



**LAND ON THE SOUTH WEST SIDE STEVENAGE ROAD,
ST IPPOLYTS, HERTFORDSHIRE**
BIODIVERSITY NET GAIN MANAGEMENT PLAN

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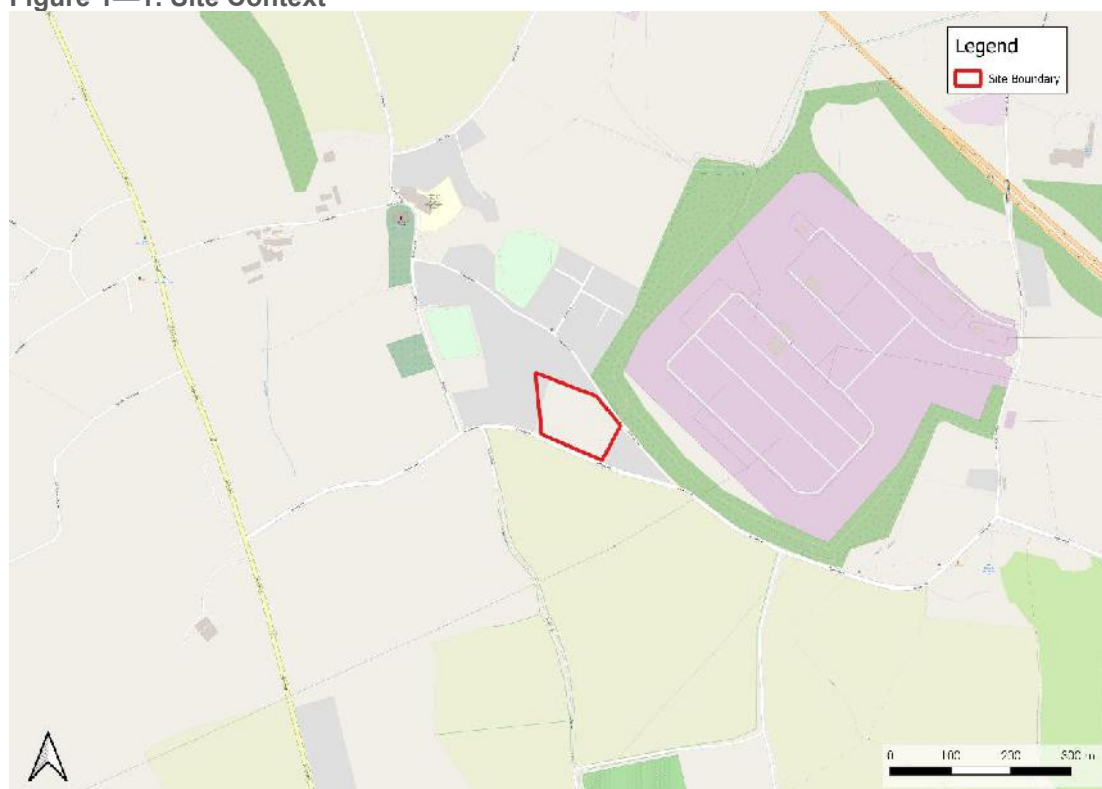
1. BACKGROUND INFORMATION

- 1.1 This Biodiversity Net Gain Management Plan (BNGMP) has been completed on behalf of Talbot Homes for the Site; Land on the South West Side of Stevenage Road, St Ippolyts, Hertfordshire. It has been produced to provide details to inform the discharge of Conditions 19 and 20 of planning consent reference 19/01669/FP for the proposed development of 14 residential properties and new vehicular access.

Site Details

- 1.2 The Site is located on the south-eastern edge of St Ippolyts Road between Steveage Road on the north-eastern Site boundary and Sperberry Hill along the southern Site boundary. The Site is located within a rural area approximately 1km south-east from Hitchin in Hertfordshire and is dominated by ruderal/ephemeral vegetation, mixed scrub, modified grassland and trees.

Figure 1—1: Site Context



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Purpose of This Report

- 1.3 This BNGMP provides detail in relation to Conditions 19 and 20 of the planning consent for the Site which state:
- 1.4 “19. Development shall not commence until a biodiversity net gain management plan (BNGMP) has been submitted to, and approved in writing by, the local planning authority. The content of the BNGMP shall ensure the delivery of the agreed number of habitat and hedgerow units as a minimum (+0.69 net habitat units 3.31 units total; +0.41 net hedgerow units, 1.65 units total) to achieve a net gain in biodiversity and include the following.

- a) *Description and evaluation of habitat parcels to be managed, cross referenced to individual lines in the metric.*
- b) *Maps of all habitat parcels, cross referenced to corresponding lines in the metric.*
- c) *Appropriate management options for achieving target condition for habitats as described in the approved metric.*
- d) *Preparation of an annual work schedule for each habitat parcel (including a 30 year work plan capable of being rolled forward in perpetuity).*
- e) *Details of the body or organisation responsible for implementation of the plan.*
- f) *Details of species selected to achieve target habitat conditions as identified in approved metric, definitively stated and marked on plans.*
- g) *Ongoing monitoring plan and remedial measures to ensure habitat condition targets are met.*
- h) *Reporting plan and schedule for informing LPA of condition of habitat parcels for 30 years.*

The BNGMP shall also include details of the legal and funding mechanism(s) by which the long-term implementation of the plan will be secured by the developer with the management body(ies) responsible for its delivery. The plan shall also set out (where the results from monitoring show that conservation aims and objectives of the BNGMP are not being met) how contingencies and/or remedial action will be identified, agreed and implemented so that the development still delivers the fully functioning biodiversity objectives of the originally approved scheme.

Reason: To enhance biodiversity in accordance with the NPPF and the North Hertfordshire Local Plan Policy NE4”.

- 1.5 *“20. No above ground development shall commence until details of 2 integrated bird boxes per dwelling and 2 integrated bat boxes per dwelling have been submitted and approved by the LPA. These devices shall be fully installed prior to occupation and retained as such thereafter.*

Reason: To enhance biodiversity in accordance with the NPPF and the North Hertfordshire Local Plan Policy NE4”.

Roles and Responsibilities

- 1.6 Talbot Homes will be responsible for the implementation of this BNGMP and a management body will be appointed to undertake the 30 year management of the Site. This BNGMP will be updated once the management body is appointed.

Implementation and Long Term Maintenance

- 1.7 A specialist landscaping contractor should be appointed to undertake the habitat management creation and prescriptions set out within this document.

Legal and Funding Mechanisms

- 1.8 The 30 year management will be secured by Talbot Homes and the LPA through a S106 agreement.

