

BIODIVERSITY ENHANCEMENT MANAGEMENT PLAN

September 2023

Land off Oldham Road
Newton Heath
Manchester
M40 2JB

**U R B A N
G R E E N**



QUALITY MANAGEMENT

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Prepared By:	Shannon Brady	Signature:		Qualifications: Senior Biodiversity Net Gain Consultant, MSc, QCIEEM
Checked By:	Sarah Child	Signature:		Qualifications: Biodiversity Net Gain Consultant, MSc
Checked By:	Barnaby Indio Gardner	Signature:		Qualifications: Assistant Ecologist, MEnv, BSc, QCIEEM
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1 Introduction

1.1 Background to the Scheme

One Manchester are proposing to develop land off Oldham Road, Newton Heath (hereafter referred to as ‘the site’). The proposals include the construction of residential units with associated hard and soft landscaping.

Urban Green have been appointed to provide a Biodiversity Enhancement Management Plan (BEMP) for the site which has been written to accompany the Biodiversity Net Gain Assessment of this site (Urban Green, 2023a).

The author of the report is Senior Biodiversity Net Gain Consultant, Shannon Brady. Shannon has experience providing consulting services in Biodiversity Net Gain for a range of development schemes, both residential and commercial, across the UK.

1.2 Site Context

The site is located at National Grid Reference SD 87972 00644 and comprises a total area of approximately 0.9ha (see Figure 1).

