

MATERIALITY

MATERIALITY

The selection of high quality hard landscape materials will contribute greatly to the character of the Riverside:

- A cohesive, coordinated palette with materials which are long lasting and easy to use and maintain - self finished materials where practicable (eg. natural stone, corten steel);
- Sustainable, locally sourced where available;
- Restrained in colour and texture, robust and appropriate for the intended use and location; and,
- Suitable for the conservation area setting, complementing the architecture and the local context, evocative of working waterside.



Figure 5.1
Hard Landscape Materials

- P1 Yorkstone paving
- P2 Yorkstone setts
- P3 Resin bonded gravel
- P4 Yorkstone steps
- P5 Natural stone boulders
- P6 Granite setts
- K1 Granite kerb
- F1 Oak
- L1 Corten steel
- W2 Painted steel balustrade

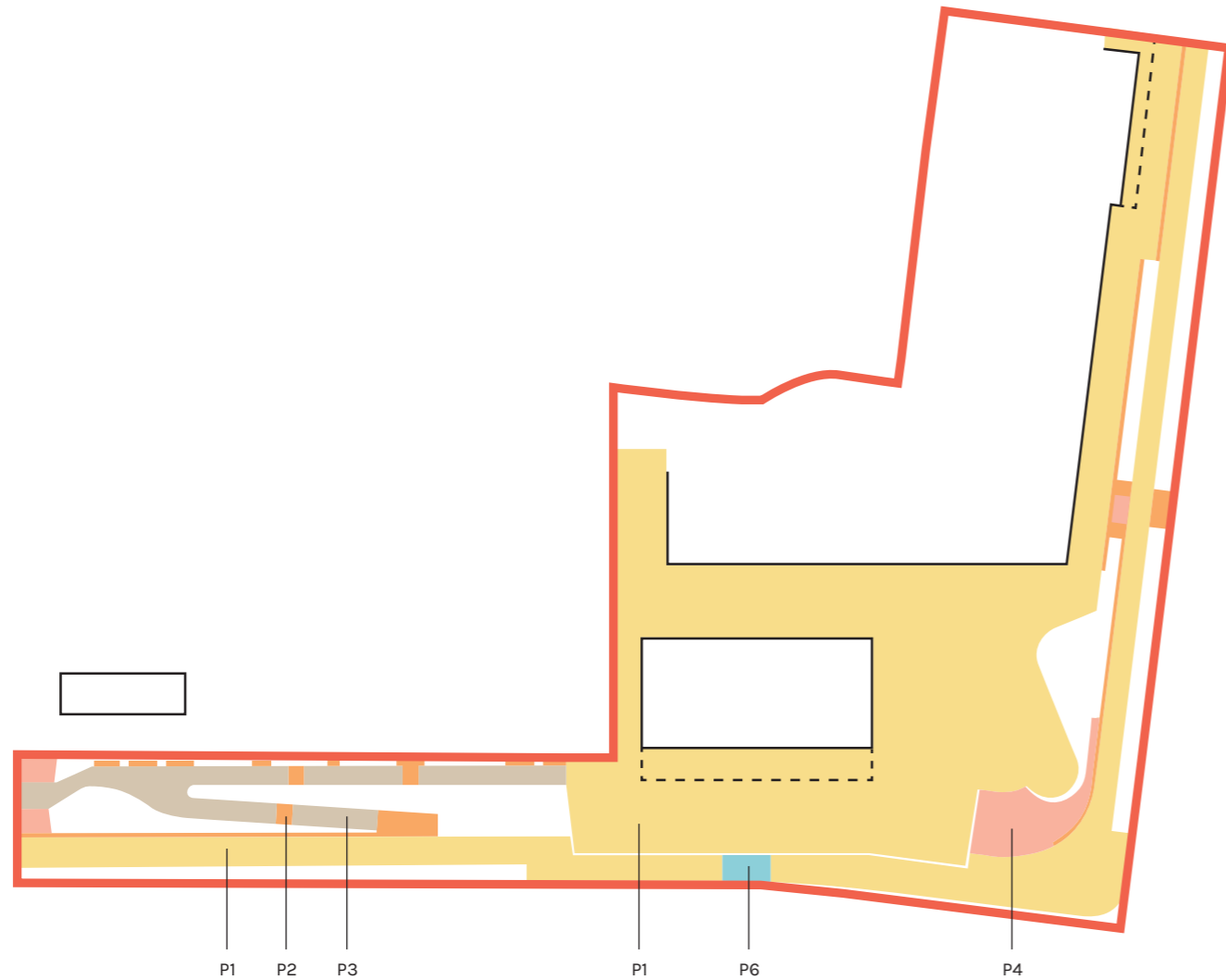
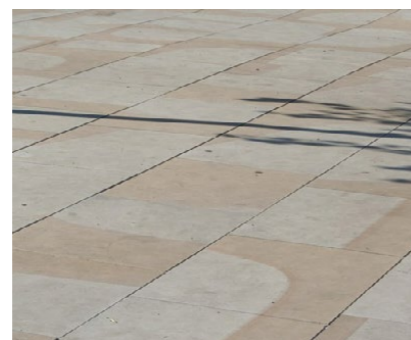
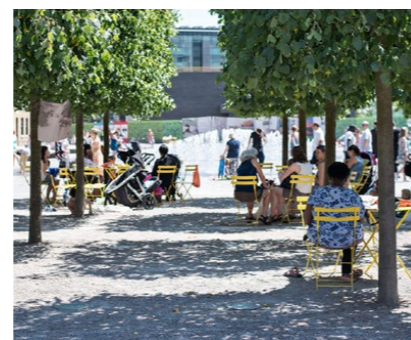


