

SOFTWARES SPECIFICATION NOTES

The contractor is responsible to ensure that no products or practices are to be used that do not comply with relevant British Standards, Codes of Practice and Construction Regulations. Contractor to be fully satisfied with locations and off sets of services prior to excavations.

Site clearance generally. Where necessary remove rubbish, concrete, metal, glass, decayed vegetation and contaminated topsoil. Remove stones exceeding 75 mm. Remove material containing toxins, pathogens or other extraneous substances harmful to plant, animal or human life.

Retain and protect trees and vegetation in accordance with BS 5837 where necessary. Grub up any large roots and dispose of without undue disturbance of soil and adjacent areas. In order to comply with UK legislation in regard to the Wildlife and Countryside Act 1981 (as amended), any tree or vegetation removal and/or management must take place outside of the bird nesting season (March to September inclusive). Where this cannot be achieved, nesting bird checks must be undertaken by a suitably qualified ecologist within 24 hours of the works.

Works within the root protection area (RPA). There shall be no areas of storage, trafficking of machinery, cultivation, ripping or mechanical rotation, or importing of top soil, within the root protection area (RPA) of the existing trees to be retained. Where paths and hard surfaces are to be replaced, the RPA shall be retained in place. No Dig methodology is to be adopted. Underlying reinforcement, such as Cell Web (or similar approved) to be utilised in these locations. No trenches shall be dug within the RPA of the existing trees. New hedging plants within the RPA of the existing trees shall be notched planted. All of the above must be in accordance with BS 5837.

SOIL
Site preparation: Where required all existing topsoil and subsoil shall be stripped and stored separately on site. Heaps must not exceed 3m in height and should be used within 12 months in accordance with BS 4425 (Code of practice for general landscape operations).

Soil Sampling - Existing topsoil and inert sub soils, shall be analysed in accordance with BS 3882 to determine available nutrients, texture, organic matter content and pH. Where require, existing soils are to be improved in accordance with BS 3882:2015

Cultivation - Flatt existing ruderal vegetation to ground level and remove arisings prior to cultivation. All areas to receive final layers of topsoil are to be de-compacted prior to spreading. Earth works vehicles to be small scale and tracked (dozer-tipping) to minimise compaction, however chosen method for decompaction will be site specific dependant on soil and soil conditions. Additional care must be taken as to not damage soil structure. All objects and stones over 75mm brought to the surface during decompaction are to be removed from the prepared surface. If existing subsoil horizons is found to consist of heavy clay, all proposed seeded areas to be lime rippled to 200mm depth at 300mm centres to increase drainage. Areas to be seeded to be chain harrowed to a fine rith and lightly rolled to provide firm seed bed. Remove all stones over 30mm dia in any direction. Impacted soil material impact as necessary to make up any deficiency of topsoil and subsoil existing on site to complete the work and mitigate deficiencies. All imported material must conform with industry standards BS 8601 (Subsoil), BS 3882 (Topsoil) and CLEA limits on heavy metals. Topsoil to be General purpose, 10mm screened and locally sourced (unless otherwise stated).

Soil build up: Existing topsoil and subsoil to be retained and reused on site within the landscape scheme where possible. Prior to spreading all topsoil to be screened to remove large stones and other deleterious materials, such as plant roots, leaves and clay. Topsoil to be loose-tipped and spread in compacted subsoil/overlying area. The total minimum rooting depth for planting, after settlement, should be: Grass 450mm; Planted areas 600mm; Trees 900mm. Topsoil depths for these areas should not normally exceed 300mm with the following minimum depths for each area: Grass 150mm; Planted areas 300mm; Trees 300mm. Meadow & wildflower seedings to be sown directly onto prepared subsoil.

Finished level of topsoil after settlement: Above adjoining paving or kerbs: 25 mm; Below edge of adjoining buildings: Not less than 150 mm; Shrub areas: Higher than adjoining grass areas by 50 mm; Within root spread of existing trees: Unchanged; Adjoining soil areas: Marry in. Thickness of turf as much as included.

