

Site Location & Context



# LAND PLANNING & DESIGN

## Site Location & Context



1. View East along stream from Southwest corner of site



4. View North along West boundary



7. View of Northeast corner showing laurel overgrowth



2. View East over stream from South boundary



5. View North along West boundary



8. View of Northeast corner showing laurel overgrowth



3. View North along East boundary ditch



6. View of Gate Northwest corner



9. View of outlet near large willow Southeast corner

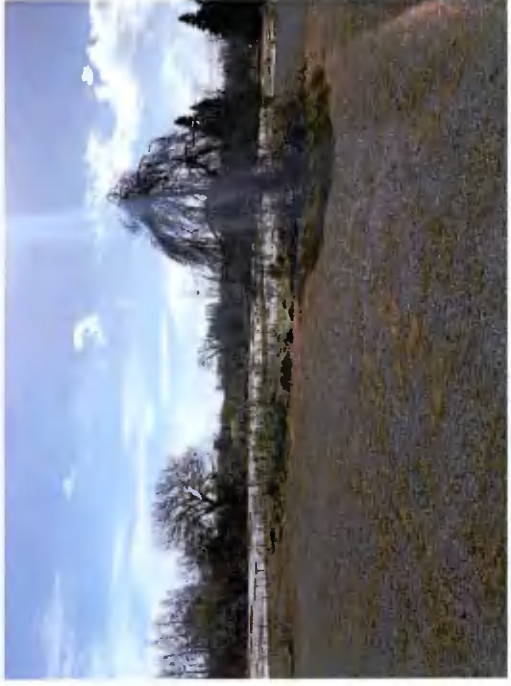
Site Location & Context



10. View over North boundary fence



11. View South across site from Northwest boundary



12. View South across site from Northwest boundary



13. View South along West boundary



14. View West from existing footbridge - South boundary

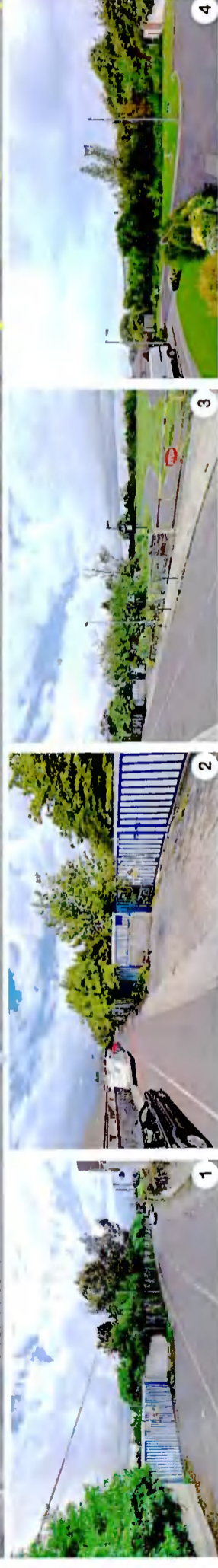


15. View West of inner ditch from Southeast corner

## Site Location & Context



- Site Boundary
- Main Road
- Existing Path (To The Park)
- Existing Hedgerow
- Existing Fence
- Road Entrances
- Existing Tree
- Possible Connection
- Possible Entrances
- Concrete Floor Plate



Movement & Spatial Hierarchy Diagram



- Main Road
- Home Zone
- Open Access Footpath
- Pedestrian routes
- Path Junctions
- Site Access Points
- Vehicular Access Point
- Social Spaces
- Ecological Gardens
- Playground
- Bicycle & Bin Storage

## Concept Diagram – Stage 2



The landscape design concept of this site aims to create enjoyable public spaces focusing on natural forms and elements. The public green areas and social spaces allow residents to gather and develop a sense of community.

As you enter the site at the north-west corner, you are immediately met with a large green open space with play and social features. The linear path system allows people to circulate freely throughout the site. Open spaces include equipped play areas, shared footpaths and cycleways, open green areas for active recreation, and sustainable drainage features, ponds and raingardens, as well as food and habitat for wildlife.

Play and social spaces throughout the site will include areas for formal play, casual recreation and passive leisure which are suitable for all age groups. These areas will be enhanced by the inclusion of features and elements such as raised planters, play spaces, seating areas, paths, and natural planting which matches the original character of the site and the adjacent parklands.

The principles of inclusivity for all age groups, universal accessibility and sustainable development will be applied to ensure an inclusive and environmentally responsible design solution.

Existing non-native overgrown hedges (cherry laurel and cotoneaster) will be removed. Where feasible, native trees and plants are proposed, existing trees to remain and the inclusion of some non-natives with value, to enhance local biodiversity.

