

Landscape Management and Maintenance Plan

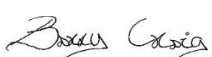
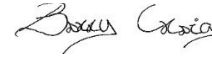
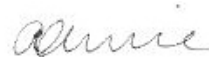
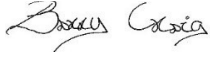
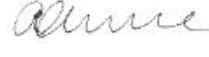
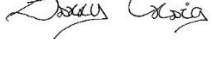
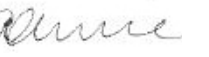
for

Quakers Yard Footbridge



Document Control Sheet

Project Name:	Quakers Yard
Project Number:	CODWBD15EMER
Report Title:	Landscape Mitigation Considerations
Report Number:	CODWBD15EMER-AMEY-00-XX-LX-RP-0001 /P02

Issue Status/Amendment	Prepared	Reviewed	Approved
REV 1.0	Name: Luke Gilmore Signature:  Date: 06/04/23	Name: Angela Assorto-McIlwaine Signature:  Date: 07/04/23	Name: Barry Craig Signature:  Date: 07/04/23
REV 1.1	Name: Luke Gilmore Signature:  Date: 25/01/24	Name: Angela Assorto-McIlwaine Signature:  Date: 31/01/24	Name:Barry Craig Signature:  Date: 31/01/24
REV 1.2	Name: Luke Gilmore Signature:  Date: 05/02/24	Name: Angela Assorto-McIlwaine Signature:  Date: 10/02/24	Name: Barry Craig Signature:  Date: 06/02/24
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Quakers Yard - Landscape Maintenance & Management Plan

01.00 INTRODUCTION

Amey Consulting's Chartered Landscape Architects have been requested to undertake this Landscape Management and Maintenance Plan (LM&M) which relates to the planting areas at the Quakers Yard site which will ensure sustainable management of the landscape, protecting and enhancing biodiversity.

Key
Quakers Yard Railway Station



Figure 1.1 - Location Plan

Quakers Yard - Landscape Maintenance & Management Plan



Figure 1.2- Detailed Landscape Planting Plan

Quakers Yard - Landscape Maintenance & Management Plan

Enhancement Opportunities

Possible opportunities for the proposed development have been identified:

- Strengthen the transport corridors, ensuring tree lines are well connected and sensitively managed
- Ensure wildflower meadows and verges are sensitively managed and well-connected with the wider vegetation and other semi-natural habitat features (particularly woodlands)
- Ensure current blocks of semi-natural habitat and protected sites are sensitively managed and their extent increased where appropriate

Opportunities for enhancement identified, which are in line with the Ecological Impact Assessment are:

- Management of grasslands for reptiles
- Management of tree and hedges to enhance diversity whilst offering visual screening
- Habitat connection through the site through
- Deployment of two bird boxes within suitably retained habitat (a combination of 1B Schwegler Nest Box | NHBS Practical Conservation Equipment – 32mm entrance (<https://www.nhbs.com/1b-schwegler-nest-box>) & 1B Schwegler Nest Box | NHBS Practical Conservation Equipment – 26mm entrance (<https://www.nhbs.com/1b-schwegler-nest-box>));
- Deployment of three bat boxes within suitably retained woodland to provide roosting opportunities for this species in the area (2F Schwegler Bat Box (General Purpose) | NHBS Practical Conservation Equipment (<https://www.nhbs.com/2f-schwegler-bat-box-general-purpose>), & 2F Schwegler Bat Box with Double Front Panel | NHBS Practical Conservation Equipment (<https://www.nhbs.com/2f-schwegler-bat-box-with-double-front-panel>); and
- Creation of refugia piles for reptiles, hedgehogs and other small mammals.
- Translocating high quality patches of existing plants as turves and relaying into the landscaping scheme may ensure individual plants and species are retained and would also preserve some of the seed bank. Implementation of dust and pollution prevention measures

will ensure no impact on surrounding habitats is likely during construction

Further opportunities are:

- Retention of existing boundary vegetation
- Connection of GI through the site through well considered planting design
- Soil to be stripped, stored and reused as part of the landscape proposals
- Visually screen the development from the northern side of the railway line

Trends and Constraints

The following are some trends and constraints on the site that may influence the future management of it:

