

**Figure 3.9 Rev B**  
Ecology

- |  |   |
|--|---|
| <p>1 Potential location for a small area of dead wood to be (1a) stacked on site, within a planted area and (1b) set into the ground for stag beetle larvae.</p> <p>2 Areas of biodiverse roof - min 80mm growing substrate. Mix of areas seeded with native wildflowers and areas of rubble.</p> <p>3 Scattered trees, native species, underplanted.</p> <p>4 Landscape planting, primarily design to be visually attractive, including native species and species of recognised wildlife value</p> | <p>5 Climbing plants provide vertical nesting habitats and foraging resources.</p> <p>● Locations for bird boxes (bricks) integrated into facade (NE orientation so away from full sun / prevailing winds).</p> |
|--|---|



1

## Ecology

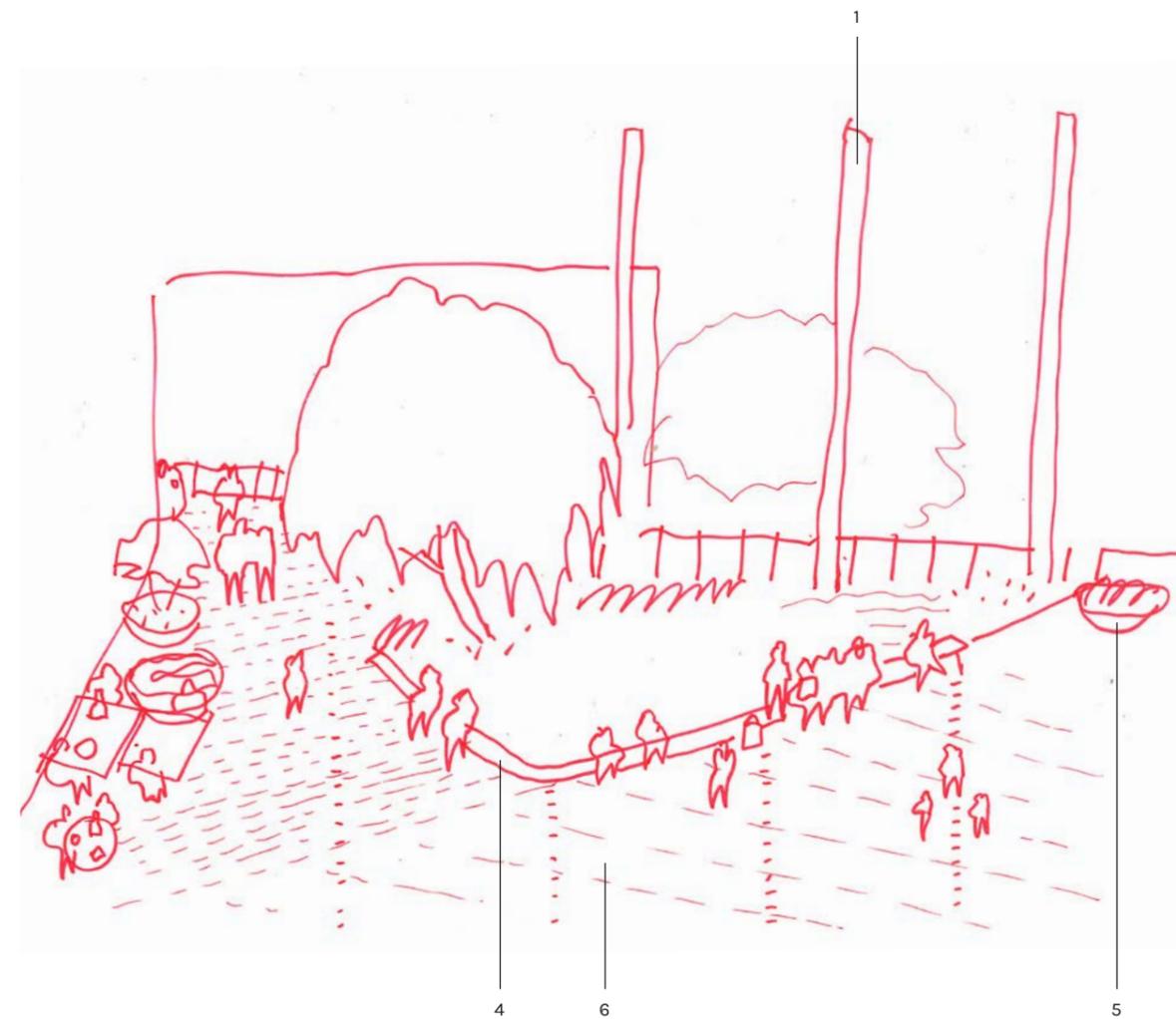
Whilst soft landscaping is generally designed to be visually attractive rather than ecological, the ecology report notes that recommendations to enhance the biodiversity value of the site in accordance with national and local planning policies comprise the inclusion of sustainable drainage systems including biodiverse roofs; landscape planting of recognised wildlife value; the provision of bird nesting opportunities; and, wildlife-friendly fencing. Strategies for meeting the ecological objectives as follows:

- **Stag beetles** rely on tree stumps and dead wood for their larvae to develop. Although not identified as present on site, the larvae of stag beetle could be present in the root systems of any trees being removed. So, a small amount of dead wood will be buried in the ground in the boulder garden.
- The existing **invertebrate tower** will be relocated to a suitable area in order to ensure its continuing use by invertebrate species. In addition a small area of dead wood will be stacked on site, within a planted area to benefit other invertebrates.
- Some compensatory habitat will be established on site, including provision of scattered trees supplemented by an understorey of native forb species, and hedging as described in Chapter 6. Native species are proposed where appropriate.
- **Wildlife planting**, whilst perhaps not integral to the soft landscape plans is provided by native species and species of recognised wildlife value. The use of nectar-rich and berry producing plants will attract a wider range of insects, birds and mammals and continue to accommodate those already recorded at the site.
- **Predominantly native trees are under-planted** to improve structure and cover for wildlife.
- The planting design also includes the **climbing plants** (Wisteria) on the piers between the doors to the storage units to provide vertical nesting habitat and foraging resources for birds and invertebrates; and,
- Good **horticultural practice** will be utilised, including the use of peat-free composts, mulches and soil conditioners, native plants with local provenance and avoidance of the use of invasive species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended).
- A **biodiverse roof** is proposed, which has areas of seeded wildflowers, and some areas of rubble.
- **Bird nesting bricks** for Swifts and Sparrows are provided on north and eastern facing facades.



**Figure 4.2**  
Landscape Masterplan

- 1 Square**  
Public space for performances, markets and sitting out. Potential for water features, event lighting, and tree planting
- 2 Water Lane**  
A much improved pedestrian route with new trees and planting.
- 3 Lookout**  
Feature seating steps and bastion 'lookout' space
- 4 Terrace**  
10m deep public space with outdoor seating, space for sitting and watching the river.
- 5 Embankment Access**  
Level access created between Embankment and Diamond Jubilee Gardens
- 6 Embankment**  
Car park entrance, some parking removed, pavements widened



**Figure 4.5 Rev B**

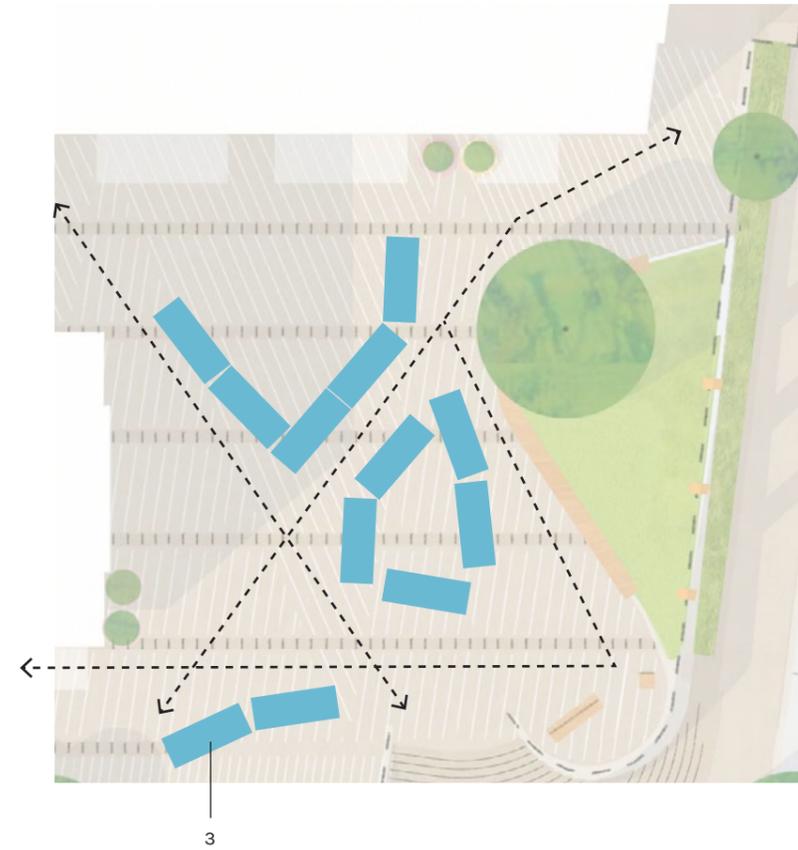
Square, General Arrangement

- 1 Bespoke corten steel lighting columns providing light and power to events
- 2 Weeping willow planted at the edge of the square, providing shade and shelter, softening the impact of the retaining wall to Water Lane, and a visual link to Eel Pie Island
- 3 Lookout space with seating
- 4 15m long curved bench - place for meeting and watching events in the square
- 5 Planting in containers over podium
- 6 Yorkstone paved surface

