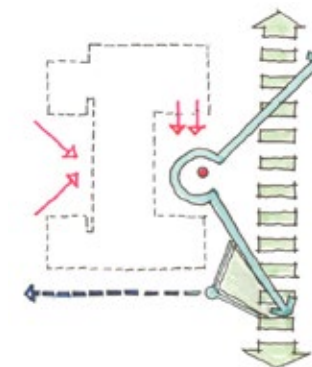


Key

1. Main Entrance
2. Shrub and Perennial Planting
3. Raised Planters/Allotments
4. Feature
5. Cafe Terrace
6. Perennial Border
7. Evergreen Shrubs
8. Pergola with Gravel Resin Bonded Path
9. Evergreen Hedge Planting
10. Amenity Lawn
11. Wildflower Meadow
12. Native Understorey Planting
13. Ornamental Trees
14. Playground with Bark Mulch Surface
15. Sand Pit backed with Timber Climbing Wall
16. Bicycle Stands
17. Biosolar Green Roof with PV's



Section 7 - Landscape Design Response

Proposed Hard Landscaping

Arrival Concept

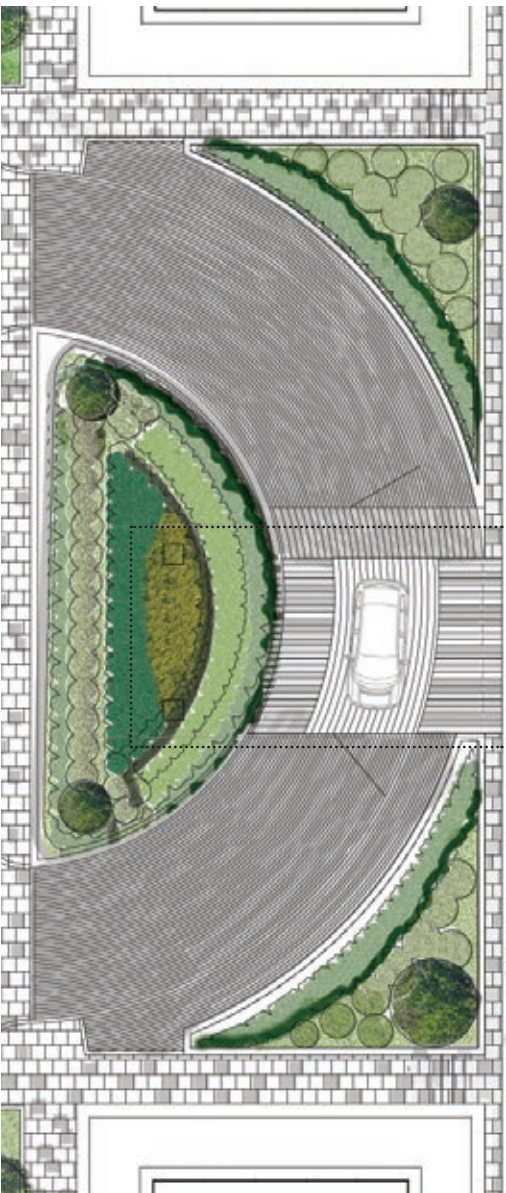
The frontage landscape would provide a formal face to the development, using radially laid paving to reinforce the shape of the carriage ramps leading up to the main entrance.

Clipped hedges would provide screening to Melliss Avenue, whilst the internal planting would consist of flowering perennial and annual planting to provide year round colour and texture.

Linear paving at the top of the carriage ramp would provide a visual cue to the main entrance and could be continued through the building to the central courtyard

The scheme seeks to incorporate a row of columnar trees along the Melliss Avenue frontage in order to replace end of lifecycle existing Cypress Oak (*Quercus robur* Fatigiata Koster) trees.

The proposed trees along the frontage are intended to provide an element of vertical structure to the street frontage that still allows the building to have a presence on the street.



