

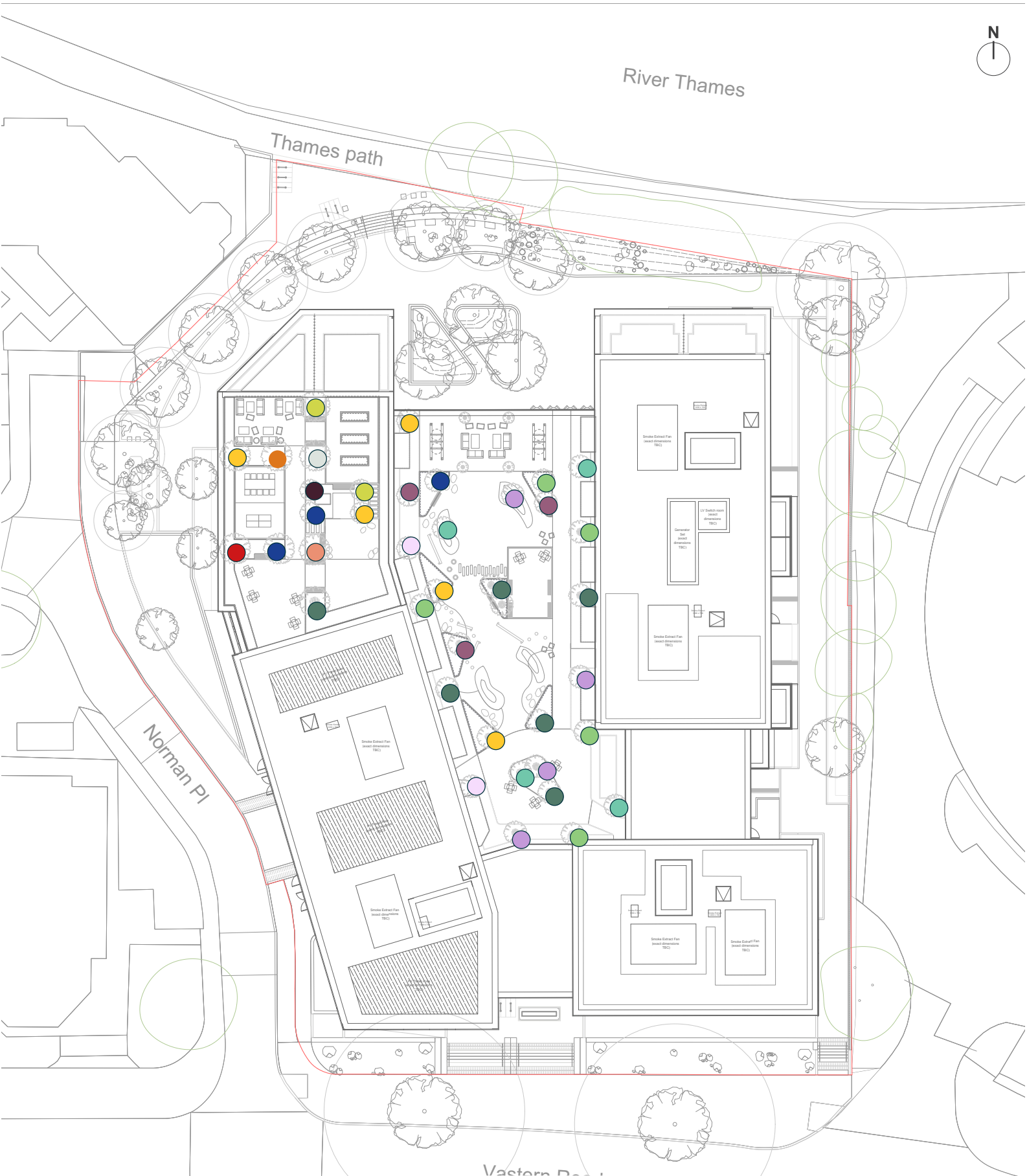
5.29 Tree strategy - Amenity terraces

A total of 40 small to medium sized trees are proposed across the podium gardens. A selection of clear stem and multi stem trees are proposed with careful consideration to species choice and placement in light of overshadowing and sun lit spaces.

Adaptable tree species such as Hazel and Field Maple, which tolerate sun light and overshadowing are proposed within the most shaded of spaces.

- Level 01 Podium terrace - 28 proposed trees
- Level 08 Amenity terrace - 12 proposed trees

| Botanical                                                                           | Common                           | Native                         | Aspect                                                                                                                                                                                                                                                              |
|-------------------------------------------------------------------------------------|----------------------------------|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Podium tree species                                                                 |                                  |                                |                                                                                                                                                                                                                                                                     |
|   | Amelanchier arborea 'Robin Hill' | Snowy Mespilus 'Robin Hill'    | N                                                                                           |
|  | Amelanchier lamarckii            | Serviceberry                   | N                                                                                         |
|  | Acer campestre                   | Field Maple                    | N    |
|  | Cornus controversa               | Giant Dogwood                  | N                                                                                         |
|  | Cornus 'eddie's white wonder'    | Dogwood 'Eddie's White Wonder' | N                                                                                         |
|  | Corylus avellana                 | Common Hazel                   | Y                                                                                         |
|  | Corylus avellana 'Zellernuss'    | Hazel 'Zellernus'              | N                                                                                         |
|  | Magnolia stellata                | Star magnolia                  | N                                                                                         |
|  | Malus 'Butterball'               | Crab Apple 'Butterball'        | N                                                                                                                                                                              |
|  | Malus sylvestris                 | Common Crab Apple              | Y                                                                                         |
|  | Malus 'Evereste'(Red)            | Crab Apple Evereste            | N                                                                                         |
|  | Osmanthus x burkwoodii           | Burkwood Osmanthus             | N                                                                                         |
|  | Syringa vulgaris Madame Lemoine  | Lilac Madame Lemoine           | N                                                                                                                                                                              |
|  | Acer rufinerve                   | Grey-budded Snake-Bark Maple   | N                                                                                         |



Key plan illustrating the location of proposed trees by species

5.29.1 Tree schedule - proposed species



Amelanchier arborea 'Robin Hill' (Multi-stem)



Amelanchier lamarckii / Serviceberry



Acer campestre / Field maple (Native multi-stem)



Cornus controversa / Giant dogwood



Cornus 'eddie's white wonder' (Multi-stem) (FS / PSH / FSH)



Coryllus avellana / Hazel (Native / Multi-stem)



Coryllus avellana 'Zellernuss' / Hazel 'Zellernuss' (Multi-stem)



Magnolia stellata / Star magnolia



Malus 'Butterball' (Yellow) / Crab apple butterball



Malus sylvestris / Common crab apple



Malus 'Evereste'(Red) / Crab apple evereste



Osmanthus x burkwoodii / Burkwood Osmanthus



Syringa vulgaris Madame Lemoine / Lilac madame lemoine



Acer rufinerve / Grey-budded Snake-Bark Maple

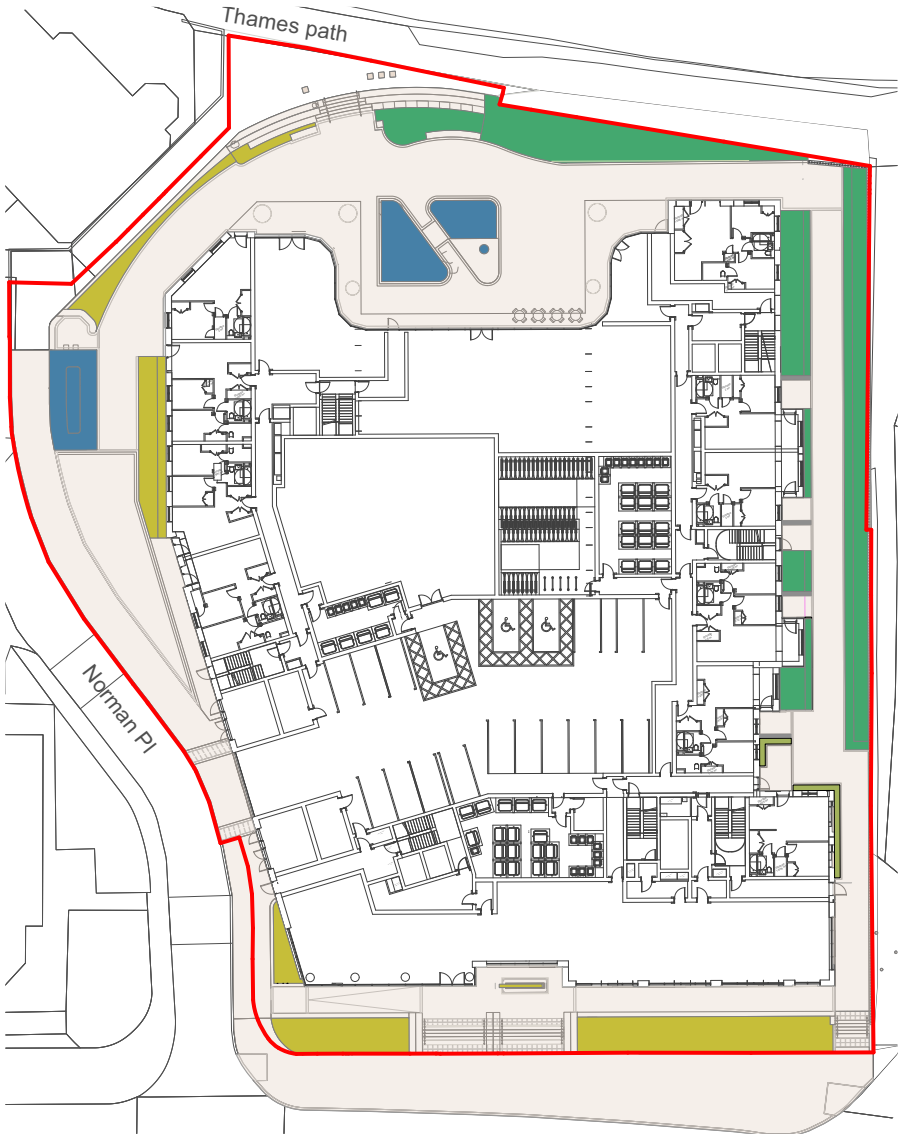
5.30 Softscape strategy

Ground floor shrub planting

An extensive planting strategy is proposed at ground floor. The spatial arrangement of the landscape proposals will create a welcoming and immersive experience for the general public. The selection of species will attract wildlife and provide the public with close contact to nature in the passing seasons. The planting strategy provides a huge number benefits including;

- Significantly improve visual amenity and create a sense of cohesiveness across the public realm
- Create defensible space and privacy to ground floor dwellings
- Create habitat and improve biodiversity
- Reduce impermeable surfaces and reduce surface water run off
- Provide seasonality and colour throughout the year
- Provide structure, form and texture
- Responds to aspect and micro-climates i.e. north / south facing, shaded / sunny aspects

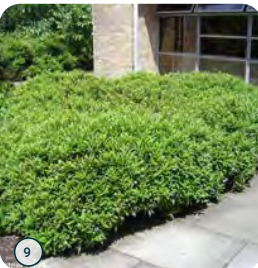
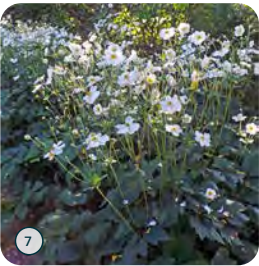
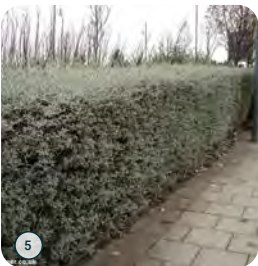
The mix of plants in the adjacent table is subject to availability at time of implementation and suitable supplements may be necessary.



