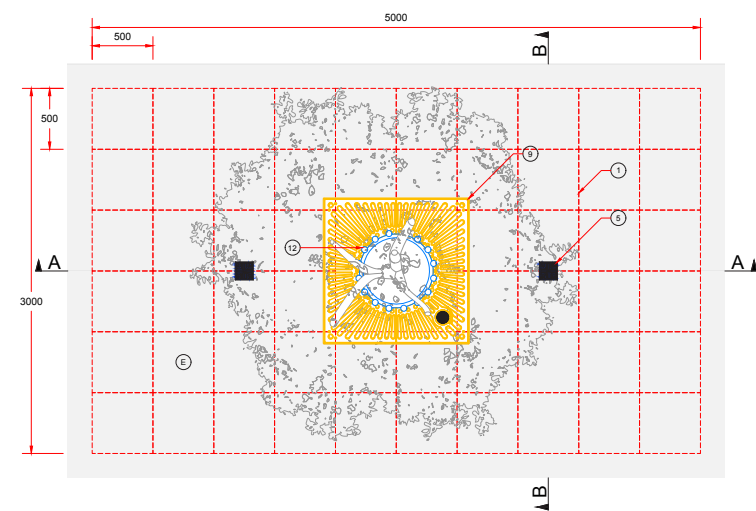


Trees in areas with constrained ground conditions

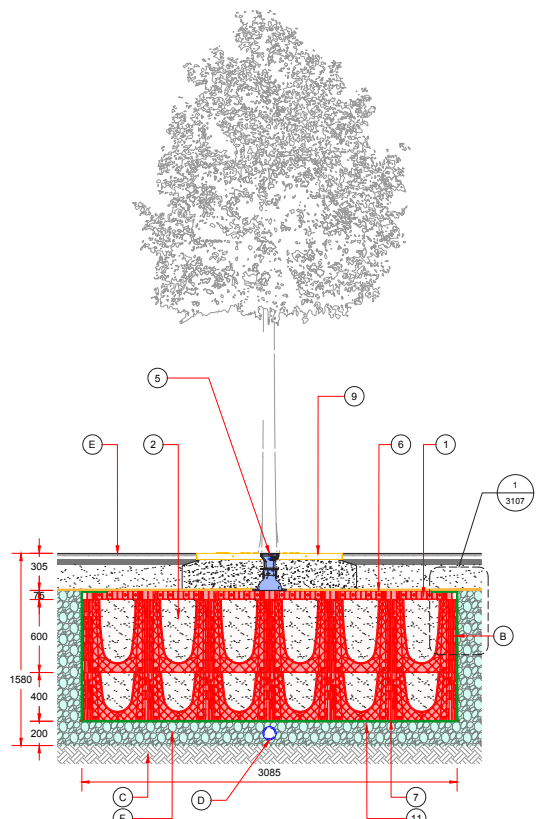
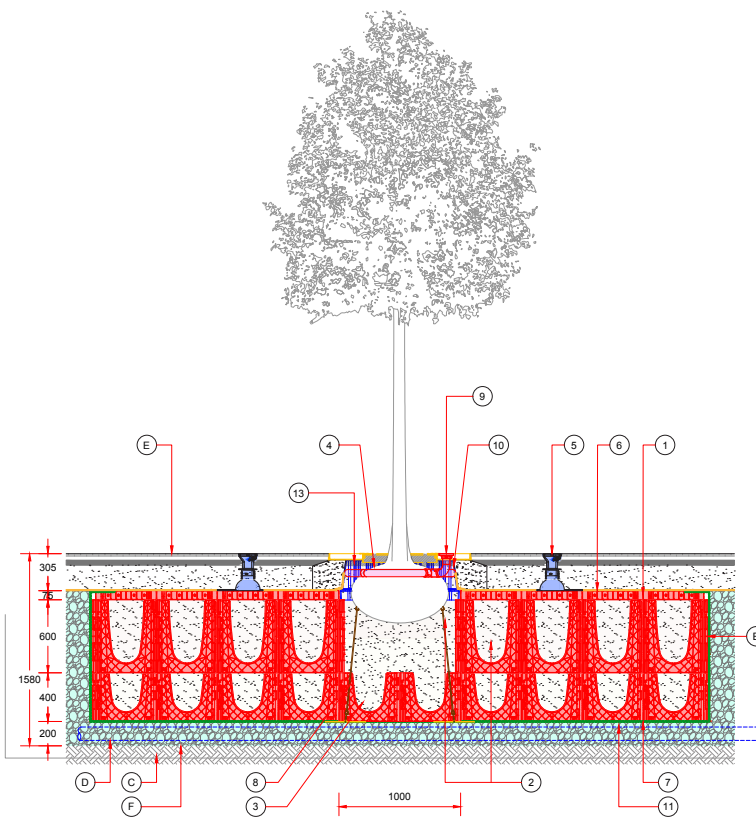
The vast majority of trees are positioned in generous areas of soft landscape that provide an adequate volume of growing media for root growth.

