



LANDSCAPE

5

5.1 Landscape Strategy

Policy Review

Reading Borough Council has clear policy guidance in relation to landscape and ecology.

A review of the Local Plan, and associated planning and strategy documents (listed below), highlighted some common themes which are noted on the right:

- Reading Borough Local Plan 2019
- Tree Strategy 2021
- Reading Biodiversity Action Plan 2021
- The Reading Climate Emergency Strategy 2020-25

Within the proposals for Amethyst Lane we have sought to identify opportunities for wildflower planting, hedgerow planting, new tree planting and the creation of green space close to houses that benefits both wildlife and people, over multiple generations.

The proposals for Amethyst Lane have been designed to meet both the needs of families, and residents of the Respite Facility.

The initial tree strategy is outlined in the following pages and is intended to be developed in discussion with the Natural Environment Officer for Reading Borough Council.



5.1 Landscape Strategy

Illustrative Landscape Plan

The quality of the public realm is of fundamental importance to creating a successful neighbourhood. The masterplan has established the principles for a substantially green new development focused around a linear swale that supports sustainable drainage, play and biodiversity. This swale is a fundamental benefit of the masterplan which creates a green legacy for the enjoyment of residents.

The landscape proposals for Amethyst Lane create a green and welcoming environment for both the new residents and wildlife, with over 220m2 of communal green space for the residential properties, and over 370m2 of amenity space for the Respite Facility.

An existing overgrown hedge to the north of the site is to be cut back and managed as a hedge to provide screening and a wildlife corridor. The group of two category C trees to the south east of the site are retained within communal open space which provides the opportunity for some wildflower and scrub planting and habitat features at the entrance to the proposed houses to support biodiversity.

Mixed native hedges to front gardens and tree planting between parking bays create a greener and more pleasant pedestrian environment.

The Respite Facility garden has been designed to meet the needs of the users, with circulation loops, smooth surfaces, colour contrast and careful placement of seating areas. The three gardens would provide a range of functions including a sensory garden, a wildlife garden and a social garden for external dining and group activities.

For section A-A see section 5.4.

- Key:
- ① Boundary hedge
 - ② Rear garden
 - ③ Swale/ informal play
 - ④ Existing tree retained
 - ⑤ Proposed tree
 - ⑥ Respite amenity
 - ⑦ Planting for wildlife



Proposed Illustrative Plan

5.2 Tree Removal & Retention

Every effort has been made to retain existing trees on site and create a suitable balance between buildings/ hard landscape and soft landscape, whilst meeting the brief for much needed new family homes and a Respite Facility.

The current proposal seeks to focus on increasing biodiversity and greening to the public realm in a meaningful way. The removal of boundary category C trees in back gardens resolves maintenance concerns, and creates less overshadowed rear garden amenity and more meaningful central communal amenity.

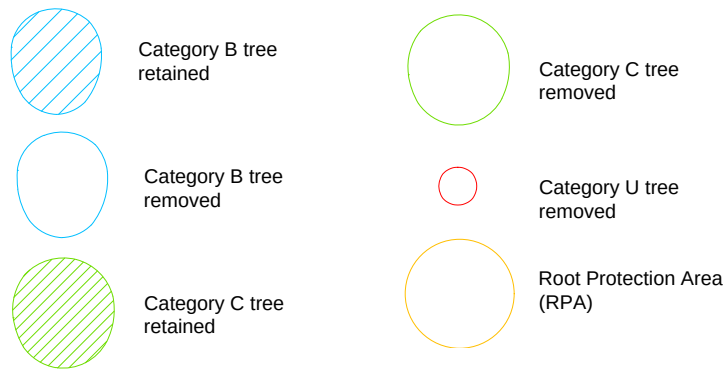
The current layout does, however, include the removal of some high quality category B trees - G5 to the north west and T5 to the south east (both Norway Maples).

The tree remediation strategy aims to provide a net gain in tree numbers. Details of this strategy, which will include off-site planting, will be discussed and agreed with Reading Borough Council.

Where construction is proposed to take place within the root protection areas (RPAs) of existing retained trees (such as boundary walls and new footpaths) suitable construction methods will be required (including the use of cellweb etc.).

Please refer to the Arboricultural Impact Assessment and Arboricultural Method Statement for further details of works proposed in relation to the trees on site.

KEY



The category C G3 to the north of the site is proposed to be cut back and managed as a hedge.

T15 (Sweet chestnut) - tree not considered to be of high quality - remove
T13 (Robinia) is showing signs of decline - remove.

Retention of T5 would not be practical with the current layout – primarily due to the unsustainable relationship that would result with the adjacent dwelling (dominating the garden)

The project arboricultural consultant has confirmed it is possible to retain both T3 and T4 if T5 is removed. The garden would still be overshadowed but not covered by canopy. Details of crown reduction to T4 to be agreed if T5 is removed.

T11 Cat B (Birch) to be retained. Supervision required when new fencing is erected within RPA. To be detailed in Arboricultural Impact Assessment.

5.3 Proposed Trees

Proposed trees will primarily be native or wildlife friendly species and (as per RBC policy) should offer diversity of the 30:20:10 ratio – no more than 30% of any one family, no more than 20% of any one genus and no more than 10% of any one species.

The current proposals include the provision of 43 new trees including:

- *Acer campestre* 'Elsrijk'
- *Alnus glutinosa* 'Imperialis'
- *Amelanchier lamarckii*
- *Betula pubescens*
- *Cercis siliquastrum*
- *Crataegus monogyna*/ *laevigata*
- *Hippophae salicifolia*
- *Koelreuteria paniculata*
- *Quercus coccinea*
- *Sorbus aucuparia*
- *Ulmus* 'Columella' (suitable for street where turning refuse vehicles necessitate a columnar form)

Fruit trees will be provided within rear gardens, to benefit both the residents and wildlife, with a mix of apple, pear, and plum trees proposed.

Soil cells will be used where required to create adequate soil volumes for proposed trees.

Additional trees are proposed as part of the off-site landscape and ecology mitigation strategy. The applicant will discuss and agree the strategy with Reading Borough Council.

Refer to the Landscape Planting Plan (DR-0902) and Soft Landscape Schedule (SH-002) for further details of proposed planting.

Key:

-  Proposed tree
-  Fruit trees to rear gardens
-  Existing retained tree



Plan to show location of proposed trees

5.4 Swale

The images on the right illustrate the proposed character of the dry swale on the north south street. This green spine would offer a number of benefits - water attenuation, tree planting, informal play, and the creation of a green outlook to the houses.

The bottom two images are from an HTA scheme that integrates a similar feature and illustrate how the dry swale could be integrated into the scheme, with bridge crossings and incorporation of under 5's informal play trails. The play would be located on the side of the swale closest to the houses, with shrub and tree planting creating a natural barrier to the road.



