

OUTLINE SPECIFICATION: TREE PROTECTION
GENERAL

Existing trees to be retained are to be protected from damage using fencing to BS 5837:2012, 2m high, fixed securely to a scaffold or equal ground-fixed framework (no concrete). Ensure that protective fencing is maintained in effective condition until completion of works and that no operations are carried out within protected area. Notices to be erected on fencing. 'Protected area - no operations within fenced area'. This fencing to be erected before work starts on site and only removed on completion of works.

Agreement / approval needs to be sought for tree work to be carried out by an arboricultural specialist prior to commencement of construction work. A schedule of tree works to be submitted and approved by the LPA before work commences.

Existing ground level within the protected area to be retained undisturbed. Where this cannot be achieved, Contractor to notify Landscape Architect and remedial measures to prevent compaction of root zone will need to be considered before work in affected area can proceed. Any alteration to ground levels within Tree Root Protection Areas will require approval.

PROTECTIVE FENCING LOCATION: location to be in accordance with BS 5837:2012 Table D.1 'Root Protection Area' and Figure 2 'Default specification for protective barrier'. Any deviation from the RPA for the location of the fence line to be in accordance with Clause 6.2 Barriers and ground protection.

When above information not available protect to lines indicated on this drawing

PRECAUTIONS IN RESPECT OF TEMPORARY WORKS

2.1 **VEHICULAR ACCESS:** If temporary vehicular access is required through the restricted area, a re-inforced load bearing surface is to be laid over the existing soil surface to prevent soil compaction. Appropriate precautions to be taken to prevent damage to the tree trunk and canopy. A written Specification and location of re-inforced load bearing surface to be submitted and approved by the LPA before vehicular access is constructed and that tree works within the tree protection area to be supervised by a qualified and experienced arboriculturalist.

SCAFFOLDING WITHIN A PROTECTED AREA: If it is essential for scaffolding to be erected within a protected area, protective fencing as detailed above is to be erected to provide just enough space for the scaffolding. Care to be taken to avoid damage to tree trunk or branches, (if necessary arboricultural work to be approved and undertaken by a qualified arboriculturalist and approved by the LPA prior to construction works). The ground between the protective fencing and the proposed building to be protected by side butted scaffold boards laid on top of a geotextile membrane in accordance with BS 5837, Clause 6.2 Barriers and ground protection. Once ground protection measures have been installed, the contractor to inform the LPA.

ADDITIONAL PRECAUTIONS OUTSIDE FENCED AREAS:
Oil, bitumen, cement or other material likely to be injurious to a tree should not be stacked or discharged within 10m of the edge of retained tree canopies.

Concrete mixing should not be carried out within 10m of a tree.

Fires should not be lit within 15m of the canopy of a tree.

Trees to be conserved should not be used as anchorages for any purposes.

Notice boards, telephone cables, or other services should not be attached to any part of a tree.

Trees to be felled that are adjacent to, or that lie within a continuous canopy of trees to be retained, should be removed with particular care. In some cases a tree may have to be removed in sections to avoid damage.

EXISTING LEVELS:
Ensure that the levels beneath existing tree spreads of the existing trees to be retained, are maintained to ensure no damage/compaction to root systems which may result in long term damage or failure of tree.

ALL TREE PROTECTION TO CONFORM TO BS 5837:2012

BIOSECURITY POLICY:
This is a very important issue for our practice and this is our Biosecurity Policy.

1.0 Awareness of Biosecurity Issues
1.1 We recognise the risk posed to the environment from pest and disease and exercise an awareness of all Biosecurity issues.
1.2 Our practice follows the latest recommendations and guidance from DEFRA/APHA, and takes reference from the Landscape Institute, Royal Horticultural Society, Horticultural Trade Association, Arboricultural Association and Forestry Commission and the UK Horticultural Industry.
1.3 We will endeavour to inform, update and advise our Clients, Main Contractors and Landscape Contractors on Biosecurity matters.
1.4 We will ask our clients, Main Contractors, Landscape Contractors, and Nursery Suppliers to commit to our Biosecurity Policy for the duration of the contractual relationship.

2.0 Contract Documents
2.1 This Biosecurity Policy refers to all landscape masterplans, planting plans, and planting schedules, Specifications and Schedule of Works.