- Natural species composition change to both wildflower and woodland mixes
- As the use of the land changes human activity will increase within the local area which may have an influence at local level on the landscape character
- Natural colonisation of native species over time found within local area due to the spread of seed heads by wind or animal
- Weed species could become established before planting has reached a natural equilibrium to balance its ecological matrix
- Natural delineation of wildflower boundaries due to seeds spreading
- Encroachment and possible elimination of open glades in the wildflower area
- Pest and diseases, such as Ash Dieback
- Integration of interpretation boards at primary ecological habitats within the proposed development site



Quakers Yard - Landscape Maintenance & Management Plan

02.00 RESPONSIBILITIES

Introduction

The works consist of the maintenance and management of the existing trees and vegetation, together with new high quality planting, including trees, bare-root transplants, shrubs, herbaceous perennials and seeded areas. The works are to be maintained are detailed in section 06.00 Maintenance, Monitoring and Remedial Measures of this document. Works to be undertaken can be seen on detailed drawings CODWBD15EMER-ELS-XX-DR-LL-001, CODWBD15EMER-ELS-XX-DR-LL-002, CODWBD15EMER-ELS-XX-DR-LL-003, CODWBD15EMER-ELS-XX-DR-LL-004 & CODWBD15EMER-ELS-XX-DR-LL-005, along with the series 3000 specification CODWBD15EMER-AMEY-ELS-XX-SP-001.

The works shall be maintained by the Landscape Contractor from practical completion for the Defects Liability as follows;

- Trees, shrubs, herbaceous perennials - 60 months after Practical Completion
- Seeded Areas - 60 months after Practical Completion

Until works are signed over to the Client. At this point the responsibility will transfer to that party

Landscape Contractor

A suitable specialist Landscape Contractor shall carry out the works described in this specification. The proposed Landscape Contractor shall be a full member of the British Association of Landscape Industries and shall only be selected from a list of approved Contractors.

Machines and Tools

Machines and tools to be used must be suitable for the site conditions and the work to be carried out. Use hand tools around trees, plants and in confined spaces where it is impracticable to use machinery.

Workmanship

Method of Work – the method of executing any of the work in this specification and schedules unless specifically mentioned, is at the discretion of the Landscape Contractor.

Good Practice – Where and to the extent that materials and products

are not fully specified in the contract or full specifications they are to be suitable for the purposes of the works. They shall be in accordance with good horticultural practice, including the relevant provisions of current British Standard documents.

Maintenance standards should at all times reflect the development’s high quality image. The Contractor shall keep all planting area weed free, plants vigorous and healthy, and the overall landscape environment neat and tidy.

Programme of the Works

The Landscape Contractor shall co-ordinate with the main Contractor’s programme and submit a detailed programme of works prior to starting work on site for approval. The Landscape Contractor shall report any



potential failures to meet the specified programme. Any changes to the agreed programme must be in writing.

Invasive Weeds

Invasive non-native species, plants and animals listed in Parts 1 and 2 of Schedule 9 of the Wildlife and Countryside Act 1981, as amended, (WCA) or listed as species of Union concern (as per EU IAS regulation 1143/2014), or animals of a kind not ordinarily resident, in or not a regular visitor to, the UK. It is not a breach of legislation to have invasive non-native species on a property; however:

- Invasive non-native animals must not be released into the wild, even if captured accidentally, or transported offsite (without following the appropriate duty of care)
- Invasive non-native plants must not be allowed to spread into the wild, must not be taken offsite (without following the appropriate duty of care), and, if listed as a species of Union concern, should be safely removed if containment cannot be guaranteed

If such species are encountered unexpectedly:

- A suitably qualified Ecologist should visit site to confirm species identification and provide further advice. Until an Ecologist has visited site, no intrusive works should be undertaken within a 7m radius of the above ground stand identified
- If the Ecologist confirms a non-native invasive species is present their presence should be recorded in writing and NNSS (Non-native Species Secretariat) should be notified (<https://www.nonnativespecies.org/what-can-i-do/recording/>)
- The disturbance of such species must be immediately prevented (e.g. by installing appropriate fencing to establish an exclusion zone)
- A site-specific Biosecurity and Management Plan should be produced by a suitably qualified specialist prior to further works in this area. Where species under the Weeds Act are encountered in significant numbers (i.e. a stand dominated by these species of more than 1m x 1m or where they are considered frequent within the sward based on the DAFOR scale) then their presence, shall be recorded for construction and future management prescriptions updated as appropriate