Figure 5.2
Hard Landscape Materials

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



P1



P3

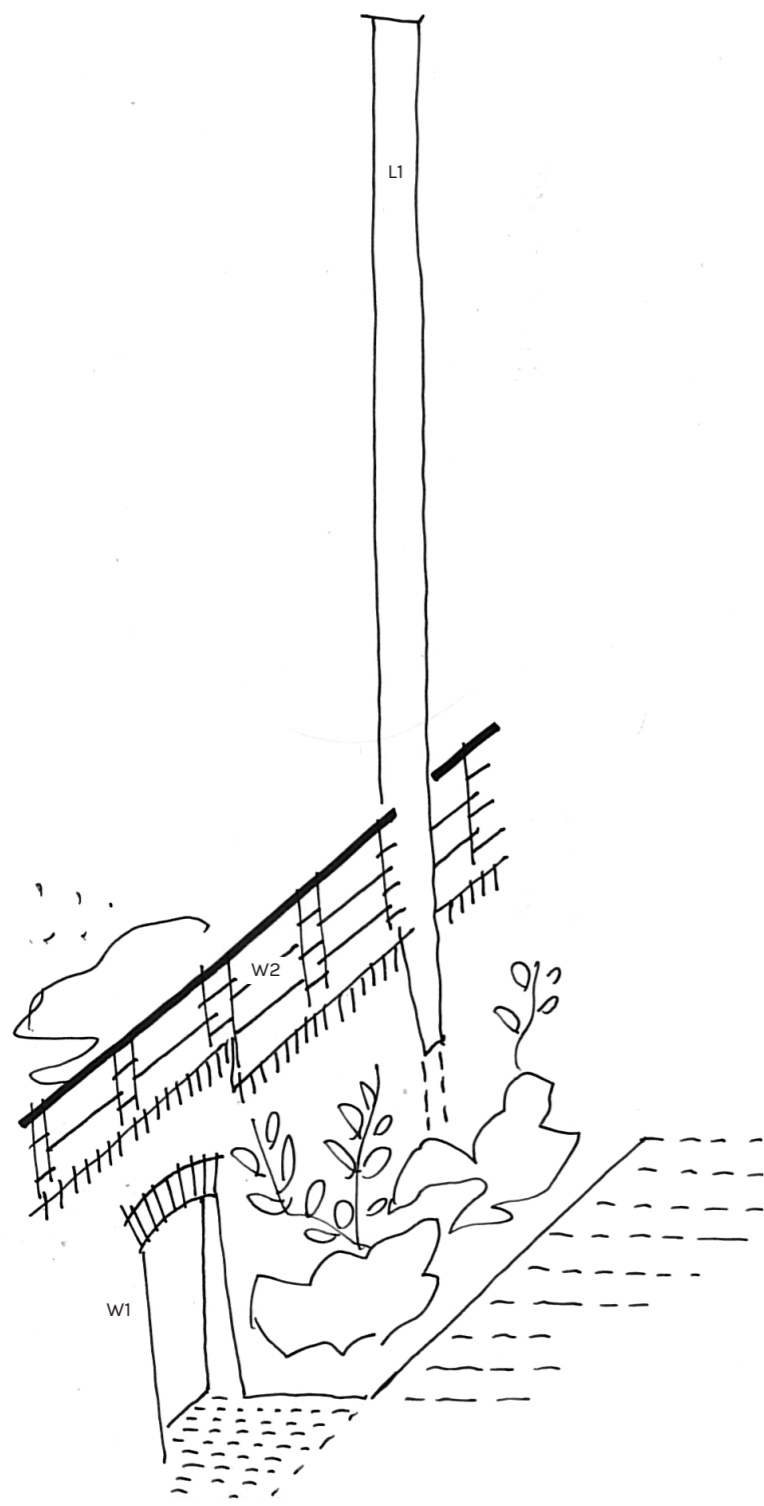
Paving

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	Material Yorkstone Colour Buff-grey Finish Diamond Sawn Size 600mm course x random lengths Thickness 50-100mm	Marshalls, Landscape House, Premier Way, Lowfields Business Park, Elland, HX5 9HT Product Ref 'Scoutmoor' or similar
P2	Natural stone setts	Material Yorkstone Colour Buff-grey Finish Diamond Sawn Size 150mm course Thickness 100mm	Marshalls Product Ref 'Scoutmoor' or similar
P3	Resin bonded gravel	Material Chinese bauxite chippings Colour Natural Size 1-3mm chippings + buff resin	Suggested Supplier(s) 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	Material Yorkstone	Suggested Supplier(s) Marshalls
P5	Boulders	Material tbc.	Suggested Supplier(s) CED Ltd, 728 London Road, Essex, RM20 3LU
K1	Natural Stone Kerb	Material Granite Colour Silver Grey Finish Fine Picked Size 300mm width	Suggested Supplier(s) Marshalls

Figure 5.3 Paving materials



Sketch design of assemblage of W1 retaining wall, W2 balustrade and L1 lighting column



W2, Precedent - existing railing to DJG



W1, Precedent - red brindled brickwork, Water Lane

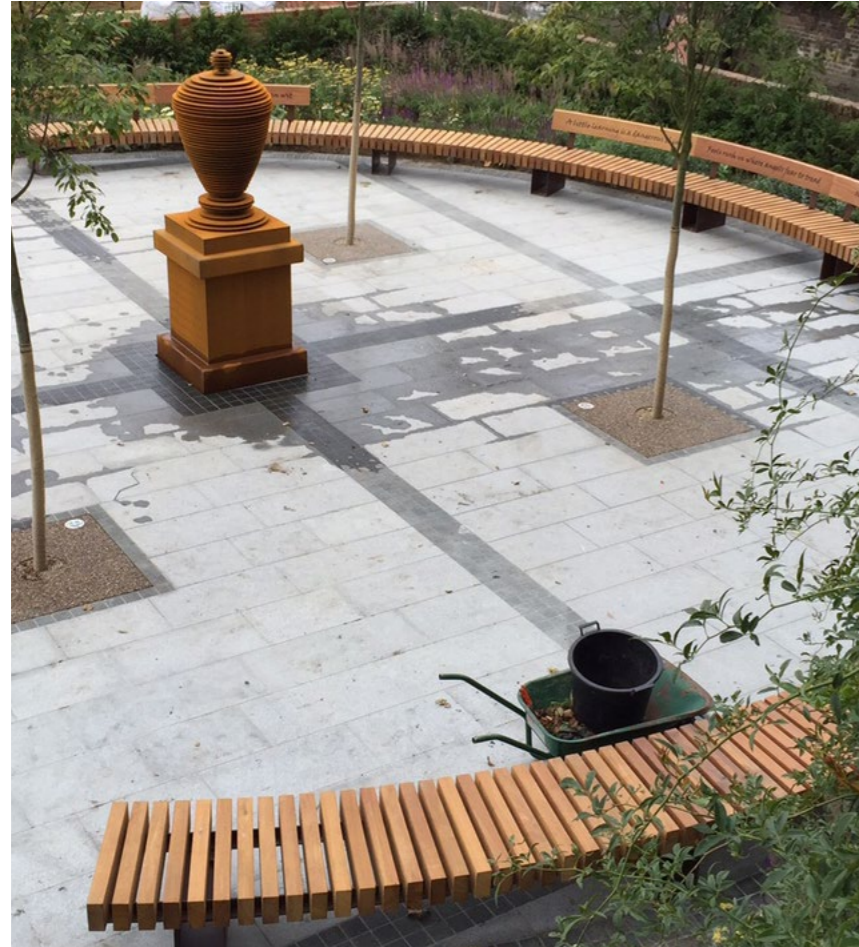
Enclosure

- The considerable level changes across the site mean that retaining walls will inevitably be important elements of building and external works design. The walls on the Embankment and Water Lane are inspired by the boathouses along the Thames.
- Balustrading will continue existing art-deco lido railings which were reinstated as part of the 2011 DJG works.