Section AA through street with swale/ informal play and front gardens



Informal play- timber stepping logs



SuDS at Elephant Park



Informal play in the form of fruit sculptures (left) and climbing boulders (right) - South Gardens, Elephant Park. Scheme by Churchman Thornhill Finch.



Crossing to dry swale



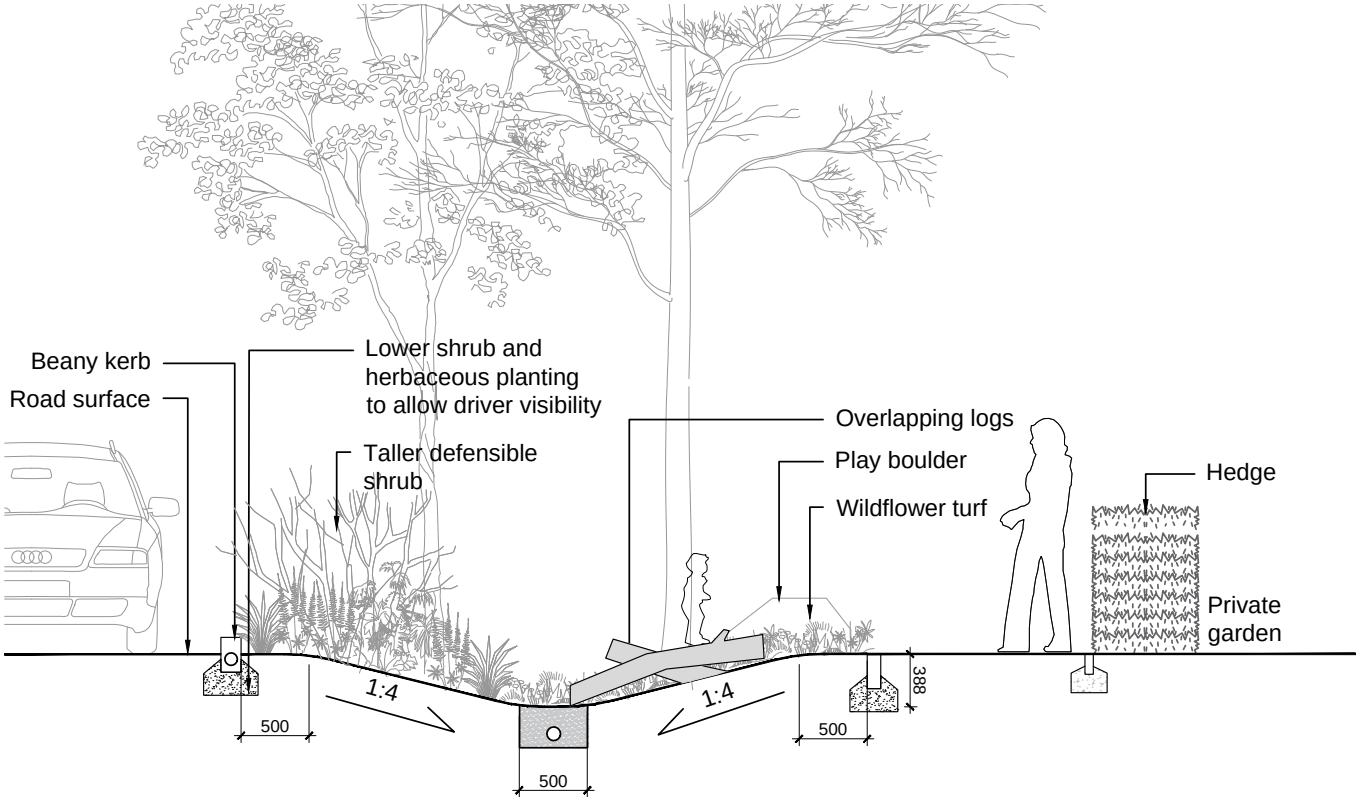
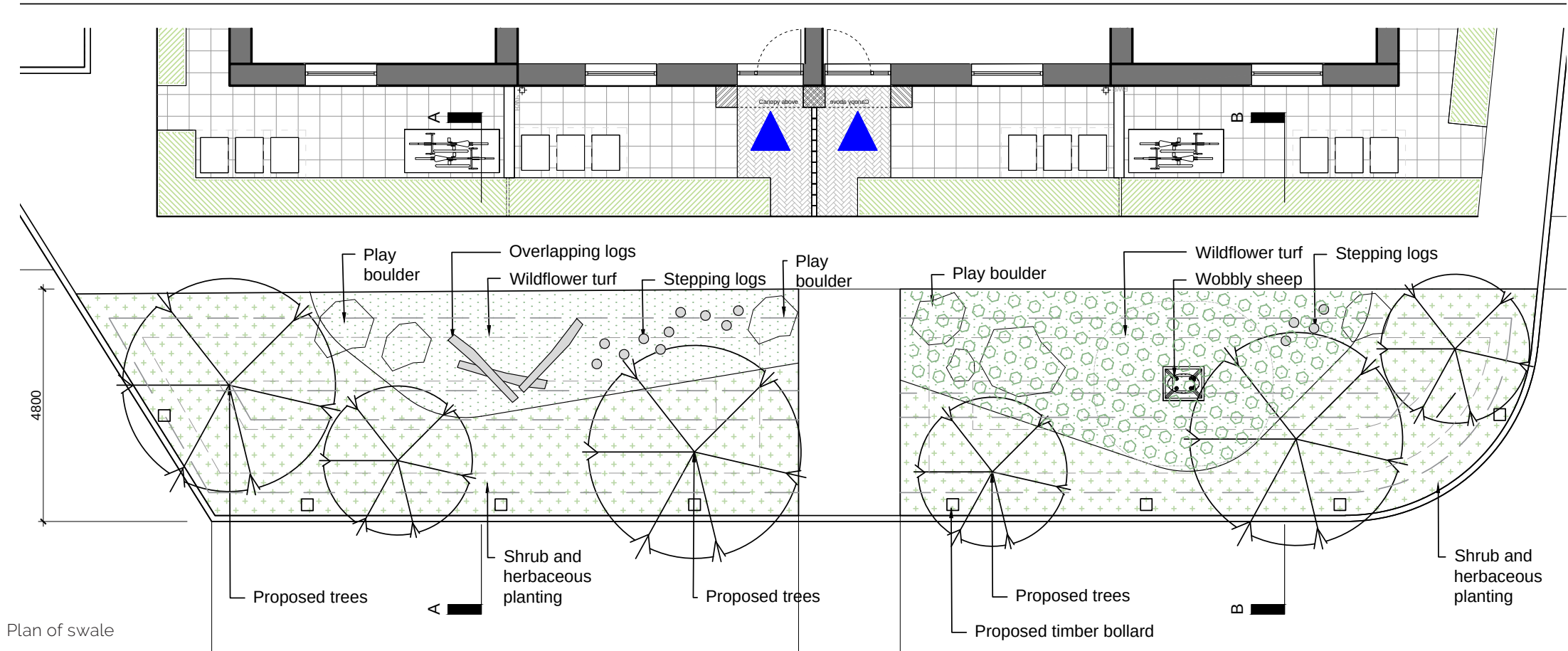
Integration of 0-5's play within dry swale

