Lanpro

South Wokingham Distributor Road

Landscape Specification

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South Wokingham Distributor Road,

Wokingham,

RG40 2HP

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Tony Gee and Partners LLP

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Issue Sheet

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Landscape Specification, Implementation & Management Plan

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Appendices

1 Introduction

1.1 Summary

1.1.1 Lanpro Services Ltd. ('Lanpro') was commissioned by Tony Gee to prepare an update to the written landscape specification, to support the discharge of Condition 12, Part e) of planning approval notice 192928 and to provide the detailed specification for all soft planting operations set out in drawings WMHP-TG-SRWG1-DR-LS-3001 - 3009 'Soft Landscaping Planting Plan' (See Appendix 1) for the Wokingham Spine Road and Western Gateway Phase 1, herein referred to as 'the Development'.

1.1.2 The requirements of condition 12 of the Decision Notice is detailed as follows:

Prior to the first occupation of any phase of the development a detailed landscaping scheme for the whole of the site shall be submitted to and agreed in writing with the Local Planning Authority. The landscaping scheme shall include the following information: Condition 12 states the following:

i. No development other than enabling works as established by the details approved pursuant to condition 3 shall take place in any phase of the development until full details of both hard and soft landscape works for that phase have been submitted to and approved in writing by the local planning authority and these works shall be carried out as approved. The details shall include, as appropriate:

a) scheme drawings;

b) proposed levels and contours;

c) detailed design of SuDS features in accordance with the SuDS Strategy, demonstrating how they will be integrated into the wider landscape, with attenuation basins having a natural shape and shallow profile (not requiring lifesaving equipment and fence barriers), allowing them to fulfil amenity, ecological and drainage functions;

d) soft landscaping details including planting plans, schedules of plants, noting species, planting sizes and proposed numbers/densities where appropriate;

e) a Landscape Specification document covering soft landscaping (including site preparation, cultivation, plant handling and other operations associated with plant and grass establishment) and hard landscaping including all construction works such as paths, bridges, retaining walls and road restraint systems;

f) details of the street tree planting pits in combination with the roadside swales/raingardens demonstrating that the trees have sufficient rooting volume to enable their successful retention long term health;

g) hard landscaping materials including samples;

h) minor artefacts and structures (e.g. bus stops, street furniture, refuse or other storage units, signs, external services) including specifications for the product and its installation;

i) *consideration of how the landscape proposals for the SWDR integrate with those for the surrounding development to ensure comprehensively planned and coordinated landscape design and delivery;*

j) *consideration of the route for a future Public Right of Way along the route of the Emmbrook between the SWDR bridge and Finchampstead Road;*

k) *consideration of incorporation of seating at regular intervals along the route to allow pedestrians to rest and facilitate social interaction;*

l) *specification for tree rooting systems and use of structural soils under paving or where rooting volumes are limited;*

m) *all boundary treatments, including temporary highway boundary fences, and other means of enclosure or controlling access such as gates, bollards and vehicle restraint systems, which shall include consideration of ecological permeability, in particular containment of otters and dogs to prevent them straying onto the road;*

n) *measures required for ecological mitigation and biodiversity net gain;*

o) *measures for management of the Emm Brook corridor;*

p) *visual screening between the road and the Grade II listed buildings, Britton's Farmhouse and the adjacent barn;*

q) *demonstration that the layout that is consistent with and does not prejudice the proposed use of the land as a SANG (under application 191068 or any application that supersedes it);*

r) *a minimum eight metre wildlife zone to watercourses measured from the top of the bank, with the exception of the areas identified within sections 2.3.4 and 2.3.5 of the WFD assessment (February 2021) within which all planting shall be native species of local provenance;*

s) *how non-native species such as Himalayan Balsam will be eradicated;*

t) *how the buffer zone will be protected during development and managed over the long term; and*

u) *how the river channel morphology and bankside habitat will be enhanced to contribute to biodiversity net gain.*

ii. *Details of quality control measures, including supervision of landscape contract(s) by a suitably qualified landscape specialist and annual landscape audits for the five-year period from completion of the landscaping for the Landscape Phase or until adoption (whichever is longer). The annual Landscape Audit shall be submitted to the Local Planning Authority for information prior to the next planting season and replacement planting undertaken in accordance with the landscape audit and iii) below.*

iii. *Any trees or plants which, within a period of five years after planting, are removed, die or become seriously damaged or defective, shall be replaced in the next planting season with others of species, size and number as originally approved and permanently retained.*

Reason: In the interests of visual amenity, to secure necessary ecological mitigation and biodiversity gain, and to safeguard the setting of designated heritage assets in

accordance with Core Strategy policies CP1, CP3, CP7 & CP21; and Managing Development Delivery Local Plan policies CC03, TB21 TB23, & TB24; and the South Wokingham SDL SPD. Details are required prior to commencement to ensure a coordinated and comprehensive approach to landscaping which is fundamental to the acceptability of proposal.

1.1.3 This document will be adhered to by the Project's personnel, Principal Contractor and sub-contractors involved with construction activities carried out in relation to the Development.

1.1.4 The approved version of this Written Landscaping Scheme will be adopted and implemented by the Projects' personnel, the appointed Principal Contractor and all sub-contractors for the Development works. Minor changes may be made to this document by the Principal Contractor during construction phase. However, changes of a material nature will be agreed with the Wokingham Borough Council and stakeholders as relevant.

1.2 Document Format

1.2.1 The document is structured into the following parts:

- Section 1; is the introduction that sets out planning basis of this document alongside all relevant guidance and standards.
- Section 2; sets out the description of works.
- Section 3; provides a summary of all planting and seeding works;
- Sectio 4; sets out prescriptions for the planting preparations and care.
- Section 5; sets out the planting methods and specification of all planting across site.
- Section 6; sets out the seeding methods and specification of all planting across site.
- Section 7; sets out the landscape aftercare prescriptions;
- Section 8; sets out the implementation timeframes.

1.2.2 The document is also supported by the following appendices in Section 9:

- Appendix 1: WMHP-TG-SRWG1-DR-LS-3001 - 3009 'Soft Landscaping Planting Plan'
- Appendix 2: WMHP-TG-SRWG1-DR-LA-3021-3026

1.3 Relevant Guidance

1.3.1 This LEMP has been produced with reference to the following guidance:

- Institute of Environmental Management and Assessment; and
- National Plant Specification 'Handling and Establishing Landscape Plants'.

1.3.2 All plants and planting operations are to comply with the requirements and recommendations of all current relevant British Standard specifications including but not limited to:

- BS 8545. Trees: From Nursery to Independence in the Landscape;
- BS 3936-1:1992. Nursery stock. Specification for trees and shrubs;
- BS 3882:2015 - Specification for topsoil;
- BS 4428:1989. Code of practice for general landscape operations (excluding hard surfaces) (AMD 6784);
- BS 5837: 2012 Trees in relation to design, demolition and construction. Recommendations;
- BS3998:2010 Recommendations for Tree Work;
- The Hedgerow Regulations 1997;
- Local Authority Guidance; and
- Bumblebee Conservation Trust
- National Grid Guidance: Design Guidelines for Development Near High Voltage Overhead Lines
- Scottish & Southern Electricity Networks: Guidance for Third Parties Working Near SSEN Transmission Assets