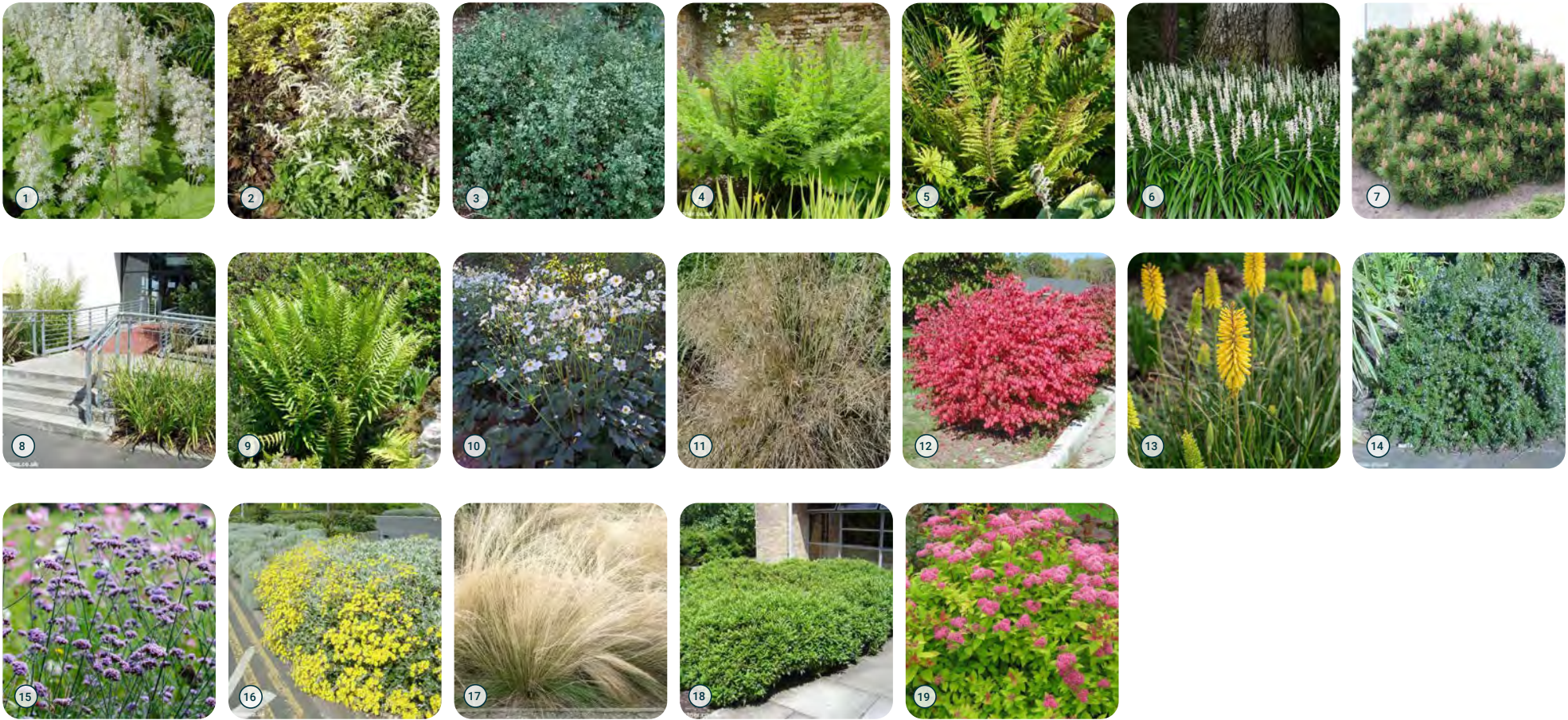
| Shade tolerant planting |                              |                         |        |        |
|-------------------------|------------------------------|-------------------------|--------|--------|
|                         | Botanical name               | Common name             | Native | Aspect |
| ①                       | Tiarella cordifolia          | Foam Flower             | N      |        |
| ②                       | Astilbe 'Deutschland'        | False Goatsbeard        | N      |        |
| ③                       | Helleborus argutifolius      | Holly-Leaved Hellebore  | N      |        |
| ④                       | Allium ursinum               | Wild Garlic             | Y      |        |
| ⑤                       | Teucrium scorodonia          | Wood Sage               | Y      |        |
| ⑥                       | Ruscus aculeatus             | Butcher's Broom         | Y      |        |
| ⑦                       | Anemone x Hybrida            | Japanese Anemone        | Y      |        |
| ⑧                       | Osmunda regalis              | Male Fern               | Y      |        |
| ⑨                       | Sarcococca confusa           | Sweet Box               | N      |        |
| ⑩                       | Polystichum setiferum        | Soft Shield Fern        | Y      |        |
| ⑪                       | Asplenium scolopendrium      | Hart's Tongue Fern      | Y      |        |
| ⑫                       | Liriope muscari 'Mon. White' | Lilyturf 'Monroe White' | N      |        |
| ⑬                       | Melica uniflora              | Wood Melick             | Y      |        |
| ⑭                       | Carex pendula                | Pendulous Sedge         | Y      |        |

Key:

- Shade tolerant planting (346 sq m)
- Ground level planting (201 sq m)
- Rain garden planting (84 sq m)



| Ground floor shrub planting |                                 |                         |        |                                                                                                                                                                                                                                                       |
|-----------------------------|---------------------------------|-------------------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                             | Botanical name                  | Common name             | Native | Aspect                                                                                                                                                                                                                                                |
| ①                           | Tiareella cordifolia            | Foam Flower             | N      |                                                                                     |
| ②                           | Astilbe 'Deutschland'           | False Goatsbeard        | N      |                                                                                                                                                                      |
| ③                           | Ruscus aculeatus                | Butcher's Broom         | Y      |                                                                                     |
| ④                           | Osmunda regalis                 | Royal Fern              | Y      |    |
| ⑤                           | Polystichum setiferum           | Soft Shield Fern        | Y      |                                                                                     |
| ⑥                           | Liriope muscari 'Mon. White'    | Lilyturf 'Monroe White' | N      |                                                                                                                                                                      |
| ⑦                           | Pinus mugo 'Mops'               | Dwarf Mountain Pine     | N      |                                                                                                                                                                      |
| ⑧                           | Carex pendula                   | Pendulous Sedge         | Y      |    |
| ⑨                           | Athyrium filix-femina           | Lady Fern               | Y      |                                                                                                                                                                      |
| ⑩                           | Anemone x hybrida               | Japanese Anemone        | Y      |                                                                                     |
| ⑪                           | Deschampsia cespitosa 'Goldtau' | Tufted Hair Grass       | N      |                                                                                     |
| ⑫                           | Euonymous europaeus             | Spindle                 | Y      |                                                                                     |
| ⑬                           | Kniphofia 'Bees' Lemon'         | Red Hot Poker           | N      |                                                                                                                                                                      |
| ⑭                           | Rosmarinus officinalis          | Rosemary                | N      |                                                                                                                                                                    |
| ⑮                           | Verbena bonariensis             | Purple Top Verbena      | N      |                                                                                                                                                                    |
| ⑯                           | Brachyglottis 'Sunshine'        | Shrub Ragwort           | N      |                                                                                                                                                                    |
| ⑰                           | Stipa tenuissima                | Mexican Feather Grass   | N      |                                                                                                                                                                    |
| ⑱                           | Sarcococca confusa              | Sweet Box               | N      |                                                                                 |
| ⑲                           | Spiraea japonica 'Candlelight'  | Japanese Spirea         | N      |                                                                                 |



| Rain garden planting |                       |                         |        |                                                                                                                                                                                                                                                             |
|----------------------|-----------------------|-------------------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                      | w name                | Common name             | Native | Aspect                                                                                                                                                                                                                                                      |
| ①                    | Althaea officinalis   | Marsh Mallow            | Y      |                                                                                       |
| ②                    | Campanula glomerata   | Clustered Bellflower    | Y      |                                                                                       |
| ③                    | Carex paniculata      | Greater Tussock 'Sedge' | Y      |                                                                                       |
| ④                    | Carex pendula         | Pendulous 'Sedge'       | Y      |    |
| ⑤                    | Dryopteris filix-mas  | Male Fern               | Y      |                                                                                       |
| ⑥                    | Juncus effusus        | Soft Rush               | Y      |                                                                                       |
| ⑦                    | Osmunda regalis       | Royal Fern              | Y      |    |
| ⑧                    | Astilbe 'Deutschland' | False 'Goatsbeard'      | N      |                                                                                                                                                                          |
| ⑨                    | Iris pseudacorus      | Yellow Flag Iris        | Y      |                                                                                       |
| ⑩                    | Penstemon digitalis   | Foxglove Beard Tongue   | N      |                                                                                       |
| ⑪                    | Lythrum salicaria     | Purple Loosestrife      | Y      |                                                                                                                                                                          |



Podium planting

In addition to an attractive planting palette at ground floor, further soft planting is provided within the resident podium gardens on Level 01 and 08. Similarly to the tree strategy the low level planting considers daylight and overshadowing. The planting strategy provides a huge number benefits including;

- Significantly improve visual amenity
- Create defensible space and privacy to ground floor dwellings
- Inclusion of evergreen hedges and planting to provide seasonal interest, and structure
- Create habitat and improve biodiversity
- Reduce impermeable surfaces and surface water run off
- Provide structure, form and texture
- Responds to aspect and micro-climates i.e. north / south facing, shaded / sunny aspects.