5.4 Swale

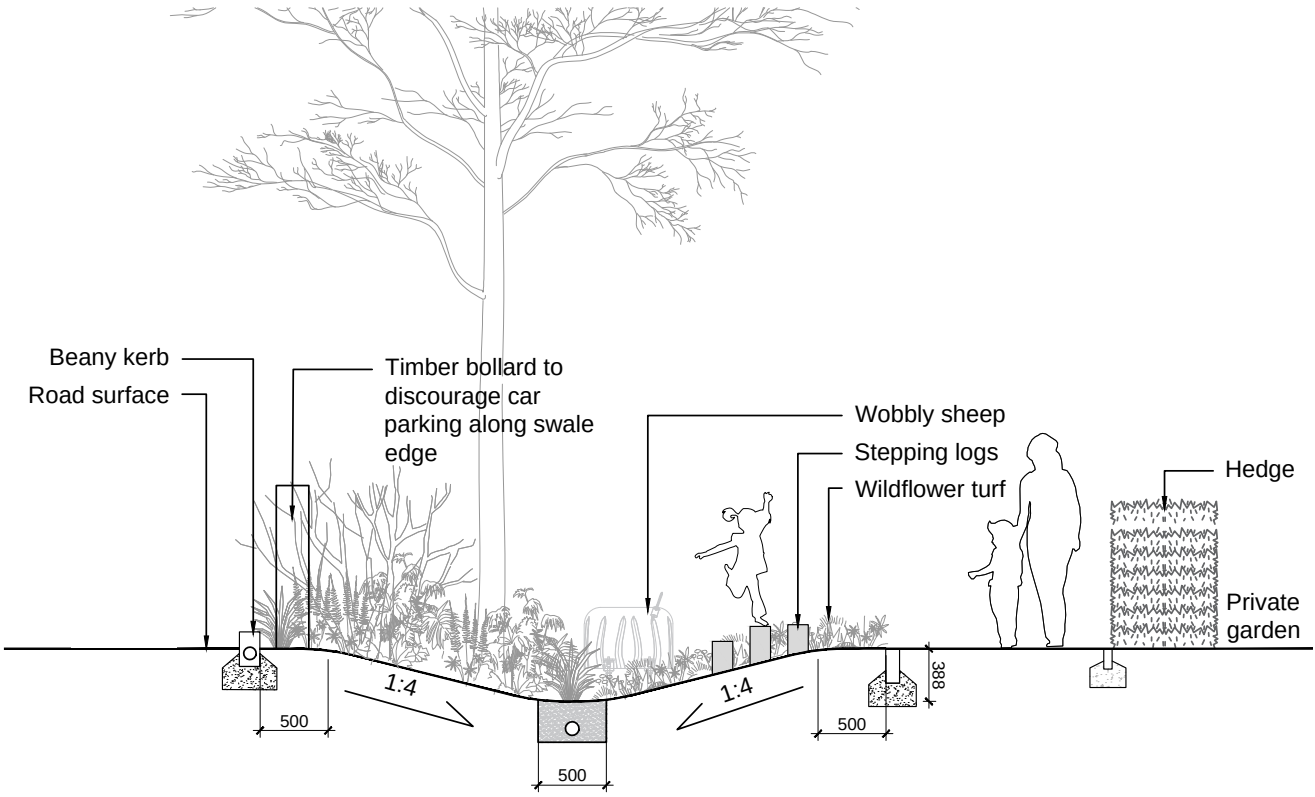
The plan on the right shows the proposed layout of the swale, with the informal play trail located closest to the houses. Shrub and tree planting along the side of the swale closest to the road creates a natural barrier to pedestrian movement and discourages parking along the edge of the swale. Timber bollards along the road edge further discourage parking.

The two sections (bottom right) illustrate the layout with play to one side.

The swale will become a key community asset and a place where the children of families on the new estate can play together. Discussions have been had with relevant Reading Borough Council departments to ensure future maintenance requirements are achievable.



Section A-A



Section B-B

5.5 Landscape Character

Planting Types

Several planting types are proposed within the development:

Existing Native boundary

There is an existing line of trees along the northern boundary that we are proposing to cut back and retain as a hedge. Species include a mix of hawthorn, sycamore, holly, hazel, and blackthorn. This hedge would need an annual maintenance prune to prevent it getting too large.

Boundary hedge

A native hedge to define property boundaries, requiring two cuts a year to retain shape. The hedges to the property frontages will be maintained at 1.1m high and circa 800mm wide and will be supplied as an instant hedge, 1.2m high. Hedges to the rear gardens create a wildlife corridor and will be allowed to grow taller to 1.8m high.

Respite Facility garden

Outdoor spaces host a multitude of proven benefits for those living with complex neurological conditions. The respite facility garden will be designed to cater for the needs of those with hypo or hyper-sensitivities. The garden will contain herbaceous perennials, shrubs, and some ornamental standard and multi-stem trees.

Swale

The eastern side of the swale is proposed to be planted with wildflower turf – such as WFT-SUD-37, SuDS turf by Wildflower Turf. The western side is proposed to be planted with a mix of grasses, herbaceous perennials and shrubs – all tolerant of both dry and wet conditions.

Perennial understorey planting

A mix of hardy low growing structure planting and herbaceous perennials to attract pollinating insects.

Shade tolerant understorey planting

This would comprise a shade tolerant wildflower turf – such as WFT-Shade-41, Shade tolerant wildflower turf by Wildflower Turf, supplemented with native bulbs and ferns (wood anemone, primroses, snowdrops, Dryopteris affinis, Asplenium scolopendrium for example).

Scrub planting

Scrub planting for wildlife is proposed with species including blackthorn, hawthorn, hazel, elder, dogrose, dogwood and brambles.

Refer to the Landscape Planting Plan (DR-0902) and Soft Landscape Schedule (SH-002) for further details of proposed planting.



Plan of proposed planting types

5.5 Landscape Character

Boundary Treatments

 Mixed Native Hedge

See previous page.

 Boundary Hedge

See previous page.

