 'Moderate'. However, following the management prescriptions outlined above will ensure that ecological benefits are maximised, such as provision of cover for birds, and prolong tree health for the long term.

Mixed Scrub

9.41 Small areas of mixed native scrub will be incorporated into areas of POS, around the LEAP and along the southern site boundary. Within the landscaping plan this encompasses areas noted as native shrub mix.

Creation

9.42 Planting will take place between November and March during the plants dormant period and protected from rabbits with tree guards as conditions on site require.

9.43 Planting will be undertaken in groups with each group supporting a mix of species, and with two to three or more of the same species planted together.

9.44 The species mix is shown in Table 6 below.

Table 6: Species proposed for mixed scrub creation

Species	Scientific Name	% mix
Hawthorn	*Crataegus monogyna*	15%
Holly	*Ilex aquifolium*	40%
Blackthorn	*Prunus spinosa*	25%
Dog rose	*Rosa canina*	11%
Elder	*Sambucus nigra*	9%

Management

9.45 Scrub planting to be attended to annually for years 1-5. At each visit the following operations are to be carried out:

- All plants shall be checked and firmed up in the ground as necessary;
- Planting guards (if fitted) shall be checked at each visit and removed if no longer required, stakes firmed up as necessary, and ties adjusted; and
- Any dead trees and shrubs shall be removed and replaced within the first 5 years.

9.46 Trimming following establishment period (by year 5 or 6) including maintenance of a sinuous edge with a graded margin down to field layer.

9.47 Selective thinning (roughly 1/3 to 1/5 every 5-6 years) of some stands and creation of open areas within/between stands to allow light to reach ground flora and promote regeneration of young shrubs. To include selective clearing of scrub edge down to ground to reduce dominance of species such as blackthorn and hawthorn and promote regeneration of young shrubs/herb edge.

9.48 To control scrub and bramble development within the herb/ grass margin these areas may need cutting every 2-3 years between October and February. This will be done on a rotational basis so that no more than half the area is cut in any one year leaving part as an undisturbed refuge.

Condition Assessment Rationale

9.49 Detailed management interventions and targets are provided in Table 7, below.

Table 7: Mixed scrub management targets

Condition Assessment Criteria/Objective		Management Intervention	Target time
1	There are at least three woody species, with no one species comprising more than 75% of the cover (except common juniper, sea buckthorn or box, which can be 100% cover).	To be provided through varied planting matrix from outset, and then maintain through regular management	From year 1
2	There is a good age range – a mixture of seedlings, saplings, young shrubs and mature shrubs.	Periodic trimming/management of scrub in planting groups including: • Periodic clearance down to ground level in some areas at scrub edge to promote seedling and sapling growth; • Periodic cutting to create some dense stands with graded margin (at scrub/glade edge); and • Management of selective areas to promote more open stands (including thinning of stands and light trimming to aid regeneration).	By year 7
3	Pernicious weeds and invasive species make up less than 5% of the ground cover.	Periodic monitoring and control/removal of non-native species as necessary.	N/A
4	The scrub has a well-developed edge with un-grazed tall herbs.	• Periodic cutting of scrub edges to create and maintain a graded margin. • Annual mowing of grassland/herb ground flora to maintain adjacent areas free of scrub growth.	N/A
5	There are many clearings and glades within the scrub.	Not targeted, however will be managed as above for criterion 2 and 4.	N/A

Other Neutral Grassland

9.50 To contribute towards the biodiversity value of the Site post development, areas of species rich other neutral grassland will be created within areas of open space. The aim for the creation and management of the neutral grassland is to work towards achieving floristically diverse, identifiable neutral grassland communities. Within the landscaping plans these areas are noted as 'enhanced species rich grass', 'POS shade tolerate meadow mix' and 'POS wildflower meadow grass'.

9.51 An additional area of other neutral grassland will be created on the arable land surrounding the surface water attenuation tank area, to provide compensation for the grassland lost to the main development.