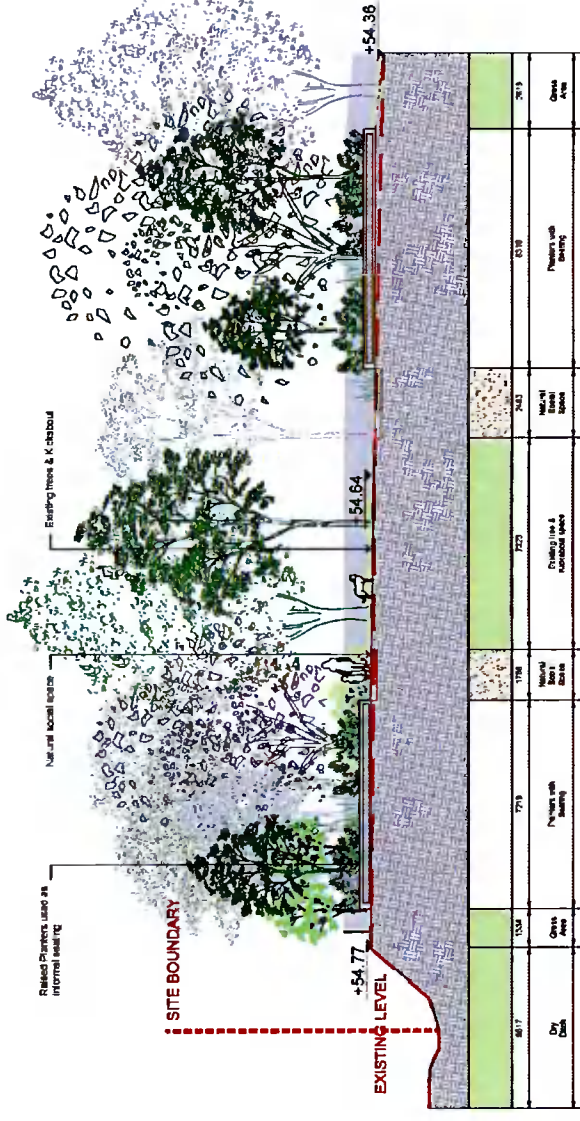
# LAND PLANNING & DESIGN



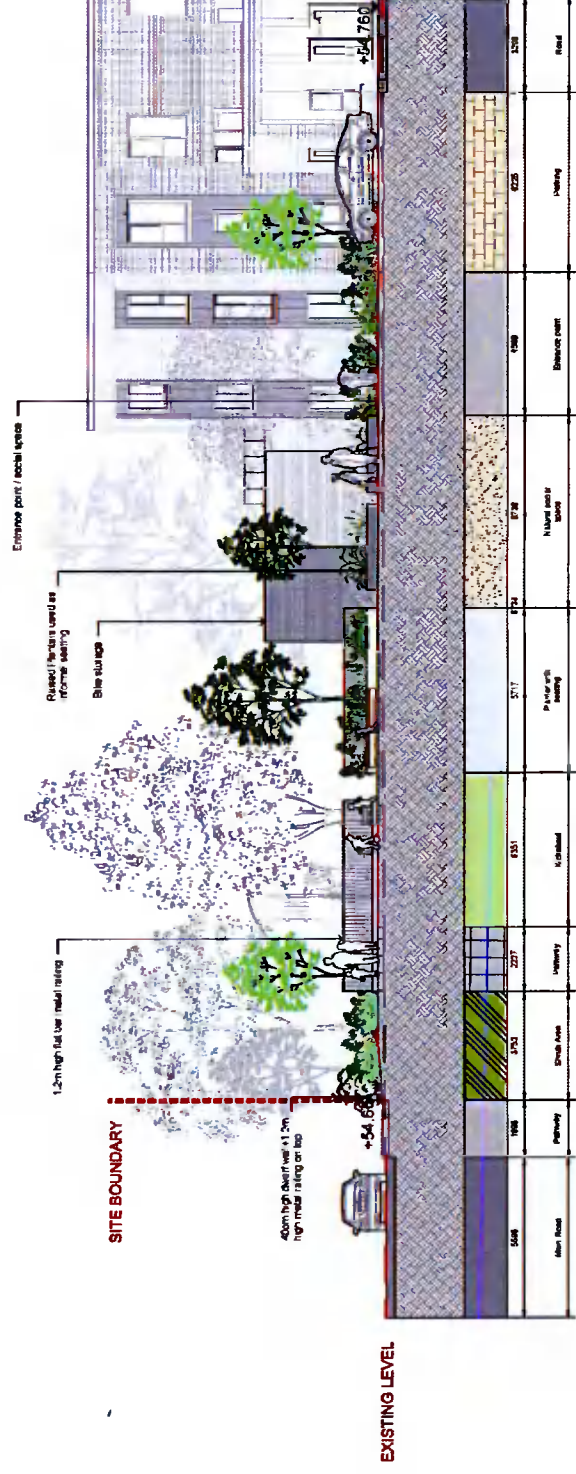
### LEGEND

- Existing trees to be retained**
- Existing tree groups + hedgerows to be removed**
- Existing trees to be removed**
- Feature low shrubs/Herbaceous species (see X, not size)**
- Dryopteris, Blechnum
  - Site: *Hebe, Juniper, Yucca, etc.*
  - Public Amenity grass mix
  - Green Roof
- Proposed selection of seasonal bulbs**
- Proposed Shrub Planting**
- Low height ornamental annuals/perennials max. H: 40-100cm, 2L min. pot size and planned at 4m<sup>2</sup>**
- Aster, Dianthus, Geranium, etc.*
  - Cornus, Lavender, etc.*
  - Hydrangea, etc.*
- Proposed Tree Planting and Aquatic Species**
- Prunella, etc.*
  - Berberis, etc.*
  - Malus, etc.*
  - Juniper, etc.*
  - Yucca, etc.*
- Proposed Wet Meadow and Aquatic Species**
- Phragmites, etc.*
  - Scirpus, etc.*
- SMA Vertical road surface**
- Type 1: 150mm concrete
  - Type 2: 150mm tarmac
- Proposed bench (wood and steel)**
- Proposed bottom of the ditch**
- Proposed top of the embankment**
- SW Filter trench**
- Selected Play Equipment Supplier: KOMPA or similar**
- Boundary Type 1: 40cm high dwarf wall + 1.2m high metal railing on top**
- Boundary Type 2: 1.2m high flat bar metal railing**
- Boundary Type 3: 1m high timber estate railing**
- Boundary Type 4: Stone wall with railing on top to match original**
- Boundary Type 5: Balustrade/Wall to architect's details**
- Proposed site**
- Clipped ornamental hedge (managed at 1m height)**
- Boxwood, Yew, etc.
- Flag paving/SuDS/Access 67 Terraces**
- Concrete flags in situ
- Flag paving/Building entrances**
- Concrete flags in situ
- Setts/Road**
- Setts with high grass sward
- Block paving/Parking bays**
- Permeable block paving in half sizes
- Concrete/Pedestrian Paving**
- Type 1: Fine beach sand + 150mm concrete (public paths)
- Exposed ball/jack aggregate/Part**
- Exposed aggregate with 150mm
- Exposed ball/jack aggregate on Gehl/Park**
- Exposed aggregate with 150mm in situ
- In situ concrete aggregate/Part**
- Concrete aggregate with 150mm
- In situ concrete aggregate/Part**
- Concrete aggregate with 150mm

# Landscape Sections



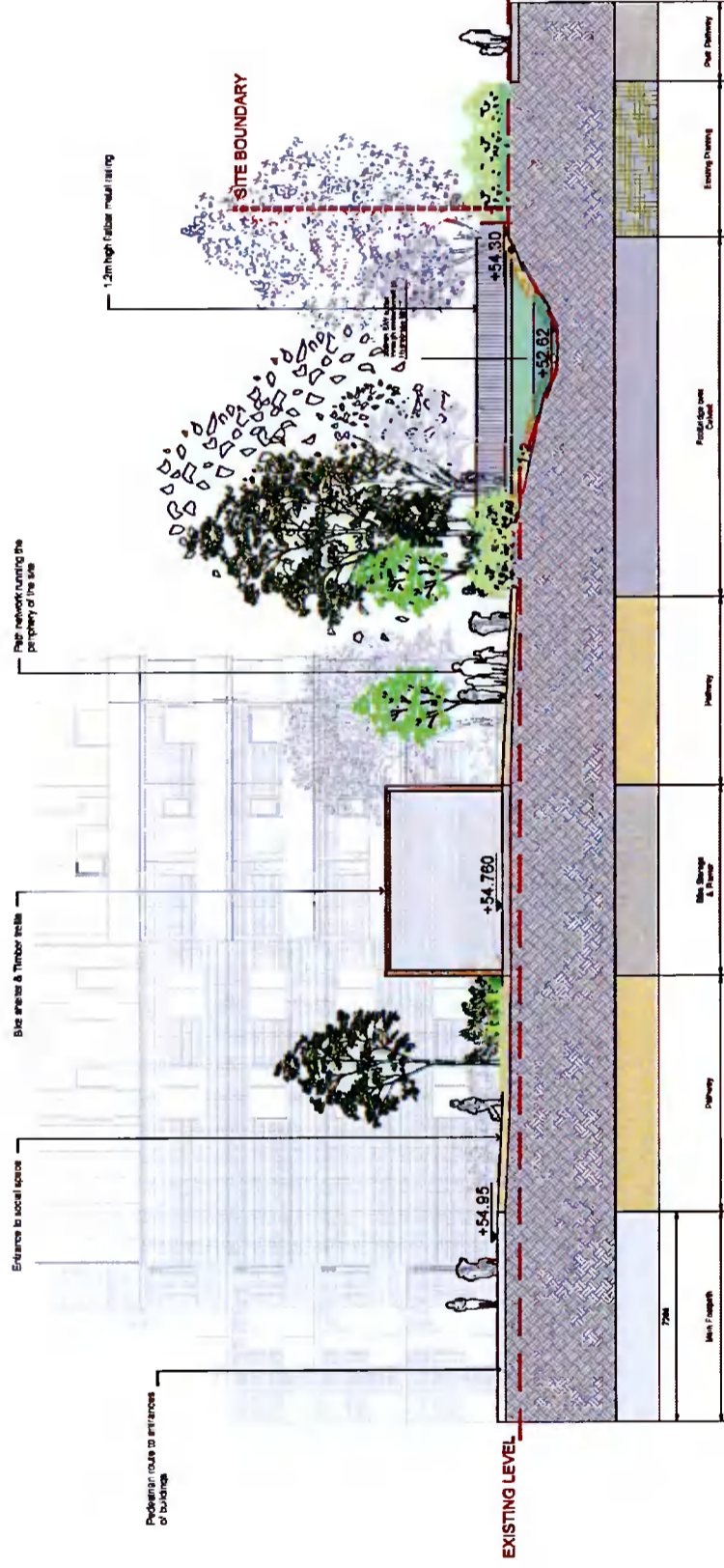
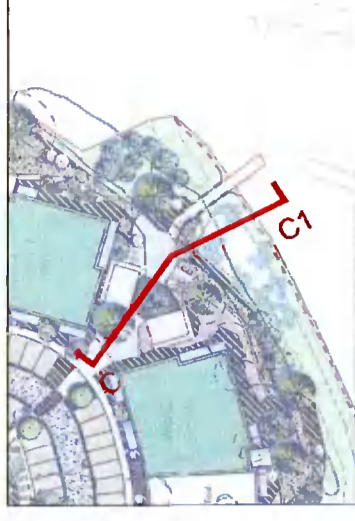
PLANTERS WITH SEATING AREA AND EXISTING TREES  
Scale 1:100



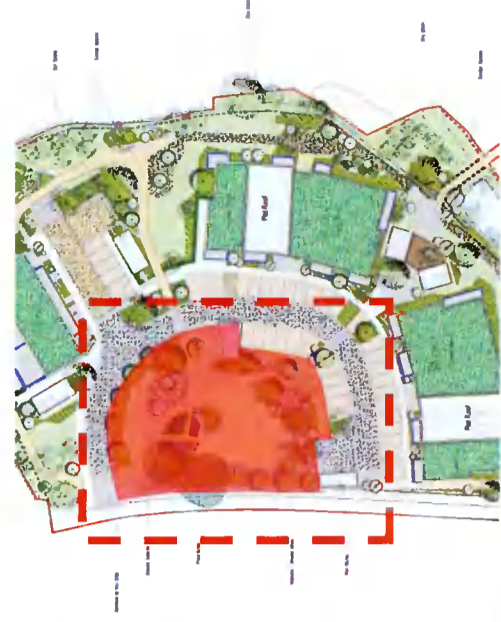
PLAYGROUND AND CENTRAL GREEN SPACE  
Scale 1:100