ADDITIVES
Compost to tree/shrub plants: To be as per BS PAS 100: well rotted sterilised spent mushroom compost max. pH 6.7 or Target Treestart compost. The contractor shall provide a Certificate of Analysis to show that the material being supplied complies with the above criteria. Incorporate spent mushroom compost or equivalent approved peat free compost into tree and shrub plants at a rate of 3 parts topsoil to 1 part compost, thoroughly mixed together.

Fertiliser to ornamental shrub beds - Apply slow release fertiliser, Scotts' Emma⁴ 1:9:10 NPK or equivalent approved at a rate of 50 gms/sq. metre over topsoil surface and fork into top 225mm spit.

PLANTING
Generally: Minimise trafficking of graded slopes. All plants to be preferably planted between Nov - March. Nursery stock trees and shrubs to be in accordance with BS 5838 and BS 8545, to be supplied and planted in accordance with British Standards and the Horticultural Association's Plant Handling Guide. Container grown shrubs to be thoroughly watered before planting, trees and bare root shrubs watered after planting.

Times of year for planting: Deciduous Trees, hedges and shrubs: Late October to late March. Evergreen hedges and shrubs: September/ October or April/ May. Container grown plants: At any time if ground and weather conditions are favourable. Watering and weed control to be provided as necessary.

Shrub/Hedge planting pits: Timing: Excavate 1-2 days (maximum) before planting. Pit sizes: Wide enough to accommodate roots/bushes when fully spread and in situ. Pit bottom improvement: Break up to a depth of 150 mm. Pit bottom improvement: Break up to a depth of 150 mm, incorporating 25g of slow-release fertiliser per planting pit. Where existing planting and roots are present plants are to be notched planted to minimise disruption/soil damage. Backfilling material: Reuse excavated material. Watering: Immediately after planting, thoroughly and without damaging or displacing plants or soil. Fencing: Lightly firm soil around plants and fork and/or rake soil, without damaging roots, to a fine rith with gentle cambers and no hollows.

Tree pit sizes: Standard trees excavate a tree pit 1.2m x 1.2m x 500mm. Break up sides and bottom of pit to a depth of 100mm to ensure free drainage. Tree pit treatment: Soil amendment worked into pit bottoms. Pit sides to be scarified and backfilled material to be in accordance with topsoil and subsoil specification. Drainage Layer: Provide 200mm layer washed, clean gravel to base of pits to aid drainage (tree pit to be actively drained if poor draining soil or clay discovered by contractor).

Tree Accessories: Typically trees in soft landscape to be staked unless stated otherwise by the Landscape Architect. Underground guying is recommended for semi mature trees or trees within hard landscape and in public areas. Trees to be staked using 1m long x 75mm dia. round timber stakes (size of stakes to be adjusted to suit size of tree). Cross member to be installed 75mm x 25mm (larger trees will need large cross members). Locate proprietary Hessian ties on cross member to secure tree and prevent rubbing. 150mm dia. 1.5m high with biodegradable Hessian ties are recommended to encourage wind tolerance and prevent rubbing. Tree pit accessories by Green Tech or similar. Underground guying and perforated plastic irrigation/ventilation pipe to landscape architects approval.

Root Barriers: To be used wherever the installed rootbar is to be within 2m of a building foundation and within proximity to underground utilities (distance at which root barrier is required is as per utility providers standards and should be confirmed prior to installation). Root barrier by Green Tech or similar to be installed vertically in accordance with supplier recommendations.

Protective fencing/guards: Newly planted areas or individual plants are to include rabbit/denier fencing. Either perimeter mesh fence or individual biodegradable plastic free spiral guards/helical tubes are to be installed around all planting where required. Where areas are fenced, mesh to be 1m min above ground and buried 300mm below ground.