9.52 Different species mixes are proposed for the different areas, detailed below and in Table 8:

- It is proposed to use a commercial seed mix similar to Emorsgate Standard General Purpose Meadow Mixture EM2 for the areas of POS wildflower meadow grass and grassland creation to the west of Penistone Road;
- for the species rich grass a mix of 40% Emorsgate 'Wildflowers for Lawns EL1F' and 60% 'General Purpose Meadow Grass Mixture EG1' (or similar approved); and
- for the POS shade tolerant wildflower meadow mix use Emorsgate Hedgerow Mixture EH1 (or similar approved).

Table 8: Species proposed for other neutral grassland creation

Species	Scientific Name	%
EM2 Standard General Purpose Meadow Mixture		
Crested dog tail	*Cynosurus cristatus*	29.75%
Red fescue	*Festuca rubra*	25.50%
Smooth meadow-grass	*Poa pratensis*	17.00%
Common bent	*Agrostis capillaris*	8.50%
Smaller cat's-tail	*Phleum bertolonii*	4.25%
Common knapweed	*Centurea nigra*	2.25%
Ribwort plantain	*Plantago lanceolata*	2.25%
Oxeye daisy	*Leucanthemum vulgare*	1.95%
Field scabious	*Knautia arvensis*	0.60%
Meadow buttercup	*Ranunculus acris*	1.50%
Salad burnet	*Poterium sanguisorba ssp sanguisorba*	1.50%
Wild carrot	*Daucus carota*	1.20%
Yarrow	*Achillea millegolium*	0.75%
Musk mallow	*Malva moschata*	0.75%
Yellow rattle	*Rhinathus minor*	0.75%
Bladder camption	*Silene vulgaris*	0.75%

Species	Scientific Name	%
Cow slip	*Primula veris*	0.45%
Lady's bedstraw	*Galium verum*	0.30%
EH1 Hedgerow Mixture		
Crested dog tail	*Cynosurus cristatus*	48.00%
Red fescue	*Festuca rubra*	19.20%
Wood meadow grass	*Poa nemoralis*	6.40%
Common bent	*Agrostis capillaris*	2.40%
Sweet vernal grass	*Anthoxanthum odoratum*	1.60%
Tufted hair-grass	*Deschampsia cespitosa*	1.60%
False brome	*Brachypodium sylvaticum*	0.80%
Common knapweed	*Centurea nigra*	2.00%
Red campion	*Silene dioica*	2.00%
Hedge bedstraw	*Galium album*	1.50%
Wild teasel	*Dipsacus fullonum*	1.50%
Oxeye daisy	*Leucanthemum vulgare*	1.20%
Narrow-leaved everlasting pea	*Lathyrus sylvestris*	1.00%
Musk mallow	*Malva moschata*	1.00%
Garlic mustard	*Allaria petiolata*	1.00%
Lesser burdock	*Arctium minus*	1.00%
Crosswort	*Cruciata laevipes*	0.80%
Wild carrot	*Daucus carota*	0.80%
Ribwort plantain	*Plantago lanceolata*	0.80%
Bladder campion	*Silene vulgaris*	0.80%
Tufted vetch	*Vicia cracca*	0.80%
Cowslip	*Primula veris*	0.60%
Cow parsley	*Anthriscus sylvestris*	0.50%
Agrimony	*Agrimonia eupatoria*	0.50%
Rough chervil	*Chaerophyllum temulum*	0.40%
Meadowsweet	*Filipendula ulmaria*	0.40%
Common sorrel	*Rumex acetosa*	0.40%
Wood avens	*Geum urbanum*	0.40%
Meadow crane's-bill	*Geranium pratense*	0.30%
Wild marjoram	*Origanum vulgare*	0.30%
EL1F Wildflowers for Lawns		

Species	Scientific Name	%
White clover	*Trifolium repens*	22%
Ribwort plantain	*Plantago lanceolata*	12.00%
Common knapweed	*Centurea nigra*	10.00%
Cowslip	*Primula veris*	10.00%
Lady's bedstraw	*Galium verum*	8.00%
Oxeye daisy	*Leucanthemum vulgare*	7.00%
Bulbous buttercup	*Ranunculus bulbosus*	6.00%
Betony	*Betonica officinalis*	5.00%
Hedge bedstraw	*Galium album*	5.00%
Black medick	*Medicago lupulina*	5.00%
Field scabious	*Knautia arvensis*	3.50%
Selfheal	*Prunella vulgaris*	3.50%
Kidney vetch	*Anthyllis vulberaria*	2.00%
Rough hawkbit	*Leontondon hispidus*	1.00%
EG! General Purpose Meadow Grass Mixture		
Crested dog tail	*Cynosurus cristatus*	35.00%
Red fescue	*Festuca rubra*	30.00%
Smooth meadow-grass	*Poa pratensis*	20.00%
Common bent	*Agrostis capillaris*	10.00%
Smaller cat's-tail	*Phleum bertolonii*	5.00%