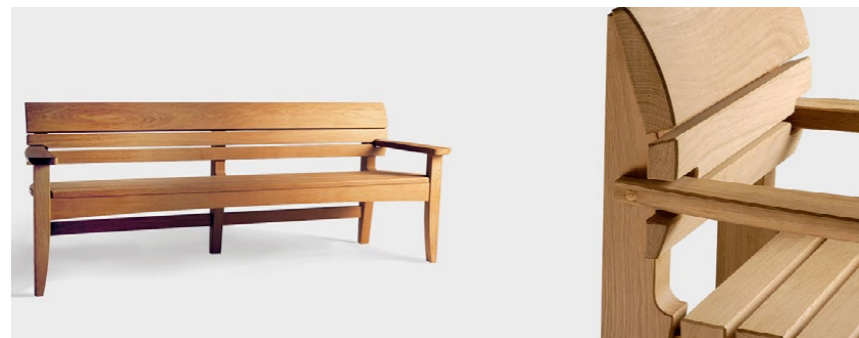
W1 Brick retaining walls **Material** Brick **Colour** Red-brindle to match Embankment buildings

W2 Balustrading **Material** Mild steel to match existing **Finish** painted **Colour** Dark Blue-black RAL5004

Figure 5.4 Enclosure



F1, Bespoke seat and sculpture precedent, Champions Wharf, Twickenham



F2



F4



F2, Precedent, seating in landscape

Site Fixtures

In order to maintain a clear and legible public realm, extraneous clutter is avoided: street furniture and fixings are kept to a minimum throughout. The primary focus will be on the activity and on the relationship with the historic town and river. Where proposed, fixtures serve an important function (eg. wayfinding, demarcation of territories) and should be combined where possible - lighting with handrails, handrails being extensions of architecture, seats combined with retaining walls etc.

- A bespoke, signature curved bench at the edge of the square;
- A mixture of benches and seats with- and without arms and backrests are provided. Seats with arm and backrests are provided at resting places along primary routes and looking out over the river continuing the pattern established in DJG;
- Areas for temporary furniture, seating areas for restaurants etc. are clearly marked by the paving so that they do not spill over and create hazards in the primary or secondary routes;
- Bins are located at a few key points around the development at places where they will be most used: doorways, entrances from street etc. and should typically be building mounted or combined with lighting columns; and,
- Short-stay Cycle stands for visitors are located at points throughout the site, typically at entrances and junction with main routes. 'Sheffield' type stands are proposed, in a corten steel finish. Secure and covered long-stay cycle parking for residents and staff is located within the building, in the lower ground floor car park.

F1	Curved seat	Material FSC certified European Oak	Suggested Supplier(s) Woodscape, Business Park Shadsworth, 1 Sett End Road, Blackburn BB1 2QJ
F2	Bench & seat with back and armrest	Material FSC certified European Oak	Suggested Supplier(s) Benchmark, Bath Road, Kintbury, Hungerford RG17 9SA Product Ref 'Chico' bench & seat
F3	Bin		Suggested Supplier(s) LBRuT specification



L1, Precedent lighting mast, Bonn Square Oxford



Lighting masts - potential location for public art - Bruce Williams, Hull

F4	Cycle stand	Type Sheffield Stand Material Corten Steel Fixing Root fixed to concrete foundation	Suggested Supplier(s) Streetlife BV, Out Singel 144, 2312 RG Leiden, The Netherlands Product Ref 'Corten bicycle rack', wide & narrow
F5	Planters	Materials Cement, Corten steel	Suggested Supplier(s) Atelier Vierkant, Solvaylaan 18, 8400 Oostende, Belgium Product Ref A90, A120, AUB180, AUS180
F6	Accessible Drinking Fountain	Materials Steel & brass Finish Painted Colour RAL 8004	Suggested Supplier(s) Santa & Cole / All Urban Ltd, Aizlewood's Mill, Nursery Street, Sheffield. S3 8GG Product Ref 'Caudal'
L1	Masts	Material Corten steel Height 10m approx	
L2	Recessed wall lights		Suggested Supplier(s) BEGA Gantenbrink-Leuchten LG, Postfach 3160, D-58689 Menden Product Ref LED recessed wall luminaire in cast bronze
L3	Step lighting		Suggested Supplier(s) BEGA Product Ref LED recessed luminaire for walls and stairs

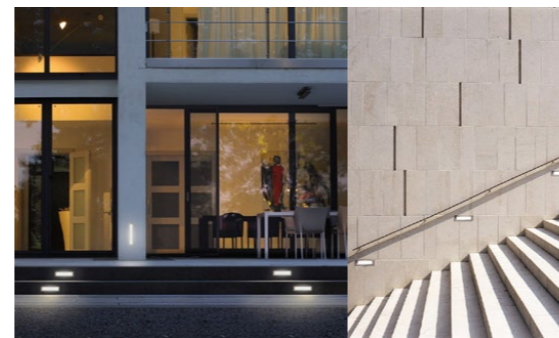
Figure 5.5 Site Fixtures



F5

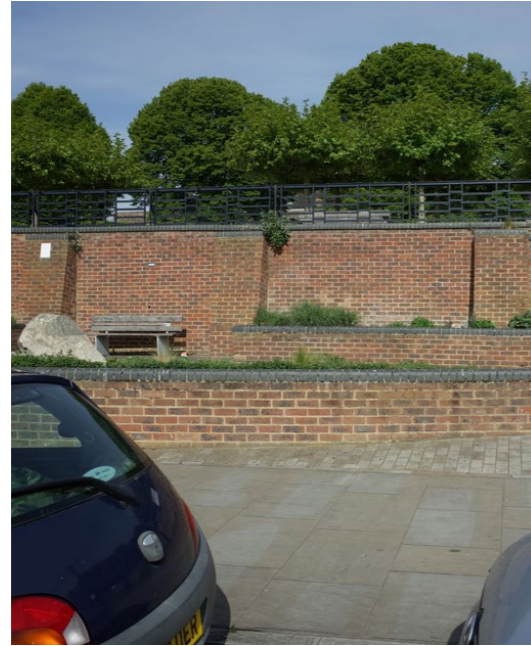


F6



L2-3

SOFT LANDSCAPE



Green backdrop to the gardens



View of Willows on the Island from King Street



Wisteria

SOFT LANDSCAPE

General Principles

Generally, the following principles are applied when considering soft landscape at the site wide scale:

- Use of planting to establish the narrative through the site: the movement from Urban to Riverside;
- to reinforce territory, to signal private, public areas;
- Planting for ecological value;
- To create sheltered conditions conducive to a vital public place; and,
- To soften potentially expansive hard surfaces and retaining walls.

Existing Trees

Working within the site constraints the proposal retains as many of the existing trees as feasible and ensures the ongoing retention of trees within DJG, at the top of King Street and on the Embankment. Combined with improved views to the trees on Eel Pie Island, this largely conserves the arboricultural character and appearance of the local landscape.