3.0 Plant selection
We will endeavour to select species that are not at risk from serious pest and diseases, whilst ensuring that we maintain diversity of plant selection.
3.1 We will regularly check DEFRA web site for updates on "At risk plants".
3.2 We will consult with UK nurseries to find alternative species that are less susceptible to disease.
3.3 Xylella: Any Xylella host plants that are specified must not be imported from Europe or anywhere else in the world directly to site, as the risk is too great. Trees will ideally be grown on a UK nursery for a minimum of 5 years and shrubs must be grown on a UK nursery for a minimum of one growing season. There must be full traceability on the Xylella host plants (ideally back to its origin).

4.0 Diversification of Plant species
We will endeavour to future proof our projects by designing out Biosecurity risks and increasing genetic diversity within the plant population.
4.1 Through our plant selection we will seek to expand the range of species and cultivars used on our projects, thus fewer species will be compromised by any single threat.
4.2 We will avoid monocultures at localised and larger scales.
4.3 Tree avenues are traditionally single species. Where appropriate we will use a mixture of species on an avenue to minimise risk. We will use tree of a similar form and scale to create the avenue but vary the species.

5.0 Plant procurement
We aim to source top quality plants, with the lowest risk, in terms of pest and disease.
5.1 We will specify UK grown plants from quality UK growers.
5.2 We will work with nurseries that have a sound Biosecurity Policy and have management systems in place that can demonstrate the traceability of their stock.
5.3 Whenever possible we will pre inspect nurseries to check that they are compliant and inspect and select plant stock.
5.4 We will work with nurseries who can supply Plant health certification/Plant Passports or Documents showing traceability and are part of the HTA Plant Health Assurance Scheme (please note, this Scheme is still in a development phase).
5.5 Whenever possible we will source plants that have been propagated and grown in the UK. We will endeavour to visit nurseries to select the plant stock that is growing in the UK. As required we will work with the nurseries on availability and be flexible on exact sizes to ensure UK supply.
5.6 Advanced procurement: When possible we will work with UK nurseries on advanced procurement, to select UK trees or trees that has been containerised and grown on in the UK for a minimum of two years. Whenever possible shrubs should be propagated in the UK and grown on in the UK for a minimum of two years.

Landscape Contractors
6.1 Our Biosecurity Policy will be highlighted within the Contract Documents at time of tender for a project and we expect the Landscape Contractor to comply with its requirements.
6.2 The Landscape Contractor will be required to have their own Biosecurity Plan that will be presented and vetted as part of the tendering process.
6.3 We will select a Landscape Contractor who can commit to our Biosecurity Policy, including the need for Plant Health certificates/Documents showing traceability and origin of plants.
6.4 We will ensure that contractors commit to our requirements on plant procurement and any variations must be approved by the Landscape Architect.

OUTLINE SPECIFICATION:
SOFT LANDSCAPING subject to full N.B.S. specification

PLANTING
All plants & planting to comply with current BS specifications including BS 3936: Part I 1992, Part II 1990 and Part IV 1984. Where applicable BS 4428: 1989. All plants to be supplied in accordance with the schedule. All trees to be planted as shown a minimum of 5.0m from buildings and 3.0m from drainage. All planting material to be British grown stock and fully hardened off. Tree root protection barriers to be incorporated where in close proximity to underground services / building foundations. Working should only be undertaken in suitable conditions.

CULTIVATION
Break up any compacted topsoil to full depth. Within a few days before planting, but in suitably dry weather and ground conditions, cultivate top 450mm of all planting beds, using suitable plant to loosen, aerate and break up the soil into particles of 2-8mm. Leave surface regular and even. Remove weeds, perennial weed roots and any undesirable material brought to the surface including stones and clods larger than 50mm in any dimension, roots, tufts of grass and foreign matter. Do not dig or cultivate within the root spread of trees and shrubs to be retained.