Creation

9.53 Soil testing will be undertaken on any proposed topsoil and subsoil in order to determine their appropriateness. Harris et al (2014)[2] defines the broad characteristics of substrates suitable for neutral grassland creation, with Critchley et al. (2002)[3] establishing the characteristics of the target communities. Phosphorous limitation is critical for the creation of the target species rich neutral grassland communities; with that in mind, the substrate parameters for habitat creation should follow the below specifications:

- Available phosphorous between 4-12mg l-1 (Calculated using the Olsen method), with 9.6mg l-1 being the optimum for species rich MG5 grassland;
- A lower limit of 0.2% dried weight Total Nitrogen with a provisional upper limit of 0.3-0.7%;
- pH 5.5-6.5;

[2] Harris, P., Brearley, A. & Doick, K.J. (2014) Best Practice Guidance for Land Regeneration Note 17: Lowland Neutral Grassland Creation and management in land regeneration. Forest Research. Forestry Commission.

[3] Critchley, Chambers, Fowbert, Sanderson, Bhogal & Rose (2002). Association between lowland grassland plant communities and soil properties. Biological Conservation, 105: 199–215.

- A lower limit of 4% organic matter, with a provisional upper limit of 5-14%;
- Topsoil depth should not exceed 200mm; and
- Drainage: slow.

Seeding

9.54 Where the soil meets the requirements outlined above, in situ soil can be used as a seedbed, once the existing vegetation has been removed mechanically. Where the soil does not meet the requirements (which is likely for the area currently managed as arable), the contractor will strip the topsoil layer from the area and the subsoil will be used as a planting medium. It may be necessary to cultivate the area using suitable tillage equipment, such as a power harrow, to produce a suitable soil structure. The substrate will then require a suitable seedbed to be created using a suitable harrow to create a fine tilth (<10mm aggregates).

9.55 An appropriate commercial seed mix (see Table 8) will be sown either in spring or autumn (autumn sowing if often more successful for first year germination). The seed mix should be of local provenance, where available.

Management

First Year Management

9.56 The condition of the grassland should be reviewed within six months of seeding;

- If any areas have failed to establish, they should be re-seeded, during the appropriate season.
- To control any flush of annual weeds, within the first year the grassland may require up to four cuts. As such, the created grassland should be monitored within the first year and if grass growth is considered to be vigorous a cut should be taken. This should be undertaken after late summer / early autumn. The sward length should ideally be kept at 100mm or below.
- Cut material should be removed from the created grassland area and either taken off site or taken to a suitable composting area on-site. This should be located close to the grassland area to avoid the need of moving cut material long distances.

9.57 Any residual perennial weeds such as docks should be dug out.

Subsequent Management

9.58 Low input extensive management:

- No artificial or organic manures to be applied; and
- No herbicides to be applied with the exception of spot treatment of any undesirable or invasive species.

9.59 On-going management will involve a single cut to a height of c.50mm after flowering in July (with late June- early August acceptable), removing arisings after they have dried. Once every four years cut the grassland in late August - September to allow late flowering species to set seed. A second Autumn / early spring cut may be necessary to remove any excess grass growth.

9.60 Green hay produced from the cut should be spread over the habitat to increase floristic diversity. The cut material should then be removed after 3-5 days and could be gathered in a single location on-site and allowed to rot down naturally or removed from Site.

9.61 20% of grassland will be left unmown every year on rotation, in order to provide sward height variation. Where access is required through the grassland, close mown pathways of 1-2m can be maintained and also add to the structural diversity of the grassland.