The existing poor quality grade trees within the hoarded area of the site are removed in order to facilitate construction of the buildings and public spaces. These trees are appraised within the arboricultural reports (group 009) as largely self seeded Sycamore, none of particularly fine quality, and provide minimal contribution to the character of the area.

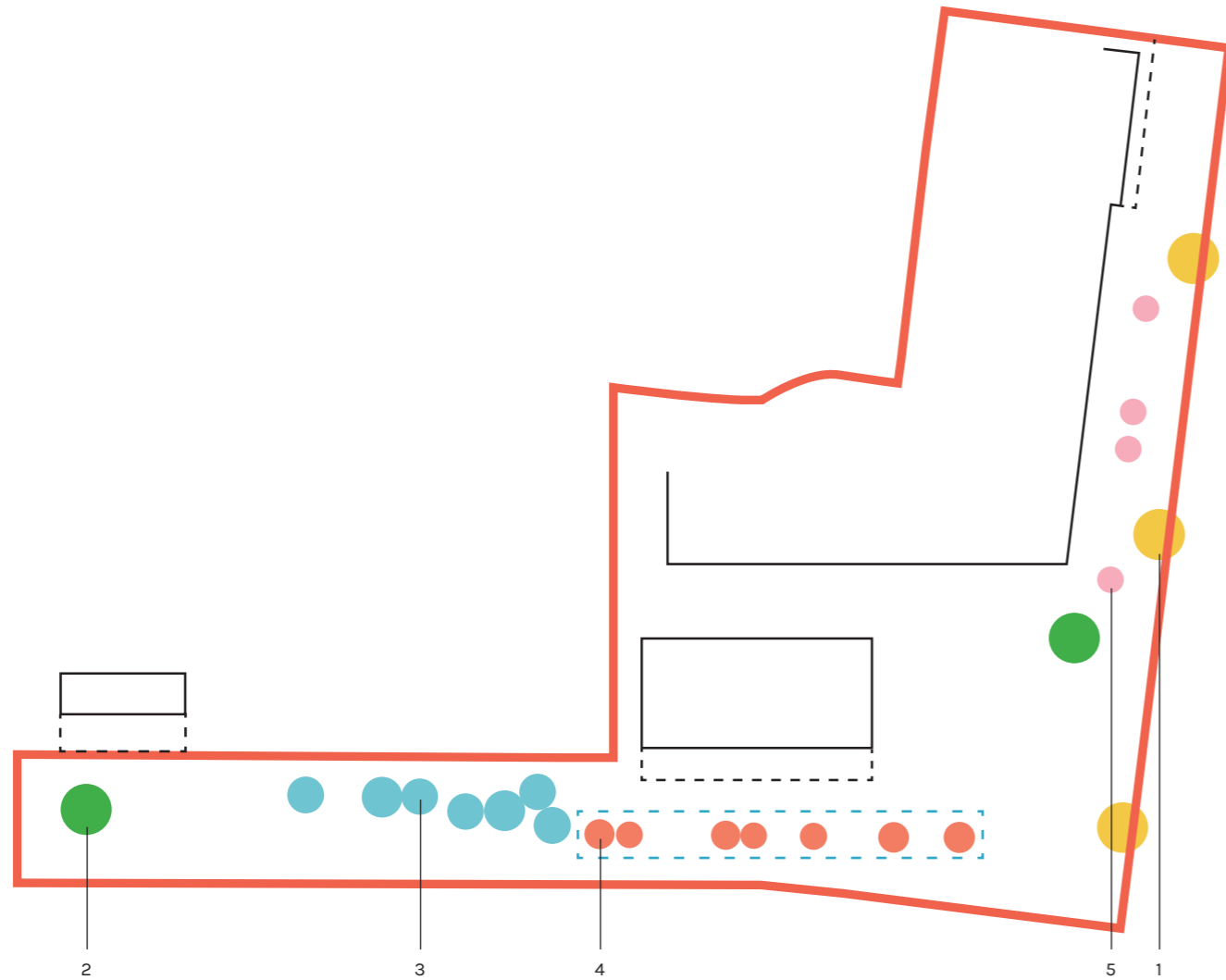


Figure 6.1
New Tree Planting

- 1 Quercus palustris
- 2 Salix
- 3 Cloud pruned pine
- 4 Potted magnolias
- 5 Malus

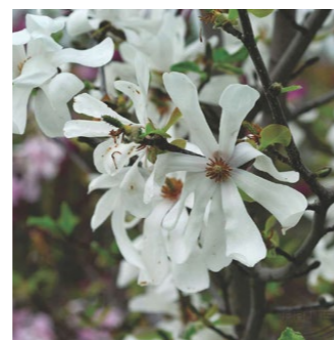
 Planting over podium in containers



Qp - Quercus palustris



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 or more. 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.