Positioning trees in constrained areas with limited growing media is avoided.

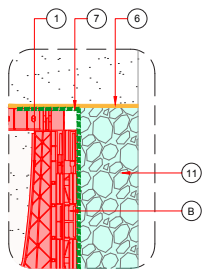
Where necessary, root cells will be placed below hard landscape to provide the adequate amount of growing media, as illustrated in the plan opposite, by Green-Blue urban ltd.



PLAN VIEW



SECTION B-B



DETAIL 1

PACKAGE INCLUDES THE FOLLOWING GREENBLUE URBAN PRODUCTS PER TREE:

- 1 ROOTSPACE @ 1000mm DEPTH (2 UNIT DEEP) C/W TWIN WALLED GEONET & OPEN REINFORCING MESH - GBURS64A
- 2 ROOTSOIL 20 TOPSOIL FOR USE WITHIN TOP 600 OF SOIL PROFILE - ROOTSOIL20
- 3 ROOTSOIL SUB SUBSOIL FOR USE WITHIN SOIL PROFILES 600mm OR DEEPER - ROOTSOILSUBA
- 4 ROOTSTART PROFESSIONAL MYCORRHIZA FUNGI ALLOW 200g PER TREE - RSPMF2.5LA
- 5 ROOTRAIN ARBORVENT CAST ALUMINUM TRAFFICABLE AERATION INLET WITH 150mm SQUARE TOP AND MANIFOLD - RRARBV150B
- 6 TWIN WALLED STRUCTURAL GEONET (INCLUDED IN ITEM 1) SEE NOTE (1) - GLTWGNA
- 7 20mm OPEN REINFORCING MESH (INCLUDED IN ITEM 1) SEE NOTE (1) - GRN20A
- 8 ARBORGUY ANCHORPLATE STRAPPED ANCHOR SYSTEM - SASAP10A
- 9 ADUR DESIGN CAST DUCTILE TREE GRILLE 1200mm SQUARE WITH 600mm CENTRAL APERTURE WITH GALVANISED SUPPORT FRAME. INCLUDING ROOTRAIN HYDROGRILLE IRRIGATION SYSTEM - ADUR12A
- 10 MEDIUM ROOTDIRECTOR WITH ROOT DEFLECTING RIBS - 800mm CLEAR APERTURE FOR ROOTBALL - RD1000-RSA
- 11 10mm - 20mm CLEAN ANGULAR DRAINAGE AGGREGATE - GBUDRSA
- 13 ARBORMULCH BARK MULCH - GBUMULCHA

NOTES:

- A ALLOW 20% ADDITIONAL FOR GEOTEXTILE AND REINFORCED GEOGRID FOR OVERLAP AND CUTTING REQUIREMENTS
- B INSTALL ROOTSPACE SIDE PANELS TO INSTALLATION AS DIRECTED BY ENGINEER
- C EXISTING GROUND
- D POSITIVE DRAINAGE PIPE (110mm PERFORATED PIPE)
- E BUILD-UP TO SUIT ENGINEER DESIGNS AND REQUIREMENTS

STRUCTURAL ENGINEER'S NOTE:

- F ADDITIONAL TWINWALL GEONET (GLTWGNA) TO BE INSTALLED WHERE SUB-BASE IS INSTALLED BELOW 3% CBR - MINIMUM 2% CBR OF FORMATION LEVEL TO BE ASSESSED BY ENGINEER