Quakers Yard - Landscape Maintenance & Management Plan

Nuisance Weeds Act

The Weeds Act 1959 lists five common native weeds, spear thistle, creeping or field thistle, curled dock, broad-leaved dock and ragwort. Some of these species are likely to be encountered on most sites. The Weeds Act 1959 imposes no obligation to control these species; however, it does create a provision that allows an appropriate authority to order that the spread of such weeds is prevented if they are spreading from a property and causing issues on a neighbouring property. Such orders will only be issued, following a complaint, if the weeds are threatening land used for one of the following:

- Keeping or grazing horses and other livestock
- Farmland used to produce conserved forage (e.g. silage and hay) and/or agriculture.

Ragwort is the main larval food plant of the cinnabar moth, a living organism of principal importance for the purpose of maintaining and enhancing biodiversity in relation to Wales (Environmental (Wales) Act 2017, section 7.) Therefore it although listed as a common native weed it should not be prevented from spreading on site.

All working within the site must comply with Natural Resource Wales’ (NRW) guidance and regulations.

Chemicals

Pesticides include herbicides, insecticides, fungicides and plant growth regulators. The use of pesticides is governed by legislation. The Landscape Contractor must comply with the ‘The Control of Pesticides Regulations 1986’ made under the ‘Food and the Environment Protection Act 1985’, ‘The Control of Substances Hazardous to Health Regulations 1988’ made under the ‘Health and Safety at Work Act 1974’ and any other legislation enacted during the contract period.

All pesticides must be products on the current list of Agricultural Chemicals Approval Scheme. All pesticide users shall comply with the conditions of approval relating to use clearly stated on the product label.

The Contractor must comply with all relevant Codes of Practice issued by Natural Resource Wales (NRW). In particular where work is near water, comply with NRW’s guidance where no herbicides shall be used within 5m of any water course.

Certificates

A recognised nominated storekeeper’s certificate of competence (BASIS) is required by a Contractor storing more than 200 litres of pesticides. All pesticides transported or stored in the Contractor’s vehicles (regardless of quantity) shall be locked in a separate storage compartment in the vehicle or within a lockable container in ‘pickups’ that are bolted to the floor of the vehicle.

The storage locker must be sealed and clearly marked as containing pesticides and must bear a standard black and yellow hazard sign.

A Certificate of Competence (National Proficiency Training Certificate) must be held by the Contractor applying pesticides and handed to the Main Contractor prior to commencement on site. Only Certificate holders shall mix, apply and dispose of pesticides and other chemicals on site.



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Use of Pesticides

Chemical intervention must only be used for the control of Invasive Non-Native Species as included in Schedule 9 of the Wildlife and Countryside Act 1981 and only at such times when no other method of control can be employed.

Notification of at least 24 hours shall be given to the Client of the Contractor’s intention to carry out application of pesticides. The Contractor shall select the most appropriate and effective method for each particular area or situation or for any particular use or specific work, and shall notify the Client of the type of pesticide, active ingredient, and method and timing of application.

Note: If alternative organic biological control methods can be used this would be the preferred method of application. Specialist advice is to be obtained before the introduction of a controlling pest.

The Contractor shall keep a written logbook detailing all uses and pesticide applications carried out and a copy shall be submitted to Client for record.

The Contractor is required to notify the public of any pesticide application. A warning sign shall be posted at the entrance to the areas to be treated. Where contained solely within planting beds the sign shall be placed adjacent to edges in noticeable positions. Details of the application and a contact person shall be indicated on the sign.

The Contractor shall in accordance with COSHH Regulations protect employees and other persons, including the public, who may be exposed to substances hazardous to health.

The Contractor shall restrict the use of chemicals strictly to where necessary to control notifiable weeds where absolutely necessary.

Disposal

The Contractor shall dispose of waste pesticides and containers in accordance with the control ‘Control of Pesticides Regulations 1986’, Control of Pollution Act 1974’, ‘Water Act 1989’ following all NRW’s procedures. Safe disposal arrangements shall be made before starting to apply pesticides.

Concentrated pesticides shall be disposed of in arrangement with the local Environmental Health Department or with a specialist waste disposal contractor.

Empty containers shall not be re-used for any purpose and containers shall be cleaned thoroughly in accordance with label instructions prior to safe disposal.