### The Square

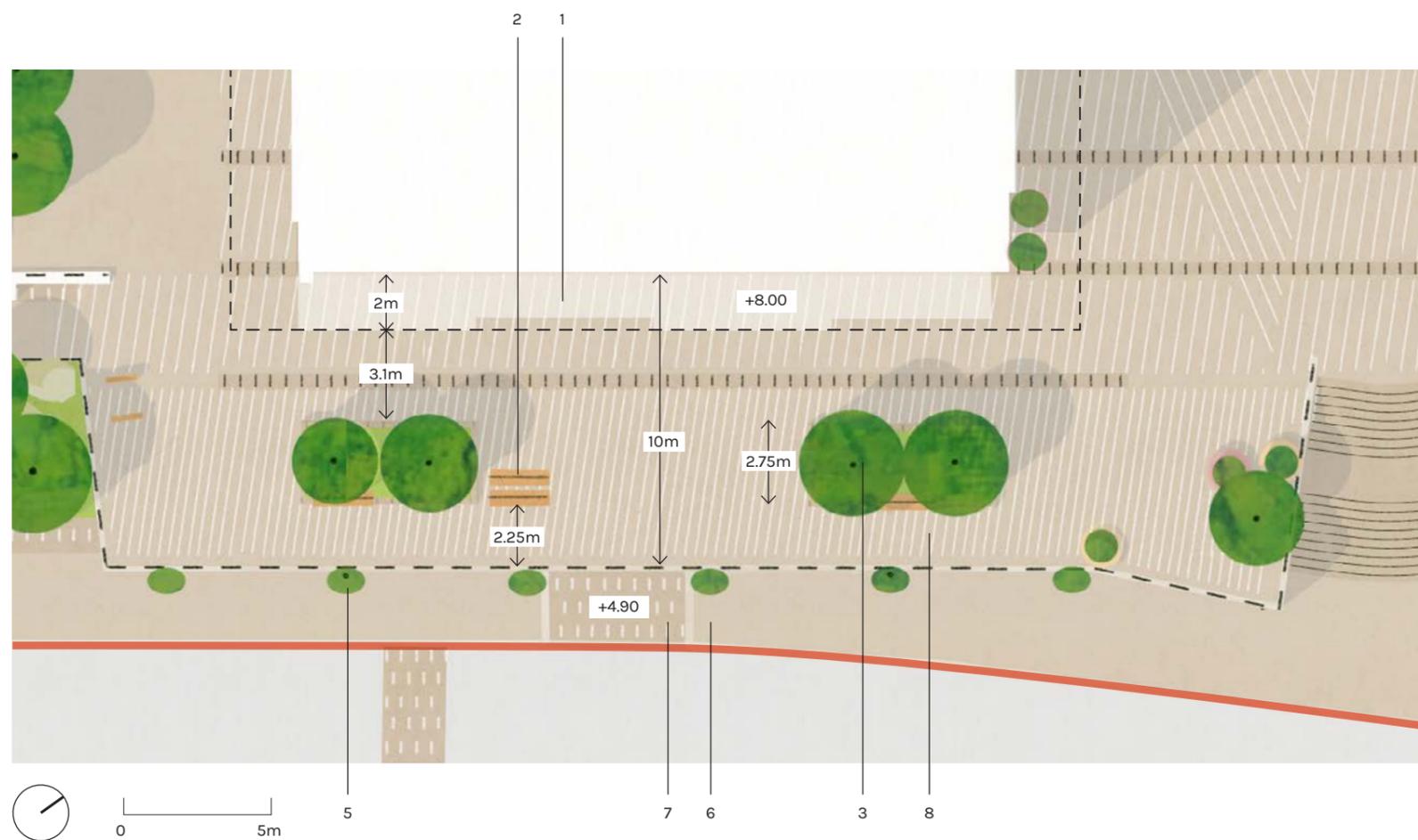
The square provides a clear space of around 430m<sup>2</sup> just smaller than 2 tennis courts, which will enable future flexible uses including events, markets and areas for commercial spill-out. The square is paved with best quality yorkstone and will feel 'special' to walk onto. The paving will be laid in such a way as to aid way finding and navigation, and to break up any potential monotony.

- Masts create enclosure at high level - 'describe volume' of the square, whilst providing lighting for events;
- A large planted area on the north-east side of the square, to soften and provide shade and shelter on the northern edge, softening the lower ground floor retaining wall from Water Lane;
- A 15m long curved bench facing into the square.



**Figure 4.7 Rev B**  
Square configurations

- 1 125 x deckchairs
- 2 8m wide outdoor cinema screen to be positioned away from tree (shown at mature size - will take a while to reach this)
- 3 12 x 1.2 x 3.0m market stalls



**Figure 4.8 Rev B**

Terrace, General Arrangement

- 1 Min 2.0m depth commercial spill-out
- 2 Paired timber benches facing to the water, and into the terrace - continuing the treatment from DJG
- 3 Magnolias planted into raised brick planters
- 4 Cycle parking
- 5 Climbers trained to facade
- 6 Yorkstone footway widened, min 2.5m
- 7 Car park entrance
- 8 Terrace paved with natural stone setts - pattern in surface to break up expanse



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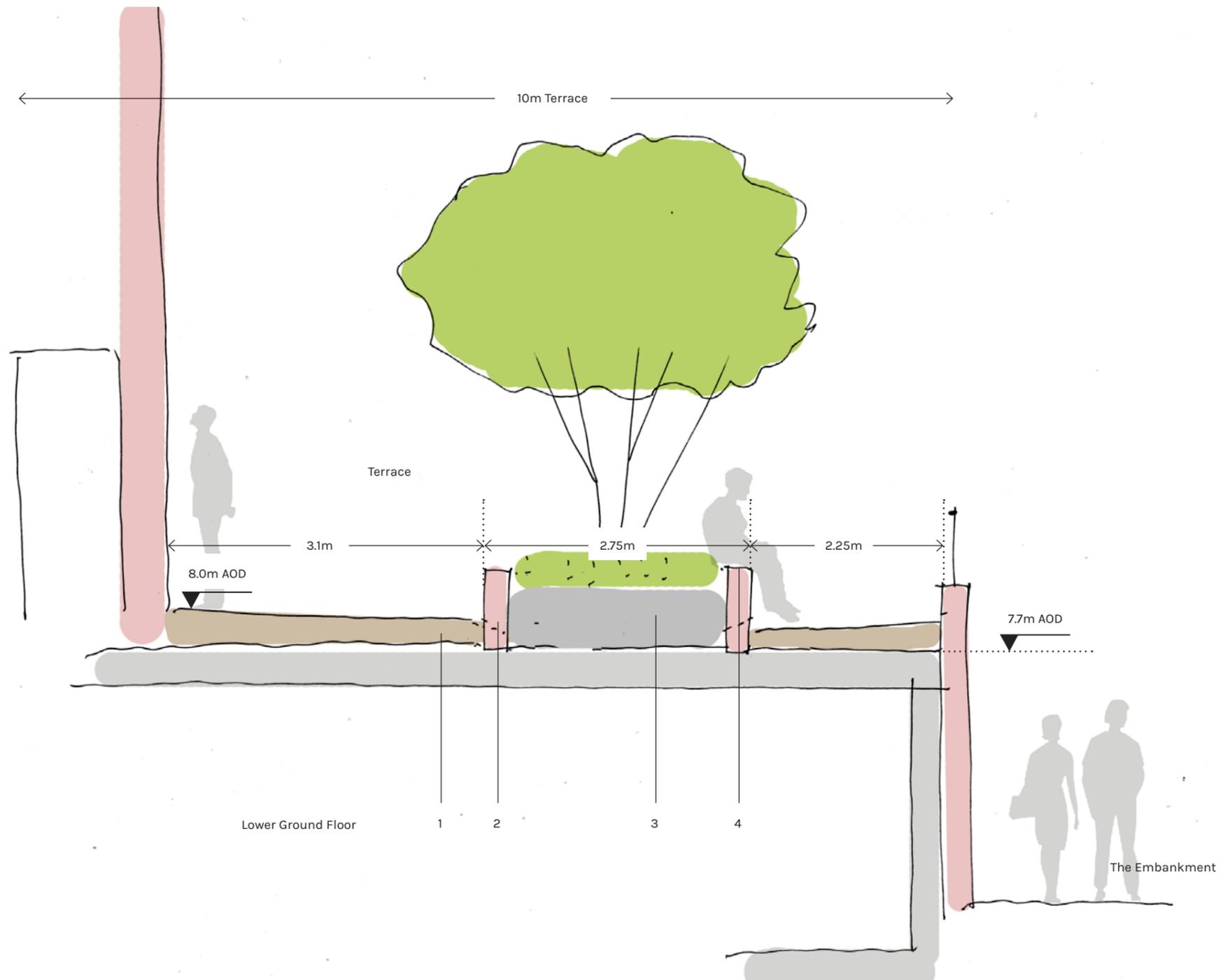