## Landscape Sections



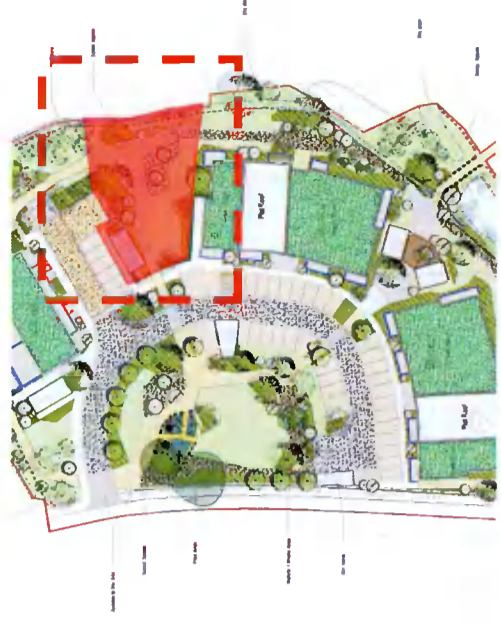
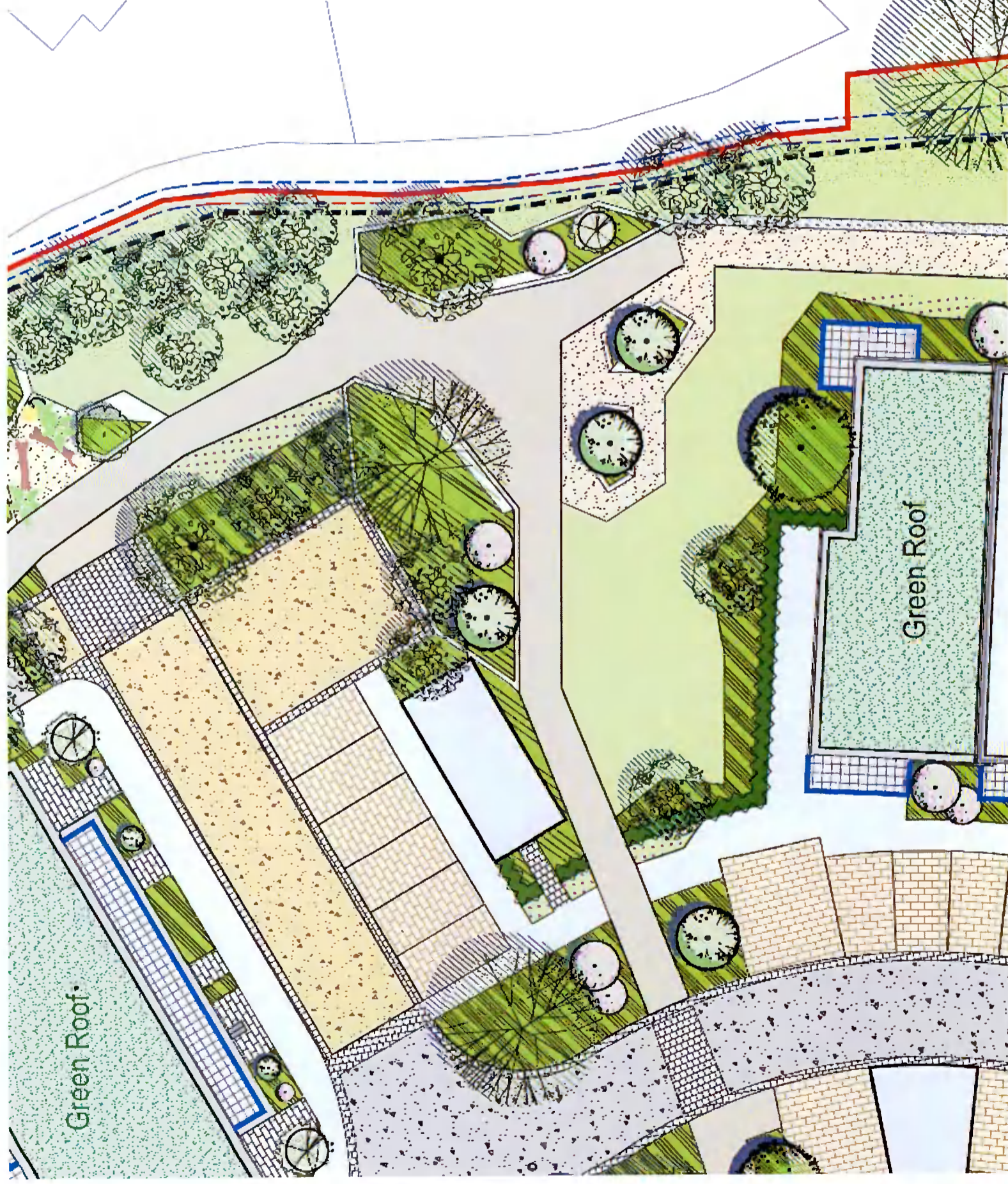
BICYCLE STORAGE, SOCIAL SPACE AND ACCESS TO PARK  
 Scale 1:100



As you enter the site you are met by a large green area – the Green. This social space will be the heart of the site offering a sense of community and allowing people of all ages to gather and socialize. This central green will be enclosed and overlooked by residential development facing and actively addressing the space.

The Green will be lined with street trees and shrubs providing enclosure and shelter to the space. The playground will include a variety of equipment which will develop core skills such as balance coordination and gross motor skills.

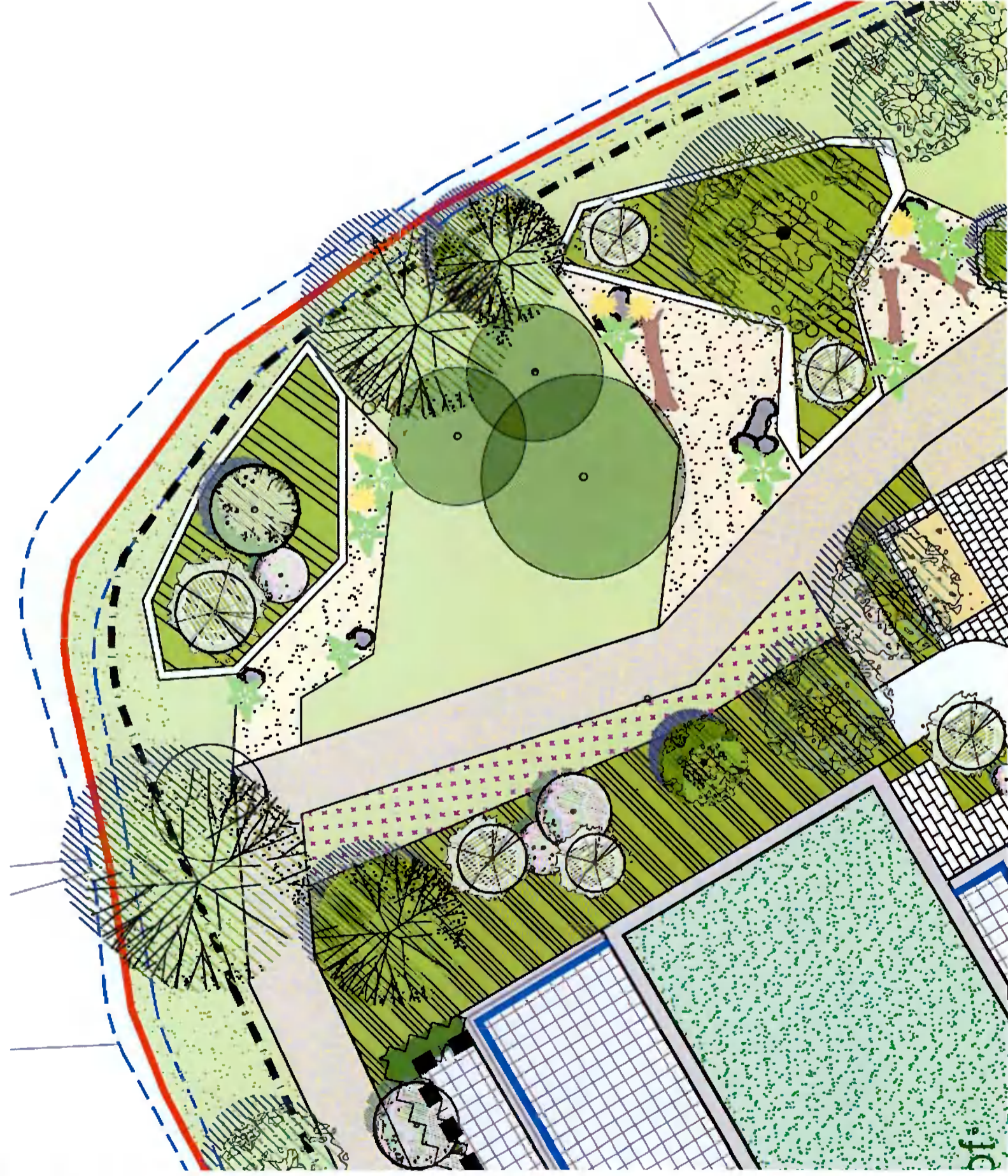
There is a kickabout grass area for more active forms of recreation. Seating is provided in raised planters and benches for older residents for relaxing and socializing. There is also a natural fitness area located to the south.



This eastern part of the site includes a nodal social space as a stop along a circular route around the site. Pathways connect this space directly to the central Green. The path then forms a continuous route and wraps around the periphery of the site. This route links the building entrances to the social spaces, parking, bin and bike storage.

Raised planters within this space will help to define the space and act as informal seating for the residents while also providing raised beds for food growing or otherwise robust protection for amenity planting. The different levels of the grass area and the planters creates a distinctive character for the space.

The area contains an easily accessible bin storage for Block 1 which is softened with shrubs and hedging. There will be a wide variety of pollinator friendly planting to encourage wildlife from Griffen Valley Park.

