
Landscape and
Ecological
Management Plan

Land at Mold Road,
Gwersyllt
Ref: P.1626.25

February 2025
(See revision dates
below)

Rev	Date	Details
A	18/03/2025	Minor amendments
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P.1626.25

Landscape and Ecological Management Plan

of

Land at Mold Road, Gwersyllt

for

Castle Green Homes

6th February 2025

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Appendix 1: P.1626.22.05D Planting Plan (3 Sheets)

1 Introduction

Ascerta has been instructed by Castle Green Homes to carry out a Landscape and Ecological Management Plan for Land at Mold Road, Gwersyllt (hereafter referred to as the site). Our client seeks planning consent to construct a residential scheme consisting of 85 plots with associated access roads, Public Open Space (POS), an attenuation basin, two newt mitigation ponds, and Local Equipped Area for Play (LEAP).

The site OS grid reference is SJ 3221 5253 and the extent of the site is displayed in photograph below.



The detailed soft landscaping scheme is shown on P.1626.22.05D Planting Plan (3 Sheets).

The maintenance and management prescriptions detailed within this report are only specific to the public open spaces, play area, GCN Mitigation area, and road access. The management of front and rear gardens of plots is not covered by this report. Instead, the management of front and rear gardens of plots is the responsibility of the resident or homeowner.

This management plan covers a period of 30 years, and it should be reviewed at the end of this period based on the condition of the site at that time to ensure the initial objectives are being achieved. The recommendations from the ecological reports are included within the management prescriptions.

2 Site Description

2.1 The Existing Site

The site, approximately 3.13Ha lies to the east of Mold Road and to the south of St Giles Park. Within the wider landscape lies agricultural land use to the south, woodland to the east, and residential developments are to the western and northern boundaries of the site. The site comprises a semi-improved grassland field that is bound by species poor hedgerows with scattered trees and pockets of bramble scrub. A wet ditch lines the southern and eastern boundaries and a single pond lies to the southern site boundary with three further ponds are adjacent to the eastern site boundary.

2.2 Site Ecology

The following reports were completed following a series of site surveys and the recommendations made for ecological and arboricultural mitigation have been included in both the design and management proposals.

- *P.1626.22 Arboricultural Impact Assessment*
- *P.1626.22 Ascerta Preliminary Ecological Appraisal, Land at Mold Road, Wrexham*
- *P.1626.22B Ascerta Great Crested Newt Mitigation Strategy*

The key habitats currently identified on site are listed below.

- Semi-improved grassland
- Species poor hedgerow
- Scattered trees
- Pockets of bramble scrub
- A wet ditch
- Ponds

The ecology report indicated no non-native species within the site or surrounding land.

2.3 The Proposed Site Description

The residential development proposes a residential development including inner roads, tree planting, native hedgerows, grass/turf, wildflower, ornamental formal hedges, scrub planting, woodland planting, and planting beds. A separate Great Crested Newts (GCN) mitigation area makes up 0.59Ha of the site with two ponds containing marginal planting. In addition, an attenuation basin is located within the proposed public open spaces (POS).

The access into the site will be from the western boundary off Mold Road.

The landscaping design is shown on Appendix 1: P.1626.22.05D Planting Plan (3 Sheets) which provides:

Planting Plan

- Proposed tree planting (Total: 77 no. trees)
- Proposed shrub planting (Total area: 435m²)
- Formal hedges (Total length: 454.5 lin.m)
- Proposed mixed native hedgerow (Total length: 602.1 lin.m)
- Native scrub mix (Total area: 840.9m²)

- Proposed mixed woodland planting (Total area: 1365.4m²)
- Grass seeding Germinal AberSustain mix (Total: 3488.59m²)
- Wildflower seeding Germinal RE3 River Floodplain/ Water Meadow (MG8 Grassland) mix (Total: 692.18²)
- Wildflower seeding Germinal Eco-Species Rich Lawn mix (Total: 626.59m²)
- LT7 Lindum Festival Turf (Total: 1775.92m²)
- Proposed Shaded Area grass mix (Total: 2019.7m²)
- Germinal Tussock grass mixture (Total: 1864.55m²)
- Marginal planting in shallow water levels (Total: 76.8m²)
- Marginal planting outside of water levels (Total: 88.2m²)

The proposed native tree species include Silver Birch, Common Alder, Hawthorn, Sessile Oak, and Common Oak. These native species provide food or shelter resource to wildlife. Ornamental tree species have also been proposed including Field Maple 'Elsjrik', Himalayan Birch, Snowy Mespilus 'Ballerina', Hornbeam 'Frans Fontaine', Midland Hawthorn 'Paul's Scarlet', Crab Apple 'Rudolph', Callery Pear, and Rowan. These species provide a food or shelter resource to wildlife.

The proposed native hedgerow mix includes Hazel, Hawthorn, Holly, Blackthorn, and Dog Rose provide a food or shelter resource to wildlife. The proposed native hedgerow will allow connectivity throughout the site and to the wider environment.

The proposed native scrub mix planting will include Common Dogwood, Hazel, Hawthorn, Holly, Wild Privet, Blackthorn, Field Rose, Dog Rose, Rowan, and Guelder rose. These species provide a food or shelter resource to wildlife.

The proposed native woodland mix will include Field Maple, Black Alder, Silver Birch, Downy Birch, Hawthorn, European Aspen, Blackthorn, Sessile Oak, Common Oak, Goat Willow, Grey Willow, and Rowan. These species provide a food or shelter resource to wildlife.

2.4 Management Company

A management company will be appointed by the developer once the main development works have commenced on site.

The details of the management company responsible for implementation of the landscape and ecological management plan are below:

Company: Trustmgt
 Address: Trustmgt
 Unit 7 - Portal Business Park,
 Eaton Lane,
 Tarporley,
 Cheshire,
 CW6 9DL.

Office Number: 01829 708 457

Website: <https://trustmgt.co.uk/>

Trustmgt are a substantially sized company with the appropriate skills to undertake the role. The management company will be established and funded as a resident contribution scheme, with an appropriate management charge for the maintenance of the public open space established prior to first purchase, and with the level of charge linked to an appropriate indexation mechanism such as RPI or CPI.

3 Landscape Design Objectives

The overall design objectives are as follows:

1. Carry out tree planting, native hedgerows, grass/turf, wildflower, ornamental formal hedges, scrub planting, woodland planting, and planting beds and native tree/shrub planting. New attenuation basins are located within the proposed public open spaces (POS) to soften the development and provide an attractive setting.
2. To include the relevant recommendations of the Great Crested Newts Mitigation Strategy including:
 - a. An area to the east of the application site will be designated as an area of mitigation for GCN and strengthen the existing offsite mitigation, providing an enhanced area for GCN. This area will not be subject to any development works and access to the area will be restricted to members of the public by the use of fencing, hedges and lockable gates.
 - b. Enhancement measures within the mitigation area will include creating two ponds, planting new hedge line, installing hibernacula, and maintaining the area as rough grassland, with pockets of scrub, wildflower planting, marginal planting and scattered trees.
3. To include the relevant recommendations of the Arboricultural Impact Assessment report including:
 - a. Where possible to satisfy local and national planning guidance and policy.
 - b. Where trees are proposed for removal, replacement planting should be undertaken as part of a landscape strategy for the site in line with local plan requirements and to integrate the development into the surrounding landscape.
 - c. Agree upon and implement measures to safeguard and physically protect retained trees, following the best arboricultural management practices available. This will help minimize any potential negative effects on long-term tree cover.
 - d. Recommend that the landscape proposal prepared for the site includes, where feasible, provision for the planting of a mixture of native as well as ornamental trees, shrubs and hedges, implemented as a condition of planning consent.
 - e. Recommend that tree protection measures are implemented based on the finalised versions of the drawings appended to this report.
4. To include the required enhancements of the ecological report including:
 - a. Provision of 12 bird boxes (25mm and 32mm entrance hole box, house sparrow terrace, swift box), attached to or integrated within new buildings or retained trees on site;
 - b. Provision of 10 bat features (e.g. Vivara Pro WoodStone Bat box or similar) attached to a retained or new tree on site or provision of a bat box (e.g. Vivara bat bricks or '*bird brick houses*' bat boxes) integrated within new buildings or attached to retained trees on site;
 - c. Retention of the drainage network (D1 & D2) and ponds P1 – P4 to provide continued terrestrial habitat for amphibians; and
 - d. Retain and enhance the site boundaries and area to the east of the site with suitable landscaping incorporating species that provide a food or shelter

resource to wildlife to include hawthorn, hazel, holly, blackthorn, field maple, dog rose and honeysuckle as hedgerow species and oak, alder, field maple, silver birch, crab apple, rowan and bird cherry as tree species together with implementing a relaxed mowing regime and establishing wildflowers in these areas.