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## The Terrace

A min 10m deep terrace continues the character of the space from DJG, a south-facing space to sit and watch the river. A light-touch is used to programme the space, which will need to work well when fairly empty (most of the time) as well as when very busy (rugby days, summer weekends). Commercial spill-out space is provided to the south of Block B, as well as a clear zone for pedestrian circulation.

The podium structure constrains the ability to plant the terrace, so trees are planted in giant pots which are located around the space - to soften and break up expansive hard areas and provide shelter.

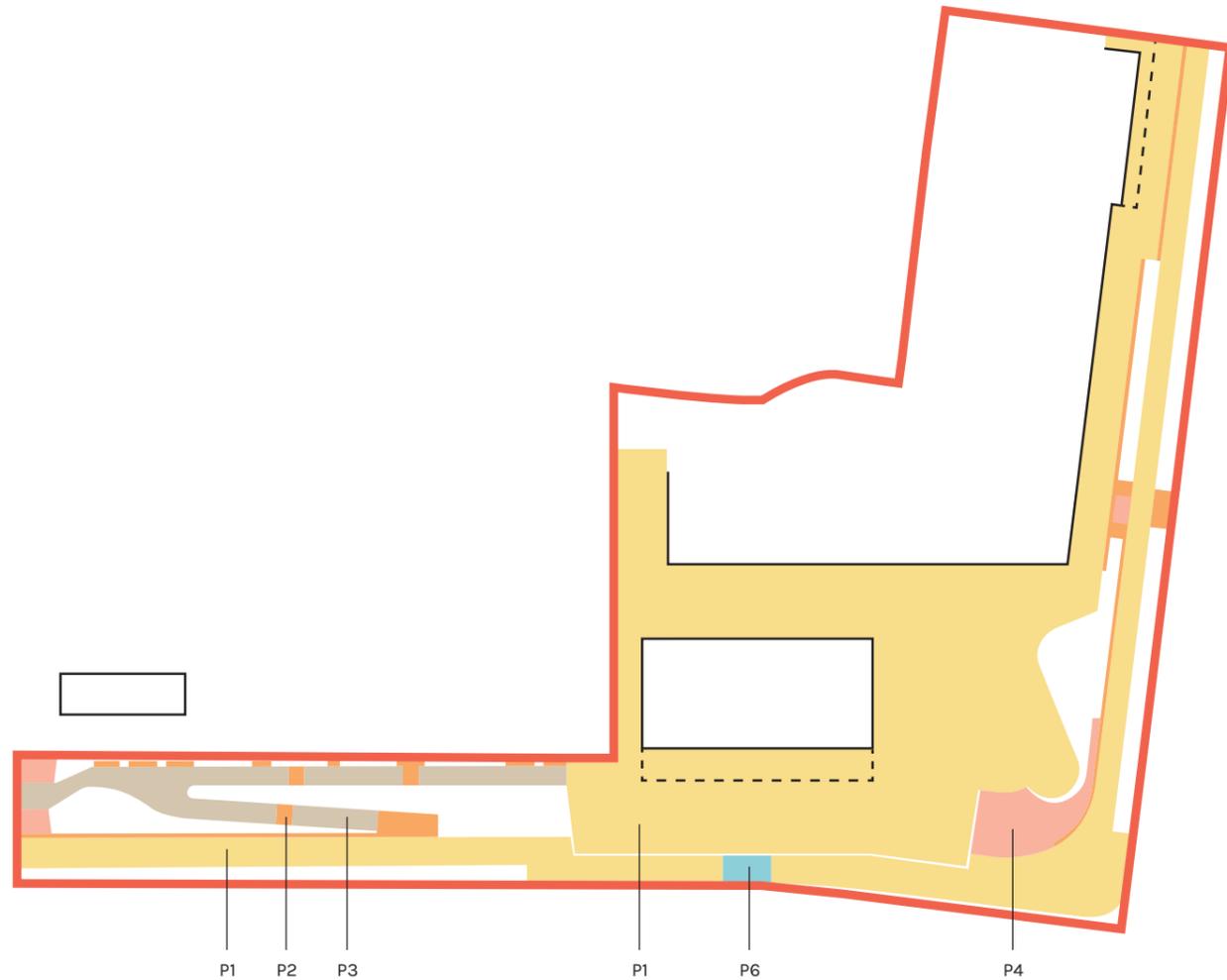


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Terrace Planter

- 1 Yorkstone paving laid to fall towards planter
- 2 Brick planter (5 courses + brick on edge coping) with holes draining into reservoir
- 3 PL4 planting mix. Planter average depth 760mm. Increased native planting + automatic irrigation
- 4 Seating to edge





**Figure 5.2**  
Hard Landscape Materials

- P1 Yorkstone paving
- P2 Yorkstone setts
- P3 Resin bonded gravel
- P4 Yorkstone steps
- P6 Granite setts



P1



P3

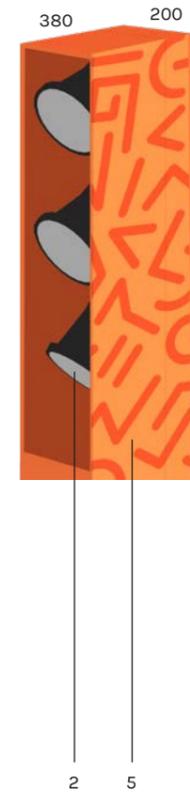
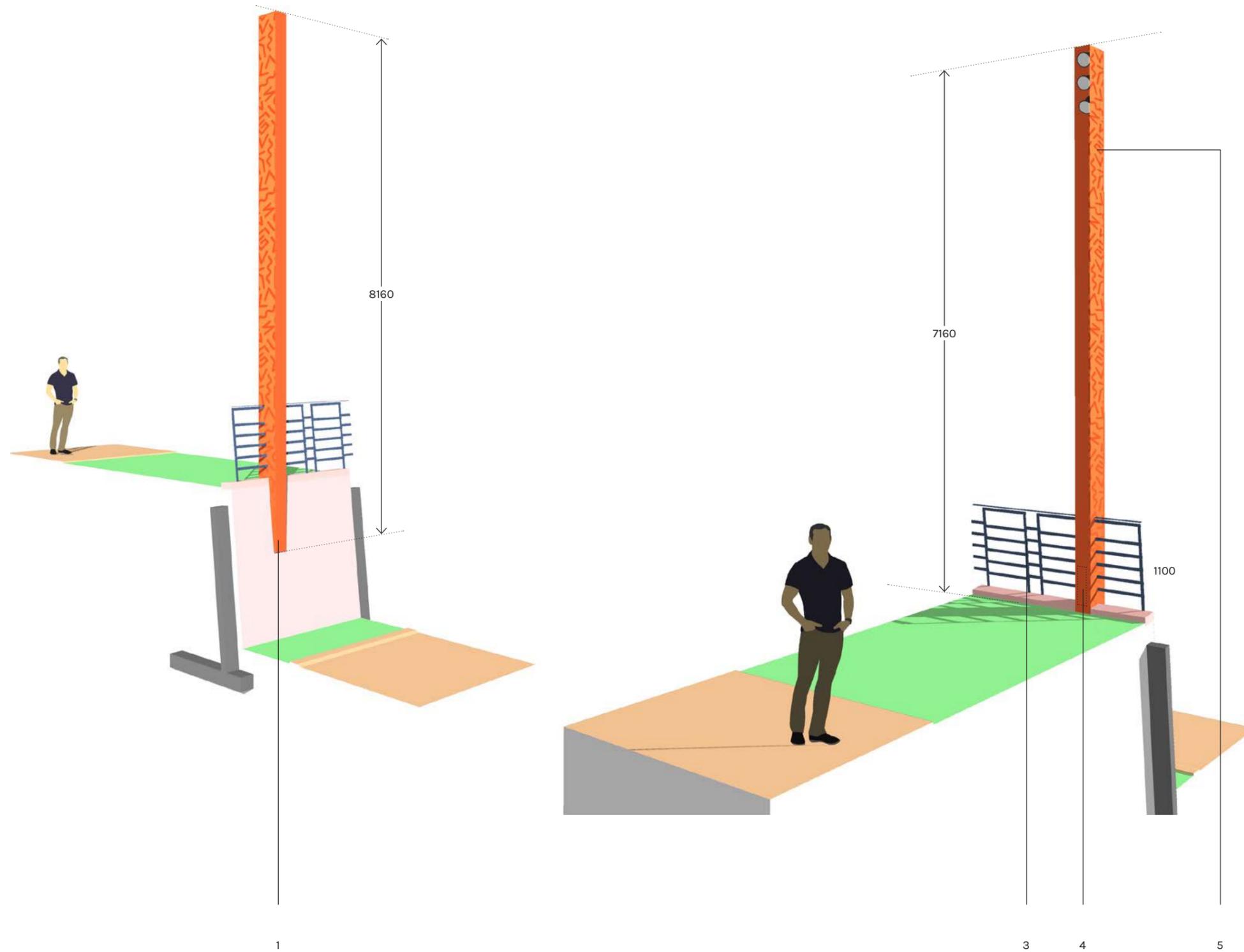
## Paving