Section 106 Open Space Provision

The Section 106 agreement requires the development to deliver a number of open space types of fixed amounts. These are;

-  Amenity Green Space 0.90 Ha
-  Natural and Semi-Natural Open Space 3.24 Ha
-  Parks and Gardens (incorporating 700m2 landscaped Civic Space) 1.02 Ha
-  Children's Play (including NEAP and MUGA) 0.13 Ha

Total Open Space 5.29 Ha

Whilst the amount of open space types to be delivered is fixed, the locations shown at outline stage are nominal.

The plan opposite shows that the locations of open space have been adjusted to fit the design progression expected at the Reserved Matters stage.

The types and quantity of open space shown for reserved matters is equal to that appended to the S106 agreement.

The following pages summarise the guidance for provision of the above open space types according to Wokingham's Open Space, Sports and Recreation Strategy and a subsequent clarification of expectations received from Wokingham. They demonstrate how the design complies.

Outline / S106



Extract from outline 'Open Space Typology Plan' (Paul Brown Architect), appended to the S106 agreement

Reserved Matters



Open Space Typology Plan adapted to the Reserved Matters Layout

S106 Open Space Provision

S106 Amenity Green Space

According to the guidance and clarification;
‘Should be easily accessible to the surrounding community, with well-connected footpaths and cycleways.’
A 3m wide path runs from north to south along the edge of the amenity space, providing an accessible connective route linking with the broader open space network and housing areas.

‘Must accommodate a range of informal recreational activities, including dog walking, relaxation, and social gatherings.’
The main body of the amenity space comprises a large swathe of short amenity grassland suitable for riverside relaxation and a range of recreational activities including informal ball games and gatherings. The short grassland connects with mown paths that run through the broader water meadows area providing a circular route suitable for exercise and dog walking.

‘Should integrate native planting, trees, and wildflower areas while ensuring a safe and welcoming environment.’
The majority of trees in the amenity space are native species set in short amenity grassland, or long native meadow grassland verges. Trees are clear stem ensuring sight-lines beneath their canopies. Most of the amenity space is overlooked by proposed housing.

‘Seating, shade, and opportunities for informal play should be strategically placed to cater to different age groups.’
The space includes bench seating as well as informal boulder seating around the attenuation basin. The landscape master plan indicates locations for potential informal play elements that could take the form of earth mounds / boulder clusters or sculptural elements to be explored through planning conditions.



S106 Amenity Green Space Area

3m wide path
Bench seating and bin



Amenity grasslands suitable for a range of recreational uses

- Native meadow
- Native Tree Planting
- Species rich amenity grass
- * Potential informal play elements / creative interpretation and wayfinding signage / to be explored through planning conditions

S106 Natural and Semi-Natural Open Space

According to the guidance and clarification;

‘These spaces should prioritise native habitats, including woodlands, meadows, wetlands, and hedgerows, to enhance biodiversity and support local wildlife.’

- The majority of the natural and semi-natural open space comprises existing grasslands in the flood-plain that will be conserved and enhanced for biodiversity.
- The attenuation basin provides wetland habitat including marginal grasslands that are temporarily inundated as well as pools of permanent water with native aquatic planting. Shallow scrapes will be formed in long grassland for wading birds.
- The space includes areas of native scrub suited to the damp riverside conditions. Similarly the tree species proposed are native and riverine including Willows, Alder, Downy Birch and Black Poplar.

‘Maintain a naturalistic character with minimal formal infrastructure; paths should be permeable and constructed from natural materials where possible.’

The design will maintain a naturalistic character. Paths through the water meadow are mown grassland.

‘Ensure clear but subtle wayfinding, using sensitive signage that does not detract from the natural setting. Include interpretation boards, nature trails, and opportunities for community engagement (e.g., the bng project).’

The path through the meadows forms a nature trail that can be brought to life through potential creative interpretation and wayfinding signage / sculptural elements that provide directions and/or narrate the biodiversity and climate change mitigation story of the riverside. These elements are to be explored through planning conditions.