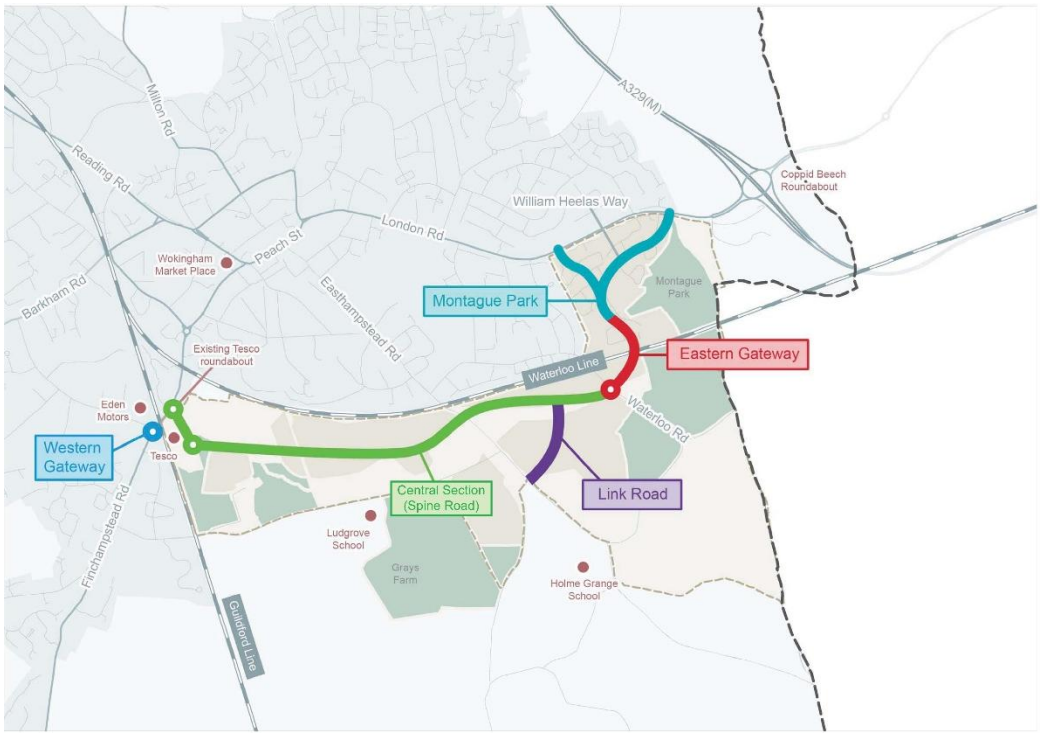
2 Description of Works

2.1.1 In order to realise the vision for the development, and mitigate traffic impacts from the development sites, a series of transport and infrastructure initiatives are being progressed including the provision of a number of major highway projects.

2.1.2 The South Wokingham Distributor Road (SWDR) will provide access to a development of up to 1800 new homes, and provide key transport link for this new community, including safe, accessible cycling and walking provision to reduce the need for driving. It will also offer an alternative route for through traffic that avoids Wokingham town centre.

2.1.3 The new distributor road is proposed to extend in an easterly direction from Finchampstead Road, along the southern side of the Reading to Waterloo Line, to London Road, as illustrated in Figure 1 below.

Figure 1: indicative alignment of the South Wokingham Distributor Road



2.1.4 The SWDR must take into consideration the South Wokingham SDL proposed development as shown on plans P18-0963_06U-01 and P18-2684_31 which can be found in WBC Project Works Information WMHP-WBC-SRWG1-RP-PM-0001; as well as planning applications that have been submitted in lieu of South Wokingham SDL. These include but are not limited to:

- Planning Application refs: 190900, 190914 and 101068 by the South Wokingham SDL Consortium.
- Planning Application ref: 192325 by Persimmon Homes.

2.1.5 The first phase of the Distributor Road, which extends from London Road into the Montague Park Development, has previously been constructed by David Wilson Homes. Planning for the second phase crossing the rail line and linking Montague Park to Waterloo Road, Eastern Gateway, was granted in April 2018, with construction completed, and the scheme completed and opened in early 2022.

2.1.6 A planning application for the third phase of the South Wokingham Distributor Road, referred to as the SRWG1 (Central Section), was submitted in November 2019, revised on December 2020, with consent granted in May 2021.

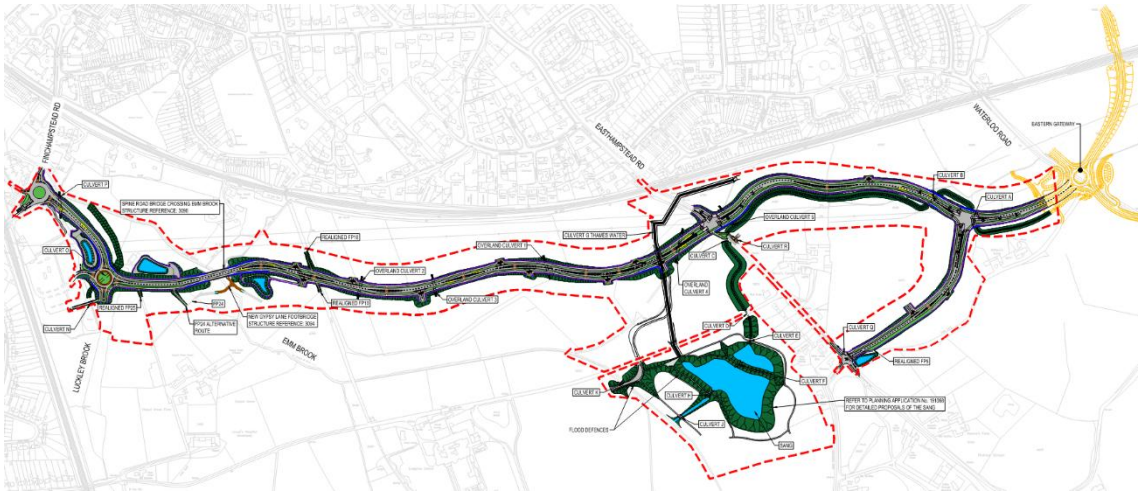
2.1.7 SRWG1 will tie in with the south-westerly arm of the Eastern Gateway roundabout and extend west through agricultural land roughly parallel to the rail line, across a new junction with Easthampstead Road, crossing the Emm Brook and linking up with Finchampstead Road at the Finchampstead Road/ Tesco Roundabout. The final phase, Western Gateway Phase 2, comprises of a roundabout enhancement at the junction of Finchampstead Road and Molly Millars Lane.

2.1.8 The proposed highway alignment is mainly offline and constructed on an embankment with some at grade sections. There is some online work with the creation of a junction at Easthampstead Road, and at the scheme tie-ins. The scheme incorporates a new bridge to provide vehicular and pedestrian/cyclist access across Emm Brook with an offline foot/cycle bridge crossing Emm Brook to the south of the distributor road.

2.1.9 One new roundabout, the New Tesco Access/ SWDR Roundabout, is included at the far west of the scheme providing access to the Tesco car park and linking the scheme to the Finchampstead Road/ Tesco roundabout. The existing Finchampstead Road/ Tesco Roundabout is also being modified to provide a new arm to connect the SWDR.

2.1.10 Detailed design drawings are listed in Appendix 1.

Figure 2: Plan illustrating SRWG1 highways works



2.1.11 The highway works for SRWG1 include, but are not limited to, the following;

- Site clearance over the footprint of the new highway and as indicated on the illustrative drawings
- Link road between Eastern Gateway and New Tesco Access/ SWDR Roundabout
- The New Tesco Access/ SWDR Roundabout
- Road bridge crossing Emm Brook
- Footbridge crossing Emm Brook
- Drainage network to collect and attenuate surface water from the highway
- Culverts to enable watercourses and overland drainage to pass under SRWG1
- Pedestrian / cycle facilities
- Bus Stop facilities
- Traffic signs, road markings, traffic signals, lighting and road restraint systems
- Traffic Signals
- Landscaping and Ecology
- Ancillary Works
- SANG earthworks and drainage
- Thames Water culverts

3 Planting and Seeding

3.1 Introduction

3.1.1 The landscape proposals consist of native tree, shrub, hedgerow, woodland, herbaceous riparian planting and native wildflower grassland mixes with both species and forms seen locally to the site to complement the wider landscape and increase biodiversity on site.