5. To carry out tree, scrub, and hedgerow planting to provide screening where required.
6. Habitat enhancement to include planting of native species and a variety of ornamental species to attract pollinators at suitable locations.
7. To retain natural buffers of suitable condition and enhance them with additional planting or by good management; and
8. Implementation of new native hedgerows, native trees, grassland, wildflower meadows, and native scrub and woodland to benefit wildlife habitats.

4 Management Proposals

This management plan covers detailed maintenance operations for an initial maintenance period of two years, followed by an establishment period covering years three-five. During this period, the operations proposed will ensure new planting and grass is establishing well and showing healthy growth, and that groundcover planting is provided as per : P.1626.22.05D Planting Plan (3 Sheets).

Long term management proposals are included for years six to thirty (the maturing phase) and this period will involve less intensive management of planting, although ongoing monitoring will be essential to ensure the character of the retained trees and vegetation, proposed planting, and areas of public open space are maintained, and replacement planting is accomplished when necessary to ensure good species diversification. Long term management of the existing trees may include some felling of mature trees at the end of their life span to maintain healthy development of the trees on site. Any felled trees are to be replaced with a suitable species to retain the character of the trees on site.

Although this management plan covers a thirty-year period, it should be reviewed at a minimum of five-year intervals to ensure the initial objectives are being achieved. Additional monitoring of the different habitat areas is essential as natural changes are 'likely to occur and there could be future changes in legislation, both of which could have an impact on the future management of the site. The proposed native hedgerows, specimen trees, and native scrub planting within the site will form wildlife corridors both through and around the perimeter of the site connecting the site to the surrounding wildlife habitats and corridors.

4.1 Management Proposals Objectives

Residential Development Management: Residential area management proposals to ensure good management of pavement and road surfaces. Whilst the maintenance of new landscaping within front and side gardens will be the responsibility of the homeowner or resident.

Public Open Space Management: To ensure the existing trees and hedgerows and new planting are managed to retain the character and diversity of the area and there is good protection of existing habitats. To ensure good establishment of trees, hedgerows, native scrub planting, woodland planting, wildflower meadows, and grass areas, and the maintenance of communal areas. The hedgerows should have a continuous, dense base although gaps created by badgers for access should be left.

Great Crested Newts (GCN) Mitigation Habitat Management: The management of the ponds will aim to maintain open water as well as sufficient aquatic and marginal vegetation. The vegetation will be monitored and thinned when required. Any encroaching scrub in the vicinity of the ponds will be removed when necessary to control the amount of shading. The grassland will be cut annually on a rotation schedule to encourage diversity while maintaining a varied structure. Any introduced fish will be removed from the pond. The removal of litter or dumped rubbish will also be conducted when required. Refer to P.1626.22B Great Crested Newt Mitigation Strategy for further information.

Sustainable Drainage Systems (SuDS) Management: To ensure attenuation basins provides attractive surroundings for the community and creates opportunities for wildlife. To ensure the correct water flow is managed to retain the character and diversity of the area whilst preventing pollution by intercepting silt and cleaning runoff from hard surfaces.

Play Area (LEAP) Management:

Before first use, the play area is to be inspected by ROSPA or similar qualified RPII and certificate provided to the developer. To provide a high-quality area and ensure that the play equipment is safe, the gates and fence are operational to prevent dogs or other possible hazards accessing the area. To ensure fortnightly playground inspections including a quarterly inspection and an annual inspection accomplished by a suitable qualified RPII (Register of Play Inspectors International) operator inspector. All maintenance shall be in accordance with BS EN1176 and BS EN1177.

5 Detailed Management Proposals

5.1.1 Maintenance Phase (Years 1-2)

Feature	Description and specification
Existing Vegetation	
Existing trees to be retained	Re-inspect once and specify any applicable management / and any on-going monitoring to ensure trees are safe and to improve / maintain health where necessary. Preliminary recommendations made at the time of the Tree Survey can be found within P.1626.22 Arboricultural Impact Assessment.
Existing Hedgerow	Prune in January / February on a 3-year rotational basis (1/3 per year) and carry out new planting, if required. Lay or coppice hedgerow initially between 8 to 15 years of age when condition of the hedge is poor. Lay or coppice hedgerow a second time after 8 to 12 years after first cut.
New Planting	
New tree planting	Water to ensure good establishment. Undertake formative pruning. Annually replace dead or dying stock and check stakes and tree ties and adjust / replace if necessary. Hand weed around a 0.6m diameter of the base of each tree to ensure weed free and top up mulch every two years.
New native scrub mix planting	Weed control by hand to ensure planting area is weed free. Check stakes and shelter guards are in place and replace where necessary. Replace dead / dying stock in winter.
Native mixed hedgerow planting	Prune in January / February on a 3-year rotational basis (1/3 per year) and carry out new planting if required. Weed control by hand to ensure planting area is weed free. Maintain a neat appearance and allow hedgerows to grow to a height of not less than 2m.
New shrub planting	Weed control by hand to ensure planting area is weed-free. Ensure mulch is topped up annually. Apply Pro Flora tablets to all plants, as per manufacturer's specifications on year 2. Application rates for shrubs are two per plant – 30g.
Mixed woodland planting	Weed control by hand to ensure planting area is weed free. Check stakes and shelter guards are in place and replace where necessary. Replace dead / dying stock in winter
Grass and Wildflower Areas	
Amenity grass areas and grass verges (Germinal AberSustain mix)	Mow grass areas and verges 14 times a year during growing season, to approximately 40mm. Clippings shall be removed on day of cutting to prevent nutrient build up.
Open space with Germinal WFG20 Eco Species Rich Lawn mix	First cut mid-September - 1st October and collect the arisings. Cutting height approx.70mm From year 2 onwards cut once a year from mid-August to early October to approximately 70mm. Clippings shall be removed on day of cutting to prevent nutrient build up. Spot treat pernicious weeds and reseed areas where required.
Wildflower RE3 River Floodplain / Water	Autumn Sown: First cut shall be early July, then monthly during August, September, and October to approximately 70mm.

Meadow (MG8 Grassland)	Thereafter: shall be cut once a year mid-July to early September to approximately 70mm. Spring Sown: First cut mid-September to 1st October, then monthly during August, September, and October to approximately 70mm. Thereafter: shall be cut once a year mid-July to early September or as required leaving at least fortnight between cuts to approximately 70mm. An area of up to one third should be left uncut when cutting in late summer, until the following spring for overwintering invertebrates. This operation should rotate areas each year. Clippings shall be removed on day of cutting to prevent nutrient build up. Spot treat pernicious weeds and reseed areas where required.
EG10 Tussock Grass Mixture Germinal	Retained grassland to be overseeded with Tussock grass to be Emorsgate EG10 Tussock Grass mix, or similar approved at 2.5g/m ² . Sowing to be taken in the autumn or spring. Mow all plant growth (sown grasses and weeds) regularly to 40-60mm in the first growing season after mid to late summer.
GCN Pond maintenance	
Marginal planting	The marginal planting should monitored and thinned when necessary, encroaching scrub should be removed.

Other Features	
Hard surfacing	Check annually and repair any defects.
Fencing	Check annually, repair any defects, and replace when necessary.
Playground Fencing and Self-closing gate mechanism	Check fencing weekly and repair any defects. Check gate weekly or in accordance with manufacturers recommendations, for any damage and repair or replace if required.
Play surfaces	Check the play surface of the play area twice a year and repair any defects
Play equipment	Check every month the play equipment in accordance with manufacturers recommendations, for the operation and stability of the equipment. Repair any damage or replace if required.
Inlets and outlets structures	Check monthly for obstructions and remove as necessary, to allow free water flow through the pond.
Silt management	Check twice a year for silt accumulation and remove as necessary.
Basin liner	Check the liner twice a year for damage (any leakage/ reduced water levels) and repair when if necessary.
Integrated bat and bird features	Integrated bat and bird features to be checked annually by a suitable licensed ecologist. Repair any defects and replace when necessary.
Hibernaculum	Hibernaculum to be checked annually by a suitable licensed ecologist. Repair any defects and replace when necessary.
Litter Management	
Play area litter	Check weekly and remove all litter and debris as necessary and collect the litter bins.
SUDs litter	Check monthly for litter or other debris and remove as necessary.
Hibernaculum litter	Check monthly for litter or other debris and remove as necessary.
General litter	Check monthly for litter or other debris and remove as necessary.
Weed Control	
Hard surfacing weed control	Check pavements and kerbs annually for weeds and spray affected areas with herbicide to keep weed free.
Paths	Remove encroaching moss/ grass from hoggin path annually to keep edging exposed. Spray with herbicide if necessary.