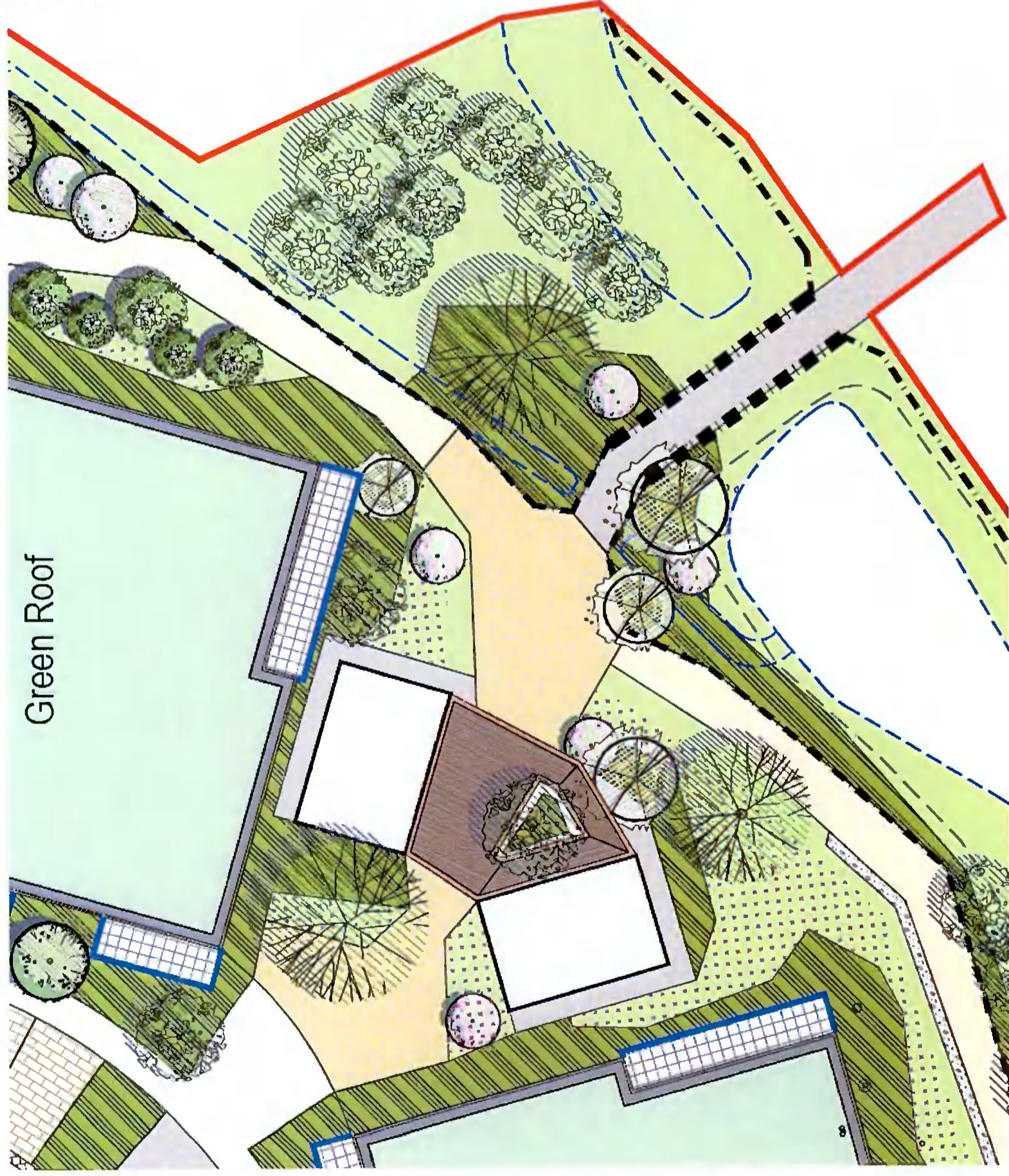


A small group of existing young oak trees has been retained in the corner of the site. These trees have been given the space to grow and form a central feature to this space in time.

A pathway connects this location to Block 1 and links to the rest of the site. Surrounding the existing trees are two planters. Residents can sit out in these areas and interact with neighbors, offering opportunities for community cohesion.

These raised elements form a feature in different parts of the site and will help to create a new sense of identity for the site.

The paving is comprised mainly of exposed aggregate concrete pathways with areas of 'softer' Ballylusk gravel paths in lower trafficked areas and social spaces, and as a sensitive application under existing trees. The Ballylusk gravel, exposed aggregate concrete, trunks and rocks form a language of natural materials that will define character of the landscape.



This south easterly part of the site offers a key nodal point and social space at the point where the site addresses the Griffen Valley Park. It is also a key junction point for the circular footpath around the periphery of the site.

A pair of bespoke bicycle storage units linked together with timber trellis will form a semi-covered outdoor social space for residents, and a gateway into the site from the park. A feature tree will form a sculptural element within the trellis area which will be underlit at night to form a focal feature from the park.

The area will be divided up with a biodiverse mosaic of wildflowers, shrubs and trees. A cluster of Birch trees will separate the semi-public area and the more private areas such as the back entrances to Blocks 2 &3.

This site will include a series of linked SuDS features formed from existing features which will be integrated into the landscape. These features will work to attenuate storm water, provide habitat for wildlife, and provide amenity for users.

Natural Play Area



Scattered along the walking route will be multiple natural play elements for the residents. The areas geometric organic form is derived from the surrounding spaces and linear path network. This space offers the local community an alternative and informal outdoor seating arrangement.

These natural areas will be made up of rubber mulch with tree trunks, logs and boulders. Planters will be raised with integrated seating. Children will have the opportunity to explore these elements and engage in unstructured play activities.

