specification notes

• Prior to construction on site, protective fencing shall be erected around each hedge, tree or group at a minimum radius from the trunk of the tree of the canopy extent plus 10% (whichever is the greater). No soil, spoil or other material shall be deposited within the fenced areas;

• Underground services to be routed to avoid fenced areas;

• No burning to take place within 10m of the furthest extent of the canopy of trees to be retained on site or on land adjoining;

• The fence shall be kept in constant repair throughout the development work;

• The protective fencing shall be retained in position until completion of the development; should the fence temporarily need to be removed to complete works, then it shall be replaced immediately following completion and at least at the end of each day;

• The fence shall be at least 2.4 metres high, comprising of a scaffolding framework, as in 8.2.2 of BS 5837 (2005), supporting Herries fencing

• 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.

• All native species to be sourced from preferably local or at least UK stock;

• 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; and

• The supply, planting and aftercare of trees will be in accordance with BS 8545:2014 and no tree to be accepted for planting until it has been shown to be compliant with Table 1 p.21

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.

• 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.

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 3m in height and subsoil mounds should be no higher than 4m.

• 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;

• All soil handling (stripping, storage, amelioration and placement) will be carried out in accordance with the approved SRP. Soils will only be imported where a shortfall of appropriate soil is apparent, and the imported soils will be certified in accordance with BS 3882:2015 and BS 8601:2013, and found to be fit for purpose via the soil scientist's interpretive report;

• 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;

• Great care must be taken to preserve existing 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;

• Soil levels to remain unchanged in RPAs of existing hedges and trees;

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

• Planting areas to be spread with topsoil to a depth of 300mm for planting beds, above subsoil; soils allowed to settle prior to planting or seeding.

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. Spike bottoms of pits if compacted with a fork to a depth of 150mm and scarify sides;

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

• 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; these peeled back rootball wrappings are to be removed not folded in so as not to impede root development;

• All tags, plastic ties and bamboo canes to be removed from trees ;

• In the case of a shortfall of site-won soil being available to plant trees of Extra Heavy Standard (EHS) size or above, imported soils will need to meet the 'sandy loam' textural range and be of slightly acid-neutral pH.

• All trees of EHS size or above should be seated on 150mm-400mm (dependent on site conditions) horticultural grade sharp sand.

• All rootballed trees to be planted with GreenBlue Urban 'Root Rain Urban' watering pipes and anchored underground with GreenBlue Urban 'Arborguy' Rootball Fixing System all fitted according to manufacturer's instructions; for trees up to 45cm diameter, anchor system SASLCB to be used, together with SASDRXLA drive rods;

• Root barriers GreenBlue Urban Reroot 1000 to be installed to engineer approval;

• Product manufacturer specifications are to be used.

• All avenue trees to be similar height, form and habit;

• Bareroot/containerised trees to be staked with short triple 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.

HEDGES AND OTHER PLANTING
• Hedges to be planted in centre of 0.8m width bed in single rows at minimum 500mm from kerb;

• 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;

• Trees to be mulched with a circle of 1.2m radius where practicable, extending lengthways or widthways as appropriate to retain same area in awkward spaces; mulch to taper to 25cm over the surface of the rootball and to 20mm at the edge of kerbs and hard surfaces;

• All trees in grass to be planted in mulched edged bed of 2.4m diameter as above.

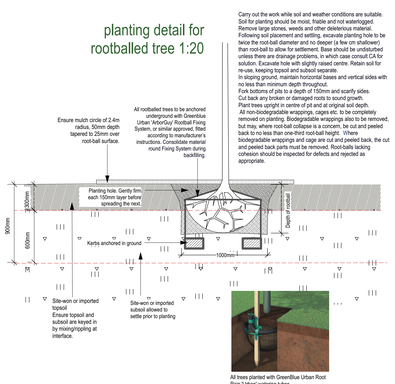
• Watering to continue as required throughout first growing season following planting;

WILD FLOWER GRASSLAND
• For new wildflower areas and remedial areas: Wildflower grass seed is to be Emorsgate EW1 Woodland Mix sown at 4g/m2 for shady areas, EM1 Meadow Mix for other areas. All to be sown in suitable conditions onto finely cultivated subsoil using shake-aerator; spread with 10-15mm layer of compost, worked into the top layer and watered in (to ensure some nitrogen but low phosphorus);