 Brick Walls to Rear Gardens

Brick walls 2.1m high are proposed to the northern and southern ends of the terraced houses that run north-south to enclose the rear gardens. A 2.1m high wall is also proposed to the western end of the T-junction at the interface with Jenkins Close. A wire trellis system will be used as a structure for climbing plants on this wall. Bricks to match primary and secondary brick types.

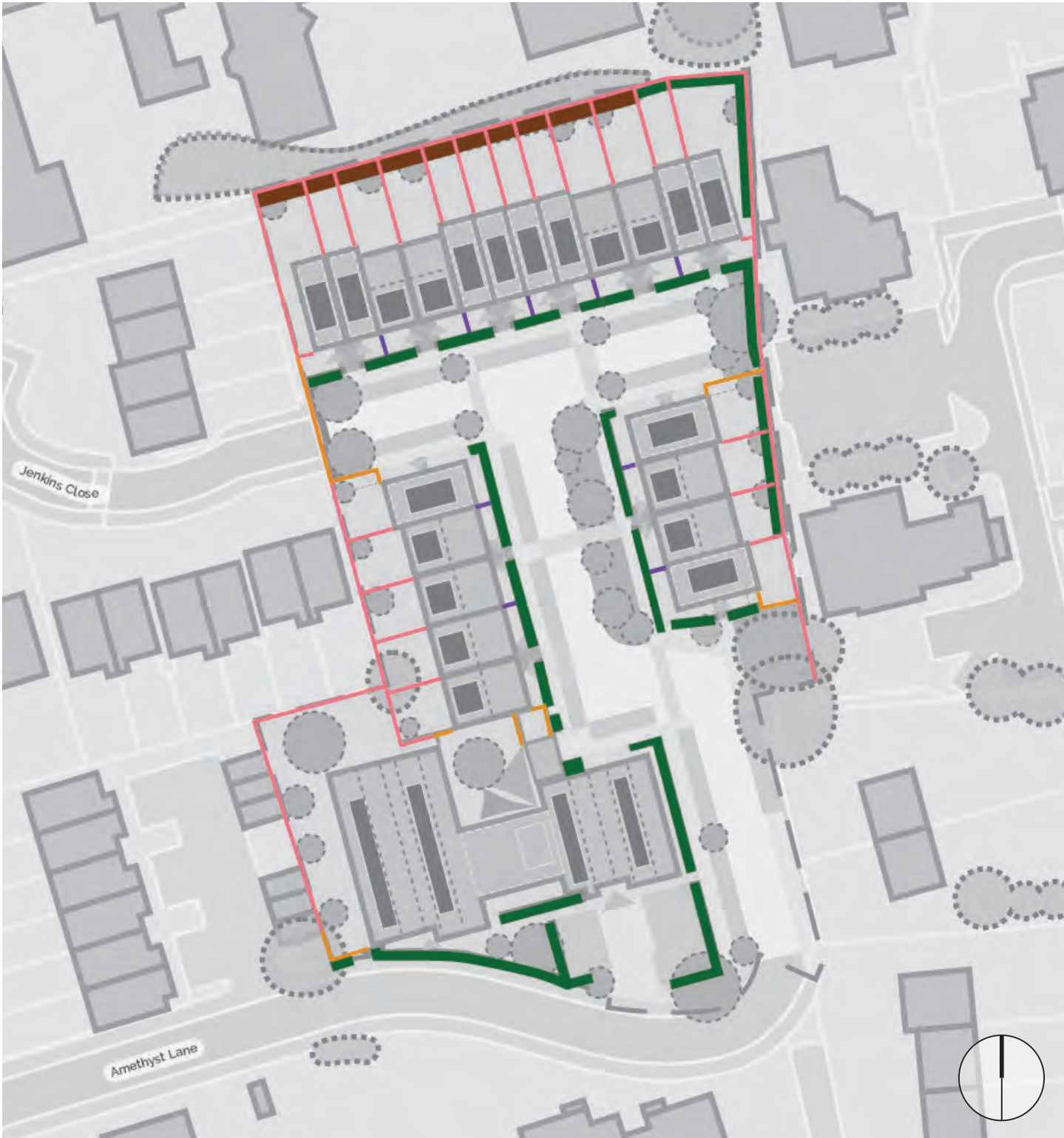
 Brick Walls to Front Gardens

Low walls 1.1m high are proposed to the front of the terraces to provide separation of property boundaries. Bricks to match primary and secondary brick types.

 Timber Fence

Close board timber fences 1.8m high are proposed to the rear gardens and beneath existing trees where we are required to minimise disturbance to tree roots.

Where walls and fences are to be constructed within the RPAs of existing trees, specialist construction methods will be required. Refer to the Arboricultural Method Statement for more details. Hedgehog gaps are proposed within the walls and fences to facilitate movement across the site (refer to the Hard Landscape General Arrangement drawing for locations).



Plan of proposed boundary treatments



Mixed native hedge



Instant mixed native hedge supplied in troughs - image by 'Practicality Brown'

5.5 Landscape Character

Materials

 Tarmac to vehicle carriageway

The vehicle carriageways are proposed to be laid with tarmac specified by the project engineers.

 Tarmac to pedestrian footpaths

Tarmac and chip is proposed to the pedestrian footpaths to differentiate them from the road.

 Permeable block paving

Permeable block paving 200 x 100mm laid in a herringbone formation will be used for the parking bays, the parking court for the Respite Care Facility and the loading bay to the north of the Respite Care Facility.

 Clay brick paving

Tumbled clay brick paving is used to demarcate the entrances to the houses.

 Resin bound gravel

Resin bound gravel is proposed to the respite facility garden which has a smooth surface facilitating ease of movement for all. This will be edged with metal edging.

 Flag paving

To rear patios and paved areas to front of houses.

 Concrete setts to crossings

Concrete setts 100 x 100mm are used to highlight the pedestrian crossings and slow traffic.



Plan of proposed material types



Resin bound gravel paths to the respite facility garden with metal edging



Clay brick paving to house entrances as seen in **Upton site**
C - HTA Design LLP

5.6 Respite Facility Garden

Garden Character

Outdoor spaces host a multitude of proven benefits for those living with complex neurological conditions.

The respite facility garden provides an external communal amenity area of over 370m² and will be designed to cater for the needs of those with hypo or hyper-sensitivities, with careful consideration given to the choice of plants and hard materials to create a calm environment.

Circulation loops, smooth surfaces, colour contrast and careful placement of seating areas help those that may be anxious.

The precedents on the right illustrate some of the ideas we have tried to incorporate into the gardens.