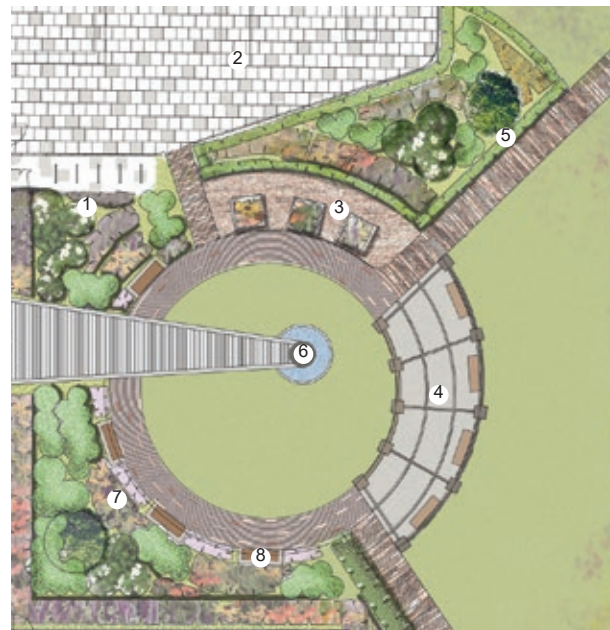
Porte Cochere

An example of a Porte Cochere, providing covered, level access to the main entrance.

Ramped Access

Ramped transition from road / pavement level to internal floor level enables full accessibility to residents in wheelchairs, cars, mobility scooters and on foot, with no trip hazards to negotiate.





1. Shrub and Perennial Planting



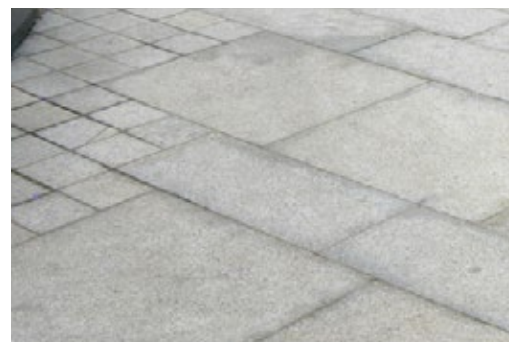
5. Evergreen Hedge



2. Cafe Terrace



6. Feature



7. Perennial Border

Central Courtyard Detail

The central courtyard aims to provide a unifying form to shared amenity space. A central feature acts as a focal point to the space that is visible from the main entrance and also from the pathway leading to the riverside. A curved pergola helps to frame views toward the riverside and create a permeable edge to the formal courtyard and a transition between the formal landscape and the more wild and natural landscape beyond.

The café terrace, which is aimed at being a shared amenity for residents and the public, is linked to the central hub via a pathway. This ensures good passive surveillance of all people coming and going through the space. An area just off the main visual corridor has been set aside for raised planters where residents are able to grow either ornamental or food plants. This could either be an informal arrangement or part of structured activity for residents. The courtyard provides a number of seating opportunities both within shade and sun. All seating would be provided with back rests to maximise the comfort for residents.

The courtyard planting would consist of ornamental shrubs and perennials to the front of each bed, with a backdrop of evergreen shrubs and hedges in order to provide year-round interest and a robust framework to the planting scheme.



3. Raised Beds/Allotments

Section 7 - Landscape Design Response

Proposed Soft Planting

Playground Concept

The play space, located at the south eastern corner of the site, sits at a junction between pathways connecting to the riverside and the car park. The aim of the play space is to provide both structured play with equipment that is inclusive, and natural play that provides tactile materials and scope for imaginative and role play activities. The play space would provide separation between infant play around a sand pit, and juvenile play with a climbing wall and tree house. The play space would be integrated into the embankment with seating for adults or guardians.