**Key:**

Amenity lawn (238 sq m)

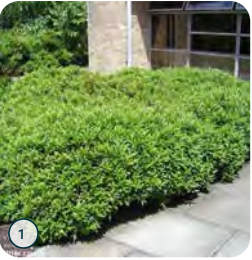
Hedge planting (162 sq m)

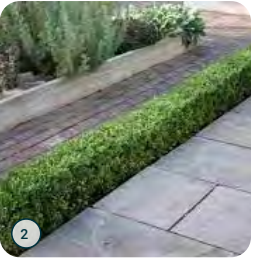
Shade aspect planting (93 sq m)

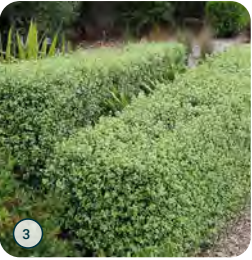
Sun aspect planting (42 sq m)

Hedge Planting

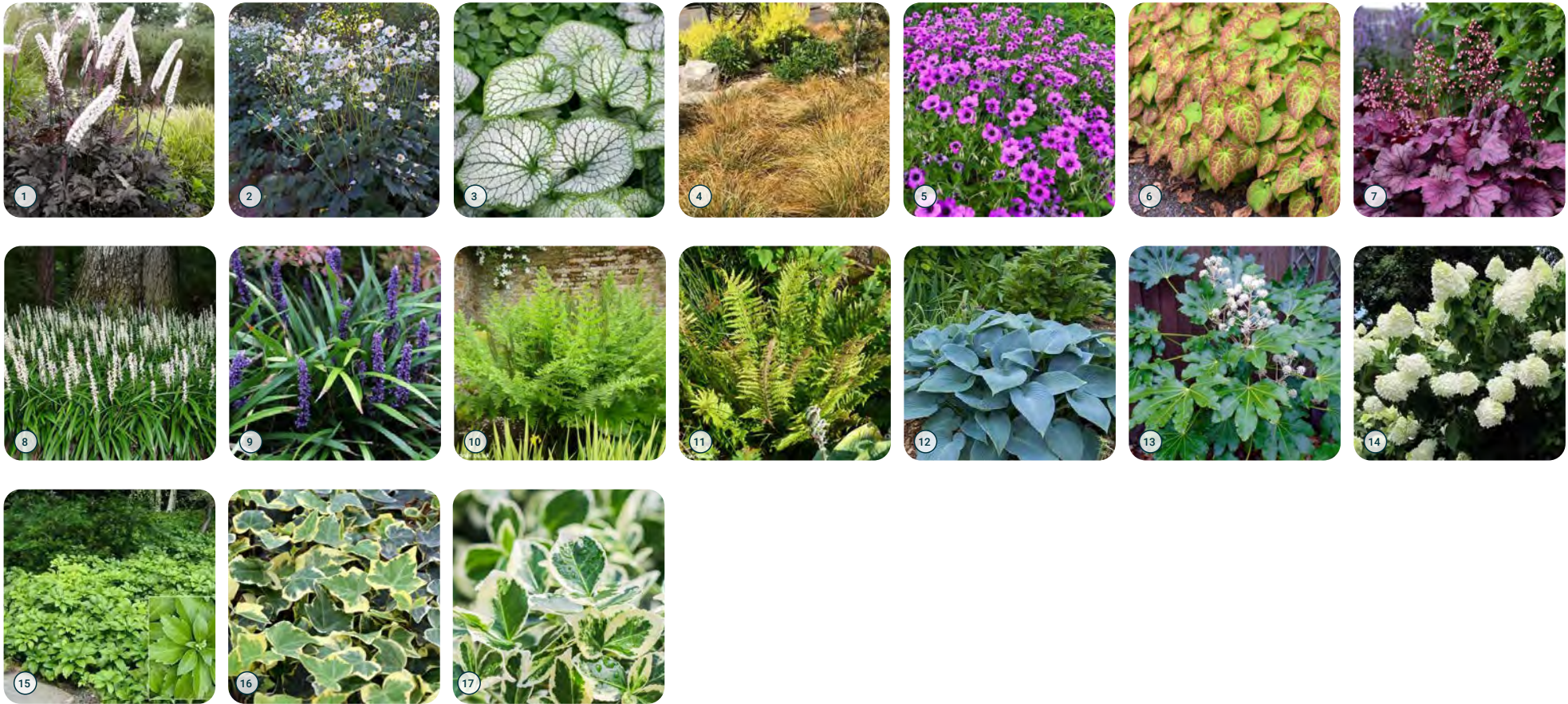
|   | Botanical name          | Common name        | Native | Aspect                                                                                                                                                                                                                                                      |
|---|-------------------------|--------------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Sarcococca confusa      | Sweet Box          | N      |                                                                                       |
| 2 | Taxus baccata           | Yew                | Y      |    |
| 3 | Pittosporum 'Garnettii' | Kohuhu 'Garnettii' | N      |                                                                                       |

  
1

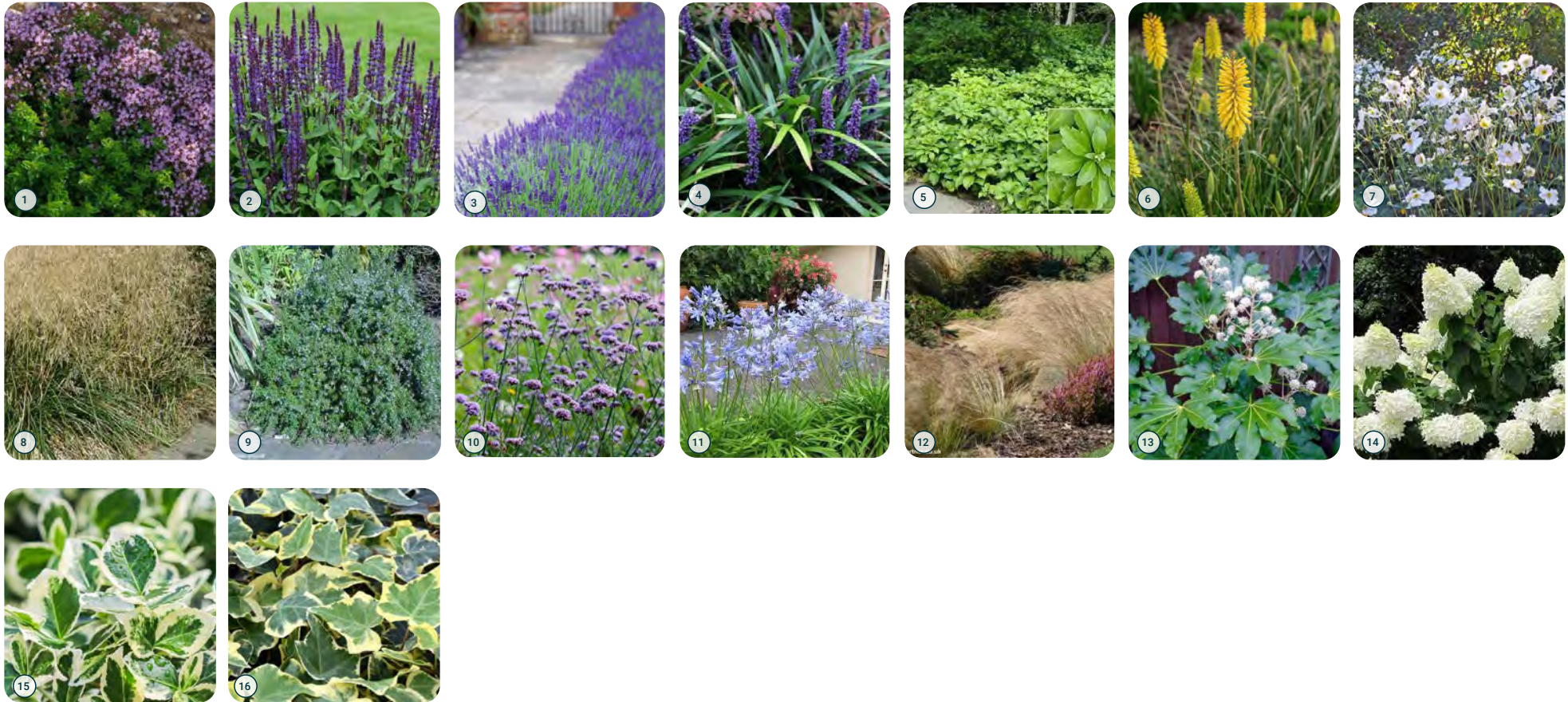
  
2

  
3

| Shade tolerant planting |                                    |                         |        |        |
|-------------------------|------------------------------------|-------------------------|--------|--------|
|                         | Botanical name                     | Common name             | Native | Aspect |
| ①                       | Actaea dahurica                    | Actaea dahurica         | N      |        |
| ②                       | Anemone x hybrida                  | Japanese Anemone        | N      |        |
| ③                       | Brunnera macrophylla               | Siberian bugloss        | N      |        |
| ④                       | Carex petriei                      | Petrie's Brown Sedge    | N      |        |
| ⑤                       | Geranium 'Mavis Simpson'           | Cranesbill              | N      |        |
| ⑥                       | Epimedium species                  |                         |        |        |
| ⑦                       | Heuchera species                   |                         |        |        |
| ⑧                       | Liriope muscari 'Monroe White'     | Lilyturf 'Monroe White' | N      |        |
| ⑨                       | Liriope muscari                    | Big Blue Lilyturf       | N      |        |
| ⑩                       | Osmunda regalis                    | Male Fern               | Y      |        |
| ⑪                       | Polystichum setiferum              | Soft Shield Fern        | Y      |        |
| ⑫                       | Hosta species                      |                         |        |        |
| ⑬                       | Fatsia japonica                    | Japanese Aralia         | N      |        |
| ⑭                       | Hydrangea paniculata 'Grandiflora' | Hydrangea               | N      |        |
| ⑮                       | Pachysandra terminalis             | Japanese Spurge         | N      |        |
| ⑯                       | Hedera helix                       | Common Ivy              | Y      |        |
| ⑰                       | Euonymous                          | Japanese Spindle        | N      |        |

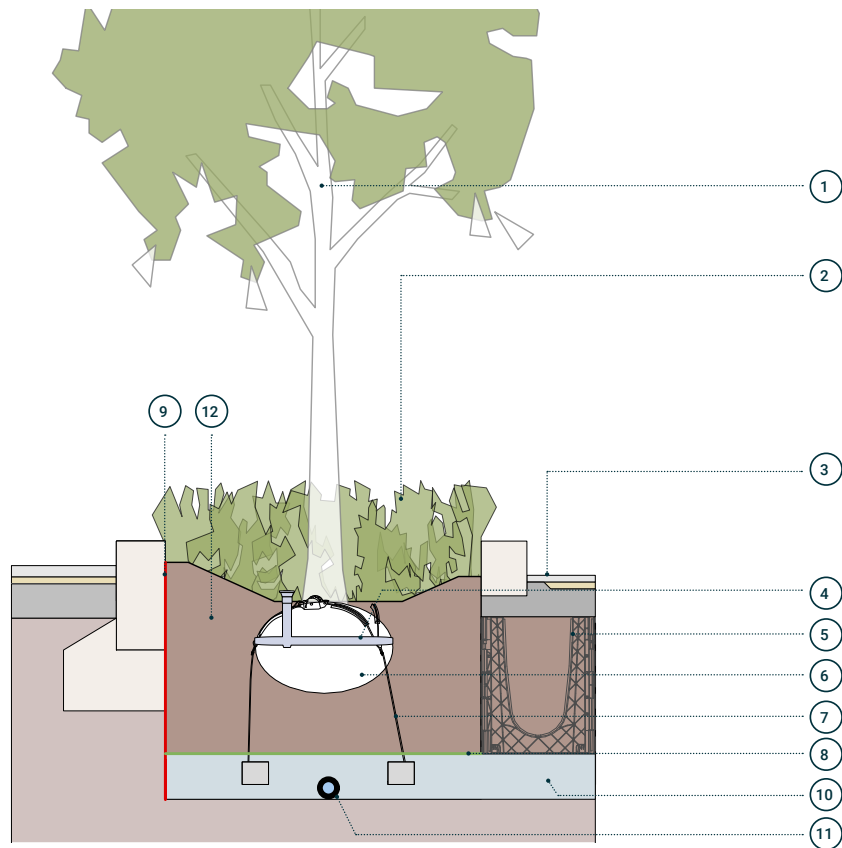


| Podium planting |                                    |                       |        |        |
|-----------------|------------------------------------|-----------------------|--------|--------|
|                 | Botanical name                     | Common name           | Native | Aspect |
| ①               | Origanum vulgare                   | Oregano               | Y      |        |
| ②               | Salvia nemorosa 'Caradonna'        | Balkan clary          | N      |        |
| ③               | Lavandula angustifolia             | English Lavender      | Y      |        |
| ④               | Liriope muscari                    | Big Blue Lilyturf     | N      |        |
| ⑤               | Packysandra terminalis             | Japanese Spurge       | N      |        |
| ⑥               | Kniphofia 'Bees' Lemon'            | Red Hot Poker         | N      |        |
| ⑦               | Anemone x hybrida                  | Japanese Anemone      | N      |        |
| ⑧               | Deschampsia cespitosa 'Goldtau'    | Tufted Hair Grass     | N      |        |
| ⑨               | Rosmarinus officinalis             | Rosemary              | N      |        |
| ⑩               | Verbena bonariensis                | Purple Top Verbena    | N      |        |
| ⑪               | Agapanthus                         | African Lily          | N      |        |
| ⑫               | Stipa tenuissima                   | Mexican Feather Grass | N      |        |
| ⑬               | Fatsia japonica                    | Japanese Aralia       | N      |        |
| ⑭               | Hydrangea paniculata 'Grandiflora' | Hydrangea             | N      |        |
| ⑮               | Euonymous                          | Japanese Spindle      | N      |        |
| ⑯               | Hedera helix                       | Common Ivy            | Y      |        |