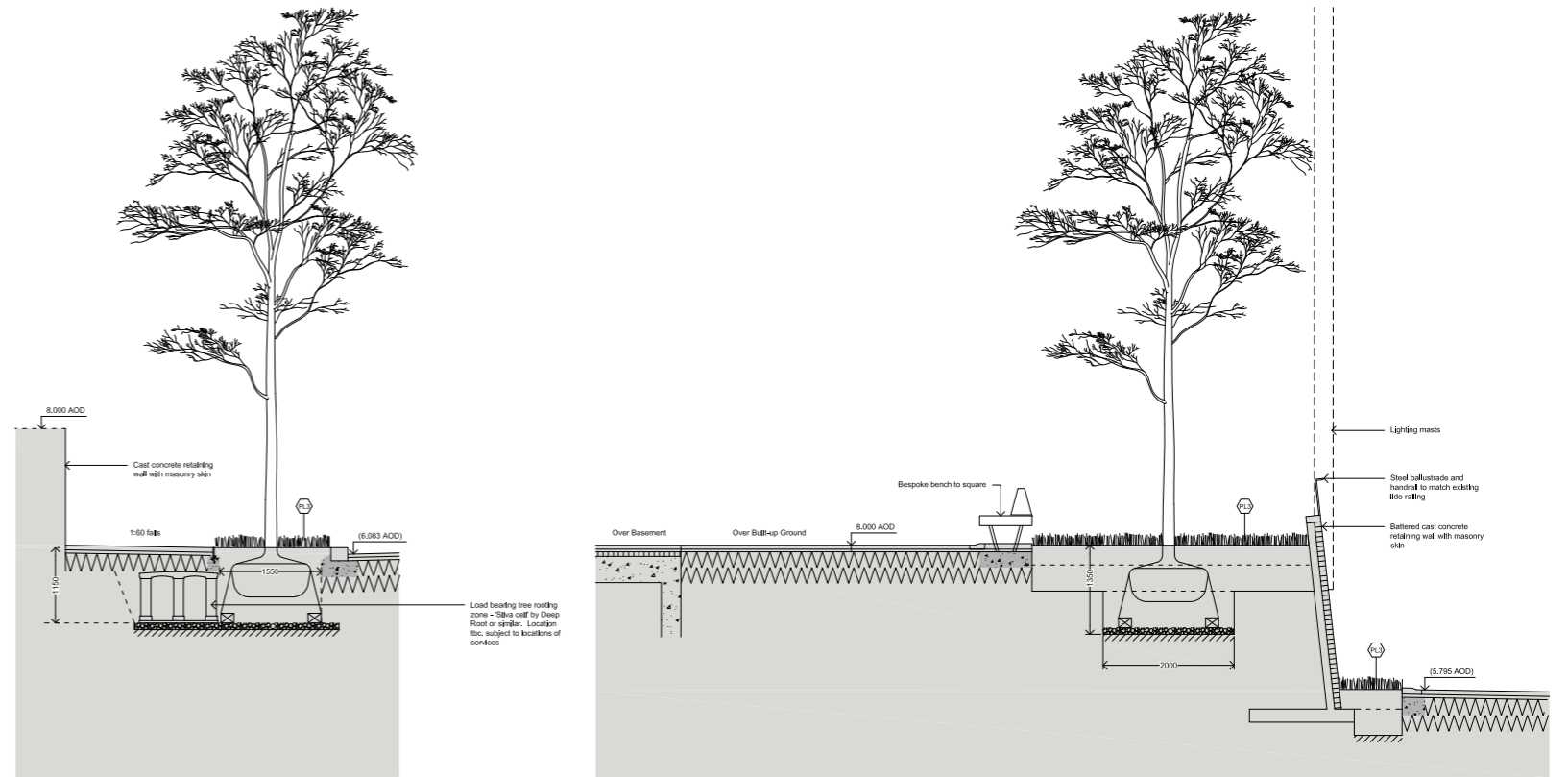
Table X schedules new trees planted to public realm areas. Species will be chosen for longevity, ecological value and visual quality:

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	4
● Qp	Quercus palustris	40-50cm	600-900cm	3
● Pi	Pinus nigra austriaca (Cloud Prune)	30-35cm	500-700cm	7
● Sa	Salix alba 'Tristis Resistenta'	50-60cm	600-900cm	2

Figure 6.2 New tree planting



Below ground rooting structures, used where required below paving



Typical tree planting details

Tree planting details

Providing an optimal below-ground environment for the proposed trees - with adequate rooting volume - is a priority for the landscape design. Context and species-specific tree pits which coordinate with drainage and service corridors have been developed. These consider all elements of the tree pit design important to the success of the tree - including watering, root aeration and below-ground support and rooting volume.

The developed designs acknowledge that trees are planted in a tight urban site rather than a field environment. A combination of case studies within *Trees in the Townscape: A Guide for Decision Makers* (TDAG, 2012) & *Trees in Hard Landscape: A Guide for Delivery* (TDAG, 2014); and the methodology within LB Southwark's 'Street Tree Design Tool' (best available methodology at time of writing) have been used to calculate the ultimate canopy sizes of trees. Trees will be planted minimum 4-5m from the building line, resulting in a successful specimen and not an onerous liability.

Load-bearing planting substrates are specified where appropriate in order to maximise rooting zones and achieve the best possible tree growth.



Figure 6.3
Planting

- PL1 Foliage, texture & scent, Water Lane
- PL2 Riot of Colour, Square
- PL3 Boulder Garden
- PL4 Potted Magnolias, Terrace



PL2 - Meadow planting in the Square



PL3 - Boulder garden, access from the Embankment

Landscape Planting

The ornamental planting scheme will be ecologically rich with 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 containers on the **Terrace**.

A range of species are described on the next page:



Malus sylvestris, small trees planted along the wall to Water Lane



Fatsia japonica



Pittosporum



Euonymus



Anemanthele lessoniana

PL1 - Water Lane

Trees

Quercus palustris Swamp oak

Malus sylvestris Crab

Specimen Shrubs

Fatsia japonica Castor oil plant

Mahonia bealei

Shrubs

Cornus alba Elegantissima

Euonymus japonicus

Euonymus fortunei 'Emerald Gaiety'