5.1.2 Establishment Phase (Years 3-5)

Feature	Description and specification
Existing Vegetation	
Existing trees to be retained	Re-inspect as advised in Maintenance Phase (Years 1-2) and specify any applicable management / and any on-going monitoring to ensure trees are safe and to improve / maintain health where necessary.
Existing Hedgerow	Prune in January / February on a 3-year rotational basis (1/3 per year) and carry out new planting, if required. Lay or coppice hedgerow initially between 8 to 15 years of age when condition of the hedge is poor. Lay or coppice hedgerow a second time after 8 to 12 years after first cut.

New Planting	
New tree planting	Undertake formative pruning if necessary. Annually replace dead or dying stock and check stakes and tree ties and adjust / replace if necessary. Hand weed around a 0.6m diameter of the base of each tree to ensure weed free and top up mulch every two years.
New native scrub mix planting	Beating up: After year 2 any dead trees to be removed and replaced. An assessment to be undertaken at this time to ensure replacement species are ones which have proven so far successful in the rest of the planted area. Undertake formative pruning if necessary. Annually replace dead or dying stock and check stakes and tree ties and adjust / replace if necessary. Hand weed around the base of plants to ensure weed free and top up mulch every two years. Replace dead / dying stock in winter. Remove stakes, ties, and shelter guards between years 3 and 5.
New woodland mix planting	Beating up: After year 2 any dead trees to be removed and replaced. An assessment to be undertaken at this time to ensure replacement species are ones which have proven so far successful in the rest of the planted area. Undertake formative pruning if necessary. Annually replace dead or dying stock and check stakes and tree ties and adjust / replace if necessary. Hand weed around the base of plants to ensure weed free and top up mulch every two years. Replace dead / dying stock in winter. Remove stakes, ties, and shelter guards between years 3 and 5.
New shrub planting	Prune, thin and remove suckers, seedlings, dead, damaged, or diseased branches annually between October and January to avoid the bird nesting season. Weed control by hand to ensure planting area is weed-free. Ensure mulch is topped up annually. Replace dead/dying stock in winter. Apply Pro Flora tablets to all plants, as per manufacturer's specifications on year 4. Application rates for shrubs are two per plant – 30g.
Native mixed hedgerow planting	Prune in January / February on a 3-year rotational basis (1/3 per year) and carry out new planting if required. Check stakes and shelter guards are in place and replace where necessary remove stakes by the end of year 5. Prune to encourage good establishment and a neat appearance at a height of not less than 2m.
Grass and Wildflower Areas	
Amenity grass areas and grass verges (Germinal AberSustain mix)	Mow grass areas and verges 14 times a year during growing season, to approximately 40mm. Clippings shall be removed on day of cutting to prevent nutrient build up.
Open space with Germinal WFG20 Eco Species Rich Lawn mix	Cut once a year from mid-August to early October to approximately 70mm. Clippings shall be removed on day of cutting to prevent nutrient build up. Spot treat pernicious weeds and reseed areas where required.
Wildflower RE3 River Floodplain / Water Meadow (MG8 Grassland)	Cut once a year mid-July to early September or as required leaving at least fortnight between cuts to approximately 70mm. An area of up to one third should be left uncut when cutting in late summer, until the following spring for

	overwintering invertebrates. This operation should rotate areas each year. Clippings shall be removed on day of cutting to prevent nutrient build up. Spot treat pernicious weeds and reseed areas where required.
EG10 Tussock Grass Mixture Germinal	Unwanted perennial weeds (docks, thistles) may need control by selective scything before seeding. To control scrub and bramble development, tussocky areas may need cutting every 2-3 years between October and February. For wildlife this cutting is best done on a rotational basis so that no more than half the area is cut in any one year leaving part as an undisturbed refuge.
GCN Pond maintenance	
Marginal planting	The marginal planting should monitored and thinned when necessary, encroaching scrub should be removed.
Other Features	
Hard surfacing	Check annually and repair any defects.
Fencing	Check annually, repair any defects, and replace when necessary.
Playground Fencing and Self-closing gate mechanism	Check the play area fencing weekly and repair any defects. Check gate weekly or in accordance with manufacturers recommendations, for any damage and repair or replace if required.
Play surfaces	Check the play surface of the play area twice a year and repair any defects
Play equipment	Check every month the play equipment in accordance with manufacturers recommendations, for the operation and stability of the equipment. Repair any damage or replace if required.
Inlets and outlets structures	Check monthly for obstructions and remove as necessary, to allow free water flow through the pond.
Silt management	Check twice a year for silt accumulation and remove as necessary.
Basin liner	Check the liner twice a year for damage (any leakage/ reduced water levels) and repair when if necessary.
Integrated bat and bird features	Integrated bat and bird features to be checked annually by a suitable licensed ecologist. Repair any defects and replace when necessary.
Hibernaculum	Hibernaculum to be checked annually by a suitable licensed ecologist. Repair any defects and replace when necessary.
Litter Management	
Play area Litter	Check weekly and remove all litter and debris as necessary and collect the litter bins.
SUDs litter	Check monthly for litter or other debris and remove as necessary.
Hibernaculum litter	Check monthly for litter or other debris and remove as necessary.
General litter	Check monthly for litter or other debris and remove as necessary.
Weed Control	
Hard surfacing weed control	Check pavements and kerbs annually for weeds and spray affected areas with herbicide to keep weed free.
Paths	Remove encroaching moss/ grass from hoggin path annually to keep edging exposed. Spray with herbicide if necessary.

5.1.3 Maturing Phase (Years 6-30)

Feature	Description and specification
Existing Vegetation	
Existing trees to be retained	Re-inspect as advised in Maintenance Phase (Years 1-2) and specify any applicable management / and any on-going monitoring to ensure trees are safe and to improve / maintain health where necessary.
Existing Hedgerow	Prune in January / February on a 3-year rotational basis (1/3 per year) and carry out new planting, if required. Lay or coppice hedgerow initially between 8 to 15 years of age when condition of the hedge is poor. Lay or coppice hedgerow a second time after 8 to 12 years after first cut.
New Planting	
New tree planting	From Year 10 - Formative pruning of established trees to remove crossing/rubbing branches and any other defects. Removal of competing leaders if considered appropriate. Remove stakes and ties where necessary and adjust where necessary. Year 15- carry out inspections on a 5-year rotation to advise on any works to improve quality of trees and maintain safety / prevent any developing hazards.
New native scrub mix planting	From Year 10 - Formative pruning of established trees to remove crossing/rubbing branches and any other defects. Removal of competing leaders if considered appropriate. Thin poorer quality suppressed trees were deemed necessary to encourage better growth of nearby trees. Remove stakes and ties where necessary and adjust where necessary. Thinning: After 10 years scrub to be thinned out by selective removal of 15-20% of establishing scrub. An assessment will be made to identify suitable trees for removal based on health, form and success of adaption to site conditions. Coppicing: Hazel (<i>Corylus Avellana</i>) in scrub to be coppiced after 10 years and thereafter every 7 years on selective cycles. Year 15- carry out inspections on a 5-year rotation until year 30 to advice on any works to improve quality of trees and maintain safety / prevent any developing hazards.
New woodland mix planting	From Year 10 - Formative pruning of established trees to remove crossing/rubbing branches and any other defects. Removal of competing leaders if considered appropriate. Thin poorer quality suppressed trees were deemed necessary to encourage better growth of nearby trees. Remove stakes and ties where necessary and adjust where necessary. Thinning: After 10 years woodland to be thinned out by selective removal of 15-20% of establishing scrub. An assessment will be made to identify suitable trees for removal based on health, form and success of adaption to site conditions. Coppicing: Hazel (<i>Corylus Avellana</i>) in woodland to be coppiced after 10 years and thereafter every 7 years on selective cycles.