TREE PITS FOR STANDARD TREES
Execute with slightly raised center. Retain topsoil for re-use where specified. Size: 75 mm wider than the root spread, and same depth as the rootball. Break up bottom of pits to a depth of 150mm and scarify sides. Backfill with previously prepared mixture of topsoil excavated from the pit (if available) and additional topsoil as required, together with compost/soil conditioner/ameliorant at 1m³ per 10m². Accessories: Perforated plastics irrigation pipe 50mm diam. wrapped around rootball with cap. Staking - single stake and tie.
Trees planted in grass - cut neat circle out of grass round each tree and mulch around each tree 500mm radius from stem.

NATIVE SHRUB PLANTING
Backfill with previously prepared mixture of topsoil excavated from the pit and additional topsoil as required, together with compost/soil conditioner/ameliorant at 1m³ per 10m². Water plants thoroughly immediately after planting. Lightly firm soil around plants.

SHRUB PLANTING PITS
Excavate not more than 1 - 2 days before planting and retain topsoil for re-use where specified. Size(s): 75mm deeper than root system and wide enough to accommodate roots when fully spread. Break up bottoms of pits to a depth of 150mm. Backfill with previously prepared mixture of topsoil excavated from the pit and additional topsoil as required, together with compost/soil conditioner/ameliorant at 1m³ per 10m². Water plants thoroughly immediately after planting. Lightly firm soil around plants.
Shrub protection should be provided to protect vulnerable beds to ensure successful establishment of plants.

TOPSOIL REQUIREMENTS TO PLANTING AREAS
Topsoil requirements to BS 3882:2015
Topsoil depth to grass areas - 150mm min.
Topsoil depth to Native Mix areas and shrub planted areas - 300mm
Include 25mm above hard surfacing when adjacent to allow for settlement
See Tree Pits notes for topsoil to tree pits.
1. Soil conditioner if required, dependent on topsoil analysis results - Incorporate 75mm depth of soil conditioner into topsoil during cultivation.
Subsequently water as necessary to all planting to ensure establishment.
Handle topsoil in the driest conditions possible. Do not handle during or after heavy rainfall or when it is wetter than the plastic limit (less 3% to BS 1377-2)

MULCHING
Material: Bark mulch free of pests, disease, fungus and weeds.

Species	Form	Girth (cm)	Height	Root	Number	Selection Comments
Acer campestre	Standard	8 - 10	2.5-3m	B	3	A medium sized native tree to provide ecological enhancement and seasonal foliage interest
	Light Standard	6 - 8	2.5-3m	B	8	
	Feathered	-	1.5 - 2m	BR	10	
Aesculus hippocastanum	Standard	8 - 10	2.5-3m	B	1	A large tree providing ecological enhancement. The flowers provide a rich source of nectar and pollen to insects, particularly bees. Caterpillars of different moths eat the leaves and provide food for blue tits. Using the same specie already found on Site
	Light Standard	6 - 8	2.5-3m	B	7	
	Feathered	-	1.5 - 2m	BR	5	
Betula pendula	Standard	8 - 10	2.5-3m	B	2	A medium sized native tree which will contrast with the cornus mix backdrop. Providing a habitat for insects, caterpillars, moths and birds. Using the same specie already found on Site
	Light Standard	6 - 8	2.5-3m	B	17	
	Feathered	-	1.5 - 2m	BR	10	
Prunus padus	Standard	8 - 10	2.5-3m	B	19	A medium native tree providing ecological enhancement and seasonal interest. The white spring flowers provide an early source of nectar and pollen for bees, while the cherries are eaten by birds
	Light Standard	6 - 8	2.5-3m	B	26	
	Feathered	-	1.5 - 2m	BR	11	
Quercus robur	Standard	8 - 10	2.5-3m	B	11	A large deciduous native tree providing ecological enhancement. They host hundreds of species of insect, supplying many British birds with an important food source. Flower and leaf buds are the foodplants of the caterpillars of purple hairstreak butterflies. The leaves form a rich leaf mould beneath the tree, supporting invertebrates, such as the stag beetle, and numerous fungi, like the oakbug milkcap. Holes and crevices in the tree bark are perfect nesting spots many birds and bats.
	Light Standard	6 - 8	2.5-3m	B	10	
	Feathered	-	1.5 - 2m	BR	7	
Tilia cordata Greenspire	Standard	8 - 10	2.5-3m	B	3	A medium deciduous tree suitable for planting in smaller spaces. Echoes the Tilia europaea used already on Site
	Light Standard	6 - 8	2.5-3m	B	10	
Tilia europaea	Standard	8 - 10	2.5-3m	B	9	A large deciduous tree providing ecological enhancement. Leaves are eaten by the caterpillars of many moth species. They are very attractive to aphids, providing a source of food for their predators, including hoverflies, ladybirds and many species of bird. The flowers provide nectar and pollen for insects, particularly bees. Using the same specie already found on Site
	Light Standard	6 - 8	2.5-3m	B	7	
	Feathered	-	1.5 - 2m	BR	12	