Phyllostachys nigra Black bamboo

Pittosporum tobira Mock Orange

Perennials & Grasses

Anemanthele lessoniana Pheasant's tail grass

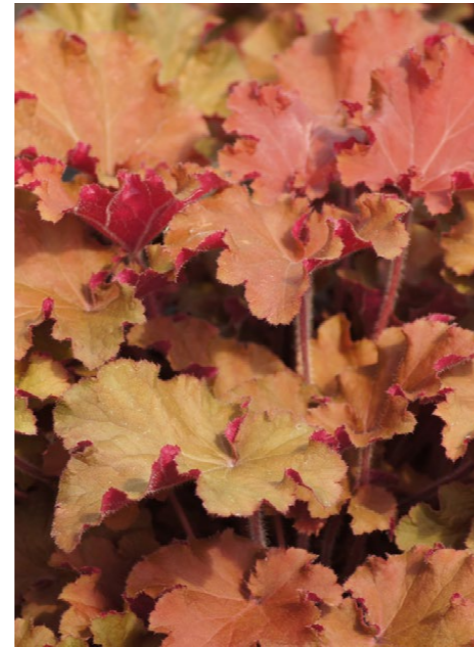
Figure 6.4 Water Lane Planting



Stipa tenuissima



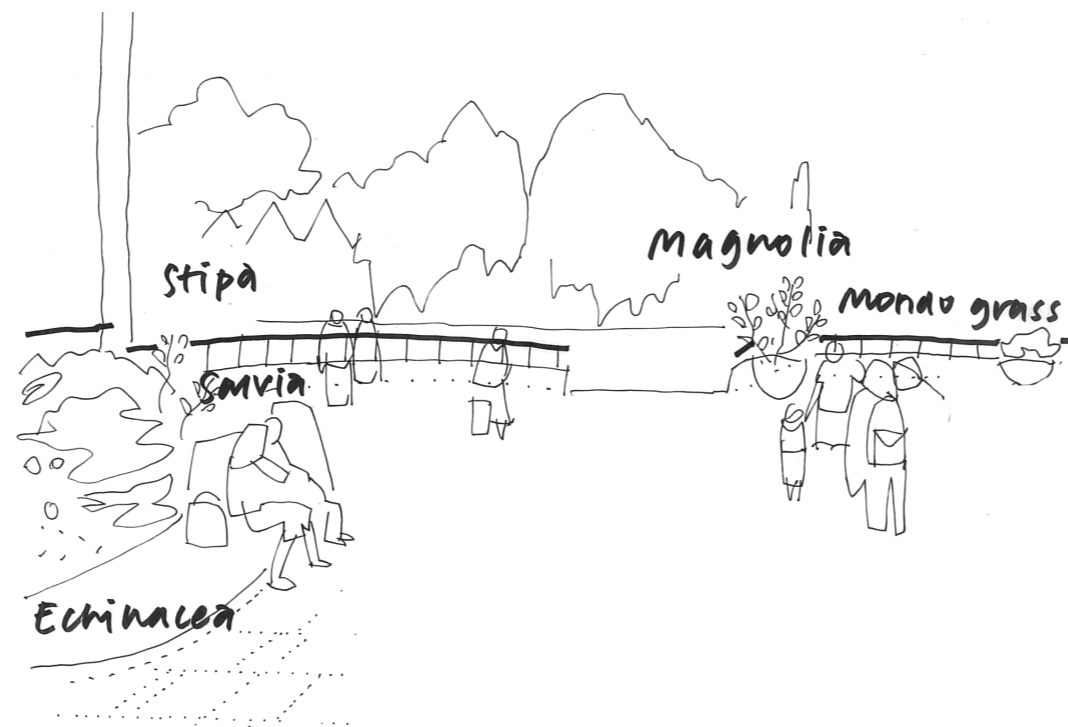
Stipa tenuissima with Salvia caradonna



Heuchera



Echinacea



PL2 - Square

Trees

Salix alba 'Tristis Resistentia'

Shrubs

Perovskia 'Little Spire'

Salvia caradonna

Perennials & Grasses

Carex morrowii 'Ice Dance'

Echinacea purpurea

Erigeron karvinskianus

Geranium macrorrhizum 'Bevan's var'

Heuchera 'Tangerine Wave'

Potentilla 'Gibson's Scarlet'

Rudbeckia Goldsturm

Stipa gigantea Giant feather grass

Stipa tenuissima Mexican feather grass

Figure 6.5 Water Lane Planting



Pinus nigra, cloud pruned



Trachelospermum jasminoides



Stipa gigantea



Creeping juniper



Pinus mugo



Brachyglottis

PL3 - Boulder Garden

Trees

Pinus nigra (Cloud pruned)

Salix alba 'Tristis Resistenta'

Climbers

Trachelospermum jasminoides

Specimen Shrubs

Cercis siliquastrum Judas tree

Fatsia japonica

Pinus mugo Gnom Dwarf mountain pine

Yucca gloriosa

Shrubs

Brachyglottis 'Sunshine'

Euonymus fortunei 'Emerald Gaiety'

Juniperus horizontalis Creeping juniper

Perennials & Grasses

Carex festucacea

Dietes grandiflora Fairy iris

Festuca glauca Blue fescue

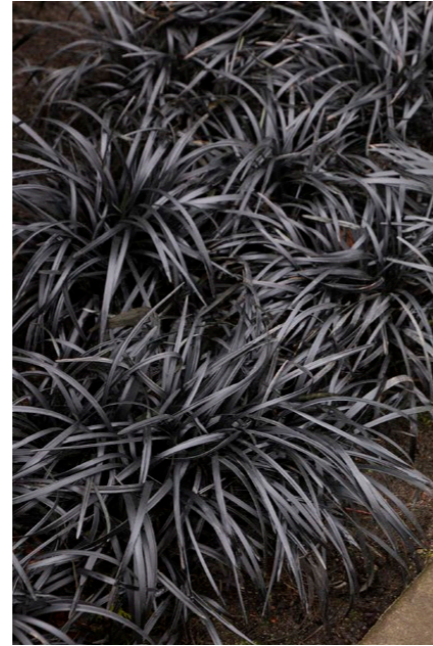
Kniphofia 'Bees' Sunset Red Hot Poker

Stipa gigantea Giant feather grass

Figure 6.6 Water Lane Planting



White flowering, deciduous Magnolia x loebneri



Magnolias underplanted with Mondo Grass
Ophiopogon japonicus

PL4 - Terrace

Specimen Shrubs

Magnolia grandiflora

Magnolia x loebneri

Perennials & Grasses

Ophiopogon japonicus

Mondo grass

Figure 6.7 Water Lane Planting

Delivery & Aftercare

The design will be developed in accordance with the Planning Application including submittal and approval of detailed information to satisfy any Conditions attached to planning permission should it be granted.

Delivery will be by appropriately skilled and experienced contractors and specialist contractors working to tight specifications and fully resolved designs. Particular attention will be paid to the sourcing of both hard and soft landscape material, and the customising of specifications and workmanship to best suit these materials which will be locally sourced where possible.

The development contract will include a period of post-practical completion soft landscape maintenance by the contractor, which will run concurrently with the defects period and beyond, followed by maintenance under the existing term contract.

This maintenance shall contribute to a high quality external environment throughout the application site, and shall be carried out by suitably skilled and locally experienced landscape contractors working to a previously agreed Landscape Management Plan. A draft of the estate framework management plan is appended.

FRAMEWORK ESTATE MANAGEMENT

FRAMEWORK ESTATE MANAGEMENT

Introduction

This document is prepared on behalf of London Borough of Richmond upon Thames (LBRuT) council in support of the highway and hard and soft landscape and public realm proposals relating to the Twickenham Rediscovered Programme (TRP). The document serves as a guide to the content of the Framework Estate Management Strategy and forms part of the detailed planning application.

The Framework Estate Management Strategy boundary is indicated in Figure 7.1.

This document sets out;

- A brief description of the proposals and vision for its use;
- Management responsibilities; and,
- Maintenance guidelines.

Vision

The landscape at TRP is structured around a movement between the high ground on King Street and the Embankment, improving the existing connection between the town and the riverside. The landscape report provides a description of the interventions made on Water Lane and the Embankment, and the design of the Square, the Terrace and the new access between the Embankment and DJG. A coherent maintenance strategy with clear responsibilities is key in ensuring the successful functioning of these places:

Water Lane & Embankment

The proposals consists of general streetscape improvements providing an enhanced connection to DJG and to the Riverside via wider pavements, decluttering, and rationalised parking. The proposals include new street trees planted into pavement buildouts between parking bays, and new low level planting between the road and upper level terraces.