03.00 SOFT LANDSCAPE TREATMENTS

Generally

The Contractor shall be responsible for making good and or compensation for any damage resulting form negligence in the application, handling and storage of pesticides.

The Contractor shall be responsible for keeping up to date with all legislation and regulations regarding the use of pesticides. The Landscape Contractor shall inform the Main Contractor of any subsequent changes to legislation and regulations that affect the contract.

Liability for Damage of Existing Vegetation

Existing trees or vegetation damaged during the works shall be replaced by trees or plants of similar size and maturity or numbers considered reasonable by the Main Contractor. The cost of the replacement shall be borne by the Main Contractor and Landscape Contractor.

Protection

The Landscape Contractor shall in respect of the maintenance works and adjacent areas of the site used by him in the course of the contract ensure that:

- Adequate protection of existing and newly planted/seeded areas is erected and maintained to prevent damage
- There is appropriate making good on removal of any protective measures on completion
- There is repair of any damage to adjacent and existing site works and features
- All hard surfaces used are kept, protected, clean and tidy

Watering

Watering shall be undertaken as necessary and appointed by the Main Contractor to ensure that trees, grass and plants remain healthy, establish and grow. In the event of emergency legislation restricting the use of water from the mains during drought conditions, the Landscape Contractor shall arrange the collection and application of suitable second class water for irrigation purposes, by bowser or other means, from an approved source to deliver to site and apply as specified. This shall be included for in the price for maintenance during the defects liability period.

Arisings

The Landscape Contractor, appointed by the Main Contractor, is to remove from site and dispose of weeds, prunings, leaves, litter, rubbish, dirt and other arisings unless specifically described as to be left and spread over beds.

Schedule of Operations

To be read in conjunction with the annual maintenance programme Section 06.00 Maintenance, Monitoring and Remedial Measures.

Woodland Planting & Individual Specimen Trees

The Contractor shall maintain the stock as set out in detail in the series 3000 specification CODWBD15EMER-AMEY-ELS-XXSP-001 and below.

Objectives -

- Create habitats of high distinctiveness and high condition to maximise biodiversity value of created habitats and aid project contribution to targets to increase extent of priority habitats within 10 years
- New native woodland planting along the proposed boundaries to strengthen existing ecological structure with the use of whips and standard trees that will integrate the proposal into the landscape and aid screening of the proposed development from the south
- Compliment the existing woodland planting areas, provide additional screening and enhance woodland edge planting
- Compensate for the losses of woodland as a consequence of development of the scheme through the creation of diverse new woodland habitats

Preamble -

Prior to, during and after work the Contractor should avoid damage to neighbouring trees, plants and property. If planting is to take place outside of planting season all stock should be supplied in containers. All Woodland stock to be supplied in 5l pots and Individual specimen trees to be supplied in 60L pots. This can be seen in detail on the detailed planting plans and planting details - CODWBD15EMER-ELS-XX-DR-LL-001, CODWBD15EMER-ELS-XX-DR-LL-002, CODWBD15EMER-ELS-XX-DR-LL-003, CODWBD15EMER-ELS-XX-DR-LL-004 & CODWBD15EMER-ELS-XX-DR-LL-005.



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Planting Specification -

Woodland plants to be planted at 2.5m centres.

Species in Woodland North Mix

Species	Height	Specification	Number	Mix
Betula pubescens	0.8-1.0m	Transplant	9	25%
Betula pendula	0.8-1.0m	Transplant	9	25%
Sorbus torminalis	0.8-1.0m	Transplant	9	25%
Acer campestre	0.8-1.0m	Transplant	9	25%

Species in Woodland South Mix

Species	Height	Specification	Number	Mix
Betula pubescens	0.8-1.0m	Transplant	89	20%
Betula pendula	0.8-1.0m	Transplant	89	20%
Sorbus torminalis	0.8-1.0m	Transplant	89	20%
Acer campestre	0.8-1.0m	Transplant	67	15%
Quercus robur	0.8-1.0m	Transplant	45	10%
Malus sylvestris	0.8-1.0m	Transplant	67	15%

Species for Individual Specimen Tree Planting

Species	Height	Specification	Number	Mix
Betula pubescens	3-4m	Heavy Standard	8	25%
Betula pendula	3-4m	Heavy Standard	8	25%
Sorbus torminalis	3-4m	Heavy Standard	8	25%
Acer campestre	3-4m	Heavy Standard	8	25%
12-14cmg, 3x WRB, Clear stem min 1.75m.				