Note:
(LS) = Light Standard Trees
(fth) = Feathered Trees
No brackets = Standard Trees

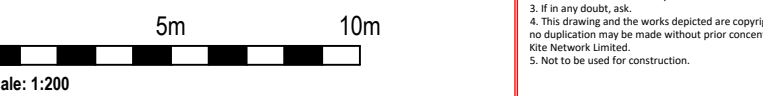
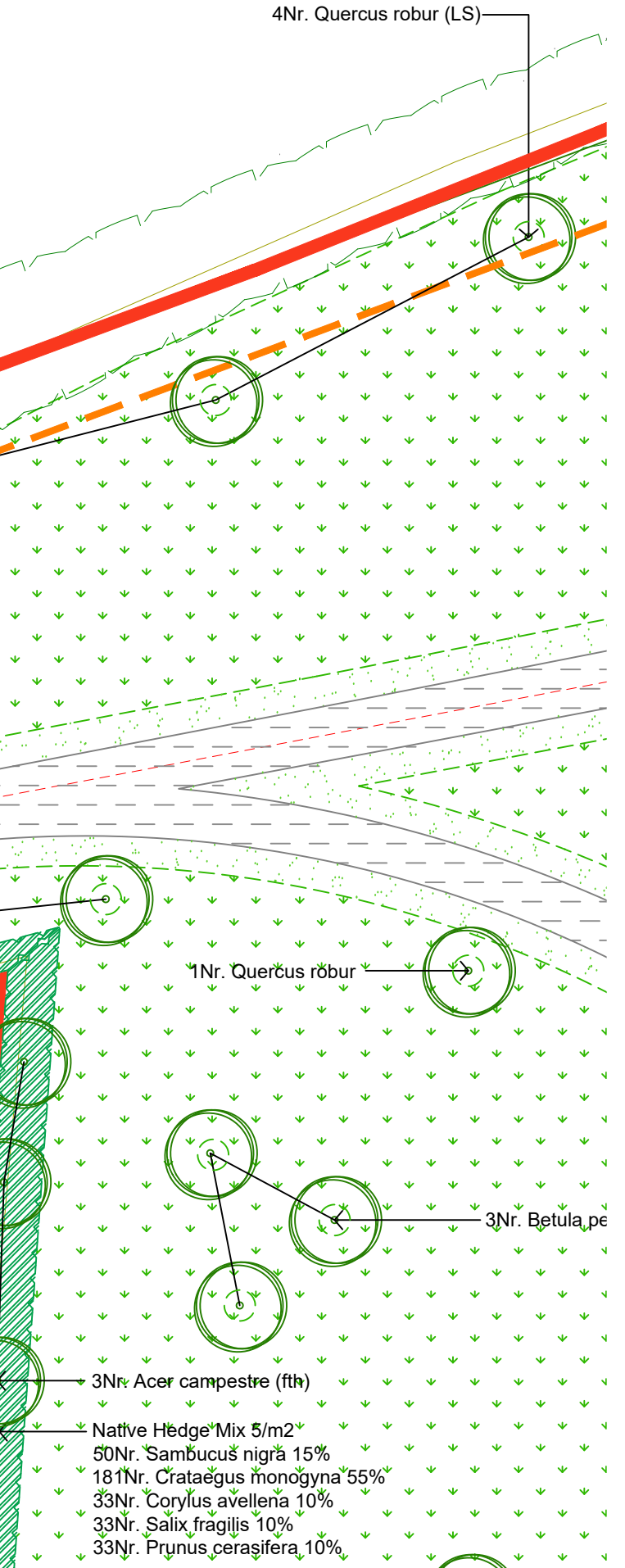
Shrub / Groundcover Species (name on plan)	Botanical Name	Specification	Density	No.
Brachyglottis 'Sunshine'	Brachyglottis 'Sunshine'	2L pot	3/m ²	69
Cornus sanguinea 'Midwinter Fire'	Cornus sanguinea 'Midwinter Fire'	2L pot	3/m ²	35
Lavandula 'Hidcote'	Lavandula angustifolia 'Hidcote'	2L pot	4/m ²	190
Lonicera nitida May Green	Lonicera nitida May Green	2L pot	3/m ²	167
Olearia x haastii	Olearia x haastii	2L pot	2/m ²	74
Perovskia 'Little Spire'	Perovskia 'Little Spire'	2L pot	4/m ²	123
Potentilla Abbotswood	Potentilla fruticosa Abbotswood	2L pot	3/m ²	144
Rudbeckia flugida deamii	Rudbeckia flugida deamii	9cm pot	5/m ²	66
Viburnum tinus 'Eve Price'	Viburnum tinus 'Eve Price'	2L pot	3/m ²	174