Hard landscape materials – specifically, the horizontal paved surfaces – are one of the most visible elements of the landscape. In the same way as the architecture, the design and materiality of paved surfaces strikes a balance between heritage considerations and aspirations for a more contemporary design language.

- In the Square, surfaces will be designed to feel permanent, to play down the feeling of being on top of a podium landscape; and,
- Laying patterns are employed to describe routes and territories, and to break up expansive surfaces to avoid monotony.
- All steps within the public realm are clad with natural yorkstone and are given contrasting nosings as required. Where required, tactile hazard warning pavings are formed of cut stone.

Ref	Element	Description	Suggested Supplier(s)
P1	Natural stone paving	<b>Material</b> Yorkstone <b>Colour</b> Buff-grey <b>Finish</b> Diamond Sawn <b>Size</b> 600mm course x random lengths <b>Thickness</b> 50-100mm	London Stone, Vermeulen's, Horton Road, Stanwell Moor, Middlesex. TW19 6AE. t. 01753 212 950 e. <a href="mailto:info@londonstone.co.uk">info@londonstone.co.uk</a> <b>Product Ref</b> 'Darley Moor' or similar
P2	Natural stone setts	<b>Material</b> Yorkstone <b>Colour</b> Buff-grey <b>Finish</b> Diamond Sawn <b>Size</b> 150mm course <b>Thickness</b> 100mm	London Stone <b>Product Ref</b> 'Darley Moor' or similar
P3	Resin bonded gravel	<b>Material</b> Chinese bauxite chippings <b>Colour</b> Natural + buff resin <b>Size</b> 1-3mm chippings	Long Rake Spar, Youlgrave, Bakewell, Derbyshire, DE45 1LW Addagrip Surface Treatments UK Ltd, Bell Lane Industrial Estate, Uckfield, East Sussex, TN22 1QL
P4	Natural stone steps	<b>Material</b> Yorkstone	London Stone
P5	Boulders	<b>Material</b> tbc.	Suggested Supplier(s) CED Ltd, 728 London Road, Essex, RM20 3LU
K1	Natural Stone Kerb	<b>Material</b> Granite <b>Colour</b> Silver Grey <b>Finish</b> Fine Picked <b>Size</b> 300mm width	London Stone