2. LEGISLATION

2.1 Legislation relevant to this assessment are as follows:

- The Conservation of Habitats and Species Regulations 2019 (as amended);
- The Wildlife and Countryside Act 1981 (as amended);
- The Countryside and Rights of Way (CROW) Act 2000;
- The Environment Act 2021;
- The Biodiversity Gain Requirements Regulations 2024;
- The Wild Mammals Act (1996);
- The Protection of Badgers Act 1992
- Hedgerow Regulations 1997.
- Natural Environment and Rural Communities (NERC) Act 2006; and,

2.2 The National Planning Policy Framework (NPPF, 2023) informs Local Planning Authorities planning policies and when reviewing planning applications affecting features of value to nature conservation. Sections relevant to biodiversity include:

- Paragraph 180;
- Paragraph 185; and,
- Paragraph 186.

2.3 The NPPF is available at <https://www.gov.uk/guidance/national-planning-policy-framework>.

2.4 Local Policy relevant to the Sites authority area has also been reviewed as necessary.

3. PRE AND POST-DEVELOPMENT HABITATS

Site Habitat Baseline

3.1 Site survey was undertaken in October 2018 by Keith Seaman. A review of the previous reports and survey of the Site was undertaken to inform this document. The following reports were reviewed:

- ELMAW Consulting (2022) Preliminary Ecological Appraisal Updated with BNG: Land off Stevenage Road, St Ippolyts. November 2022; and,
- ELMAW Consulting (2022) Copy of Biodiversity Metric 3.1 auditing and accounting for biodiversity calculation tool.

Table 3—1: Summary of On-Site Habitats and Condition Assessment Results

HABITAT TYPE	DESCRIPTION (ELMAW Consulting, 2022)	CONDITION ASSESSMENT RESULT
Sparsely vegetated land – Ruderal/Ephemeral	<i>The majority of the site was comprised of the resulting natural regrowth and colonisation of vegetation, dominated by low-growing bramble (Rubus fruticosus agg.) and nettle (Urtica dioica), with numerous species of ruderal plant, listed in the appended species list. This habitat of scrub and ruderal appeared to be generally species-poor but supporting typical plants which thrive on disturbed and likely nutrient-rich soils associated with brownfield sites, soil-stripped and heavily disturbed and degraded land.</i>	Poor
Heathland and shrub – Mixed scrub		Poor
Grassland – Modified grassland	<i>Located adjacent to the public footpath in the east of the application site was a narrow strip of poor semi-improved grassland which ran parallel with a length of defunct hedgerow which divided a strip of dense and continuous scrub from the rest of the site.</i>	Poor
Urban Tree	<i>Located in the south-eastern corner of the application site were six individual mature/semi-mature sycamore trees. These are located outside of the hedgerows and were considered unremarkable examples.</i>	Poor
Native Hedgerow 1	<i>Three sides of the application site were bounded by two sections of intact but species-poor hedgerow, classified under UK Hab as Native Hedgerows. These hedgerows, which continue beyond the application site were found running along Sperberry Hill Lane and Stevenage Road. They were dominated by hawthorn (Crataegus monogyna) and blackthorn (Prunus spinosa), with ash (Fraxinus excelsior), elm (Ulmus sp.),</i>	Moderate
Native Hedgerow 2		Poor
Native Hedgerow 3		Moderate

	<i>sycamore (Acer pseudoplatanus) and hazel (Corylus avellana)</i>	
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Post Development Habitats

- 3.2 The table below provides a summary of the baseline habitats and their impacts as part of the development.

Table 3—2: Summary of Impacts to Baseline Habitats

HABITAT TYPE	DESCRIPTION
Sparsely vegetated land – Ruderal/Ephemeral	Lost to facilitate proposal.
Heathland and shrub – Mixed scrub	Lost to facilitate proposal.
Grassland – Modified grassland	Lost to facilitate proposal.
Urban Tree	Retained.
Native Hedgerow 1	Retained and enhanced.
Native Hedgerow 2	Retained and enhanced.
Native Hedgerow 3	Retained.

Habitat Creation

- 3.3 The Table below provides the habitats to be created at the Site as part of the proposals, with a description of the habitat type and the target condition. The soft landscaping proposals masterplan can be found in Appendix 1 with a Habitat Plan in UKHabs format provided in Appendix 2.

Table 3—3: Summary of Habitats to be Created at the Site

HABITAT TYPE	DESCRIPTION	TARGET CONDITION
Mixed Native Scrub	Located along the southern side of the Site within areas of Public Open Space (POS), to be planted with a native mix comprising: - Silver birch <i>Betula pendula</i> 15% - Blackthorn <i>Prunus spinosa</i> 10% - Hazel <i>Corylus avellana</i> 20% - Elder <i>Sambucus nigra</i> 10% - Dogwood <i>Cornus sanguinea</i> 15% - Dog rose <i>Rosa canina</i> 15% - Guelder rose <i>Viburnum opulus</i> 15% Planting should follow manufacturer instructions. Individual specimens should be at least 300-600mm apart. Specimens should be planted in the spring or autumn. If mixed scrub proposed in the infiltration basin is too close to the feature and may	Moderate

	compromise its integrity, it should be moved into the adjacent LAP area a sufficient distance as necessary. Staying as close to the proposed location as possible.	
Modified Grassland (Moderate Condition)	Two types of wildflower grassland are proposed at the Site peripheries to achieve modified grassland in moderate condition; a modest classification based on the residential context/setting. These will: ➤ Wildflower meadow areas to be seeded with EM1 Basic General Purpose Meadow Mix (Emorsgate Seeds); and, ➤ Shaded grassland areas to be seeded with EG9 Grass Mix for Hedgerows and Woodland (Emorsgate Seeds). Grassland should be sown in the spring. Initial stripping of topsoil 50mm should take place to reduce nutrient loading. Seed should be broadcast by hand or via a seed dispersal tool at a rate in accordance with supplier instructions. Seed must have good contact with bare soil to promote successful growth. If birds are an issue, a layer of low nutrient soil should be cast over the seed 10mm thick.	Moderate
Modified Grassland	Proposed in the 'LAP' Area and in the infiltration basin. These areas are to be considered as Modified grassland in poor condition to allow for management practices which will inevitably degrade these areas for example: ➤ LAP likely to require management to short sward to facilitate public use/access by residents; and, ➤ Infiltration basin will require specific management regime (which may be intensive in the fullness of time depending on pressure on the feature). Also surface water drainage inputs make controlling nutrient inputs and sedimentation extremely challenging; all of which impacts sward in terms of species assemblage and relative abundance. Therefore, a grassland type of low distinctiveness and poor condition has been selected for both features to reduce the pressure in future years of management to create/maintain a grassland which is not feasible in this setting/location. Despite this, to promote as a diverse a sward as possible, in the first instance the following grassland mixes have been proposed:	Poor

