

Verge seed with meadow grass mix to enhance biodiversity

WASTE MANAGEMENT

By incorporating recycling facilities into the kitchen designs it is possible to ensure that waste minimisation is easy and convenient to implement. 3No. separate refuse storage bins will be provided within the kitchens, which promote and assist in the separation and storage of household waste and recyclables. Bins can therefore be waste streamed according to the Local Authority's specific collection scheme.

Each dwelling will be provided with:

1x240l general waste bin & 1x240l recycling bin

Total provision = 720L general & 720L recycling bin.

REFUSE NOTE:
Collection will be as existing - every Wednesday the refuse lorry enters the site on the tarmac driveway and turns at the island.



SITE LAYOUT LEGEND:			
	Tarmac finish		New native hedge
	450x450 riven slab paving		Existing hedge
	Areas laid to grass		Proposed Native Scrub/Shrub Planting
	Proposed wildflower Grassland		Existing trees retained
	Proposed wildflower Grassland		RPA
	Proposed wildflower Grassland		Existing trees removed
	Proposed wildflower Grassland		1.8 BW - 1.8m Brick wall

TREES/HEDGING	
① Silver birch 'Betula pendula' (10-12cm girth) 12+m tall/8+m spread	⑥ New hedge to be a mix of 50% hawthorn 'Crataegus monogyna' and 50% hornbeam [Carpinus Betulus]
② Crab Apple 'Malus sylvestris' 6-8cm girth) 8-12m tall/4-8m spread	A Nandina domestica @ 3/m²
③ Rowan 'Sorbus aucuparia' (20-25 girth) 12+m tall/4-8m spread	B Hebe 'Mrs Winder' @ 4/m²
④ Wild cherry 'Prunus avium' (10-12 girth) 12m tall/8m spread	C Aucuba japonica 'azarnie' @ 3/m²
⑤ Whitebeam 'Sorbus aria laetescens' (16-18cm girth) 8-12m tall/4-8m spread	D Pachysandra terminalis 'green carpet'
	B & C Viburnum davidii @ 4/m²
	D Mahonia media 'winter sun' x 3
	Acer palmatum 'osakazuki' x 3

INDICATIVE LANDSCAPING PROPOSALS

NOTE: These implementation and maintenance guidelines are for planning purposes only to indicate the level of workmanship to be specified and do not constitute a detailed specification.

Proposed Planting Details & Specification:

All areas of new landscaping to have the existing subsoil decompacted by hand digging or machine rotavator in accordance with BS 8601:2013. If any imported subsoil is required it should be placed to a depth of 300mm minimum; to be carried out to BS 8601:2013 specification for subsoil and requirements for use.

All topsoiling operations are to be carried out to BS 3882:2015 specification for topsoil and requirements for use, topsoiling to be carried to the following depths:

Lawned areas to have a maximum depth of 150mm - BS 3882:2015.

Planting should preferably take place during the dormant planting season ie October to March, otherwise the contractor is responsible for regular watering to ensure the tree establishes successfully. All plants and planting should comply with the relevant British Standards including BS 3936:1992 Part 1, BS 8545:2014 and BS 5326:1975 where applicable, BS 4428:1989.

Planting adjacent to road kerbs and hard surfaces are to be set back a minimum of 250mm from the back of the kerb to allow room for the plants to establish, with the unplanted area keyed out to receive bark mulch.

Tree Planting:

Standard specimen trees planted in locations indicated as per the following specification:

Excavate free pit (300mm larger than root ball), fork over bottom of pit, plant free with roots well spread out, backfill with excavated material incorporating 30% of soil excavated and secured with timber stake and rubber tie and spacer.