3.1.2 All landscape operations will be in-line with the relevant British Standard listed in Section 1.3 of this report.

3.1.3 All planting and seeding operations will be conducted under supervision of a suitably qualified landscape architect or competent landscape professional

3.2 Planting and Seeding Locations

3.2.1 The location of all proposed planting and seeding areas are illustrated in drawings WMHP-TG-SRWG1-DR-LS-3001 - 3009 'Soft Landscaping Planting Plan' and provided in Appendix 1.

3.3 Restrictions on Planting

3.3.1 Proposed planting may be restricted due to the presence of existing and proposed below and above ground services. Where services are present a reasonable safe distance for landscape contractors when undertaking planting works must be adhered to.

3.3.2 The Principal Contractor is responsible for accurately identifying all information in relation to existing services on site. This includes the accurate location of existing services and identification and agreement of associated easements required by each asset owner and will be shared with the landscape contractor prior to the commencement of landscape works.

4 Planting and Seeding Preparation

4.1 Clearance

4.1.1 Where required, the Site will be cleared prior to any planting operations being undertaken.

4.1.2 Where existing ground vegetation is retained or has re-established during the construction phase, the following clearance works should be undertaken prior to any planting or seeding works:

- **Tree Planting (including Street Tree and Green Space Tree Planting): All** grass and perennial vegetation within a 500mm radius of the base of each proposed tree should be cleared to ground level including all epicormic and below ground growth;
- **Hedgerow Planting (including Hedgerow Tree Planting):** All grass and perennial vegetation within a 500mm offset each side of the proposed centre line and within a 250mm radius of each proposed tree should be cleared to ground level including all epicormic and below ground growth;
- **Woodland Planting (including Wet Woodland Planting):** All grass and perennial vegetation within a 250mm radius of the base of each proposed tree should be cleared to ground level including all epicormic and below ground growth;
- **Native Shrub Planting (Including Woodland Edge Planting, Low Native Shrub Mix, Low Wet Shrub Mix):** All grass and perennial vegetation within a 250mm radius of the base of each proposed tree should be cleared to ground level including all epicormic and below ground growth;
- **Riparian Mix Planting:** All grass and perennial vegetation should be cut to 25-50mm across each planting area;
- **All Wildflower and Grassland Seeding:** All grass and perennial vegetation should be cleared to ground level including epicormic and below ground growth;
- **All Areas:** Clear all rubbish and debris and stone pick all stones over 25mm diameter; and
- **Arisings:** Removed from site.

4.2 Herbicide Application

4.2.1 There is a general presumption against the use of herbicides, pesticides and fertilisers due to the detrimental impact they can have on the environment. These should be restricted to essential tasks when other management methods are not feasible.

4.2.2 Where persistent weeds exist that would be detrimental to the establishment of the proposed planting and when other hand/machine weed control methods have not been successful, the area should be treated with two applications of selective broadleaf

herbicide prior to planting and seeding. Where necessary, care should be taken to avoid existing bulb and wildflowers and strictly in accordance with the Control of Pesticides Regulations 1986 (COPR) (as amended 1997) (or, otherwise, updated/superseded legislation) and following manufacturer's instructions by qualified staff.

4.3 Cultivation

4.3.1 Topsoil should be cultivated in-line with BS 3882: 2015 to a minimum of 400mm over all planting areas and to a fine tilth over all areas to be seeded and include basic levelling with levels graded to fall.

4.3.2 No additional / imported top soil is required for species rich grassland / meadow areas.

4.3.3 No cultivation should take place in wet/ waterlogged conditions and within the root protection areas of existing trees. Where necessary imported topsoil should be sustainably sourced and must be compliant with the BS 3882: 2015.

5 Planting

5.1 Plant Handling

5.1.1 The handling of plants and planting operations should be in accordance with the requirements and recommendations set out in the relevant British Standards outlined in section 1.3 of this report. The supplier of any plant material to site should be listed in the Horticultural Trade Associations, Nursery Certificate Scheme.

5.1.2 All planting should be carried out during appropriate weather conditions and where possible during the optimal planting period of October through until the end of March.

5.1.3 Care should be taken to ensure the roots of bareroot specified trees and shrubs do not dry out prior to planting and should be planted as soon as possible after delivery. If this is not possible then rootballed and container grown plants should be specified and stored closed together with the ball or container covered with sand or a moist cloth to prevent drying out. Plant / Tree Handling, Storage and Transport to be carried out to CPSE 'Handling and establishing landscape plants' (obtainable from the Horticultural Trades Association) Part I, Part II and Part III, paragraphs 1.3.3 to 1.3.6, 3.0, and 4.0.

5.1.4 Planting work to be carried out to CPSE 'Handling and establishing landscape plants' (obtainable from the Horticultural Trades Association) Part III, paragraphs 6.2 to 6.6. Plant upright or well balanced with best side to front. Plants to be handled and dispatched in accordance with the National Plant Specification - Handling and establishment, with special reference to the following:

- Frost: Protect bare root plants and frost susceptible plants;
- Handling: Handle plants with care. Protect from mechanical damage and do not subject to shock, e.g. by dropping from a vehicle;
- Plant packaging: Bare root material to be sealed in co-extruded black and white polyethylene bags;
- Planting: Upright or well balanced with best side to front;
- If plants suffer slight damage, they are to be carefully pruned. If major damage has occurred the plant shall be rejected and replaced at the Contractor's expense;
- After delivery, if planting is not carried out immediately, root balled shrubs should be placed cheek to cheek and the root ball covered with sand, peat or straw and watered to prevent drying out;
- Bare-rooted plants should be heeled-in by pacing the roots in a prepared trench and covering them with top-soil, which should be watered thoroughly to eliminate air pockets around the roots; and
- The security and tidiness of the area set aside for heeling in shall be the responsibility of the Contractor. If planting is delayed for more than a week after

delivery, packaged plants shall be unpacked, the bundles opened up and each groups of plants heeled-in separately and clearly labelled.

5.2 Plant Staking and Protection

5.2.1 It is recommended that all staking and protection measure consist of biodegradable products where possible.

5.2.2 Should any non-biodegradable products be used, it is essential that these are removed in a timely manner following establishment and in-line with the landscape management plan.

5.2.3 All removed accessories should be disposed of responsibly.

All stakes, canes and other supports should be positioned on the windward side of the tree or shrub and driven in to the ground vertically.

Semi Mature Trees

5.2.4 New semi mature trees are to be planted and staked in line with Tree Pit Construction Details Drawing WMHP-TG-SRWG1-LS-3010 (latest revision).

5.2.5 All semi mature trees to be planted in pits 900 x 900 x 700 mm or dimensions of rootball, whichever is greater (for tree pit details refer to Tree Pit Construction Details Drawing WMHP-TG-SRWG1-LS-3010 latest revision).

5.2.6 Trees are to be supported by GreenBlue Urban ArborGuy Deadman Guying System.

5.2.7 1 no. 25kg bag of soil improver and the root balls to be given a mycorrhizal treatment immediately before planting.

5.2.8 Trees to be planted centrally within the tree pit. Semi-mature trees to have minimum 2.4m clear stem.

Standard Trees

5.2.9 All standard trees to be planted in pits 600 x 600 x 500 mm or dimensions of rootball, whichever is greater (for tree pit details refer to Tree Pit Construction Details Drawing WMHP-TG-SRWG1-LS-3010 latest revision).

5.2.10 Tree to be supported by two wooden stakes, 600mm above ground with two adjustable ties.

5.2.11 1 no. 25kg bag of soil improver and mycorrhizal treatment to be incorporated into the soil of all new tree pits immediately before planting.

5.2.12 Trees to be planted centrally within the tree pit.

Light Standard Trees

5.2.13 All light standard trees to be planted in pits 500 x 500 x 400 mm or dimensions of rootball, whichever is greater.