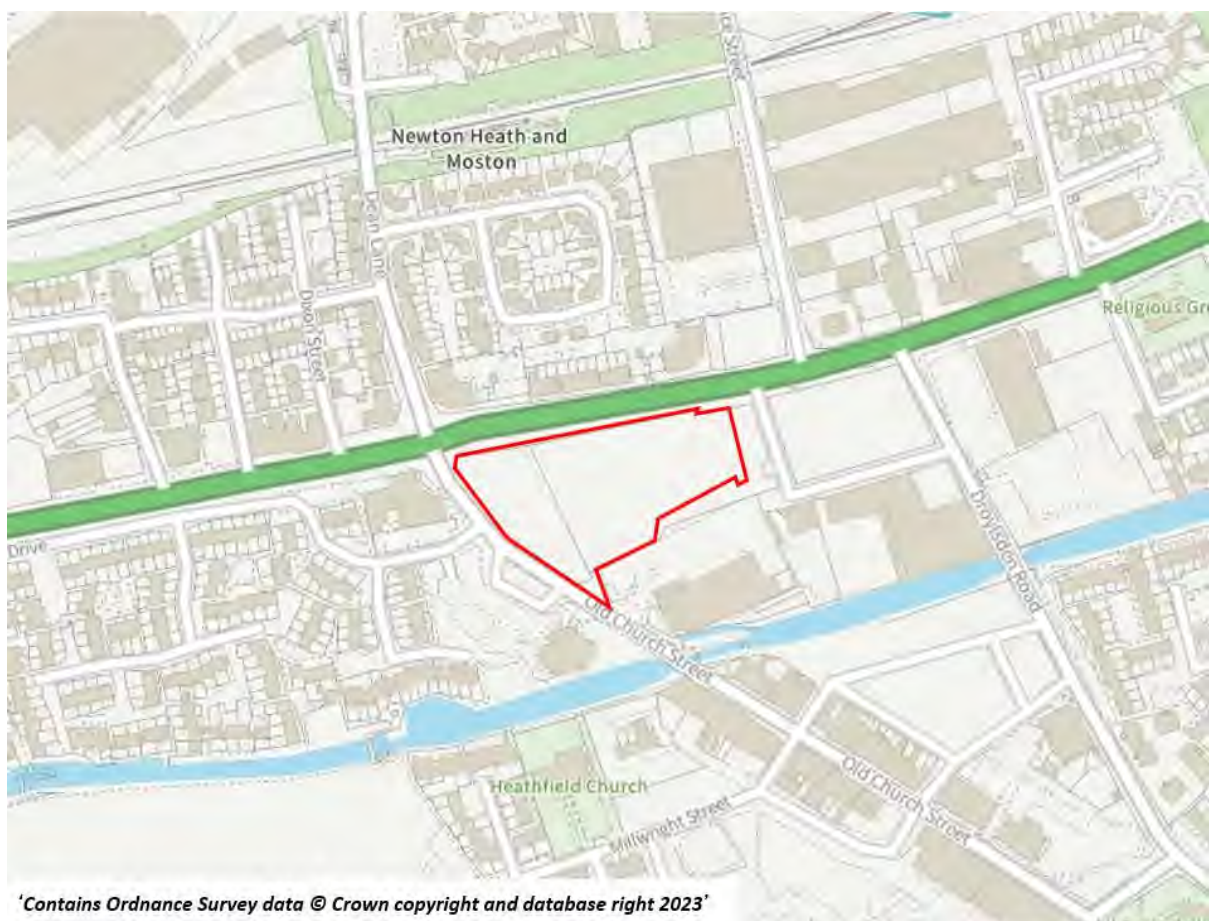


Figure 1 – Site Extent

The site is located within the densely urban area of Newton Heath, 4.5km from Manchester city centre. The northern border is bound by the busy A62 road, which spans an extensive east-west distance beyond site – a major dispersal barrier. To the south of site, the Rochdale Canal spans a similar distance parallel

to the A62. Extensive urban residential, commercial, and industrial districts are found in all directions of the site's wider area. Sparse areas of urban green space are interspersed between, notably Moston Vale northwest, Broadhurst park northeast, Brookdale Park southeast, and the woodland off Briscoe Lane Academy close southwest.

1.3 Purpose of this Management Plan

The purpose of this management plan is to provide a schedule for the long-term management of habitats on site, ensure that proposed habitats are suitably maintained and ensure good establishment and continued improvement of habitat condition. This allows those responsible for the management and maintenance of the site to understand the existing habitats, the development and ongoing management requirements of the site. Habitats should be maintained under a formal management regime for a minimum of 30 years, in accordance with the Environment Act 2021, with regular assessments during this period to assess the development and condition of habitats.

1.4 Aims of this Management Plan

This management plan covers the habitat creation on site, as detailed within the Biodiversity Net Gain (BNG) Assessment (Urban Green, 2023a). The report assessed the development as scoring a net loss of <0.01 area habitat units (--0.18%) and a net gain of 0.15 linear hedgerow units (percentages not applicable as baseline values are zero). The trading rules have not been met due to insufficient compensation for the existing modified grassland and vacant/derelict land habitats.

Appropriate management practices are essential to ensuring that the proposed habitats reach the condition outlined within the Biodiversity Net Gain assessment and that the development achieves the predicted gain in value to the environment. The aim of this management plan is to provide a management regime that:

- Promotes the successful establishment and growth of newly created habitats;
- Ensures the health and safety of all site user's post development is protected;
- Outlines a process for the regular monitoring and review of management practices and site habitats; and
- Provide measurable and achievable targets appropriate to each habitat to ensure condition targets are met as set out in Section 4 in accordance with Biodiversity Metric 4.0 condition scoring.

2 Development Proposals

Proposals include the construction of residential units with associated hard and soft landscaping on land off Oldham Road, Newton Heath. The existing habitats on site are modified grassland, developed land; sealed surface, vacant/derelict land and other developed land. Disturbance from construction activity relating to Phase 1 of the scheme has altered the land use and habitats to the east of the site. In accordance with Paragraph 6 (Part 1, Section 14) of the Environment Act, the baseline data for this part of the site has been taken from pre-disturbance data and imagery and the categorisation and condition of adjacent habitats.