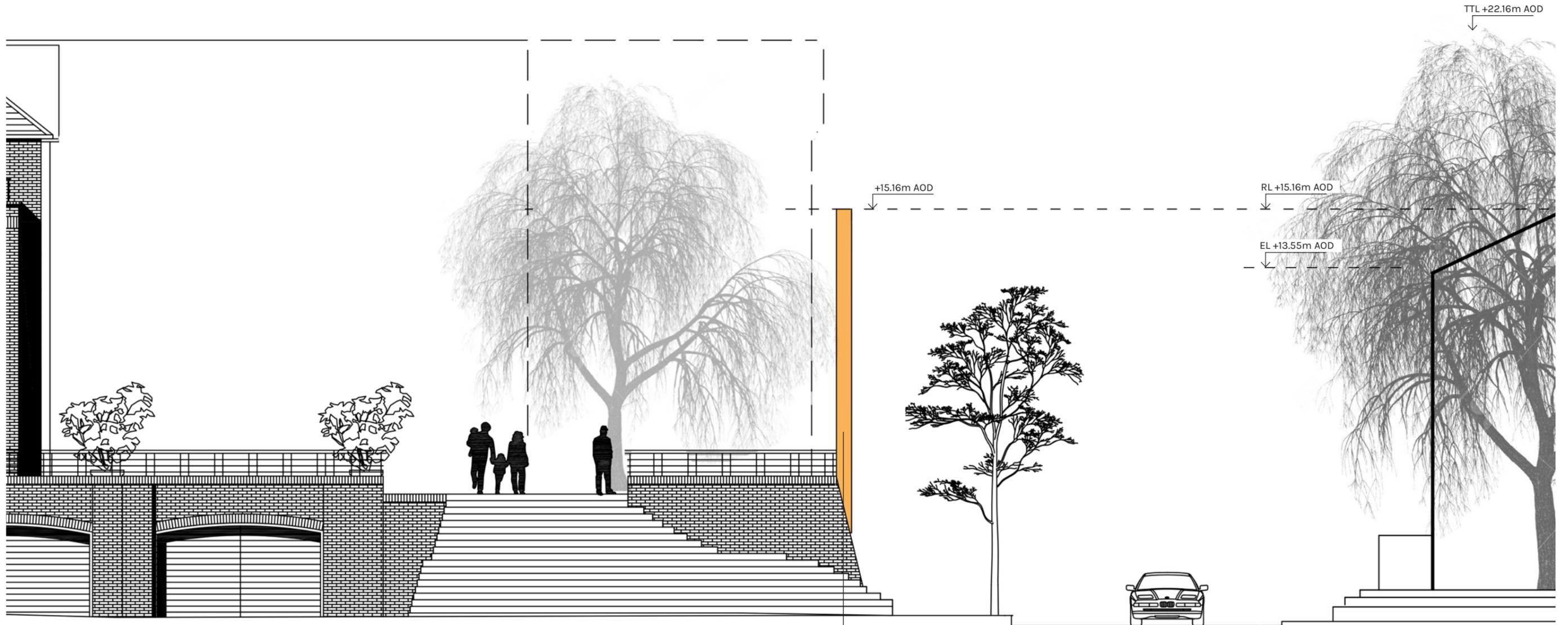
**Figure 5.3 Rev B** Paving materials



**7085\_LUC-LD\_SK171201-001C**

Lighting Mast

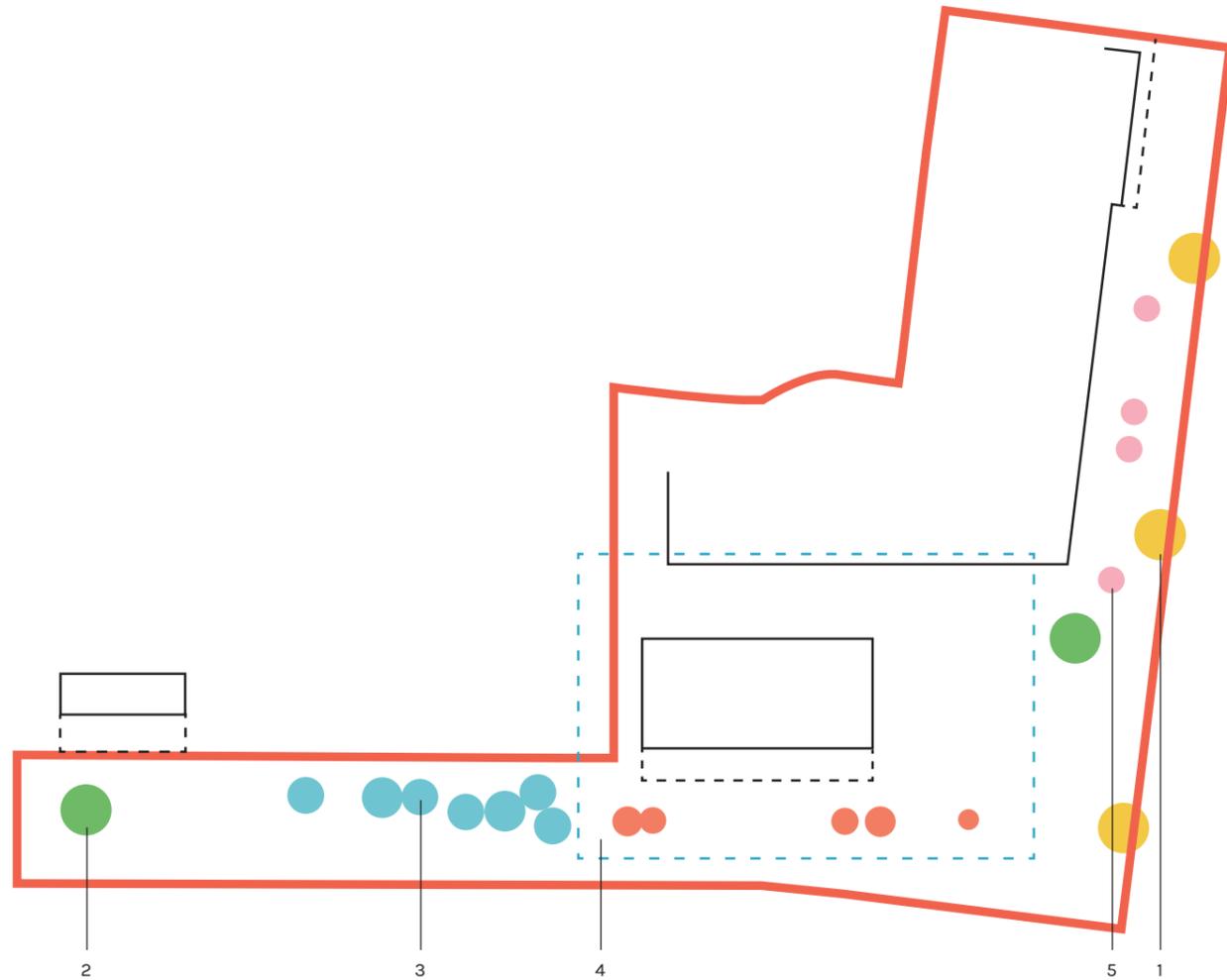
- 1 Lighting mast. Overall dimensions 380 x 200mm x 8160mm tall. Top of mast not higher than ridge line of Water Lane properties @ 15.160m AOD. Corten steel cladding with internal structure, bolts back to concrete substructure
- 2 Bega compact LED floodlights with shielding to prevent light spillage. Narrow beam. Mounted via corten steel bracket - potential gimbal mounting with controls
- 3 Balustrade to top of retaining wall
- 4 Door with key lock, commando socket inside for use by events
- 5 Potential etched design etc. (Indicative - potential artist commission)



**7085\_LUC-LD\_SK180207-001**

Lighting masts, Embankment  
Elevation