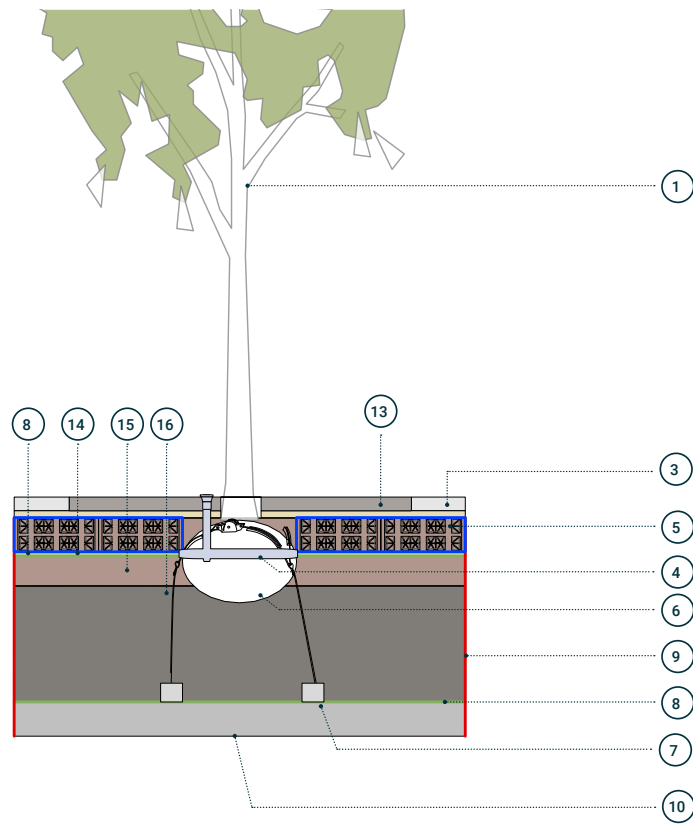


5.30.1 Trees pits

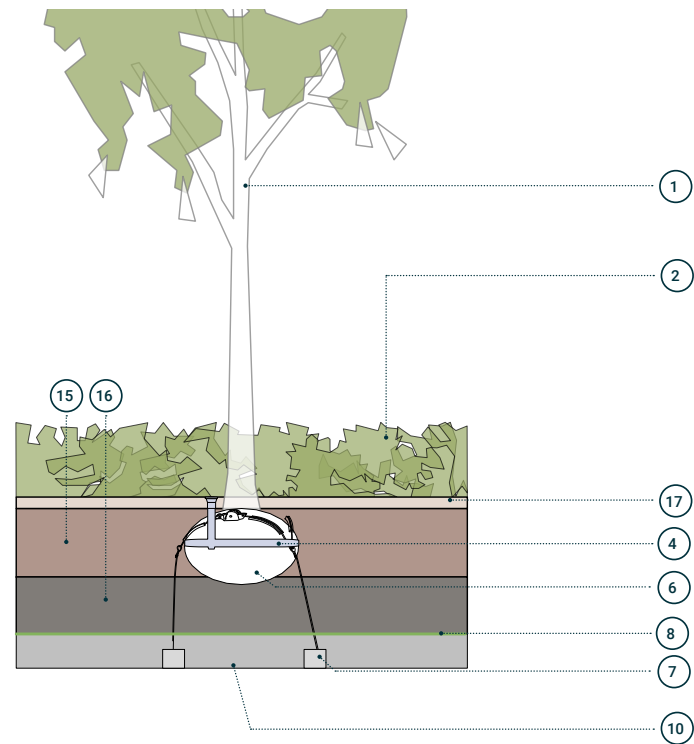
Typical tree pit in rain garden



Typical tree pit in paving

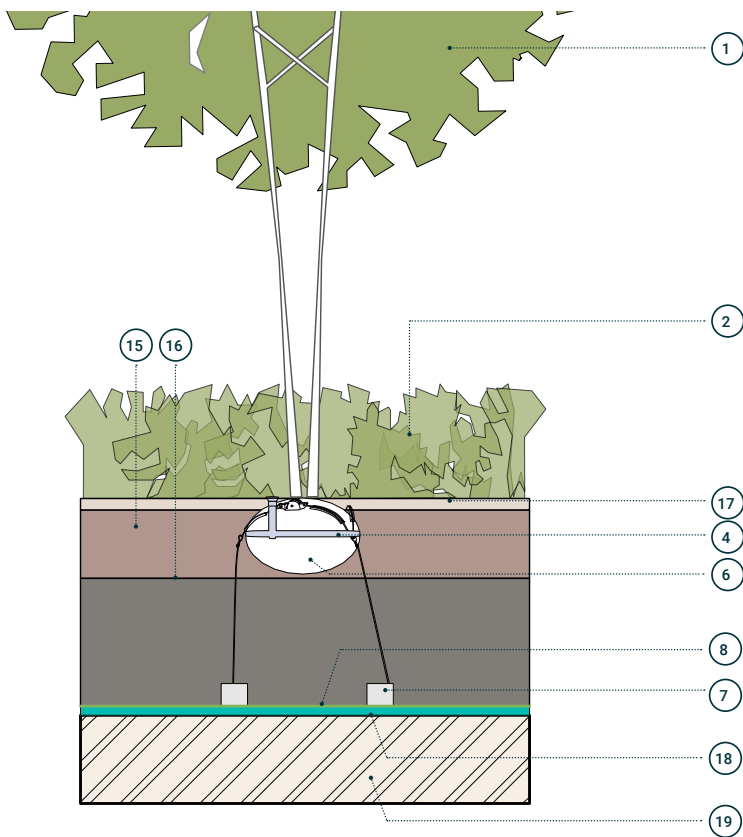


Typical tree pit in softscape

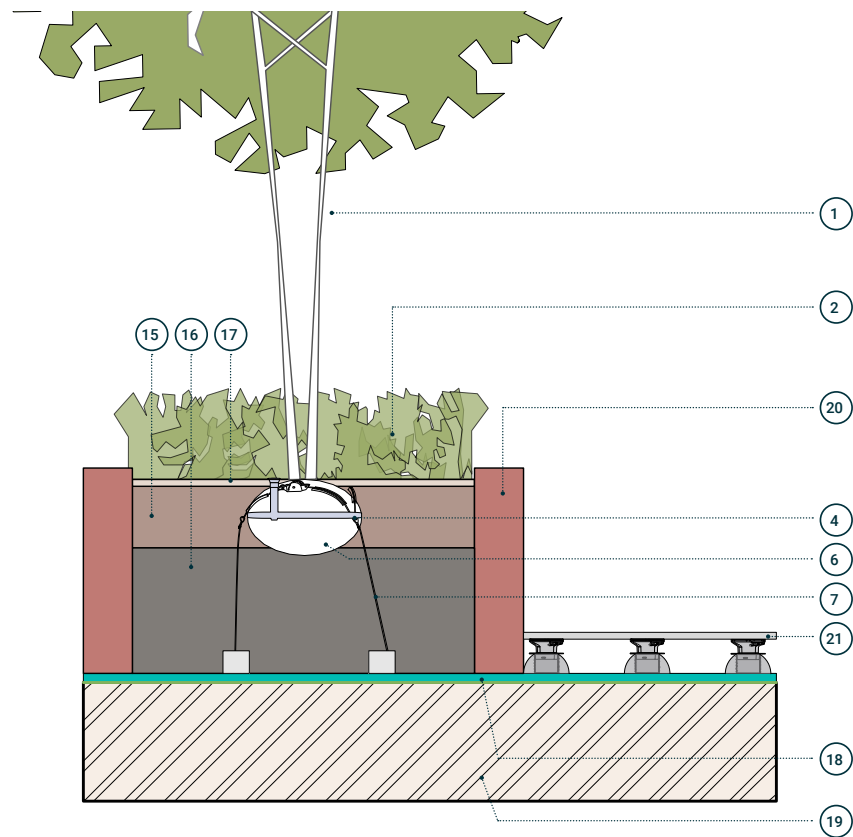


- Key
- |    |                                                          |    |                                     |
|----|----------------------------------------------------------|----|-------------------------------------|
| 1  | Proposed trees - refer to key plan for tree species      | 13 | Tree grille                         |
| 2  | Low-level softscape planting                             | 14 | 30mm bedding layer                  |
| 3  | Paving system - build-up to engineer's specification     | 15 | 300mm topsoil to BS 3882:2015       |
| 4  | Aeration / irrigation pipe                               | 16 | 600 - 700mm subsoil to BS 8604:2013 |
| 5  | Root cell system - as required to achieve soil volumes   | 17 | 50mm mulch                          |
| 6  | Root ball                                                | 18 | 30-50mm drainage board              |
| 7  | Guying system                                            | 19 | Architectural / structural build-up |
| 8  | Geo textile membrane                                     | 20 | Raised planter                      |
| 9  | Root barrier                                             | 21 | Paving on pedestal system           |
| 10 | Granular drainage course                                 |    |                                     |
| 11 | Perforated drainage pipe                                 |    |                                     |
| 12 | Soil type 1 - 1,000mm filter medium soil to BS 8601:2013 |    |                                     |

Typical tree pit on podium (L02)



Typical tree pit on roof terrace (L10)



5.31 Trees - Vastern Road

In order to improve the lack of green infrastructure fronting the development site, and with consideration to the constraints such as existing utilities and the culvert, 2 trees are proposed within the public footpath.

Carefully designed tree pits can accommodate existing utilities whilst mitigating potential risks to service runs, whilst also maintaining maintenance access. There are two main services, a Thames Water main and a Traffic Signal which impact the positioning of the new trees. It is possible to include root barriers around the utility to prevent root damage.

The tree pit design and final location of trees is subject to further coordination with utility providers, in collaboration with tree pit specialists such as Green Blue Urban.

Key points to note regarding the 2 trees:

- Trees proposed to continue design language along Vastern Road
- Tree species: Platanus x hispanica (London Plane), continuation of established species along Vastern Rd
- Root zone required is 21sqm per tree based on size and canopy spread of existing specimens (8m canopy)
- Tree cells systems would be required to mitigate potential clashes with Thames Water main and traffic signal lines
- The above would be subject to agreement by Thames Water and The Local Authority Highways team.