Note:
The planting palette for this residential development draws inspiration from the surrounding residential roads of Leintwardine village by including privet hedges and replicate the 'permaculture' ornamental plant species used in the north of Leintwardine village. Native hedge mixes with feathered tree planting to the boundaries of the site form connected structural planting and replicates the design intent shown in the planning approved drawing, Landscape Framework Plan revision A.

Hedge Name	Botanical Name	Specification	Density	%	No.
Residential Hedge 1	Ugustrum ovalifolium	Bare Root 2 year 60-60cm	5/m (linear) Planted in double staggered rows 0.3m apart		1119
	Ugustrum ovalifolium			50%	973
Residential Hedge 2	Crataegus monogyna	Bare Root 2 year 60-60cm	Planted in double staggered rows 0.3m apart	25%	485
	Corylus avellana			25%	487
	Sambucus nigra			15%	511
Native Hedge Mix	Crataegus monogyna	Bare Root 2 year 60-60cm	Planted in triple staggered rows 0.3m apart	55%	1865
	Corylus avellana			10%	336
	Salix fragilis			10%	336
	Prunus cerasifera			10%	336

TIMES OF YEAR FOR PLANTING

- Deciduous trees and shrubs as bare root or root ball: Late October to late March.
- Conifers and evergreens: September/ October or April/ May.
- Herbaceous plants (including marginal): September/ October or March/ April.
- Container grown plants: At any time if ground and weather conditions are favourable.



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Landscape Architecture | Ecology | Greenspace

CLIENT: **Lieuin Ltd** DATE: **August 2019**

PROJECT: **Rosemary Lane, Leintwardine** STATUS: **Planning**

DRAWING: **Hard and Soft Landscape Plan - Sheet 6** DRAWN: **KL**

NUMBER: **343.18.06 Rev B** CHECKED: **NH**

LEGEND SOFT LANDSCAPE

- Proposed tree planting: Single stake and tie. Trees planted in grass - cut neat circle out of grass round each tree and mulch around each tree 500mm radius from stem. Refer to planting schedules for species, planting sizes and proposed numbers.
- Ornamental shrub & groundcover planting, Refer to planting schedules for species, planting sizes, proposed numbers and densities.
- Existing tree as identified on topographical information, retained.
- Wildflower grass seeding to provide biodiversity enhancement in the areas of Public Open Spaces. Seed mix to be suitable for soil following topsoil testing. 1m width against footpath and roadways to be amenity seeded and mown regularly.

HARD LANDSCAPE

- Slab paving to residential property front and back gardens. Product: Riven Flags by Tobermore, Colour: Natural, Size: 400 x 400 x 32mm.
- Pedestrian specification macadam surface for footpaths associated with roadways.
- Pedestrian specification self-binding gravel for footpaths. Light buff coloured.

BOUNDARY TREATMENTS

- Rubber grass mat to natural play area.
- Single leaf timber gate. For access to rear of residential gardens.
- Extent of Tree Protection Fencing To Be Retained During Site Set Up, Demolition and Construction.
- 1.8m high timber feather edge closeboard fencing. To separate the rear of neighbouring residential properties.

Notes:
1. Do not scale from this drawing.
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