Mulching: Approved medium coarse chipped tree bark composted for at least 4 weeks. Particle size 25-75mm dia, max. 20% fines, pests and disease free and free of Methyl Bromide contamination. Clear any weeds, ensure soil is thoroughly moistened prior to applying mulch. All planting areas inc. trees, hedges and planting beds should receive an even 75mm depth of bark mulch, adjoining edges of mulch to be 150mm min. below adjacent hardstanding to avoid spillage. 50mm depth of mulch is only suitable for higher quality ornamental bark (<5% fines, 5-30mm size etc.). All bark should be FSC certified. Option to use biodegradable mulch mats to control moisture, soil temperature, erosion and weeds. All trees within grass areas to have a 1.5m diameter mulch circle.

Seeding and making good existing grass areas: Steep embankments to be hydroseeded where required. After cultivating, grading and fertilizing prepare seed bed to fine, firm silt with good crumb structure (Depth 25 mm). Rake to a true, even surface, friable and lightly firmed but not over compacted. Remove surface stones/earth clods. Extend cultivation into existing adjacent amenity grassed areas sufficient to ensure full maturing in levels where required. Evenly distribute seeds at an application rate of 25g/m² or as per supplier recommendations. Establish good seed contact with the root zone to promote healthy, consistent growth. Lightly harrow or rake to cover seed. Thoroughly water completed seeding until germination as necessary to keep the surface damp and soil moist but not water logged.

Cutting In: Where cutting planting beds into existing grass areas, the surrounding grass shall be protected and made good as necessary. These areas to be made good by preparing and re-seeding area. Seed mixes: John Chambers Lawn/Meadow Seed or similar approved.

Lift Preparation - Lay turf with minimum possible delay after lifting. If delay occurs, lay turf out on topsoil and keep moist. Do not lift turf in frosty weather or if ground waterlogged. Arrange phased delivery timescales to avoid need for excessive stacking. Stacking height 1m (max). Do not use dried out or deteriorated turf. After cultivating, grading and fertilizing prepare seed bed to fine, firm silt with good crumb structure (Depth 25 mm). Rake to a true, even surface, friable and lightly firmed but not over compacted. Remove surface stones/earth clods. Extend cultivation into existing adjacent amenity grassed areas sufficient to ensure full maturing in levels.