5.2.14 Tree to be supported by a single stake and suitable biodegradable tie.

5.2.15 1 no. 25kg bag of soil improver and the root balls to be given a mycorrhizal treatment immediately before planting.

5.2.16 Trees to be planted centrally within the tree pit.

Feathered Trees

5.2.17 All feathered trees to be planted in pits 300 x 300 x 450 mm or dimension of the rooting area which ever is greater.

5.2.18 Trees to be planted centrally within the tree pit and supported using a suitable cane/stake and biodegradable tie and rubber buffer to prevent excessive movement during establishment.

5.2.19 Feathered trees should be protected from animal damage using a suitable tree guard appropriate to the size. Guards should be biodegradable and pushed up to 2 cm into the ground.

5.2.20 Soil improver and mycorrhizal treatment to be incorporated into the soil of all new tree pits before planting.

Whips and Transplants

5.2.21 All other planting within hedgerows should be staked in-line with BS 4428: 1989 using a single and appropriate biodegradable tie to prevent excessive movement during establishment.

5.2.22 All stakes, canes and other supports should be positioned on the windward side of the tree or shrub and driven in to the ground vertically.

5.2.23 All newly planted plants should be protected from animal damage using a suitable shrub guard appropriate to the size. Guards should be biodegradable and pushed up to 2 cm into the ground.

5.2.24 A spiral guard should be used for whips and transplants within hedgerow and shrub plants, and shrub shelters for tree and shrub species with a bushy formation to allow room for growth, and mesh construction to allow wind through for successful trunk / stem establishment.

5.3 Mulching

5.3.1 All new tree and shrub planting should be covered using a coarse bark mulch to a minimum depth of 100mm leaving the stem of the plant clear.

5.3.2 The following mulch areas should be applied:

- **Hedgerow Planting (including trees):** minimum mulch area of 500mm offset from the centreline of the proposed hedge;

- Woodland Planting (including Wet Woodland Planting**): minimum mulch area of 250mm** radius from stem;
- **Native Shrub Planting (including Woodland Edge Planting, Low Native Shrub Mix, Low Wet Shrub Mix):** minimum mulch area of 250mm radius from stem; and
- **Street Trees:** minimum mulch area of 500mm radius from stem.
- **Green Space (Individual) Trees:** minimum mulch area of 500mm radius from stem.

5.4 Street Tree Planting

5.4.1 Table 1.1 provides a species list and specification for all proposed street tree planting associated with the Development works. Locations of all proposed street trees are shown on drawings WMHP-TG-SRWG1-DR-LS-3001 - 3009 'Soft Landscaping Planting Plan' (See Section 9, Appendix 1)

Table 1.1 Street Tree Planting Schedule

Species	Form	Girth (cm)	Height (cm)	Root	Clear Stem (cm)	Quantity
Acer campestre 'Streetwise'	4X	18-20	450-600	RB	240 min	42
Alnus cordata	4X	18-20	450-600	RB	240 min	34
Carpinus betulus 'Frans Fontaine'	4X	18-20	450-600	RB	240 min	33
Corylus colurna	4X	18-20	450-600	RB	240 min	25
Pyrus calleryana 'Chanticleer'	4X	18-20	450-600	RB	240 min	17
Quercus robur 'Fastigiata Koster'	4X	18-20	450-600	RB	240 min	42
Tilia cordata 'Streetwise'	4X	18-20	450-600	RB	240 min	21
Ulmus 'New Horizon'	4X	18-20	450-600	RB	240 min	18

Abbreviations: RB= Root Balled, 4x = 4 times transplanted

5.5 Green Space (Individual) Tree Planting

5.5.1 Table 1.2 provides a species list and specification for all amenity tree planting associated with the Development works. Locations of all proposed green space trees are shown on drawings WMHP-TG-SRWG1-DR-LS-3001 - 3009 'Soft Landscaping Planting Plan' (See Section 9, Appendix 1)

Table 1.2 Green Space (Individual) Tree Planting Schedule

Species	Form	Girth (cm)	Height (cm)	Root	Clear Stem (cm)	Quantity
Salix caprea	S	8-10	250-300	RB	-	4
Castanea sativa	SM	18-20	450-600	RB	-	11
Prunus avium	SM	18-20	450-600	RB	-	16
Quercus robur	SM	18-20	450-600	RB	-	37
Sorbus aucuparia	SM	18-20	450-600	RB	-	13
Sorbus torminalis	SM	18-20	450-600	RB	-	30

Abbreviations: S= Standard, SM= Semi-Mature, BR= Bare Root, RB= Root Balled

5.6 Hedgerow Tree Planting

5.6.1 Table 1.3 provides a species list and specification for all hedgerow tree planting associated with the Development. Locations of all proposed hedgerow trees are shown on drawings WMHP-TG-SRWG1-DR-LS-3001 - 3009 'Soft Landscaping Planting Plan' (See Section 9, Appendix 1)

Table 1.3 Hedgerow Tree Planting Schedule

Species	Form	Girth (cm)	Height (cm)	Root	Clear Stem (cm)	Quantity
Acer campestre	SLi	6-8	250-300	BR	150min	19
Prunus avium	SLi	6-8	250-300	BR	150min	36
Prunus 'Sunset Boulevard'	SLi	6-8	250-300	BR	150min	18
Quercus robur	SLi	6-8	250-300	BR	150min	23
Sorbus aucuparia 'Cardinal Royal'	SLi	6-8	250-300	BR	150min	20

Abbreviations: SLi= Light Standard, BR= Bare Root

5.7 Woodland Mix

5.7.1 Table 1.4 provides a species list and specification for all proposed Woodland Mix on site. Locations of Woodland Mix is shown on drawing WMHP-TG-SRWG1-DR-LS-3001 - 3009 'Soft Landscaping Planting Plan' (See Section 9, Appendix 1).

5.7.2 All Woodland Mix areas will be under-seeded using the wildflower and grass seeding specified in section 6.3 'Meadow Seeding' of this report.

Table 1.5 Woodland Mix Schedule

Species	Form	Girth (cm)	Height (cm)	Root	Pot Size	% in mix	Quantity
Acer campestre	S	8-10	250-300	BR	-	10	114
Betula pendula	T	-	60-80	BR	-	5	62
Carpinus betulus	T	-	60-80	BR	-	10	114
Castanea sativa	T	-	60-80	BR	-	5	62
Ilex aquifolium	T	-	60-80	C	2	7	81
Malus sylvestris	T	-	60-80	BR	-	5	62
Prunus avium	S	8-10	250-300	BR	-	10	114
Quercus robur	S	8-10	250-300	BR	-	10	114
Quercus robur	T	-	60-80	BR	-	15	166
Rhamus catharica	T	-	60-80	BR	-	5	62
Sorbus aucuparia	T	-	60-80	BR	-	8	91
Sorbus torminalis	T	-	60-80	BR	-	5	62
Tilia cordata	T	-	60-80	BR	-	5	62

Mix Density: 1 plant per 4 m^2. All species planted randomly un species groups of 1, 3, 5 or 7.
250-300cm height trees to be 2-3X transplanted with minimum clear stem height of 1.75-2m.
Abbreviations: S= Standard, BR= Bare Root, RB= Root Balled, C= Containerised, T= Transplant

5.8 Wet Woodland Mix

5.8.1 Table 1.5 provides a species list and specification for all proposed Wet Woodland Mix on site. Locations of Wet Woodland Mix is shown on drawing WMHP-TG-SRWG1-DR-LS-3001 - 3009 'Soft Landscaping Planting Plan' (See Section 9, Appendix 1).

5.8.2 All Wet Woodland Mix areas will be under-seeded using the wildflower and grass seeding specified in section 6.5 'Wetland Meadow Seeding' of this report.

