specification notes

• Tree locations are subject to confirmation of engineering and foundation details. Foundations shall comply with guidelines set by structural engineering consultants, and shall accord with the current NHBC Standards 'Building near Trees' and shall accommodate immediate and future impact of tree or shrubs on buildings and their foundations.

• Any proposed substitutions, whether species, cultivar, pot size or other specification, must be approved by landscape architect prior to planting;

• Any significant layout changes necessitating revised details (such as new retaining walls casting shade on planting beds) should be reported to the landscape architect;

• All Nursery Stock to comply with BS3936 Part 1:1992 and all subsequent amendments;

• All Landscape operations to comply with BS4428:1989 and all subsequent amendments;

• The landscape contractor to make him/herself aware of any underground services prior to planting.

• Any poor site or soil preparation or conditions to be reported to site manager for remediation prior to planting.

• No substitutions are to be made without prior approval;

• In relation to the adopted SAB features, the design is currently draft

WATERING
During tree, hedge, shrub, perennial and grass establishment and for duration of maintenance period ensure that sufficient water is applied using a hose to maintain healthy growth. During very dry summer spells, trees to be watered at rate of 25L and shrubs at 5L per plant per week during establishment. Draw back mulch and water with hose. Do not use sprays or sprinklers (except for grass and wildflowers) as these just wet the top of the mulch and do not penetrate the root zone.

SOILS
• Topsoil and subsoil to be stored in separate, non-overlapping mounds and topsoil should be stripped from any areas used for subsoil storage. The minimum amount of compaction should be applied when forming soil storage mounds, they should not be driven across. Topsoil mounds should be no greater than 2m in height and subsoil mounds should be no higher than 3m;

• All imported or amended site soils for tree and shrub planting will comprise sandy loams as per BS 3882:2015 and BS 8601:2013, of slightly acid pH on placement and with excellent drainage and aeration properties. Details of the soils to be imported (certification in accordance with BS 3882:2015 and BS 8601:2013) and the soil scientist's interpretive report evidencing fitness for purpose, will be made available to the LPA. Soil scientist to advise if ripping is required underneath tree pit.

• Soil for rain gardens, in addition to the above specification, to be of minimum porosity 40%, and minimum conductivity 30m/hr. Refer to Engineer details for SUDS construction details;

• The protection of topsoil and subsoil for planting areas should accord with the Construction Code for the Sustainable Use of Soils on Construction Sites (DEFRA, 2009), BS 3882:2015 and BS 8545:2014;

• Great care must be taken to preserve soil quality and integrity;

• All ground modelling to be to smooth and flowing contours new soil edge to be feathered to marry into adjacent levels;

• All planting and grass areas to be cultivated, with prior ripping where necessary to relieve compaction caused by tracking;

• Soils allowed to settle prior to planting or seeding;

• Settled soil profiles to be 300mm topsoil over 600mm subsoil for all areas of tree planting/mixed tree and shrub planting, including provision for a minimum 10 cubic metres of root available soil (11m2) for each new tree. Shrubs only and mixed shrub and to receive 300mm topsoil over 150mm subsoil; grass or wildflower turf to be 150mm topsoil over 150mm subsoil; direct seeding of wildflower mixes to be compost over subsoil, as per specification below

TREE PITS
• Tree pits to be excavated to minimum 1m x 1m x depth of rootball. In sloping ground, maintain horizontal bases and vertical sides with no less than minimum depth throughout. If compacted, break up bottoms of pits to a depth with a fork and scarify sides;

• All tree pits to be back filled with 600mm subsoil followed by 300mm topsoil;

• Rootballed trees to be anchored underground with Greenleaf Rootball Fixing System and planted with Greenleaf 'Root Rain Urban' watering pipes, fitted according to manufacturer's instructions;

• Bare root and containerised trees to be anchored with short triple softwood stakes a maximum of one quarter the height of the tree above ground, and fixed with biodegradable hessian ties such as 'Naturetie' available in 30m rolls from GreenBlue Urban.

• Tree supply, planting and aftercare must accord with BS 8545:2014.

• No tree will be planted until it has been found to be compliant with Table 1, p.21, BS 8545:2014 – this will be established via inspections on delivery

• All non-biodegradable wrappings, cages etc. to be completely removed on planting. Biodegradable wrappings also to be removed, but may, where root-ball collapse is a concern, be cut and peeled back to no less than one-third root-ball height, and pelled back wrapping removed not folded in;

• All trees in grass to be planted in mulched edged bed. Tree mulch circles to be a minimum 1.5m radius and 50mm depth tapered to 25mm over the root-ball surface; underplanted with bulbs as specified below;

• All planting beds adjacent grass areas and tree pits in grass to be edged with half moon edging tool to separate mulch from grass by forming neat and vertical edges;