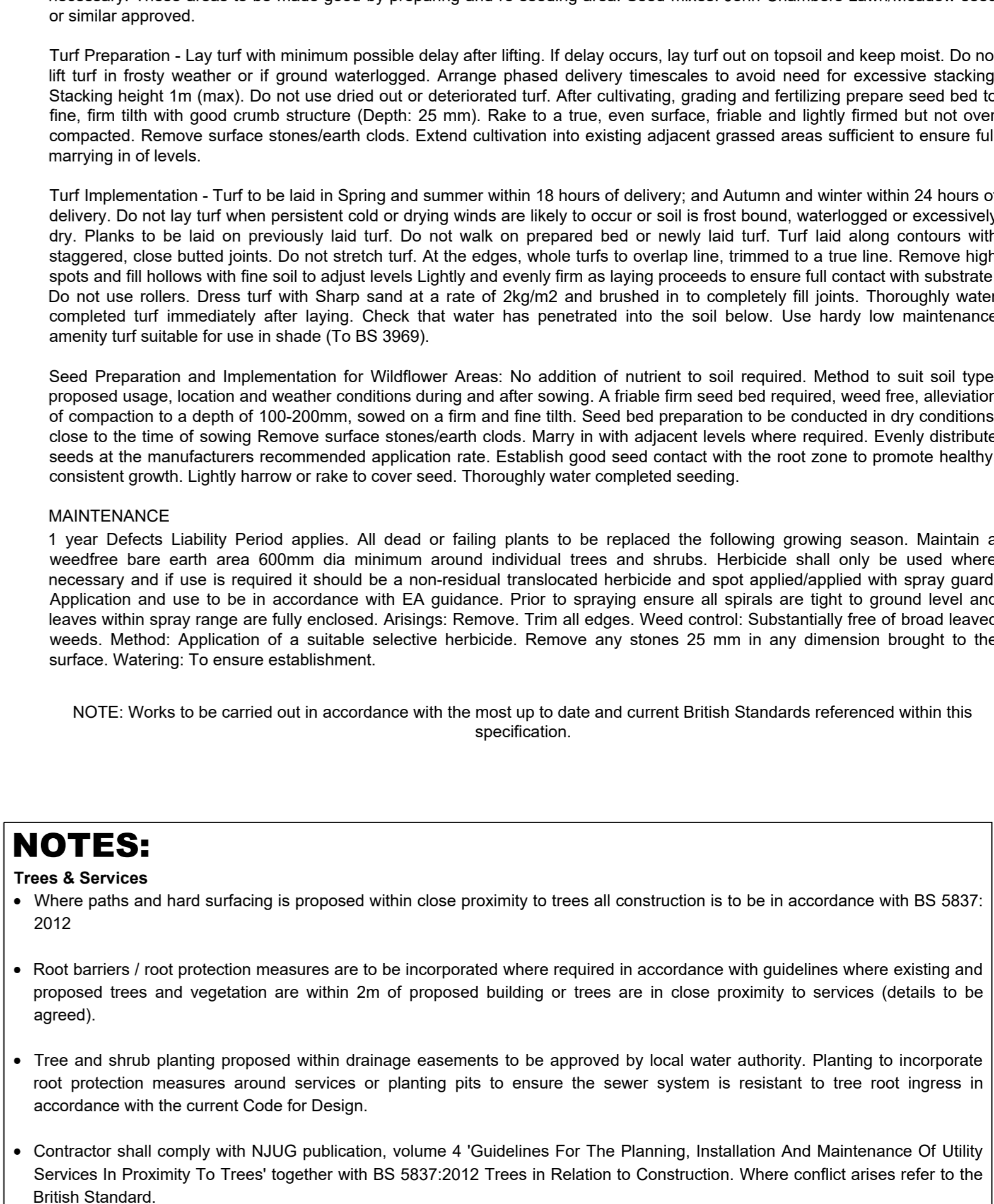
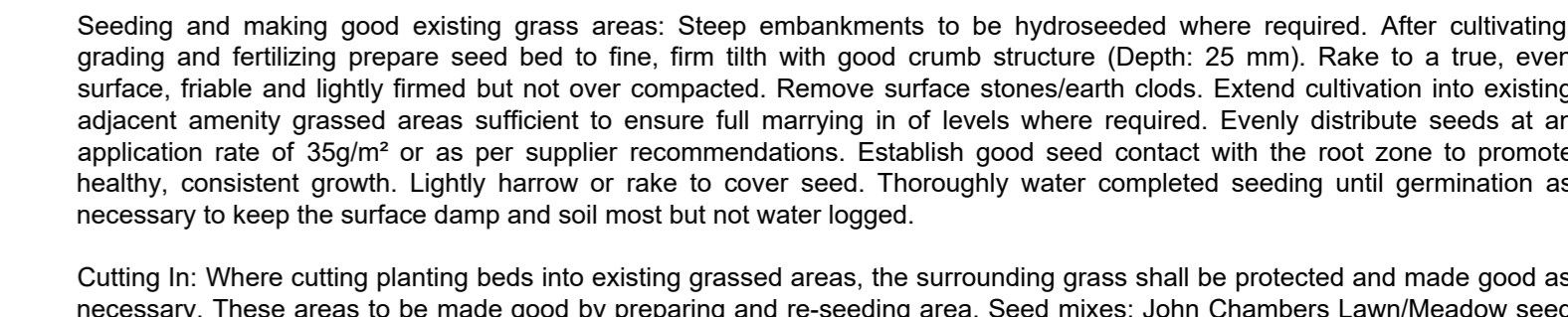
Lift Implementation - Turf to be laid in Spring and summer within 18 hours of delivery; and Autumn and winter within 24 hours of delivery. Do not lay turf when persistent cold or drying winds are likely to occur or soil is frost bound, waterlogged or excessively dry. Plants to be laid on previously laid turf. Do not walk on prepared bed or newly laid turf. Turf laid along contours with staggered, close butted joints. Do not stretch turf. At the edges, whole turfs to overlap line, trimmed to a true line. Remove high spots and fill hollows with fine soil to adjust levels. Lightly and evenly firm as laying proceeds to ensure full contact with substrate. Do not use rollers. Dress turf with Sharp sand at a rate of 0.2kg/m² and brushed in to completely fill joints. Thoroughly water completed turf immediately after laying. Check that water has penetrated into the soil below. Use heavy low maintenance amenity turf suitable for use in shade (To BS 3969).