Grass:

- Preparation: The area to be turfed or seeded shall be sprayed out with a glyphosate herbicide and cultivated to a depth of 100mm removing all weeds, debris and stones over 25mm diameter. The surface shall be raked to smooth flowing contours with a fine till, incorporating pre-seeding fertiliser at 70 g/m².
- Delivery and Storage: Turf shall be supplied in accordance with BS3936. Turf shall be Medallion as supplied by Rowdown. It shall be close textured and green in colour and be sufficiently fibrous to withstand handling. Turves shall be regular in shape, 300mm wide and of uniform thickness (minimum 25mm). The grass shall be closely mown and shall not exceed 25mm in height. Turf shall be stacked in piles of up to 1 metre. It shall not be laid in frosty or waterlogged conditions and shall not be stacked in rolls for more than three days.
- Turfing operations shall be in accordance with BS 4428. Whole turfs shall be laid around the perimeter of the area to be turfed. The central area shall be laid in rows with staggered joints, well butted together, working from plants positioned on turfs already laid. The turf shall be watered on completion. Any unevenness shall be made good by lifting the turf and adjusting the levels. Should shrinkage occur, fine topsoil shall be brushed into the joints.

Seeding:

Grass seed shall be sown in April during calm weather and not when the ground is frost bound or waterlogged. Seed shall be sown in two equal sowings in transverse directions at 35 g/m². After sowing the contractor shall lightly rake the seed into intimate contact with the soil.

Initial cut:

When newly seeded and turfed areas reach 50mm they should be lightly rolled and cut to a height of 30mm. All arising shall be removed. Any bare patches shall be made good at this time. Seeded areas shall be cut for a second time when the sward reaches 50mm high. MEADOW MIXTURE in accordance with suppliers instructions. Sow at 4g/m². Area shown indicative only and dependant on final ground works.

Wildflower Grass Seeding General:

Ensure the ground that is not highly fertile by the use of existing site subsoil during earthwork operations. Good preparation is essential to success so aim to control weeds and produce a good quality seed bed before sowing. Seed is best sown in the autumn or spring but can be sown at other times of the year if there is sufficient warmth and moisture. The seed must be surface sown and can be applied by machine or broadcast by to get an even distribution and avoid running out divide the seed into two or more parts and sow in overlapping sections. Do not incorporate or cover the seed, but firm in with a roll, or by treading, to give good soil/seed contact. Cultivate soil to depth of 25mm including all consolidation, rolling, harrowing or raking to achieve a firm, fine till suitable for seeding. The seed bed shall be free from unevenness, hollows, depressions and soft areas so that an evenly graded grass surface can be achieved.

The seed bed should be evenly graded to finish 25mm above adjoining paving, kerbs etc after settlement. Ensure free flowing contours and marrying in to adjacent grass areas.

Remove all weeds, and remove stones, grass sods and other debris exceeding 20mm in any dimension and all roots exceeding 15mm diameter or 200mm length.

Native hedge planting:

To be planted at 5 plants per linear metre in double staggered rows. All with spiral rabbit guards and secured with bamboo cane.

Areas for planting shall be treated with a translocated herbicide such as Glyphosate to clear any existing weeds before planting, the ground shall be cultivated to a depth of 100mm. Whips shall be pit planted, with backfill mixed with 70grams of Emvog slow release fertiliser. All stock delivered to site shall be of proven British provenance. All roots to be dipped into Mycorforce Whip Dip prior to planting.

New native mix hedge planting:

Crataegus Monogyna (Hawthorn) - 40-60cm Bare root - to be accessed on site. (approx 200no. if required for the length of the hedge)

Carpinus Betulus (Hornbeam) - 40-60cm Bare root - to be accessed on site. (approx 200no. if required for the length of the hedge)

Root Barriers:

- Where there is concern that adjacent services, such as gas and water pipes and electricity cables, might be affected by growing root systems then an impenetrable barrier should be installed which will prevent damage by future root growth.
- Where there is danger of damage to services on just one side, or any other reason why roots should be prevented from growing in one direction such as building foundations, a strip barrier is preferable such as GreenBlue Urban 'ReRoot 300/600/1000 Root Barriers'. The barrier must be installed from surface level to a minimum of 1.0 m below surface level with joints overlapped by 300 mm. In a new build situation, within 8m of building foundations or adjacent to service runs that are deeper than 1m the barrier must extend to a depth of 2m.
- Where excavation is limited to the area of the planting pit a pre-formed barrier (e.g. GreenBlue Urban 'Root Director') shall be installed to the manufacturer's instructions. The barrier must be manufactured in such a way as to discourage the tree roots to spiral around the inside but encourage them to grow in a downward direction. In paving, the backfill surrounding the 'root - director' must be compacted sufficiently to support the paved surface material and discourage roots that emerge from the base of the 'director' from reaching back up to the surface layers.

Drainage:

- It is a prime requirement of any tree planting situation that planting pits do not hold water and become waterlogged. In new construction the minimum requirement is a layer of stone consisting of 200 mm deep of clean aggregate 50mm nominal size in the base of the pit topped with a geotextile blanket, to reduce contamination of the drainage layer by fines. This will allow surplus water to drain freely from the rooting zone.
- Particular care must be taken when excavating free pits in clay soils where there is a danger of creating a sump and the subsequent water logging of free roots. It may be necessary in these situations to provide active drainage to remove excess water away from the tree rooting zone.

Tree Support – staking and guying:

- The purpose of staking and guying is to anchor the tree and stabilise the root ball until new roots are established into the surrounding soil. It should not be seen as a method of protecting from vandalism or physical damage. For this reason, support is required until the roots, damaged during the lifting process, have made sufficient new growth. In reasonable growing conditions this should be achieved within three seasons after planting.
- Above ground supports shall be restricted to private areas and open spaces where vandalism to the supports is unlikely.
- Below ground support may be used in paved areas to remove the need for above ground guying. It is achieved using specialist proprietary ground anchor systems, such as GreenBlue Urban products. Alternative methods of anchoring the trees such as timber or concrete dead man system in the base of the pits may also be considered. Below ground support must be placed at the time of pit excavation and fitted with all necessary wire cables prior to back filling the pit and planting the tree. Tensioning of the wire is by turnbuckle or ratchet systems.

General guidance - trees in paving areas:

Underground support to comply with BS 8545 & BS 4428

Pit Size and Construction:

- Pits: shall be 400 mm wider than the diameter of the root ball with a minimum size of 900 x 900 mm. Minimum depth to be 750 mm. Where necessary the depth shall be increased to accommodate the depth of the root ball and to obtain the correct planting depth. Break up bottom of pit to 150 mm deep and scold the sides of the pit with a fork.
- Planting - Remove any moisture-retentive material used to prevent the root ball drying out during transport from the nursery but protect the root ball from sun and wind during the planting operation. Move the wire mesh support and root packing away from the trunk of the tree but do not cut away from the main root ball, the integrity of the wire mesh must not be damaged. Do not cut the wire mesh. Plant trees upright and, unless otherwise instructed, in centre of pit.

Planting depth:

- The natural thickening between the trunk and the root collar shall be at the finished top surface of the planting medium. A straight pipe placed across the pit at finished surface level and adjacent to the tree will assist in gauging the correct level. If necessary, the depth of the pit must be adjusted to ensure the correct planting level.

Drainage:

- Install below-ground irrigation and aeration system only where required in hard surfaced areas, ensuring that the top of the filler pipe is flush with finished surface levels. Backfill around the root ball with specified material in 150 mm layers, treading lightly to compact each layer to a level approximately halfway up the side of the root ball. The underground support should be installed prior to completing the backfilling of the pit. Immediately after planting the tree shall be watered with approximately 25 ltrs. of water to ensure that the contact of soil between the root ball and backfill material is uniformly moist.