	Year 15- carry out inspections on a 5-year rotation until year 30 to advise on any works to improve quality of trees and maintain safety / prevent any developing hazards.
New shrub planting	Prune, thin and remove suckers, seedlings, dead, damaged or diseased branches annually between October and January to avoid the bird nesting season. Weed control by hand to ensure planting area is weed-free. Ensure mulch is topped up annually.
Native mixed hedgerow planting	Prune in January / February on a 3-year rotational basis (1/3 per year) and carry out new planting if required. Prune to encourage good establishment and a neat appearance to a height of not less than 2m. Lay or coppice hedgerow initially between 8 to 15 years when condition of the hedge is poor. Lay or coppice hedgerow a second time after 8 to 12 years after first cut.
Grass and Wildflower Areas	
Amenity grass areas and grass verges (Germinal AberSustain mix)	Mow grass areas and verges 14 times a year during growing season, to approximately 40mm. Clippings shall be removed on day of cutting to prevent nutrient build up.
Open space with Germinal WFG20 Eco Species Rich Lawn mix	Cut once a year from mid-August to early October to approximately 70mm. Clippings shall be removed on day of cutting to prevent nutrient build up. Spot treat pernicious weeds and reseed areas where required.
Wildflower RE3 River Floodplain / Water Meadow (MG8 Grassland)	Cut once a year mid-July to early September or as required leaving at least fortnight between cuts to approximately 70mm. An area of up to one third should be left uncut when cutting in late summer, until the following spring for overwintering invertebrates. This operation should rotate areas each year. Clippings shall be removed on day of cutting to prevent nutrient build up. Spot treat pernicious weeds and reseed areas where required.
EG10 Tussock Grass Mixture Germinal	Unwanted perennial weeds (docks, thistles) may need control by selective scything before seeding. To control scrub and bramble development, tussocky areas may need cutting every 2-3 years between October and February. For wildlife this cutting is best done on a rotational basis so that no more than half the area is cut in any one year leaving part as an undisturbed refuge.
GCN Pond maintenance	
Marginal planting	The marginal planting should monitored and thinned when necessary, encroaching scrub should be removed.
Other Features	
Hard surfacing	Check annually and repair any defects.
Fencing	Check annually, repair any defects, and replace when necessary.
Playground Fencing and Self-closing gate mechanism	Check the play area fencing weekly and repair any defects. Check gate weekly or in accordance with manufacturers recommendations, for any damage and repair or replace if required.

Play surfaces	Check the play surface of the play area twice a year and repair any defects
Play equipment	Check every month the play equipment or in accordance with manufacturers recommendations, for the operation and stability of the equipment. Repair any damage or replace if required.
Inlets and outlets structures	Check monthly for obstructions and remove as necessary, to allow free water flow through the pond.
Silt management	Check twice a year for silt accumulation and remove as necessary.
Basin liner	Check the liner twice a year for damage (any leakage/ reduced water levels) and repair when if necessary.
Integrated bat and bird features	Integrated bat and bird features to be checked annually by a suitable licensed ecologist. Repair any defects and replace when necessary.
Hibernaculum	Hibernaculum to be checked annually by a suitable licensed ecologist. Repair any defects and replace when necessary.
Litter Management	
Play area Litter	Check weekly and remove all litter and debris as necessary and collect the litter bins.
SUDs litter	Check monthly for litter or other debris and remove as necessary.
Hibernaculum litter	Check monthly for litter or other debris and remove as necessary.
General litter	Check monthly for litter or other debris and remove as necessary.
Weed Control	
Hard surfacing weed control	Check pavements and kerbs annually for weeds and spray affected areas with herbicide to keep weed free.
Paths	Remove encroaching moss/ grass from hoggin path annually to keep edging exposed. Spray with herbicide if necessary.

6 Annual Maintenance Schedule

The annual schedule summarises the maintenance operations required for a one year period, to be repeated for the first five years and should be reviewed on an annually to allow for any changes that may be required as the site develops and matures.

MONTH	J	F	M	A	M	J	J	A	S	O	N	D
OPERATION												
Management of Existing Trees and Hedgerows.												
Inspect for hazards and deteriorations in health and/ or structural integrity								X				
Pruning	In accordance with recommendations made during inspection / identification of work											
Other works	In accordance with recommendations made during inspection / identification of work											
New Tree Planting												
Water as required to ensure good establishment for first 24 months				X	X	X	X	X	X			
Basic formative pruning	X											
Check stakes and tree ties and adjust / replace if necessary and hand weed around base	X				X				X			
Apply fertiliser at years 2 and 4.				X								
Hand weed around a 0.6m diameter of the base of each tree to ensure weed free				X		X		X				
Top up mulch every two years				X								
Annually replace of dead or dying stock for 7 years.											X	
New Native Scrub Mix												
Undertake formative pruning											X	
Annually replace dead or dying stock and check stakes and tree ties and adjust / replace if necessary.											X	
Undertake beating up with replacements at end of year 2										X	X	X
Apply fertiliser at years 2 and 4.				X								
Top up mulch every two years											X	
Hand weed				X		X		X				
Annually replace of dead or dying stock for 7 years.											X	
New Woodland Mix												
Undertake formative pruning											X	
Annually replace dead or dying stock and check stakes and tree ties and adjust / replace if necessary.											X	
Undertake beating up with replacements at end of year 2										X	X	X
Apply fertiliser at years 2 and 4.				X								
Top up mulch every two years											X	
Hand weed				X		X		X				
Annually replace of dead or dying stock for 7 years.											X	
Amenity grass areas and grass verges												

(Germinal AberSustain mix)													
Mow 14 times a year outside of the dormant period to a height of 30-40mm				X	X	X	X	X	X	X			
Spot treat pernicious weeds					X			X					
Apply fertiliser			X										
Open space with Germinal WFG20 Eco Species Rich Lawn mix													
Mow once a year to a height of approx.70mm. Remove clippings on day of cuts. (X means first cut only)								X	X				
Spot treat pernicious weeds					X			X					
Wildflower RE3 River Floodplain / Water Meadow (MG8 Grassland)													
Autumn Sown: First cut shall be early July, then monthly during August, September, and October to approximately 70mm. (X means first cut only)								X	X	X	X		
Thereafter: shall be cut once a year mid-July to early September to approximately 70mm. An area of up to one third should be left uncut when cutting in late summer, until the following spring for overwintering invertebrates. This operation should rotate areas each year.								X	X				
Spring Sown: First cut mid-September to 1 st October, then monthly during August, September, and October to approximately 70mm. (X means first cut only)								X	X	X	X		
Thereafter: shall be cut once a year mid-July to early September or as required leaving at least fortnight between cuts to approximately 70mm. An area of up to one third should be left uncut when cutting in late summer, until the following spring for overwintering invertebrates. This operation should rotate areas each year. An area of up to one third should be left uncut when cutting in late summer, until the following spring for overwintering invertebrates. This operation should rotate areas each year.								X	X				
Spot treat pernicious weeds					X					X			
EG10 Tussock Grass Mixture Germinal													
Mow once every 2-3 years to a height of approx.70mm. Remove clippings on day of cuts. (X means first cut only)									X		X		
Spot treat pernicious weeds											X		
GCN Pond maintenance													
Marginal planting should monitored and thinned when necessary, encroaching scrub should be removed.	X												
Spot treat pernicious weeds											X		

Ornamental Shrub Planting													
Weed control					X		X		X				
Water as required for first 24 months to ensure establishment				X	X	X	X	X	X				
Apply fertiliser at years 2 and 4.				X									
Top up mulch every two years												X	
Replacement planting of dead or dying stock												X	
Management of Native Hedgerow													
Weed control					X		X		X				
Trim on a three-year rotation	X	X											
Monitor and weed around new planting and check and adjust stakes, ties, and shelter guards	X				X				X				
Carry out planting to fill any gaps in hedgerow												X	
Apply compost or fertiliser to new planting at years 2 and 4.				X									
Replace dead or dying plant stock												X	
Management of Other Site Features													
Check and repair fencing, surfacing and street furniture and repair when required					X							X	
Check the play area fencing weekly and repair any defects. Check gate weekly or in accordance with manufacturers recommendations, for any damage and repair or replace if required.	X	X	X	X	X	X	X	X	X	X	X	X	X
Check the play surface of the play area twice a year and repair any defects	X						X						
Crown lift trees above footpaths and pavements	X												
Check monthly for litter or other debris and remove as necessary.	X	X	X	X	X	X	X	X	X	X	X	X	X
Check pavements and kerbs annually for weeds and spray affected areas with herbicide to keep weed free.											X		
Remove encroaching moss/ grass from paths and pavements annually to keep edging exposed. Spray with herbicide if necessary.											X		
Visually inspect integrated bat and bird features and replace if damaged by suitably licenced ecologist.											X		
Visually inspect hibernaculum and repair if damaged by suitably licenced ecologist.											X		

7 Long Term Maintenance Schedule (Years 6-30)

The long-term management plan is a guideline for the maturing phase of the site. As mentioned earlier this should be reviewed every 5 years as a minimum to take account of site based ecological changes and amendments to legislation.