Table 1.5 Wet Woodland Mix Schedule

Species	Form	Age	Height (cm)	Root	% in mix	Quantity
Alnus glutinosa	T	1+1	60-80	BR	20	372
Betula pubescens	T	1+1	60-80	BR	20	372
Salix alba	T	1+1	60-80	BR	10	188
Salix caprea	T	1+1	60-80	BR	15	280

Salix fragilis	T	1+1	60-80	BR	10	188
Salix purpurea	T	1+1	60-80	BR	15	280
Salix viminalis	T	1+1	60-80	BR	10	188

Mix Density: 1 plant per 4 m^2. All species planted randomly in species groups of 1, 3, 5 or 7.
Abbreviations: T= Transplant, BR= Bare Root, 1+1 = 1 year transplant

5.9 Low Woodland Edge Mix

5.9.1 Table 1.6 provides a species list and specification for all proposed Low Woodland Edge Mix on site. Locations of Low Woodland Edge Mix is shown on drawing WMHP-TG-SRWG1-DR-LS-3001 - 3009 'Soft Landscaping Planting Plan' (See Section 9, Appendix 1)

5.9.2 All Low Woodland Edge Mix areas will be under-seeded using the wildflower and grass seeding specified in section 6.3 'Meadow Seeding' of this report.

Table 1.6 Low Woodland Edge Mix Schedule

Species	Form	Age	Height (cm)	Root	% in mix	Quantity
Cornus sanguinea	T	1+1	60-80	BR	15	48
Euonymus europaeus	T	1+1	60-80	BR	5	16
Ligustrum vulgare	T	1+1	60-80	BR	5	16
Prunus spinosa	T	1+1	60-80	BR	15	48
Rhamnus cathartica	T	1+1	60-80	BR	5	16
Rosa arvensis	T	1+1	60-80	BR	5	16
Rosa canina	T	1+1	60-80	BR	5	16
Rosa rubiginosa	T	1+1	60-80	BR	5	16
Salix cinerea	T	1+1	60-80	BR	30	96
Sambucus nigra	T	1+1	60-80	BR	5	16
Viburnum opulus	T	1+1	60-80	BR	5	16

Mix Density: 1 plant per 4 m^2. All species planted randomly in species groups of 1, 3, 5 or 7.
Abbreviations: T= Transplant, BR= Bare Root, 1+1 = 1 year transplant

5.10 Native Shrub Mix

5.10.1 Table 1.7 provides a species list and specification for all proposed Native Shrub Mix on site. Locations of Native Shrub Mix is shown on drawing WMHP-TG-SRWG1-DR-LS-3001 - 3009 'Soft Landscaping Planting Plan' (See Section 9, Appendix 1)

5.10.2 All Native Shrub Mix areas will be under-seeded using the wildflower and grass seeding specified in section 6.4 'Shade Tolerant Seeding' of this report.

Table 1.7 Native Shrub Mix Schedule

Species	Form	Age	Height (cm)	Root	Density per m^2	% in mix	Quantity
Cornus sanguinea	T	1+1	60-80	BR	1	10	114
Corylus avellana	T	1+1	60-80	BR	1	10	114
Crataegus monogyna	T	1+1	60-80	BR	1	10	114
Euonymus europaeus	T	1+1	60-80	BR	1	10	114
Ilex aquifolium	T	1+1	60-80	BR	1	5	59
Ligustrum vulgare	T	1+1	60-80	BR	1	10	114
Prunus spinosa	T	1+1	60-80	BR	1	5	59
Rhamnus cathartica	T	1+1	60-80	BR	1	10	114
Rosa arvensis	T	1+1	60-80	BR	1	10	114
Rosa canina	T	1+1	60-80	BR	1	10	114
Viburnum opulus	T	1+1	60-80	BR	1	10	114

All species planted randomly in species groups of 5 to 7.
Abbreviations: BR= Bare root

5.11 Hedgerow Mix

5.11.1 Table 1.8 provides a species list and specification for all proposed Hedgerow Mix on site. Locations of Hedgerow Mix is shown on drawing WMHP-TG-SRWG1-DR-LS-3001 - 3009 'Soft Landscaping Planting Plan' (See Section 9, Appendix 1).

Table 1.8 Hedgerow Mix Schedule

Species	Height (cm)	Root	Form	Age / Notes	Pot Size (L)	Density per m	% in mix	Quantity
Acer campestre	60-80	BR	T	1+1		5	10	1279
Cornus sanguinea	60-80	BR	T	1+1		5	5	646
Corylus avellana	60-80	BR	T	1+1		5	15	1914

Crataegus monogyna	60-80	BR	T	1+1		5	20	2548
Euonymus europaeus	60-80	BR	T	1+1		5	5	646
Ligustrum vulgare	60-80	BR	T	1+1		5	5	646
Prunus spinosa	60-80	BR	T	1+1		5	10	1279
Rhamnus cathartica	60-80	BR	T	1+1		5	10	1279
Rosa canina	60-80	C		Bushy, 4brks	3	5	10	1279
Viburnum opulus	60-80	C		Bushy, 4brks	3	5	10	1279

All species planted randomly in species groups of 3 to 5, laid in double staggered rows.
Abbreviations: C= Containerised, BR= Bare Root, T=Transplant, 1+1 = 1 year transplant

5.12 Herbaceous Riparian Mix

5.12.1 Table 1.9 provides a species list and specification for all proposed Herbaceous Riparian Mix on site. Locations of Herbaceous Riparian Mix is shown on drawing WMHP-TG-SRWG1-DR-LS-3001 - 3009 'Soft Landscaping Planting Plan' (See Section 9, Appendix 1)

Table 1.9 Riparian Mix Schedule

Species	Root	Plug Size (cm)	Notes	Density per m^2	% in mix	Quantity
Angelica sylvestris	C	5	Plug established root 2-3 months minimum	5	8	9569
Caltha palustris	C	5	Plug established root 2-3 months minimum	5	7	8373
Cardamine pratensis	C	5	Plug established root 2-3 months minimum	5	7	8373
Carex riparia	C	5	Plug established root 2-3 months minimum	5	7	8373
Eupatorium cannabinum	C	5	Plug established root 2-3 months minimum	5	7	8373
Filipendula ulmaria	C	5	Plug established root 2-3 months minimum	5	7	8373
Geum rivale	C	5	Plug established root 2-3 months minimum	5	7	8373

Iris pseudacorus	C	5	Plug established root 2-3 months minimum	5	7	8373
Juncus effusus	C	5	Plug established root 2-3 months minimum	5	7	8373
Lythrum salicaria	C	5	Plug established root 2-3 months minimum	5	7	8373
Phragmites australis	C	5	Plug established root 2-3 months minimum	5	7	8373
Scrophularia auriculata	C	5	Plug established root 2-3 months minimum	5	7	8373
Silene flos-cuculi	C	5	Plug established root 2-3 months minimum	5	7	8373
Veronica beccabunga	C	5	Plug established root 2-3 months minimum	5	8	9569

All species planted randomly in species groups of 7 to 9.
Abbreviations: C= Containerised

5.13 Low Native Shrub Mix

5.13.1 Table 1.10 provides a species list and specification for all proposed Low Native Shrub Mix on site. Locations of Low Native Shrub Mix is shown on drawing WMHP-TG-SRWG1-DR-LS-3001 - 3009 'Soft Landscaping Planting Plan' (See Section 9, Appendix 1).

5.13.2 All Low Native Shrub Mix areas will be under-seeded using the wildflower and grass seeding specified in section 6.4 'Shade Tolerant Seeding' of this report.