Seed Preparation and Implementation for Wildflower Areas: No addition of nutrient to soil required. Method to suit soil type, proposed usage, location and weather conditions during and after sowing. A friable firm seed bed required, weed free, alleviation of compaction to a depth of 100-200mm, sowed on a firm and fine silt. Seed bed preparation to be conducted in dry conditions, close to the time of sowing. Remove surface stones/earth clods. Marry in with adjacent levels where required. Evenly distribute seeds at the manufacturers recommended application rate. Establish good seed contact with the root zone to promote healthy, consistent growth. Lightly harrow or rake to cover seed. Thoroughly water completed seeding.

MAINTENANCE
1 year Defects Liability Period applies. All dead or failing plants to be replaced following growing season. Maintain a weedfree bare earth area 600mm dia minimum around individual trees and shrubs. Hessian shall only be used where necessary and if use is required it should be a non-residual treated herbicide and spot applied/ applied with spray guard. Application and use to be in accordance with EA guidance. Prior to spraying ensure all plants are tight to ground level and leaves within spray range are fully extended. Arisings: Remove. Trim all edges. Weed control: Substantially free of broad leaved weeds. Method: Application of a suitable selective herbicide. Remove any stones 25 mm in any dimension brought to the surface. Watering: To ensure establishment.

NOTE: Works to be carried out in accordance with the most up to date and current British Standards referenced within this specification.

NOTES:
• Where paths and hard surfacing is proposed within close proximity to trees all construction is to be in accordance with BS 5837: 2012
• Root barriers / root protection measures are to be incorporated where required in accordance with guidelines where existing and proposed trees and vegetation are within 2m of proposed building or trees are in close proximity to services (details to be agreed).
• Tree and shrub planting proposed within drainage easements to be approved by local water authority. Planting to incorporate root protection measures around services or planting pits to ensure the sewer system is resistant to tree root ingress in accordance with the current Code for Design.
• Contractor shall comply with NUNO publication, volume 4 'Guidelines For The Planning, Installation And Maintenance Of Utility Services In Proximity To Trees' together with BS 5837:2012 Trees in Relation to Construction. Where conflict arises refer to the British Standard.



Project: Land At South View Darfield

Client: MR J Hughes

Title: Outline Landscape Masterplan & Specification

Revision: 02

Drawing Scale: 1:250@A0

Rev Date Detail

02 28/11/24 FOR PLANNING - Minor tweaks and coordination amendments BP LW LW

01 25/11/24 FOR PLANNING - updated to coordinate with layout amendments BP LW LW

00 30/04/24 DRAFT SENT FOR CLIENT BP LW LW

Rev Date Detail

Made Chk'd App'd

FOR PLANNING PURPOSES ONLY

Notes:

- Not for construction all dimensions to be confirmed on site.
- Based on Layout Drawing - Proposed dwellings' MS/77/23-02 C by Mark Smith - Architectural Design.
- Refer to architects/engineers drawing for site levels, drainage, retaining walls, services and utilities .
- Build ups/footings to engineers specification.
- Location of services to be confirmed by contractor prior to installation of any planting.
- All existing trees to be protected to BS 5837.