YEAR	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
OPERATION																									
Management of Existing Vegetation																									
Monitor and manage tree groups and scrub areas. Manage habitat by thinning when necessary	Annually if appropriate				x					x					x					x					x
Monitor and manage scattered specimen trees	Annually if appropriate				x					x					x					x					x
Remove stakes / ties as required					x																				
Crown lift / thin existing trees					x					x					x					x					x
Monitor for invasive species	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Native Hedgerows																									
Manage hedgerows by trimming 1/3 each year	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Weed control	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Manage hedgerows by laying or coppicing,			Lay or coppice hedgerow initially between 8 to 15 years when condition of the hedge is poor.								Lay or coppice hedgerow a second time after 8 to 12 years after first cut.														
Manage hedgerows by planting in gaps	x				x					x					x					x					x

Ornamental Shrub Planting																									
Continue to carry out annual pruning and weed control	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Grass and Wildflower Meadows																									
Amenity grass areas and grass verges (Germinal AberSustain mix). Mow fourteen a year to a height of approx. 70mm, Spot treat pernicious weeds, and apply fertiliser annually.	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Wildflower Germinal WFG20 Eco Species Rich Lawn mix. Mow once a year to a height of approx. 70mm, and Spot treat pernicious weeds.	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Wildflower RE3 River Floodplain / Water Meadow (MG8 Grassland). Mow once a year to a height of approx. 70mm, and Spot treat pernicious weeds.	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Mow once every 2-3 years to a height of approx. 70mm. Remove clippings on day of cuts.	x		x		x		x		x		x		x		x		x		x		x		x		x

Spot and treat pernicious weeds.																									
GCN Pond maintenance																									
Marginal planting should be monitored and thinned when necessary, encroaching scrub should be removed.	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Spot treat pernicious weeds	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Other Site Features																									
Monitor and repair fencing, surfacing and street furniture	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Check the play area fencing weekly and repair any defects. Check gate weekly or in accordance with manufacturers recommendations, for any damage and repair or replace if required.	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Check the play surface of the play area twice a year and repair any defects	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Check every month the play equipment or in accordance with manufacturers recommendations, for the operation and stability of the equipment. Repair	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

any damage or replace if required.																									
Check Inlets and outlets structures of attenuation basin.	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Check for silt accumulation due to attenuation basin.	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Check for litter and remove if required	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Weed control	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Monitor basin liner of attenuation basin	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Visually inspect integrated bat and bird features and replace if damaged by suitably licenced ecologist.	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Visually inspect hibernaculum and repair if damaged by suitably licenced ecologist.	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

8 Summary

This report described the proposed development, the landscape design objectives and set out detailed management proposals to ensure high-quality environment within the development.

This report provides:

- Residential area management proposals to ensure good management of pavement and road surfaces. Whilst the maintenance of new landscaping within front and side gardens will be the responsibility of the homeowner or resident.
- Public Open Space management proposals to ensure the existing trees, existing hedgerows, and new planting are managed to retain the character and diversity of the area and there is good protection of existing habitats. To ensure good establishment of native trees, native hedgerows, mixed woodland, native scrub planting, wildflower meadows, and grass areas, and the maintenance of communal areas. The hedgerows should have a continuous, dense base although gaps created by badgers for access should be left.
- Sustainable Drainage Systems (SuDS) management proposals to ensure the areas with attenuation basins provide attractive surroundings for the community and create opportunities for wildlife. To ensure the correct water flow is managed to retain the character and diversity of the area, whilst preventing pollution by intercepting silt and cleaning runoff from hard surfaces.
- Great Crested Newts (GCN) Mitigation Habitat Management: The management of the ponds will aim to maintain open water as well as sufficient aquatic and marginal vegetation. The vegetation will be monitored and thinned when required. Any encroaching scrub in the vicinity of the ponds will be removed when necessary to control the amount of shading. The grassland will be cut annually on a rotation schedule to encourage diversity while maintaining a varied structure. The removal of litter or dumped rubbish will also be conducted when required.
- Play Area Management: The play area is to be inspected by ROSPA or similar qualified RPII and certificate provided to the developer. To provide a high-quality area and ensure that the play equipment is safe, the gates and fence are operational to prevent dogs or other possible hazards accessing the area. To ensure fortnightly playground inspections including a quarterly inspection and an annual inspection accomplished by a suitable qualified RPII (Register of Play Inspectors International) operator inspector. All maintenance shall be in accordance with BS EN1176 and BS EN1177.
- Provide a detailed description of the maintenance operations required for Maintenance Phase (Years 1-2), Establishment Phase (Years 3-5) and Long-Term Management Guidelines (Years 6-30).
- Provide an annual schedule that summarises the maintenance operations required for a one-year period to be repeated for the first five years and a Long-Term Maintenance Schedule (Years 6-30).

Appendix 1



DO NOT SCALE

ALL COORDINATES RELATED TO LOCAL GRID LOCATED TO OS NG BY BEST FIT TO DETAIL. EXTRACTED FROM OS DIGITAL DATA.

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Planting Plan Key:

- Site Boundary
- Public open space boundary
- Existing trees and hedgerows to be retained and protected during the works.
- Existing trees and hedgerow to be removed.
- Proposed ornamental planting on 400mm depth of topsoil with 75mm bark mulch.
- Proposed native tree planting, tree pit and stake as detailed in the specification.
- Proposed ornamental tree planting, tree pit and stake as detailed in the specification.
- Proposed mixed native hedgerow planted in a double staggered row at 0.33m centres and 0.3 offset. Bare root transplants, each with a 60cm high Tubex shrub shelter, two cable ties and a timber stake.
- Proposed single species formal hedge planted in a single row (3 or 5 no. plants per linear metre dependant on stock size). Container transplants.
- Front gardens and verge to be turfed on 150mm topsoil.
- Public open space and verges to be sown with Germinal AberSustain mix, or similar approved, to be sown at a rate of 40g/m² on 150mm topsoil.
- Public open space to be sown with Germinal Eco Species Rich Lawn mix, or similar approved, to be sown at a rate of 10g/m² on 150mm topsoil.
- Native scrub mix planting to be planted as 60-80cm whip planting at 1m centres, for additional wildlife habitat.
- Native woodland mix planting to be planted as 60-80cm whip planting at 2m centres, for additional wildlife habitat.
- Wildflower seeding, Germinal RE3 River Floodplain / Water Meadow (MGB Grassland), to the existing water course within public open space to be sown at 5g/m² planted into 150mm of a mix of topsoil and subsoil (50:50).
- Retain existing grassland and overseed with Tussock grass mixture, Emorsgate Seeds EG10 in GCN mitigation area to be sown at 2.5g/m².
- Wildflower seeding, WFG8 Hedgerows and Shaded Areas, to the public open space to be sown at 5g/m².
- Marginal planting mix outside of water level of Great Crested Newt ponds.
- Marginal/aquatic planting mix within shallow water level of Great Crested Newt ponds.
- Gravel areas; Polar white gravel - 20mm chippings.
- Hibernacula detailed in GCN report

Boundary key:

- 1.8m high screen wall/fence
- 1.8m timber close boarded fence to side and rear

0 2 4 6 8 10 12 14 16

SCALE 1:200

D	updated to "...Rev H"	07/04/25
C	updated to "...Rev G"	18/03/25
B	updated to "...Rev F"	12/12/24
A	updated to "...Rev D"	25/11/22
REV	DESCRIPTION	DATE

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CUSTOMER:
Castle Green Homes

PROJECT:
Land at Mold Road, Gwersyllt, Wrexham

DRAWING TITLE:
Planting Plan (Sheet 1 of 3)

SCALE:
1:200 @ A0

DRAWING NO:
SC

DATE:
01/06/2022

REV:
D

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FOR EASTERN PART OF SITE REFER TO PLANTING PLAN (SHEET 2 OF 3)



DO NOT SCALE

ALL COORDINATES RELATED TO LOCAL GRID LOCATED TO OS NG BY BEST FIT TO DETAIL, EXTRACTED FROM OS DIGITAL DATA.