WILDFLOWER TURF laid on topsoil as per supplier recommendation; supply option with plant paper in lieu of plastic mesh (suited to both sun and shade) WFT-LANDSCAPE-34

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

planting detail for rootballed tree 1:20

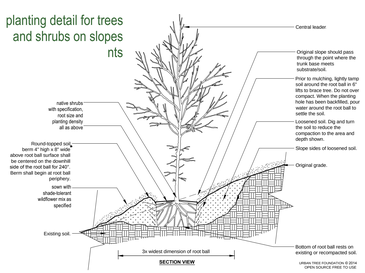


Carry out the work while soil and weather conditions are suitable. Soil for planting should be moist, friable and not waterlogged. Remove large stones, weeds and other deleterious material. Following soil placement and settling, excavate planting hole to be twice the root-ball diameter and no deeper (a few cm shallower) than root-ball to allow for settlement. Base should be undisturbed unless there are drainage problems, in which case consult CA for 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.

planting specification

Spacing	ID	No.	Latin Name	Scheduled Size	
3/linm	AjS	255	Aucuba japonica 'Salicifolia'	80-80cm, 7L	7 breaks in lower third, bushy
SPEC	BB	6	Buxus sempervirens	40L	40cm dia. ball
8/m2	BE	311	Bergenia 'Eroica'	30-40, 5L	Full pot
TREE	Bp-8	8	Betula pendula	8-10cm	Rootballed
TREE	Bp-12	6	Betula pendula	12-14cm	Rootballed
TREE	Bp-18	6	Betula pendula	18-20cm	Rootballed
as shown	Ca-1	306	Corylus avellana	1+2, 80–100cm	BR
3/m2	CHG	33	Cornus sericea 'Hedgerow's Gold'	30-40cm, 3L	Bushy
as shown	Cm-BR	153	Crataegus monogyna	1+2, 80–100cm	BR
TREE	Cma	3	Cornus mas	11-12cm	compact, well balanced crown
8/m2	CpS	54	Carex phyllocephala 'Sparkler'	30-40cm, 3L	full pot
as shown	Cs	216	Cornus sanguinea	1+1, 60-80cm	BR
4/m2	CWD	57	Choisya dewitteana 'White Dazzler'	40-50cm, 3L	
3/m2	Cxp	155	Cistus x pulverulentus 'Sunset'	40-60cm, 5L	7 breaks in lower third, bushy
6/m2	DG	67	Deschampsia cespitosa 'Goldtau'	30-40cm, 3L	full pot
4/m2	HAm	91	Hydrangea 'Ammarin'	60-80cm, 3L	5 breaks in lower third
3/m2	HPD	67	Hydrangea paniculata 'Pink Diamond'	30-40cm, 5L	5 breaks in lower third
6/m2	Hxh	303	Helleborus x hybridus	20-30cm, 3L	Full pot
as shown	Ia-H	51	Ilex aquifolium	120-150cm, 7L	5 breaks in lower third
8/m2	Ila	54	Iris lazica	20-30, 3L	Full pot
8/m2	IRB	73	Imperata 'Red Baron'	20-30, 3L	Full pot
8/m2	Isib	119	Iris sibirica	20-30, 3L	Full pot
TREE	Jr	3	Juglans regia	14-16cm	Rootballed
4/m2	LG	58	Lavandula 'Grappenhall'	30-40cm, 3L	5 breaks in lower third, bushy
TREE	Lor	1	Liquidambar orientalis	3.5m fthrd	RB
as shown	Lp	51	Lonicera periclymenum	60-90cm, 3L	min 2 breaks, cane removed on planting
4/m2	Ma	128	Mahonia aquifolium 'Apollo'	20-30cm, 3L	main leader, well branched
4/m2	MML	222	Miscanthus sinensis 'Morning Light'	30-40, 3L	full pot
TREE	Ms	17	Malus sylvestris	14-16cm	Rootballed
TREE	MxgG	4	Magnolia x grandiflora 'Gallisoniere'	14-16cm, 4m high	2m clear stem, RB
4/m2	Pac	198	Polystichum aculeatum	20-30, 3L	Full pot
4/m2	PBS	232	Phormium 'Bronze Surfer'	40-60cm, 3L	Minimum of 5 spears
8/m2	PDR	104	Persicaria amplexicaulis 'Fat Domino'	20-30, 3L	Full pot
4/m2	PoD	91	Physocarpus opulifolius 'Diabolo'	40-60cm, 3L	3 breaks in lower third
3/m2	Pols	263	Polystichum setiferum	30-40, 3L	Full pot
TREE	Qr-fthrd	5	Quercus robur	12-14cm RB	fthrd to ground
4/m2	Rb	29	Rosa 'Fru Dagmar Hastrop'	30-40, 3L	5 breaks in lower third
as shown	Rca	102	Rosa canina	1+2, 80–100cm	BR, 5 breaks in lower third
3/m2	RK	86	Rosa 'Kent'	30-40, 3L	5 breaks in lower third
6/m2	Rni	10	Ribes nigrum	30-40cm, 3L	3 breaks in lower third
TREE	Sau	16	Sorbus aucuparia	16-18cm	Rootballed
4/m2	SjF	24	Spiraea japonica 'Firelight'	30-40cm, 3L	5 breaks in lower third
4/m2	SjFi	29	Spiraea japonica 'Firelight'	30-40, 3L	Bushy, 5 breaks in lower third
8/m2	Ss	36	Sisyrynchium striatum	20-30, 3L	Full pot
3m2	VAR	30	Viburnum x burkwoodii 'Anne Russell'	30-40cm, 3L	3 breaks in lower third
4/m2	Vb	25	Verbena x bonariensis	30-40, 3L	5 breaks in lower third
4/m2	Vdi	246	Vinca difformis	20-30, 3L	Full pot
2/m2	Vo	327	Viburnum opulus	1+2, 60-90cm	BR or CG