- 1 Lighting mast. Overall dimensions 380 x 200mm x max height 10.2m above street level (7.16m above Square). Top of column not above ridge height of Water Lane properties



**Figure 6.1 Rev B**  
New Tree Planting

- 1 Alder
- 2 Weeping Willow
- 3 Willows
- 4 Potted magnolias
- 5 Crab

Planting over podium in containers



Ag - Alnus glutinosa



Sa - Salix alba 'tristis'



Ma - Malus sylvestris

### Proposed Soft Landscape

Objectives of the planting scheme:

- New street tree planting on Water Lane;
- Use of trees and planting in raised containers in the Square and Terrace areas to reinforce territory and to create shade & shelter;
- Reinforce the waterside character of the Embankment;
- Extend the horticultural character of DJG to the street, signposting what is happening inside the gardens.

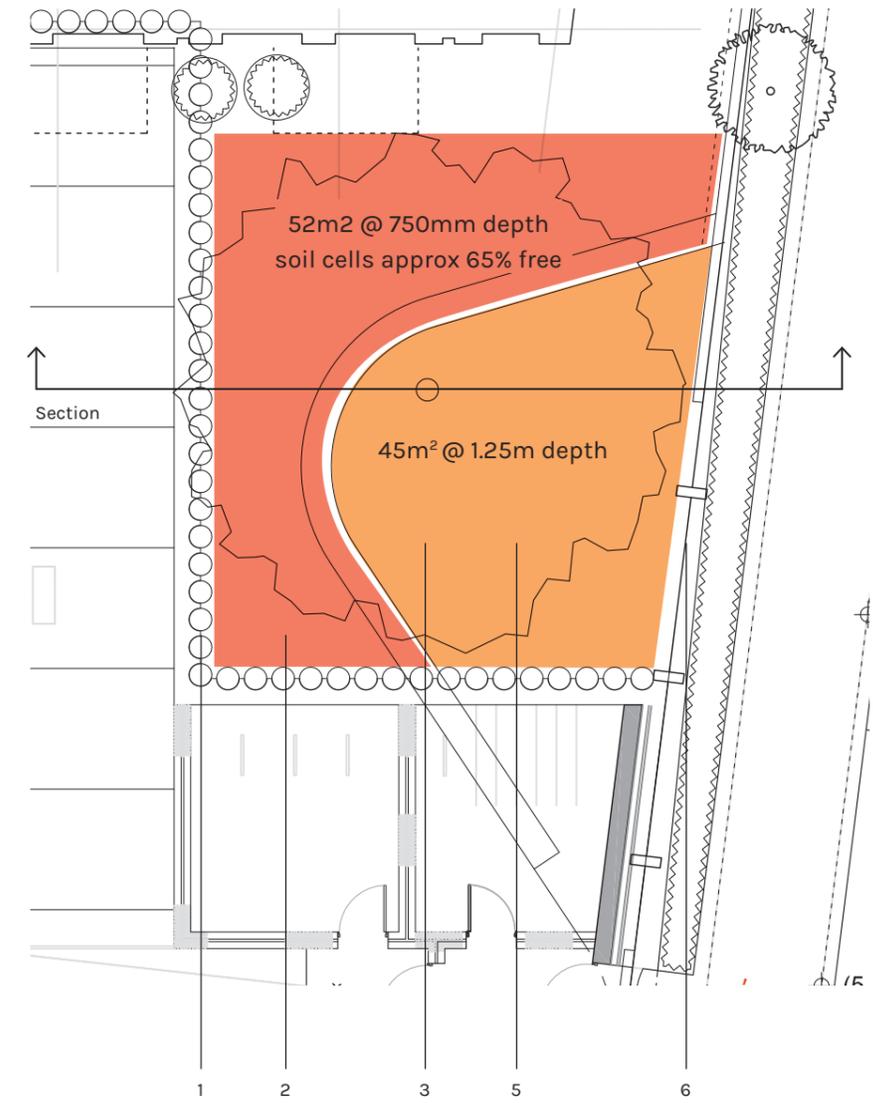
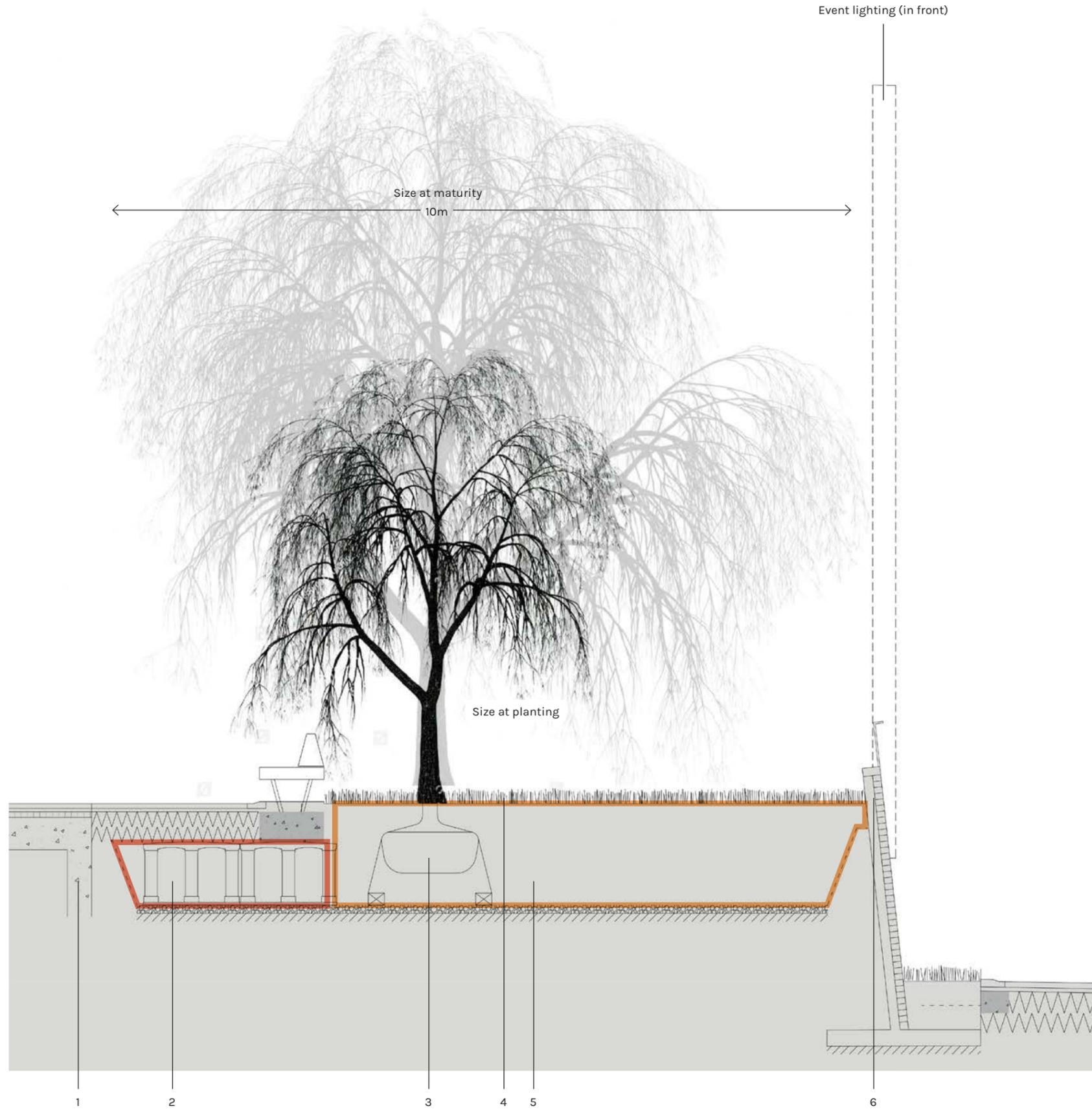
### New Trees

