

# Ascerta

Landscape, Arboricultural & Ecological Solutions  
for the Built Environment

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## Landscape and Ecological Management Plan

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Well Street, Buckley  
CH7 2PQ

Ref:

P.1828.23

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June 2023

(See revision dates  
below)

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Rev	Date	Details

## Ascerta

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**P.1828.23**

**Landscape and Ecological Management Plan**

**of**

**Well Street, Buckley CH7 2PQ**

**for**

**Castle Green Homes**

**14<sup>th</sup> June 2023**

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Appendix 1: P.1828.23.04 Planting Plan (5 Sheets)

# 1 Introduction

Ascerta has been instructed by Castle Green Homes to carry out a Landscape and Ecological Management Plan for land off Well Street, Buckley CH7 2PQ (hereafter referred to as the site). Our client seeks planning consent to develop the site for the erection of 155 dwellings with associated access, landscaping, and public open space.

The detailed soft landscaping scheme is shown on P.1828.23.04 Planting Plan (5 Sheets).

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 is located south of the A549 Ffordd Argoed Road, CH7 2PQ in Buckley, Flintshire (the site OS grid reference is SJ2674963605), as per image below.

The site, approximately 5.35 hectares sits to the southwest of Buckley. The site comprises of two grassland fields, with tall ruderal vegetation and bramble scrub encroaching the field margins.

The site is bound by defunct species poor hedgerow with scattered trees and a small ephemeral waterbody is located within the eastern field. The site is bordered by Well Street to the south, farmland to the west and residential dwellings to the north and east.

Land-use in the wider area comprises of agricultural pasture fields, agricultural buildings and residential buildings (refer to Appendix A - site location plan) and the town of Buckley to the Northeast. Buckley (and the site) sits in the lee of the Snowdonia Mountain Range.



**Figure 1 Satellite image showing the proposed development site**

## **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.1828.23 Ascerta Arboricultural Impact Assessment May 23'*
- *P.1828.23 Ascerta Preliminary Ecological Appraisal, Well Street*

The key habitats currently identified on site are listed below.

- *Bramble scrub (A2.1)*
- *Improved grassland (B4)*
- *Tall ruderal (C3.1)*
- *Scattered trees (A3.1)*
- *Species Poor Hedge (J2.1.2)*
- *Standing water (G1)*

## 2.3 The Proposed Site Description

The residential development proposes the construction of 155 dwellings with rear gardens, front gardens and driveways or shared parking facilities. The development includes inner roads, tree planting, native hedgerows, grass/turf, wildflower, ornamental formal hedges, and planting beds and native tree/shrub planting. An attenuation pond is located within the proposed public open spaces (POS).

The main access into the site will be from the eastern corner off Well Street. There will also be pedestrian access from the northern and northwestern corner through footpath connections. Sections of existing species poor hedging within the site will be removed for access, however appropriate compensation will be provided by way of new trees, scrub, and hedgerow planting.

Proposed trees and shrub planting include species from the RHS *Perfect for Pollinators* plant lists. The landscaping design is shown on P.1828.23.04 Planting Plan (5 Sheets) which provides:

### Planting Plan

- Proposed ornamental shrub planting (Total area: 610m<sup>2</sup>)
- Proposed native tree planting (Total: 38 no. trees)
- Proposed ornamental tree planting (Total: 65 no. trees)
- Proposed mixed native hedgerow (Total length: 376 lin.m)
- Formal hedges (Total length: 833 lin.m)
- Grass seeding Germinal AberSustain mix (Total: 4170 m<sup>2</sup>)
- Wildflower seeding Germinal Eco-Species Rich Lawn mix (Total: 1008 m<sup>2</sup>)
- Wildflower seeding Germinal RE3 River Floodplain/ Water Meadow (MG8 Grassland) mix (Total: 1683 m<sup>2</sup>)
- Wildflower seeding Germinal WF19 Pollinators Paradise mix (Total: 1466 m<sup>2</sup>)
- Native scrub mix planting as whip planting, for additional wildlife habitat (Total: 584 m<sup>2</sup>)
- LT7 Lindum Festival Turf (Total: 4098m<sup>2</sup>)

The proposed native specimen trees include Alder, Silver Birch, Hornbeam, Rowan, and English Oak. These native species provide a food or shelter resource to wildlife.

The proposed native hedgerow includes Hazel, Hawthorn, Holly, Blackthorn, Field Rose, 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 Hazel, Hawthorn, Holly, Crab Apple, Blackthorn, Dog Rose, European Elder, Rowan, and Guelder rose. 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 management plan is:

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.

Whilst the maintenance of new landscaping within front and side gardens will be the responsibility of the homeowner or resident.

### 3 Landscape Design Objectives

The overall design objectives are as follows:

1. Carry out native and ornamental tree planting, hedgerows, ornamental shrub planting, native tree and shrub planting, wildflower areas and turfed grass around the housing plots to soften the development and provide an attractive setting.
2. 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.
3. To include the relevant recommendations of the ecological report including:
  - a. If works have not begun by April 2024, an updated site visit will be required to assess the habitats within the site;
  - b. Production and implementation of an amphibian RAMS to avoid any harm to this species during the proposed works. Site supervision will also likely be required for vegetation removal;
  - c. Implementation of badger and hedgehog RAMS (section 5.2) to avoid any harm to this species during the proposed works;
  - d. Production of an invasive species method statement to avoid the spread of cotoneaster (TN2) into the wider landscape during the proposed works;
  - e. Precautionary check for badger prior to works commencing to assess if badgers are using the habitats within the site for shelter;
  - f. Precautionary check for invasive prior to works commencing;
  - g. Retain and enhance hedgerows within the site with native planting to maintain and provide foraging and commuting habitat as well as areas of refuge for wildlife; and
  - h. Enhancing the site for species through appropriate landscape planting (see section 5.3) that includes native, species rich hedgerows, trees and areas of wildflowers plus provision of integrated bat and bird features within newly constructed buildings;
  - i. Production of the Defra Metric Biodiversity Net Gain Calculations to minimise impacts on biodiversity and provide net gains in biodiversity;
  - j. Production of a Management Plan to ensure the long-term commitments to manage the planting, protection and enhancement of biodiversity in and around a new development site; and
  - k. Vegetation clearance or pruning should be undertaken outside of the nesting bird season (1<sup>st</sup> March to 31<sup>st</sup> August Inclusive) to avoid any impact on



breeding birds. Or a nesting bird check undertaken by a suitably experienced ecologist should be undertaken immediately prior to works commencing.

4. To carry out tree, scrub, and hedgerow planting to provide screening where required.
5. Habitat enhancement to include planting of native species and a variety of ornamental species to attract pollinators at suitable locations.
6. To retain natural buffers of suitable condition and enhance them with additional planting or by good management; and
7. Implementation of new native hedgerows, native trees, grassland, wildflower meadows, and native scrub 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.1828.23.04 Planting Plan (5 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, 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, 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: 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.

## 4.2 Detailed Management Proposals

### 4.2.1 Maintenance Phase (Years 1-2)

Feature	Description and specification
Existing Vegetation	
<b>Existing trees to be retained</b>	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.1828.23 Ascerta Arboricultural Impact Assessment.
<b>Existing Hedgerow</b>	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	
<b>New tree planting</b>	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.
<b>New native scrub mix planting:</b>	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.
<b>Native mixed hedgerow planting</b>	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.
<b>Ornamental shrub planting</b>	Weed control by hand to maintain weed free planting beds during the growing period. Apply fertiliser at years 2 and 4, and top up mulch every two years. Prune as necessary to ensure health growth and natural shape of the plant.
Grass and Wildflower Areas	
<b>Amenity grass areas and grass verges (Germinal AberSustain mix)</b>	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.
<b>Open space with Germinal WFG20 Eco Species Rich Lawn mix</b>	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.
<b>Wildflower RE3 River Floodplain / Water Meadow (MG8 Grassland)</b>	Autumn Sown: First cut shall be early July, then monthly during August, September, and October to approximately 70mm.