Scale 1:200

North Arrow

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PWP DESIGN

ECOLOGICAL & BIODIVERSITY RECOMMENDATIONS:

Refer to Preliminary Ecological Appraisal by Middleton Bell for further detail

- MITIGATION**
- Vegetation clearance should take place at a time when it will not affect nesting birds (outside March to August). If works are to be undertaken during this time, then they should be preceded by a nesting bird check to be undertaken by an ecologist.
 - Boundary trees should be retained (especially the northwest corner). Taking a best practice approach to nature conservation issues, British Standard 5837 (2012). Trees in relation to design, demolition and construction, should be followed. Root Protection Zones (RPZ's) should be calculated and implemented to prevent harm to trees. This should also apply to any trees within the site, up to 5 m from the boundary.
- ENHANCEMENT**
- The development should include swift boxes in one third of units integral to the fabric of the building high on external walls. House sparrow terraces should also be included in one third of units, with bat boxes in the remainder of new dwellings. Bird boxes should not be installed on the south facing elevations. Bat boxes should be installed at wall top height on either south or west elevations.
 - Dwelling boundaries and fences should not impede the free movement of hedgehogs throughout the site with holes out at fence junctions.

- Bulbs:**
- | Species | Grade | Density |
|---------------------------|-------|--------------------|
| Acemone-nemorosa | 12/50 | 50/m ² |
| Galanthus nivalis (g) | 4/5 | 100/m ² |
| Hyacinthoides non-scripta | 6/7 | 20/m ² |
| Narcissus pseudonarcissus | 10/15 | 35/m ² |
- UK cultivated stock to be used for native bulbs

Meadow Seed Mixes:
Total Area = 1017m²

Species	Spec.	Size in cm	Pot Size	Density
Choriza tenata 'Orange Blossom'	C	40-60	3L	4/m ²
Cornus sanguinea 'Midwinter Fire'	C	60-80	3L	4/m ²
Euonymus fortunei 'Emerald Gaiety'	C	30-40	3L	4/m ²
Hebe 'Page'	C	20-30	2L	5/m ²
Lonicera pileata	C	30-40	3L	6/m ²
Pachysandra terminalis	C	15-20	3L	6/m ²
Potentilla fruticosa 'Manchu'	C	30-40	3L	5/m ²
Pittosporum tenuifolium 'Tom Thumb'	C	30-40	3L	4/m ²
Spiraea japonica 'Goldflame'	C	30-40	3L	4/m ²
Sarcococca hookeriana	C	30-40	3L	4/m ²
Skimmia japonica 'Rubella'	C	30-40	3L	4/m ²
Viburnum davidii	C	30-40	3L	3/m ²

Species	Size (cm)	Spec	Notes
Carpinus betulus	60-90	5L, C	5 per linear m in a double staggered row

Schedule provides an indicative, but not exhaustive species list. All newly planted areas are to be mulched in accordance with specification.

Hedges: Schedule provides an indicative, but not exhaustive species list. All trees are to be supported and mulched in accordance with the specification. Protective fencing/guards to be provided where required in vulnerable areas. Root protection to be incorporated where required and in close proximity to services and buildings.

Lawn Turf/Seed:
Total Area = 695m²

Species	Spec	Size in cm	Age
Cornus alba	BR	40-60cm	1+1
Corylus avellana	BR	40-60cm	1+0
Crataegus monogyna	BR	40-60cm	1+1
Ligustrum vulgare	BR	60-80cm	1u1
Prunus spinosa	BR	60-80cm	1u1
Rosa canina	BR	40-60cm	1+0
Liriodendron tulipifera	BR	25-30cm	1+1
Viburnum opulus	BR	40-60cm	2+0

To be planted as per specification in staggered rows, all 0.5m centres. Planted in groups of 3, 6, 7, 9 to ensure an even distribution of species throughout the specified area. Taller species to be planted in the centre or rear along the boundary, with smaller species to the edge of the front. Biodegradable plastic free tubes and cane supports to be provided to each plant. All hedges to be mulched in accordance with specification.