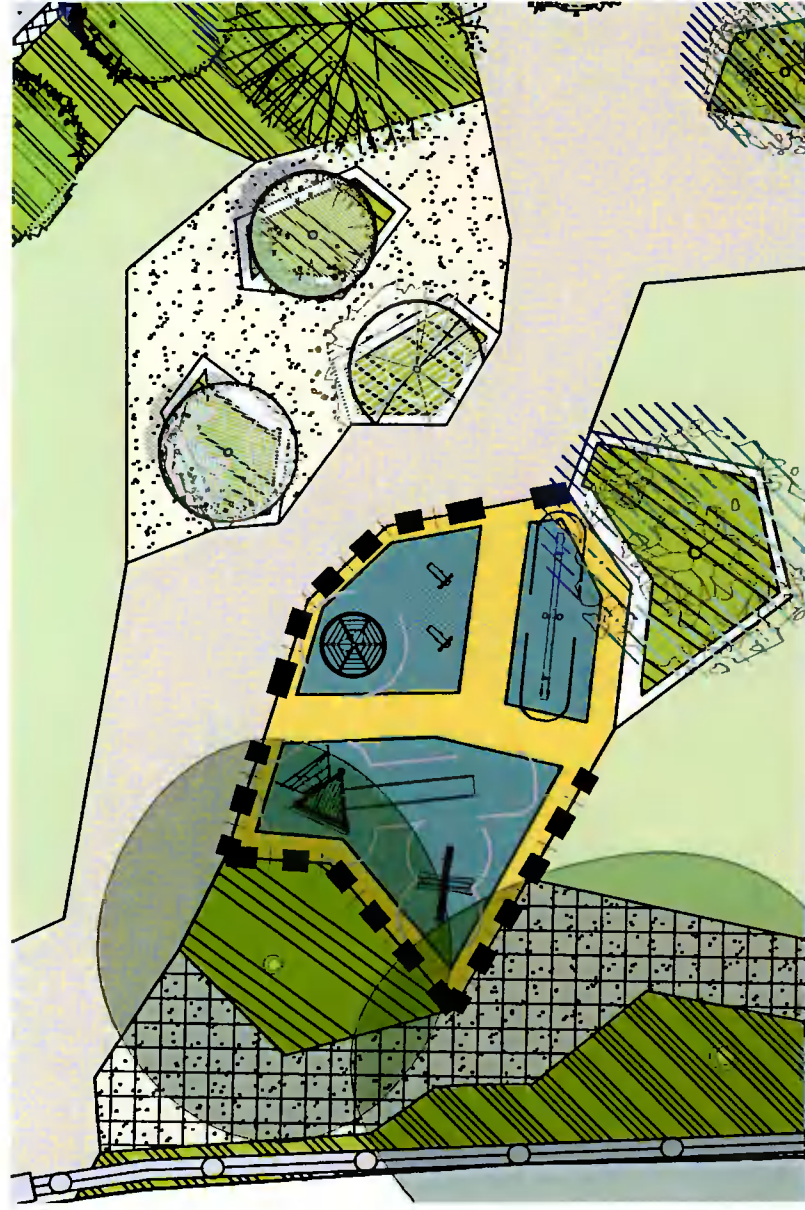


1: Rocks

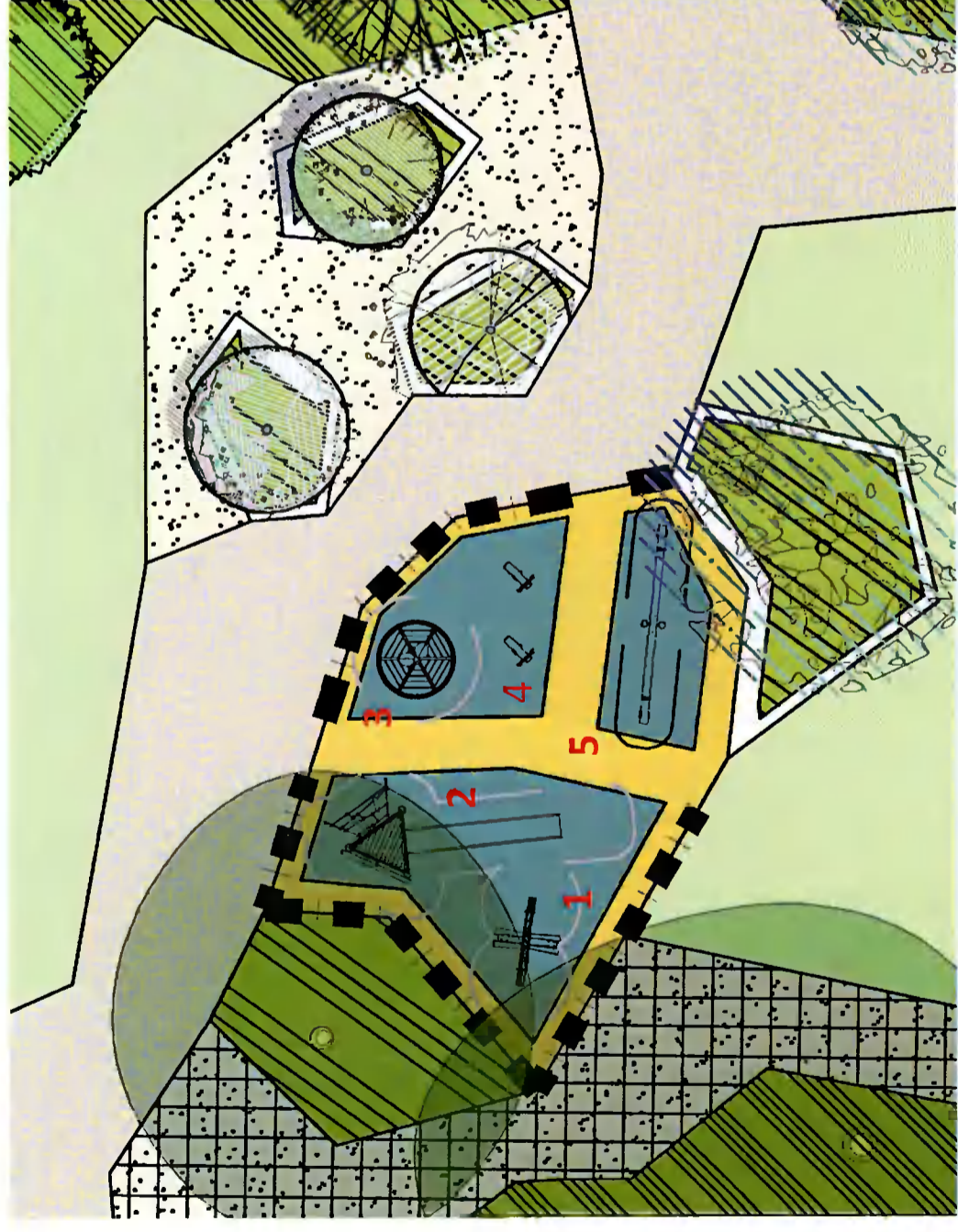


2: Trunks on rubber mulch

Provider: Kompan or similar  
Age Group: 5+



Play Area



**1: Butterfly seesaw**

Provider: Kompan or similar  
 Age Group: 3-8  
 Materials: Robinia treated wood & steel



**2: Tower with slide**

Provider: Kompan or similar  
 Age Group: 3-8  
 Materials: Robinia treated wood & steel



**3: Carousel with seats**

Provider: Kompan or similar  
 Age Group: 3+  
 Materials: Robinia treated wood & steel



The primary play space will be located within the central Green. This play area is located strategically to provide play access and to feel welcoming to residents from all Blocks. The play area will be accessible to all ages and abilities and will be situated far enough from the apartment blocks to avoid impacting residents.

The playground will be made up of natural materials such as timber (robinia) in order to integrate into the surrounding landscape.

The play equipment was selected for children to develop their balance and gross motor skills. Balancing helps train a child's co-ordination and ability to concentrate while having fun.



**4: Bee Springer**

Provider: Kompan or similar  
 Age Group: 3+  
 Materials: Robinia treated rubber, wood & steel









**5: Seesaw with springs**

Provider: Kompan or similar  
 Age Group: 3-8  
 Materials: Treated timber & steel

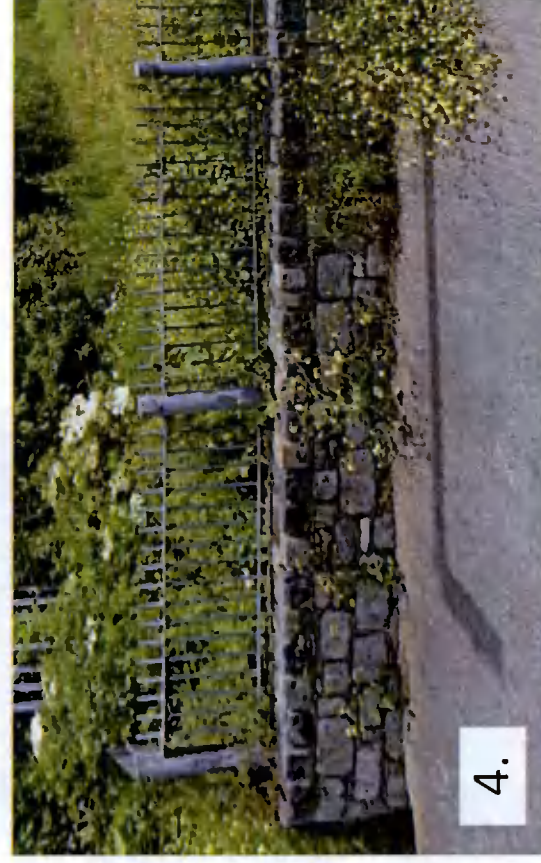
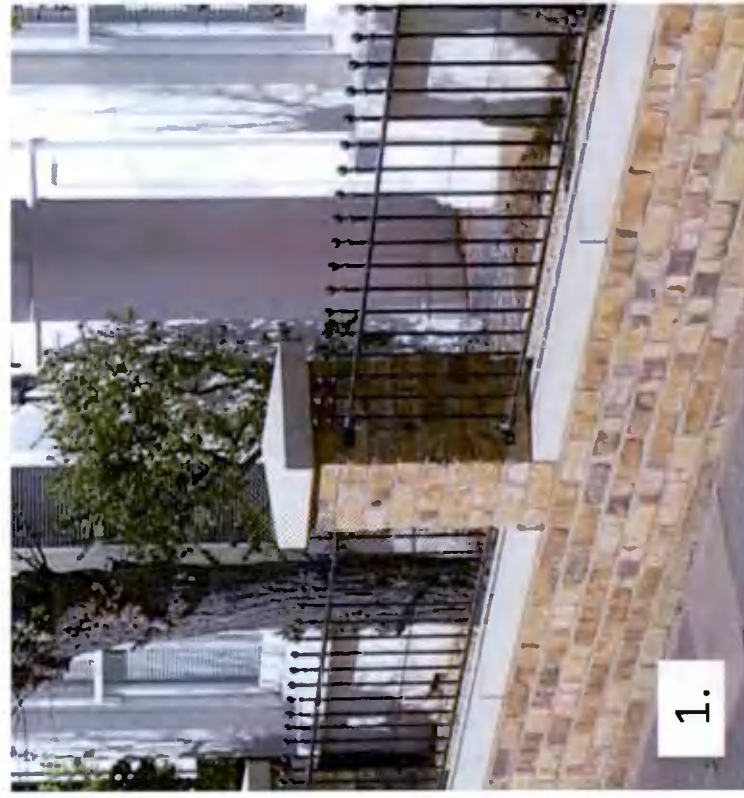
## Boundary Plan





### LEGEND

-  Boundary Type 1 - 40cm high dwarf wall with 1.2m high metal railing on top
-  Boundary Type 2 - 1.2m high flat bar metal railing
-  Boundary Type 3 - 1m high timber estate railing
-  Boundary Type 4 - Stone wall with railing on top to match original
-  Boundary Type 5 - Balustrade/Wall to Architects' details
-  Proposed site







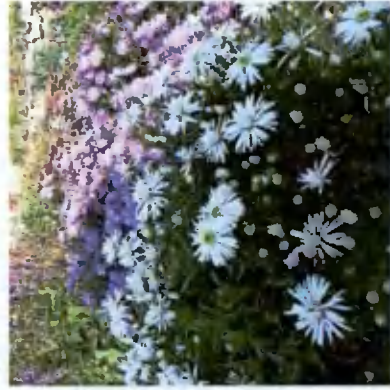
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Planting List - Shrubs & Groundcovers

Shrub Planting (Low height):