Underground Support :

- Underground ground anchorage system such as: 'Root ball Guying Kit', as supplied by Platipus Anchors Limited. GreenBlue Urban tree and landscape products or equivalent approved, or alternatively, Deadman System comprising 2No. dead man anchors of timber or concrete located at opposite sides of the root ball, rectangular in section and of sufficient mass to prevent movement when buried below the soil. The dead man anchors and root ball guying wires must be fixed prior to backfilling the pit or placing the Multi-strand wire 5mm diam. shall be stapled around each anchor and shall be tensioned by turnbuckle or ratchet devices or 'gripsole' system after the tree is in its final position.

Trees in paving (if required) – root director / root barrier:

To comply with BS 8545 & BS 4428

Pit Size and Construction:

- Pits: the minimum size of the tree pit will be 1200 x 1200 x 1100mm deep. Excavate a planting hole 400 mm wider than the diameter of the root ball. The depth of the excavated pit will be sufficient to accommodate the root ball and to obtain the correct planting depth. Install a layer of clean stone or granular material such as reclaimed broken bricks to a settled depth of 200mm. Cover with a geotextile sheet to filter fine particles.

Installation of Root Director / Root Barrier:

- Supply and install a Root Director as supplied by

GreenBlue Urban
Northpoint,
Compass Park,
Junction Road,
Bodiam,
TN32 5BS

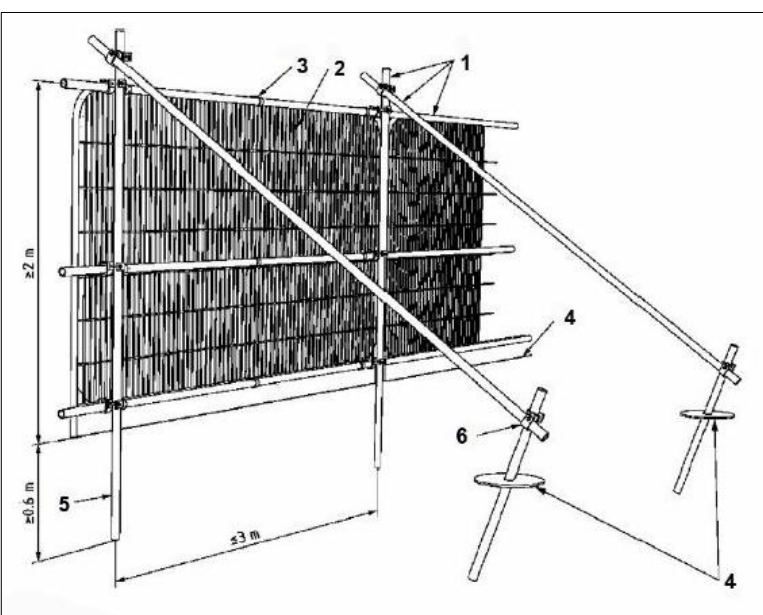
or equivalent approved. Installation shall be in accordance with the supplier's instructions. Please refer to GreenBlue RootDirector data sheet:

<https://www.greenblue.com/gb/datasheets/rootdirector/>

Tree Protective Fencing:

Protective fencing to BS 5837 to be installed before any work commences on site fencing to remain in place until all work including landscaping has been completed no diesel oil, bitumen, cement or other material potentially injurious to the tree should not be stacked or discharged within 10m if the retained tree or where it could reach into their root zone. Extreme care should be taken when using cranes or lifting materials so as not to damage the tree

Proposed alignment of tree protection fencing - All works to be carried out within or around the tree protective zone are to be carried out in accordance with BS5837: 2012 figures 2 or 3. Tree Protective fencing to be erected along the agreed alignment, as shown on the drawing, prior to commencement of works and remain in place for the duration of the works. Warning signs should be fixed at 6m intervals to raise awareness of the fencing and its desired function. Fencing must be checked daily by the site manager, any breach will be reinstated by the end of the working day. The removal of fencing must be agreed with the local planning authority.



Maintenance Programme:

All new planting areas are to be subject to a 12 month maintenance regime.