1. Nest Swing



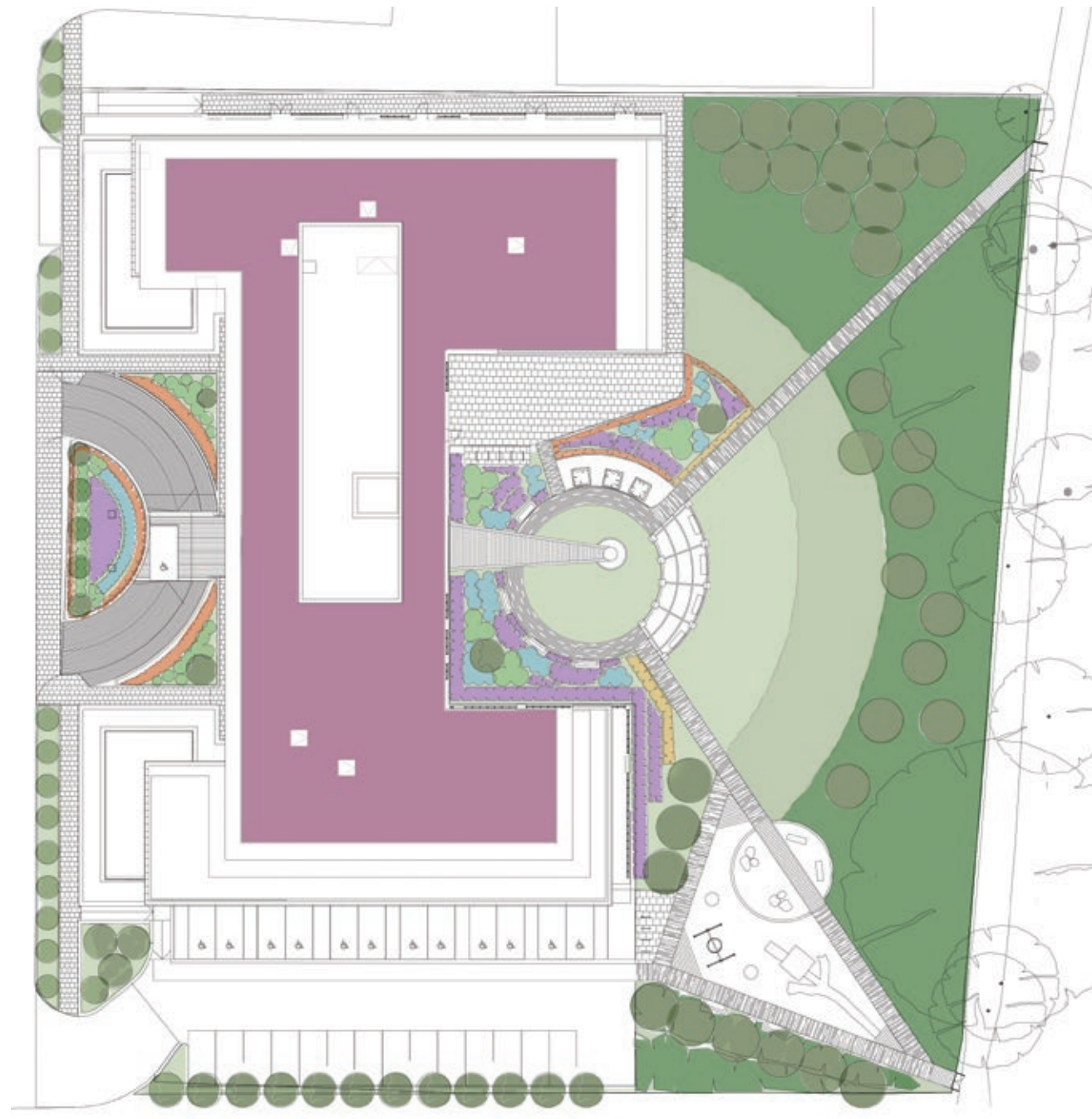
2. Sandpit with Boulders



3. Tree Trunk/Fallen Log









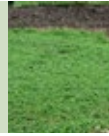






4. Timber Bench



Proposed Planting Palette

Whilst the entrance and the courtyard would consist of primarily ornamental species, the area within the MOL would consist of wildflower meadows and native under-storey planting beneath the riverside tree canopy.

Trees and evergreen shrubs would be used to frame the play space and provide spatial containment to the adjoining site. Evergreen hedges would be used to provide a strong framework for the planting and numerous species of evergreen shrubs would be used to provide year-round interest and colour.


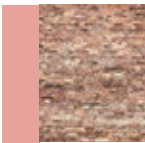
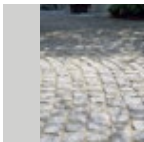
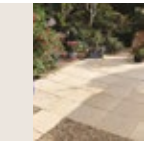



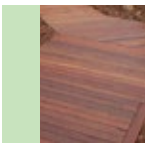
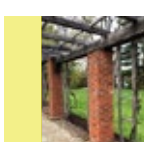

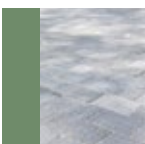
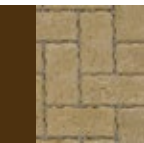

		Trees		Evergreen Shrubs
		Large/Medium Shrubs		Evergreen Hedge
		Lawn		Meadow 1114m ²
		Box Hedge		Native Shrub Planting 378m ²
		Perennials		Biosolar Green Roof with PV's