Tree supply and planting shall correspond to BS 8545: 2014 Trees: from nursery to independence the landscape - Recommendations. Planting of trees shall be undertaken in favourable weather conditions between October 31st to March 31st.

Transplants shall be of the size stated in the schedules and conform to BS 3936 - Part 1: Nursery stock specification for trees and shrubs as shown on drawing number CODWBD15EMER -AMEY-ELS-XX-DR-LL-003, Standard Planting Details. Containerised planting details are shown on drawing number CODWBD15EMER-AMEY-ELS-XX-DR-LL-005 Planting Details Containerised Species.

Layout: Random groups of no less than 3 or more than 7 of the same species, ensuring that no three plants are aligned in any one direction.

Establishment Period Years 0-5 (0-60 months)

Watering -

Landscape Contractor to seek approval from the Main Contractor prior to any watering of woodland/tree/shrub planting.

Plant and Tree Shelters -

Biodegradable plant shelters to be placed around transplants and container grown species for protection from grazing rabbits and / or deer in plantations where fencing is not intended to be erected to protect plants.

Check and secure, tree and shrub shelters, associated stakes and fastenings. Re-firm planted trees and stakes by treading around the base. Remove weed growth within shelters. To be undertaken 3 times per year for at least the first three years, and after storm events.

On each inspection adjust stakes, tubes, guards and ties to suit growth. At end of year 4 remove tree stakes and shelters unless there are reasons to retain.

Plant Inspections / Replacements -

Plant replacement inspections shall be made in August/September annually for all planted tree stock, to identify dead, diseased and dying tree stock.

Plant replacements shall be carried out annually between the start of November and end of March. Priority shall be given to completing replacement planting before the end of December each year.

Replacement plants to match size of adjacent or nearby plants of same species or match original specification, whichever is the greater.

Control of grass and weeds within areas of tree planting -

During first five years maintain a 1m diameter clear of vegetation should be maintained around the base of plants, or a 1m free strip where rows occur. Mechanical or mulching methods of vegetation control acceptable, assuming that they act to maintain a 1m free strip.

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Maintenance Period Years 5-10 (60-120 months)

Thinning -

Thinning and felling of selected woodland trees shall remove the less healthy or less desirable trees and give the remaining trees more space to develop. Cut to ground level. Cut some of the material into 1m lengths and create brash piles to promote invertebrate habitat.

Prolific colonisers shall be removed to favour desired species to establish or to maintain designated open areas. A mixed age class across the species with reduced canopy cover will create light for the field layer to develop, however, drastic interventions which cause abrupt changes in light regimes should be avoided.

Performance Indicator and End Target at Year 10 -

Undertake walkover survey inspections annually throughout the maintenance period to assess species present and stage of development.

Development of a diverse woodland that enhances the value of the overall habitat mosaic.

Thinning and felling to take place as required during year 10 of the maintenance period.

Post Maintenance Period Considerations Years 10 + (over 120 months)

Requirement for thinning to be considered after ten years, and periodically at five year intervals thereafter.

Performance Indicator and End Target at Year 10 -

Undertake walkover survey inspections annually throughout the maintenance period to assess species present and stage of development.

Development of a diverse woodland edge that enhances the value of the overall habitat mosaic.

All planting to be inspected annually with individual planting circles kept weed free during the establishment period 1-10 years (0-120 months).



Quakers Yard - Landscape Maintenance & Management Plan

Schedule of Operations

To be read in conjunction with the annual maintenance programme
Section 06.00 Maintenance, Monitoring and Remedial Measures.

Proposed Woodland Edge

The Contractor shall maintain the stock as set out in the specification
below

Objectives -

- Create habitats of high distinctiveness and high condition to maximise biodiversity value of created habitats and aid project contribution to targets to increase extent of priority habitats within 10 year
- Compliment the native main mix planting areas and provide additional screening
- Development of a diverse woodland edge that enhances the value of the overall habitat mosaic
- Create habitats of high distinctiveness with high condition to maximise biodiversity value of created habitats and aid project contribution to targets the increase of priority habitats
- To enhance the existing green infrastructure found on the site
- New native woodland planting along the proposed boundaries to strengthen existing ecological structure with the use of whips and standard trees that will integrate the proposal into the landscape and aid screening of the proposed development from the south



Preamble -

Prior to, during and after work the Contractor should avoid damage to neighbouring trees, plants and property. If planting is to take place outside of planting season all stock should be supplied in containers. All woodland edge stock to be supplied in 2L Pots.