9.62 Areas within 1m of hedgerows or woodland/scrub boundaries should be left uncut in most years. To control scrub and bramble development these areas may need cutting every 2-3 years between October and February. This will be done on a rotational basis so that no more than half the area is cut in any one year leaving part as an undisturbed refuge.

9.63 Where wildflower cover is low in successive years use of conservation harrowing to create bare areas necessary to promote wildflower germination should be considered including addition of wildflower seed following harrowing.

9.64 If grasses begin to dominate, an autumn sowing of yellow rattle *Rhinanthus minor* following mowing/harrowing will be undertaken to reduce dominance of grasses.

9.65 Recreational impacts on the grassland will be monitored throughout the management period and if a negative influence is noted the grassland will be demarcated with a small post and rope fence to deter access.

9.66 As well as being monitored, assessed and managed throughout the Aftercare Management Period, at the end of this period, an assessment will be made of how well the grassland has established and the management prescriptions reviewed, as necessary.

Condition Assessment Rationale

9.67 Detailed management interventions and targets are provided in Table 9, below. A condition score of 'Moderate' is targeted for the areas of species rich and meadow grassland planting onsite.

Table 9: Other neutral grassland management Targets

	Condition Assessment Criteria/Objective	Management Intervention	Target time
1	The area is clearly and easily recognisable as a good example of this type of habitat and there is little difference between what is described in the relevant habitat classifications and what is visible on site.	• Creation of a herb rich neutral grassland community achieved through use of a suitable nutrient poor substrate and seeding with an appropriate species rich seed mix • Ongoing management to maintain low fertility and maintain species composition	By year 7
2	The appearance and composition of the vegetation on site should very closely match the characteristics for the specific Priority Habitat [i.e. as described by either the Phase 1 Habitat Classification or the UK Habitat Classification], with species typical of the habitat representing a significant majority of the vegetation.	Not targeted	N/A
3	Wildflowers, sedges and indicator species for the specific Priority grassland habitat are very clearly and easily visible throughout the sward and occur at high densities in high frequency. See relevant Habitat Classification for details of indicator species for specific habitat	The grasslands are to be seeded with a suitable mix of neutral grassland indicator species, while ongoing management will maintain the species composition.	By year 7

	Condition Assessment Criteria/Objective	Management Intervention	Target time
4	Undesirable species and physical damage is below 5% cover.	• Where large patches of injurious weeds persist cutting in early spring is recommended with arisings removed straight away. • Use of weed wipes to treat persist pernicious weeds (occurring in successive years over 5%). • Where excessive and persistent physical damage evident use of fencing or hedging should be considered depending on cause and where deemed likely to be effective	By year 5
5	Cover of bare ground greater than 10% (including localised areas, for example, rabbit warrens).	• Regular monitoring and re-sowing of areas where necessary. • Where bare ground is below threshold in successive years scarification by hand (on smaller areas) should be considered.	By year 5
6	Cover of bracken less than 20% and cover of scrub and bramble less than 5%.	Regular mowing regime to control encroachment.	By year 5

Vegetated garden (front garden turf)

Creation

9.68 Areas of grass turf are proposed in the front gardens of the residential properties (mapped as front garden grass – turf on the landscaping plan). They should be seeded with an appropriate flowering lawn seed mix including a range of grasses and herbs that responds well to regular mowing such as Emorsgate EL1 – flowering lawn mix (or similar).

Management

9.69 Front gardens are to be within the plot ownership and therefore no management prescriptions are applied.

Other habitats

9.70 Also proposed onsite are ornamental shrub (introduced shrub) and bulb planting (recorded as vegetated garden within the metric). Both of these habitats do not have condition assessments within the metric and are therefore not considered further.

10.0 WORKS SCHEDULE AND MONITORING

10.1 To ensure that the habitats created within the site reach and maintain their maximum value to nature conservation, all habitats will be monitored annually by the appointed landscape contractor. Regular monitoring by a suitably experienced ecologist will also be undertaken during the habitat establishment stage to ensure that creations measures are suitable to achieve the objectives. See Table 10 below for the expected timetable of management.