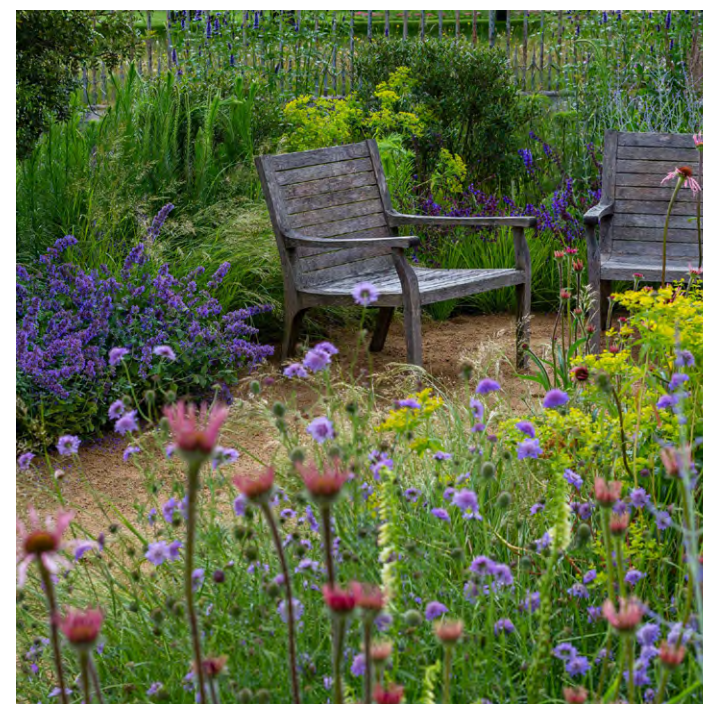
Location of Respite Facility garden



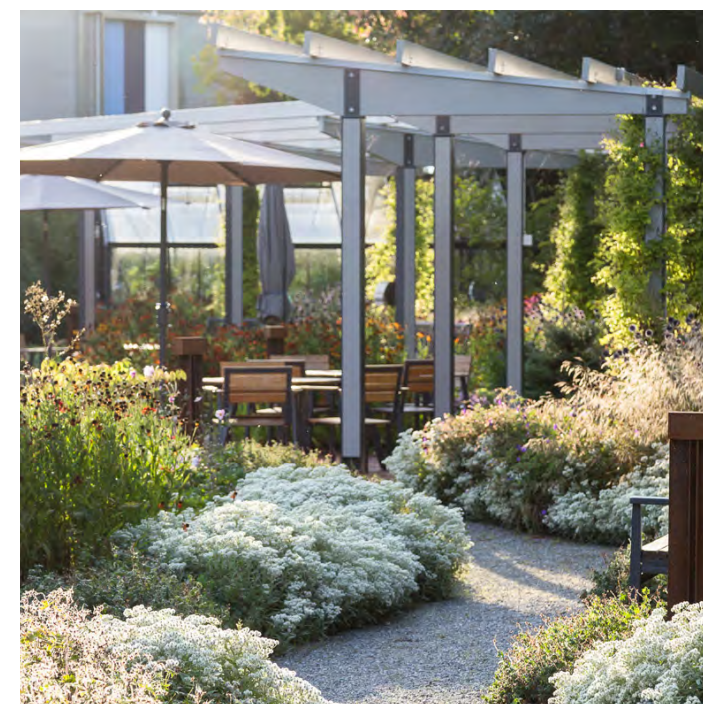
Alliums - species suited for those with Hypo or Hyper-sensitivity



Sensory Trust - Hampton Court show garden. Colourful shade sails add a playful element to the garden.



Quiet seating area within textured herbaceous perennial planting



Shade structures enable outdoor dining in hot weather



A simple palette of materials but laid in an interesting way creates a visually rich but still calming environment

5.6 Respite Facility Garden

Spatial Arrangement

The proposed garden is divided into three key courtyard spaces:
1) Communal garden
2) Sensory garden
3) Wildlife garden

These three gardens are described in more detail over the following pages.

- 1 Communal Garden
- 2 Sensory Garden
- 3 Wildlife garden



Illustrative plan of Respite Facility Garden

5.6 Respite Facility Garden

Communal Garden (1)

A flexible design facilitates a range of outdoor activities including raised beds for growing, a potting shed/ garden store, sensory planting, space for external activities and dining, and ornamental tree planting.

Planting to the western side of the courtyard provides a privacy buffer to the internal bedrooms that overlook the space, and contain a mix of both scented and unscented plants.

Furniture is moveable to facilitate outdoor games such as giant jenga and connect 4. Brightly coloured shade sails can be erected when required to create cover for residents and add a playful element to the garden. The wall on the northern boundary provides the opportunity for tactile/ sensory panels and the projection of images to aid visual and sensory stimulation, whilst a fold down, wall mounted clothes drier on the eastern boundary provides a practical function.

- Key:**
- ① Feature paving (clay brick)
 - ② Resin bound gravel with metal edge
 - ③ Kite sail colourful shading and cover
 - ④ Moveable raised planter/ growing bed
 - ⑤ Lean-to potting shed/ garden store
 - ⑥ Moveable outdoor seating with tables
 - ⑦ Privacy screening and groundcover planting
 - ⑧ Entrance to garden from dining area
 - ⑨ Proposed feature tree
 - ⑩ Fold down wall mounted clothes drier
 - ⑪ Sensory/ tactile wall
 - ⑫ Fixed curved bench
 - ⑬ Swing seat



Above: Initial spatial design of The Respite Facility Communal Garden

5.6 Respite Facility Garden

Sensory Garden (2)

The sensory garden will provide residents with a quiet space with semi-private seating areas, and is designed to allow the senses to guide and stimulate residents. As many of the residents may experience a range of complex neurological and mobility requirements, this space should be fully accessible and accommodating to all. Planting will be used to enhance the sensory experience, catering for residents with both hyper and hypo sensitivities. A covered arbour allows the garden to be used in all weathers.

The garden will include scented, textural, and sound-bearing plant species to cater for all residents' sensitivities to the outdoor environment, showcasing:

- Accessible, continuous walkways
- Wild areas for exploration and relaxation
- Scented and unscented planting
- A range of seating areas

Key:

- ① Resin bound gravel with metal edge
- ② Recessed areas with fixed seating and space for wheelchairs
- ③ Covered arbour
- ④ Raised planter for privacy
- ⑤ Textural, unscented planting
- ⑥ Scented herbs and flowers
- ⑦ Planting creating sounds
- ⑧ Access via quiet lounge
- ⑨ Low maintenance ground cover planting with feature shrubs
- ⑩ Private patios in wildlife garden
- ⑪ Feature tree