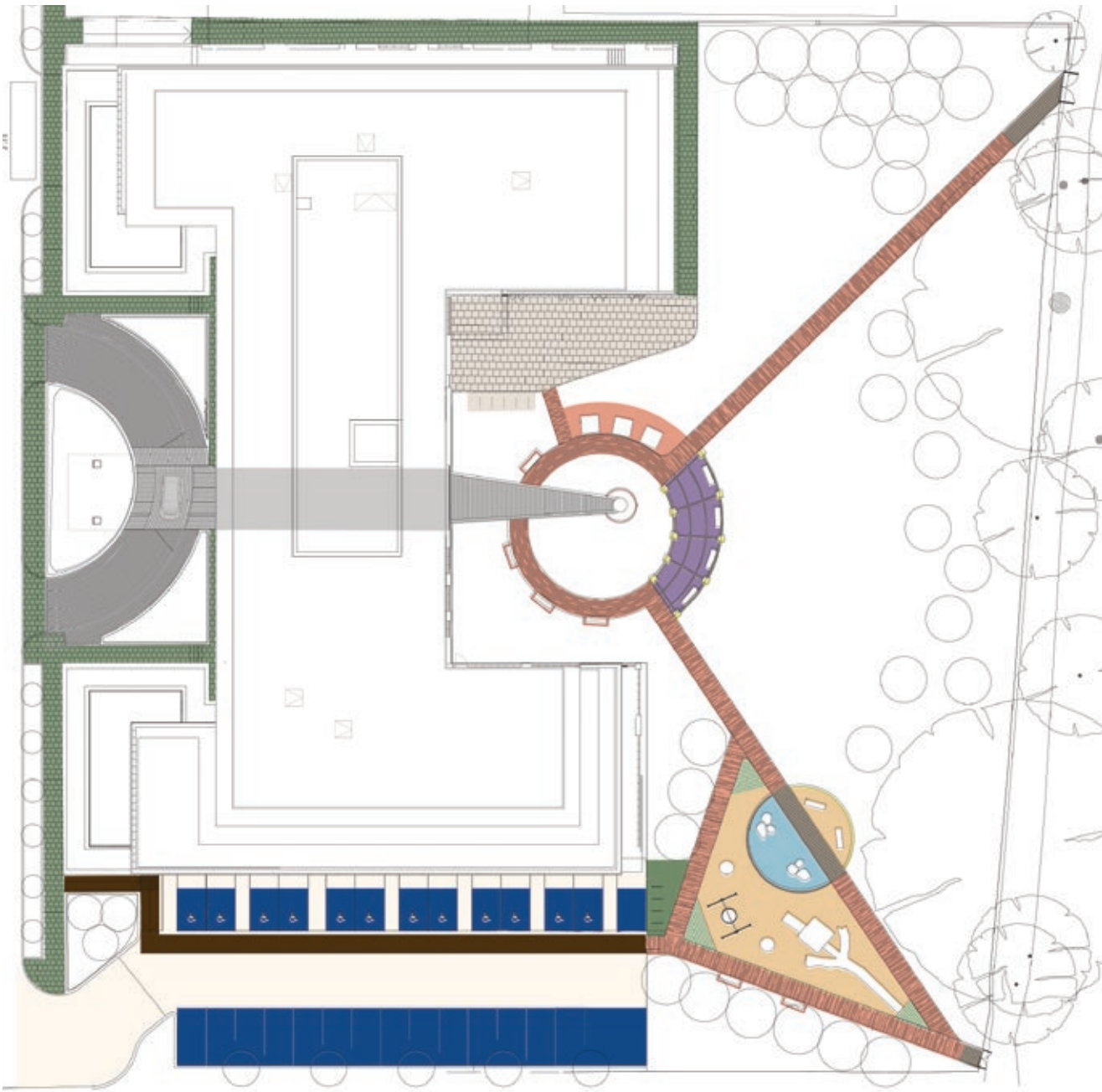
Section 7 - Landscape Design Response

Proposed Materials

Proposed Materials Palette

The hardworks palette should establish a hierarchy of materials that is robust and easy to maintain. Entrance areas would be laid with high quality natural stone or concrete with exposed aggregate to provide high durability and slip resistance. Areas within the courtyard would be given a more subtle hue with earthy tones. Resin bound gravel would be used beneath the pergola to create a softer and more natural look, but still with a smooth and even texture and adequate slip resistance. Bridges across the drainage ditch between the site and the riverside pathway would be finished with composite timber materials that are impervious to rot or warping, but provide high slip resistance. The play space would be laid with soft materials such as play bark and sand.