	<p>Thereafter: shall be cut once a year mid-July to early September to approximately 70mm.</p> <p>Spring Sown: First cut mid-September to 1st October, then monthly during August, September, and October to approximately 70mm.</p> <p>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.</p> <p>Clippings shall be removed on day of cutting to prevent nutrient build up.</p> <p>Spot treat pernicious weeds and reseed areas where required.</p>
<b>Wildflower WF19 Pollinators Paradise</b>	<p>First cut mid-September to 1<sup>st</sup> October, collect arisings. Cutting height 70-100mm.</p> <p>Thereafter cut once a year to 70 -100 mm from early September. Remove arisings. If practical consider leaving up to one fifth of the area uncut, the remaining dead stalks will provide a nesting and hibernation site and egg laying habitat for invertebrates over the winter. Alternate this area each winter.</p> <p>Clippings shall be removed on day of cutting to prevent nutrient build up.</p> <p>Spot treat pernicious weeds and reseed areas where required.</p>
<b>Other Features</b>	
<b>Hard surfacing</b>	Check annually and repair any defects.
<b>Fencing</b>	Check annually, repair any defects, and replace when necessary.
<b>Inlets and outlets structures</b>	Check monthly for obstructions and remove as necessary, to allow free water flow through the pond.
<b>Silt management</b>	Check twice a year for silt accumulation and remove as necessary.
<b>Basin liner</b>	Check the liner twice a year for damage (any leakage/ reduced water levels) and repair when if necessary.
<b>Integrated bat and bird features</b>	Integrated bat and bird features to be checked annually by a suitable licensed ecologist. Repair any defects and replace when necessary.
<b>Litter Management</b>	
<b>SUDs litter</b>	Check monthly for litter or other debris and remove as necessary.
<b>General litter</b>	Check monthly for litter or other debris and remove as necessary.
<b>Weed Control</b>	
<b>Hard surfacing weed control</b>	Check pavements and kerbs annually for weeds and spray affected areas with herbicide to keep weed free.
<b>Paths</b>	Remove encroaching moss/ grass from hoggin path annually to keep edging exposed. Spray with herbicide if necessary.

#### 4.2.2 Establishment Phase (Years 3-5)

Feature	Description and specification
Existing Vegetation	
<b>Existing trees to be retained</b>	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.
<b>Existing Hedgerow</b>	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	
<b>New tree planting</b>	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.
<b>New native scrub mix planting:</b>	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.
<b>Native mixed hedgerow planting</b>	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.
<b>New formal hedge</b>	Weed control by hand to ensure planting area is weed free. Check stakes and 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 maximum height of 1m.
<b>Ornamental shrub planting</b>	Weed control by hand to maintain weed free area around planting during the growing period. Apply fertiliser at years 2 and 4 and top up mulch every two years. Prune as necessary to ensure health growth and natural shape of the plant. Replace any dead stock in winter.
Grass and Wildflower Areas	
<b>Amenity grass areas and grass verges (Germinal AberSustain mix)</b>	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.
<b>Open space with Germinal WFG20 Eco Species Rich Lawn mix</b>	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.
<b>Wildflower RE3 River Floodplain / Water Meadow (MG8 Grassland)</b>	<p>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.</p> <p>Clippings shall be removed on day of cutting to prevent nutrient build up.</p> <p>Spot treat pernicious weeds and reseed areas where required.</p>
<b>Wildflower WF19 Pollinators Paradise</b>	<p>Cut once a year to 70 -100 mm from early September. Remove arisings. If practical consider leaving up to one fifth of the area uncut, the remaining dead stalks will provide a nesting and hibernation site and egg laying habitat for invertebrates over the winter. Alternate this area each winter.</p> <p>Clippings shall be removed on day of cutting to prevent nutrient build up.</p> <p>Spot treat pernicious weeds and reseed areas where required.</p>
<b>Other Features</b>	
<b>Hard surfacing</b>	Check annually and repair any defects.
<b>Fencing</b>	Check annually, repair any defects, and replace when necessary.
<b>Inlets and outlets structures</b>	Check monthly for obstructions and remove as necessary, to allow free water flow through the pond.
<b>Silt management</b>	Check twice a year for silt accumulation and remove as necessary.
<b>Basin liner</b>	Check the liner twice a year for damage (any leakage/ reduced water levels) and repair when if necessary.
<b>Integrated bat and bird features</b>	Integrated bat and bird features to be checked annually by a suitable licensed ecologist. Repair any defects and replace when necessary.
<b>Litter Management</b>	
<b>SUDs litter</b>	Check monthly for litter or other debris and remove as necessary.
<b>General litter</b>	Check monthly for litter or other debris and remove as necessary.
<b>Weed Control</b>	
<b>Hard surfacing weed control</b>	Check pavements and kerbs annually for weeds and spray affected areas with herbicide to keep weed free.
<b>Paths</b>	Remove encroaching moss/ grass from hoggin path annually to keep edging exposed. Spray with herbicide if necessary.

#### 4.2.3 Maturing Phase (Years 6-30)

<b>Feature</b>	<b>Description and specification</b>
Existing Vegetation	
<b>Existing trees to be retained</b>	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.
<b>Existing Hedgerow</b>	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.
<b>New Planting</b>	
<b>New tree planting</b>	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.
<b>New native scrub mix planting</b>	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 where 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 advise on any works to improve quality of trees and maintain safety / prevent any developing hazards.
<b>Native mixed hedgerow planting</b>	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.
<b>New formal hedge</b>	Weed control by hand to ensure planting area is weed free. Prune to encourage good establishment and a neat appearance at maximum height of 1m.
<b>Ornamental shrub planting</b>	Weed control by hand to maintain weed free area around planting during the growing period. Apply fertiliser at years 2 and 4, and top up mulch every two years. Prune as necessary to ensure health growth and natural shape of the plant. Carry out replacement of dead plants in winter.



<b>Grass and Wildflower Areas</b>	
<b>Amenity grass areas and grass verges (Germinal AberSustain mix)</b>	<p>Mow grass areas and verges 14 times a year during growing season, to approximately 40mm.</p> <p>Clippings shall be removed on day of cutting to prevent nutrient build up.</p>
<b>Open space with Germinal WFG20 Eco Species Rich Lawn mix</b>	<p>Cut once a year from mid-August to early October to approximately 70mm.</p> <p>Clippings shall be removed on day of cutting to prevent nutrient build up.</p> <p>Spot treat pernicious weeds and reseed areas where required.</p>
<b>Wildflower RE3 River Floodplain / Water Meadow (MG8 Grassland)</b>	<p>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.</p> <p>Clippings shall be removed on day of cutting to prevent nutrient build up.</p> <p>Spot treat pernicious weeds and reseed areas where required.</p>
<b>Wildflower WF19 Pollinators Paradise</b>	<p>Cut once a year to 70 -100 mm from early September. Remove arisings. If practical consider leaving up to one fifth of the area uncut, the remaining dead stalks will provide a nesting and hibernation site and egg laying habitat for invertebrates over the winter. Alternate this area each winter.</p> <p>Clippings shall be removed on day of cutting to prevent nutrient build up.</p> <p>Spot treat pernicious weeds and reseed areas where required.</p>
<b>Other Features</b>	
<b>Hard surfacing</b>	Check annually and repair any defects.
<b>Fencing</b>	Check annually, repair any defects, and replace when necessary.
<b>Inlets and outlets structures</b>	Check monthly for obstructions and remove as necessary, to allow free water flow through the pond.
<b>Silt management</b>	Check twice a year for silt accumulation and remove as necessary.
<b>Basin liner</b>	Check the liner twice a year for damage (any leakage/ reduced water levels) and repair when if necessary.
<b>Integrated bat and bird features</b>	Integrated bat and bird features to be checked annually by a suitable licensed ecologist. Repair any defects and replace when necessary.

Litter Management	
<b>SUDs litter</b>	Check monthly for litter or other debris and remove as necessary.
<b>General litter</b>	Check monthly for litter or other debris and remove as necessary.
Weed Control	
<b>Hard surfacing weed control</b>	Check pavements and kerbs annually for weeds and spray affected areas with herbicide to keep weed free.
<b>Paths</b>	Remove encroaching moss/ grass from hoggin path annually to keep edging exposed. Spray with herbicide if necessary.