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Hibernacula detailed in GCN report

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0 2 4 6 8 10 12 14 16

SCALE 1:200

N

D updated to "...Rev H"

C updated to "...Rev G"

B updated to "...Rev F"

A updated to "...Rev D"

REV DESCRIPTION

07/04/25

18/03/25

12/12/24

25/11/22

DATE

CLIENT

PROJECT

DRAWING TITLE

SCALE

DRAWN BY

CHKD BY

DATE

P.1628.22.05

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Planting Plan (Sheet 2 of 3)

1:200 @ A0

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FOR WESTERN PART OF SITE REFER TO PLANTING PLAN (SHEET 1 OF 3)

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LANDSCAPE AND MAINTENANCE SPECIFICATION

All operations to comply with appropriate British Standards unless otherwise stated on drawings or in the specification.

GENERAL TREATMENT OF PLANTING AREAS

Ensure that planting areas are protected from consolidation by heavy construction plant.

For work near a retained tree: Refer to BS 5837 *Trees in relation to design, demolition & construction - Recommendations*- Section 9 (Appendix C).

Damage to Plants to be Retained: If a plant is to be retained is damaged, the plant is to be repaired or replaced by the contractor at their own expense. "Damaged" means:

- The destruction of a plant the breaking of branches or roots
- The debarking of trunks or limbs
- The contamination of root zone soil or plants from drift sprays, dust or contaminated storm water
- The damage by the placement of fill or building materials within the canopy perimeter or otherwise.

1) GROUND PREPARATION AND SOIL SPECIFICATION

Subsoil:

Before receiving topsoil, subsoil shall be loosened using appropriate equipment to a depth of 300mm. This shall be done when the subsoil is dry so as to encourage soil shattering. All stones and other objects larger than 50mm shall be removed from the prepared surface. The loosened subsoil shall be roughly levelled so that an even depth of topsoil can be achieved.

Topsoil (To Comply with British Standard 3882:2015 - Specification for Topsoil):
Imported topsoil shall be Multipurpose Grade as described in BS 3882:2015 and suitable for sustaining plant life. Stockpiling of soil shall be avoided whenever possible to minimise loss of physical quality, diffusion of oxygen and biological activity.

Any stockpiling shall not exceed 1.5 metres high and shall be sited so as to avoid risk of muddy water run-off into a watercourse, not exceeding 1.5 metres high.

The site of the stockpile will be prepared in advance by grading, removing rubbish and ensuring no fuel or chemicals were previously stored in area.

Topsoil shall be lightly consolidated in layers not exceeding 150mm using track laying machinery.

Soil shall not be handled in inappropriate conditions of weather and soil moisture i.e.

During or shortly after heavy precipitation

When soil is in a waterlogged condition

When the ground is frozen or covered by snow

When there are pools of water on the grounds surface.

Topsoil shall be laid to the following minimum depths:

150mm below new grass areas

300mm to rear gardens

400mm beneath new shrub areas.

Finished levels, after settlement, shall be as follows:

25mm above adjacent paving from new grassed areas and non-mulched shrub beds

75mm below adjacent paving and grass for mulched planting beds.

150mm below damp proof courses.

2) GROUND CONDITIONING

40 litres of compost to be incorporated into the top 200mm of each square metre of topsoil for all ornamental shrub beds.

3) PLANT AND PLANTING SPECIFICATION

All plant stock, plant handling and planting to be undertaken in accordance with the following British Standard Specifications and Code of Practice:

BS 8545:2014 'Trees: from nursery to independence in the landscape

BS 3936: Part 1 1992 Nursery stock (Specification for trees and shrubs)

BS 3936: Part 4 1984 Nursery stock (Specification for forest trees)

BS 3936: Part 9 1987 Nursery stock (Specification for bulbs, corms and tubers)

BS 3936: Part 10 1990 Nursery stock (Specification for ground cover plants)

BS 4428: 1989 Recommendations for general landscaping operations.

BS 4043: 1989 Recommendations for transplanting root-balled trees. (withdrawn)

The Code of Practice for Plant Handling 1985. (Horticultural Trades Association).

Plant Stock:

Plant stock to be supplied in accordance with the size and description specified ion the plant schedule and position indicated on the most current revision of the planting plan.

Plant stock shall be healthy, vigorous, free from pests and diseases and suitably hardened off for the proposed situation of planting and lifted at a time in accordance with good nursery practice. Stock shall have a well-formed fibrous root system and be free from perennial weeds. The form of trees shall be in accordance with BS 3936: Part 1:1992, Section 7, *Form of Trees*.

Plant Handling:

All plant materials shall be lifted, bundled, labelled, packaged, transported, temporarily stored and planted in accordance with the procedures and methods illustrated in the publication, *"Plant Handling"* (Horticultural; Trades Association) and relevant sections of BS 4043: 1989 *Transplanting Root-Balled Trees*.

Tree Planting:

Trees to be pit planted following supplier recommendations. Minimum pit size: Selected standard tree 600 x 600 x 600 and Heavy standard tree 900 x 900 x 700mm.

Pits to be prepared to base and sides of pit to be further scarified.

Trees to be double staked using two stakes (75mm dia.), driven into ground 400mm below bottom of pit. Trees to be centrally located and stem placed in an upright position. Pit to be backfilled with 200-400mm (dependant on depth of pit due to size of tree) of a mix of subsoil with a 70 to 80% mix of sharp sand. Then backfill remaining area of pit with 400mm of a 3:1 mix of an approved topsoil with compost. Backfill firmly to 50mm above previous ground level to allow for settlement.

Water each tree in same day of planting, 30 to 50 litres per tree dependant on size and soil conditions.

All works shall be carried out to the minimum standard according to BS 3936: 1992 Part 1 Nursery Stock. Specification for Trees and Shrubs. BS 4043: 1989 Recommendations for transplanting root-balled trees.

Staking:

Double stake all trees with two stakes, a crossbar, a spacer and webbing. Stakes to be round timber with chamfered tops. Position stake close to tree on windward side and drive vertically at least 400mm into bottom of pit before planting. Backfilling: consolidate material around stake. Height of stakes: cut to approximately 600mm above ground level, taking care not to damage the bark. Ties: Webbing with a spacer. Tying: secure tree firmly to crossbar with spacer and webbing.

Mulch:

All shrub beds shall be spread with a medium grade bark mulch to a settled depth of 75mm. Mulch to be free from fines, weeds, disease and contaminants.

Ornamental shrub planting:

To be set out carefully and evenly over indicated areas. Remove plants from pots and plastic containers, plant and water in thoroughly. Shrubs shall be individually pit planted in prepared

pits suited to accommodate full spread of roots. Plants shall be evenly spaced over the planting area. Firm backfill by treading, ensuring the ground is not overly compacted and that the plant is positioned upright.

Native woodland mix and scrub mix planting

Bare root stock shall be planted between November and March. Plants to be planted in groups of 5, 7, or 9 of the same species. Plants shall be evenly spaced over the planting area. Ensure plants are planted to the correct depth to correspond to the soil mark on main stems. Undertake formative pruning if necessary. Each plant to be protected with a 60cm high tubex shrub shelter, with two cable ties and a timber stake.

New formal hedges

Consistent in species, cultivar and clone to ensure a uniform hedge. To be planted in a previous prepared planting bed 0.6metre wide and 0.3m deep. Container stock planted centrally in a single row at 3 per metre. Ensure plants are planted to the correct depth to correspond to the soil mark on main stems. Cut the tips of any wilted leading stems to encourage the roots of the cherry laurel to grow down and the plant to bush out in the first year. Sprinkle 100g per square metre of blood fish and bone fertilizer in the trench before laying each plant and backfill the trench with a 3:1 mix of an approved topsoil with compost and using your heal to firm the soil around each plant. Backfill the trench to 50mm above previous ground level creating a slightly domed shape with the highest point being at the centre of the trench to assist drainage and settlement. Planting bed to be covered with a medium grade bark mulch to a settled depth of 75mm. Prune back to a height of 1 metre.

New mixed native hedgerows - Double staggered

Bare root stock shall be planted between November and March. Consistent in species, cultivar and clone to ensure a uniform hedge. Plants to be planted in groups of 3, 5 or 7 of the same species. To be planted in a previous prepared planting bed 1metre wide. Planted to be centrally in a double row, 330mm between plants and 300mm between rows (6 no. plants per linear metre). Ensure plants are planted to the correct depth to correspond to the soil mark on main stems. Backfill the trench with a 3:1 mix of an approved topsoil with compost and using your heal to firm the soil around each plant. Backfill the trench to 50mm above previous ground level creating a slightly domed shape with the highest point being at the centre of the trench to assist drainage and settlement. Planting bed to be covered with a medium grade bark mulch to a settled depth of 75mm. Each plant to be protected with a 60cm high tubex shrub shelter, with two cable ties and a timber stake. Prune back to a height of 2 metres.