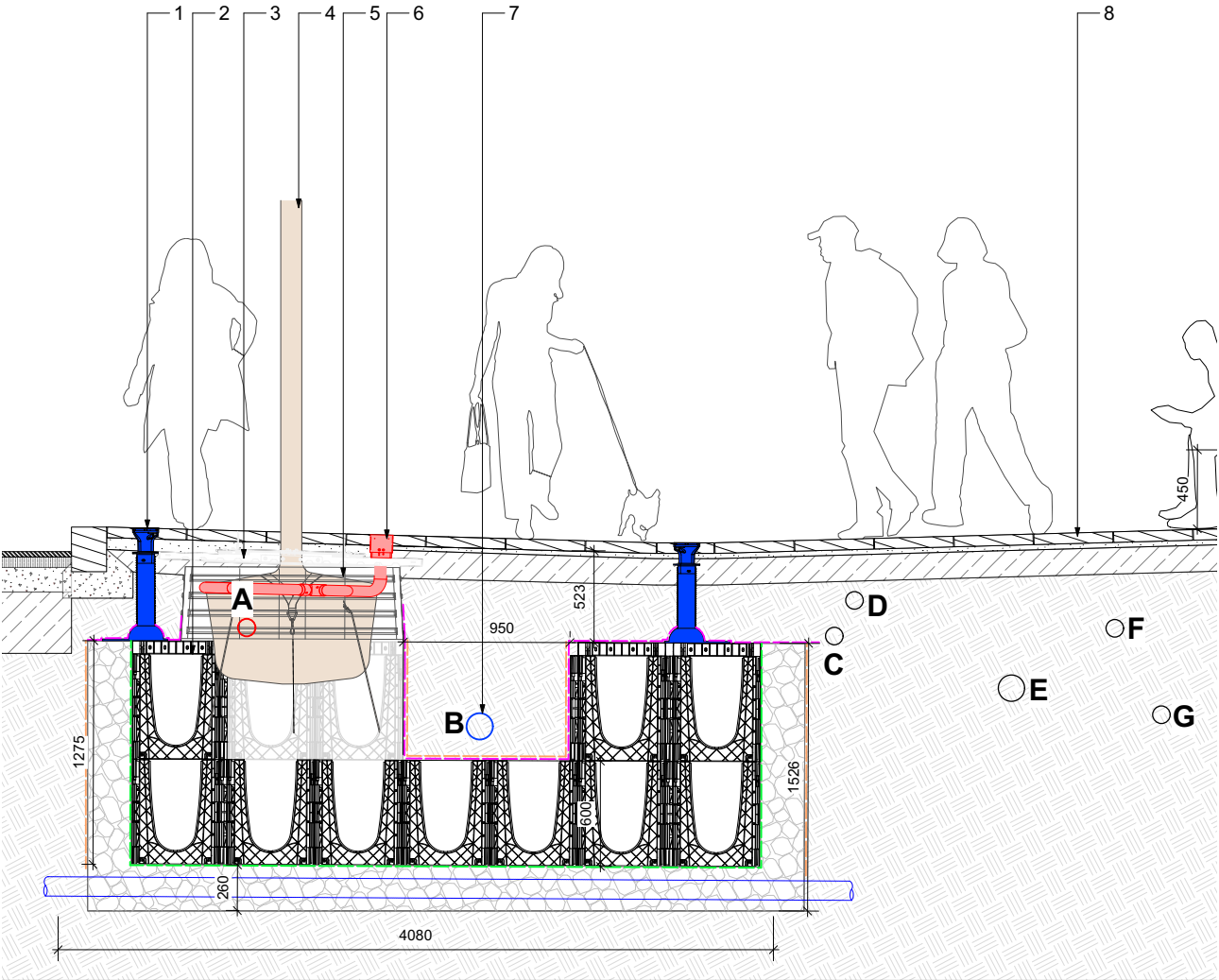


Plan showing the proposed location of 2 London Plan trees along Vastern Road overlaid with existing services plan

Key:

- Predicted canopy spread (8m)
- ★ Proposed installation size (Semi mature specimen)
- - - Approx. Tree pit extent (based on predicted canopy)
- Thames Water main
- Traffic signal line

- 1 Tree cell aeration inlet
- 2 Tree cell - 600mm - double stacked and installed to manufacturer's recommendations surrounded by 260mm clean angular drainage aggregate (10-20mm) with 110mm diam positive drainage pipe to base
- 3 Recessed tree grille to house paving finish
- 4 Proposed tree - 35-40cm girth / root-ball size 100cm diameter / 70cm depth
- 5 Root deflector - deflects roots below ground to aerated and irrigated soil root zone
- 6 Tree cell root-ball irrigation and aeration inlet
- 7 Tree cells built around Thames Water asset with root barrier to top and sides
- 8 Paving surface and build ups to Reading Highways standards



Typical section illustrating tree pit design with existing utilities

5.32 Arts strategy

Waterfront Square also includes a space for public art, with an indicative sculpture representing water is shown in the adjacent visual. Opportunities to engage with the local community to develop this strategy are proposed to be secured by planning condition.

Located in a key central position with good visibility of the sculpture could become a wayfinding marker.



Pop art installations



Reflective sculptures



Organic sculptures



Nature based installations



Interactive installations



Place making sculptures



Artists impression with illustrative sculptures in the background and artscape references on the terraced seating

5.33 Urban Greening Factor

To assess our green infrastructure strategy we have undertaken an Urban Greening Factor assessment. The Urban Greening Factor assessment is a tool that is used to evaluate the quality and quantity of urban greening. It is a tool that enables major developments to demonstrate how a scheme has integrated ‘urban greening’ as a fundamental element rather than low-quality green washing.

For developments that are predominantly residential, guidance recommends that they should achieve a score of 0.4, and 0.3 for predominately commercial developments. Therefore, a target score of 0.4 would be suggested for this particular development.

The adjacent table should be read in conjunction with the diagram below; together they illustrate the urban greening strategy which **achieves a score of 0.45**.

The table identifies the scoring factor for the different surface cover types, calculated by area and a scoring mechanism applied. For tree planting, the mature canopy spread is also calculated in line with the guidance document.

| Item                                                                                | Surface cover type                       | Factor | Area (m²) | Contribution |
|-------------------------------------------------------------------------------------|------------------------------------------|--------|-----------|--------------|
|    | Semi-natural vegetation                  | 1      | 146       | 146          |
|                                                                                     | Wetland or open water                    | 1      | 0         | 0            |
|  | Intensive green roof                     | 0.8    | 609.1     | 487.28       |
|                                                                                     | Standard trees planted in connected pits | 0.8    | 1812      | 1449         |
|  | Extensive green roof substrate of 80mm   | 0.7    | 113.7     | 79.6         |
|  | Flower-rich perennial planting           | 0.7    | 0         | 0            |
|  | Rain gardens                             | 0.7    | 61        | 42           |
|  | Hedges                                   | 0.6    | 79        | 47           |
|                                                                                     | Standard trees planted in pits           | 0.6    | 0         | 0            |
|                                                                                     | Green wall                               | 0.6    | 0         | 0            |
|  | Ground-cover planting                    | 0.5    | 464       | 232          |
|                                                                                     | Amenity grassland                        | 0.4    | 0         | 0            |
|                                                                                     | Extensive green roof / sedum mat         | 0.3    | 0         | 0            |
|                                                                                     | Water features                           | 0.2    | 0         | 0            |
|                                                                                     | Permeable paving                         | 0.1    | 0         | 0            |
|                                                                                     | Sealed surfaces                          | 0      | 0         | 0            |
| Total contribution                                                                  |                                          |        |           | 2484         |
| Total site area (m²)                                                                |                                          |        |           | 5498         |
| Urban Greening Factor                                                               |                                          |        |           | 0.45         |