	➤ The LAP area, will to be seeded with EM1 Basic General Purpose Meadow Mix as supplied by Emorsgate and sown at 4g/m² (or similar). A number of the species in this mix are low flowering and tolerant of regular mowing and as such a more diverse species assemblage may be achieved; despite the poor condition target; ➤ In the Infiltration basin EP1 Pond Edge Mix as supplied by Emorsgate and to be sown at 5g/m² (or similar). This mix includes species tolerant of seasonal inundation and drought conditions. The hope is some of the more interesting species in this mix are able to establish and a sward typical of seasonal inundation establishes. However, with the poor condition target, pressure to maintain this as a diverse floristic feature is removed.	
Urban Trees	Trees to be planted in areas of POS at the Site along the northern, eastern and southern sides of the Site will include: - Field Maple <i>Acer campestre</i> - Goat willow <i>Salix caprea</i> - Crack willow <i>Salix fragilis</i> - Silver birch - Hornbeam <i>Carpinus betulus</i> - Tibetan cherry <i>Prunus serrula</i> - Small-leaved lime <i>Tilia cordata</i> - Beech <i>Fagus sylvatica</i> - Wild cherry <i>Prunus avium</i> - Sycamore <i>Acer pseudoplatanus</i> Planting should follow supplier instructions. Trees should be appropriately spaced, this will be species dependant with fruit trees tolerant of 3-6m spacing and larger standards such as beech and silver birch requiring a broader spacing. Trees should be planted in the spring or autumn. If trees proposed in the infiltration basin are too close to the feature and may compromise its integrity, they should be moved into the adjacent LAP area a sufficient distance as necessary.	Moderate
Native hedgerow	Located along the southern boundary, to be planted with a native hedgerow mix comprising: - Field maple 25% - Hazel 30% - Hawthorn <i>Crataegus monogyna</i> 10% - Elder 15% - Guelder rose 20% Planting of whips should follow supplier instructions.	Moderate

	Individual specimens should be at least 300mm apart. A second parallel row of planting should occur 450mm away. The dual planting row will facilitate a more robust hedgerow. Hedgerow should be planted in spring or autumn.	
Developed Land; Sealed Surface	Buildings and infrastructure.	N/A
Un-vegetated garden	Front and back gardens to be turfed with some patio areas.	N/A

Habitat Enhancement

- 3.4 The Table below provides the habitats to be retained and enhanced at the Site as part of the proposals, with a description of the habitat type and the target condition. The soft landscaping proposals masterplan can be found in Appendix 1.

Table 3—4: Summary of the Habitats to be Retained and Enhanced at the Site

HABITAT TYPE	DESCRIPTION	TARGET CONDITION
Urban Tree	Trees to be retained will have minimal works for visibility and safety purposes only.	Poor
Native Hedgerow 1	Hedgerows will be trimmed back for visibility and enhanced to form a good condition.	Good
Native Hedgerow 2		Good
Native Hedgerow 3	Hedgerow will be trimmed back and maintained at moderate Condition	Moderate

Ecological Trends and Constraints

- 3.5 All of the habitats to be retained and created at the Site are of low difficulty to create and maintain. The habitats to be created at the Site are considered to all achieve their target condition with appropriate management prescriptions.

4. HABITAT MANAGEMENT

- 4.1 The following habitats to be created and enhanced at the Site will be subject to management to ensure they meet their target conditions:
- Native Hedgerow 1;
 - Native Hedgerow 2;
 - Native Hedgerow 3;
 - Mixed Native Scrub;
 - Modified Grassland; and,
 - Urban Trees.
- 4.2 Appendix 1 provides the Soft Landscaping Proposals for the Site with Appendix 2 providing a habitat plan with areas of habitats to be created and enhanced at the Site as set out in Table 4.1 below.
- 4.3 In order for the habitats to meet the target conditions as set out by the condition assessment criteria management prescriptions can be undertaken if and when required. Table 4.1 provides the management prescriptions to be undertaken for each condition criteria for the habitats to be created within areas of public space. The criteria provided for each of the habitat types is based on version 3.1 of the metric condition assessments as this metric was utilised to undertake the BNG calculation for the Site.
- 4.4 Un-vegetated Gardens, Retained Trees and Developed Land Sealed Surface have not been included, as these habitats do not require any set management prescriptions to meet their target conditions or are included in private ownership and will not be subject to any management. Retained features should be Heras fenced and signposted to site operatives during development to avoid accidental encroachment.

Table 4—1: Habitat Management Prescriptions

HABITAT TYPE	TARGET CRITERIA	MANAGEMENT PRESCRIPTION
Mixed Scrub	1. Habitat is representative of UKHab description (where in its natural range). There are at least three woody species, with no one species comprising more than 75% of the cover.	At least 5 native species will be planted. Bi annual maintenance to provide opportunities for all species to regenerate. Cutting back of any areas which are in excesses of 75% single species cover.
	2. There is a good age range- all of the following are present: seedlings, saplings, young shrubs and mature shrubs.	Rotational management to allow a range of ages.
	3. There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981).	Control of any invasive species.
	4. The scrub has a well-developed edge, with scattered scrub, and tall grassland and or forbs present between the scrub and adjacent habitat.	Allow areas to “naturalise” and completed rotational management with areas left to develop.

HABITAT TYPE	TARGET CRITERIA	MANAGEMENT PRESCRIPTION
Modified Grassland (Moderate Condition)	There are 6-8 vascular plant species per m ² present, including at least 2 forbs.	Wildflower meadow areas to be seeded with EM1 Basic General Purpose Meadow Mix (Emorsgate Seeds) at 4g per m². This area will require bare earth preparation to provide a good medium for sowing seed. Any undesirable species should be removed by hand before broadcasting seed. - Shaded grassland areas to be seeded with EG9 Grass Mix for Hedgerows and Woodland (Emorsgate Seeds) at 5g per m². As this is to be incorporated into an existing grassland the area should be raked/harrowed to provide bare ground areas for seed to be broadcast and a medium for sowing. Seed mix used will provide diverse sward. If failure occurs over time area should be re-seeded or plug planting using native forbs typical of such habitats. Attaining 6 species per m² will be highly achievable in this context/setting.
	Any scrub present accounts for less than 20% of the total grassland area. (Some scattered scrub such as bramble <i>Rubus fruticosus</i> agg. may be present). Note - patches of scrub with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.	Scrub will be removed from the sward by hand as appropriate by appointed management company.
	Physical damage is evident in less than 5% of total grassland area. Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.	Any damaged area will be re-seeded as per the prescriptions outlined above.
	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens).	Any area with bare ground should be re-seeded as appropriate (see steps above in this section of the table).
	Cover of bracken <i>Pteridium aquilinum</i> is less than 20%.	Any bracken will be removed from the sward by hand as appropriate by appointed management company.
	There is an absence of invasive non-native plant species ³ (as listed on Schedule 9 of WCA).	Any invasive species will be removed if identified using appropriate methods. This may require a formal invasive species management plan to be drafted to avoid accidental spread of the species across the locality.