Square & Terrace

The Square provides a substantial public open space, just under the size of two tennis courts, approx 300m², on the corner of Water Lane and the Embankment. Bordering the square on two sides is ground-floor flexible commercial space, with predominantly restaurant / café uses. The square will be a public flexible space for performances, markets and sitting out benefiting from the potential for event lighting. The community will be encouraged to put forward ideas for usage of the square and it is envisaged that it will provide an area for extension to some of the existing events within Diamond Jubilee Gardens. [A range of

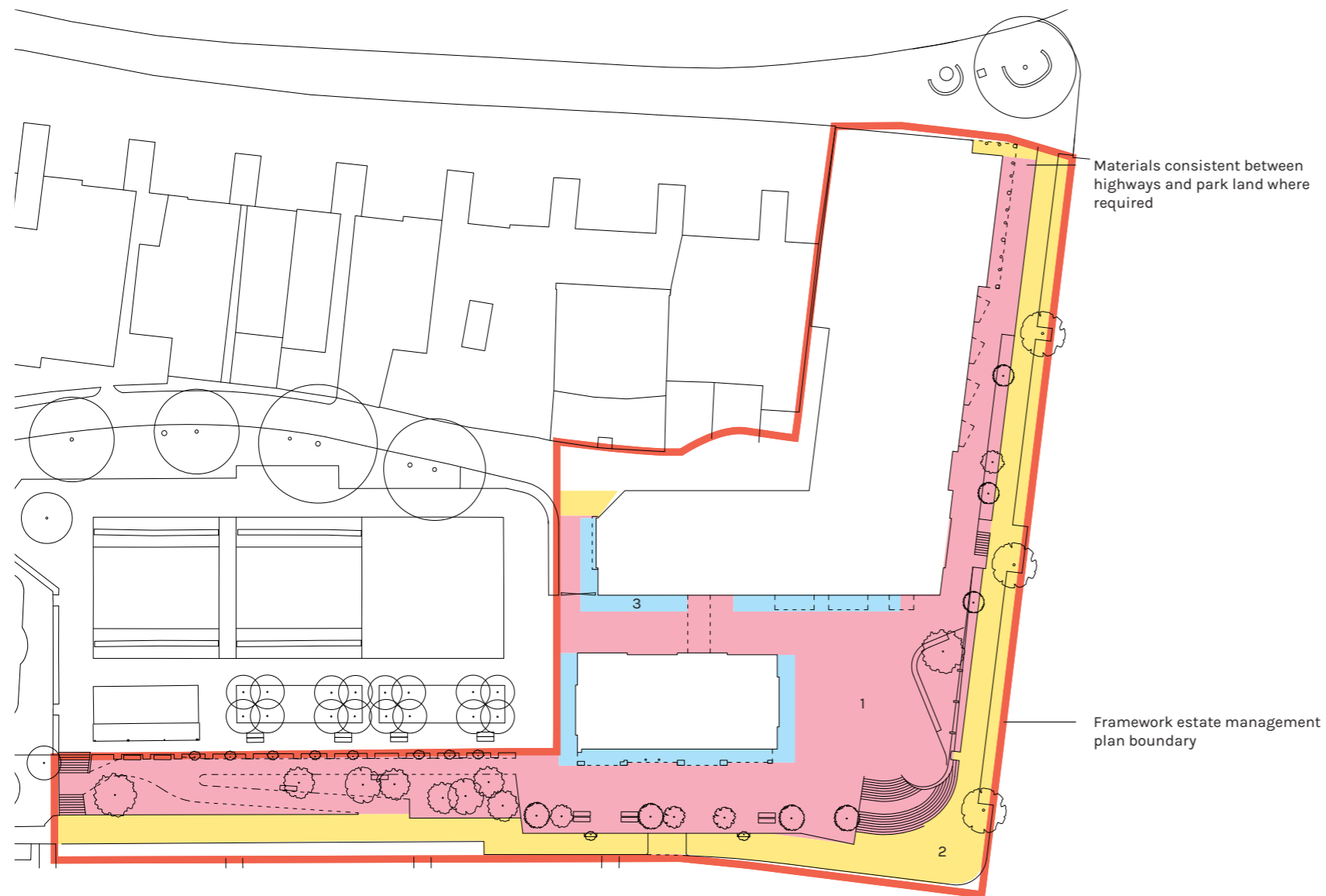


Figure 7.1
Management Responsibilities

- 1 LBRuT Parks Management
- 2 LBRuT Highways Management
- 3 Tenant Management

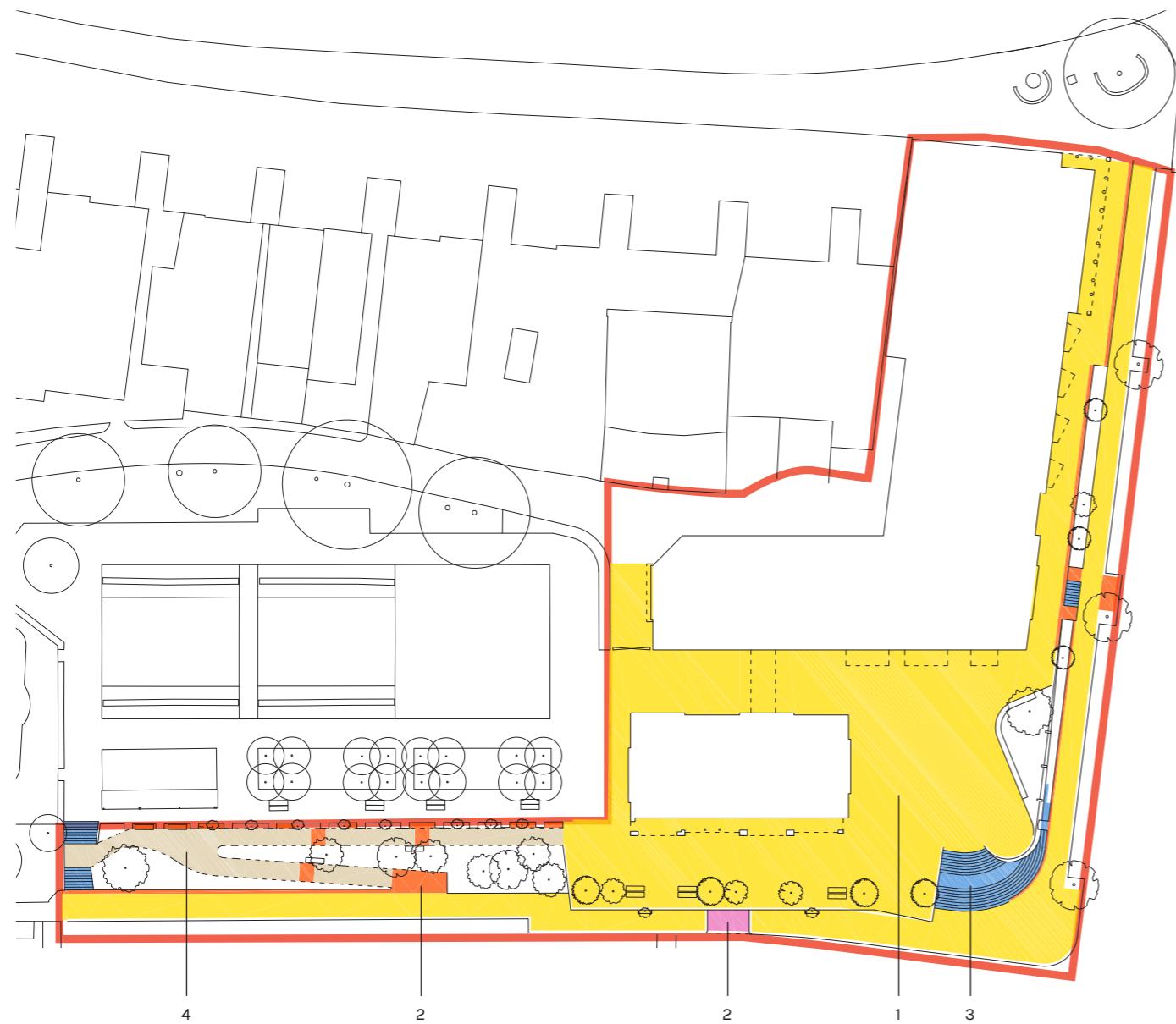


Figure 7.2
Hard Landscape Areas

- 1 Natural stone paving
- 2 Natural stone setts
- 3 Natural stone steps
- 4 Bonded gravel

fixed and moveable seating is being explored]. Pop-up electricity outlets will be incorporate on the north-eastern edge of the square to facilitate this range of uses. The Terrace will be a 10m deep space for sitting out above the level of the road, watching the river and surrounding activities. Surface materials will delineate between areas to be kept clear for circulation, and areas for sitting. The commercial spaces will bring activity to the Square and Terrace creating a central hub that will provide the opportunity for retail, office space and community uses.

Embankment Gardens

A new gently sloping access with resting places is created between the Embankment and DJG. The level change will be created by replacing the existing rockery with stacked boulders - arranged to allow older children to climb. An engineered slope is created - boulders concreted in place.

Management Responsibilities

As indicated on Figure 7.1 the public area of the scheme adjoining Diamond Jubilee Gardens and incorporating the Square (coloured pink) will be managed and maintained by LBRuT Parks. The footpath and roadway elements, coloured yellow, will be managed by LBRuT Highways.

In terms of grounds maintenance and cleansing side i.e. daily litter bin empty, sweeping, graffiti removal, the site would be added to the Council's asset list and would be carried out for and on behalf of LBRuT by the relevant contractor (currently Continental Landscapes).

Each of the café/restaurant units has a [2m] deep spill-out area proposed (coloured blue) which will be managed and maintained by the relevant occupier. Provisions for appropriate standards will be incorporated within the lease terms to ensure there is no noticeable difference in standards with the public spaces. Responsibility for this will fall under the management of the Property and Estates Team.

Management organisations, roles and responsibilities will be set out in the O&M manual on completion.

Maintenance Guidelines

This section sets out the guidelines for the first 7 years maintenance following installation of hard landscape, soft landscape and street furniture.

Hard Surfaces

Further details can be found in LUC drawings 7085_LUC-LD_PLN-200 Hard Landscape. All hard surfaces are to be maintained as safe and clean, high quality pavements. Paving should be checked during maintenance inspections for deviations and settlement.



Figure 7.3
Soft Landscape Areas

- 1 New tree planting
- 2 New ornamental shrub planting
- 3 New ornamental planting in containers

Drainage