Planting Specification -

Woodland edge plants to be planted at 1.5m centres.

Species in Woodland Edge North Mix

Species	Height	Specification	Number	Mix
Crataegus monogyna	0.4-0.6m	Transplant	47	30%
Corylus avellana	0.4-0.6m	Transplant	39	25%
Cornus sanguinea	0.4-0.6m	Transplant	24	15%
Prunus avium	0.4-0.6m	Transplant	24	15%
Viburnum opulus	0.4-0.6m	Transplant	24	15%

Species in Woodland Edge South Mix

Species	Height	Specification	Number	Mix
Crataegus monogyna	0.4-0.6m	Transplant	49	20%
Corylus avellana	0.4-0.6m	Transplant	49	20%
Cornus sanguinea	0.4-0.6m	Transplant	25	10%
Prunus avium	0.4-0.6m	Transplant	37	15%
Viburnum opulus	0.4-0.6m	Transplant	25	10%
Rosa canina	0.4-0.6m	Transplant	25	10%
Salix caprea	0.4-0.6m	Transplant	37	15%

Tree supply and planting shall correspond to BS 8545: 2014 Trees: from nursery to independence the landscape - Recommendations. Planting of trees shall be undertaken in favourable weather conditions between October 31st to March 31st.

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Transplants shall be of the size stated in the schedules and conform to BS 3936 - Part 1: Nursery stock specification for trees and shrubs, as shown on drawing number CODWBD15EMER -AMEY-ELS-XX-DR-LL-003, Standard Planting Details. Containerised planting details are shown on drawing number CODWBD15EMER-AMEY-ELS-XX-DR-LL-005 Planting Details Containerised Species. All whips to be protected with biodegradable shelters.

Layout: Random groups of no less than 3 or more than 7 of the same species, ensuring that no three plants are aligned in any one direction.
Establishment Period Years 0-5 (0-60 months)

Watering -

Landscape Contractor to seek approval from the Main Contractor prior to any watering of woodland edge.

Plant and Tree Shelters -

Plant shelters to be placed around transplants for protection from grazing rabbits.

On each inspection adjust stakes, tubes, guards and ties to suit growth.

At end of year 4 remove tree stakes and shelters unless there are reasons to retain.

Plant Inspections / Replacements -

Plant replacement inspections shall be made in August/September annually for all planted tree stock, to identify dead, diseased and dying stock.

Plant replacements shall be carried out annually between the start of November and end of March. Priority shall be given to completing replacement planting before the end of December each year.

Replacement plants to match size of adjacent or nearby plants of same species or match original specification, whichever is the greater.

Control of grass and weeds within areas of tree planting -

During first five years maintain a 1m diameter clear of vegetation should be maintained around the base of plants, or a 1m free strip where rows occur. Mechanical or mulching methods of vegetation control acceptable, assuming that they act to maintain a 1m free strip.

Maintenance Period Years 5-10 (60-120 months)

Thinning September to March -

Thinning and felling of selected woodland trees shall remove the less healthy or less desirable trees and give the remaining trees more space to develop.

Cut to ground level. Cut some of the material into 1m lengths and create brash piles to promote invertebrate habitat.

Prolific colonisers shall be removed to favour desired species to establish or to maintain designated open areas. A mixed age class across the species with reduced canopy cover will create light for the field layer to develop, however, drastic interventions which cause abrupt changes in light regimes should be avoided.

Coppicing September To March -

Divide woodland edge habitats into sections of 20-30m in length. Clear non-adjacent areas on a 5-10 year rotation.

Cut stumps to height of 150mm using chain saw or bow saw. Cut should be at 45 degrees to allow run-off and promote regrowth. Clear compartments year in rotation to develop a diverse age structure.

Once tree planting has begun to establish coppice management should be undertaken. Commence coppicing of woodland edge planting in Yr 10.

Performance Indicator and End Target at Year 10 -

Undertake walkover survey inspections annually throughout the maintenance period to assess species present and stage of development.

Development of a diverse woodland edge that enhances the value of the overall habitat mosaic.

All planting to be inspected annually with individual planting circles kept weed free during the establishment period 1-10 years (0-120 months).