HABITAT TYPE	TARGET CRITERIA	MANAGEMENT PRESCRIPTION
Modified Grassland (Poor Condition)	There are 6-8 vascular plant species per m² present, including at least 2 forbs. **Not an essential target but desirable**	LAP area to be sown with wildflower meadow areas to be seeded with EM1 Basic General Purpose Meadow Mix (Emorsgate Seeds) at 4g per m². This area will require bare earth preparation to provide a good medium for sowing seed. Any undesirable species should be removed by hand before broadcasting seed. Whilst this area will be subject to trampling and regular mowing, the hope is a more diverse amenity lawn establishes. This seed mix includes low flowering forbs which will help provide a more diverse sward; despite the poor target condition. In the Infiltration basin EP1 Pond Edge Mix as supplied by Emorsgate and to be sown at 5g/m² (or similar). This area will require bare earth preparation to provide a good medium for sowing seed. Any undesirable species should be removed by hand before broadcasting seed. This mix includes species tolerant of seasonal inundation and drought conditions typical of infiltration basins. The hope is some of the more interesting species in this mix are able to establish and a sward typical of seasonal inundation establishes. However, with the poor condition target, pressure to maintain this as a diverse floristic feature is removed as regular mowing/silt- removal may be required over time.
	Any scrub present accounts for less than 20% of the total grassland area. (Some scattered scrub such as bramble <i>Rubus fruticosus</i> agg. may be present). Note - patches of scrub with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.	Scrub will be removed as part of mowing regime. If stands begin to establish within the grassland, they should be removed by hand.
	Cover of bracken <i>Pteridium aquilinum</i> is less than 20%.	Bracken will be removed as part of mowing regime. If stands begin to establish within the grassland, they should be removed by hand.
	There is an absence of invasive non-native plant species³ (as listed on Schedule 9 of WCA).	Any invasive species must be identified and removed. This should be informed by a professional ecologist and/or a invasive species management plan.

HABITAT TYPE	TARGET CRITERIA	MANAGEMENT PRESCRIPTION
Urban Trees	1. The tree is a native species	Planting native species and replacement of any failed trees with native species.
	2. The tree canopy is preliminarily continuous with gaps in the canopy cover making up <10% of total area and no individual gaps >5m wide (individual trees automatically passes)	Replacement of any failed or diseased trees which do not provide continuous canopy cover.
	4. There is little or no evidence of an adverse impact on tree health by anthropogenic activities such as vandalism or herbicide use. There is no current regular pruning regime so the trees retain >75% of expected canopy for their age range and height.	No excessive pruning to be undertaken or herbicide use.
	5. More than 20% of the tree canopy area is oversailing vegetation beneath.	Tree canopy to be left with pruning of branches to be undertaken only if a health and safety concern is raised.
Native Hedgerow	A1. Height is >1.5 m average along length	Planting of species to increase height. Decrease in management.
	A2. Width is >1.5 m average along length	Planting of species to increase width. Decrease in management
	B1. Gap between ground and base of canopy <0.5m for >90% of length	Planting of species to gap up base of hedgerow.
	B2. Gaps make up <10% of total length and No canopy gaps >5m	Planting of species to fill any gaps.
	C2. Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground.	Control of undesirable species.
	D1. >90% of the hedgerow and undisturbed ground is free of invasive non-native plant species and recently introduced species.	Removal and control of any invasive, recently introduced and non-native species.
	D2. >90% of the hedgerow or undisturbed ground is free of damage caused by human activities.	Identify causes of damage and implement control measures.

Aims and Objectives of Management

Modified Grassland (Moderate Condition)

- Provide the best opportunities for a range of species including invertebrates by providing a species rich sward in grassland areas;

- Cutting to be undertaken late summer with arising's left in situ before being raked off to allow seed dispersal and continuation of species rich sward once grasslands have established.
- Areas left without management to form tussocks which will provide shelter and opportunities for amphibians, small mammals and reptiles.

Modified Grassland (Poor Condition)

- To provide as diverse a sward as possible without this being an essential criteria owing to the function of the land associated with this habitat (LAP and infiltration basin).
- Areas will be subject to more regimented mowing regime to facilitate public use of LAP and to maintain Infiltration Basin as appropriate.

Urban Trees

- Provide opportunities for a range of species through the planting of species which provide a foraging resource as well as providing opportunities for nesting birds within the development.

Native Hedgerow and Mixed Scrub

- Provide the best benefits for wildlife by being maintained as thick and bushy as reasonably practicable.
- Cutting should be conducted every other year in early February to provide as much foraging resource for nesting birds as possible throughout the winter period and to not disturb birds during the nesting period (March to end of September/October).

5. IMPLEMENTATION AND MAINTENANCE

- 5.1 An overview of the management prescriptions recommended timescales has been provided in Table 5.1 and Table 5.2 below.

Table 5—1: Works Schedule for Establishment (Years 1-5)

Year	Habitat Type	Timing	MANAGEMENT PRESCRIPTION
1-3	All Grassland	Creation	Appropriate ground preparation required. This should include preparing an adequate medium for seeding. For new grassland this should be creation of bare earth that has been aerated to facilitate root setting (i.e., not compressed by large machinery). Grassland areas should be sown with appropriate seed mix as per guidance provided earlier in Table 4.1. Where existing grassland will be enhanced, areas should be raked and harrowed providing bare earth for seed to be set. Any undesirable species (nettles, docks, thistles, scrub or bracken) should be removed before seeding.
		Year 1 only	Frequent mowing to of 40-60mm. Some small piles of arisings should be retained on Site in close proximity of the boundary hedgerows to provide opportunities for species. This will not be possible in the LAP and infiltration Basin. New grassland should be watered during the first year in periods of drought.
		All year	Weeds (including bracken and scrub) can be treated by spot-spraying with herbicide, being dug out, or by topping (cutting weeds when they are in flower). Use of herbicides in and around the Infiltration Basin is not considered appropriate. Instead weeds should be removed by hand in this area.
		All year	Any invasive species must be identified and removed. This may require invasive species management to ensure it is safely/appropriately removed and is not accidentally spread.
	Modified Grassland: Moderate Condition	Spring/Autumn	Additional seeding to take place where there are less than 6 species per m². Timing of planting depends on recommended species/seed mix utilised. To follow guidance provided above in respect of habitat creation.
	Modified Grassland: Poor Condition	All year	Grassland will be subject to mowing regime considered appropriate for its functionality including the LAP and infiltration basin. This may be regular or more sporadic; but is not considered a constraint.
	Trees	Spring	Trees should be planted in appropriate tree pits and replaced if failed. This should be as per supplier guidance. Trees should also be staked to facilitate a healthy growth form with the base of trees mulched to maintain moisture.