Table 1.10 Low Native Shrub Mix Schedule

Species	Form	Age	Height (cm)	Root	Density per m^2	% in mix	Quantity
Cornus sanguinea	T	1+1	60-80	BR	1	20	173
Ligustrum vulgare	T	1+1	60-80	BR	1	20	173
Prunus spinosa	T	1+1	60-80	BR	1	5	44
Rosa rubiginosa	T	1+1	60-80	BR	1	20	173
Rosa arvensis	T	1+1	60-80	BR	1	15	130
Rosa canina	T	1+1	60-80	BR	1	20	173

All species planted randomly in species groups of 5 to 7.
Abbreviations: BR= Bare root

5.14 Low Wet Shrub Mix

5.14.1 Table 1.11 provides a species list and specification n for all proposed Low Wet Shrub Mix on site. Locations of Low Wet Shrub Mix is shown on drawing WMHP-TG-SRWG1-DR-LS-3001 - 3009 'Soft Landscaping Planting Plan' (See Section 9, Appendix 1).

5.14.2 All Low Wet Shrub Mix areas will be under-seeded using the wildflower and grass seeding specified in section 6.5 'Wetland Meadow Seeding' of this report.

Table 1.11 Low Wet Shrub Mix Schedule

Species	Form	Age	Height (cm)	Root	Density per m^2	% in mix	Quantity
Corylus avellana	T	1+1	60-80	BR	1	20	378
Sambucus nigra	T	1+1	60-80	BR	1	15	291
Salix caprea	T	1+1	60-80	BR	1	15	291
Salix purpurea	T	1+1	60-80	BR	1	15	291
Prunus spinosa	T	1+1	60-80	BR	1	10	194
Salix viminalis	T	1+1	60-80	BR	1	15	291
Viburnum opulus	T	1+1	60-80	BR	1	10	194

All species planted randomly in species groups of 5 to 7.
Abbreviations: BR= Bare root

6 Seeding

6.1 Introduction

6.1.1 Seeding areas should be sown with either a suitable wildflower meadow mix that replicates other grassland and wildflower areas local to the Development are. Sowing should be undertaken in accordance with the seed supplier's instructions. All locations for seeding areas are shown on drawing WMHP-TG-SRWG1-DR-LS-3001 - 3009 'Soft Landscaping Planting Plan' (See Section 9, Appendix 1).

6.2 Flowering Lawn Seeding

6.2.1 Table 1.12 provides a general-purpose flowering lawn seed mix containing native wildflower and grassland species and is suggested for use on all proposed Flowering Lawn areas shown on drawing WMHP-TG-SRWG1-DR-LS-3001 - 3009 'Soft Landscaping Planting Plan' (See Section 9, Appendix 1).

Table 1.12 Flowering Lawn Mix Species Schedule

Emorsgate EL1 Flowering Lawn Mixture – Sowing rate: 40kg per Ha, total area 1.56 Ha		
%	**Scientific name**	**Common name**
Wildflowers (20% of overall mix)		
1.0%	*Achillea millefolium*	Yarrow
1.0%	*Anthyllis vulneraria*	Kidney Vetch
0.4%	*Betonica officinalis*	Betony
1.5%	*Centaurea nigra*	Common Knapweed
0.4%	*Galium album*	Hedge Bedstraw
1.5%	*Galium verum*	Lady's Bedstraw
0.4%	*Knautia arvensis*	Field Scabious
0.5%	*Leontodon hispidus*	Rough Hawkbit
1.0%	*Leucanthemum vulgare*	Oxeye Daisy - (Moon Daisy)
1.0%	*Medicago lupulina*	Black Medick
0.4%	*Plantago lanceolata*	Ribwort Plantain
2.0%	*Plantago media*	Hoary Plantain
2.0%	*Primula veris*	Cowslip
0.4%	*Prunella vulgaris*	Selfheal
0.4%	*Ranunculus acris*	Meadow Buttercup
1.6%	*Ranunculus bulbosus*	Bulbous Buttercup

Emorsgate EL1 Flowering Lawn Mixture – Sowing rate: 40kg per Ha, total area 1.56 Ha		
%	**Scientific name**	**Common name**
4.0%	*Trifolium pratense*	Wild Red Clover
Grasses (80% of overall mix)		
8.0%	*Agrostis capillaris*	Common Bent
28.0%	*Cynosurus cristatus*	Crested Dogstail
24.0%	*Festuca rubra*	Red Fescue
4.0%	*Phleum bertolonii*	Smaller Cat's-tail
16.0%	*Poa pratensis*	Smooth-stalked Meadow-grass

6.3 Wildflower Meadow Seeding

6.3.1 Table 1.13 provides a general-purpose seed mix containing native wildflower and grassland species and is suggested for use on all proposed Meadow Seed areas shown on drawing WMHP-TG-SRWG1-DR-LS-3001 - 3009 'Soft Landscaping Planting Plan' (See Section 9, Appendix 1).

Table 1.13 Wildflower Meadow Mix Species Schedule

Emorsgate EM3 Special General Purpose Meadow Mixture– Sowing rate: 40kg per Ha, total area 3.93 Ha		
%	**Scientific name**	**Common name**
Wildflowers (20% of overall mix)		
0.4%	*Agrimonia eupatoria*	Agrimony
0.4%	*Anthyllis vulneraria*	Kidney Vetch
1.6%	*Centaurea nigra*	Common Knapweed
0.6%	*Centaurea scabiosa*	Greater Knapweed
0.1%	*Chaerophyllum temulum*	Rough Chervil
0.4%	*Cruciata laevipes*	Crosswort
1.2%	*Daucus carota*	Wild Carrot
0.2%	*Echium vulgare*	Viper's Bugloss
1.0%	*Galium album*	Hedge Bedstraw
0.8%	*Galium verum*	Lady's Bedstraw
0.1%	*Geranium pratense*	Meadow Crane's-bill
1.0%	*Knautia arvensis*	Field Scabious
0.2%	*Lathyrus pratensis*	Meadow Vetchling
0.8%	*Leucanthemum vulgare*	Oxeye Daisy - (Moon Daisy)

Emorsgate EM3 Special General Purpose Meadow Mixture– Sowing rate: 40kg per Ha, total area 3.93 Ha		
%	**Scientific name**	**Common name**
2.2%	*Malva moschata*	Musk Mallow
0.6%	*Medicago lupulina*	Black Medick
0.2%	*Onobrychis viciifolia*	Sainfoin
0.2%	*Origanum vulgare*	Wild Marjoram
2.2%	*Plantago lanceolata*	Ribwort Plantain
0.4%	*Plantago media*	Hoary Plantain
1.8%	*Poterium sanguisorba - (Sanguisorba minor)*	Salad Burnet
0.4%	*Primula veris*	Cowslip
0.2%	*Prunella vulgaris*	Selfheal
0.4%	*Ranunculus acris*	Meadow Buttercup
1.0%	*Rhinanthus minor*	Yellow Rattle
0.1%	*Sanguisorba officinalis*	Great Burnet
1.0%	*Silene dioica*	Red Campion
0.2%	*Silene vulgaris*	Bladder Campion
0.1%	*Taraxacum officinale*	Dandelion
0.2%	*Vicia sativa ssp. segetalis*	Common Vetch
Grasses (80% of overall mix)		
8.0%	*Agrostis capillaris*	Common Bent
28.0%	*Cynosurus cristatus*	Crested Dogstail
24.0%	*Festuca rubra*	Red Fescue
4.0%	*Phleum bertolonii*	Smaller Cat's-tail
16.0%	*Poa pratensis*	Smooth-stalked Meadow-grass

6.4 Shade Tolerant Wildflower Seeding

6.4.1 Table 1.14 provides a shade tolerant seed mix containing native wildflower and grassland species and is suggested for use on all proposed Shade Tolerant Wildflower Meadow areas shown on drawing WMHP-TG-SRWG1-DR-LS-3001 - 3009 'Soft Landscaping Planting Plan' (See Section 9, Appendix 1).