• All planting beds but not tree pits to receive peat-free compost during cultivations at a rate of 1m3 to 20m2 and slow release fertiliser (e.g. Ficote 140) at rate of 25g/plant; beds to be thoroughly watered following planting and before mulching

• All planting beds to receive Green-tech mycorrhizal Root Grow (granules for general planting and root dip for bare root planting), applied according to manufacturer recommendations;

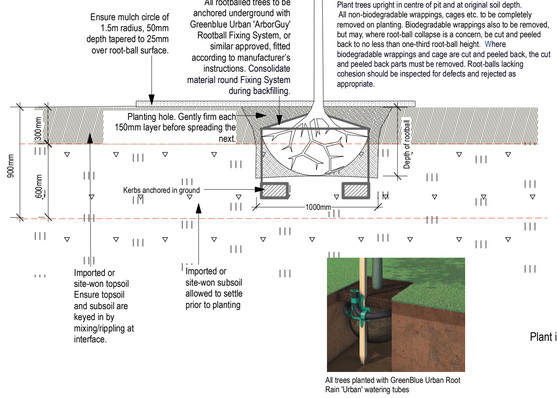
• Mulch to be dark brown mixed conifer bark of particle size 8-35mm and pH range 5.0-7.0 to BS PAS 100:2005; mulch to be laid to 75mm (settled) depth.

WATERING
During tree, hedge, shrub, perennial and grass establishment and for duration of maintenance period ensure that sufficient water is applied using a hose to maintain healthy growth. During very dry summer spells, trees to be watered at rate of 25L and shrubs at 5L per plant per week during establishment. Draw back mulch and water with hose. Do not use sprays or sprinklers (except for grass and wildflowers) as these just wet the top of the mulch and do not penetrate the root zone.

WILDFLOWER GRASSLAND
• Existing grassland and vegetation underneath trees retained wherever possible, particularly under tree canopies where ground is to remain undisturbed
• Wildflower grass seed to be Germinal Seeds (formerly British Seed Houses) WFG2 Flowering Meadow in open areas or WFG8 Hedgerows and Shaded Areas under existing trees and proposed shrubs, both sown at 5g/m2.
• Except for underneath existing trees, wildflower grass seed to be sown in 20mm compost layer over finely cultivated subsoil (ideally using shake-aerator) worked into the top layer and watered in (to ensure some nitrogen but low phosphorus); within tree RPAs to protect tree roots, seed is to be sown over lightly raked soil, compost layer applied and then seeded.

WILDFLOWER SUDS TURF from www.wildflowerturf.co.uk laid on topsoil as per supplier recommendation
50m2 SUDS turf: WFT-SUD-37

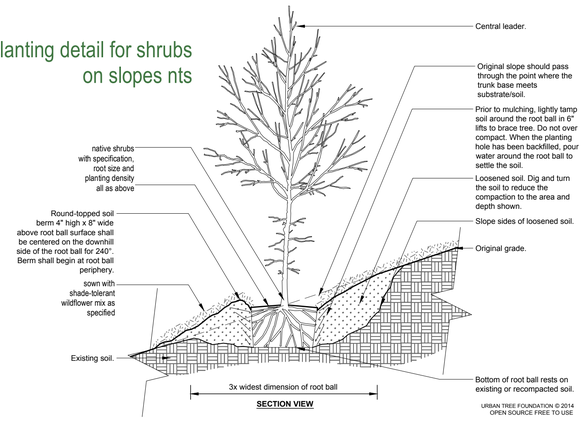
planting detail for rootballed tree 1:20