		November to March.	Pruning should be limited to promoting a healthy upright growth form, with up right leaders retained and lateral limbs pruned to reduce risk of leaning. Any signs of disease, decay should be removed as appropriate.
	Trees, Hedgerow and Scrub	Spring, Summer, Autumn	Planted features should be watered in periods of extreme drought.
	Hedgerow and Scrub	November to March.	Whips should be planted in appropriate pits at a distance apart which gives best prospect of healthy growth. (i.e, for scrub planting at least 50cm apart. For hedgerows, at least 30cm apart, ideally in two parallel rows 50cm apart to promote wide hedge form).
			Stock should be replaced if it fails. Whips should be staked to promote healthy growth form. Pruning should be limited to promoting a healthy upright growth form, with up right leaders retained. Any signs of disease, decay should be removed as appropriate.
			Replace any failed specimens.
		All year	Any invasive species must be identified and removed. This may require invasive species management to ensure it is safely/appropriately removed and is not accidentally spread.
4-5	Modified Grassland: Moderate Condition	September	Mowing down to 150mm after plants including grasses, have flowered ideally in September. Arisings should be left in situ for a week and then raked off to allow seed dispersal.
		All year	Weeds (including bracken and scrub) can be treated by spot-spraying with herbicide, being dug out, or by topping (cutting weeds when they are in flower).
	Modified Grassland: Poor Condition	All year	Grassland will be subject to mowing regime considered appropriate for its functionality including the LAP and infiltration basin. This may be regular or more sporadic; but is not considered a constraint.
			Weeds (including bracken and scrub) should be treated by being dug out, or by topping (cutting weeds when they are in flower).
	All Grassland	All year	Any invasive species must be identified and removed. This may require invasive species management to ensure it is safely/appropriately removed and is not accidentally spread.
	Trees	Spring	Any trees should be maintained as required and replaced if failed; following prescriptions set out earlier in this table.
		November to March.	Pruning should be limited to promoting a healthy upright growth form, with up right leaders retained and lateral limbs pruned to reduce risk of leaning. Any signs of disease, decay should be removed as appropriate. Stakes should be considered for removal if impacting growth form.

	Trees, Hedgerow and Scrub	Spring, Summer, Autumn	Planted features should be watered in periods of extreme drought.
	Hedgerow and Scrub	November to March	Any losses should be replaced with new planting following prescriptions set out earlier in this table.
			Pruning should be limited to promoting a healthy upright growth form, with up right leaders retained. Any signs of disease, decay should be removed as appropriate. Stakes should be considered for removal if impacting growth form.
		All year	Any invasive species must be identified and removed. This may require invasive species management to ensure it is safely/appropriately removed and is not accidentally spread.

Table 5—2: Annual Works Schedule (Years 6+)

Habitat Type	Timing	MANAGEMENT PRESCRIPTION
Modified Grassland: Moderate Condition	Spring/Autumn	Additional seeding to take place where there are less than 6 species per m ² . Timing of planting depends on recommended species/seed mix utilised. To follow guidance provided earlier in this document, in respect of habitat creation.
	September.	Mowing should be undertaken in autumn down to 150mm. Arisings should be left in situ for 1 week and then raked off to allow seed dispersal. Selected areas should be left with no management to allow the formation of tussocks. These areas can be cut as a maximum every 5 years.
	All year	Weed control - If considered necessary weeds can be treated by spot-spraying with herbicide, being dug out, or by topping (cutting weeds when they are in flower).
	All year	Other management prescriptions required to meet the target criteria as set out in Table 4.1.
Modified Grassland: Poor Condition	All year	Grassland will be subject to mowing regime considered appropriate for its functionality including the LAP and infiltration basin. This may be regular or more sporadic; but is not considered a constraint.
		Weeds (including bracken and scrub) should be treated by being dug out, or by topping (cutting weeds when they are in flower).
All Grassland	All year	Any invasive species must be identified and removed. This may require invasive species management to ensure it is safely/appropriately removed and is not accidentally spread.

Trees	November to March	Any pruning works should be undertaken outside of the nesting bird season and trees pruned if there is a health and safety concern only. These works should not be undertaken annually on each tree – trees should be left to develop natural deadwood, cavities and other features which are valuable for wildlife. Pruning should seek to promote a healthy upright growth form. Any signs of disease decay should be managed as appropriate. Stakes should be removed as appropriate.
	November to March	Any trees should be replaced if failed.
	All year	Other management prescriptions required to meet the target criteria as set out in Table 4.1.
Hedgerow and Scrub	Early February	Scrub and hedgerow should have areas cut every other year as a maximum, allowing some trees to develop in hedgerows and a diverse range of ages to establish within the scrub. This should be undertaken in the winter period outside of nesting bird season. Pruning should be limited to promoting a healthy upright growth form, with up right leaders retained. Any signs of disease, decay should be removed as appropriate.
	November to March	Any losses should be replaced with new native planting. Stakes should be removed as appropriate.
	All year	Any invasive species must be identified and removed. This may require invasive species management to ensure it is safely/appropriately removed and is not accidentally spread.

Monitoring Schedule

- 5.2 For the life of the development monitoring will be undertaken yearly by the landscape contractor.

Remedial Measures

- 5.3 Remedial measures will be undertaken as set out by the monitoring. Remedial measures should include those to achieve each habitats target conditions as provided within the Habitat Management Section and Table 4.1 of this document.

Reporting plan and schedule

- 5.4 A monitoring report should be submitted to the LPA which provides details of the condition of habitat parcels on years:
- 1
 - 2
 - 5
 - 10
 - 15

- 20
- 25
- 30

5.5 Monitoring should include quadrat assessments of grassland parcels checking for species composition and relative abundance. The specific locations of the quadrats set out in monitoring report 1 should be used thereafter to facilitate standardisation and an approach to monitoring that can measure success more accurately.

6. SPECIES MITIGATION AND ENHANCMENTS

Bats

- 6.1 Two integrated bat boxes within each new buildings on-Site will be installed. These should be installed over 3m high on south facing walls away from windows or artificial lighting wherever possible
- 6.2 Appendix 3 provides the recommended locations of these bat boxes. The boxes should be Schwegler 2FR Bat/Access Units or similar. These can be sourced from Wildcare <https://www.wildcare.co.uk/>.

Birds

- 6.3 Two integrated bird boxes will be installed on each new building. These boxes will be installed on eastern facing elevations wherever possible and be away from windows (ideally below overhanging eaves).
- 6.4 Appendix 3 provides the recommended locations of these bat boxes.. The boxes should be Woodstone Sparrow Nest Boxes or similar and Woodstone build-in open nest boxes or similar. These can be sourced from NHBS <https://www.nhbs.com/>.