Table 1.14 Wildflower Meadow Mix (Semi-Shade) Species Schedule

Emorsgate EH1 Hedgerow Mixture– Sowing rate: 40kg per Ha, total area 0.43 Ha		
%	**Scientific name**	**Common name**
Wildflowers (20% of overall mix)		
0.5%	*Agrimonia eupatoria*	Agrimony
1.0%	*Alliaria petiolata*	Garlic Mustard
0.5%	*Anthriscus sylvestris*	Cow Parsley
1.0%	*Arctium minus*	Lesser Burdock
2.0%	*Centaurea nigra*	Common Knapweed
0.4%	*Chaerophyllum temulum*	Rough Chervil
0.8%	*Cruciata laevipes*	Crosswort
0.8%	*Daucus carota*	Wild Carrot
1.5%	*Dipsacus fullonum*	Wild Teasel
0.4%	*Filipendula ulmaria*	Meadowsweet
1.5%	*Galium album*	Hedge Bedstraw
0.4%	*Geum urbanum*	Wood Avens
0.3%	*Geranium pratense*	Meadow Crane's-bill
1.0%	*Lathyrus sylvestris*	Narrow-leaved Everlasting-pea
1.2%	*Leucanthemum vulgare*	Oxeye Daisy - (Moon Daisy)
1.0%	*Malva moschata*	Musk Mallow
0.3%	*Origanum vulgare*	Wild Marjoram
0.8%	*Plantago lanceolata*	Ribwort Plantain
0.6%	*Primula veris*	Cowslip
0.4%	*Rumex acetosa*	Common Sorrel
2.0%	*Silene dioica*	Red Campion
0.8%	*Silene vulgaris*	Bladder Campion
0.8%	*Vicia cracca*	Tufted Vetch
Grasses (80% of overall mix)		
2.4%	*Agrostis capillaris*	Common Bent
1.6%	*Anthoxanthum odoratum*	Sweet Vernal-grass
0.8%	*Brachypodium sylvaticum*	False Brome
48.0%	*Cynosurus cristatus*	Crested Dogstail
1.6%	*Deschampsia cespitosa*	Tufted Hair-grass
19.2%	*Festuca rubra*	Red Fescue
6.4%	*Poa nemoralis*	Wood Meadow-grass

6.5 Wetland Meadow Seeding

6.5.1 Table 1.15 provides a seed mix suitable for seasonally wet soil, containing native wildflower and grassland species and is suggested for use on all proposed Wetland Meadow and Rain Garden seed mix areas shown on drawing WMHP-TG-SRWG1-DR-LS-3001 - 3009 'Soft Landscaping Planting Plan' (See Section 9, Appendix 1).

Table 1.15 Wetland Meadow Species Schedule

Emorsgate EM8 Meadow Mixture For Wetlands– Sowing rate: 40kg per Ha, total area 1.43Ha		
%	**Scientific name**	**Common name**
Wildflowers (20% of overall mix)		
0.7%	*Achillea millefolium*	Yarrow
0.6%	*Agrimonia eupatoria*	Agrimony
0.1%	*Angelica sylvestris*	Wild Angelica
0.2%	*Betonica officinalis*	Betony
3.2%	*Centaurea nigra*	Common Knapweed
1.4%	*Filipendula ulmaria*	Meadowsweet
0.4%	*Galium album*	Hedge Bedstraw
2.0%	*Galium verum*	Lady's Bedstraw
0.8%	*Lathyrus pratensis*	Meadow Vetchling
0.6%	*Leontodon hispidus*	Rough Hawkbit
1.2%	*Leucanthemum vulgare*	Oxeye Daisy - (Moon Daisy)
0.6%	*Lotus corniculatus*	Birdsfoot Trefoil
0.1%	*Lotus pedunculatus*	Greater Birdsfoot Trefoil
1.0%	*Medicago lupulina*	Black Medick
2.0%	*Plantago lanceolata*	Ribwort Plantain
0.4%	*Primula veris*	Cowslip
0.8%	*Prunella vulgaris*	Selfheal
1.2%	*Ranunculus acris*	Meadow Buttercup
0.8%	*Rhinanthus minor*	Yellow Rattle
0.6%	*Rumex acetosa*	Common Sorrel
0.3%	*Sanguisorba officinalis*	Great Burnet
0.5%	*Silene flos-cuculi (Lychnis flos-cuculi)*	Ragged Robin
0.2%	*Taraxacum officinale*	Dandelion
0.3%	*Vicia cracca*	Tufted Vetch

Emorsgate EM8 Meadow Mixture For Wetlands– Sowing rate: 40kg per Ha, total area 1.43Ha		
%	**Scientific name**	**Common name**
Grasses (80% of overall mix)		
4.0%	*Agrostis capillaris*	Common Bent
4.0%	*Anthoxanthum odoratum*	Sweet Vernal-grass
0.8%	*Carex divulsa subsp. divulsa*	Grey Sedge
33.6%	*Cynosurus cristatus*	Crested Dogstail
1.6%	*Deschampsia cespitosa*	Tufted Hair-grass
20.0%	*Festuca rubra*	Red Fescue
3.2%	*Hordeum secalinum*	Meadow Barley
5.6%	*Phleum bertolonii*	Smaller Cat's-tail
5.6%	*Poa trivialis*	Rough-stalked Meadow-grass
1.6%	*Schedonorus arundinaceus*	Tall Fescue

6.6 Wetland Meadow Seeding Type 2 (EM8+)

6.6.1 Table 1.16 provides an enhanced Emorsgate EM8-Meadow Mixture for Wetlands, seed mix suitable for seasonally wet soil, referred to as EM8+ on drawings with supplementary plug planting illustrated in table 1.17. The mixes contain native wildflower and grassland species and is suggested for use within SANG attenuation basin, areas shown on drawing WMHP-TG-SRWG1-DR-LS-3008 - 3009 'Soft Landscaping Planting Plan' (Appendix 1).

Table 1.16 Wetland Meadow Species Schedule

Emorsgate EM8 Meadow Mixture For Wetlands– Sowing rate: 40kg per Ha, total area 1.19 Ha		
%	**Scientific name**	**Common name**
Wildflowers (20% of overall mix)		
0.7%	*Achillea millefolium*	Yarrow
0.6%	*Agrimonia eupatoria*	Agrimony
0.1%	*Angelica sylvestris*	Wild Angelica
0.2%	*Betonica officinalis*	Betony
3.2%	*Centaurea nigra*	Common Knapweed
1.4%	*Filipendula ulmaria*	Meadowsweet
0.4%	*Galium album*	Hedge Bedstraw
2.0%	*Galium verum*	Lady's Bedstraw

Emorsgate EM8 Meadow Mixture For Wetlands– Sowing rate: 40kg per Ha, total area 1.19 Ha		
%	**Scientific name**	**Common name**
0.8%	*Lathyrus pratensis*	Meadow Vetchling
0.6%	*Leontodon hispidus*	Rough Hawkbit
1.2%	*Leucanthemum vulgare*	Oxeye Daisy - (Moon Daisy)
0.6%	*Lotus corniculatus*	Birdsfoot Trefoil
0.1%	*Lotus pedunculatus*	Greater Birdsfoot Trefoil
1.0%	*Medicago lupulina*	Black Medick
2.0%	*Plantago lanceolata*	Ribwort Plantain
0.4%	*Primula veris*	Cowslip
0.8%	*Prunella vulgaris*	Selfheal
1.2%	*Ranunculus acris*	Meadow Buttercup
0.8%	*Rhinanthus minor*	Yellow Rattle
0.6%	*Rumex acetosa*	Common Sorrel
0.3%	*Sanguisorba officinalis*	Great Burnet
0.5%	*Silene flos-cuculi (Lychnis flos-cuculi)*	Ragged Robin
0.2%	*Taraxacum officinale*	Dandelion
0.3%	*Vicia cracca*	Tufted Vetch
Grasses (80% of overall mix)		
4.0%	*Agrostis capillaris*	Common Bent
4.0%	*Anthoxanthum odoratum*	Sweet Vernal-grass
0.8%	*Carex divulsa subsp. divulsa*	Grey Sedge
33.6%	*Cynosurus cristatus*	Crested Dogstail
1.6%	*Deschampsia cespitosa*	Tufted Hair-grass
20.0%	*Festuca rubra*	Red Fescue
3.2%	*Hordeum secalinum*	Meadow Barley
5.6%	*Phleum bertolonii*	Smaller Cat's-tail
5.6%	*Poa trivialis*	Rough-stalked Meadow-grass
1.6%	*Schedonorus arundinaceus*	Tall Fescue