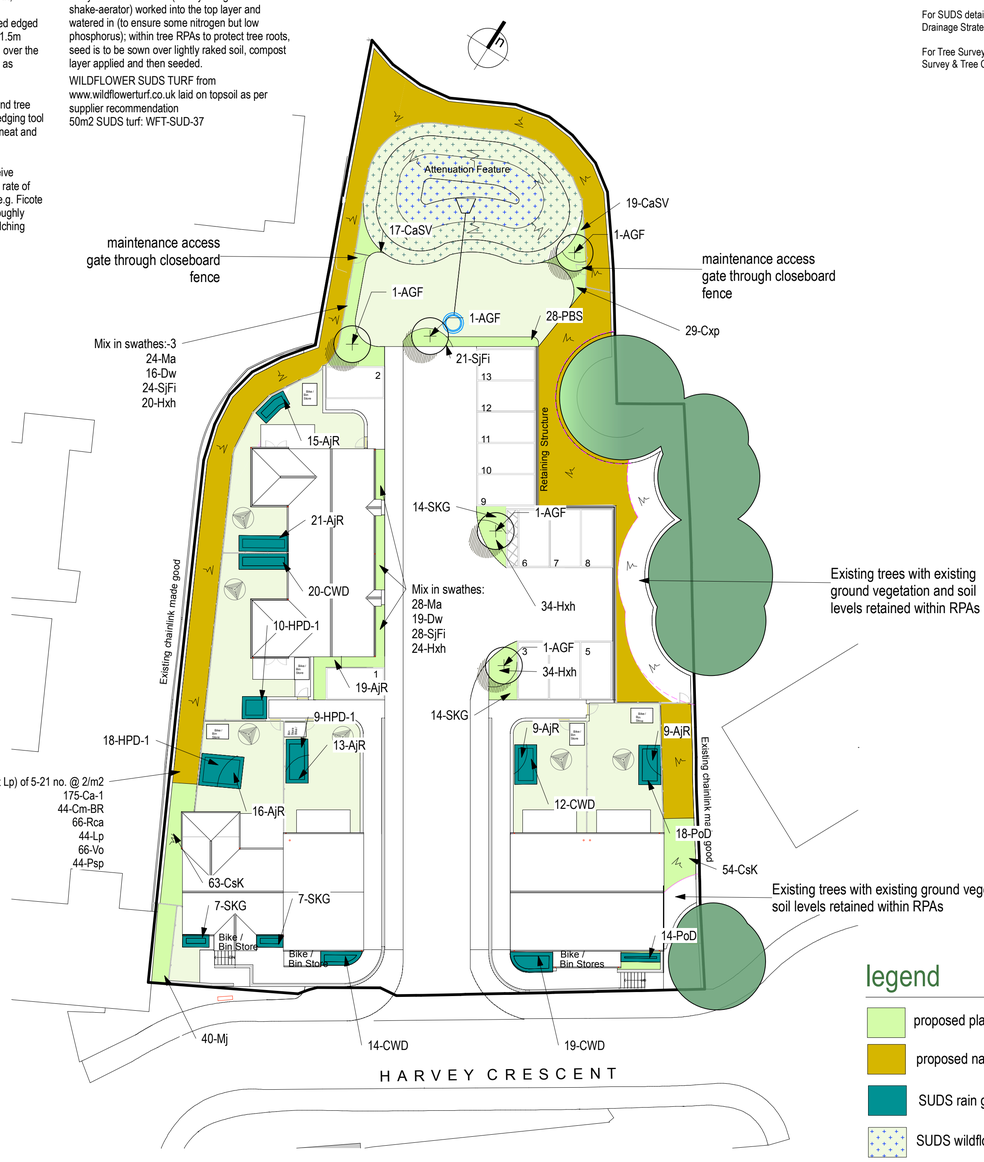
Carry out the work while soil and weather conditions are suitable.
Soil for planting should be moist, friable and not waterlogged.
Remove large stones, weeds and other deleterious material.
Following soil placement and settling, excavate planting hole to be twice the root-ball diameter and no deeper (a few cm shallower) than root-ball to allow for settlement. Base should be undisturbed unless there are drainage problems, in which case consult soil scientist and drainage engineer to design solution. Excavate hole with slightly raised centre. Retain soil for re-use, keeping topsoil and subsoil separate.
In sloping ground, maintain horizontal bases and vertical sides with no less than minimum depth throughout.
Fork bottoms of pits to a depth of 150mm and scarify sides.
Cut back any broken or damaged roots to sound growth.
Plant trees upright in centre of pit and at original soil depth.
All non-biodegradable wrappings, cages etc. to be completely removed on planting. Biodegradable wrappings also to be removed, but may, where root-ball collapse is a concern, be cut and peeled back to no less than one-third root-ball height. Where biodegradable wrappings and cage are cut and peeled back, the cut and peeled back parts must be removed. Root-balls lacking cohesion should be inspected for defects and rejected as appropriate.

All trees planted with GreenBlue Urban Root Rain 'Urban' watering tubes

planting detail for shrubs on slopes nts



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Green Infrastructure Statement

Harvey Crescent is a sparsely vegetated, brownfield site located in a suburban residential area with industrial units to the north.

The River Afan is within 125m to the south, although there is no green link or pedestrian access to the river. There is a small area of scrub and an area of trees to the north east of the site.

Key GI assets

1. Existing trees which overhang the site: 7no. pine and 1no. whitebeam.

2. Proximity to River Afan.

These provide some diversity of habitat and potential wildlife resource.

GI opportunities

1. Steep banks around the site provide unuseable space ideally suited for green infrastructure to wrap around the site;

2. Existing hard standing of little value in a suburban setting is replaced with a landscape which improves biodiversity;

3. Planting will ensure resilience of the GI network, its features and habitats, including sufficient space for new planting to grow (including appropriate tree rooting volume), and preservation of existing soil structure and macronutrients;

4. Improvement of adequate travel, foraging, nesting and roosting opportunities for wildlife, and potential to link into the more distant River Afan corridor;

5. Ensuring pedestrian permeability and connection to surrounding environment is provided;

7. Ensuring visual appeal and attractive setting of the development with screening and softening and planting to enhance Harvey Crescent .