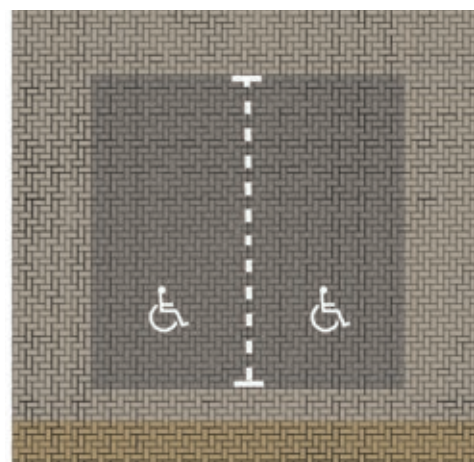
	Bridge		Concrete Block Pavers		Gray Granite Setts 80x80
	Buff Concrete Slab Paving 600x600		Sand Pit		Resin Bonded Gravel Path
	Bark Mulch		Composite Timber Decking		Brick Piers/Walls
	Porous Block Paving Marshalls Priora Natural 200x100		Gray Block Paving 400x400		
	Porous Block Paving Marshalls Priora Buff 200x100		Porous Block Paving Marshalls Priora Charcoal 200x100		





Proposed Parking Palette

The intention is for the carpark to be laid with permeable block paving using Marshalls Piora with white marker blocks to delineate the bays. Light grey will be used for the carriageway and dark grey for the bays to avoid oil stains and other marks from cars.



Parking Space Detail

Marshalls Piora Permeable Block Paving, 100x200

'Charcoal' for bays and 'Natural' for carriageways with white marker blocks to delineate bays and disabled allocation and 'Buff' for the pathway to delineate a route through the car park for pedestrians.

Section 7 - Landscape Design Response

Proposed Biodiversity Strategy

The diagram opposite illustrates the proposed biodiversity strategy which combines existing habitats, proposed ground level habitats and a green roof combined with photovoltaics.

The proposals for biodiversity include species rich meadows, mid-level and low level native planting as an extension to the woodland species currently present along the riverside.

Extensive native tree planting to the north and south of the site will provide screening and offset the replacement of existing trees without compromising openness and views to the riverside corridor.

Ornamental planting around the building entrance and within the courtyard is aimed at providing year round interest through colour, texture and seasonal colour change as well as providing species which attract pollinators.

- Tall Native Shrub Planting 1110m2**
- Cornus sanguinea
 - Sambucus nigra
 - Corylus avellana
 - Salix lanata AGM
 - Salix caprea
 - Salix viminalis
 - Ligustrum vulgare
 - Euonymus europaeus
 - Viburnum lantana
 - Ilex aquifolium

- Meadow Habitat 339m2**
- Achillea millefolium
 - Betonica officinalis
 - Centaurea nigra
 - Filipendula ulmaria
 - Galium verum
 - Lathyrus pratensis
 - Leucanthemum vulgare
 - Lotus corniculatus
 - Plantago lanceolata
 - Primula veris
 - Prunella vulgaris
 - Ranunculus acris
 - Rhinanthus minor
 - Rumex acetosa
 - Silaum silaus
 - Silene flos-cuculi
 - Trifolium pratense
 - Agrostis capillaris
 - Alopecurus pratensis
 - Anthoxanthum odoratum
 - Briza media
 - Cynosurus cristatus
 - Festuca rubra
 - Hordeum secalinum
 - Phleum bertolonii