10.2 Results of this monitoring will be used to inform changes to the management plan (including rolling five-year work programme). The detailed management prescriptions set out in the management plan will be altered if required following monitoring and in agreement with the landscape contractor, Kirklees Council and any other stakeholders. This BEMP and work programme will be reviewed on a five-year rolling basis, with the work programme fully reviewed at the end of the initial five-year period by those involved in site management.

10.3 A detailed work programme will be set annually by the landscape contractor or other parties managing the site.

10.4 While general monitoring will be undertaken annually to inform the forthcoming year's work programme, a more detailed habitat assessment of the semi-natural habitats should also be undertaken between April and September at years 2 and 5 of the rolling 5-year work programme by an experienced ecologist.

10.5 Results should be reported back and feed into a five-year management plan review, to enable assessment of the management prescriptions against the defined objectives for each habitat. Where objectives are not being adequately met, appropriate action will be put in place (such as detailed in the Management Target tables for each habitat) to amend management prescriptions, with any refinements incorporated into the updated management plan and annual work programme. At this time the need for, and frequency of, detailed habitat assessments should be set accordingly for each habitat as necessary and incorporated within subsequent management plan periods.

10.6 The delivery of the biodiversity mitigation will follow the development timetable. Site clearance of the habitats proposed to be lost to the east of Penistone Road took place in July 2024. Landscaping will be implemented through the build route as it progresses. If delays are incurred during the planning process, the table of works may need to be updated to reflect this, however the broad principles of the schedule will apply.