The general maintenance management will include 12 visits per year in order to provide the following:

- comprehensive weed control

- checking the condition of tree stakes, ties, guards and fencing and making repairs or replacing where necessary
- ensuring that all plants remain firmly in the ground in an upright position
- pruning back of damaged / diseased growth
- topping up mulches reapply fertiliser as necessary
- replacing dead and dying plants on a yearly basis to achieve a minimum 90% establishment rate
- keeping planting beds and their surroundings tidy and free of litter.

Landscape Management Areas:

Existing trees and hedgerows:

The existing site trees and hedgerows are to be retained for their visual amenity and ecological benefit. Selective thinning may be required (as set out in TYLER GRANGE document 20 July 2022) to minimise overhanging of hedges. The trees shall be inspected on an annual basis to determine any required Health & Safety works. All works shall be approved by the local authority.

All future tree works are to be carried out by an Arboricultural Contractor all in accordance with BS 3998:1989 (Recommendations for Tree Work). It is recommended that the tree works contractor is approved by the Arboricultural Association.

Future management of existing hedgerows should look to ensure that they attain a minimum 2m overall height. Occasional thinning of the hedge face will be permissible to prevent overgrowth. Grass to hedge bottoms shall be managed for ecological benefit and shall be trimmed once yearly during late summer or as directed. Gaps in hedges shall be planted with native transplants such as Hawthorn and Blackthorn. Plants shall be fitted with spiral rabbit guards and protected by temporary fencing if required.

Long Term Objectives and Management:

- to ensure the long term viability of the remaining sections of hedgerow and mature trees
- to maintain a high standard of presentation, enabling a visually pleasing environment
- to ensure the health of existing hedgerow and trees and that they survive to provide the required form and green infrastructure to the development
- to ensure that all hedgerows are weed and litter free
- to maintain a ecologically diverse and wildlife friendly grass base to the existing hedgerow.

All new planting areas are to be subject to a maintenance regime.

The general maintenance management will include 12 visits per year in order to provide the following:

- comprehensive weed control
- checking the condition of tree stakes, ties, guards and fencing and making repairs or replacing where necessary
- ensuring that all plants remain firmly in the ground in an upright position
- watering during periods of dry weather
- pruning back of damaged / diseased growth
- topping up mulches reapply fertiliser as necessary
- replacing dead and dying plants on a yearly basis to achieve a minimum 90% establishment rate
- keeping planting beds and their surroundings tidy and free of litter.

Maintenance Schedule:

Year 1:

- Existing trees shall be inspected on an annual basis to determine any required H&S works. All works shall be carried out by a qualified arboriculturist and tree surgeon.
- Existing hedgerows inspected on an annual basis. Allow for bringing the hedgerows to a maintainable standard at the outset of the maintenance contract. The existing hedge is to be laid using a traditional style, helping to encourage new growth, ensuring the existing hedge is regenerated, whilst promoting healthy growth. Prune out any dead wood, cut legacy hedge material back to promote bushy growth. Hedgerows to be cut rather than flailed during December to end of February.

Years 2 - 5+:

- Existing trees shall be inspected on an annual basis to determine any required H&S works. All works shall be carried out by a qualified arboriculturist and tree surgeon.
- Existing hedgerows inspected on an annual basis, hedges are to be clipped to shape, tapered gently towards the top. Allow top of hedge to grow naturally to no less than 2m in height. Prune out any dead wood, cut legacy hedge material back to promote bushy growth. Hedgerows to be cut rather than flailed during December to end of February.

It is the responsibility of the developer to design foundations to accommodate all proposed and existing tree and shrub planting. The developers engineers should satisfy themselves that the tree locations meet the recommended distance from drainage runs and services and that no planting falls in service strips. If any planting should be considered to be compromising services or underground structures in anyway, they should inform the designer as soon as possible.

The client / employer is obliged to take due care in ensuring that only competent contractors with appropriate H & S credentials are employed.

A suitable method of foundations must be provided allowing for existing ground conditions.

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A 04.07.23 Hedges revised

Revision Notes:

Drawing Status:

PLANNING

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Title:

Proposed landscape and refuse plan

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