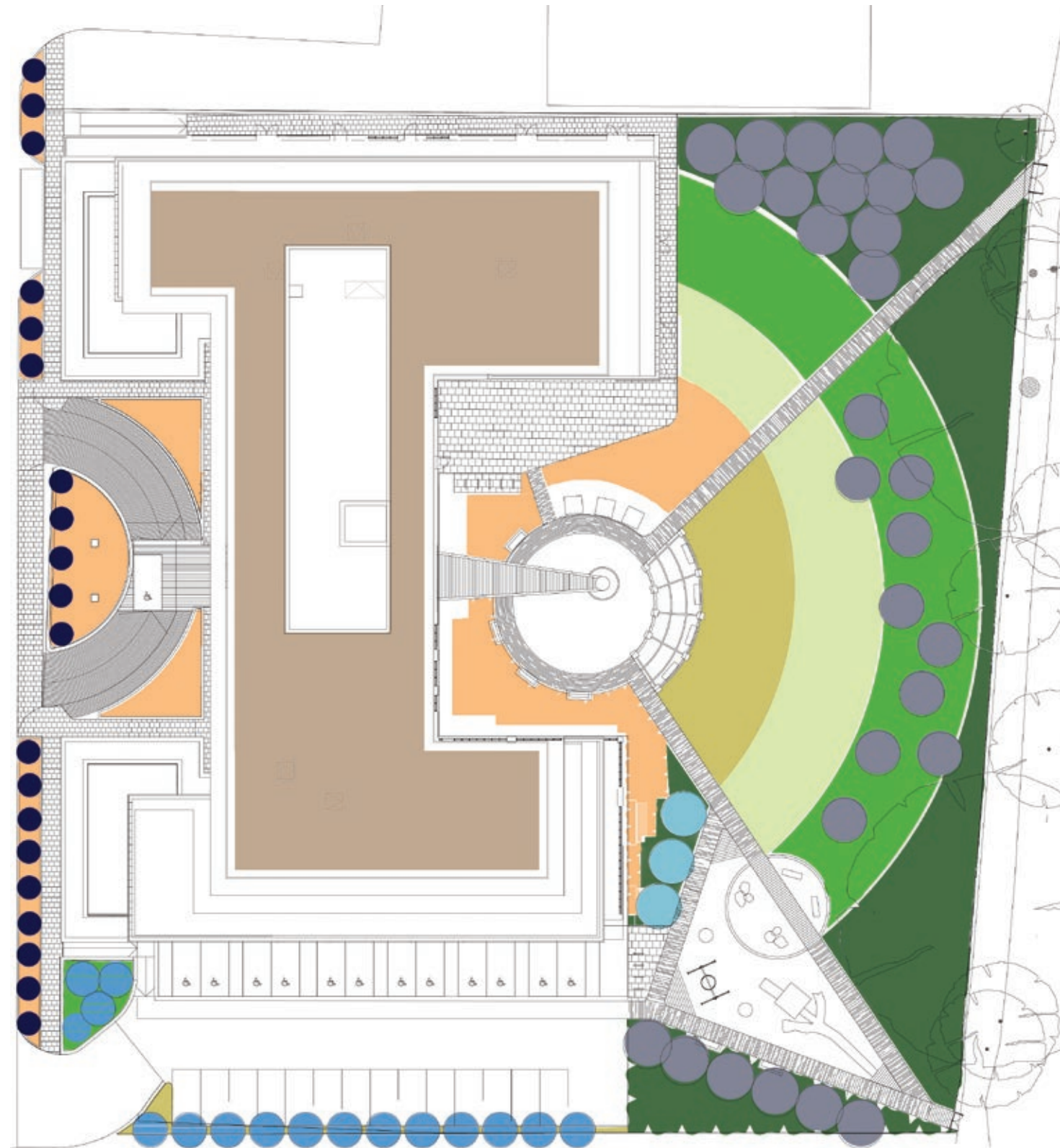
- Lawn 191m2**

- Low Native Shrub Planting 520m2**
- Iris foetidissima
 - Pulsatilla vulgaris
 - Anemone nemorosa
 - Echium vulgare
 - Anthriscus sylvestris
 - Ruscus aculeatus
 - Hyacinthoides non-scripta
 - Viburnum opulus
 - Narcissus pseudonarcissus
 - Ajuga reptans
 - Blechnum spicant
 - Polystichum setiferum
 - Dryopteris filix-mas

- Ornamental Shrub Planting with Plants for Pollinators 517m2**
- Magnolia stellata
 - Viburnum x bodnantense 'Dawn'
 - Forsythia intermedia 'Lynwood'
 - Lamium maculatum 'Beacon Silver'
 - Mentha x piperita
 - Origanum vulgare
 - Osmanthus heterophyllus
 - Digitalis purpurea
 - Delphinium elatum
 - Phlox paniculata
 - Geranium sanguineum
 - Ajuga reptans
 - Lavandula angustifolia
 - Lupinus albus
 - Spiraea japonica
 - Agapanthus africanus

- Native Trees**
- Tilia cordata 'Greenspire'
 - Betula pendula
 - Alnus glutinosa

- Bisolar Green Roof with PV's, min. 150mm Substrate depth 996m2**
- Agrostis capillaris
 - Poa nemoralis
 - Cynosurus cristatus
 - Festuca rubra
 - Poa pratensis
 - Poa trivialis
 - Ajuga reptans
 - Lunaria annua
 - Erysimum sp.
 - Primula vulgaris
 - Primula vulgaris
 - Mentha spicata
 - Malva moschata
 - Myosotis arvensis
 - Origanum vulgare
 - Papaver rhoeas
 - Scabiosa columbaria
 - Tanacetum vulgare
 - Verbascum thapsus
 - Verbena bonariensis
 - Achillea millefolium
 - Anthemis tinctoria
 - Antirrhinum majus
 - Aquilegia vulgaris
 - Calendula Cyanus
 - Campanula glomerata
 - Centaurea cyanus
 - Centaurea nigra
 - Centaurea scabiosa
 - Cleome sp.
 - Echium vulgare
 - Pulicaria dysenterica
 - Geranium pratense
 - Knautia arvensis
 - Lathyrus latifolius
 - Leucanthemum vulgare
 - Liatris spicata
 - Linaria maroccana
 - Linaria purpurea
 - Lychnis flos-cuculi
 - Anthyllis vulneraria
 - Lotus corniculatus
 - Prunella vulgaris
 - Leontodon hispidus
 - Trifolium pratense
 - Onobrychis viciifolia
 - Rhinanthus minor
 - Silene dioica