## 5 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
<b>OPERATION</b>												
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											
<b>New Tree Planting</b>												
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	
<b>New Native Scrub Mix</b>												
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	
<b>Amenity grass areas and grass verges (Germinal AberSustain mix)</b>												
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									
<b>Open space with Germinal WFG20 Eco Species Rich Lawn mix</b>												
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)  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	X	X		
Spring Sown: First cut mid-September to 1 <sup>st</sup> October, then monthly during August, September, and October to approximately 70mm. (X means first cut only) 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	X	X		
Spot treat pernicious weeds					X			X				
Wildflower WF19 Pollinators Paradise												
Mow once a year to a height of approx. 70mm (X means first cut only) Consider leaving up to one fifth of the area uncut, the remaining dead stalks will provide a nesting and hibernation site and egg laying habitat for invertebrates over the winter. Alternate this area each winter.								X	X			
Spot treat pernicious weeds					X				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	
<b>Management of Other Site Features</b>												
Check and repair fencing, surfacing and street furniture and repair when required					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
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		

## 6 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
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
Wildflower WF19 Pollinators Paradise. 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
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 Inlets and outlets structures of attenuation pond.	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 pond.	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 pond	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



## 7 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.

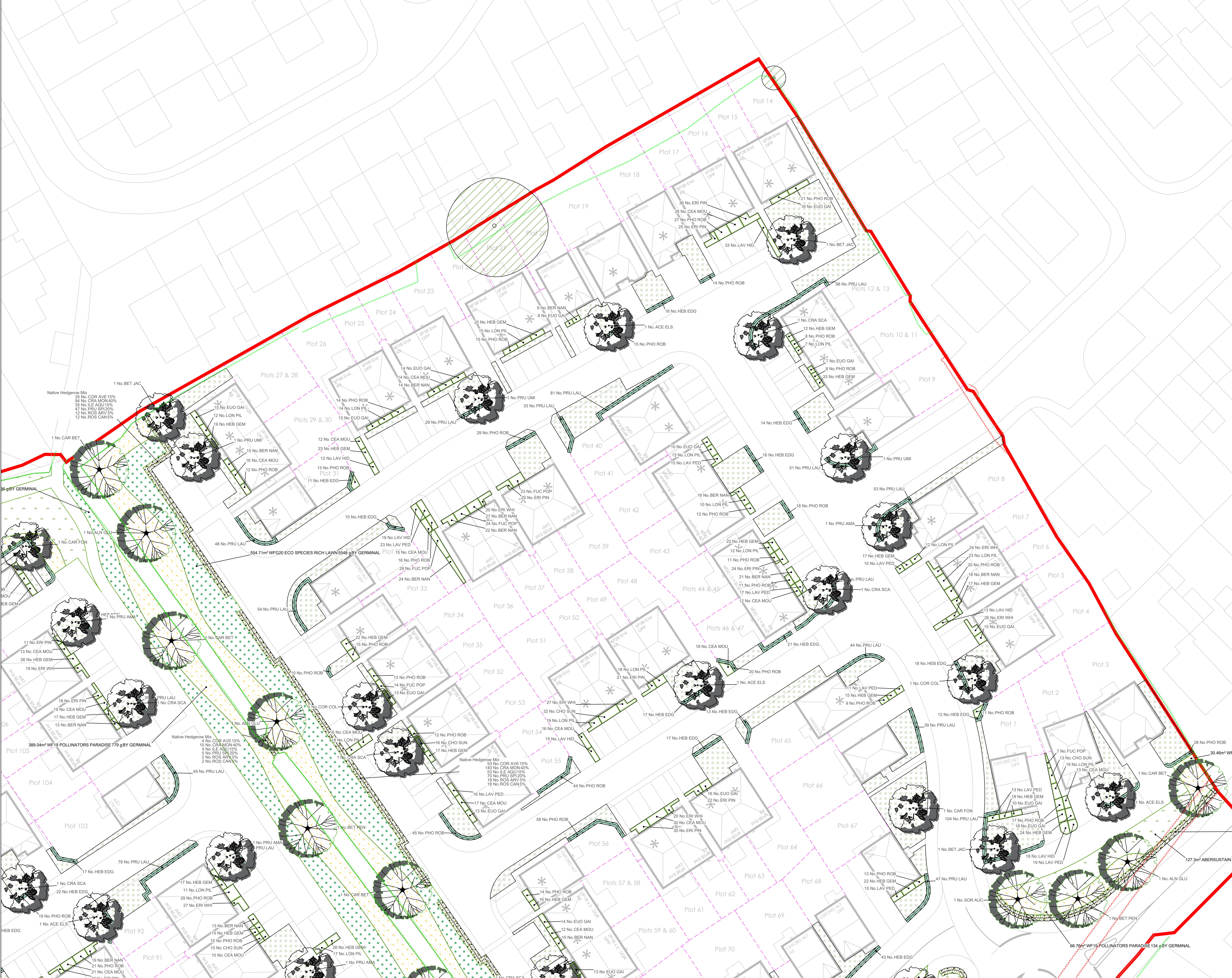
This report provides:

- 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, 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.
- 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).

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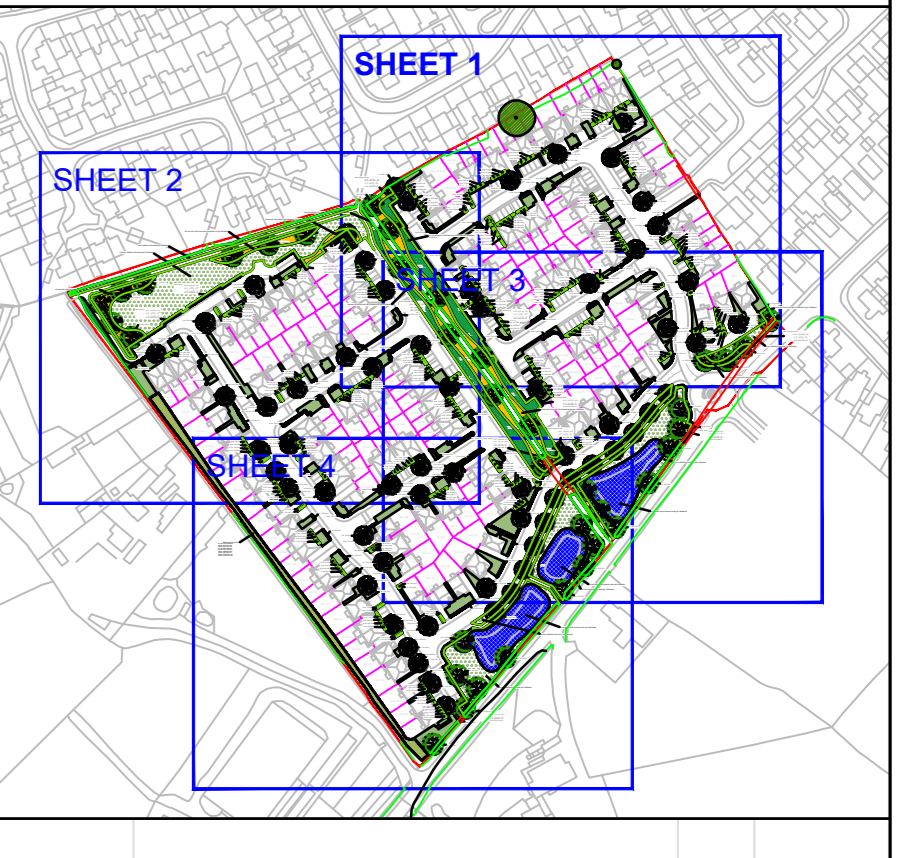
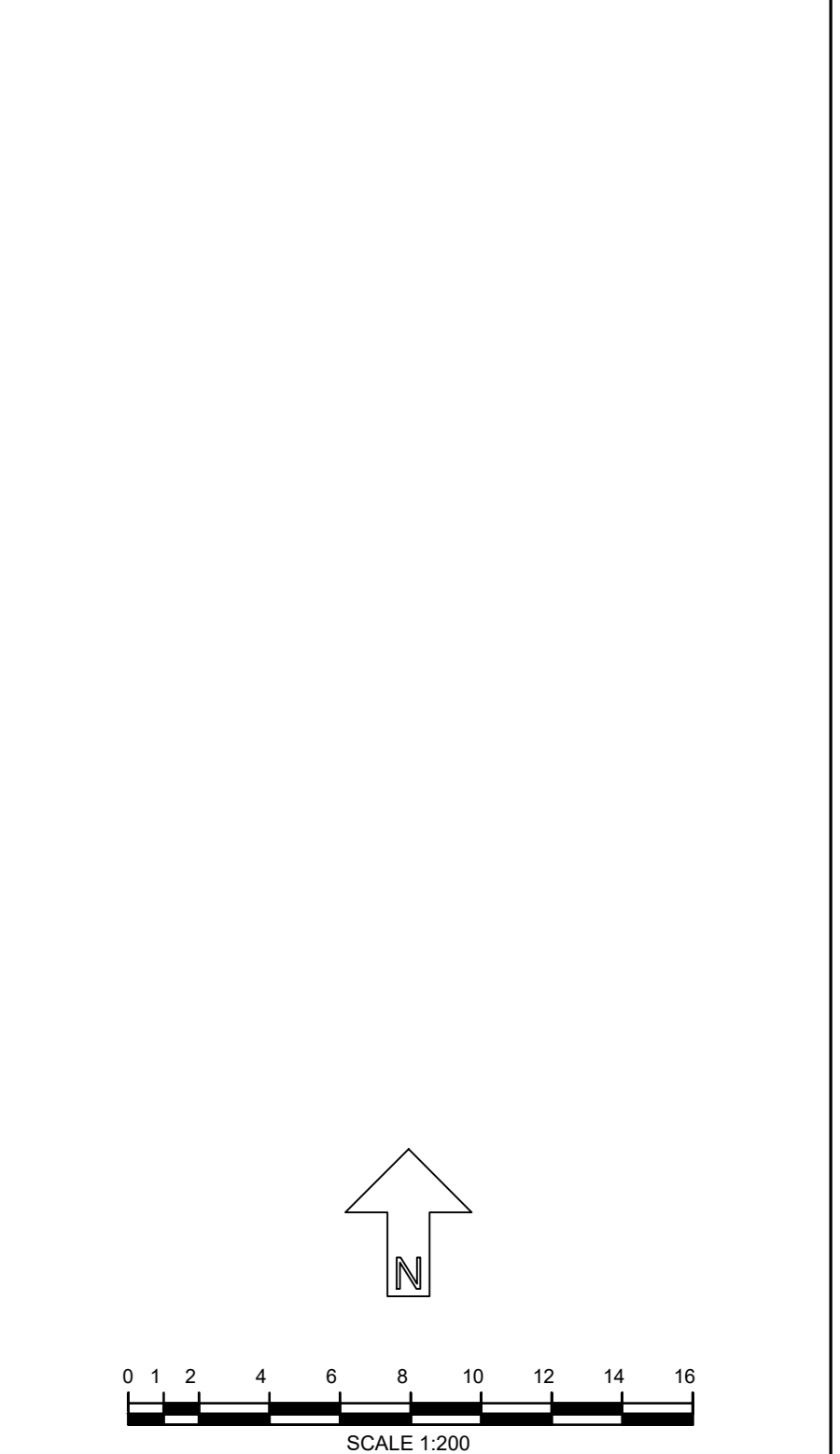
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# Appendix 1