GI proposals

1. Improve biodiversity across the site, for both flora and fauna; allow for incoming species;

2. Provide multifunctional SUDS proposals which enhance biodiversity and amenity and provides seasonal amphibian habitat;

3. Retain existing trees by respecting the Root Protection Areas, avoiding changes in levels and fencing off the trees as per the ArbTS recommendations

4. Allow wildlife travel around site which will allow some species to connect with the river corridor;

6 Design planting to encourage pollinating insects;

7. Ensure any lighting scheme is designed to avoid light spill on dark corridors

8. Supply habitat for threatened species (e.g. swift boxes, hedgehog houses)

Baseline studies which have informed GI proposals

For Ecology Appraisal, refer to report by Ecology Planning

For SUDS details, refer to phg Engineering & Drainage Strategy

For Tree Survey, refer to ArbTS Arboricultural Survey & Tree Constraints Plan

Summary of net biodiversity gains

• In accordance with Welsh Planning Policy, the development will represent a net gain in biodiversity;

• The strategy provides biodiversity enhancements through species-rich, native tree and shrub and grassland planting, provision of seasonal wetland and associated flowering species;

• Landscape proposals will provide an attractive setting which integrates the site into the residential area;

• Surface water and roof water will be captured and drained into the attenuation pond. Soils will be specified to ensure that plants grow in a moist but well drained rootzone, with water temporarily stored and then draining into pipes to be transported further down the drainage chain. Grassland is specified to tolerate the aspect (sun/shade) and the drainage (wet/dry/mesic);

• A proposed shrub corridor will wrap around the site to provide connectivity and bring wildlife into back gardens;

• Bird and bat boxes erected to provide additional nesting and roosting opportunity;

• Provision for brash piles and compost heaps on-site to provide habitat for a variety of reptile and other species

• Management of existing and proposed vegetation will be sympathetic to wildlife, both in terms of methods and timing of maintenance operations.

planting specification

Spacing	ID	No.	Latin Name	Scheduled Size	
TREE	AGF	5	Acer davidii 'George Forrest'	12-14cm	rootballed
4/m2	AjR	102	Aucuba japonica 'Rozannie'	30-40cm, 3L	3 breaks in lower third, bushy
as shown	Ca-1	175	Corylus avellana	1+2, 80–100cm	BR
3/m2	CaSV	36	Cornus alba 'Sibirica Variegata'	40-60cm, 3L	3 breaks in lower third
as shown	Cm-BR	44	Crataegus monogyna	1+2, 80–100cm	BR
3/m2	CsK	117	Cornus stolonifera 'Kelseyi'	30-40cm, 3L	Bushy
4/m2	CWD	65	Choisya dewitteana 'White Dazzler'	40-50cm, 3L	
3/m2	Cxp	29	Cistus x pulverulentus 'Sunset'	40-60cm, 5L	7 breaks in lower third, bushy
5/m2	Dw	35	Dryopteris wallichiana	60-80, 7.5L	Full pot
3/m2	HPD-1	37	Hydrangea paniculata 'Pink Diamond'	40-60cm, 3L	5 breaks in lower third
6/m2	Hxh	112	Helleborus x hybridus	20-30cm, 3L	Full pot
as shown	Lp	44	Lonicera periclymenum	60-90cm, 3L	min 2 breaks, cane removed on planting
4/m2	Ma	52	Mahonia aquifolium 'Apollo'	20-30cm, 3L	main leader, well branched
4/m2	Mj	40	Mahonia japonica	20-30cm, 3L	main leader, well branched
4/m2	PBS	28	Phormium 'Bronze Surfer'	40-60cm, 3L	Minimum of 5 spears
4/m2	PoD	32	Physocarpus opulifolius 'Diabolo'	40-60cm, 3L	3 breaks in lower third
as shown	Psp	44	Prunus spinosa	1+1, 60-80cm	BR, 3 breaks
as shown	Rca	66	Rosa canina	1+2, 80–100cm	BR, 5 breaks in lower third
4/m2	SjFi	73	Spiraea japonica 'Firelight'	30-40, 3L	Bushy, 5 breaks in lower third
4/m2	SKG	42	Skimmia x confusa 'Kew Green'	30-40cm, 3L	5 breaks in lower third
as shown	Vo	66	Viburnum opulus	1+2, 80-100cm	BR

legend

- proposed planting, mulched and edged against turf with half moon edging tool against grass
- proposed native planting mix unmulched and undersown with WFG8
- SUDS rain gardens
- SUDS wildflower turf
- wildflower seeded areas: sunny WFG2
- hard wearing grass turf such as 'Shademaster'

Revision A January 2024: Green Infrastructure Statement added

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client: Coastal Housing Association
scale • 1:250 at A1
date • November 2023
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