The current landscape proposals for the development of the site produce a net loss of <0.01 area habitat units (-0.18%) and a net gain of 0.15 linear hedgerow units (percentages not applicable as baseline values are zero). The trading rules laid out by the metric have also been satisfied due to insufficient compensation for the modified grassland and vacant/derelict land habitats.

3 Management Considerations

3.1 Management Responsibilities

The implementation of this management plan will be the responsibility of the landowner or developer for a minimum of 30 years, based on requirements within the Environment Act (2021). Any transference of responsibility of this plan should be undertaken with the appropriate appointment of a competent organisation capable of delivering the management detailed within the document.

The organisation implementing this plan will be a management company with the necessary certificates of competence to implement landscape management operation on site. The managing organisation will ensure that all site management complies with good practice standards and all relevant health and safety procedures. The managing organisation will also ensure that measures outlined to avoid pollution incidents, comply with protected species and habitats legislation, and ensure overall environmental protection are enforced.

A maintenance specification is provided in Section 5. This sets out the detailed maintenance requirements for the habitats onsite, which must be followed at all times. Any deviations from the management plan must be highlighted to the site owners or management company.

3.2 Controlling Authority

The controlling authority, Manchester City Council, should be consulted on any matters relating to the approved landscape proposals for the scheme.

3.3 Health and Safety

The site will be managed to comply with all relevant health and safety legislation, approved codes of practice (ACOP) and Health and Safety Executive (HSE) guidance.

As the managing organisation will be the main company involved in on site works, the managing organisation will fulfil the landowner's role and the work manager's role. This places an obligation on the managing company to ensure that any contractor understands and fulfils their health and safety role and any work undertaken on the site will follow the guidelines of the HSE.

3.4 Monitoring and Review

Regular monitoring of the development against measurable targets (as detailed within Section 4) will be undertaken across all habitats detailed within this management plan during the 30-year period. The outcome of this monitoring will form part of a Monitoring and Audit Report to be submitted to the site owner annually to inform the forthcoming year's work. The report will include management operations undertaken, any unexpected changes or declines in habitat condition and any actions required that fall outside those detailed within this report.

Work programmes have been provided for the first 5-years post-development only. This is because external factors, such as climate, extreme weather events and disease, prevent accurate forecasting of the management activities required beyond this stage. A more in-depth assessment of the habitats on site should therefore also be undertaken between April and September annually by an experienced ecologist. 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, with any refinements incorporated into the updated management plan and annual work programme. This review will enable

maintenance operations to evolve in accordance with habitat requirements as they establish, and mature and targeted conditions are met.

3.5 General Measures

Habitat creation on site will follow details set out in the Detailed Planting Plan (TPM Landscape, 2023a). The following general measures shall be met to ensure successful habitat creation and succession on site.

- All planting is to follow guidance set out in the relevant British Standard or Horticultural Trades Association documents and carried out by a competent person.
- Planting is to remain undamaged, with healthy and vigorous growth, and is to be planted upright and well balanced. 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.
- All planting is to be true to name and free from pests, diseases, discoloration, weeds, fungus, and physiological disorders upon planting.
- If plants/trees are unobtainable alternatives are to be agreed with the Ecologist/Landscape Architect in writing prior to ordering.
- After planting ensure that the full depth of topsoil is wetted. Apply water evenly and without damaging or displacing plants or soil. Continue to water as necessary to ensure the successful establishment and continued thriving of planting.
- All tree/shrub/hedgerow works shall be completed outside of nesting bird season (i.e. between October and February inclusive). If works are required within the nesting bird season, a check must be undertaken of all affected trees by a suitably qualified ecologist.
- All tree works shall be carried out by a skilled, qualified and approved Arboricultural Contractor in accordance with BS3998: 2010 'Tree Work – Recommendations'.