Above: Initial spatial design of The Respite Facility Sensory Garden

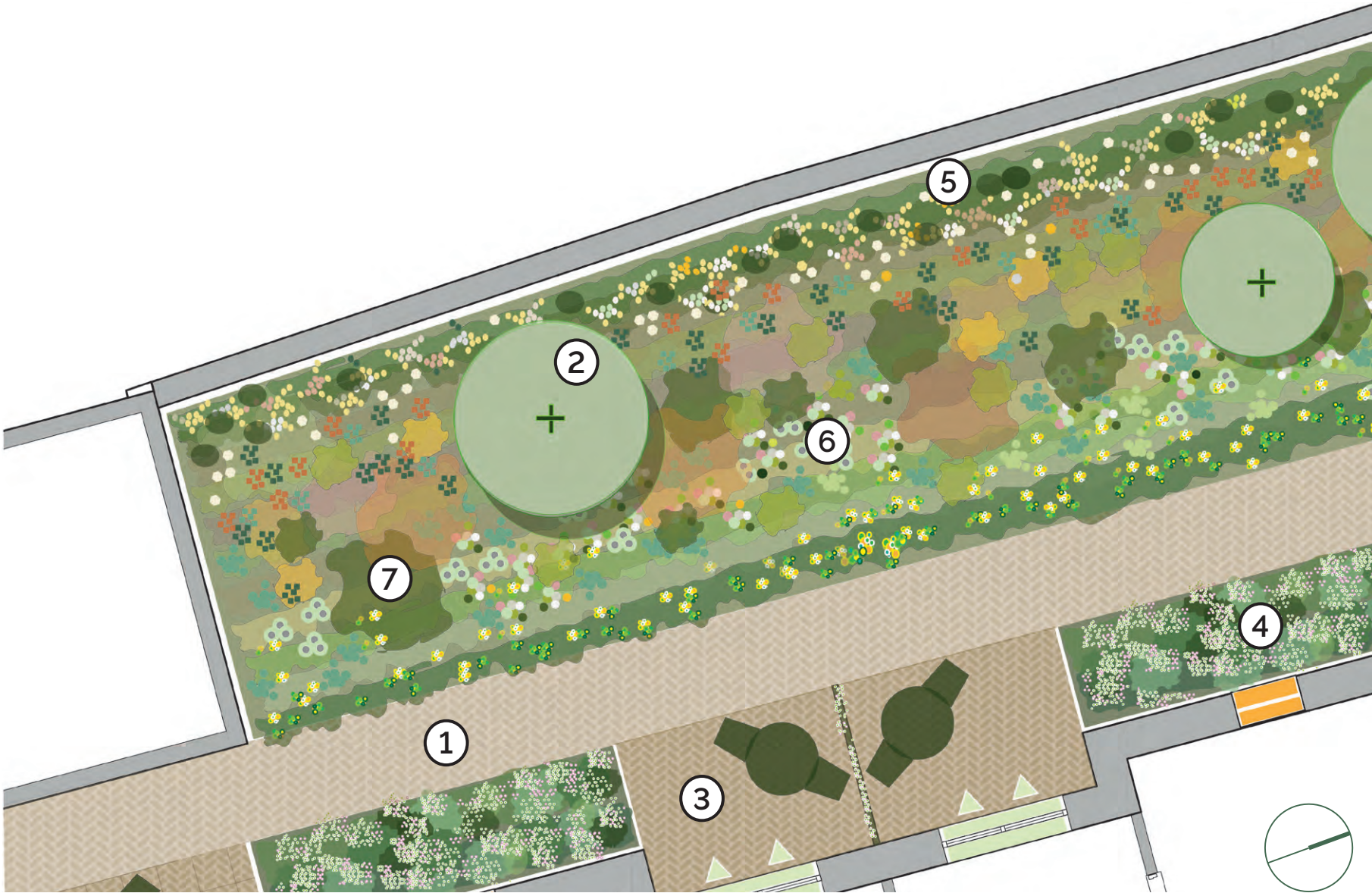
5.6 Respite Facility Garden

Wildlife Garden (3)

The Wildlife Garden is designed to provide a calming backdrop to the resident's bedrooms with planting utilised to both attract wildlife and create a visual display throughout the year.

The Wildlife Garden is curated in such a way as to allow residents in the western wing a pleasant and natural outlook. Residents here would be able to enjoy a safe natural environment from their own private patios or via the path connecting north towards the Sensory Garden. Additionally, the wild perennial planting styles would also be ideal in encouraging nature to this area. This garden will include:

- Wild areas for wildlife
- Structural, low-maintenance planting
- Private outdoor spaces
- Peace and quiet for sleeping
- Visible and continuous accessibility
- Flat, and even paving



Above: Initial spatial design of The Respite Wildlife Garden

Key:

- ① Resin bound gravel with metal edge
- ② Proposed feature trees
- ③ Semi-private patios for bedrooms
- ④ Privacy planting
- ⑤ Climbing plants to boundary fence
- ⑥ Low maintenance ground cover planting
- ⑦ Feature shrubs



Attracting wildlife to the semi-private garden - left to right - habitat features, providing food for wildlife, creating nesting opportunities for birds

5.6 Respite Facility Garden

Planting, Furniture & Materials

Accommodating both residents with hyper-sensitivity, hypo-sensitivity, as well as mobility and learning requirements, outdoor spaces should be welcoming to all, so the selective placement and introduction of varying planting styles may include species like rockery plants, small shrubs, grasses, herbs, flowering understorey bulbs, and scented species alike. Wilder areas of the garden can be comforting for those experiencing some neurological conditions, offering both engagement with nature, enlivening a sense of curiosity in an individual, as well as being spaces of safety and relaxation.

Species releasing evening scent may prove stimulating for residents if located considerably. Separate to species only releasing their scent when brushed past or touched deliberately, scented plants can often give-off pleasant aromas at particular times of the day, and these may include *Trachelospermum jasminoides*, (**Star Jasmine**) : a non-toxic climbing evergreen species with delicate white flowers during May-August.

Fixed seating, with adjacent space for wheelchair users, is provided throughout the garden. Seating will have back and arm rests for comfort and will have timber slats for warmth.

An arbour is proposed within the sensory garden to provide shade and shelter, and a sense of privacy for those who seek it.

Moveable dining furniture is proposed within the communal garden to allow for flexibility of space.

The communal garden is proposed to contain moveable raised planters, a potting shed/garden store, a tactile/sensory wall and the potential for projecting images onto one of the garden boundary walls.