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- Planting Plan Key:**
- Site Boundary
  - Existing trees and hedgerows to be retained and protected during the works.
  - Existing hedgerows to be removed.
  - Proposed ornamental planting on 400mm depth of topsoil with 75mm bark mulch.
  - Proposed native tree planting, tree pit and double staking as detailed in the specification.
  - Proposed ornamental tree planting, tree pit and double staking as detailed in the specification.
  - Proposed mixed native hedgerow planted in a double staggered row at 0.3m centres and 0.3 offset (6 no. plants per linear metre). Bare root transplants (common holly in containers), 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 at 3 no. or 5 no. plants per linear metre dependant on stock size. Container transplants.
  - Front gardens to be turfed on 150mm topsoil.
  - Public open space to be sown with Germinal AberSustain, or similar approved, to be sown at a rate of 40g/m<sup>2</sup> on 150mm topsoil.
  - Wildflower seeding, Germinal Eco Species Rich Lawn mix, or similar approved, to be sown at a rate of 10g/m<sup>2</sup>.
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  - Native scrub planting to be planted as mainly 60-80cm whip planting at 1m centres, for additional wildlife habitat.



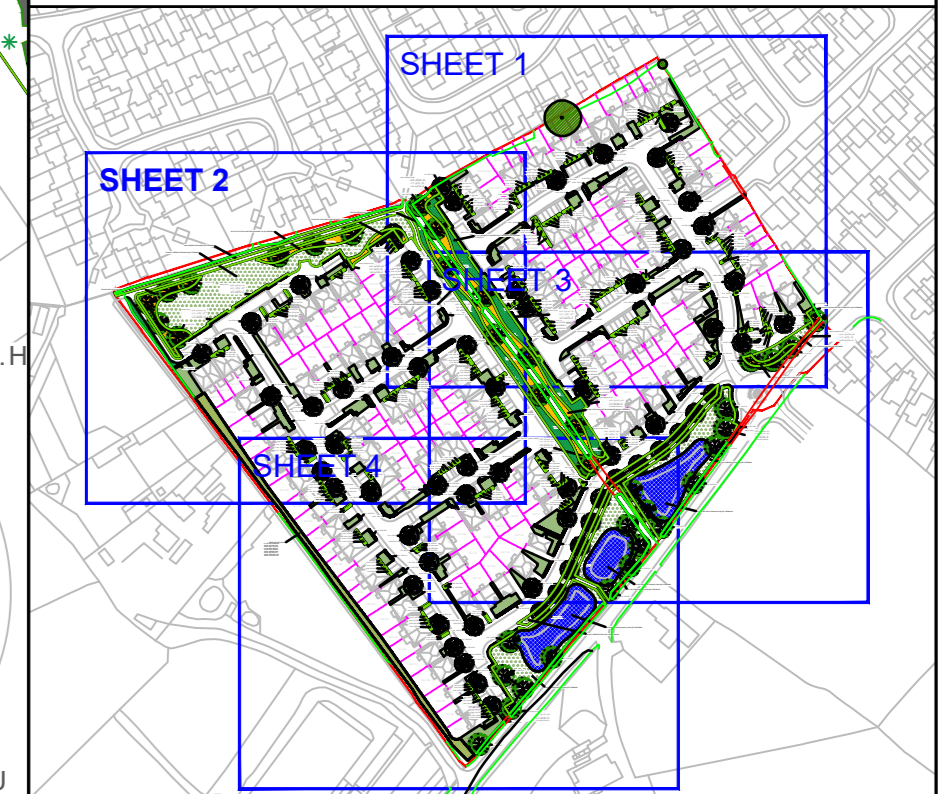
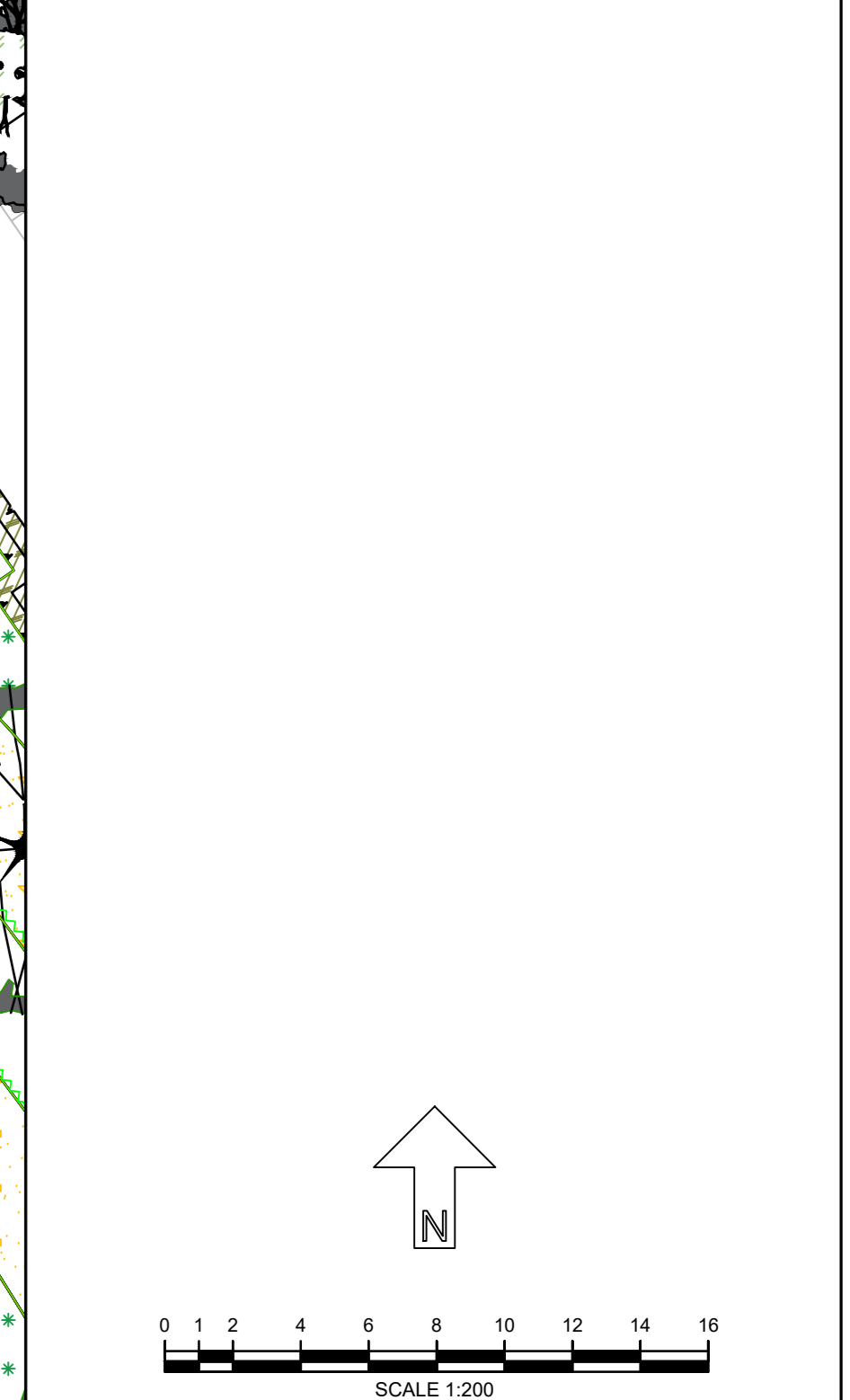
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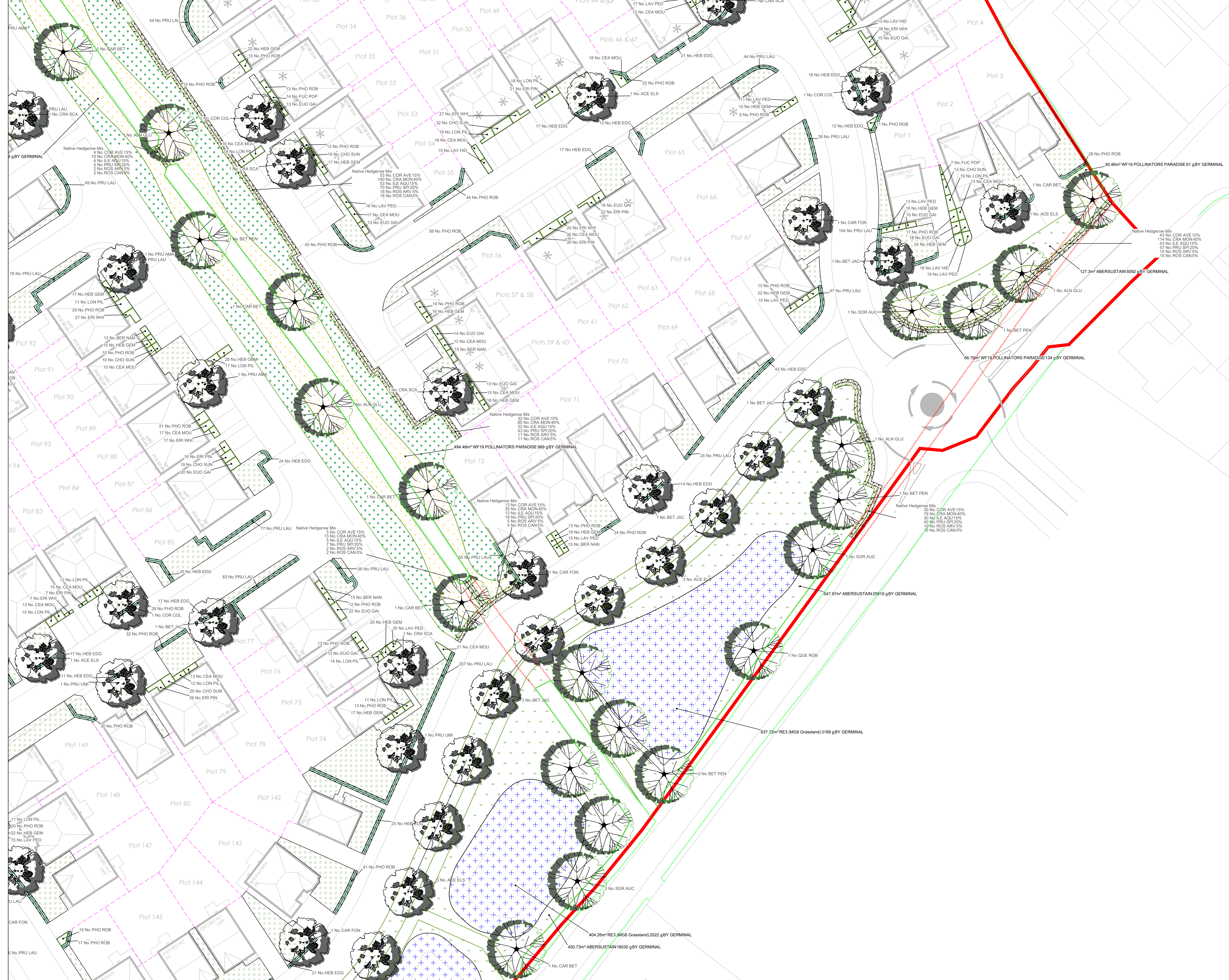