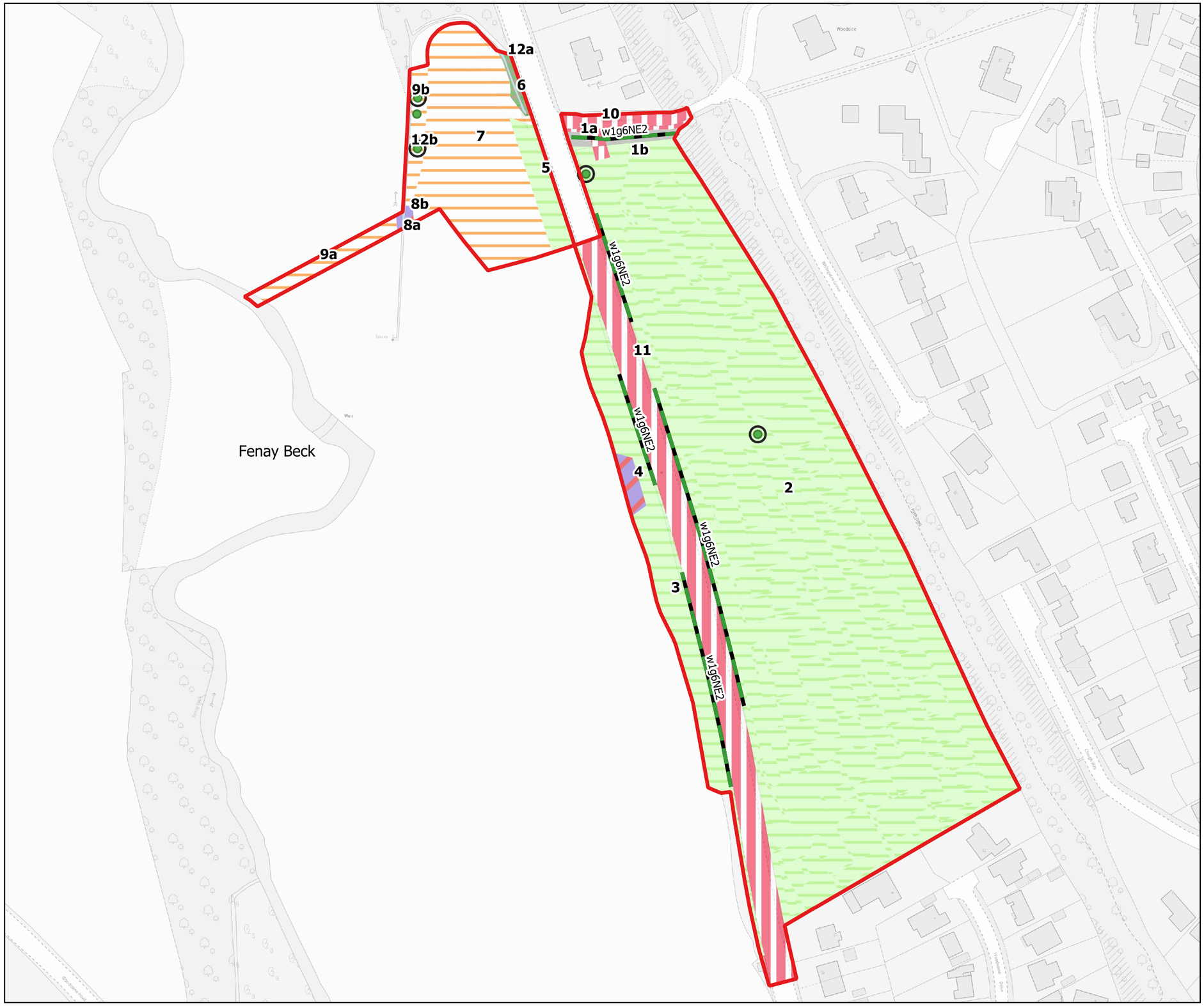
Table 10: Management timetable

Habitat / feature	Description of works	Active Month												Year (since habitat creation)					Aftercare Period
		J	F	M	A	M	J	J	A	S	O	N	D	1	2	3	4	5	5-30
Management prescriptions																			
Individual trees	Tree planting																		
	Any dead or dying newly planted specimens replaced in first ten years																		
	Weeds / invasive species spot treated and tree guards checked																		
	Inspection by qualified arboriculturalist.																		
Hedgerows	Hedgerow planting in double staggered rows																		
	Any dead and dying specimens replaced in first five years																		
	Trim hedgerow to encourage branching																		
Scrub	Scrub planting																		
	Firm up plants, check ties and guards																		
	Any dead and dying specimens replaced in first five years																		

Habitat / feature	Description of works	Active Month												Year (since habitat creation)					Aftercare Period
		J	F	M	A	M	J	J	A	S	O	N	D	1	2	3	4	5	5-30
	Selective thinning and clearing of scrub edge (cut no more than 1/3rd scrub in any one area in any 5-year period).																		
	Trimming following establishment period (by year 5 or 6) including maintenance of a sinuous edge with a graded margin down to field layer																		
Other Neutral Grassland – Wildflower Meadow	Soil testing and ground preparation.																		
	Sow in accordance with manufacturer's instructions and protect during establishment																		
	First cut when sward reaches 100mm																		
	Mowing / strimming + remove arisings																		
	Conservation harrowing and resowing /sowing of yellow rattle as required																		

Habitat / feature	Description of works	Active Month												Year (since habitat creation)					Aftercare Period
		J	F	M	A	M	J	J	A	S	O	N	D	1	2	3	4	5	5-30
	Rotational mowing of hedge & scrub grass margin.																		
Monitoring																			
Whole site	Site visit to review suitability of management objectives on yearly basis.																		
	Update management plan, if required																		

FIGURES



Key

- Site boundary

Habitats baseline (with Parcel Ref.)

- Bramble scrub
- Cereal crops
- Developed land; sealed surface
- Mixed scrub
- Other neutral grassland
- Other woodland; broadleaved
- River
- Ruderal/Ephemeral

Hedgerow Baseline

- Line of Trees (w1g6NE2)

Urban Trees Baseline

- Existing Large
- Existing Small

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client
Newett Homes

project
Land Off Penistone Road, Fenay Bridge

drawing title
Baseline Habitats Plan

scale
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drawn
DHS

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Figure 1

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Key

- Site Boundary

Proposed Habitats

- Cereal crops
- Developed land; sealed surface
- Introduced shrub
- Mixed scrub
- Other neutral grassland
- Other woodland; broadleaved
- Ditches
- Vegetated garden

Proposed Hedgerows

- Hedge Ornamental Non Native (h2NE3)
- Line of Trees (w1g6NE2)
- Native Species Rich Hedgerow (h2NE2)

Proposed Street Trees

- Large
- Small

client
Newett Homes

project
Land Off Penistone Road,
Fenay Bridge

drawing title
Proposed Habitats Plan

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Figure 2

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