In line with LB Richmond policies, the proposal is to replace trees which are being removed 1:1 where practicable. The proposal adheres to the principles contained in the London Plan of 'right tree, right place' and carefully ensures that none of the proposed trees will grow up to dominate any particular building or space, minimising future liabilities.

Table 6.2 schedules new trees planted to public realm areas. Species will be chosen for longevity, ecological value and visual quality:

Ref	Scientific Name	Girth	Height	Nr
Ma	Malus sylvestris	m/s	350-400cm	4
Mg	Magnolia grandiflora	m/s	450-500cm	3
Mxl	Magnolia x loeberi	m/s	450-500cm	2
Ag	Alnus glutinosa	40-50cm	600-900cm	3
Sa	Salix alba	30-35cm	500-700cm	7
STR	Salix alba 'Tristis Resistentia'	50-60cm	600-900cm	2

**Figure 6.2 Rev B** New tree planting

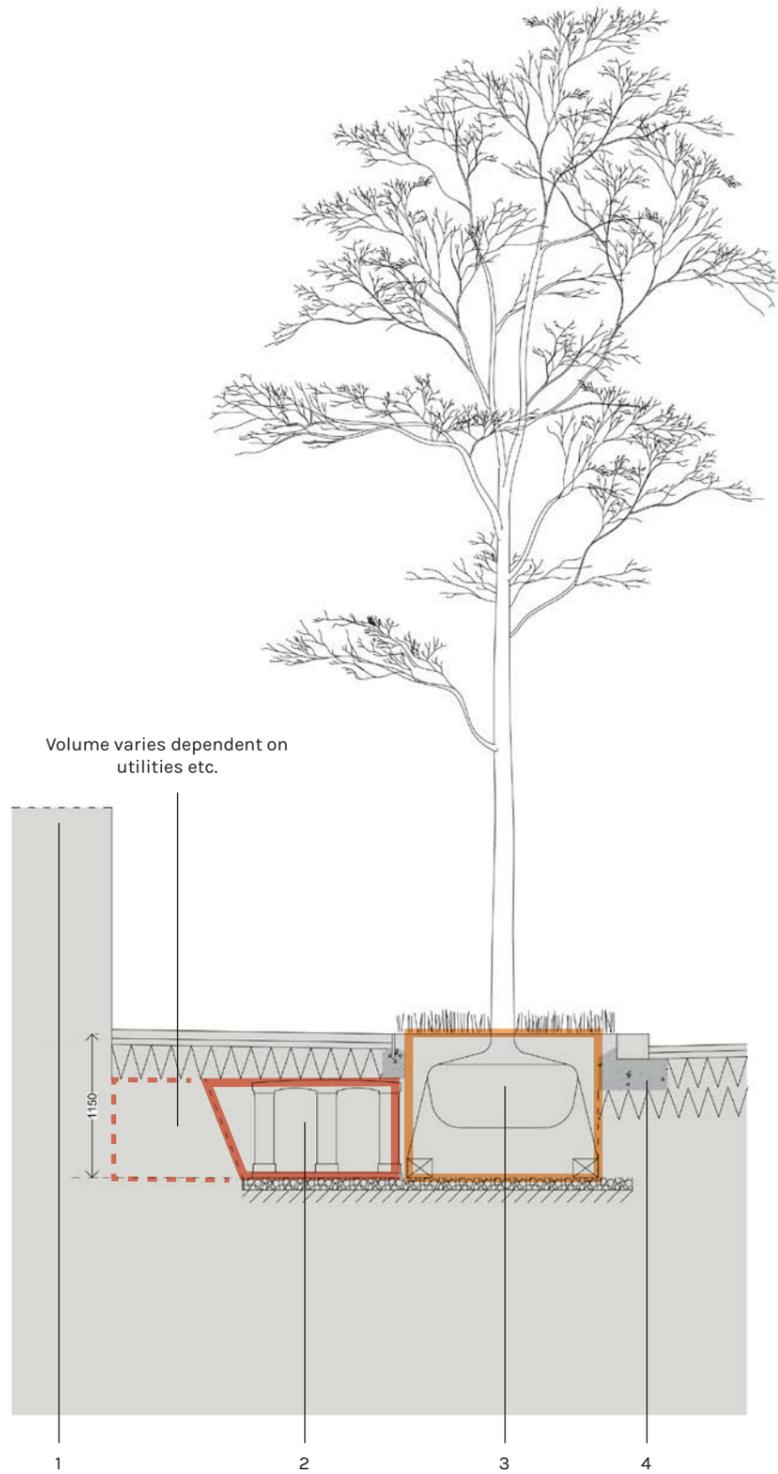


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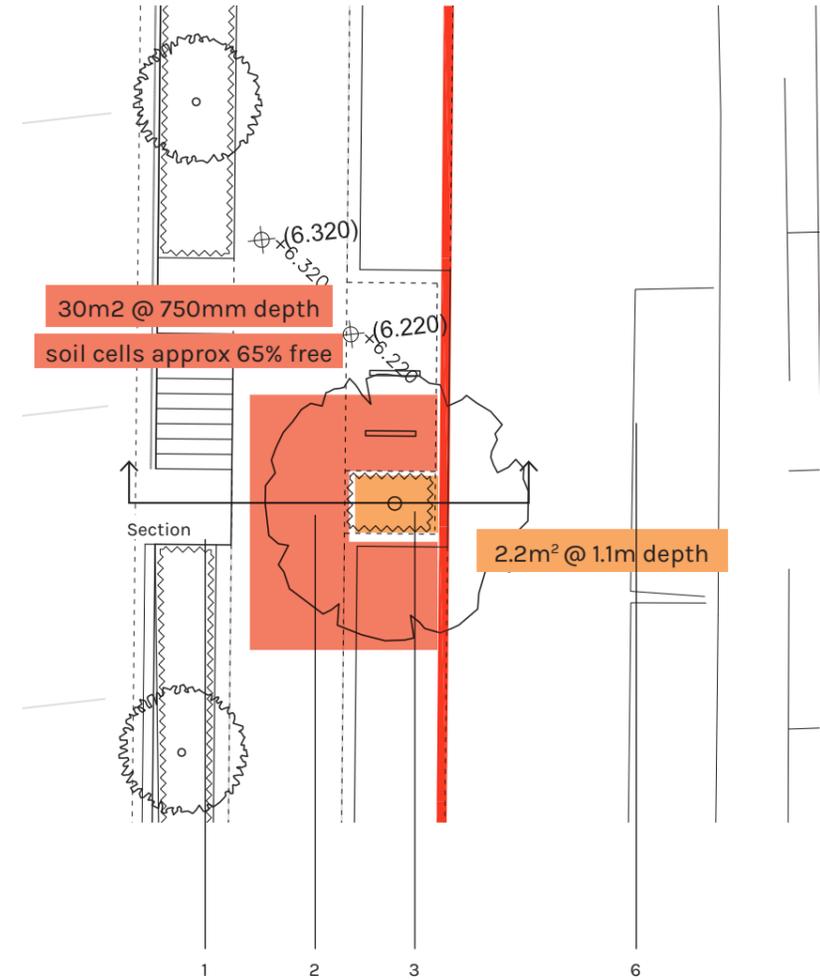
Tree Pit Detail, Square

- 1 Piled wall to lower ground floor
- 2 52m<sup>2</sup> rooting cells @ 750mm depth (Silva cell by DeepRoot) below yorkstone paving with aeration and irrigation pipes as required.
- 3 Salix 'Tristis resistentia' - planted as 50/60 - ultimate 10m canopy spread
- 4 Ornamental planting PL3
- 5 45m<sup>2</sup> rooting area (topsoil & subsoil) @ 1.25m depth.
- 6 Retaining wall to Water Lane

Approx 80m<sup>3</sup> rooting area available



2

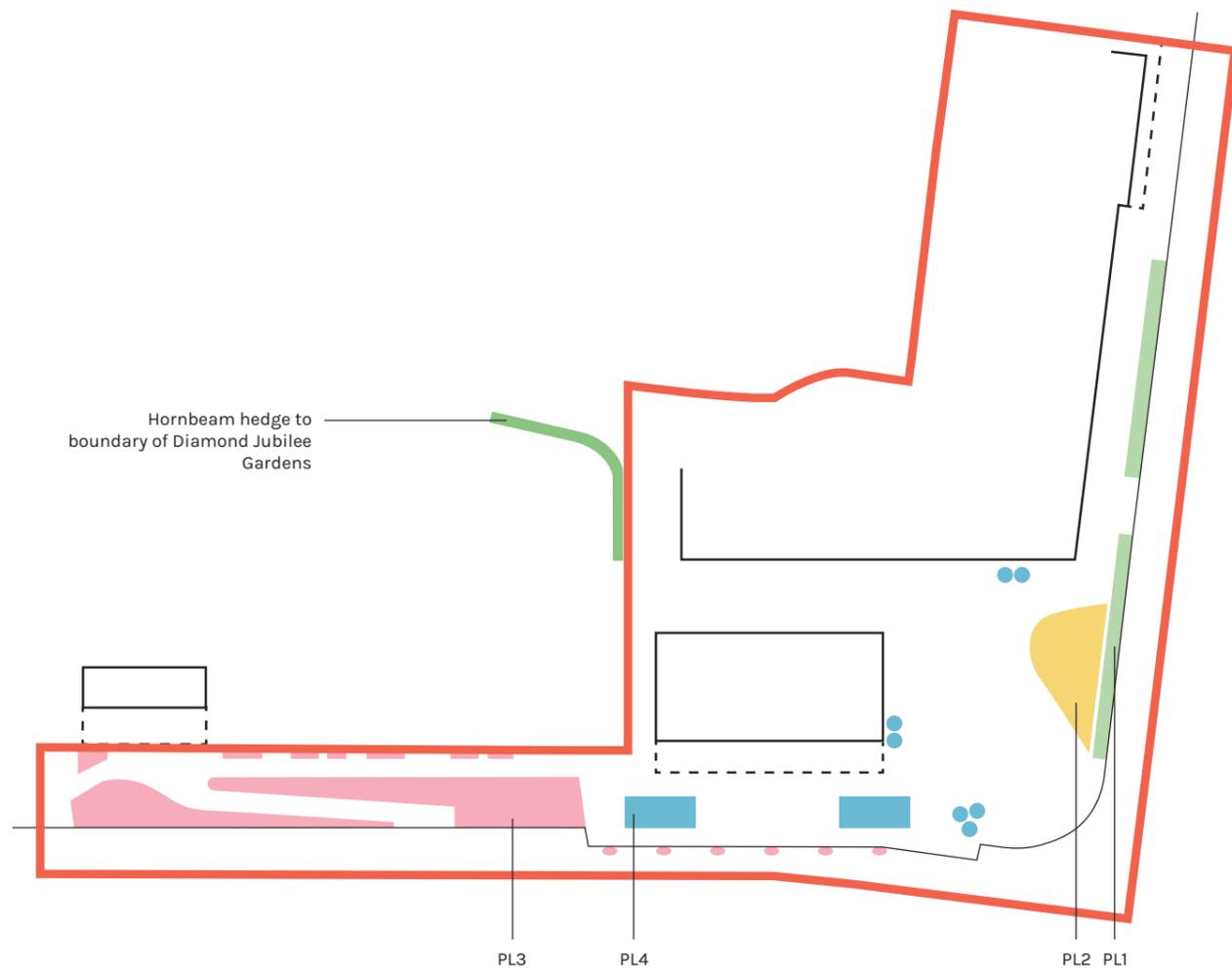


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Tree Pit Detail, Water Lane

- 1 Upper level walkway
- 2 Rooting cells @ 750mm depth (Silva cell by DeepRoot) below yorkstone paving with aeration and irrigation pipes as required.
- 3 Street trees species tbc. Salix alba - planted as 50/60 - ultimate 6m canopy spread.
- 4 Road construction

Approx 17m<sup>3</sup> rooting area available



**Figure 6.3 Rev B**  
Planting

- PL1 Foliage, texture & scent, Water Lane
- PL2 Riot of Colour, Square
- PL3 Boulder Garden
- PL4 Raised brick planters, Terrace



PL2 - Meadow planting in the Square



PL3 - Boulder garden, access from the Embankment

### Landscape Planting

The ornamental planting scheme is designed to be visually attractive, whilst having some benefit to wildlife. It will have seasonal interest and structure which complements the public realm.

The planting is broadly split into four areas, being Water Lane (PL1); the Square (PL2); the Embankment Boulder Garden (PL3); and, the Terrace (PL4).

A variety of mixes are deployed to create vibrant characterful places, and to respond to the varying conditions within the site.

- **Foliage, texture and winter scent** along **Water Lane**, providing continuity and softening the retaining wall. An 'evergreen plinth' provide structure in the winter months;
- **A riot of colour** on the north side of the **Square**, again softening the impact of the retaining wall to the street;
- The new access between the Embankment and DJG builds on the existing **boulder garden** character and extends the horticultural character of DJG down to the street; and,
- Planting in raised beds on the **Terrace**.

A range of species are described on the next page.



Malus sylvestris, small trees planted into ground cover planting along the wall to Water Lane



Salix aegyptiaca



Salix purpurea



Cornus sanguinea



Hedera helix

### PL1 - Water Lane

A planted verge between the widened Water Lane footway and the upper level walkway to the Square. Evergreen ground-cover planting with native early-flowering Salix. Perennial grasses provide habitat for hibernating invertebrates during Winter.

#### Trees

Alnus glutinosa	Common Alder
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#### Specimen Shrubs

Malus sylvestris	Crab
Salix aegyptiaca	Musk Willow
Salix purpurea	Purple osier

#### Shrubs

Cornus alba Elegantissima	
Cornus sanguinea	
Hedera helix	
Pittosporum tobira	Mock orange

#### Perennials & Grasses

Anemanthele lessoniana	Pheasant's tail grass
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Figure 6.4 Rev B Water Lane Planting



Deschampsia



Stipa tenuissima with Salvia caradonna



Aster novae-angliae 'Purple Cloud'



Echinacea



Veronicastrum virginicum 'Album'



Dryopteris affinis

## PL2 - Square

Visually attractive **riot of colour** on the north side of the **Square**. Includes drifts of species beneficial to pollenators - particularly blue-violet flowering perennials - set in a matrix of tufty grasses. Characterful weeping willow (*Salix alba* cultivar) underplanted with sedges and ferns.