4 Ecological Strategy

This section summarises the management strategy for each habitat proposed to be introduced within the final design of the scheme. Each objective includes a target time for positive assessment provided to enable identification of failing management and trigger early intervention. Management plans have been included detailing management objectives for an initial 5-year period. Regular monitoring of the site against the management objectives will be conducted during the first five years of the project, and a review of the management strategies will be undertaken, with any updates or changes to the program incorporated for the next five years of the management plan.

The proposed landscape layout (TPM Landscape, 2023b) displays the final proposed habitats and their location on site. Areas which are classified as ‘developed land, sealed surface’ offer negligible ecological benefit and introduced shrub provides primarily ornamental, aesthetic value rather than habitat value. Therefore, both habitats are automatically allocated condition scores of N/A and require no ecologically driven management. Condition tables have been taken from the Biodiversity Metric 4.0 Technical Annex 1 (Natural England, 2023a) to inform this management plan.

4.1 Created Area Habitats

4.1.1 Individual Trees – Urban Trees

A total of 32 trees will be planted across the site, however, 9 of these trees are under the management of homeowners and have therefore been excluded from the calculation and management plan.

Detailed management techniques for new urban trees are described within Table 1 along with corresponding condition criteria. The targeted condition for the new urban trees is **moderate**, with an expected target condition time of 27 years. In order to reach the expected targeted condition, at least 3 of the condition criteria must be achieved. An annual schedule of works for the first 5 years post-development is detailed in Table 5 in Section 5.

Table 1 – Management Objectives for Urban Trees

Condition Assessment Criteria / objective	Management Activities	Benefit to environment	Target time for Positive Assessment
1. The tree is a native species (or at least 70% within a block)	This criterion is fixed by the planting proposals and will always fail due to 100% of proposed species being non-native	N/A	N/A
2. The tree canopy is predominantly continuous	Individual trees automatically pass this criterion	N/A	N/A
3. The tree is mature or veteran	<ul style="list-style-type: none"> After 10-20 years, trees will reach semi-maturity and appropriate corrective surgery may be necessary. Aid establishment by installing tree guards/stakes where necessary, mulching using an organic mulch 	Mature and veteran trees are more effective than young trees at providing air filtration services and sequester carbon. Veteran trees provide additional niches for wildlife.	>30 years

	<ul style="list-style-type: none"> and watering during periods of warm weather • Undertake arboricultural assessments once annually post-planting and every 3 years after this. Increase frequency if professional advice dictates 		
4. There is little or no evidence of an adverse impact on tree health by anthropogenic activities and no current regular pruning regime so the trees retain >75% of expected canopy	<ul style="list-style-type: none"> • Only undertake management activities where essential • No use of herbicides around trees • Tree works/pruning should be undertaken by a qualified professional • Avoid cutting all specimens across the plot in a single period, particularly where this is likely to remove all flower/fruit resources for wildlife 	Promotes healthy growth and supports growth to maturity.	From year 1
5. Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark	<ul style="list-style-type: none"> • Leave any micro-habitat features, such as ivy and loose bark, in place • Where it is safe and appropriate, retain areas of dead wood • No management activities to take place during nesting season (February to August inclusive) • Avoid undertaking management activities on all trees in a single month period to retain important resources for wildlife. • Installation of bird and bat boxes in suitable locations on trees 	Ensures diversity is maintained throughout by allowing the creation of additional habitat niches which can be exploited by wildlife.	By year 5
6. More than 20% of the tree canopy area is oversailing vegetation beneath	<ul style="list-style-type: none"> • Fixed by landscape design • Maintain surrounding habitats to suitable condition • No use of herbicides within this zone 	Creates a buffer habitat around trees to allow movement of wildlife and increases diversity of flora	From year 1

	<ul style="list-style-type: none"> Periodic removal of non-native invasive species 		
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4.1.2 Grassland – Modified Grassland

A block of modified grassland will be created within public open space to the west of the site by laying quality fine turf containing a low species richness of grass species only.