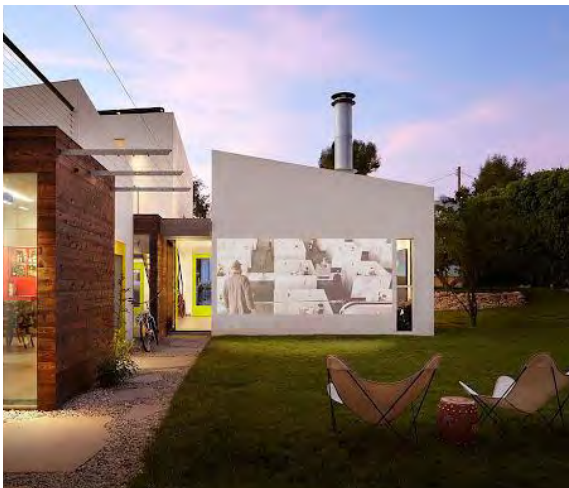
Stachys byzantina (lamb's ear) - tactile planting creates intrigue



Multi-purpose potting shed/ garden store within the communal garden



Jasminum officinale (common jasmine) - a highly scented climbing plant that attracts pollinators



Blank gable or garden walls provide the ideal opportunity for projection of imagery within the communal garden



Cercis siliquastrum (Judas tree) - feature tree within the sensory garden that attracts pollinators



Vestre 'Parc' seat comes in a wide range of colours and can be moved around the garden creating flexible space



Echinacea - plants suitable for those with both hypo and hyper sensitivities



Blank gable or garden walls provide the ideal opportunity for tactile or sensory panels within the communal garden

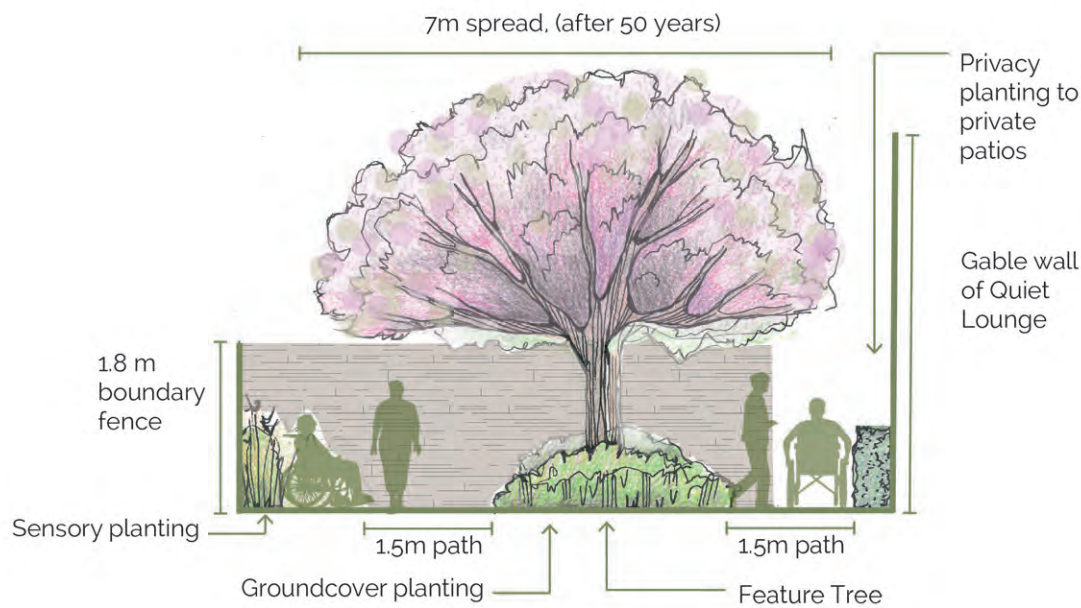


Raised beds on castors can be moved as required to accommodate space for outdoor games