Table 1.17 Wetland Meadow Supplementary Plug Planting Schedule for Backwater Embankments

Supplementary Plug Plant:			
Scientific name	**Common Name**	**% in mix**	**Quantity**
Angelica sylvestris	Wild Angelica	20	1180
Caltha palustris	Marsh Marigold	20	1180
Eupatorium cannabinum	Hemp Agrimony	15	886
Lythrum salicaria	Purple Loosestrife	20	1180
Mentha aquatica	Water Mint	15	886
Phragmites australis	Common Reed	10	592

Plug plants to be established root 2-3 months old. Plug planting density 0.5plant per meter square.

6.7 Emergent Macrophyte Wetland Meadow

6.7.1 Table 1.18 provides details for emergent macrophyte planting which is suggested for used on all proposed slopes of the backwater areas shown on drawing WMHP-TG-SRWG1-DR-LS-3008 - 3009 'Soft Landscaping Planting Plan' (Appendix 1) and Cross Section drawings WMHP-TG-SRWG1-DR-LA-3024 - 3022 (Appendix 2).

Table 1.18 Wetland Meadow Emergent Macrophyte Species Schedule for Backwater Embankments

%	**Scientific name**	**Common name**
10%	*Carex acuitformis*	Lesser Pond Sage
10%	*Carex riparia*	Greater Pond Sage
10%	*Glyceria maxima*	Reed Sweet Grass
10%	*Juncus effusus*	Smooth rush
10%	*Lythrum salicaria*	Purple Loosestrife
10%	*Mentha aquatica*	Water Mint
10%	*Myosotis scorpiodes*	Water Forget me Not
10%	*Phalaris arundinacea*	Reed Canary Grass
10%	*Ranunculus flammula*	Lesser Spearwort
10%	*Sparganium erectum*	Branched Bur Reed

7 Aftercare

7.1 Introduction

7.1.1 To ensure a reasonable level of establishment, newly planted and seeded areas associated with the Development should be monitored and maintained for a period of 5 years following completion of planting works associated with each stage of works.

7.2 General

7.2.1 All newly planted areas should be maintained free from litter and excessive weed growth (i.e. growth that would be detrimental to the intended planting). Litter, grass cuttings or other deleterious materials should not be deposited on any of the planted areas during the establishment period. Should this occur then the deleterious material should be removed and responsibly disposed of away from site.

7.3 Watering

7.3.1 All newly planted areas should be watered immediately after planting and again during periods of drought. This should be done at a rate of 50 litres per tree and at weekly intervals during extended drought.

7.3.2 Large specimen trees will need to be watered twice a week during the first year (25 – 30 litres per visit) but more frequently during prolonged dry periods. This can be reduced during subsequent years. If water supply is, or is likely to be, restricted by emergency legislation, submit proposals for an alternative suitable source of water. Obtain instructions before proceeding.

7.3.3 Generally, watering to be carried out to the following principles:

- Quantity: Wet full depth of topsoil.
- Application: Do not damage or loosen plants.
- Compacted soil: Loosen or scoop out, to direct water to root zone.
- Frequency: As necessary for the continued thriving of all planting.

7.4 Pruning

7.4.1 Trees and shrubs should be monitored for any deadwood, crossing branches and should be pruned accordingly to encourage healthy, strong growth.

7.4.2 Trees with clear stems should be maintained as such with any lower branches removed as required.

7.5 Weed Control

7.5.1 There is a general presumption against the use of herbicides, pesticides and fertilisers, which should be restricted to essential tasks when other management methods are not feasible.

7.5.2 A weed free area, to a minimum of 250mm around the base of each newly planted tree or shrub, and length of hedgerow should be maintained during establishment. Weed growth to be pulled from inside any tree or shrub shelters, and maintain a weed free area between plants by strimming to remove excessing weed growth, twice a year.

7.5.3 Areas outside of the weed free areas should be maintained in-line with the specified wildflower and grass seeding management prescriptions outlined in the Landscape and Ecological Management Plan.

7.5.4 Weed control should be undertaken during the growing season, typically from March through to October however this may vary depending of the season and should occur at least 3 times during the season. Any use of herbicide applications should be strictly in accordance with the Control of Pesticides Regulations 1986 (as amended 1997) (or, otherwise, updated/superseded legislation) and following manufacturer's instructions by qualified staff.

7.6 Stakes and Protective Guards

7.6.1 Tree and shrub stakes and guards should be inspected twice yearly to ensure they are secure and in place and ties should be adjusted as required to allow for growth. The contractor should ensure that the protective guards do not impede the natural growth of the plant.

7.6.2 Plant guards and stakes should be removed and responsibly disposed of away from site once the plant has fully established or at the end of the fifth growing season, whichever is sooner.

7.7 Mulch

7.7.1 A depth of 100mm if course bark mulch should be maintained at the base of each newly planted tree or shrub. This should be topped up on an annual basis or as required to maintain depth.

7.8 Plant Failures

7.8.1 Should any trees or shrubs planted as part of the landscape scheme, within a period of five years after planting, be removed, die or become, seriously damaged or diseased, it is to be replaced in the first available planting season with a specimen of the same species and size as that originally planted.

7.9 Mowing – Amenity Grass

7.9.1 The amenity should be maintained in-line with the suppliers' recommendations, typically:

- Following successful establishment, cut regularly to maintain a height of 20-50cm with a minimum of 10 cuts per year, removing arisings from site;
- Carefully dig out or spot treat any residual perennial weeds such as docks as required throughout establishment.

7.10 Mowing – Wildflower Seeding

7.10.1 The wildflower meadow should be maintained in-line with the suppliers' recommendations, typically:

- In year 1 following seeding, cut regularly to maintain a height of 40-60cm, removing arisings from site;
- In years 2-5, cut grass to a height of 50mm in late July/ August after flowering, leaving arisings in situ for a period of 7 days then clear and remove from site.
- Cut again in October to a height of 50mm; and
- Carefully dig out or spot treat any residual perennial weeds such as docks as required throughout establishment.

7.11 Mowing – Wetland / Pond Meadow Seeding

7.11.1 The pond edge seeding should be maintained in-line with the suppliers' recommendations, typically:

- In year 1 following seeding, cut back to encourage the development of good perennial ground cover.
- Once established, cut back and remove short sections of vegetation every 2-3 years on rotation. Dense stands of single species may require selective thinning.
- Carefully dig out or spot treat any residual perennial weeds such as docks as required throughout establishment.

8 Implementation Timeframes

8.1.1 Due to the nature of the project, it is anticipated that sections of the planting works may be possible to implement at the completion of each phase of the road scheme,

8.1.2 Therefore, it is recommended that, at completion of each stage, the associated landscape works be implemented during the first planting season (October – March) following each phased completion.

~~8.1.1 All proposed tree and shrub planting and meadow seeding works will be implemented in the first available planting season (October – March) following the completion of the Development works.~~

9 Appendices

Appendix 1 WMHP-TG-SRWG1-DR-LS-3001-3009 ‘Soft Landscaping Planting Plan’

Appendix 2 WMHP-TG-SRWG1-DR-LA-30261-30267