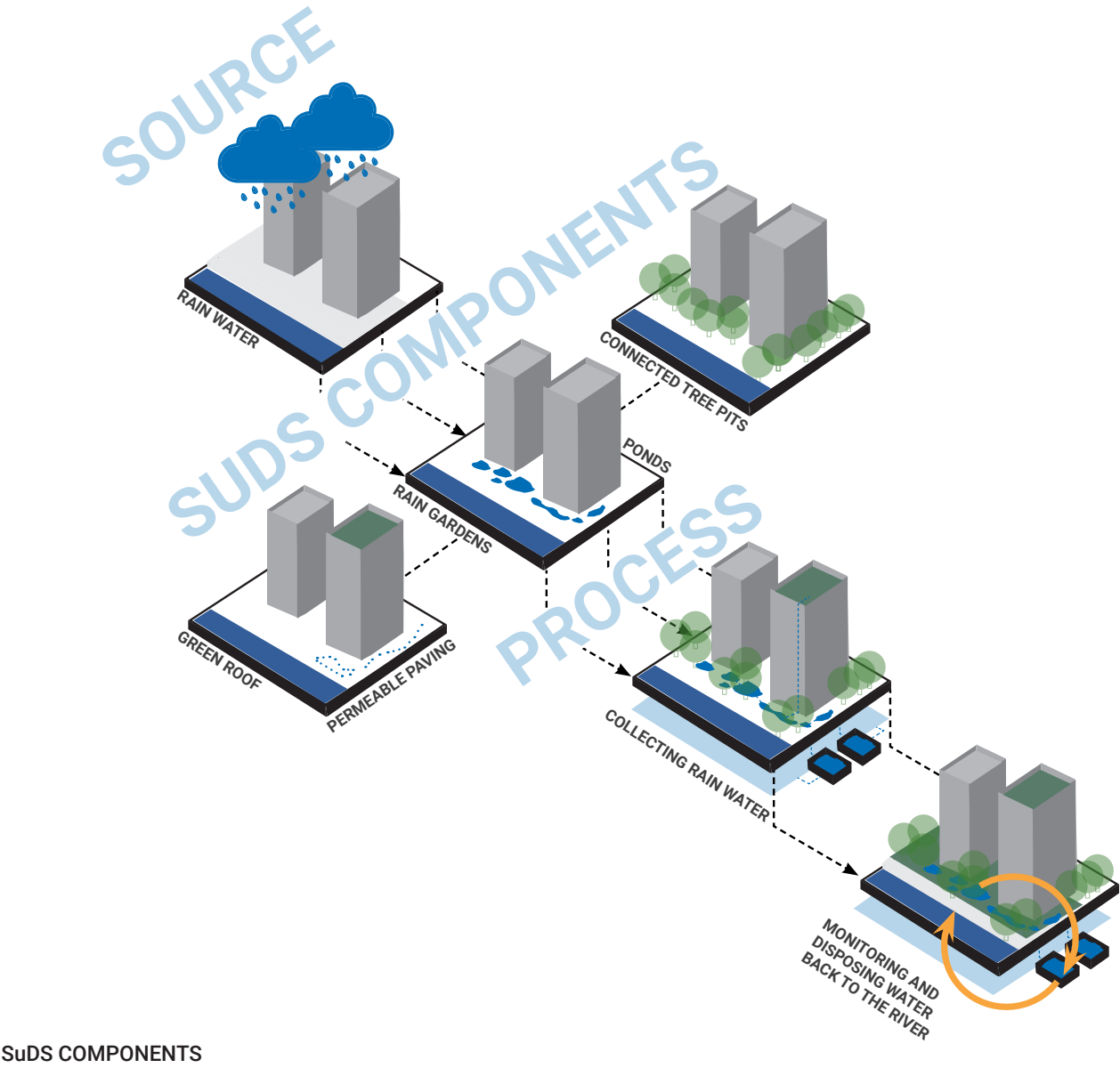
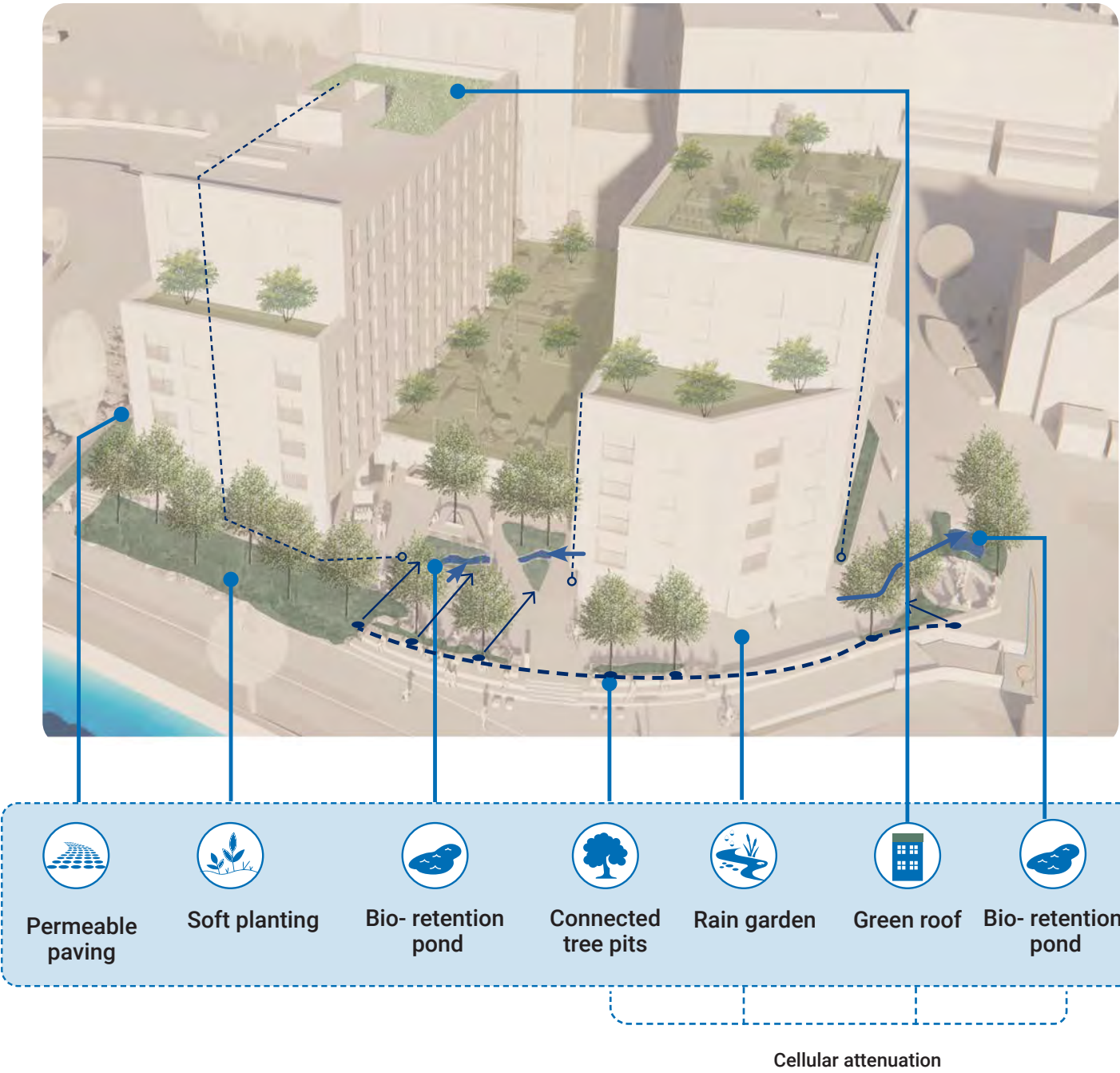


5.34 Drainage & sustainable drainage strategy

The diagram below illustrates the drainage strategy which integrates sustainable drainage systems within the landscape proposals.

The proposal includes extensive green roof systems, permeable paving, and large swathes of soft planting, amenity lawns and new tree planting. The use of non-permeable hardscape is limited across the site.

This diagram should be read alongside the drainage engineers report and technical drawings prepared by BWB Consulting.



5.35 Ecology - Getting to 10% BNG

All developments are required to provide a minimum biodiversity net gain of 10% on all new developments, and proposals should seek to create new and make improvements to habitat features and green infrastructure.

Accompanying this submission is an Ecological Impact Assessment (EclA) and a Biodiveristy Net Gain (BNG) report. The report provides a detailed assessment of existing habitats on site and provides recommendations for improving biodiversity across the scheme. The report also provides a calculation of biodiversity net gain based on the proposed landscape scheme.

A summary of the EclA is provided below;

Ecology baseline summary

- Habitats on site are common and widespread, with the scattered trees of greatest ecological value.
- The adjacent River Thames is a statutory main river and Habitat of Principal Important under the Natural Environment and Rural Communities (NERC) Act 2006.
- was assessed as having low suitability to support roosting bats;
- The adjacent sub-station and garage were assessed as having moderate suitability, on a precautionary basis
- Further nocturnal bat surveys are required of the buildings, to be undertaken between May and August.

Biodiversity Net Gain

In summary the scheme achieves a biodiversity net gain of 12%, above the national requirement of 10%.

Additional, trading rules for the removal of existing trees were met through the introduction of 61 trees.

•



Selection of precedent images of habitat features for integartion across the development area

5.36 Landscape management & maintenance

5.36.1 Landscape management aims

Maintenance

The primary aim is to manage the landscape spaces so that they thrive and are able to continue to provide their green infrastructure functions, including cultural ecosystem services such as providing sense of place and amenity.

The following key factors will need to be addressed in order to sustain a high-quality public and private realm:

- Safety
- Cleanliness
- Repair and replacement
- Horticulture health
- Replacement and cleanliness of hard surfaces

Safety & security

A safe environment is one that is accessible to all. As well as adopting ‘Secured by Design’ principles in the design of the landscaped areas, long-term management and maintenance of the landscape proposals will be required.

Well-maintained places are less likely to suffer from crime as they are more likely to be used, thus increased presence will deter antisocial behaviour. Passive surveillance will be encouraged with landscaping enabling clear visibility along main pedestrian routes with trees being clear stemmed to a minimum of 2m.

Hazard warning paving and handrails are located at the top and bottom of stairs, with contrast nosing on newly proposed steps.

Cleanliness

Cleanliness is the principal indication of the quality of management of the landscape design. It will be important to maintain the cleanliness of the landscape with regular collection and removal of leaves, debris and litter.

Repairs & replacement

The need for repair and replacement of finishes will be minimised by the use of appropriate and durable materials. Nevertheless, a degree of maintenance and replacement is unavoidable in the long-term and will need to form part of maintenance strategy.

Horticulture health

The health and general condition of planted areas, including trees, shrubs, perennial plants and lawns, is clearly indicative of the level of care and attention a place receives.

Planting, including any replacements to dead or dying material, will be maintained in accordance with a Landscape Maintenance Specification.

Trees, hedging, climbers and soft planting will undergo regular inspections that will provide informative pruning to ensure appropriate habit and form, monitor health of trees, and removal of dead, dying or diseased branches as required.

Once established, the removal of stakes / guying systems will be required where necessary. Shrub beds will receive ongoing maintenance to ensure weed-free conditions through combined techniques of hand weed removal, chemical-free herbicides, cultivation and mulching.

Until fully established, new trees and shrubs will require adequate watering. An irrigation system will be required for establishment of plants and trees and for ongoing watering during prolonged periods of drought.

Works to existing trees will accord to BS 5837: 2012.

Hard surfaces

Seasonal maintenance of fallen leaves, snow and de-icing is required, and combined use of herbicides and hands to remove weeds that grow within paving or other hard surface joints.

Delivery

Delivery of the landscape scheme will be by appropriately skilled and experienced contractors and specialist contractors, in accordance with BS3936:1992, BS4043:1989 and BS4428:1989 (or subsequent superseding equivalent) and current arboricultural best practice, 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 landscape construction contract will include 12-months post-practical completion establishment maintenance before handing over to the ongoing management team.

Lighting & electrical

Following planning, the developer will liaise with the Local Authority on responsibility for street lighting. Feature lighting is proposed across the public realm and amenity spaces, and general inspection and upkeep of lighting is required.

Flooding

Additional maintenance may be required after flooding events:

Cleanliness: It will be important to maintain the cleanliness of the landscape after each flood event; this will include collection and removal of leaves and debris and litter.

Hardscape: Care should be taken to ensure paving, boulders and build-ups are not damaged, lifted or moved during a flood event. In the event of such issues arising, the surrounding area should be made secure and remedial work undertaken as soon as possible.

Softscape: All trees, shrubs and other plant typologies should be checked to ensure plant health is maintained; this period will extend for a minimum of two weeks after a flood event. Tree and plant failure will require replacement to maintain a high-quality landscape.

5.36.2 Landscape management tasks

| Fortnightly tasks                       | J | F | M | A | M | J | J | A | S | O | N | D | Notes                                                                                                                   |
|-----------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|-------------------------------------------------------------------------------------------------------------------------|
| Grass maintenance                       |   |   |   |   |   |   |   |   |   |   |   |   |                                                                                                                         |
| Cutting                                 |   |   |   |   |   |   |   |   |   |   |   |   |                                                                                                                         |
| Edging of lawns                         |   |   |   |   |   |   |   |   |   |   |   |   |                                                                                                                         |
| Removal of leaf fall                    |   |   |   |   |   |   |   |   |   |   |   |   |                                                                                                                         |
| Irrigation / watering                   |   |   |   |   |   |   |   |   |   |   |   |   | Irrigation is only required during prolonged periods of drought                                                         |
| Shrub beds / borders                    |   |   |   |   |   |   |   |   |   |   |   |   |                                                                                                                         |
| Seasonal pruning                        |   |   |   |   |   |   |   |   |   |   |   |   |                                                                                                                         |
| Weeding / litter removal / leaf removal |   |   |   |   |   |   |   |   |   |   |   |   |                                                                                                                         |
| Cultivation of beds                     |   |   |   |   |   |   |   |   |   |   |   |   |                                                                                                                         |
| Edging of beds                          |   |   |   |   |   |   |   |   |   |   |   |   |                                                                                                                         |
| Irrigation / watering                   |   |   |   |   |   |   |   |   |   |   |   |   | Irrigation is only required during prolonged periods of drought                                                         |
| Trees                                   |   |   |   |   |   |   |   |   |   |   |   |   |                                                                                                                         |
| Inspection                              |   |   |   |   |   |   |   |   |   |   |   |   | Year 1 - fortnightly. Year 2 onwards - 7 annual visits (1 in May, 2 in June, 1 in July, 2 in August, 1 in September)    |
| Irrigation                              |   |   |   |   |   |   |   |   |   |   |   |   | 12 visits during establishment for first 3 years. Ongoing irrigation maybe required during prolonged periods of drought |
| Clearance                               |   |   |   |   |   |   |   |   |   |   |   |   |                                                                                                                         |
| Hedges                                  |   |   |   |   |   |   |   |   |   |   |   |   |                                                                                                                         |
| Cutting                                 |   |   |   |   |   |   |   |   |   |   |   |   |                                                                                                                         |
| Clearance of basal growth/litter        |   |   |   |   |   |   |   |   |   |   |   |   |                                                                                                                         |
| Hard surfaces                           |   |   |   |   |   |   |   |   |   |   |   |   |                                                                                                                         |
| Chemical free cleaning                  |   |   |   |   |   |   |   |   |   |   |   |   | Maintenance to public spaces should be carried out before store opening hours.                                          |
| Clearance                               |   |   |   |   |   |   |   |   |   |   |   |   | Includes removal of leaves, litter, gum, graffiti, unblocking drainage channels, etc.                                   |
| Furniture                               |   |   |   |   |   |   |   |   |   |   |   |   |                                                                                                                         |
| Maintenance & repairs                   |   |   |   |   |   |   |   |   |   |   |   |   | 1 monthly inspection, repairs as required.                                                                              |
| Clearance                               |   |   |   |   |   |   |   |   |   |   |   |   | As required. Includes gum removal, litter and graffiti removal.                                                         |



**Introduction**

**Context**

**Design process**

**Design response**

**Landscape proposals**

**6.0 [Access](#)**

**Appendices**

6.1 Access principles

An inclusive environment does not attempt to meet every single need, but by considering people's diversity, inclusive environments can break down barriers and exclusion and will often achieve superior solutions that benefit everyone.