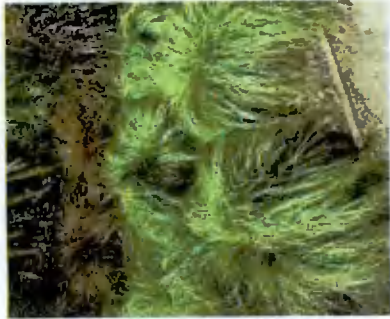
*Ajuga reptans va*



*Aster novi belgii*



*Berberis 'Amstelveen'*



*Carex spp.*



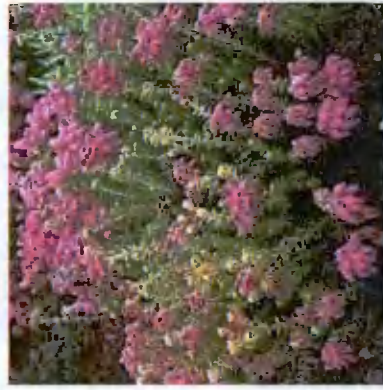
*Ceanothus 'Blue Mound'*



*Ceanothus 'Glorie de Versailles'*



*Centaurea montana*



*Erica spp.*



*Geranium m. 'Czakor'*



*Hedera helix 'Hibernica'*



*Lavandula angustifolia*



*Miscantus spp.*



*Picea abies procubens*



*Pinus mugo 'Mops'*



*Potentilla spp.*



*Rosa 'Rhapsody Blue'*



*Rosa 'Tananaistrud'*



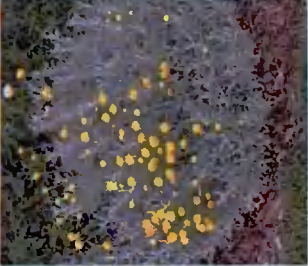
*Rosa 'Noaschnee'*



*Rudbeckia 'Goldstrum'*



*Spirea japonica 'Firelight'*



*Santolina cham. 'Nana'*



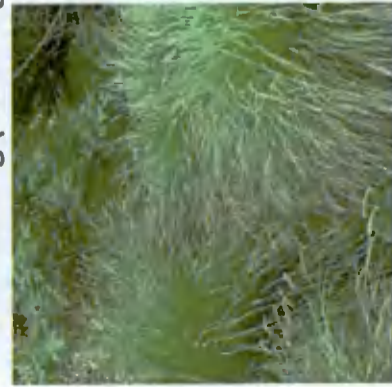
*Sarcococca spp.*



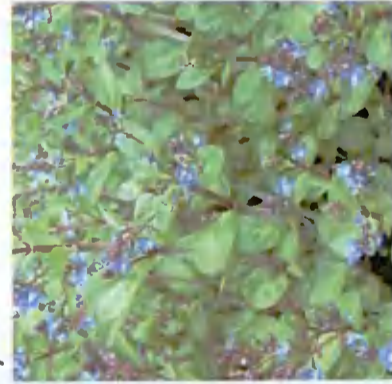
*Stipa spp.*

Planting List - Shrubs & Groundcovers

Shrub Planting (Low height):



*Carex* spp.



*Veronica beccabunga*



*Eupatorium cannabinum*



*Trollius europaeus*



*Caltha palustris*



*Lychnis flos-cuculi*



*Leucorum aestivum*



*Lysimachia vulgaris*



*Lysimachia nummularia*



*Lythrum salicaria*



*Filipendula ulmaria*



*Festuca arundinacea*



*Phalaris arundinacea*



*Osmunda regalis*



*Descampsia cespitosa*



*Sagittaria sagittifolia*



*Menyanthes triflora*



*Juncus inflexus*



*Mentha aquatica*



*Ranunculus aquatilis*



*Ranunculus lingua*  
'Grandiflora'



*Nymphaea alba*



*Dryopteris filix-mas*



*Stipa tenuissima*

## Planting Specification

### INTRODUCTION

This document sets out the proposed maintenance and management plans for the establishment and ongoing maintenance of the landscape element of the proposed development. There will be a minimum 12 months defects period on all soft landscape works implemented. Thereafter the landscaping will be maintained in perpetuity in consecutive 12 month periods.

### 1.0 SOFT LANDSCAPE WORKS SPECIFICATIONS

#### 1.1 Site Clearance Generally

- General: Remove rubbish, concrete, metal, glass, decayed vegetation and contaminated topsoil.
- Stones: Remove those with any dimension exceeding 25mm.
- Contamination: Remove material containing toxins, pathogens or other extraneous substances harmful to plant, animal or human life. In accordance with current Health and safety legislation.
- Vegetation: remove all weed growth.
- Large roots: Grub up and dispose of without undue disturbance of soil and adjacent areas.

#### 1.2 Weed Control

Remove all noxious and undesirable weeds from the sit. Weeds shall include: Ragwort, Himalayan Balsam, Giant hogweed & Japanese knotweed, Thistle, Dock, Common Barberry, Male Wild Hop and Spring Wild Oat, or any other noxious species identified by the Department of Environment. For the removal of certain species such as Japanese Knotweed a method statement is to be prepared and submitted to the Department of Environment.

#### 1.3 Standards

In preparing the landscaping, supplying plants and maintaining the landscaping the following standards are to be adhere to:

- BS 3882 Specification for topsoil and requirements for use
- BS 3936-1 to 10 Specification for the supply of nursery stock
- NPS National Plant Specification
- BS 3998 Tree Works: Recommendations
- BS 4428 Code of Practice for general Landscape Operations
- BS 5837 Trees in relation to Construction
- BS 7370-1 to 5 Grounds Maintenance
- BS 8545 Trees: from nursery to independence in the landscape-recommendations
- BS 8601 Specification for subsoil and required use
- BS EN 1722-9 Fences Specification for mild steel - low carbon steel - fences with round or square verticals and flat horizontals
- RoSPA Standards for safety for play and exercise equipment.

The latest publications for each document are to be used.

#### 1.4 Soil Conditions

- Soil for cultivating and planting: Moist, friable and do not plant if waterlogged.
- Frozen or snow covered soil: Give notice before planting. Provide additional root protection. Prevent planting pit sides and bases and backfill materials from freezing.

#### 1.5 Climatic Conditions

- General: Carry out the work while soil and weather conditions are suitable.
- Strong winds: Do not plant.

#### 1.6 Times of year for planting

- Deciduous trees and shrubs: Late October to early March.
- Evergreens/Conifers: October/November or Feb/ March.
- Container Grown plants: Any time of years.

#### 1.7 Mechanical Tools

Restrictions: Do not use within 100mm of tree and plant stems.

#### 1.8 Watering

- Quantity: Wet full depth of topsoil.
- Application: Even and without damaging or displacing plants or soil.
- Frequency: As necessary to ensure establishment and continued thriving of planting.

#### 1.9 Preparation, Planting and Mulching Materials

General: Free from toxins, pathogens or other extraneous substances harmful to plant, animal or human life.

#### 1.10 Plants/ Trees - General

- Condition: Materially undamaged, sturdy, healthy and vigorous.
- Appearance: Of good shape and without elongated shoots.
- Hardiness: Grown in a suitable environment and hardened off.
- Health: Free from pests, diseases, discoloration, weeds and physiological disorders.
- Budded or grafted plants: Bottom worked.
- Root system and condition: Balanced with branch system.
- Species: True to name.

#### 1.11 Container Grown Plants/ Trees

- Growing medium: With adequate nutrients for plants to thrive until permanently planted.
- Plants: Centred in containers, firmed and well watered.
- Root growth: Substantially filling containers, but not root bound, and in a condition conducive to successful transplanting.
- Hardiness: Grown in the open for at least two months before being supplied.
- Containers: With holes adequate for drainage when placed on any substrate commonly used under irrigation systems.

## Planting Specification

### 1.12 Labelling And Information

General: Provide each plant/ tree or group of plants/ trees of a single species or cultivar with supplier's labelling for delivery to site, showing:

- Full botanical name.
- Total number.
- Number of bundles.
- Part bundles.
- Supplier's name.
- Employer's name and project reference.
- Plant specification, in accordance with scheduled National Plant Specification categories and BS 3936.

### 1.13 Plant/ Tree Substitution

Plants/ trees unobtainable or known to be likely to be unobtainable at time of ordering. Submit alternatives, stating the price and difference from specified plants/ trees. Obtain approval before making any substitution.

### 1.14 Plant Handling, Storage Transport and Planting

- Standard: To HTA 'Handling and Establishing Landscape Plants'.
- Frost: Protect plants from frost.
- Handling: Handle plants with care. Protect from mechanical damage and do not subject to shock, e.g. by dropping from a vehicle.
- Planting: Upright or well balanced with best side to front.

### 1.15 Treatment of Tree Wounds

- Cutting: Keep wounds as small as possible.
- Cut cleanly back to sound wood using sharp, clean tools.
  - Leave branch collars. Do not cut flush with stem or trunk.
  - Set cuts so that water will not collect on cut area.
  - Fungicide/ Sealant: Do not apply unless instructed.

### 1.16 Protection of Existing Grass

- General: Protect areas affected by planting operations using boards/ tarpaulins.
- Excavated or imported material: Do not place directly on grass.

Duration: Minimum period.

### 1.17 Surplus Material

Subsoil, stones, debris, wrapping material, canes, ties, temporary labelling, rubbish, pruning's and other arising's: Remove.

### 1.18 General Planting/Seeding

- Planting shall be carried out within the contract period but not during periods of frost, drought, cold drying winds or when the soil is waterlogged, or when the moisture of the soil exceeds field capacity.
- All containers and protective coverings including biodegradable coverings to root systems shall be removed prior to planting. Roots, except for emergent vegetation, shall be teased out from the root-ball, spread evenly and not twisted.
- All plant material shall be planted upright or placed so as to be well-balanced. Extreme care

is to be taken to avoid damage to the root system, stem and branches when planting. The plant shall be positioned such that after planting the original soil mark on the stem is at finished ground level.

- Following completion of planting, grass seeding and turf laying, the soil over the whole of the planted, seeded or turfed area shall be sufficiently watered to achieve its field capacity.
- On completion of planting, watering and mulching, all areas shall be left tidy and weed-free and shall be maintained in a tidy and weed-free state until completion of the works.
- For shrub and transplant pit planting, notch planting and ordinary planting, the plant positions shall be set at equal centres in order to obtain a natural dense cover when mature. For notch and pit planting plants shall be planted in parallel lines. Planting positions in each row shall be staggered with the previous row.
- Finely-broken backfill material shall be carefully spread around roots and root trainers of all plants and the plants given slight shake to ensure that all interstices/ gaps are filled with soil, which shall then be consolidated by heeling. Careful filling and heeling shall continue as necessary at 150mm layers.

### 1.18.1 Mulching

Newly planted shrub areas shall be mulched immediately after planting to a depth of 50mm or in accordance with the details indicated on the drawing. Mulch shall be coarse chipped tree bark, composted for 2-4 months. Particle size 25-75mm diameter. No Fines.