planting detail for trees and shrubs on slopes nts



legend

- proposed shrub beds
- proposed hedge
- proposed rain garden planting
- proposed rain garden hedge
- proposed rain garden SUDS turf
- proposed native wildflower seeded grassland established on site-won topsoils
- proposed native wildflower turf established on site-won topsoils
- native shrub planting
- existing vegetation retained including groups of scrubby native trees with selective coppicing to be agreed on site
- Coed Dinefwr green oak timber bench with armrests
- 2 no. wildlife ponds allowed to colonise naturally. With one shallow edge and large cobbles at water's edge; min 3mx4mx0.6m deep with liner completely buried. RSPB liner Shop code R421163

planting aftercare

Maintenance operations shall include:
• Litter clearance;
• Watering;
• Control of insects, fungus and other diseases;
• Control of weeds;
• Pruning and trimming;
• Refirming and other operations necessary for proper growth; and
• Regular checking and repair / removal of tree guys/stakes and ties as necessary.

number of visits to site
Sufficient visits must be made to site over the maintenance period and at the appropriate time in order to achieve the standard of maintenance described. A minimum of 6 visits will be required per year, with additional visits during drought or after strong winds or other disturbances.
health & safety legislation
All operations must comply with relevant sections of the following legislation:
• Health and Safety at Work Act 1974;
• Control of Pollution Act 1974;
• Food and Environment Protection Act 1985;
• The Wildlife and Countryside Act 1981; Schedule 9 Section 14 makes it an offence for anyone to knowingly introduce Japanese Knotweed into the wild.
•The Control of Pesticides Regulations 1986; these regulations require all those who handle or use pesticides (including herbicides) to hold approved Certificates of Competence. Only approved pesticides as covered under this Act may be used.
• The Environmental Protection (Duty of Care) Regulations 1991; these regulations require all producers, carriers and disposers of waste to follow a Code of Practice and keep records. Any material contaminated with Japanese Knotweed is a 'waste' unless treated for re-use.
• The Health and Safety (First Aid) Regulations 1981; and
• Guidance notes produced by the Health and Safety Executive with respect to safe working practices.

generally

REINSTATEMENT
Reinstate disturbance to soil structure, mulch or planting to original condition

CONTROL OF PESTS
Combat any attack by mammals/fungus/insect/other pests. Submit proposals for control method to CA for approval

WATERING
Supply: Potable mains water.
Quantity: Draw back mulch and wet full depth of topsoil.
Application: Do not damage or loosen plants.
Compacted soil: Loosen or scoop out, to direct water to root zone.
Frequency: as often as necessary to maintain healthy plant growth.
DISPOSAL OF ARISINGS
Remove from site to approved tip.
Compostable material to be removed to Local Authority recycling collection point.