Turfed Areas:

To be specified and laid in accordance with BS. 3936:1998 Recommendations for turf for general purposes. Turf to be Lindum Festival Turf (or similar approved). Hardwearing with a dense sward containing a mixture of 25% perennial ryegrass, 55% fescues and 20% smooth stalked meadow grass. This mix is easy to maintain and will recover well from general wear.

Turf to be laid in suitable weather conditions on a prepared bed with no weeds and a suitable slow release fertiliser applied to bed prior to laying. Turf to be watered regularly until it is well established.

Rear gardens:

Subsoil to be prepared to a depth of 300mm as per ground preparation and soil specification.

Topsoil to be supplied as per ground preparation and soil specification to a depth of 300mm, after gentle compaction and to be left bare in rear gardens.

Grass Seeding:

Public open spaces shall be Germinal AberSustain mix, or similar approved. Sowing to be taken between March and October.

Topsoil shall be cultivated to a fine tilth, be free from weeds, stones and other debris. Levels to be graded to form finished levels as indicated in section, 'Topsoil'.

Roll, fertilise at 50gms/sq m, 10-14 days prior to seeding, sow at rate of 40g/m2 and lightly rake. First cut to be undertaken when grass reaches 50mm.

Tussock Grass:

Retained grassland to be overseeded with Tussock grass to be Emorsgate EG10 Tussock Grass mix, or similar approved within the proposed pond. Sowing to be taken in the autumn or spring. Mow all plant growth (sown grasses and weeds) regularly to 40-60mm in the first growing season.

Wildflower Seeding:

Germinal RE3 River Floodplain / Water Meadow (MG8 Grassland), or similar approved within the proposed pond. Sowing to be taken between March and October.

The topsoil mixed with subsoil (50:50) shall be cultivated to a fine tilth, be free from weeds, stones and other debris. Sow at rate of 5 g/m2 and lightly rake. First cut to be undertaken 6 weeks after sowing or when reaches 70-100mm.

Germinal WFG20 Eco Species Rich Lawn, or similar approved. Sowing to be taken between March and October.

The topsoil mixed with subsoil (50:50) shall be cultivated to a fine tilth, be free from weeds, stones and other debris. Sow at rate of 10 g/m2 and lightly rake. First cut to be undertaken 6 weeks after sowing or when reaches 70-100mm.

Germinal WFG8 Hedgerows and Shaded Areas, or similar approved. Sowing to be taken between March and October.

The topsoil mixed with subsoil (50:50) shall be cultivated to a fine tilth, be free from weeds, stones and other debris. Sow at rate of 5g/m2 and lightly rake. First cut to be undertaken 6 weeks after sowing or when reaches 70-100mm.

4) MAINTENANCE AND MANAGEMENT

Plant stock and soft landscaped areas shall be maintained for a period of five years via the developers' agent or appointed Management Company during which time the following operations shall be carried out:

Regular visits:

Monthly maintenance visits to include the following operations:

- Hand weed planting beds
- Remove litter
- Sweep mulch spillage
- Re-firming plant stock to ensure the new planting is all planting to upright positions.
- Adjust stakes and ties as necessary
- Prune plant stock as required to encourage good form
- Check all plant stock and report signs of pests, disease, death and damage

Mulch:

Top up mulch levels (using matching material) surrounding trees and within beds to 75mm at the end of the maintenance period.

Watering:

Plant stock to receive the following quantities of water:

Trees: 150 to 250 litres per tree each month dependant on size, soil conditions and weather conditions between April and September.

Shrubs and transplants: 5 litres/plant on three occasions throughout growing season.

Watering to be undertaken during the first 24 months as needed to maintain plant health.

Grass Maintenance:

Grass shall be cut throughout the growing season to maintain a sward of approximately 38mm. Shall be edged, watered as necessary and clippings removed.

Tussock Grass Maintenance:

Autumn or Spring sown, mown regularly to 40-60mm throughout first growing season.

Once established, tussocky areas may need cutting every 2-3 years between October and February. For wildlife this cutting is best done on a rotational basis so that no more than half the area is cut in any one year leaving part as an undisturbed refuge.

Wildflower Maintenance:

In the first year once the sward height is at least 10cm, cut to a sward length of 70mm after flowering, allowing the heads to go to seed and the seeds to drop into the soil so as they regrow the next year. The seeds can be firmed into the ground to promote regrowth. The clippings should be left to allow annuals to return also.

Cut to a sward length of 70mm annually after the flowers have set seed for the following years, leaving the clippings in situ to promote regrowth.

RE3 River Floodplain / Water Meadow (MG8 Grassland)

Autumn Sown: during the first year: first cut shall be early July, then monthly during August, September and October to maintain a sward of approximately 70mm.

Thereafter: shall be cut 2 times a year mid-July to early September to maintain a sward of approximately 70mm.

Spring Sown: during the first year: first cut shall be mid-September, then again during October to maintain a sward of approximately 70mm.

Thereafter: shall be cut 1 time a year mid-September or as required leaving at least fortnight between cuts to maintain a sward of approximately 70mm.

The clippings shall be left in situ for 3 to 7 days to allow seed drop, then removed to prevent nutrient build up.

WFG20 Eco Species Rich Lawn Maintenance

First Cut: Mid-September. Cutting height approximately 70mm.

Thereafter: shall be cut 2 times a year mid-August to early October to maintain a sward of approximately 70mm.

The clippings shall be left in situ for 3 to 7 days to allow seed drop, then removed to prevent nutrient build up.

WFG8 Hedgerows and Shaded Areas

First Cut: Mid-September. Cutting height approximately 70mm.

Thereafter: shall be cut 2 times a year mid-August to early October to maintain a sward of approximately 70mm.

The clippings shall be left in situ for 3 to 7 days to allow seed drop, then removed to prevent nutrient build up.

Native Scrub and Woodland Planting Maintenance

Beating up: After year 2 any dead trees to be removed and replaced.An assessment to be undertaken at this time to ensure replacement species are ones which have proven so far successful in the rest of the planted area.

Thinning: After 10 years woodland to be thinned out by selective removal of 15-20% of establishing woodland.An assessment will be made to identify suitable trees for removal based on health,form and success of adaption to site conditions.

New Tree/Shrub Planting:

Weed control by hand to ensure planting area is weed free. Check stakes and guards are in place and replace where necessary. Prune, thin and remove suckers, seedlings, dead, damaged, or diseased branches annually between October and January to avoid the bird nesting season. Replace dead / dying stock in winter.

Plant replacements:

All dead, dying and vandalised plant stock shall be replaced, at the landscape contractor's expense, at the end of each growing season throughout the maintenance period.