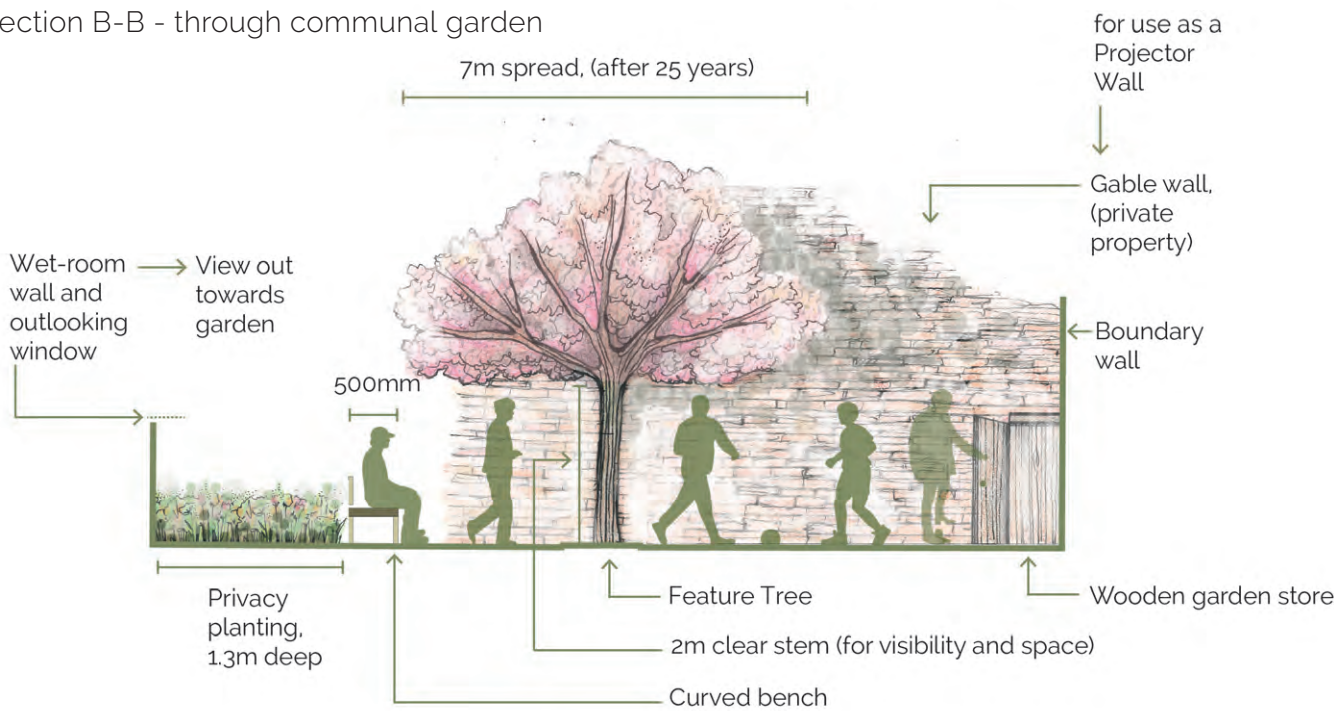
5.6 Respite Facility Garden

Sections A-A to C-C

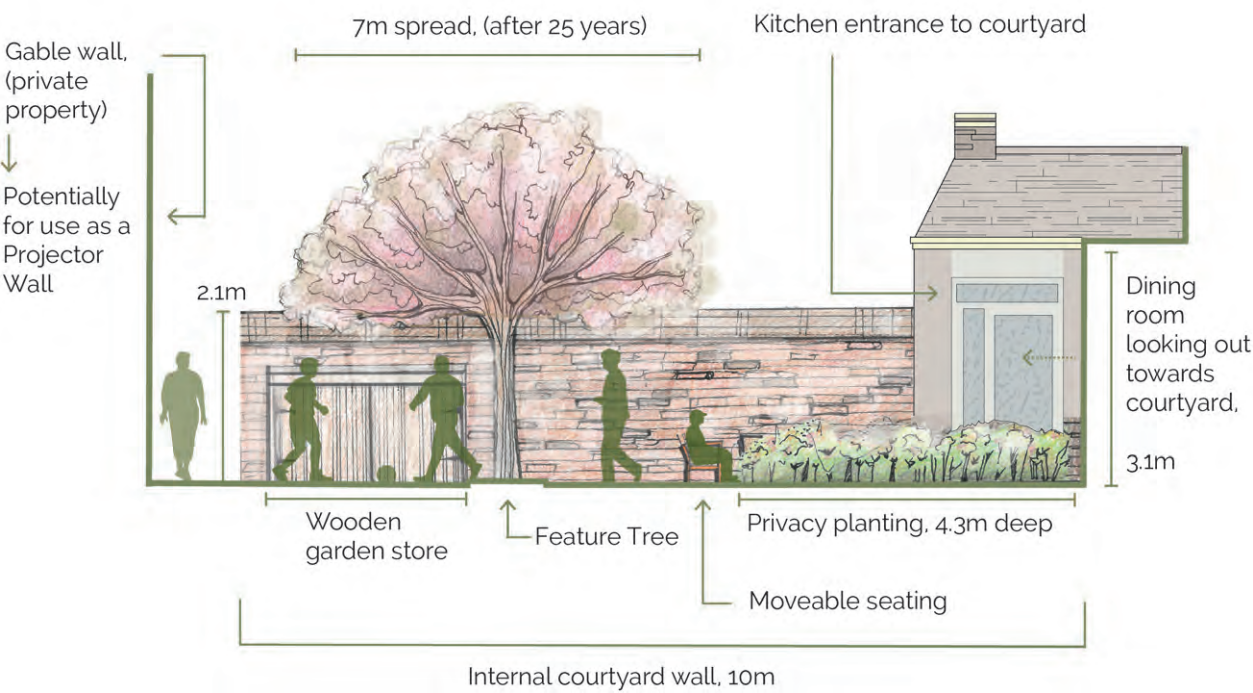
Section A-A - through sensory garden



Section B-B - through communal garden



Section C-C - through communal garden



5.6 Respite Facility Gardens

Visualisations

The images below illustrate how the communal and sensory gardens may look.

The image below on the left shows a view from the dining area looking north west within the Communal Garden. The image on the right shows the Sensory Garden, with a view looking west, and featuring pocket seating that is accommodating for seated users and those in wheelchairs also.



Prunus avium 'Plena' proposed to communal garden (above left and middle). This cherry is sterile and therefore does not produce fruit.

Cercis siliquastrum (judas tree) proposed within the sensory garden



Visualisation of the communal garden - tactile panels shown on the boundary wall, with planting to the western side to create privacy for the adjacent bedrooms.



Visualisation of the sensory garden

5.6 Ecology & Biodiversity Net Gain

Enriching biodiversity

Adopting a planting strategy that aims to maximise diversity of planting across the site would provide a variety of nectar, pollen and fruit resources throughout the seasons, a variety of structural diversity and larval food plants.

Habitat features, such as Integrated and tree mounted bird and bat boxes, Insect hotels, loggers (made from site won timber) and bee bricks, provide important homes for insects.

Preliminary Ecological Appraisal

The Preliminary Ecological Appraisal made the following recommendations:

- Broadleaved plantation woodland/ Scattered broadleaved trees – should any trees be removed as part of the work, the same number of trees should be replaced as part of the landscaping plan in line with the Reading Borough Local Plan section EN12 where it states 'Development should... provide new tree planting, wildlife friendly landscaping and ecological enhancements.'
- Birds – the hedges, trees and scrub provide suitable nesting and foraging opportunities for common and widespread birds. Compensation for reduction in nesting opportunities to include 8 bird boxes
- Bats – three further surveys are recommended to be carried out between May and September, spaced two weeks apart. Surveys will inform any mitigation needed. It is recommended that any new lighting follows 'Bats and Artificial Lighting in the UK (2018)' guidance note.
- Badgers - All badger activity was contained within the north of the site, with a well-

established path between the setts and latrines leading off site.

- Other mammal species – evidence suggestive of a fox den present. Monitoring with camera traps recommended for 1 month.
- Non-native invasive plants – Hollyberry Cotoneaster identified on site – measures to ensure this species is not spread around/ off the site should be put in place, within a detailed Biosecurity method statement, to ensure compliance with the Wildlife and Countryside Act 1981 (as amended).

Other enhancement opportunities:

- Artificial hibernacula should be installed in the retained boundary landscaping, such as log piles. Using any felled trees or dead branches from the site will also increase the opportunity for invertebrates and other mammals such as hedgehogs.
- Soft landscaping should be incorporated using native species planting to ensure that connectivity and foraging opportunities are not lost. Planting schemes should use a range of native flora, including diverse meadow seed mixes, fruit/seed/nut-bearing species and those that provide pollen and/or nectar (such as Corylus sp., Sambucus sp., Malus sp., Sorbus sp., etc.) this will also increase foraging opportunities for invertebrates, badgers, bats and birds.
- The line of the hedge with trees bordering the site provides potential habitat for commuting Hedgehogs and the amenity grass provides foraging opportunities. To enhance the site for hedgehogs following works, it is recommended that the hedge should have additional native planting to increase suitability for hedgehogs, a strip of grass around the boundary line

be allowed to grow long, and leaf litter and dead wood should be left in areas around the site to provide more foraging and nesting opportunities. These areas should be created away from the road and parking areas too. Hedgehog homes could also be provided within the line of scattered trees.

Although the proposals suggest removal of some of the boundary vegetation to the eastern boundary, it is hoped that the trees to the north can be maintained as a hedge and wildlife corridor. Hedgehog gaps should be incorporated into all rear garden fencing to allow movement of hedgehogs and other small mammals through the site.

BNG calculations

ADAS have assessed the proposals and calculated that there is an **11.39% gain in habitat units**, (albeit trading rules are not met for the small area of scrub), and an **89.68% gain in linear units**. This means no offsite mitigation is required, subject to Reading Borough Council confirmation that they are satisfied that trading rules have not been met for the small area of scrub.