Drainage is either into planting beds, straight to storm water system or via attenuation on the podium. Maintenance of drainage is therefore limited to localised cleaning of outlet gullies, slot drainage and perm avoid (or similar) collection chambers. The design of the landscape has been mindful of flooding - refer to the FRA for further details.

Site Fixtures

Litter bins are provided across the site in public areas and will be emptied daily or as required by the management regime. Other site fixtures such as seating and balustrades will be constructed with appropriate materials and will have details for their care within the O&M manual.

Trees & Soft Landscape

Further details can be found in LUC drawing 7085_LUC-LD_PLN-400 Soft Landscape. Indicative tree planting pits are illustrated on LUC drawing 7085_LUC-LD_PLN-621. It is anticipated that the landscape work will be carried out by a specialist landscape sub-contractor, with a management contract being let concurrently with the defects period, and including replacement of defective planting at the contractors expense or replacement of vandalised planting at the developer's (Richmond Council) expense. Trees will be planted as semi-mature specimens and therefore require close monitoring particularly in the first years to prevent costly replacement. Trees will be regularly watered (watering via aeration pipe) and fed with liquid fertiliser as required.

Water

Irrigation is carried out manually with hosepipe. A separate watering ring main will be installed with hose connection points and valve boxes close to planted areas. All components, bar the hose will be handed over to the developer by the contractor on completion of the development.

Lighting & Electrical

Following planning, liaison will also be required within the Council on responsibility for street lighting and electrical equipment within the proposals.

Indicative Maintenance Schedule

A maintenance activity schedule is provided here, outlining the required activities and approximate frequency of visits which will be resourced by the council and formalised in the maintenance contract.

Ref	Operation	Frequency	Amount	Respons.
H1	Paving Areas			
	Weeding			
	Sweeping / Washing			
	Mechanical cleaning			
	Repair			
	Leaf Clearance			
	Snow & Ice Clearance	As required		
H2	Litter Clearance			
	Self-Binding Gravel Areas			
	Weeding			
H3	Litter Clearance			
	Topping-up			
	Drainage			
F1	Cleaning, Slit Removal			
	Seating			
	Clean & treat	6/yr		
F2	Repairs & replacement			
	Litter Bins			
	Emptying, Disposal and keep clean			
F3	Clean & treat			
	Repairs & replacement			
	Repairs & replacement			

Figure 7.4
Hard Landscape Operations

Ref	Operation	Frequency	Amount	Respons.
F3	External Lighting			
	Inspection for damage, replace bulbs			
	Clean & treat	As required		
F4	Boulders			
	Inspection for damage			
	Check firmness			
F5	Clean & treat	As required		
	Railings			
	Inspection for damage, check firmness			
F6	Clean & treat	As required		
	Repairs & replacement			
	External Lighting			
F6	Inspection for damage, replace bulbs			
	Clean & treat	As required		

Table X Hard Landscape Operations

Ref	Operation	Frequency	Amount	Respons.
S1	Amenity Shrub & Ground Cover Planting		300m2	
	Watering	As required		
	Hand Weeding	10/yr		

Ref	Operation	Frequency	Amount	Respons.
	Mulching	2/yr		
	Cutting back	2/yr		
	Split & replant, 20% per year	2/yr		
	Litter Clearance	52/yr		
S2	Hedges			
	Cut hedge by hand			
	Maintain hedge base			
	Litter Clearance			
S3	New Trees			
	Watering	As required		
	Inspection	8/yr		
	Apply fertiliser	1/yr		
	Pruning	1/yr		
	Replacement	Within 2wks of deaths, during appropriate season		
	Weeding	8/yr		

Table 7.5 Soft Landscape Operations