Section 7 - Landscape Design Response

Protection and Maintenance

Tree Protection Measures

Trees are often overlooked during development and, as a result, many are either lost, or given inadequate protection, that results in their demise within a few years. BS 5837 Trees in relation to design, demolition and construction, is the benchmark document for how to successfully take account of, and retain, suitable trees in proximity to development.

Common damage to trees during development maybe:

- abrasion of bark and wounds that leave wood tissue exposed;
- crushing of roots by vehicles / plant equipment and / or storage of materials;
- severing and removal of roots by excavation;
- broken branches, leaving wood tissues exposed;
- poor pruning;
- fire damage;
- poisoning of roots from spillage, or storage of fuel, oil, chemicals and any other potentially noxious materials;
- changes in soil levels around trees, resulting in root death;
- installation of impermeable surfaces.

The part of the tree most susceptible to damage is the root system because roots cannot be seen and their extent is not realised.

The guidance contained within 'BS 5837 Trees in relation to design, demolition and construction - Recommendations' identifies a Root Protection Area (RPA) based on the stem diameter, but protective measures may need to be increased, for example, to the extent of the branch spread, to avoid damage to the above ground parts of the tree. Tree protective measures are detailed within the British Standard, the default specification for a protective barrier is shown in the diagram opposite.

Landscape Maintenance

Hard Landscape Maintenance

To maintain the condition of the hard landscaping and to ensure the public realm remains attractive a maintenance regime needs to be put in place that:

- removes any litter, leaves or other debris;
- keeps surface gutters and drains free from detritus;
- regularly removes stubborn stains and chewing gum whilst not damaging the paving or street furniture;
- refills any sand joints;
- cleans any street furniture, signage, lighting etc. and retreats any timber;
- replaces any light bulbs;
- reinstatement materials need to be a similar specification as to the original works.
- provision for reinstatement needs to be agreed at an early stage.
- a maintenance manual should be provided that includes:
 - 'as built' drawings;
 - procedures for maintenance works;
 - the names and contact information of all suppliers;
 - procedures for reinstatement.