Thinning and felling to take place as required during year 10 of the maintenance period.

Post Maintenance Period Considerations Years 10 + (over 120 months)

Requirement for thinning to be considered after ten years, and periodically at five year intervals thereafter.



Quakers Yard - Landscape Maintenance & Management Plan

Schedule of Operations

To be read in conjunction with the annual maintenance programme Section 06.00 Maintenance, Monitoring and Remedial Measures.

Proposed Meadows & Grass Verges

The Contractor shall maintain the stock as set out in the series 3000 specification CODWBD15EMER-AMEY-ELS-XXSP-001 and below.

Objectives -

- Grass verges made up of 80% Grasses & 20% Wildflowers
- Areas of Meadows to be made up of 80% tussock grass and 20% wildflower will maximise biodiversity value of surrounding existing habitats and contribute to scheme wide no net loss in biodiversity targets

Preamble -

The contractor shall be responsible for maintaining all wildflower areas in a weed free and litter free condition, throughout the complete growing season, or when the landscape works are completed, whichever is the later.

All arisings shall be collected immediately following cutting or at the end of each work period and taken to the designated location for disposal.

Planting Specification -

Grass verges to be N14 Flowering Lawn Mix supplied by Naturescape or similar and approved, sown at 5g/m²

Proposed Meadows to be N5 Long Season Meadow Mixture by Naturescape or similar and approved, sown at 5g/m²

Planting shall be as drawing CODWBD15EMER -AMEY-ELS-XX-DR-LL-002 Landscape Plan & CODWBD15EMER -AMEY-ELS-XX-DR-LL-004 Standard Seeding Details.

Sowing-

Create a fine friable seedbed down to 150mm in depth. Carry out two equal sowings at right angles to each other and diagonally to main axis. Broadcast manually or use seed drill, rake level and roll. Ensure good seed to soil contact.

Works required 6 weeks after installation -

All areas are to be walked and any loose stones, debris or rubbish over 25mm in any direction removed from grass verges and visibility splays. For all other grassland & wildflower area this increases to 75mm. After the surface clearance all areas with no or little establishment shall have their surface broken by hand rake and over seeded. Following the clearance and over seeding all areas are to be wetted and lightly rolled with an even and smooth weight.

Fertilizer -

Only deficient areas shall receive a small amount of specific fertilizer to balance the discrepancy between all other areas and only when directed by the landscape architect.

Settlement -

Any areas of settlement or local depressions shall be made up and re-sown by the contractor at his own expense.

Trimming of Edges -

The edges of wildflower areas are to be carefully trimmed to a true line.

Failed Areas -

All areas of failed wildflower meadow shall be reinstated using the seed mix as specified within the landscape contract, with ground cultivation prior to seeding meeting the same requirements.



Quakers Yard - Landscape Maintenance & Management Plan



N14 Flowering Lawn Mix

Handover of Wildflower Areas -

All new areas shall be handed over as complete, well established sward at the end of the establishment maintenance period.

N14 Flowering Lawn Mixture

Establishment Period Years 0-1 (0-12 months)

First cut early in the growing season to 30mm. Remove arisings.

Visibility splays and verges to 25-50mm when grass reaches 75mm.

Maintenance Period Years 1-10 (12-120 months)

Cut down to 50-70mm at least three times per year year. Remove arisings. If possible lightly mow the sward down to 70-100mm as required throughout the winter months until March.

N5 Long Season Meadow

Establishment Period Years 0-1 (0-12 months)

Cut down to 70-100mm. Early cuts during establishment period with final cut taking place late October to allow for suitable flowering and self seeding period to take place. If grass is overtaking meadow an additional cut may be required. Arisings shall be shaken and removed off site.

Maintenance Period Years 1-10 (12-120 months)

Allow flowering and self seeding period to take place before cutting down to 70-100mm in early March and allow flowering until mid October. If grass is overtaking meadow an additional cut may be required. If possible lightly mow the sward down to 70-100mm as required throughout the winter months until March.

Performance Indicator and End Target at Year 10 - Wildflower areas shall have good, well knitted sward without obvious bare patches.