Mixed Native Planting:

% of Mix	Species	Spec	Size in cm	Age	Notes
10	Cornus alba	BR	40-60cm	1+1	5 per linear m in a double staggered row
10	Corylus avellana	BR	40-60cm	1+0	
35	Crataegus monogyna	BR	40-60cm	1+1	
5	Ligustrum vulgare	BR	60-80cm	1u1	
15	Prunus spinosa	BR	60-80cm	1u1	
5	Rosa canina	BR	40-60cm	1+0	
10	Liriodendron tulipifera	BR	25-30cm	1+1	
10	Viburnum opulus	BR	40-60cm	2+0	

To be planted as per specification in staggered rows, all 0.5m centres. Planted in groups of 3, 6, 7, 9 to ensure an even distribution of species throughout the specified area. Taller species to be planted in the centre or rear along the boundary, with smaller species to the edge of the front. Biodegradable plastic free tubes and cane supports to be provided to each plant. All hedges to be mulched in accordance with specification.

AMENITY FLOWERING LAWN
Habitat Aid Flowering Lawn Mix. 20% native British wildflowers and 80% mixed slow-growing grasses
Sowing rate @ 5g/m²

AMENITY LAWN
Premier lawn turf roll
Sowing rate @ 15g/m²

AMENITY MIX
John Chambers Grass Seed Low Maintenance
Sowing rate @ 15g/m²



PLANTING SCHEDULES:

Any substitutions of plant species and varieties to be approved by landscape architect prior to installation. All planting to be undertaken as per the softworks specification

Trees:

Total	Species	Height mm	Girth	Size	Spec.
2	Acer campestre (Ac)	250-300	8-10cm	F	Feathered
1	Acer campestre 'Streetwise' (AcS)	250-300	8-10cm	F	Feathered
4	Alnus glutinosa (Ag)	250-300	8-10cm	F	Feathered
3	Betula pendula (Bp)	250-300	8-10cm	F	Feathered
3	Quercus robur (Qr)	250-300	8-10cm	F	Feathered
2	Sorbus aria (Sa)	250-300	8-10cm	F	Feathered
4	Sorbus aucuparia (Sau)	250-300	8-10cm	F	Feathered
1	Sorbus aucuparia 'Joseph Rock' (SJR)	250-300	8-10cm	F	Feathered
1	Tilia cordata 'Greenspire' (TcG)	250-300	8-10cm	F	Feathered

Total	Species	Height mm	Girth	Size	Spec.
2	Amelanchier alnifolia 'Obelisk' (AaOb)	300-350cm	10-12cm	SS	RB, clear stem 175-200mm
5	Prunus cerasifera 'Crimson Point' (PcCP)	300-350cm	10-12cm	SS	RB, clear stem 175-200mm
3	Pyrus calleryana 'Chanticleer' (PvCc)	300-350cm	10-12cm	SS	RB, clear stem 175-200mm
3	Sorbus aucuparia 'Sheerwater Seeding' (SaaS)	300-350cm	10-12cm	SS	RB, clear stem 175-200mm

Schedule provides an indicative, but not exhaustive species list. All trees are to be supported and mulched in accordance with the specification. Protective fencing/guards to be provided where required in vulnerable areas. Root protection to be incorporated where required and in close proximity to services and buildings.

Total	Species	Height mm	Girth	Size	Spec.
40	Acacia saligna	3L	4/m ²		
30	Cornus sanguinea	3L	4/m ²		
20	Euonymus fortunei	3L	4/m ²		
20	Hebe 'Page'	2L	5/m ²		
20	Lonicera pileata	3L	6/m ²		
15	Pachysandra terminalis	3L	6/m ²		
15	Potentilla fruticosa	3L	5/m ²		
15	Pittosporum tenuifolium	3L	4/m ²		
15	Spiraea japonica	3L	4/m ²		
15	Sarcococca hookeriana	3L	4/m ²		
15	Skimmia japonica	3L	4/m ²		
15	Viburnum davidii	3L	3/m ²		

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