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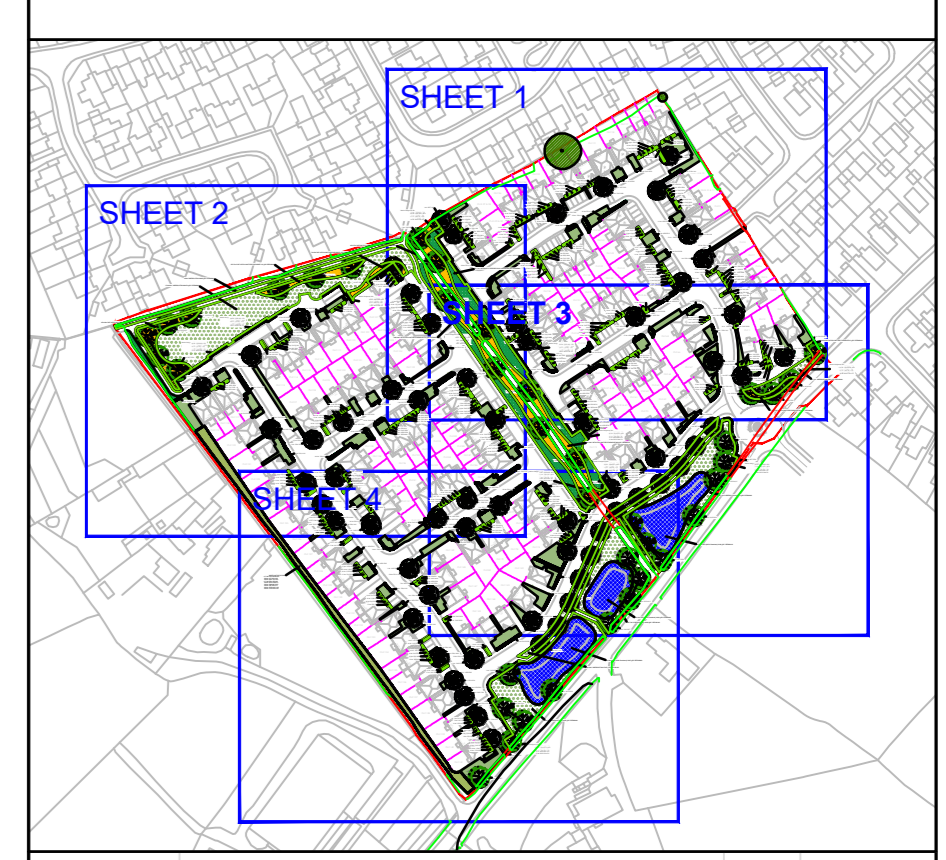
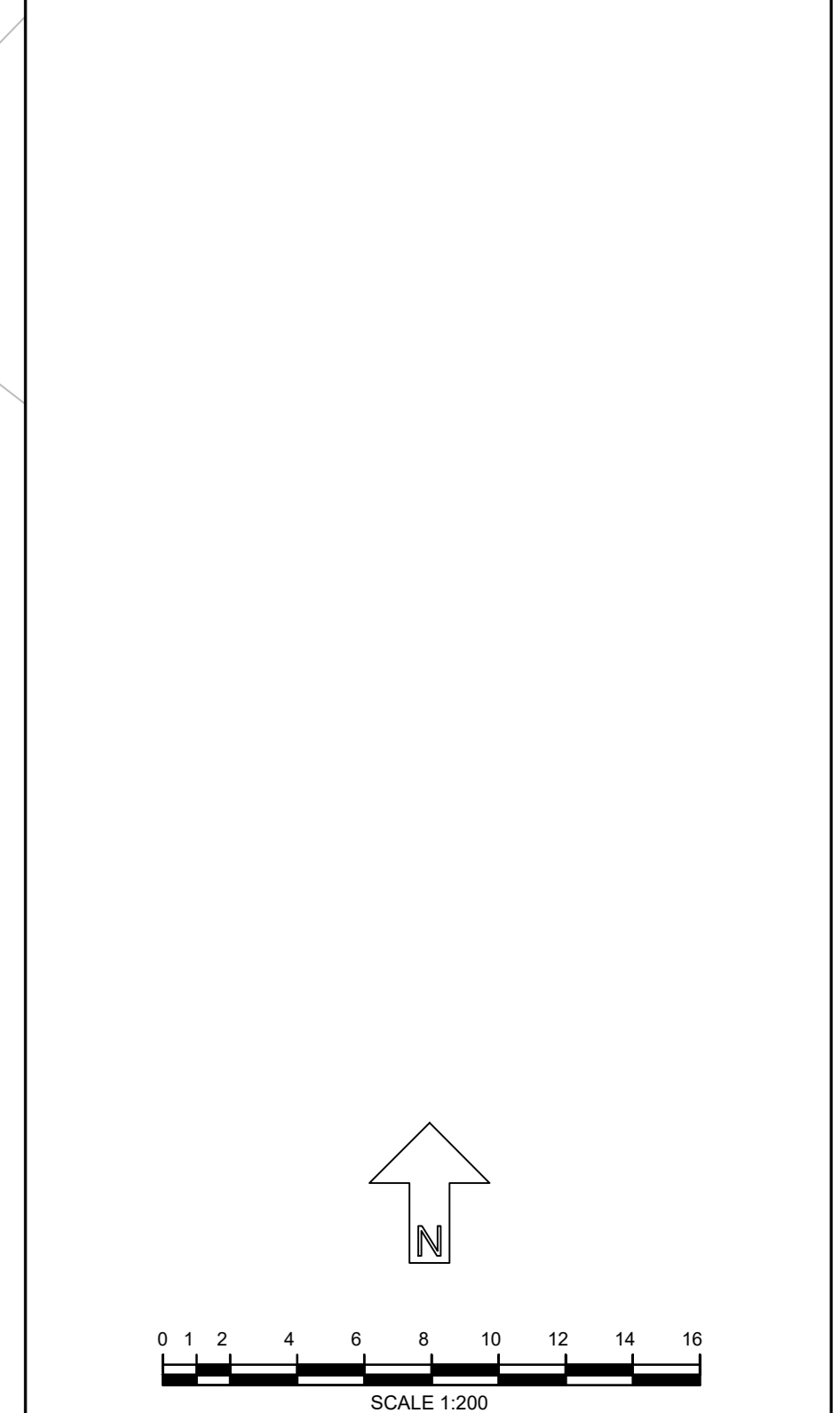
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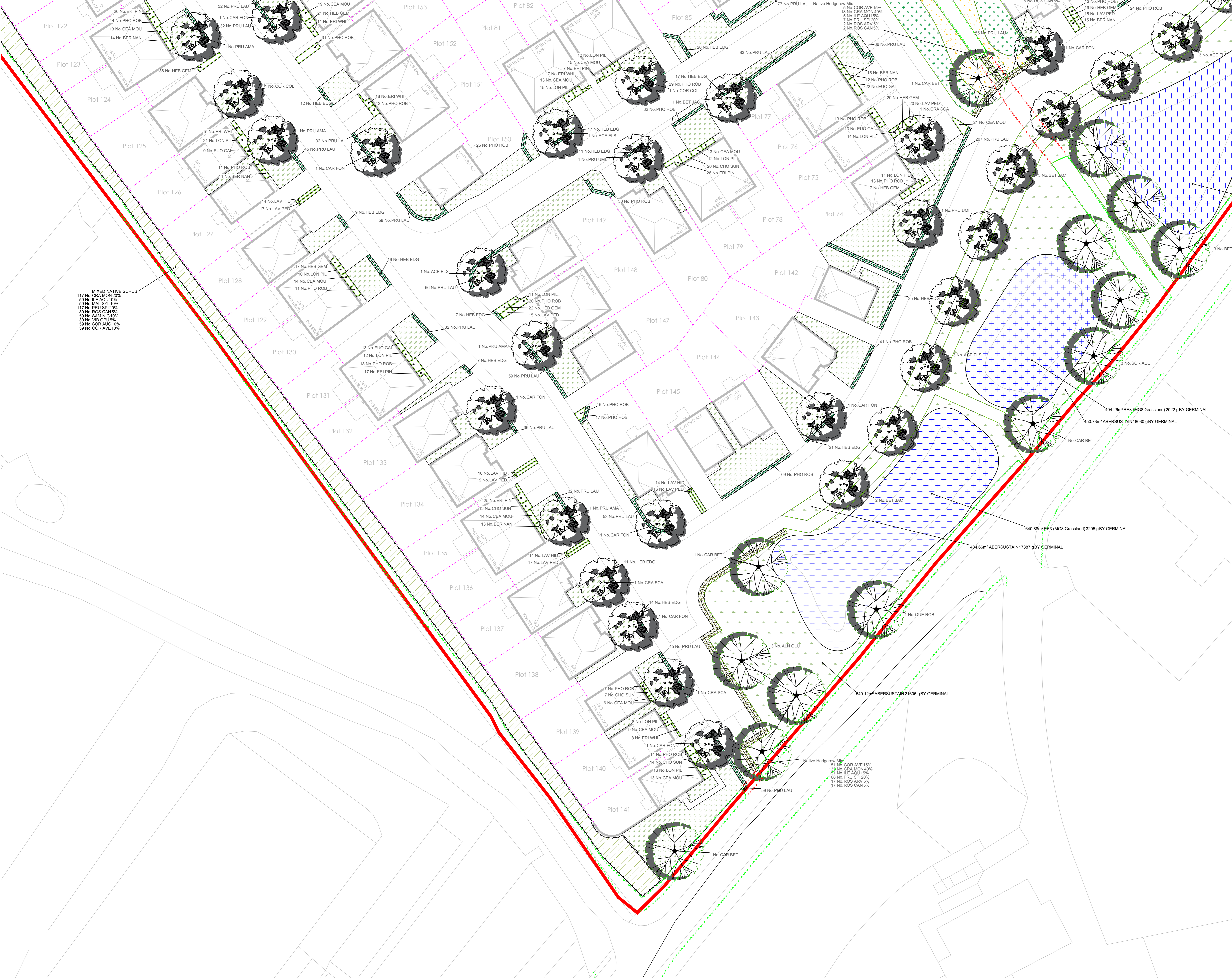
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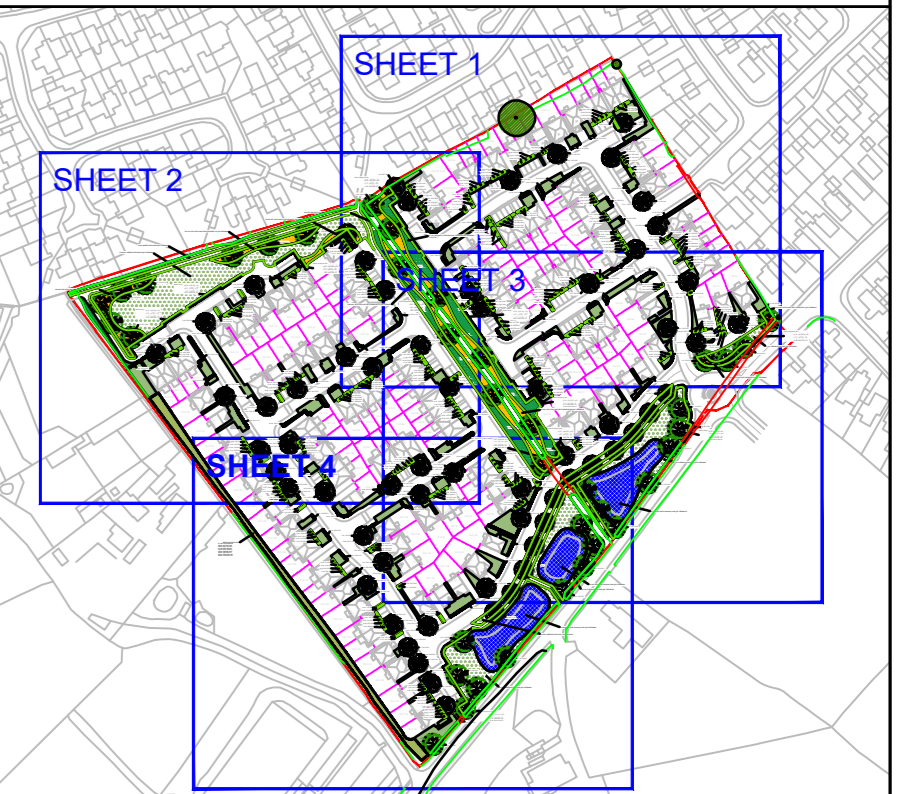
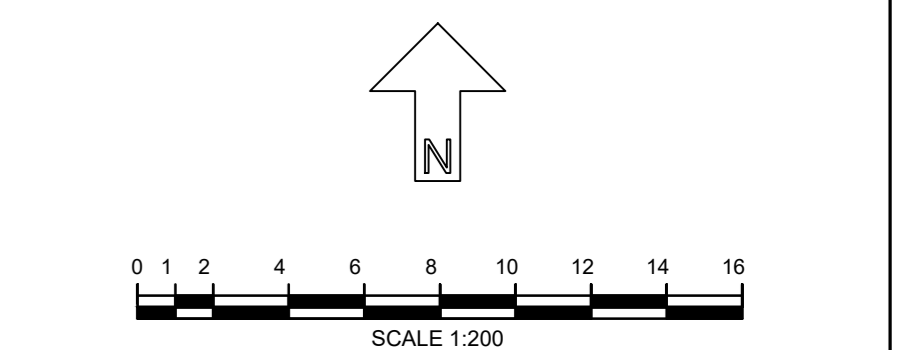
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 SCALE: 1:200 @ A0 DRAWING No:   
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MIXED NATIVE SCRUB  
 117 No. CRA MON 20%  
 59 No. LE ADU 10%  
 59 No. MAL SYL 10%  
 117 No. PRU SPI 20%  
 30 No. ROS CAN 5%  
 59 No. SAM NIG 10%  
 30 No. VIB ORU 5%  
 59 No. SOR AUC 10%  
 59 No. COR AVE 10%