Soft Landscape Maintenance

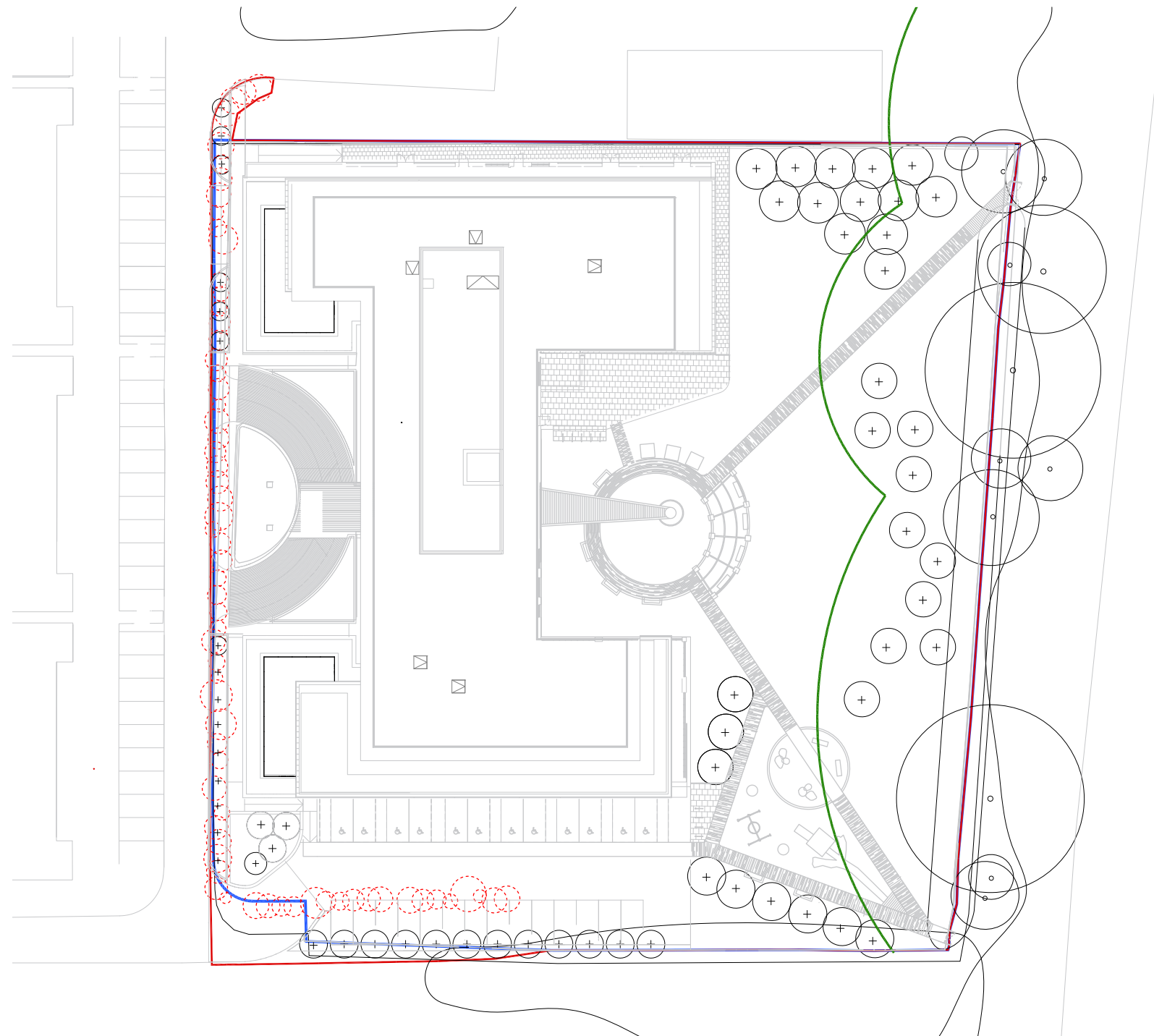
Elements of soft landscaping will require regular maintenance particularly during the initial establishment period.







Soft landscape to be maintained to an agreed detailed programme to be included with the maintenance manual that sets out management requirements including:

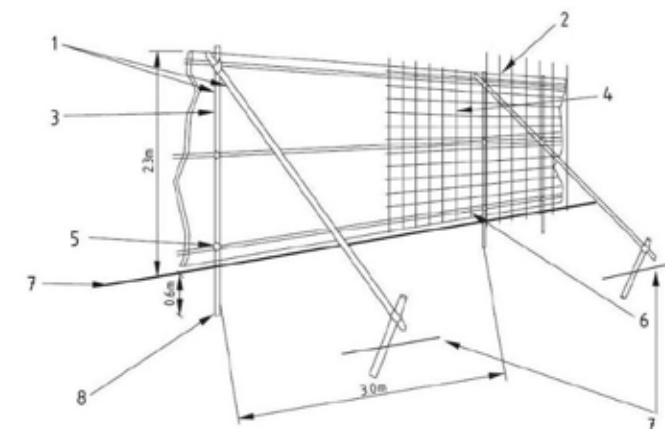
- Tree details to include a water pipe to allow additional water to reach the roots.
- All dead or failing trees/plants would need to be replaced with a tree/plant of the same size as the one being replaced.
- Trees and plants will require pruning in accordance with the species requirements.
- Weeds will need to be suppressed using suitable safe methods.

Utilities

The public realm design requires careful co-ordination with the utilities provision at a strategic level. Utilities would be required to be positioned so as not to interfere with tree roots and vice versa. Potential future service expansion requirements should be considered at an early stage to prevent any disruptive works, and any excavations required for works to services should involve replacement with original materials.



-  Existing Trees
-  Proposed Trees
-  Removed Trees
-  Root Protection Zone Area
-  Melliss Avenue Boundary Line
-  Melliss Avenue Planning Line



Tree Protection Measures in Accordance with BS 5837:2012

1. Standard scaffold poles
2. Uprights to be driven into the ground
3. Panels secured to uprights with wire ties and where necessary standard scaffold clamps
4. Weldmesh wired to the uprights and horizontals
5. Standard clamps
6. Wire twisted and secured on inside
7. Ground level
8. Approx. 0.6m driven into the ground

invest  **change**