7. REFERENCES

- Baker, J. (2016). Biodiversity Net Gain: Good practice principles for development. CIEEM, IEMA, CIRIA, UK
- Baker J., Hoskin, R. & Butterworth, T. (2019). Biodiversity Net Gain: Good Practice Principles for Development, A Practical Guide. CIEEM, IEMA, CIRIA, UK.
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- Emorsgate seed mix, accessed at: <https://wildseed.co.uk/product/mixtures/wild-flower-only-mixtures/>.
- Legislation.gov.uk for: Wildlife and Countryside Act 1981 (amended) & Conservation of Habitats and Species Regulations 2019.
- Ministry of Housing, Communities and Local Government (2023) National Planning Policy Framework. Found at: <https://www.gov.uk/government/publications/national-planning-policy-framework--2>
- The Conservation of Habitats and Species Regulations 2017 (as amended). Found at: <https://www.legislation.gov.uk/uksi/2017/1012/introduction>
- The Environment Act 2021 [Environment Act 2021 \(legislation.gov.uk\)](https://www.legislation.gov.uk/uksi/2021/1160/introduction)
- The Hedgerow Regulations 1997 (England) Found at: <https://www.legislation.gov.uk/uksi/1997/1160/contents/made>
- The NERC Act 2006 found at [Habitats and species of principal importance in England - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/publications/habitats-and-species-of-principal-importance-in-england)

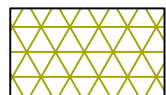
APPENDICES

APPENDIX 1: Soft Landscape Masterplan

Legend



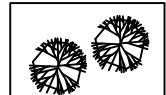
Existing trees to be retained and protected during construction



Existing grassland to be retained. Areas of bare soil should be seeded with the shaded grassland mix specified below



Proposed tree planting within soft landscape. See tree pit detail on sheet 2



Proposed specimen shrub planting to receive short angular staking on half standards with expandable tree ties



Proposed climbing plants to be trained up adjacent wall/fence with Webnet Wire Mesh System (see below). Support canes must be removed prior to planting



Proposed Webnet Wire Mesh System with 300mm spacings to be installed onto wall/fencing (onto side with proposed climbing plants) in line with supplier's recommendations, as available from Jakob Rope Systems or similar



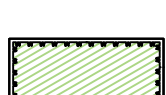
Proposed hedge planting to be planted in a double staggered row 300mm apart and at 500mm centres in each row. To be maintained at 1m height



Proposed mixed native hedge planting to be planted in a double staggered row 300mm apart and at 500mm centres in each row. To be maintained at 1m height and 1.8m height adjacent to site boundaries. If within tree RPA, trenches must be dug by hand

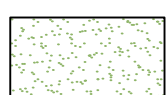


Proposed planting to receive 75mm bark mulch after planting operations



Proposed planting mix to be planted in groups of 4-6no. of each species and as above. Smaller species are to be positioned closer to the front of the planting bed whilst larger species should be placed further towards the back.

Within Decorative mix 3, Cornus alba 'Kesselringii' must be spread evenly throughout planting



Proposed grass areas to receive good quality amenity grass turves laid in line with good horticultural practices. Open spaces are to be seeded



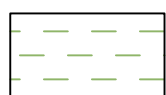
Proposed wildflower meadows, to be seeded with EM1 Basic General Purpose Meadow Mix as supplied by Emorsgate and sown at 4g/m², or similar and approved



Proposed shaded grassland, to be seeded with EG9 Grass Mix for Hedgerows and Woodland as supplied by Emorsgate and sown at 5g/m², or similar and approved



Proposed infiltration basin grassland, to be seeded with EP1 Pond Edge Mix as supplied by Emorsgate and sown at 5g/m², or similar and approved

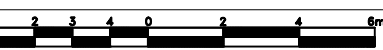


Cut lines

For tree pit detail and planting schedule see sheet 2

SPECIFICATION
All works generally, to comply with the written Soft Landscape Specification.

NOTES:
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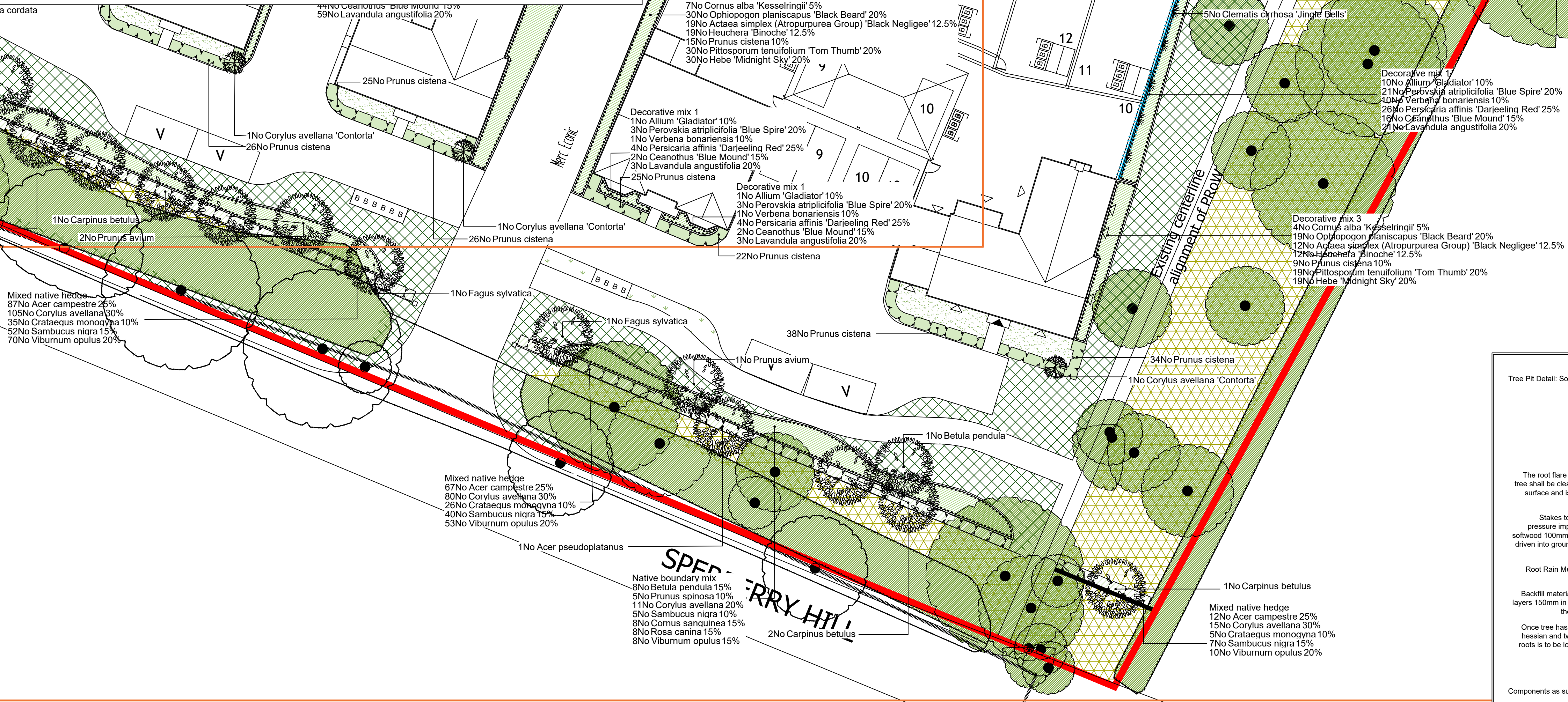
Planting Schedule