Detailed management techniques for the proposed grassland are described within Table 2 along with the corresponding condition criteria. The targeted condition for the grassland is **poor**, with an expected target condition time of 1 year and the grassland cannot achieve above poor condition due to the low species richness. Regardless, consideration should be given to implementing management practices which promote the development of a habitat which still offers value to local wildlife. An annual schedule of works for the first 5 years post-development is detailed in Table 6 in Section 5.

Table 2 – Management Objectives for Modified Grassland

Condition Assessment Criteria / objective	Management Activities	Benefit to environment	Target time for Positive Assessment
1. There are 6-8 vascular plant species per m ² present, including at least 2 forbs	<ul style="list-style-type: none"> No fertiliser to be used within the grassland habitat Removal of arisings after mowing to reduce nutrient input to encourage the natural germination of grasses Supplementary seeding of ground where patches of bare earth arise 	Species rich grassland provides a rich source of nectar for pollinators	From year 1
2. Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	<ul style="list-style-type: none"> It is unlikely that this criterion will pass given the location of the grassland and level of disturbance March – September is an important window for a multitude of hay meadow flowering species and is therefore significant to invertebrate, bird and small mammal populations. Observe periods where mowing is avoided during this summer period, for example, No Mow May 	Varied sward heights provide increased opportunities for commuting and foraging for birds, invertebrates and small mammals	From year 1
3. Some scattered scrub (including bramble) may be	<ul style="list-style-type: none"> Consistent monitoring of habitat for growth of shrub species 	Maintains the characteristic of the habitat and prevents	From year 2

present, but scrub accounts for less than 20% of total grassland area.	<ul style="list-style-type: none"> Hand removal of any growth of woody species 	overgrowth by shrub species	
4. Physical damage is evident in less than 5% of total grassland area.	<ul style="list-style-type: none"> Ensure areas of bare ground are kept to a minimum to reduce erosion by re-seeding bare ground Only carry out necessary maintenance activities when specified and at the appropriate time of year Management activities to be carried out by a suitably qualified person using the correct equipment 	Preventing physical damage promotes healthy growth of vegetation and uniformity within the habitat	From year 1
5. Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens).	<ul style="list-style-type: none"> Seed any bare areas with a suitable grass seed mix 	Ensures widespread cover of desired species and reduces space for non-desirable species to colonise	From year 1
6. Cover of bracken <i>Pteridium aquilium</i> less than 20%.	<ul style="list-style-type: none"> Consistent monitoring of the habitat for bracken growth Hand removal of bracken upon discovery 	Removing bracken at an early stage prevents species from dominating the habitat and outcompeting other desired species	From year 2
7. There is an absence of invasive, non-native plant species (as listed on Schedule 9 of WCA)	<ul style="list-style-type: none"> Identification and removal of invasive non-native species as soon as possible. Where possible, do this by hand. If necessary, application of herbicide should be carried out by an experienced contractor 	Ensure native assemblage of species throughout mixed scrub habitat. Prevents competition from aggressive non-native species.	From year 1

4.1.3 Heathland and Shrub – Mixed Scrub

40m² of mixed scrub, containing hawthorn (*Crataegus monogyna*), hazel (*Corylus avellana*), blackthorn (*Prunus spinosa*), elder (*Sambucus nigra*) and guelder-rose (*Viburnum opulus*) will be planted to the north of the site, adjacent to a car park.

The expected condition of the scrub is **poor**, with a time to target condition of 1 year. To achieve a higher condition score, the scrub would need to meet 3 criteria (moderate) or 5 criteria (good) from those listed in Table 3, however, due to space constraints it is unlikely that all criteria can be met. An annual schedule of works for the first 5 years post-development is detailed in Table 7 in Section 5.