Legislation and guidance has tended to result in 'special' provision being made for disabled people rather than their needs being integrated with all other users. The term 'inclusive design' relates as much to the design process as to the final product and just as equally to management, operation and information, bonding user experience with professional expertise.

The aim of this section is to provide a clear description of how the users of the proposed development will access and be guided through the building and the site, without discrimination or limitation.

It considers, but is not limited to, the access and circulation needs of a wide range of people, including parents with children, the elderly and the disabled.

An Access Statement is work in progress and, as such, evolves throughout the design and construction period. This Access section deals with the design, up to RIBA Stage 3, and the aspirations of the design for its development and final realisation through the construction phases.

13 of the residential dwellings have been identified as Part M4(3) compliant, which represents 5.1% of the total dwellings. Apartments have been chosen throughout the development, all of which are accessible by at least two lifts. These apartments are designed specifically for ease of use for visually impaired, ambulant disabled and wheelchair bound residents.

6.2 Legislation, standards and guidance

Policies, legislation and guidance followed in the preparation of the Access Statement:

- Approved Documents K (2013) and M (2015) of the Building Regulations, hereafter referred to as ADK and ADM
- Technical Housing Standards – Nationally Described Space Standards, March 2015
- Equality Act 2010
- British Standards BS 8300-1:2018 and BS 8300-2:2018

6.2.1 Travel to site

The development is easily accessible by foot, cycle, public transport and car.

6.2.2 Pedestrian approach

The site can be accessed via Vastern Road, Norman Place and via the dedicated public footpath, Thames Path. There is a slight level difference across the site with a gradient running from north to south. There is a bigger level change from the Thames Path to the site which has been mitigated through integrated ramps and steps.

The enhanced public realm is split between a public square, mews street and activated street edge along Vastern Road. The public square is formed to create a new public link between Vastern Road and the Thames Path, connecting with the River Thames. As such there is a level difference between the public square and the Thames Path footpath, where ramps have been introduced to serve this space providing access for all.

All residential and commercial entrances will have level access entrances.

Dedicated fire escape corridors connect each of the residential cores to the exterior in order to allow for a protected and compliant means of escape strategy.

6.2.3 Cycle access

The proposals include resident's secured bicycle stores on the ground floor, and are accessed via the car park.

6.2.4 Public transport

The development is approximately 650m from Reading station. There are also several bus stops within close proximity of the site on both sides of Vastern Road.

Car parking for residents is provided within the site boundary and accessed via Norman Place. The car park in total includes 18 parking spaces. This includes 3 x blue badge parking spaces and provision for E-charging to all parking spaces.

A loading bay is located in close proximity to the western façade and residential entrances for parcel deliveries, resident move in / move out and resident drop-off.

6.3 Access philosophy

The entrances to all buildings and residential homes have been designed and located in such a manner as to make them clearly visible and easily accessible from the public realm. All residential entrances have been designed to provide level access from the public realm, as required by ADM, with a clear, covered, open space in front of the doors. This accessible approach leads to a level entry threshold and to the internal lobby which will feature a slip-resistant finish.

All routes to the entrances along Norman Place and the Mews Street to the east will be well lit. Entrances are designed to be obvious on the elevations to ensure they are easy to find. The reception aesthetic is separated from the main body of the buildings by the use of contrasting materials, making identification easier for the visually impaired.

6.3.1 Public realm

The public realm will be accessible to all as part of an inclusive design philosophy. Users with disabilities are not segregated and are able to move through the public realm and access the buildings. The change in levels across the topography means that there will be publicly-accessible stairs and slopes within the public realm and these will be designed to ensure they will fully comply with ADK and ADM.

The hard and soft landscaping design is based on a strategy to ensure ease of long-term maintenance and management. Practical consideration will include the use of durable, non-slip hard landscape materials that benefit not only disabled users but also older people and children.

The residential and leisure space entrances will be accessible to all. Short-stay cycle parking for visitors to the scheme are provided within close proximity to entrances.

The communal residents' gardens within the development will be available to all residents. The gardens will share a common language and material palette but each will feature distinct elements to instil a sense of ownership to the spaces and assist with the wayfinding strategy. Visual clutter and obstructions will be minimised where possible.

6.3.2 Surface materials

The entire public realm will be accessible, with the pavement textures selected in order to balance the needs of wheelchair users (who require a low resistant surface) with the needs of crutch and stick users (who require more purchase during wet weather). The key principles for the palette of considered surface materials will include the following:

- A visual contrast in colour between the pedestrian and vehicular access
- Tactile paving defining pedestrian and vehicular areas
- Surfacing designed to aid wayfinding
- Width / gradient to footways

Footpaths will be of a suitable width as to allow users at all mobility levels to pass comfortably, including wheelchair uses and adults with children. A key part of the landscape design includes the widening of existing footpaths from their arrangement. Street furniture such as directional signs, lighting and seating will be located just off the perimeter of the access routes to minimise obstructions. All signage will be colour contrasted.

Hand rails are provided to all steps where required to provide support and guidance. They will be colour-contrasted to make them easily visible, easy and comfortable to grip and they will have no sharp or protruding edges. They will be located at the correct height (900mm) and will extend for 300mm.

**6.3.3 Cross-falls to footpaths**

Cross-falls are important on footpaths to move standing water to the edges, which stops ice from forming on cold days. The need for this surface drainage must be balanced with the difficulty a manual-operated wheelchair has moving across a cross-fall. The design of the footpaths across the site have minimal cross-fall to balance both needs.

**6.3.4 External street lighting & CCTV**

A balanced level of lighting has been considered. This will be designed to avoid strong contrasting pools of light and silhouette. The lighting design supplied will be of a safe and comfortable illumination level, assisting access and improving security.

The spread of light will be even and the lamp type chosen will provide a light with good colour rendering properties. Timing controls will be introduced to allow the switching off of certain parts of the lighting at key times to save energy and discourage use at night close to residential areas. Principal entrances to the buildings will remain illuminated.

All open spaces such as the communal gardens and other accessible areas within the development will be illuminated at both high and low levels at the appropriate lux figure for their contextual setting. Lighting strategies will also take account for neighbouring apartments where necessary, ensuring any strategies do not adversely impact these homes.

Lighting levels to the street and car parking areas will be to the recommended levels in BS 5489-1:2013 and confirmatory will be checked by a ‘competent’ independent designer. A competent design should hold at least ILP competency level 3 or 4.

Locations of CCTV are subject to discussions between the local authority and the building operator in the next design stage.

**6.4 Building Environment**

The buildings are set within a hard-landscaped environment at a slightly raised street level.

All entrances to the residential and commercial spaces are accessed from the same AOD across the site. Level access is provided to all residential homes and amenities. The residential building cores can be accessed from the ground floor amenity space with secondary access and exit points on the west and east façades of the building.

First and eighth floor external amenity space is provided. Level access is provided to these spaces which will include hard and soft landscaped environments that are fully accessible.

**6.5 Building and Structures**

**6.5.1 Materials**

The proposed materials will be specified, using ADM specifications, to contrast tonally with the ground finishes. This will help to enable people with visual impairments to identify building boundaries.

**6.5.2 Construction**

The design follows a simple concept based on the clarity of the overall structure of the building. Slab levels have been set to ensure that the structure will not impose restraints upon individuals using and moving through the building, including ensuring obstructions are avoided in pedestrian / common areas and that level access can be provided throughout.

**6.5.3 Internal floor surfaces**

The floor finishes will contrast tonally with the walls and will be non-slip. Finishes will be contrasting in the vertical and horizontal situations. Floor surfaces will not be overly resistant to wheelchair users, but will aid crutch users in gaining purchase. As well as this, floor finishes will be of a robust and durable nature.

**6.5.4 Entrances**

Each building provides an ADM-compliant transition from external to internal spaces to all users. The approach to the buildings will be well lit and obvious.

**6.5.5 Transition to internal**

The entrances will have manifestation to identify them, and the frames will be of a strong tone or colour to visually separate them from the surroundings. Entrances will be appropriately lit. The main entrance doors are designed to comply with relevant legislation in terms of minimum width opening and closing and the thresholds will be level.

**6.5.6 Opening windows and projections on public routes**

Obstructions at head height can be dangerous to the visually impaired. All opening windows and projections have been minimised within the design. Where possible, outward swinging doors are avoided and, where required due to means of escape, they will be marked as recessed where possible.

**6.5.7 Steps and ramps**

All steps, stairs and ramps have been designed to comply with ADM 2015 and BS 8300-2:2018. This includes tread, risers, handrails, lighting and nosings.

**6.5.8 Door design**

All doors of the scheme, both manually operated or automated, are compliant with ADM and BS 8300-2:2018 according to different uses and users of the buildings, specifically in relation to vision panels, weight, colour, door ironmongery and use of materials.

**6.5.9 Movement within buildings**

The buildings are accessed via horizontal corridors. Vertical circulation is via lifts in the cores, and ambulant disabled stairs.

**6.5.10 Lifts**

All lifts, in all buildings, are designed to comply with ADM and BS 8300-2:2018, including size, internal materials, door opening width, floor landings and operating apparatus.

**6.5.11 Stairs**

Stairs comply with ADM and BS 8300-2:2018 in terms of widths, treads, risers, hand rails, nosings, top and bottom surfaces, landings and finishes. They have also been designed for ambulant disabled users, including the fire escape stairs.

**6.5.12 Corridor and lobby design**

All corridors within the buildings comply according with their specific uses and with ADM in terms of size, lighting, materials, signage, doors and colours etc.

There are no changes in level to any corridors and the typical width is 1.5m. This increases to a minimum of 1.8m at the lift lobbies in order to ease the movement of larger items of furniture, glazing and plant etc. Vision panels in corridor doors will be designed to allow people both seated or standing to be seen.