### 1.18.2 After Planting & Mulching

- Watering: Immediately after planting, thoroughly and without damaging or displacing plants or soil.
- Firming: Lightly firm soil around plants and fork and/ or rake soil, without damaging roots, to a fine tilth with gentle cambers and no hollows.
- All areas shall be left tidy and weed-free and shall be maintained in a tidy and weed-free state until completion of the works.

### 1.19 Tree Planting

Attached in the appendix are typical tree planting details for this site.

#### 1.19.1 Semi-Mature Trees

- Standard: Prepare roots and transplant to BS 8545.
- Planting shall be carried out by positioning the tree in the centre of the pit closely against the tree stake and spreading the tree roots to their fullest extent.
- Backfilling material: Backfill with fine sand up to 400mm below the proposed ground level. Then fill with previously prepared mixture of topsoil excavated from pit and additional compost as required.
- Immediately following planting, trees with stakes shall be secured with tree ties. Tree ties shall be fixed so that movement of the tree shall not cause damage or abrasion to the bark, top tie to be 50mm below top stake.

## Planting Specification

### 1.19.2 Staking Generally

Softwood, peeled chestnut, larch or pine, straight, free from projections and large or edge knots and with pointed lower end. Adjustable rubber ties to be fixed to all trees and at the correct size for the tree.

### 1.19.3 Mulch Circles/Squares

All existing trees/newly planted trees within open grass areas or grass verges shall have 50mm depth mulch circle/square of a maximum 1m diameter or as allowed by verge width.

### 1.20 Shrub Planting

- All shrubs are to be pit planted. General pit dimensions are to be wide enough to accommodate roots when fully spread and 75mm deeper than root system.
- Break up base of pit to a depth of 150 mm, incorporating soil ameliorant/ conditioner at 50 g/m<sup>2</sup>.
- Pits to be backfilled with previously excavated material. Backfilling to be done in layers of 150mm depth; at each stage the filling to be firmly consolidated.
- Soil ameliorants can be premixed with the soil applied or mixed in during planting.
- Soil ameliorants to consist of an approved compost at 10L per m<sup>2</sup>; and 150g/m<sup>2</sup> of 10:10:10 NPK slow release fertilizer, or as approved.
- All shrub areas to be finished, with 75mm of medium grade bark mulch.

### 1.21 Hedgerow Planting

- Preparation: Dig trench to 500mm width for single staggered row, ensuing pit base is broken up 100mm deeper than plant rootball.
- Ameliorants: Compost at 10lt/m<sup>2</sup> and 10:10:10 NPK slow release fertiliser at 150g/m<sup>2</sup>.
- Planting: Mix in soil ameliorants with excavated topsoil, or if there is poor topsoil then mix in with imported new topsoil. Firm down topsoil lightly in layers of 150mm by treading.
- Additional Requirements: If there is no existing fencing or barrier, install a protective fence to stop people walking through it until hedge is established. If there is livestock adjoining hedge install a stockproof fence or electrical fence 1m from hedge line until hedge is established.
- Prior to new growth cut the hedge back by 300mm to encourage new growth from base.

### 1.23 Removing Trees and Shrubs

- Identification: Clearly mark trees and hedges to be removed.
- Work near retained trees: Where canopies overlap, take down trees carefully in small sections to avoid damage to adjacent trees that are to be retained.

### 1.24 Failures of Planting

- Defects due to materials or workmanship not in accordance with the Contract: Plants/ trees/ shrubs that have failed to thrive.
  - Exclusions: Theft or malicious damage after completion.
  - Rectification: Replace with equivalent plants/ trees/ shrubs.
- Replacements: To match size of adjacent or nearby plants of same species or match original specification, whichever is the greater.
- Defects Period: 5 years.

### 1.25 Green Roofs

Due care is to be taken when planting in gardens to ensure no damage occurs to the waterproof membranes. All planting is to be laid over a green-roof system that complies with EEuropean Federation of Green Roof Associations, ( EFB), or equivalent, and in accordance with the drawings provided.

### 1.26 Grass and Meadow Seeding

#### 1.26.1 Herbicide Application

- Type: Suitable for suppressing perennial weeds and existing grass.
- Timing: Allow fallow period before cultivation.
- Duration: As manufacturer's recommendation

#### 1.26.2 Seedbed cleaning before sowing

Operations: Kill pernicious weeds with selective contact herbicide.

#### 1.26.3 Cultivation

- Compacted topsoil: Break up to full depth.
- Soil ameliorant/ Conditioner/ Fertilizer are to be used to boost late seeding only. Type to be used is to be agreed with the administering body depending on the time of year and the condition of the soil.
- Tilth: Reduce topsoil to a tilth suitable for blade grading.
  - Depth: 75 mm.
  - Particle size (maximum): 20 mm.
- Material brought to the surface: Remove stones and clay balls larger than 50 mm in any dimension, roots, tufts of grass, rubbish and debris.

#### 1.26.4 Topsoiling

- Areas to be reinstated shall be top-soiled to a min. depth of 150mm.
- Quantity: Provide as necessary to make up any deficiency of topsoil existing on site and to complete the work.
- General: Do not use topsoil contaminated with subsoil, rubbish or other materials that are:
  - Corrosive, explosive or flammable;
  - Hazardous to human or animal life;
  - Detrimental to healthy plant growth.

#### 1.26.5 Grading

- General appearance to be achieved: A fine graded finish to bring the ground to a uniform and even grade at the correct finished levels with smooth, flowing contours.
- Topsoil condition: Reasonably dry and workable.
- Contours: Smooth and flowing, with falls for adequate drainage.
- Hollows and ridges: Not permitted.
- Finished levels after settlement: 25 mm above adjoining paving, kerbs, manholes etc.
- Blade grading: May be used to adjust topsoil levels provided depth of topsoil is nowhere less than 150mm.
- Give notice: If required levels cannot be achieved by movement of existing soil.

## Planting Specification

### 1.26.6 Fertilizer for Seeded Areas

- Types: Apply both:
  - Superphosphate with a minimum of 18% water-soluble phosphoric acid.
  - A sulphate of ammonia with a minimum of 20% nitrogen.
- Application: Before final cultivation and three to five days before seeding/turfing.
- Coverage: Spread evenly, each type at 70 g/m<sup>2</sup>, in transverse directions.

### 1.26.7 Final Cultivation

- Timing: After grading and fertilizing.
- Seed bed: Reduce to fine, firm tilth with good crumb structure.
- Depth: 50-100mm.
- Surface preparation: Rake to a true, even surface, friable and lightly firmed but not over compacted.
- Remove surface stones/earth clods exceeding:
  - Pastoral areas: 50mm.
  - Fine lawn areas: 10mm.
- Adjacent levels: Extend cultivation into existing adjacent grassed areas sufficient to ensure full marrying in of levels.

### 1.26.8 Grass Seed

- All seeds shall carry appropriate certificates.
- Seed shall be purchased fresh for each growing season and seed purchased impervious sowing seasons is not to be used.
- Seed shall be stored under non-transparent wrapping, off the ground, in a dry, shaded place, in well ventilated conditions under cover and shall be protected from vermin and contamination until required for use.
- No seeding shall take place until the seedbed is completed. All seeding shall be carried out within the sowing season.

### 1.26.9 Sowing

- General: Establish good seed contact with the root zone.
- Method: To suit soil type, proposed usage, location and weather conditions during and after sowing.
- Distribution: 2 equal sowings at right angles to each other.
- Protection: fence off areas with suitable fencing to stop people or animals from trampling new growth.

### 1.26.10 Grass sowing season

Grass seed generally: April to June or August to November.

### 1.27 Cleanliness

- After completion of all works remove all debris and waste material from site.
- Soil and arisings: Remove from hard surfaces and grassed areas.
  - General: Leave the works in a clean tidy condition at completion and after any maintenance operations.

## Maintenance & Management

### 2.0 MAINTENANCE

The maintenance programme will be organised on the basis of specific performance standards which must be met by the contractor at all times and will be the basis on which this contract will be assessed. Along with these performance standards a monthly report sheet shall be filled out and returned each month. Details of the performance standards are outlined below.

Remove all noxious and undesirable weeds from the site. Weeds shall include: Ragwort, Himalayan Balsam, Giant hogweed & Japanese knotweed, Thistle, Dock, Common Barberry, Male Wild Hop and Spring Wild Oat, or any other noxious species identified by the Department of Environment. For the removal of certain species such as Japanese Knotweed a method statement is to be prepared and submitted to the Department of Environment.

#### Performance Standards and Maintenance Operations

##### 2.1 Grassed Areas

###### 2.1.1 Fine-Cut Grass Areas

Fine cut grass areas shall achieve an even cover of vegetation of uniform height and colour comprising predominantly of grass species. No more than 5% of the grass areas shall contain dicotyledonous (dicots) weeds, except clover. Grass cutting shall not be carried out during excessively wet or waterlogged conditions. Contractor to inform administrative authority if conditions are unsuitable.

###### *Fine-Cut Mowing*

Where practical fine grass areas shall be cut using a cylinder mower, otherwise a rotary mower shall be used. All grass clippings shall be collected and removed off-site after each cut.

Lawn grass cutting shall be carried out every 10-14 days during the growing season, (throughout the period of March to October), but will need to be adjusted according to season's weather conditions. Grass shall be kept at a maximum height of 50mm and minimum height of 35mm. A minimum of 24 cuts shall be carried out annually.