LITTER/TIPPED MATERIALS
Collect and remove from site.

INVASIVE SCRUB
Cut down to ground level and dig out roots.

KNOTWEED
Appearance of knotweed should be reported to CA for instruction.

PROTECTION OF PWED AREAS
Protect areas affected by maintenance operations using boards/tarpaulins. Do not place excavated or imported materials directly on paving.

CLEANLINESS
Soil and arisings: Remove from hard surfaces.
Leave the works in a clean, tidy condition at completion and after any maintenance operations.

PEDESTRIAN ACCESS
Wherever works impede pedestrian or vehicular access the Contractor shall provide and maintain safe alternative routes alongside the affected work area

WATERING
During 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 10L per plant per week during establishment. Where watering tube is not fitted, draw back mulch and water with hose. Do not use sprays or sprinklers as these just wet the top of the mulch and do not penetrate the root zone.

trees and shrubs

REFIRMING OF TREES AND SHRUBS
Timing: After strong winds, frost heave and other disturbances.
Refirming: Tread around the base until firmly bedded. Collars in soil at base of tree stems, created by tree movement: Break up by fork, avoiding damage to roots. Backfill with topsoil and refirm.

Ensure trees are vertical and adjust tree guys, stakes or ties as necessary.

If present, ensure that stakes are self supporting and reduce in height by one third each year to complete removal at end of third year. Adjust tie and spacer to top of stake. Ensure stakes do not come into contact with tree directly. If sufficient anchorage has not been established at the end of the third year then tree is to be replaced.

Loosen off tree ties regularly to accommodate new growth.

PRUNING
In accordance with good horticultural and arboricultural practice and at appropriate season for the type of plant. Prune to remove dead, dying or diseased wood and to promote healthy growth.
Removing branches: Do not damage or tear the stem. Wounds: Keep as small as possible and cut cleanly back to sound wood.
Cutting: Make cuts above and sloping away from an outward facing healthy bud, angled so that water will not collect on cut area.
Larger branches: Prune neither flush nor leaving a stub, but using the branch bark ridge or branch collar as a pruning guide.
Appearance: Thin, trim and shape each specimen appropriately to species, location, season, and stage of growth, leaving a well balanced natural appearance.
Tools: Use clean sharp secateurs, hand saws or other approved tools. Trim off ragged edges of bark or wood with a sharp knife.
Disease or fungus: Give notice if detected.
Growth retardants, fungicide or sealant: Do not use unless instructed.
Compostable material to be removed to Local Authority recycling collection point.

FORMATIVE PRUNING OF YOUNG TREES
In accordance with BS3998:2010 Recommendations for Tree Work
Time of year: Do not prune during the late winter/early spring sap flow period.
Young trees up to 4 m high:
• Crown prune by removing dead branches and reducing selected side branches by one third to preserve a well balanced head and ensure the development of a single strong leader.
• Remove duplicated branches and potentially weak or tight forks. In each case cut back to live wood.
Whips or feathered trees: Do not prune except to remove damaged wood.

FAILURES OF PLANTING: Plants which have failed to thrive, which are apparent during the maintenance period,may be made good by replanting at discretion of the CA. Review the reason for failure to inform consideration of selecting alternative species, location or replacement soil as directed by CA.

WEED CONTROL GENERALLY
First 3 years: keep planting areas and mulched beds underneath trees clear of pernicious weeds by hand weeding
Weed tolerance: weed cover 5% and not to reach more than 100mm high. Do not damage adjacent plants, trees.