Table 3 – Management Objectives for Proposed Mixed Scrub

Condition Assessment Criteria	Management Activities	Benefit to environment	Target time for Positive Assessment
1. The scrub is a good representation of the habitat type it has been identified as based on its UKHab description. At least 80% of the scrub is native, and there are at least three woody species with no single species comprising more than 75% cover	<ul style="list-style-type: none"> Beat up scrub habitat as required with whips of the same species, size and quality to ensure diversity is maintained and one species cannot dominate Removal of non-native invasive species to prevent species dominating habitat 	A wide range of species provides varied foraging, commuting nesting opportunities to birds, invertebrates and small mammals	From year 1
2. Seedlings, saplings, young shrubs and mature shrubs are all present	<ul style="list-style-type: none"> Beat up scrub habitat with whips to replace lost shrubs, according to the planting proposals Thinning of dense growth of shrubs or bramble (<i>Rubus fruticosus</i> agg.) to guarantee sufficient light levels within scrub for regeneration 	Different life stages provide different foraging and habitat opportunities	From year 3
3. There is an absence of invasive non-native species	<ul style="list-style-type: none"> Identification and removal of invasive non-native species as soon as possible. Where possible, do this by hand. If necessary, application of herbicide should be carried out by an experienced contractor. 	Ensure native assemblage of species throughout mixed scrub habitat. Prevents competition from aggressive non-native species.	From year 1
4. The scrub has a well-developed edge with scattered scrub and tall grassland and/or herbs present between the scrub and adjacent habitat(s).	Due to the location of the habitat, the scrub cannot pass this criterion	N/A	N/A
5. There are clearings, glades or rides present within the	Due to the small area of the proposed scrub, it is unlikely that this criterion will ever be met	N/A	N/A

scrub, providing sheltered edges.

4.2 Created Linear Hedgerow Habitats

Ornamental hedgerows are automatically allocated a condition score of **poor** within the metric and require aesthetic management only.

4.2.1 Native Hedgerow

A total of 41m of native hedgerow containing wild privet only (*Ligustrum vulgare*) will be planted within the public spaces of the site.

The expected condition for the hedgerows is **moderate**, with a time to target condition of 5 years. To achieve moderate condition, there must be no more than 4 failures in total and both attributes must not fail in more than one functional group. An annual schedule of works for the first 5 years post-development is detailed in Table 8 in Section 5.

Table 4 – Management Objectives for Native Hedgerow

Condition Assessment Criteria	Management Activities	Benefit to environment	Target time for Positive Assessment
A1. Height >1.5m average along length.	<ul style="list-style-type: none"> Damaging practices and activities should be avoided around the hedge e.g., use of machinery to allow plants to grow to maturity and in good health 	<p>Hedgerows serve several important roles for birds, mammals and invertebrates. They act as valuable wildlife corridors, facilitating the movement of species between different habitats, which is especially important in urban environments where there is likely to be a high level of anthropogenic disturbance. Hedgerows, particularly those containing native species, provide plentiful foraging opportunities and can support complex food webs. Finally, hedgerows offer nesting habitat for some bird species, as well as refuge from</p>	5 years
A2. Width >1.5m average along length.	<ul style="list-style-type: none"> Only essential management to be carried out by a qualified contractor, during tree/shrub dormant period No management to take place during bird nesting season Retain any pruned wood on site as habitat piles 		
B1. Gap between ground and base of canopy <0.5 m for >90% of length (unless 'line of trees').	<ul style="list-style-type: none"> Undertake pruning only when necessary to remove dead or damaged branches and encourage growth Pruning should promote the natural form of shrubs within the hedgerow Prune during winter months when plants are dormant and outside of bird nesting season 		5 years
B2. Gaps make up <10% of total length and no canopy gaps >5 m	<ul style="list-style-type: none"> Replace any failed plants with new wild privet whips 		From year 1
C1. >1 m width of undisturbed ground with perennial	<ul style="list-style-type: none"> Where possible, leave a 2m buffer zone around the base of the hedge which is free from 		From year 1