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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 leveled 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 into 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 750 x 750 x 700, Heavy standard tree 1000 x 1000 x 1000mm

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

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 300-600mm (dependant on depth of pit due to size of tree) of a mix of subsoil with a 70 to 80% mix of sharp sand. Irrigation pipe to put around bottom of rootball with 25mm of pipe sticking out from the bark mulch level. 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 and creating a slightly domed shape with the highest point being at the centre of the tree to assist drainage and settlement. Tree pits in grass to contain a 600mm diameter circle of medium grade bark mulch to a settled depth of 75mm.

Water each tree sufficiently in same day of planting, amount of water 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. Tree locations in grass shall have a 600mm diameter circle of 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 sized to accommodate full spread of roots. Plants shall be evenly spaced over the planting area. Backfill each plant with a 3:1 mix of an approved topsoil with compost. Middle centre area of plant beds to be 50mm above previous ground level creating a slightly domed shape to assist drainage and settlement. Planting bed to be covered with a medium grade bark mulch to a settled depth of 75mm. Firm backfill by treading, ensuring the ground is not overly compacted and that each plant is positioned upright.

### Native scrub planting

Bare root stock shall be T-notch 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. Planting area to be covered with a medium grade bark mulch to a settled depth of 75mm. 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 0.6 metre wide. Plant stock to be planted centrally in a single row at 330mm spacings (3 per linear metre). Trench backfilled with 300mm of a 3:1 mix of an approved topsoil with compost. Backfill firmly to 50mm above previous ground level and creating a slightly domed shape with the highest point being along the hedge line/ centre line 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. Ensure plants are planted to the correct depth to correspond to the soil mark on main stems.

### New mixed native hedgerows - Double staggered

Bare root stock (container stock for Common Holly) 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 previously prepared planting trench 300mm deep and up to 1metre wide. Backfill trench with 300mm of a 3:1 mix of an approved topsoil with compost. Backfill firmly to 50mm above previous ground level and creating a slightly domed shape with the highest point being at the centre line 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.

Plant stock to be planted in a double row in the centre of the plant bed, 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. 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.

### Mycorrhizae:

Fat specimen trees as root ball stock, ornamental shrubs in containers, and holly in containers for native hedgerow mix - Apply MycoForce Endo & Ecto Mycorrhizal Transplanter as per manufacturers specification before backfilling. Apply 1gm of Transplanter per litre of rootball. Either, dust the powder lightly over the root ball, mix MycoForce Transplanter with water and drench the root ball, or place Mycorrhizal Transplanter in the bottom of the planting pit or mix with the backfill that will come into contact with the feeder roots.

For bare root whips for native hedgerow mix and native scrub mix planting - Apply MycoForce Endo Ecto Mycorrhizal Whip Dip as per manufacturers specification. Apply as a root dip just before planting. 100g is sufficient to make Dip for 220 whips. Add 100 grammes of Whip Dip and 1.2 hydro gel sachet to 3-6 litres of water while stirring (the actual hydro gel and water requirement will depend upon water hardness and plant root mass.) Dip the bare roots of the whips into the paste just before planting (if dipped offsite, cover the roots in plastic during transport)

Products to be supplied by Green-tech or similar approved.

### Turfed Areas:

To be specified and laid in accordance with BS. 3936:1988 Recommendations for turf for general purposes. Turf to be LT7 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 Geminal 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/m<sup>2</sup> and lightly rake. First cut to be undertaken when grass reaches 50mm.

### Wildflower Seeding:

Geminal RE3 River Floodplain / Water Meadow (MGB Grassland), or similar approved within the proposed pond. Sowing to be taken in March/ April or September

Topsoil shall be cultivated to a fine tilth, be free from weeds, stones and other debris. Sow at rate of 5 g/m<sup>2</sup> and lightly rake. First cut to be undertaken 6 weeks after sowing or when reaches 70-100mm.

Geminal WFG20 Eco Species Rich Lawn, or similar approved. Sowing to be taken in March/ April or September

Topsoil shall be cultivated to a fine tilth, be free from weeds, stones and other debris. Sow at rate of 10 g/m<sup>2</sup> 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: Regularly water each tree per 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.

### Wildflower Maintenance:

RE3 River Floodplain / Water Meadow (MGB Grassland)

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

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

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

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

The arisings are to be collected and removed just after the cut to prevent nutrient build up.

### WFG20 Eco Species Rich Lawn Maintenance

First Cut: Mid September - 1st October. Cutting height approximately 70mm.

Thereafter: shall be cut 1 time a year mid-August to early October to approximately 70mm.

The arisings are to be collected and removed just after the cut to prevent nutrient build up.

### Geminal WF19 Pollinators Paradise Maintenance

First Cut: Mid September - 1st October. Cutting height approximately 70mm.

Thereafter: shall be cut 1 time a year from early September to approximately 70mm.