Species Name	Girth	Height	Density	Specification	No.
Acer campestre	60-80cm	0.3Ctr	Double Staggered at 0.5m offset	Transplant BR Maintained as hedge	262 -
Crataegus monogyna	60-80cm	0.3Ctr	Double Staggered at 0.5m offset	Transplant BR Maintained as hedge	100 -
Salix caprea	60-80cm	2/m²		Branched BR	24 -
Salix fragilis	60-80cm	2/m²		Branched BR	24 -
Setula pendula	80-100cm	1/m²		Transplant BR Planted in Native boundary mix	19 -
Carpinus betulus	80-100cm	0.5Ctr	Double Staggered at 0.3m offset	Transplant BR Maintain as hedge	64 -
Prunus serrula	10-12cm	300-350cm	Counted	Selected Standard Clear Stem 175-200 2x BR	1 -
Acer campestre	10-12cm	300-350cm	Counted	Selected Standard Clear Stem min. 200 RB	1 -
Setula pendula	10-12cm	300-350cm	Counted	Selected Standard Clear Stem 175-200 2x BR	1 -
Acer campestre	10-12cm	300-350cm	Counted	Selected Standard Clear Stem 175-200 2x BR	1 -
Prunus avium	10-12cm	300-350cm	Counted	Selected Standard Clear Stem 175-200 2x BR	1 -
Carpinus betulus	10-12cm	300-350cm	Counted	Selected Standard Clear Stem 175-200 2x BR	1 -
Fagus sylvatica	12-14cm	350-425cm	Counted	Heavy Standard Clear Stem min. 200 RB	3 -
Tilia cordata	12-14cm	350-425cm	Counted	Heavy Standard Clear Stem min. 200 RB	2 -
Carpinus betulus	12-14cm	350-425cm	Counted	Heavy Standard Clear Stem min. 200 RB	4 -
Acer pseudoplatanus	12-14cm	350-425cm	Counted	Heavy Standard Clear Stem min. 200 RB	3 -
Prunus avium	12-14cm	350-425cm	Counted	Heavy Standard Clear Stem min. 200 RB	3 -

Species Name	Height	Pot Size	Specification	Density	No.
Ceanothus 'Blue Mound'	60-80cm	3L	Bushy C Planted in Decorative mix 1	6/m²	84 -
Cornus alba 'Kesselringii'	60-80cm	10L	Branched C Planted in Decorative mix 3	6/m²	31 -
Cornus alba 'Sibirica'	40-60cm	3L	Branched C Planted in Decorative mix 2	4/m²	49 -
Cornus sanguinea	40-60cm	3L	Branched BR Planted in Native boundary mix	1/m²	19 -
Cornus sanguinea 'Midwinter Fire'	40-60cm	3L	Branched C Planted in Decorative mix 2	4/m²	49 -
Cornus sericea 'Flaviramea'	40-60cm	3L	Branched C Planted in Decorative mix 2	4/m²	66 -
Corylus avellana	60-80cm	3L	BR Maintained as hedge	0.3Ctr Double Staggered at 0.5m offset	303 -
Corylus avellana	80-100cm	3L	Branched BR Planted in Native boundary mix	1/m²	25 -
Corylus avellana 'Contorta'	60-80cm	10L	Branched C	Counted	9 -
Hebe 'Midnight Sky'	30-40cm	3L	Bushy C Planted in Decorative mix 3	6/m²	137 -
Lavandula angustifolia	20-30cm	3L	Bushy C Planted in Decorative mix 1	6/m²	113 -
Perovskia atriplicifolia 'Blue Spire'	30-40cm	3L	Bushy C Planted in Decorative mix 1	6/m²	113 -
Pittosporum tenuifolium 'Tom Thumb'	30-40cm	3L	Bushy C Planted in Decorative mix 3	6/m²	137 -
Prunus cistena	40-60cm	3L	Branched C Maintain as hedge	0.5Ctr Double Staggered at 0.3m offset	638 -
Prunus cistena	40-60cm	3L	Branched C Planted in Decorative mix 3	6/m²	67 -
Prunus spinosa	125-150cm	3L	Branched BR Planted in Native boundary mix	1/m²	12 -
Rosa canina	80-100cm	3L	Branched BR Planted in Native boundary mix	1/m²	19 -
Salix viminalis	80-100cm	3L	Branched 3 brks BR	2/m²	48 -
Sambucus nigra	60-80cm	3L	BR Maintained as hedge	0.3Ctr Double Staggered at 0.5m offset	150 -
Sambucus nigra	125-150cm	3L	Branched BR Planted in Native boundary mix	1/m²	12 -
Sambucus nigra	40-60cm	3L	Branched 2 brks BR	2/m²	24 -
Viburnum lantana	40-60cm	3L	Branched 2 brks BR	2/m²	16 -
Viburnum opulus	60-80cm	3L	BR Maintained as hedge	0.3Ctr Double Staggered at 0.5m offset	202 -
Viburnum opulus	60-80cm	3L	Branched BR Planted in Native boundary mix	1/m²	19 -

Species Name	Height	Pot Size	Specification	Density	No.
Clematis cirrhosa 'Jingle Bells'	100-150cm	10L	Several Shoots Caned	Counted	7 -
Clematis koreana 'Amber'	100-150cm	10L	Several Shoots Caned	Counted	5 -

Species Name	Height	Pot Size	Specification	Density	No.
Actaea simplex (Atropurpurea Group) 'Black Negligee'	2L	C	Planted in Decorative mix 3	36/m²	85 -
Allium 'Gladiator'	2L	C	Planted in Decorative mix 3	36/m²	54 -
Heuchera 'Binoche'	2L	C	Planted in Decorative mix 3	36/m²	85 -
Ophiopogon planiscapus 'Black Beard'	2L	C	Planted in Decorative mix 3	36/m²	137 -
Persicaria affinis 'Darjeeling Red'	2L	C	Planted in Decorative mix 3	36/m²	141 -
Verbena bonariensis	2L	C	Planted in Decorative mix 3	36/m²	54 -