S106 Children’s Play; NEAP (Neighbourhood Equipped Area for Play) and MUGA (Multi Use Games Area)

‘Design must adhere to the Wokingham Play Space Design Guide to ensure high quality play provision.’

The design proposals for the Play area are set out on Pages 10 and 11 of this document and are to be developed in detail through conditions.



The existing grasslands will be conserved and enhanced for biodiversity. Mown paths will provide access to nature.

- Native meadow grasslands conserved and enhanced for biodiversity
- Native scrub planting
- Native Tree Planting
- Species rich amenity grass / mown paths
- Native wet meadow in swale / attenuation basin
- Potential creative interpretation and wayfinding signage / sculptural elements
- Ecological scrapes for wading birds

S106 Open Space Provision

S106 Parks and Gardens (incorporating 700m2 landscaped Civic Space)

According to the guidance and clarification;

'These spaces should cater to diverse users, including areas for active recreation, quiet relaxation, community events and activities.'

Loddon Green provides a formal lawned space suitable for a range of community events and activities, whereas The Orchard provides an opportunity for the community to engage in growing. Parks and Gardens connect with the north-south Muddlers Lane and broader recreational routes through the water meadows.

'Incorporate a mix of formal planting, lawns, and structured elements (e.g., sculptures) to create an attractive and engaging environment. Provide step-free access, clear sight-lines, varied seating options, and spaces designed for all age groups and abilities.'

Loddon Green includes formal ornamental shrub planting and lawns. The masterplan indicates locations for creative interpretation and wayfinding signage / sculptural elements to be explored through conditions. Access will be step free with paths no steeper than 1:21. The Orchard and Loddon Green provide bench seating. The Riverine Swale that passes along the western edge of Loddon Green includes informal boulder seating at its edge.

'Ensure natural surveillance through well-planned sight-lines, appropriate lighting, and placement near active frontages. Including drought-resistant planting, SuDS, and tree canopy cover for shade.'

The tree planting proposals in Parks and Gardens are generous and will provide shade. Trees are specified as clear stem (except for orchard trees) allowing sight-lines beneath their canopies. Parks and Gardens are well overlooked by proposed housing. The Riverine swale provides an attractive SuDS element.



S106 Parks & Gardens Area

'Loddon Green' with formal lawns and ornamental planting



Orchard Trees

New woodland planting to enhance existing north-south tree corridor along Muddlers Lane in line with ecologist's recommendations

-  Native meadow grasslands conserved and enhanced for biodiversity
-  Native Tree Planting
-  Orchard Tree Planting
-  Species rich amenity grass
-  Native woodland planting
-  Low native woodland shrub planting

 Potential creative interpretation and wayfinding signage / sculptural elements

Biodiversity Net Gain and Landscape and Ecological Management

Nicholsons Ecology have produced

- Biodiversity Net Gain Assessment
- Biodiversity Enhancement Plans
- Landscape and Ecological Management Plan
- Ecological Permeability Report

The biodiversity net gain assessment found that **the proposed development will result in a net gain in habitat biodiversity of +15.13%** (+5.16 habitat units), **a net gain in hedgerow biodiversity of +146.84%** (+6.30 hedgerow units), **and a net gain in watercourse biodiversity of +15.60%** (+1.07 watercourse units).

The BNG report sets out requirements for habitat enhancement. Of particular note is the existing woodland strip (w1g) that runs down the centre of the site along the north-south 'Muddler's Lane'. Enhancement of this woodland strip will be achieved by removing any invasive or undesirable species to encourage the growth of a shrub layer, and the retention of deadwood features where safe to do so. Wood arising from tree removal (as detailed in the Arboricultural Impact Assessment) will be lain on the ground below the tree canopies.

Biodiversity enhancements include a range of bird, bat and insect boxes as well as 'hedgehog highways'. The native meadow in open space areas provides ample habitat for hedgehogs to form commuting routes. Hedgehog fencing will be specified in the development areas; i.e. with 130x130mm gaps to allow access to, from and between gardens.

Full details of habitat retention, enhancement and creation can be found in Nicholsons Ecology Reports and Plans listed above.



BNG Post Intervention Plan by Nicholsons Ecology.