Pull handles will only be fitted on the pull side of doors and fingerplates will be fitted on the push side. This assists all users, but especially people with learning difficulties and people with visual impairments. Handles will not extend down to floor level since this type of handle can become caught in the footplates or wheels of a wheelchair.

There is adequate space between lobby doors for a wheelchair user to clear one door before opening the next.

6.6 Means of escape

6.6.1 Design for independent means of escape

All features and materials to comply with Approved Document Part B. Each dwelling in the buildings has a fire rated compartment surrounding it to ensure that residents are protected from the source of the fire. Sprinklers are also provided to all residential accommodation due to the height of the development and open plan nature of the dwellings.

6.6.2 Facilities for physical evacuation

The escape routes, horizontal and vertical, meet the minimum widths to comply with ambulant disabled requirements. Two escape stairs are provided within each building. Stairs meet ambulant disabled goings and risings. Disabled refuge provision is made, where required. At upper residential floor levels, no refuge has been allowed for, as the fire strategy is for people to remain in their homes while the brigade deal with the fire.

Together with the Fire Alarm System, the buildings are designed to provide safe evacuation routes in the case of emergencies.

6.7 Signs and wayfinding

6.7.1 External signage

The signage strategy for the development will follow good practice guidelines. All signage will be contrasting and designed for those with learning difficulties or visual impairments.

6.7.2 Internal signage

All internal signs to communal areas will be clear, with contrasting symbols and with braille translations to help the visually impaired. All signage will be located in obvious locations and will be well lit.

6.7.3 The use of differing tactile materials

A palette of tactile handrails / support rails showing directions of travel to the nearest fire exit have been considered through the design of each building.

6.7.4 The layout of the buildings

The clear layout of each building, generally arranged with a sequence of entrance / lobby / lift / stair core / corridors, allows a simple circulation throughout and between the floors. A readable structure and detailing provides an easy indication to distinguish residential from leisure uses within the building.

6.8 Part M Volume 1 Category 2

6.8.1 Accessible and adaptable dwellings

The following section demonstrates compliance with the criteria set out by M4(2). Listed below are the criteria for compliance with Part M4(2).

6.8.2 Approach routes

The approach route to all dwellings is level, gently sloping or ramped where necessary. Communal parts of the approach route (except communal stairs) have a minimum clear width of 1,200mm. All parts of the external approach routes will have a suitable ground surface.

6.8.3 External steps forming part of an escape route

Any external steps will be uniform with a rise of between 150mm and 170mm and a going of between 280mm and 425mm, and a minimum clear width of 900mm. Landings are provided where required and are of the size required. Graspable handrails are provided to every flight of three or more risers and these extend beyond the top and bottom nosing of the steps.

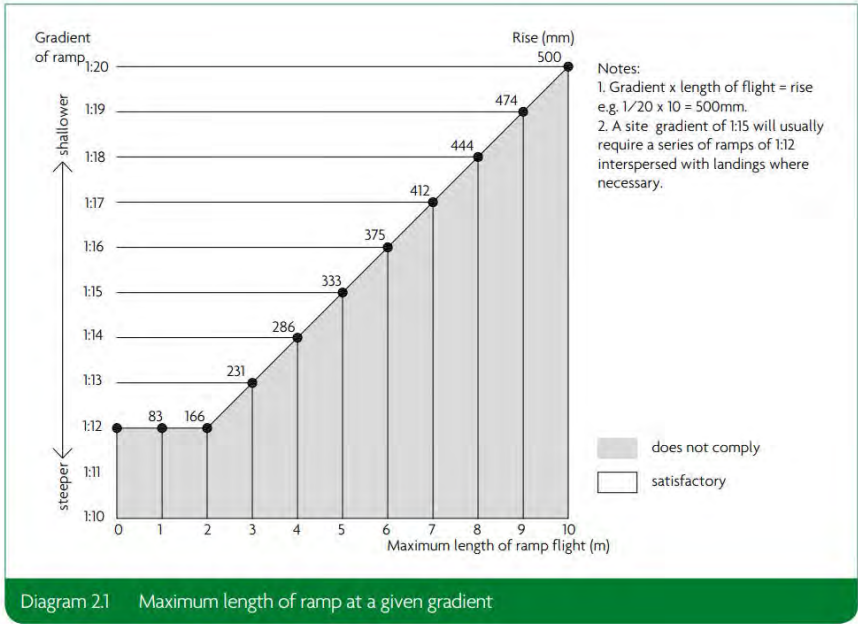
6.8.4 Car parking and drop-off

Parking space

3 spaces are disabled parking bays and have a minimum clear access zone of 1,200mm to both sides. The parking spaces are level with a suitable ground surface. Access to the residential core and amenity spaces from these bays is step-free.

Drop-off point

There is a drop-off point on the western side of the site and has suitable ground surfaces and offer level access to all entrances.



6.8.5 Communal entrance

Principal communal entrances

The principal communal entrance has a level landing 1,500mm x 1,500mm directly outside and clear of any door swing. This will be covered by the proposed colonnade. Lighting will use fully diffused luminaires that are activated automatically by a dusk-to-dawn timer or a motion detector. The entrance door has a minimum clear opening width of 850mm, and a 300mm nib is provided to the leading edge of the door as outlined in diagram 2.2 below. Door entry controls will be mounted 900-1,000mm above finished ground level, and at least 300mm away from any projecting corner.

Other communal doors

All other communal doors have a minimum clear opening width of 850mm, and a 300mm nib will be provided to the leading edge of the door. Door entry controls will be mounted 900-1,000mm above finished ground level, and at least 300mm away from any projecting corner.

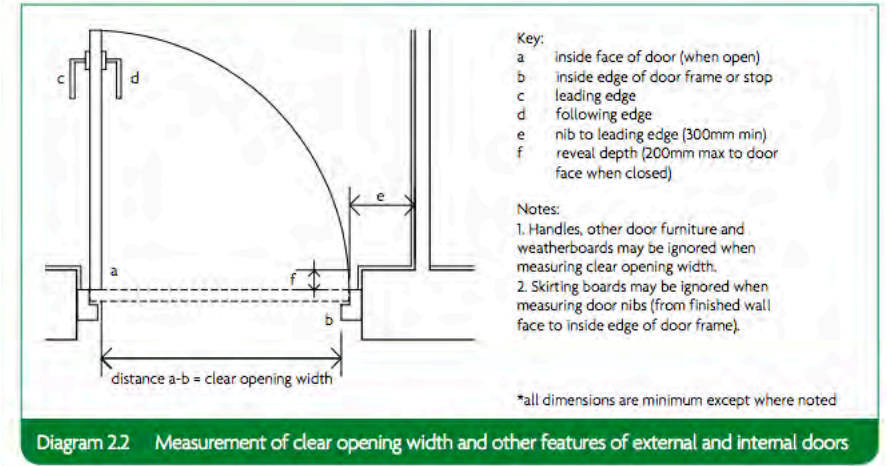
6.8.6 Communal lifts and stairs

Communal lifts

A minimum of 2 no. 13-person lifts will be provided in each building. Each lift has a clear landing of 1,500mm x 1,500mm directly in front of the lift door at every floor level, a door clear opening width of at least 800mm, and meets BS EN 81-70:2003. Landing and car controls will be 900-1,200mm above the car floor and a minimum of 400mm from the inside of the front wall.

Communal stairs

All buildings are served by two communal stair cores, which meet the requirements of Approved Document Part K for a general access stair.



6.8.7 Private entrances

Principal private entrance and alternative entrance

The principal private entrance to each apartment will have a level landing 1,200mm x 1,200mm directly outside. Lighting will use fully diffused luminaires that are activated automatically by a dusk to dawn timer or a motion detector. The entrance door (including double doors) has a minimum clear opening width of 850mm, and a 300mm nib is provided to the leading edge of the door.

Other external doors

All other doors connected to the dwelling will have a minimum clear opening width of 850mm, and a 300mm nib is provided to the leading edge of the door.

6.8.8 Circulation areas and doorways

The minimum clear width of every hall or landing is 900mm. Localised obstructions will not occur opposite or close to a doorway and the corridor will not be reduced below 750mm width at any point. The clear opening widths will conform to those set by Approved Document M and a 300mm nib will be provided to the leading edge of every door within the entrance storey.

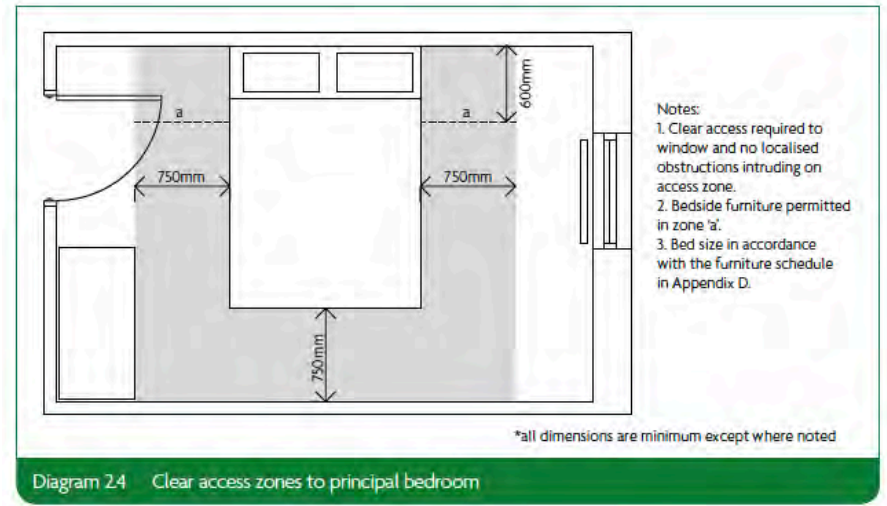
6.8.9 Habitable rooms

Living, kitchen and dining areas

All apartments are single storey and therefore there is a living area within the entrance storey of all dwellings. A minimum of 1,200mm clear space is provided in front and between all kitchen units and appliances.

Bedrooms

Every bedroom has a clear access route, minimum of 750mm wide from the doorway to the window, and at least one double bedroom will provide a clear access zone a minimum of 750mm wide to both sides and the foot of the bed. Other double bedrooms have a clear access zone a minimum of 750mm wide to one side and the foot of the bed.



6.8.10 Sanitary facilities

General provisions

All walls, ducts and boxing to the WC / cloakroom, bathroom and shower rooms will be strong enough to support adaptations that could impose a load of up to 1.5N/m2.

WC facilities on the entrance storey

All apartments are single storey and therefore every dwelling has a room that provides a WC and basin on the entrance storey. The door to the WC will open outwards.

Bathrooms

All apartments are single storey and therefore every dwelling has a bathroom that contains a WC, a basin and a bath on the same floor as the double bedroom, described as the principal bedroom above.

Services and controls

Consumer units will be mounted so that the switches are between 1,350mm and 1,450mm above floor level. Switches, sockets and controls will have their centre line between 450mm and 1,200mm above floor level and a minimum of 300mm from an inside corner.

The handle to at least one window in the principle living area is located between 450mm and 1,200mm, or a remote opening device will be fitted. Handles to other windows will be located between 450mm and 1,400mm above floor level, or a remote opening device will be fitted.

Boiler controllers will be mounted in an accessible location between 900mm - 1,200mm above finished floor level.