###### *Weed Control*

Lawn grass areas shall be treated using an approved selective herbicide according to manufacturer's instructions. Areas of invasive and noxious species in the lawn or areas, shall be spot sprayed.

###### *Fertilizer*

Approved fertilizer shall be applied 2no. times per year to lawn areas if required due to poor grass growth / establishment or yellowing. Spring fertilizer application of NPK ratio 9:7:7 shall be applied in May of each year and Autumn/Winter fertiliser of NPK ratio 3:12:12 shall be applied in October of each year to all fine cut grass areas.

###### 2.1.2 Amenity Grass Areas

Amenity grass areas shall achieve an even cover of vegetation of uniform height and colour comprising predominantly of grass species. Unless otherwise agreed with the landscape architect no more than 15% of the grass areas shall contain dicotyledonous (dicots) weeds, except clover. Grass cutting shall not be carried out during excessively wet or waterlogged conditions. Contractor to inform administrative authority if conditions are unsuitable.

###### *Amenity Grass Mowing*

Where practical grass areas shall be cut using a cylinder mower, otherwise a rotary mower shall be used. Unless excessive or unsightly, or likely to cause a nuisance or damage to the sward, arisings shall be spread evenly over sward areas collected.

Lawn grass cutting shall be carried out every 10-14 days during the growing season, (throughout the period of March to October), but will need to be adjusted according to season's weather conditions. Grass shall be kept at a maximum height of 75mm and minimum height of 35mm. A minimum of 24 cuts shall be carried out annually.

###### *Weed Control*

Areas of invasive and noxious species in lawns, shall be spot sprayed.

Weed infestations shall be reviewed in the context of the aesthetic and amenity functioning of the grass and if necessary controlled or eradicated.

###### *Fertilizer*

Approved fertilizer shall be applied 2no. times per year to lawn areas if required due to poor grass growth / establishment or yellowing. Spring fertilizer application of NPK ratio 9:7:7 shall be applied in May of each year and Autumn/Winter fertiliser of NPK ratio 3:12:12 shall be applied in October of each year to all fine cut grass areas.

###### 2.1.3 Meadow Grass

Meadow grass cutting will occur twice in the first year in spring once grass has established and in August/September to improve growth. There after it can be cut annually. Cut grass should be removed from field to stop rotting and damage to grass growth.

###### *Weed Control*

Areas of invasive and noxious species in meadow grass areas, shall be spot sprayed.

###### *Fertilizer*

Fertiliser is not to be applied to meadow grass areas unless there is no establishment and only then at dilute rates.

###### 2.1.4 Swale

Planting to be kept well-weeded in the first year. Once good vegetation cover is achieved, the annual need for weeding will be reduced. Leave growth standing through winter Cut back in Spring if necessary. Use stems as a mulch. Water upon establishment and in exceptionally dry periods.



## Maintenance & Management

### 2.1.4 Edging and Strimming

Grass edges along pathways, planting borders, roadways, trees, lampposts, signs and any other obstacle shall be kept neat and tidy at all times.

Between the months of March and October inclusive edging shall be carried out to all areas of grass abutting isolated/ specimen trees or shrub borders or mulch circles. These areas shall be maintained using a half moon tool or similar to maintain straight or curved defined line and shall be carried out a minimum of 2 - 3 times per year.

Mowing strips against permanent obstacles shall be a max. width of 150mm and shall be maintained using a hand trimmer. Large areas of desiccated/ burnt off grass are not permitted. Strimming shall be carried out a min. of 12 times per year.

Grass clipping and all arisings shall be swept up and removed off site.

### 2.1.5 Failed areas

Areas of grass which fail or are damaged or worn shall be reinstated by re-turfing or re-seeding in accordance with the original specification.

### 2.2 Shrub Planting

Shrub areas shall be kept litter and weed free, particularly of perennial weeds. Healthy growth shall be maintained to cover as much as possible of the planting area and allowing the individual plants to achieve as near as possible their natural form. With the exception of hedges, boxing or pruning to shapes is prohibited. Plants shall be contained with designed planting areas and pruned to avoid obstructing pathways or sightlines. Climbers are to be pruned and tied into trellises as required, with two main inspections annually to check trellis system is intact and anchor points are secure.

### 2.3 Pruning

In general pruning shall be done only to enhance natural growth. Dead, damaged and diseased portions of the plant will be removed. All cuts shall be flush and clean, leaving no stubs or tearing of bark. All major pruning shall be done following flowering or during plant's dormant season. Emergency or minor pruning shall be done when needed.

Pruning shall be carried out to maintain proper size in relationship to adjacent plantings and intended function. Remedial attention and repair to shrubs shall be provided as appropriate by season or in response to incidental damage.

Groundcover plants shall be pruned as required to restrain perimeter growth to within planting bed areas where adjacent to walks and curbs. Tip prune selected branches of low growing shrub or groundcover masses to maintain even overall heights and promote fullness.

Certain plants, such as Cornus spp. will require heavy annual pruning in order to maintain healthy colourful stems and healthy leaves. All arising's from pruning shall be removed of site.

### 2.4 Weed Control

Planting beds shall be maintained relatively weed free (no more than 10% of weed cover at maximum) by hand weeding or spot spraying any emergent weeds during the growing season with Glyphosate or approved equivalent. Saplings shall be removed from all planting areas on emergence or immediately after to prevent establishment.

Specific weed control operations shall be carried out a min of 9no. times per year, however it will be the contractor's duty to control weeds by hand weeding or other if weed cover exceeds 10% of the planting area.

### 2.5 Mulching

Shrub beds shall contain a min. depth of 50mm bark mulch throughout the year. Contractor to top-up as 2 times per year or as appropriate to maintain depth. Mulch is not required in areas where plant foliage completely covers the soil surface, such that the soil is not visible through the foliage. The contractor shall spot treat to remove emergent weeds as specified above but do not cultivate or incorporate the mulch into the soil. Any mulch outside of designated planting areas shall be returned to the planter on a weekly basis.

Mulch shall be uniform in colour and appearance, and free of leaves, sticks, or trash. Mulch may be chipped or shredded wood, bark. When replacing existing mulch, use a mulch product that is similar in appearance to that already at the site.

### 2.6 Tree Planting Care

Trees shall be maintained in a healthy, vigorous growing condition with a well-shaped framework for future growth.

### 2.7 New Tree Planting

Spring and autumn of each year during the maintenance period the trees, double-stakes, rabbit guards and ties shall be checked and adjusted, the soil firmed, any dead wood removed back to healthy tissue and mulch adjusted to original levels. Any broken stakes or ties evident throughout the maintenance period shall be replaced.

A 1m-diameter mulch circle/square shall be maintained at the base of each tree located in open grass areas or grass verges. Top up bark mulch to 75mm where required and make good any mulch mats.

During the first growing season all standard trees / semi-mature trees shall be watered at least five times during the growing season - in April, May, June, July and August unless otherwise directed by the Landscape Architect. During the second growing season trees will be kept well watered, particularly during June, July and August.

The edge of the mulch circle shall be maintained in a neat and tidy condition as above.

The surface of all planting pits is to be kept free of weeds during the maintenance period by hand weeding of annual weeds, and spot application of translocated herbicide, (as per manufacturer's instructions), for perennial weeds to be carried out on three visits during the growing season.

## Maintenance & Management

### 2.9. Tree Stakes and Ties

Check tree stakes and ties on each maintenance visit. Repair, strengthen and adjust (loosen / tighten) to ensure optimum functioning and trees not being damaged by poor fixings. If trees no longer require stake / tie remove. Prior to handover, check all tree stakes and ties and remove those no longer required.

### 2.8 Woodland/Scrub Area Management

Woodland areas specified shall be maintained in a healthy, vigorous condition and free from litter and noxious weeds throughout the year.

Certain areas of woodland may require thinning over the 5-year period. These areas shall be thinned by no more than 10%, removing only the weaker tree specimens. Thinning shall be carried out as directed onsite by administrative authority.

Woodland areas shall be sprayed 3 times per year with a suitable contact herbicide. Contractor to ensure that no damage is caused to trees by herbicide application.

Areas of natural scrub as indicated on the maintenance plans shall be contained by trimming back once per year. The contractor shall spray the perimeter of the scrub areas with a contact herbicide to control noxious weeds. This shall be carried out 2no. times per annum.

All clearance operations within woodland and scrub areas shall be carried out outside of the bird-nesting season to preserve the bird life in the area. This season extends from the 1<sup>st</sup> March to 31<sup>st</sup> August.

### 2.9 Litter Clearance/Pick-up

The contractor shall maintain all areas free from litter. This shall mean the removal of all extraneous litter, rubbish and any other debris from all areas, which will include grass areas, planted areas, carparks, footpaths as well as woodlands and tree canopies.

Notwithstanding the above it is expected that the contractor and his staff shall take sufficient pride in the appearance of the site and that they would pick up all visible litter during every site visit.

In addition to removal of litter from footpaths, planted areas, etc., the contractor shall make provision for the immediate (within 1 days of notification) arrangement for collection and removal of all extraneous matter which has been deliberately deposited on site by persons known or unknown (fly-tipping).

### 2.10 Replacements

Any tree, hedge or shrub that is removed, uprooted, destroyed or becomes seriously damaged, defective, diseased, or dead shall be replaced in the same location with another plant of the same species and size as that originally planted within 5 years after planting. All such replacements shall be carried out in the first available planting season after the requirement to do so is recognised.