### Trees

*Salix alba* 'Tristis Resistentia'

### Perennials & Grasses

*Agastache foeniculum*

*Anemone nemorosa*

*Aster novae-angliae* 'Purple Cloud'

*Carex pendula*

*Deschampsia cespitosa* 'Goldtau'

*Echinacea purpurea*

*Erigeron karvinskianus*

*Iris foetidissima*

*Lamium album*

*Salvia nemorosa* Caradonna

*Stipa tenuissima* Mexican feather grass

*Veronicastrum virginicum* 'Album'

### Ferns

*Dryopteris affinis*

**Figure 6.5 Rev B** Water Lane Planting



Salix alba Trisis resistente



Rosmarinus officinalis



Stipa gigantea



Ajuga reptans



Pinus mugo



Brachyglottis

### PL3 - Boulder Garden

The new access between the Embankment and DJG builds on the existing character - robust mediterranean planting with scent, benefit to wildlife, interspersed with boulders.

#### Trees

Salix alba 'Tristis Resistenta'

#### Climbers

Trachelospermum jasminoides

#### Shrubs

Brachyglottis 'Sunshine'

Cercis siliquastrum

Judas tree

Pinus mugo Gnom

Dwarf mountain pine

#### Perennials & Grasses

Ajuga reptans

Calamintha nepeta 'Blue Cloud'

Carex festucacea

Centaurea scabiosa

Greater Knapweed

Dietes grandiflora

Fairy iris

Festuca glauca

Blue fescue

Origanum vulgare

Marjoram

Rosmarinus officinalis

Rosemary

Stipa gigantea

Giant feather grass

Figure 6.6 Rev B Water Lane Planting



White flowering, deciduous Magnolia x loebneri



Trachelospermum jasminoides

#### PL4 - Terrace

On the upper level, looking out across the River, planters are built up with brick and hold flowering Magnolias underplanted with grasses and perennials.

##### Specimen Shrubs

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Magnolia grandiflora

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Magnolia x loebneri

##### Perennials & Grasses

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Heuchera 'Tangerine Wave'

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Penstemon heterophyllus

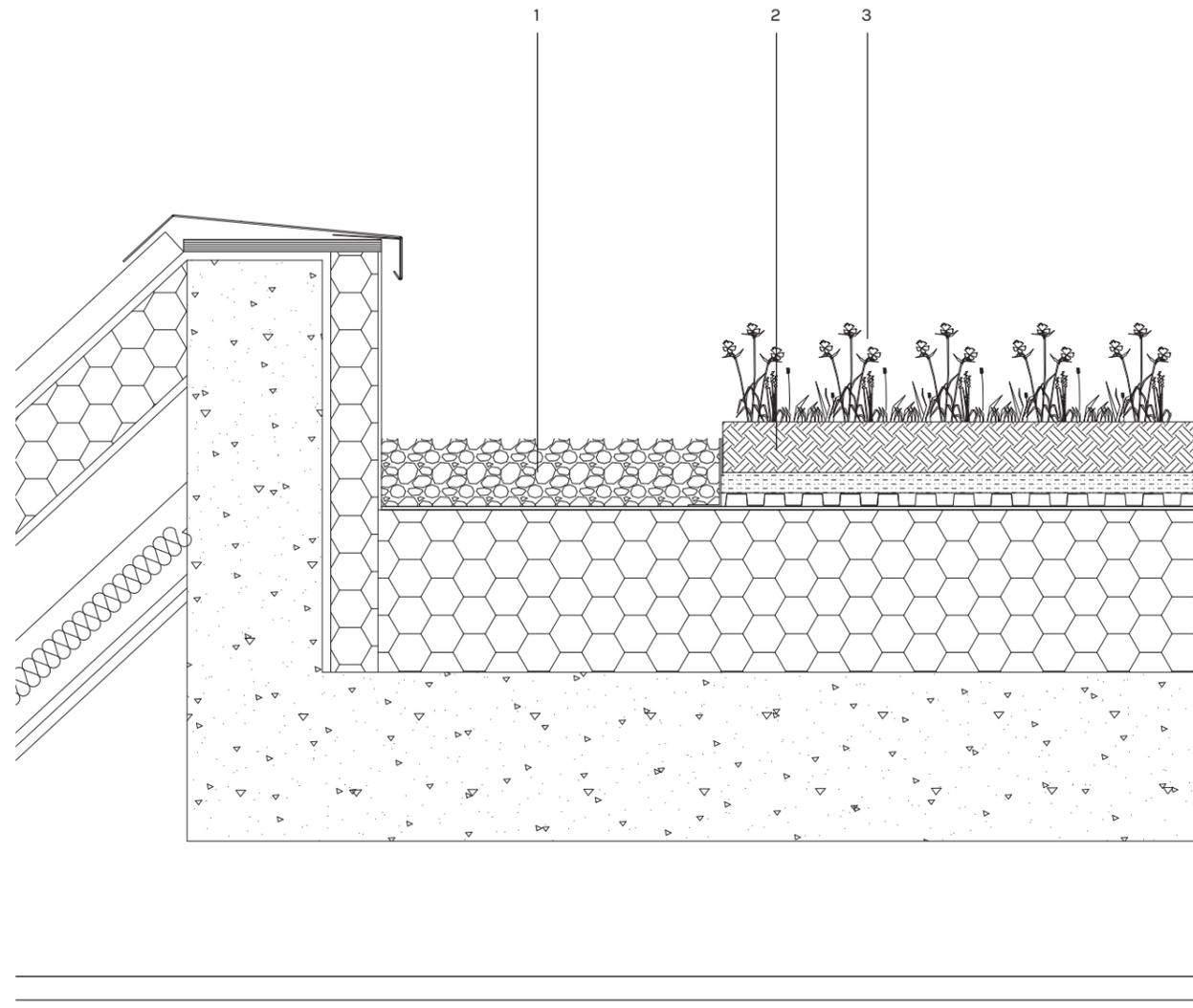
Figure 6.7 Rev B Water Lane Planting



Heuchera



Penstemon heterophyllus



Section to Mansard Roof

### SPECIES LIST BAUDER-SEED MIXTURE KS-PLUS

Botanical Name	Blossom	Exposure (sun or shade)	Origin
<i>Achillea millefolium</i>	White	☀️	H
<i>Anthemis tinctoria</i>	Yellow	☀️	H
<i>Campanula rotundifolia</i>	Purple	☀️	H
<i>Dianthus carthusianorum</i>	Pink	☀️	H
<i>Dianthus deltoides</i>	Pink	☀️	H
<i>Fragaria vesca</i>	White	☀️	H
<i>Geranium sanguineum</i>	Pink / Purple	☀️	H
<i>Hieracium pilosella</i>	Yellow	☀️	H
<i>Leucanthemum vulgare</i>	White / Yellow	☀️	H
<i>Linum perenne</i>	Blue	☀️	H
<i>Muscari comosum</i>	Violet	☀️	H
<i>Origanum vulgare</i>	Pink	☀️	H
<i>Papaver rhoeas</i>	Red	☀️	H
<i>Petrorhagia saxifraga</i>	White / Pink	☀️	H
<i>Potentilla argentea</i>	Yellow	☀️	H
<i>Salvia pratensis</i>	White / Pink	☀️	H
<i>Sedum acre</i>	Yellow	☀️	S
<i>Sedum album</i>	White	☀️	S
<i>Sedum ellacombianum/ (selskianum hort.)</i>	Yellow	☀️	S
<i>Sedum hispanicum</i>	White / Pink	☀️	S
<i>Sedum montanum</i>	Yellow	☀️	S
<i>Sedum sexangulare</i>	Yellow	☀️	S
<i>Sedum spurium</i>	Pink	☀️	S
<i>Teucrium chamaedrys</i>	Purple / Pink	☀️	H
<i>Thymus pulegioides</i>	Lilac	☀️	H
<i>Verbascum nigrum</i>	Yellow	☀️	H
<i>Veronica spicata</i>	Blue	☀️	H

**Other Components:** Mycorrhizal fungi, carrier, nutrients, bonding compound  
 H = Herbaceous  
 S = Stonecrop

Wildflower seed mix by Bauder or similar



#### 7085\_LUC-LD\_SK180124-001

Biodiverse Roof Build-up

- 1 Fire break
- 2 Build up: drainage matt, filter fleece and minimum 80mm growing substrate
- 3 Planting from wildflower seed (mix above) broadcast onto completed roof.

After CJCT drawing 180122 Mansard Section WIP.dwg