Birdfoot Trefoil found in both mixes N5 & N14



N5 Long Season Meadow Mix

Quakers Yard - Landscape Maintenance & Management Plan

04.00 MAINTENANCE, MONITORING AND REMEDIAL MEASURES

Establishment Period Years 0-5 (0-60 months)														
Activity	Description	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Woodland														
Plant and Tree Shelters -	Check / secure / adjust, tree and shrub shelters, associated stakes and fastenings until end of year 3													
	Re-firm planted trees and stakes by treading around the base until end of year 3													
	On each inspection of all above following storm events until end of year 3													
	At end of year 4 remove tree stakes and shelters unless there are reasons to retain.													
Plant Inspections / Replacements -	Plant inspections to determine plant failures e.g. - dead, diseased and dying tree stock													
	Plant replacements as identified. Priority shall be given to completing replacement planting before the end of December each year if instructed.													
Control of grass and weeds within areas of tree planting -	Maintain clear vegetation strip around base of plants.													

Establishment Period Years 5-10 (60-120 months)														
Activity	Annual Activities to be undertaken in \ when	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Woodland														
Walkover Survey Inspections -	Plant inspections to determine plant failures e.g. - dead, diseased and dying tree stock													
	Remove tree stakes unless there are reasons to retain.													
	Removal of dead trees													
Arboricultural works	Pruning of dead dying or diseased branches													
	Thinning and felling of woodland													

Establishment Period Years 10 + (120 months +)														
Activity	Annual Activities to be undertaken in \ when	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Woodland														
Walkover Survey Inspections -	Main areas of woodland planting to be coppiced from around year 15 onwards under a 7-10 year regime in rotation. Divide woodland into suitable management parcels and clear in rotation to create a chequerboard effect. Note: Dependent on rate of establishment it may not be suitable to commence coppice management of main woodland areas until later in the establishment period.													

Quakers Yard - Landscape Maintenance & Management Plan

Establishment Period Years 0-5 (0-60 months)														
Activity	Description	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Woodland Edge														
Plant and Tree Shelters -	On each inspection adjust stakes, tubes, guards and ties to suit growth until end of year 4.													
	At end of year 4 remove tree stakes and shelters unless there are reasons to retain.													
Plant Inspections / Replacements -	Plant inspections to determine plant failures eg - dead, diseased and dying stock													
	Plant replacements as identified. Priority shall be given to completing replacement planting before the end of December each year if instructed.													
Control of grass and weeds within areas of tree planting -	Maintain clear vegetation strip around base of plants.													

Establishment Period Years 5-10 (60-120 months)														
Activity	Annual Activities to be undertaken in \ when	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Woodland Edge														
Walkover Survey Inspections -	Plant inspections to determine plant failures eg - dead, diseased and dying tree stock													
	Rmove tree stakes unless there are reasons to retain.													
	Removal of dead trees													
Arboricultural works	Pruning of dead dying or dieaeased branches													
	Thinning and felling of selective parts of woodland													

Establishment Period Years 10 + (120 months +)														
Activity	Annual Activities to be undertaken in \ when	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Woodland Edge														
Coppicing	Divide woodland edge habitats into sections of 20-30m in length. Clear non-adjacent areas on a 5-10 year rotation.													
	Cut stumps to height of 150mm using chain saw or bow saw at 45 degrees													
Arboricultural works	Thinning and felling of selective parts of woodland													

Quakers Yard - Landscape Maintenance & Management Plan

Establishment Period Years 0-1 (0-12 months)														
Activity	Description	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Meadow Mixture/ Tussock Grass Mixture														
Establishment Period -														
	Cutting - Cut down to 70-100mm from mid-July to early September. Remove arisings. If possible lightly mow the sward down to 70-100mm as required throughout winter months until March.													
	Weeds - Pernicious weed species managed and treated with spot treatment. In areas of wildflower hand weeding may be required													

Establishment Period Years 5-10 (60-120 months)														
Activity	Annual Activities to be undertaken in \ when	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Meadow Mixture/Tussock Grass Mixture														
	Cutting - Cut down to 70-100mm from mid-July to early September. Remove arisings. If possible lightly mow the sward down to 70-100mm as required throughout the winter months until March. Performance Indicator and End Target at Year 10 - Wildflower areas shall have good, well knitted sward without obvious bare patches.													
	Cutting - Visibility splays to 150mm													
	Spot treatment with herbicide and suitable portable applicator (or pulling where appropriate) for undesirable species including docks, thistles and ragwort.													

Quakers Yard

Prepared by Amey Consulting