The arisings are to be collected and removed just after the cut to prevent nutrient build up.

### Native Scrub 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 scrub 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.

**Coppicing:** Hazel (*Corylus Avellana*) in scrub to be coppiced after 10 years and thereafter every 7 years on selective cycles.

### 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 end of each growing season during the maintenance period.

### Fertilising:

Apply Pro Flora Tablets to all plants, as per manufacturers specification. Apply once during years 2 and 4 after planting.

Application rate as follows:

Application rate for trees

- Transplant - 30-120cm Tree Height - 2 per plant - 30g
- Selected Standard - 300-360cm Tree Height - 7 per plant - 105g
- Heavy Standard - 360-425cm Tree Height - 8 per plant - 120g
- Extra Heavy Standard - 425-500cm Tree Height - 10 per plant - 150g

Application rate for shrubs

- 10-20 height - 1 per plant - 15g
- 20-40 height - 2 per plant - 30g
- 40-60 height - 3 per plant - 45g
- 60-80 height - 4 per plant - 60g
- 80-100 height - 5 per plant - 75g
- 100+ height - 5 per plant - 75g

Fertilising products to be supplied by Green-tech or similar approved.

## Plant Schedule

### Trees

Number of Plants	Abbreviation	Species	Specification	Height	Girth	Density
12	ACE ELS	Acer campestre 'Elsrijk'	Selected Standard: 4 brks: 2x: RB: Clear Stem min. 200cm	300-350cm	10-12cm	Counted
10	ALN GLU	Alnus glutinosa	Heavy Standard: 5 brks: 3x: RB: Clear Stem min. 200cm	350-425cm	12-14cm	Counted
9	BET PEN	Betula pendula	Heavy Standard: 5 brks: 3x: RB: Clear Stem 175-200cm	350-425cm	12-14cm	Counted
11	BET JAC	Betula utilis jacquemontii	Selected Standard: 5 brks: 2x: RB: Clear Stem 175-200cm	300-350cm	10-12cm	Counted
11	CAR BET	Carpinus betulus	Heavy Standard: 5 brks: 3x: RB: Clear Stem 175-200cm	350-425cm	12-14cm	Counted
11	CAR FON	Carpinus betulus 'Frans Fontaine'	Selected Standard: 4 brks: 2x: RB: Clear Stem 175-200cm	300-350cm	10-12cm	Counted
5	COR COL	Corylus colurna	Selected Standard: 4 brks: 2x: RB: Clear Stem 175-200cm	300-350cm	10-12cm	Counted
10	CRA SCA	Crataegus laevigata 'Paul's Scarlet'	Selected Standard: 4 brks: 2x: RB: Clear Stem 175-200cm	300-350cm	10-12cm	Counted
10	PRU AMA	Prunus 'Amanogawa'	Selected Standard: 4 brks: C: Clear Stem 100-150cm	300-350cm	10-12cm	Counted
6	PRU UMI	Prunus 'Umineko'	Selected Standard: 4 brks: 2x: RB: Clear Stem 175-200cm	300-350cm	10-12cm	Counted
2	QUE ROB	Quercus robur	Heavy Standard: 5 brks: 3x: RB: Clear Stem 175-200cm	350-425cm	12-14cm	Counted
6	SOR AUC	Sorbus aucuparia	Heavy Standard: 5 brks: 3x: RB: Clear Stem 175-200cm	350-425cm	12-14cm	Counted
Total :103 -						

### Shrubs

Number of Plants	Abbreviation	Species	Specification	Height	Pot Size	Density	Area
332	BER NAN	Berberis thunbergii 'Atropurplea Nana'	Branched: 4 brks: C	20-25cm	3L	7/m <sup>2</sup>	46.0561m <sup>2</sup>
477	CEA MOU	Ceanothus 'Blue Mound'	Branched: 5 brks: C		3L	6/m <sup>2</sup>	77.0319m <sup>2</sup>
181	CHO SUN	Choisyva ternata 'Sundance'	Bushy: 4 brks: C	30-40cm	3L	6/m <sup>2</sup>	28.9402m <sup>2</sup>
334	ERI PIN	Erica carnea 'Springwood Pink'	Bushy: C		3L	8/m <sup>2</sup>	40.8357m <sup>2</sup>
328	ERI WHI	Erica carnea 'Springwood White'	Bushy: C		3L	8/m <sup>2</sup>	39.9435m <sup>2</sup>
285	EUO GAI	Euonymus fortunei 'Emerald Gaiety'	Bushy: 7 brks: C	20-30cm	3L	6/m <sup>2</sup>	45.766m <sup>2</sup>
130	FUC POP	Fuchsia 'Mrs Poppie'	Bushy: 5 brks: C	20-30cm	3L	6/m <sup>2</sup>	21.1456m <sup>2</sup>
625	HEB GEM	Hebe 'Green Globe'	Bushy: 7 brks: C	15-20cm	3L	9/m <sup>2</sup>	67.768m <sup>2</sup>
221	LAV HID	Lavandula angustifolia 'Hidcote'	Bushy: 5 brks: C	20-30cm	3L	6/m <sup>2</sup>	35.7663m <sup>2</sup>
327	LAV PED	Lavandula stoechas pedunculata	Bushy: 5 brks: C	15-20cm	2L	7/m <sup>2</sup>	45.1471m <sup>2</sup>
376	LON PIL	Lonicera pileata	Bushy: 6 brks: C		3L	6/m <sup>2</sup>	60.7253m <sup>2</sup>
612	PHO ROB	Photinia x fraseri 'Red Robin'	Branched: 6 brks: C	30-40cm	3L	6/m <sup>2</sup>	98.3027m <sup>2</sup>
21	SKI RUB	Skimmia japonica 'Rubella'	Bushy: 3 brks: C	30-40cm	3L	7/m <sup>2</sup>	2.8992m <sup>2</sup>
Total :4249 -							Total :610.3276m <sup>2</sup>

### Formal Hedge

Number	Abbreviation	Species	Specification	Height	Pot Size	Density	Length
614	HEB EDG	Hebe 'Red Edge'	Bushy: 7 brks: C		5-7.5L	3/m	198.4915m
722	PHO ROB	Photinia x fraseri 'Red Robin'	Branched: 3 brks: C	20-30cm	2L	5/m	141.6593m
2487	PRU LAU	Prunus laurocerasus	Bushy: 3 brks: C	40-60cm	2L	5/m	493.2045m
Total :833.3553m							

### Grass and Wildflower Areas

Weight	Seed Mix Name	Seed Mix Supplier	Density	Area
166787 g	ABERSUSTAIN	BY GERMINAL	40g/m <sup>2</sup>	4169.6056m <sup>2</sup>
8416 g	RE3 (MGB Grassland)	BY GERMINAL	5g/m <sup>2</sup>	1682.8523m <sup>2</sup>
2934 g	WF19 POLLINATORS PARADISE	BY GERMINAL	2g/m <sup>2</sup>	1465.4697m <sup>2</sup>
10084 g	WFG20 ECO SPECIES RICH LAWN	BY GERMINAL	10g/m <sup>2</sup>	1008.2772m <sup>2</sup>
Total :188221				Total :8326.2048m <sup>2</sup>

### Native Hedgerow Mix

Number	Abbreviation	Species	Specification	Height	Pot Size	Density	Percentage Contribution
347	COR AVE	Corylus avellana	1+2: Transplant - seed raised: Branched: 3 brks: B	60-80cm		0.33Ctr	Double Staggered at 0.3m offset 15%
920	CRA MON	Crataegus monogyna	1+1: Transplant - seed raised: B	60-80cm		0.33Ctr	Double Staggered at 0.3m offset 40%
347	ILE AQU	Ilex aquifolium	Leader with Laterals: C	40-60cm	3L	0.33Ctr	Double Staggered at 0.3m offset 15%
464	PRU SPI	Prunus spinosa	1+1: Transplant - seed raised: Branched: 2 brks: B	60-80cm		0.33Ctr	Double Staggered at 0.3m offset 20%
120	ROS ARV	Rosa arvensis	1+1: Transplant - seed raised: Branched: 2 brks: B	60-80cm		0.33Ctr	Double Staggered at 0.3m offset 5%
120	ROS CAN	Rosa canina	1+1: Transplant - seed raised: Branched: 3 brks: B	60-80cm		0.33Ctr	