herbaceous vegetation for >90% of length: - measured from outer edge of hedgerow, and - is present on one side of the hedge (at least).	management activity e.g., weeding, mowing <ul style="list-style-type: none">No use of fertilisers in this area to ensure habitat isn't dominated by a handful of species	predators, spaces to rest and shelter.	
C2. Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground.	<ul style="list-style-type: none">No use of fertilisers in the habitat bordering the hedgerow to allow for a higher diversity of flora and prevent a few species dominating		From year 1
D1. >90% of the hedgerow and undisturbed ground is free of invasive non-native and neophyte species.	<ul style="list-style-type: none">Identification and removal of invasive non-native species as soon as possibleWhere possible, do this by hand. If necessary, application of herbicide should be carried out by an experienced contractor		From year 1
D2. >90% of the hedgerow or undisturbed ground is free of damage caused by human activities.	<ul style="list-style-type: none">Damaging practices and activities should be avoided around the hedge e.g., use of machinery to allow plants to grow to maturity and in good health		2 years

Appropriate for management
 Not appropriate for management

5 Five Year Work Programme

Table 5 – Five Year Work Programme for Urban Trees

Habitat	Action	Frequency Notes	Indicative timing of operation											
			J	F	M	A	M	J	J	A	S	O	N	D
Urban Trees	Replacement planting – Bare root and root ball	Year 1 then as required to year 5												
	Replacement planting – Containerised	Year 1 then as required to year 5												
	Control and removal of non-native species surrounding trees	As required year 1 to 5												
	Visual inspection of tree health to ensure successful establishment growth	Annually years 1 to 3 and minimum every 3 years following this												
	Required pruning to damaged or diseased trees	As required year 1 to 5												

Habitat	Action	Frequency Notes	Indicative timing of operation											
			J	F	M	A	M	J	J	A	S	O	N	D
	Water twice a month during warmer months	Annually during warmer months or as needed in periods of hot weather												
	Mulching around base of tree – 2m radius of organic mulch e.g. woodchip	Twice annually – spring and autumn												

Table 6 – Five Year Work Programme for Modified Grassland

Habitat	Action	Frequency Notes	Indicative timing of operation											
			J	F	M	A	M	J	J	A	S	O	N	D
Modified Grassland	Mowing to 3-5cm and removal of arisings. Observation of regular periods of no mowing e.g. No Mow May	Once a month, years 1 to 5												
	Removal of shrub growth within grassland	As required years 1 to 5												
	Seeding areas of bare ground with appropriate seed mix	As required years 1 to 5												
	Removal of bracken growth within grassland	As required years 1 to 5												
	Monitoring for, and removal of, invasive, non-native species	As required years 1 to 5												

Table 7 – Five Year Work Programme for Proposed Mixed Scrub

Habitat	Action	Frequency Notes	Indicative timing of operation											
			J	F	M	A	M	J	J	A	S	O	N	D
Mixed scrub	Beating up with native whips (species according to planting proposals)	Year 1 then as required to year 5												
	Control and removal of invasive non-native species	As required year 1 to 5												
	Pruning of damaged or diseased plants using appropriate methods and retention of dead wood as hibernacula	As required year 1 to 5												
	Thinning of very dense shrub growth and bramble to ensure sufficient light levels within scrub	Bi-annually												
	Thinning of dense scrub regeneration within clearings/glades/rides	Bi-annually												

Table 8 – Five Year Work Programme for Native Hedgerow

Habitat	Action	Frequency Notes	Indicative timing of operation											
			J	F	M	A	M	J	J	A	S	O	N	D
Native Hedgerow	Replacement planting of lost hedge plants	Year 1 then as required to year 5												
	Control and removal of non-native species	As required year 1 to 5												
	Formative pruning of wild privet	During winter months for first 2 years then once annually after this												
	Mulching	Twice a year in first year then once annually after this												
	Watering	During warmer months or as needed in periods of hot weather												
	Visual inspection of shrub health	Annually years 1 to 3 and then every 3 years after this												

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