HAND WEEDING
Remove entire weed, including roots.
Remove the minimum quantity of soil, and disturb plants, bulbs and mulched surfaces as little as possible.
Completion: Rake area to a neat, clean condition.

HORTICULTURAL CHEMICALS
Seek approval for use from CA. Are to be used strictly in accordance with the manufacturer's latest written instructions and current government regulations and shall only be used by persons holding the relevant NPTC certificate of competence.

MAINTENANCE OF MULCH
Maintain mulch for 3no. years.
Top up mulch annually to maintain 50mm settled depth of bark mulch to specification given below.
Weeding: Remove weeds growing on or in mulch by hand.

PARTICULAR REQUIREMENT FOR SPECIFIC SPECIES:

HYDRANGEA
Cut back by one third in late winter/early spring. Allow dried flowerheads to persist during winter for pollinator habitat.

VIBURNUM OPULUS in shrub mixes
Cut back in late winter/early spring to prevent invasive growth into adjacent shrubs

CORNUS spp except Csk
Coppice every 2 years

EXISTING TREE GROUPS (Scrubby willow, birch, aspen)
Coppice on biennial basis

HEDGES
New garden hedges except lavender to be maintained at 1.2m-1.4m by biennial cutting in late summer/late winter.
Lavender hedge flowers to be trimmed back to foliage at end of summer; lightly trim foliage to shape but do not cut into old wood
Manage hedges so as not invade adjacent footpaths or compromise boundary treatments.

Tall, thick hedgerows are of more value to wildlife than low overly-managed hedges, and provide better screening and softening of the built landscape.

All equipment used for Hedge Cutting shall be appropriate for the task, and must be kept properly maintained and in a well sharpened condition.

grass and wildflowers

CUTTING OF GRASS
The Contractor shall inspect all areas to be mown, and remove litter, stones and earth clods larger than 25 mm in any dimension and other debris immediately prior to cutting or treatment being undertaken. Cut when grass is reasonably dry. Grass shall not be cut in adverse weather or ground conditions. Cutting shall only recommence when it is safe to do so without danger of damaging the sward, surface levels or contours of the ground.

LONG GRASS & WILDFLOWERS
These areas provide valuable wildlife habitat including cover for fledgling birds.

First year management of seeded areas (not turf): mow lightly and regularly in between waterings to enable sward to establish; mow at a height of 8-10cm to 5cm, and subsequently every 2 months during the first growing season

Thereafter, and for wildflower turf, 1 cut early in the year, before mid April, then grass and wild flowers allowed to flower and produce seed. Final cut of year at end of summer, using rotocastre or suitable equivalent.

Allow all arisings to lie on ground for 2 days before removal to allow seed to set. All arisings to compost heap as below, with any excess removed to local authority recycling point

CLOSE MOWN including 1.0m strip along wildflower areas adjacent to paths, seating and all planting beds but not hedgerows. In addition, mow paths through longer areas of flowers in the play area.

EDGES
At the time of each cut, trim all grass edges round the base of trees, manholes, etc. and remove arisings. Sweep all adjoining hard areas clear of cuttings and remove.

Form edges to planting beds and around newly planted trees with a suitable edging tool, to clean straight lines or smooth curves. Draw back soil from edges to permit use of edging shears and remove all arisings.

WEED CONTROL
Keep the sward substantially free of pernicious broad leaved weeds by hand removal, ensuring that wild flower species thrive. During first year, ensure that sufficient visits are made to keep complete control over undesirable broadleaf weed growth.

FAILURES OF GRASS: Bare areas, areas of dead grass/flowers that have failed to thrive, which are apparent during the maintenance period, must be made good by recultivation and reseeding with appropriate seed with species and at times agreed with the CA.

FERTILISER
Do not use

REMOVAL OF ARISINGS
Arisings to be removed to on-site compost heap.

Revision A October 2024: Revised layout & SUDS, re-profiling of boundary slopes

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Parc Beddw • Libanus • Brecon • LD3 8NN

job title: Monbank, Newport
drawing title: Planting & Management Plan
client: Monmouthshire Housing Association
scale • 1:250 at A0
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drawn • CE
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621.02 Monbank