All plant details:												
Main dead, dying and vandalised plant stock shall be replaced, at the landscape contractor's expense, at the end of each growing season throughout the maintenance period.												
Native Hedgerow Mix												
Number	Abbreviation	Species	Specification	Height	Pot Size	Density	Percentage Contribution	Area	Length			
371	-	COR AVE	Cornus avellana	1+2: Transplant - seed raised: Branched: 3 brks: B(60-80cm)	1Cr	10%	0.3Cr Double Staggered at 0.3m offset	84m²	69.2m			
1830	-	CRA MON	Crataegus monogyna	1+1: Transplant - seed raised: B	60-80cm	0.3Cr Double Staggered at 0.3m offset	50%	30.1m				
1830	-	ILE AQU	Ilex aquifolium	Bushy: 3 brks: C	40-60cm SL	0.3Cr Double Staggered at 0.3m offset	10%	69.2m				
736	-	PRU SPI	Prunus spinosa	1+1: Transplant - seed raised: Branched: 2 brks: B(60-80cm)	1Cr	5%	0.3Cr Double Staggered at 0.3m offset	20%	120.5m			
3710	-	ROS CAN	Rosa canina	1+1: Transplant - seed raised: Branched: 3 brks: B(60-80cm)	1Cr	5%	0.3Cr Double Staggered at 0.3m offset	10%	69.2m			
Total: 3676												
Mixed Native Scrub												
Number	Abbreviation	Species	Specification	Height	Pot Size	Density	Percentage Contribution	Area	Length			
86	-	COR SAN	Cornus sanguinea	1+1: Transplant - seed raised: Branched: 3 brks: B(60-80cm)	1Cr	10%	0.3Cr Double Staggered at 0.3m offset	84m²				
44	-	COR AVE	Cornus avellana	1+2: Transplant - seed raised: Branched: 3 brks: B(60-80cm)	1Cr	5%	0.3Cr Double Staggered at 0.3m offset	42.1m²				
298	-	CRA MON	Crataegus monogyna	1+1: Transplant - seed raised: B	60-80cm	1Cr	35%	294.2m²				
86	-	ILE AQU	Ilex aquifolium	Bushy: 3 brks: C	40-60cm SL	1Cr	10%	84m²				
44	-	LIG VUL	Ligustrum vulgare	0/2: Cutting: Branched: 2 brks: B	80-100cm	1Cr	5%	42.1m²				
127	-	PRU SPI	Prunus spinosa	1+1: Transplant - seed raised: Branched: 2 brks: B(60-80cm)	1Cr	15%	126.1m²					
44	-	ROS ARV	Rosa arvensis	1+1: Transplant - seed raised: Branched: 2 brks: B(60-80cm)	1Cr	5%	42.1m²					
44	-	ROS CAN	Rosa canina	1+1: Transplant - seed raised: Branched: 3 brks: B(60-80cm)	1Cr	5%	42.1m²					
44	-	SOR AUC	Sorbus aucuparia	1+2: Feathered: B	100-125cm	1Cr	5%	42.1m²				
44	-	VIB OPUL	Viburnum opulus	1+2: Transplant - seed raised: Branched: 3 brks: B(60-80cm)	1Cr	5%	42.1m²					
Total: 858									Total: 840.9m²			
Native Woodland Mix												
Number	Abbreviation	Species	Specification	Height	Pot Size	Density	Percentage Contribution	Area	Length			
6	-	ACE CAM	Acer campestre	1Cr	60-90cm	2Cr	2%	27.8m²				
52	-	ALNGL	Alnus glutinosa	1Cr	60-90cm	2Cr	15%	204.9m²				
12	-	FL LIL	Filipendula ulmaria	1Cr	60-90cm	2Cr	18%	245.8m²				
52	-	BETRU	Betula pubescens	1Cr	60-90cm	2Cr	15%	189.3m²				
29	-	CRAMO	Crataegus monogyna	1Cr	60-90cm	2Cr	8%	109.3m²				
10	-	POPPR	Populus tremula	1Cr	60-90cm	2Cr	4%	54.6m²				
8	-	PRUPR	Prunus spinosa	1Cr	45-60cm	2Cr	2%	27.8m²				
42	-	QU PETE	Quercus petraea	1Cr	60-90cm	2Cr	15%	189.3m²				
29	-	QUERO	Quercus robur	1Cr	60-90cm	2Cr	8%	109.3m²				
25	-	SALCA	Salix caprea	1Cr	60-90cm	2Cr	7%	86.4m²				
18	-	SALCI	Salix cinerea	1Cr	60-90cm	2Cr	5%	68.2m²				
15	-	SORAU	Sorbus aucuparia	1Cr	60-90cm	2Cr	4%	54.6m²				
Total: 356									Total: 1365.4m²			
Marginal planting in shallow water level												
Number	Abbreviation	Species	Specification	Pot Size	Density	Percentage Contribution	Area	Length				
32	-	AL AQU	Alisma plantago-aquatica	Full Pot: C	0.5Cr	8.3%	6.4m²					
32	-	CAL PAL	Caltha palustris	Plug: Established Root min. 2-3 months: Sept to April planting, British Native-origin: C	C50cc min 50m³	8.3%	6.4m²					
32	-	FL LIL	Filipendula ulmaria	Full Pot: Sept to April planting, British Native-origin: C	0.5Cr	8.3%	6.4m²					
32	-	HIP VUL	Hippuris vulgaris	Plug: Established Root min. 2-3 months: April to Sept planting, British Native-origin: C	C50cc min 50m³	8.3%	6.4m²					
32	-	RIP PSE	Rispa pseudocarya	Plug: Established Root min. 2-3 months: Sept to April planting, British Native-origin: C	C50cc min 50m³	8.3%	6.4m²					
32	-	LYT SAL	Lythrum salicaria	Plug: Established Root min. 2-3 months: Sept to April planting, British Native-origin: C	C50cc min 50m³	8.3%	6.4m²					
32	-	MEN AQU	Menyanthes aquatica	Full Pot: C	0.5Cr	8.3%	6.4m²					
32	-	MYO SOD	Myosotis scorpioides	Plug: Established Root min. 2-3 months: Sept to April planting, British Native-origin: C	C50cc min 50m³	8.3%	6.4m²					
32	-	POT PAL	Potentilla palustris	Plug: Established Root min. 2-3 months: Sept to April planting, British Native-origin: C	C50cc min 50m³	8.3%	6.4m²					
32	-	RAN LIN	Ranunculus lingua	Plug: Established Root min. 2-3 months: Sept to April planting, British Native-origin: C	C50cc min 50m³	8.3%	6.4m²					
32	-	SAG SAG	Sagittaria sagittifolia	Full Pot: C	0.5Cr	8.3%	6.4m²					
32	-	VER BEC	Veronica beccabunga	Plug: Established Root min. 2-3 months: Sept to April planting, British Native-origin: C	C50cc min 50m³	8.3%	6.4m²					
Total: 384									Total: 76.8m²			
Marginal planting outside of water level												
Number	Abbreviation	Species	Specification	Pot Size	Density	Percentage Contribution	Area	Length				
148	-	CRA FRA	Cardamine pratensis	Full Pot: Sept to April planting, British Native-origin: C	0.5Cr	9.3%	29.4m²					
148	-	JUN EFF	Juncus effusus	Full Pot: Sept to April planting, British Native-origin: C	0.5Cr	9.3%	29.4m²					
148	-	SL CUC	Silene cucullata	Plug: Established Root min. 2-3 months: Sept to April planting, British Native-origin: C	C50cc min 50m³	9.3%	29.4m²					
Total: 444									Total: 88.2m²			
Grassland												
Number	Abbreviation	Species	Specification	Pot Size	Density	Percentage Contribution	Area	Length				
148	-	CRA FRA	Cardamine pratensis	Full Pot: Sept to April planting, British Native-origin: C	0.5Cr	9.3%	29.4m²					
148	-	JUN EFF	Juncus effusus	Full Pot: Sept to April planting, British Native-origin: C	0.5Cr	9.3%	29.4m²					
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148	-	JUN EFF	Juncus effusus	Full Pot: Sept to April planting, British Native-origin: C	0.5Cr	9.3%	29.4m²					
148	-	SL CUC	Silene cucullata	Plug: Established Root min. 2-3 months: Sept to April planting, British Native-origin: C	C50cc min 50m³	9.3%	29.4m²					
Total: 444									Total: 88.2m²			
Grassland												
Number	Abbreviation	Species	Specification	Pot Size	Density	Percentage Contribution	Area	Length				
148	-	CRA FRA	Cardamine pratensis	Full Pot: Sept to April planting, British Native-origin: C	0.5Cr	9.3%	29.4m²					
148	-	JUN EFF	Juncus effusus	Full Pot: Sept to April planting, British Native-origin: C	0.5Cr	9.3%	29.4m²					
148	-	SL CUC	Silene cucullata	Plug: Established Root min. 2-3 months: Sept to April planting, British Native-origin: C	C50cc min 50m³	9.3%	29.4m²					
Total: 444									Total: 88.2m²			
Grassland												
Number	Abbreviation	Species	Specification	Pot Size	Density	Percentage Contribution	Area	Length				
148	-	CRA FRA	Cardamine pratensis	Full Pot: Sept to April planting, British Native-origin: C	0.5Cr	9.3%	29.4m²					
148	-	JUN EFF	Juncus effusus	Full Pot: Sept to April planting, British Native-origin: C	0.5Cr	9.3%	29.4m²					
148	-	SL CUC	Silene cucullata	Plug: Established Root min. 2-3 months: Sept to April planting, British Native-origin: C	C50cc min 50m³	9.3%	29.4m²					
Total: 444									Total: 88.2m²			
Grassland												
Number	Abbreviation	Species	Specification	Pot Size	Density	Percentage Contribution	Area	Length				
148	-	CRA FRA	Cardamine pratensis	Full Pot: Sept to April planting, British Native-origin: C	0.5Cr	9.3%	29.4m²					
148	-	JUN EFF	Juncus effusus	Full Pot: Sept to April planting, British Native-origin: C	0.5Cr	9.3						