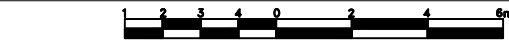


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- Existing trees to be retained and protected during construction
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- Proposed shaded grassland, to be seeded with EG9 Grass Mix for Hedgerows and Woodland as supplied by Emorsgate and sown at 5g/m², or similar and approved
- Proposed infiltration basin grassland, to be seeded with EP1 Pond Edge Mix as supplied by Emorsgate and sown at 5g/m², or similar and approved
- Cut lines
- For tree pit detail and planting schedule see sheet 2

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Rev	Date	Details	Drawn
D	08-05-24	team comments	HCS
C	01-05-24	layout change	HCS
B	03-11-22	layout change	JNT
A	30-05-19	Client name amended	JRD
Rev	Date	Details	Drawn



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Malmesbury, SN16 0ES
Tel: 01666 825646

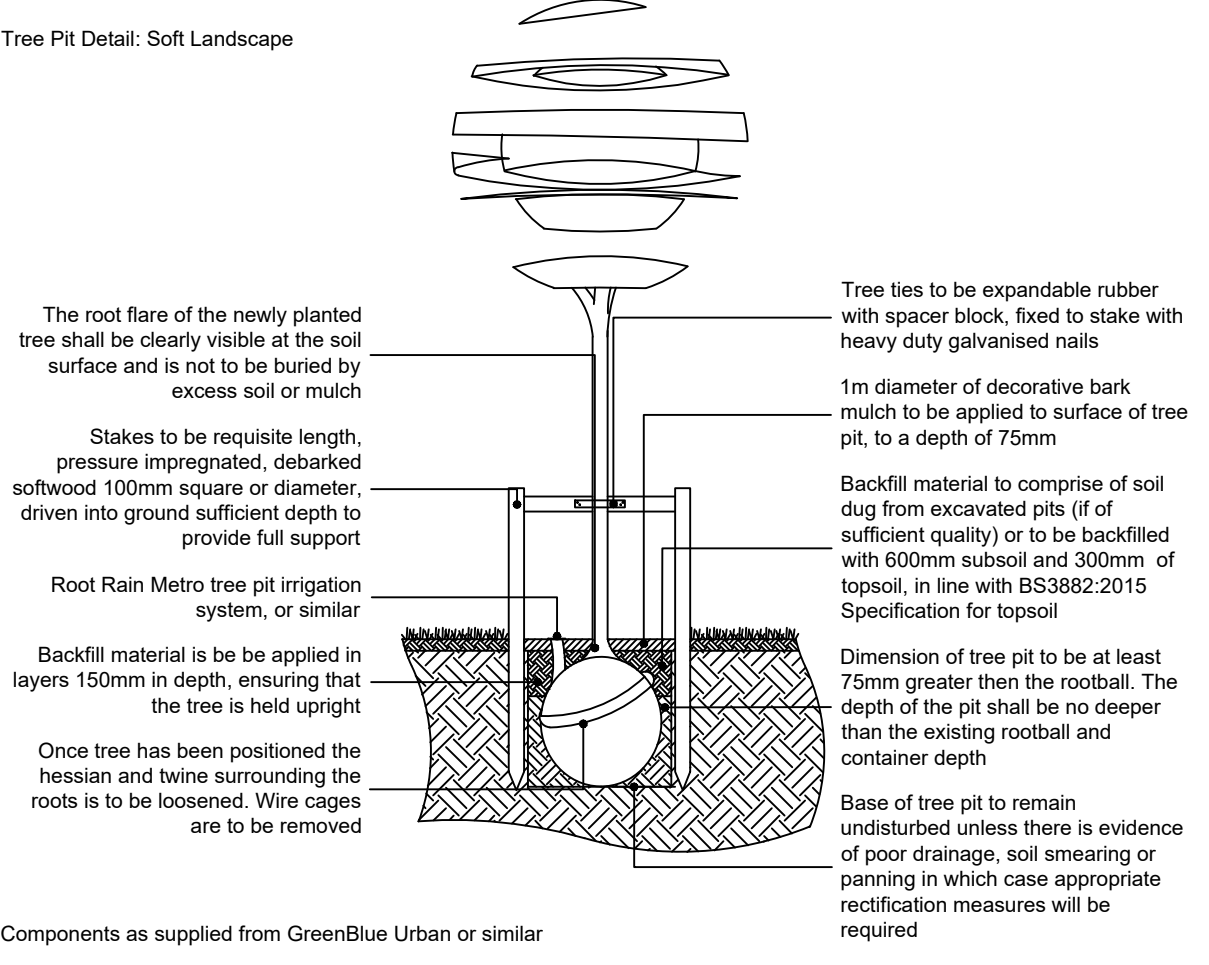
Courttyard House, Mill Lane, Codrington, GU7 1EY
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Suite 6, Crescent House, Yonge Close, Eastleigh, SO50 9SX
Tel: 02382 026300

email: mail@acdenv.co.uk
www.acdenvironmental.co.uk

scheme: Sperberry Hill, St
Ippolytis, Hitchin
client: Templias Ltd.
drawing: Soft Landscape Proposals
date: April 2019
scale: 1:200@A1
drawing no: WHK21863-11D (Sheet 2 of 2)
drawn: JRD checked: HCS

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APPENDIX 2: Habitat Plan



APPENDIX 3: Bat and Bird Box Location Plan



DRAWING LEGEND:

Landscaping:

- Denotes Existing Landscapin
- Denotes Existing Landscapin
- Denotes Existing Landscapin
- Denotes Proposed Tree Plan
- Denotes Proposed Hedgerow
- Denotes Proposed Shrub/Lov
- Denotes Existing Landscapin
- Denotes Proposed mesh Fen
- Denotes Wildflower meadow
- Denotes Grass
- Denotes Shaded Grassland

N.B. Landscaping is indicative only, please refer to proposals for further information.

Note
1.Do not scale this drawing.
2.This drawing is to be read in conjunction with all relevant reports

- Key
- Site Boundary
 - Bird box
 - Bat box



Client
TALBOT HOMES

Project Title
LAND ON THE SOUTH WEST SIDE STEVENAGE ROAD, ST IPPOLYTS, HERTFORDSHIRE

Drawing Title
BAT AND BIRD BOX LOCATION PLAN

Drawn:	AR	Reviewed:	JMcL
Project no:	JME_XXXX	Date:	26.11.24
		Scale@A3:	1:1000



Drawing Number
JME_XXXX_DR2_V1

SCHEDULE OF ACCOMMODATION:

Market Housing:		
House Type:	Plot No.	No.
2971 (+ 463sq. ft Garage)	4	1
2376	6, 7, 8,10	4
2060	1,5,9	3
2039	2,3	2

Sub-Total: [10]

Affordable Housing:

House Type:	Plot No.	No.
2B	12, 13	2
2B Bungalow	14	1
© Copyright JM Ecology Ltd	11	1

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