



Type 1 (default) tree protective fencing set back within Root Protection Area (RPA) to allow for proposed works. Refer to POE dwg. No. 199\_007\_Detail 7 for details of Tree Protection fencing.

All works within or adjacent to RPA's are to be undertaken in full accordance with approved Arboricultural Method Statement (AMS) and BS5837:2012 Trees in Relation to Design, Demolition and Construction. Recommendations. Seeding/planting works within the RPA to be undertaken once main works are complete and protective fencing has been removed, subject to approval of St Helens Council Tree Officer and in full accordance with the approved AMS and BS5837:2012 as noted above.

- LEGEND**
- Proposed Extra Heavy Standard / Standard Tree Planting
  - Proposed Native Hedgerow Transplant Planting
  - Proposed Native Woodland Whip Planting
  - Proposed Native Woodland Planting
  - Proposed Native Woodland Edge Planting
  - Proposed Amenity Grass Seeding
  - Proposed Wild Flora / Wildflower Meadow Seeding
  - Proposed Wild Flora Seeding to Attenuation Basin and Margins
  - Proposed Ponds (Habitat Creation)
  - Existing Woodland / Trees / Vegetation to Be Retained and Protected
  - Existing Contours
  - Proposed Contours
  - Proposed Red Line Boundary
  - Root Protection Area (RPA)
  - Tree Protective Fencing (Type 1 - Default)
  - T.M. Site/Pot Boundary

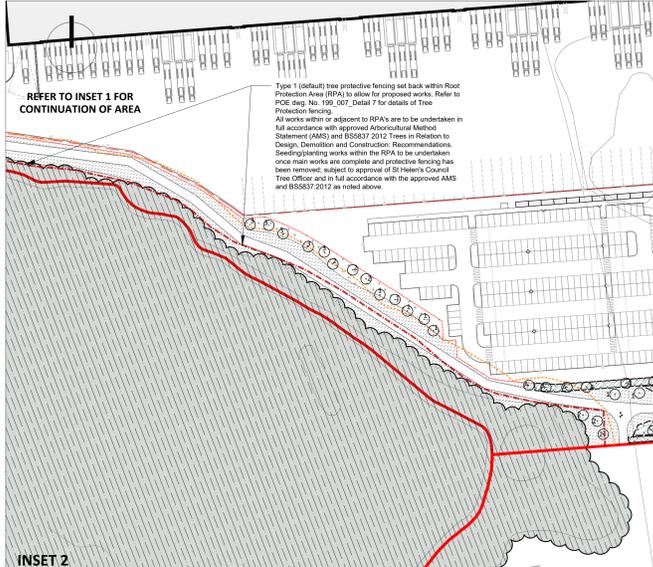
**Native Under Storey Transplant Planting to Plain Plantation (PROVISIONAL)**

SPECIES	SIZE (cm)	TYPE	DENSITY	% IN MIX	TOTAL
Acer campestre	40-60	1u1 BR	1m Centres	15	130
Corylus avellana	40-60	1u1 BR	1m Centres	15	130
Crataegus monogyna	40-60	1u1 BR	1m Centres	25	215
Ilex aquifolium	40-60	2Lr CG	1m Centres	15	130
Malus sylvestris	40-60	1u1 BR	1m Centres	7.5	65
Sambucus nigra	40-60	1u1 BR	1m Centres	2.5	20
Rosa canina	40-60	1u1 BR	1m Centres	10	85
Viburnum opulus	40-60	1u1 BR	1m Centres	10	85
<b>TOTAL</b>					<b>860</b>

Allow 15% of area. To be planted in full accordance with BS5837:2012 and approved method statement to prevent damage to trees within the existing plantation.

Native woodland edge species to be planted in random single species odd numbered groups of 3,5,7 etc.

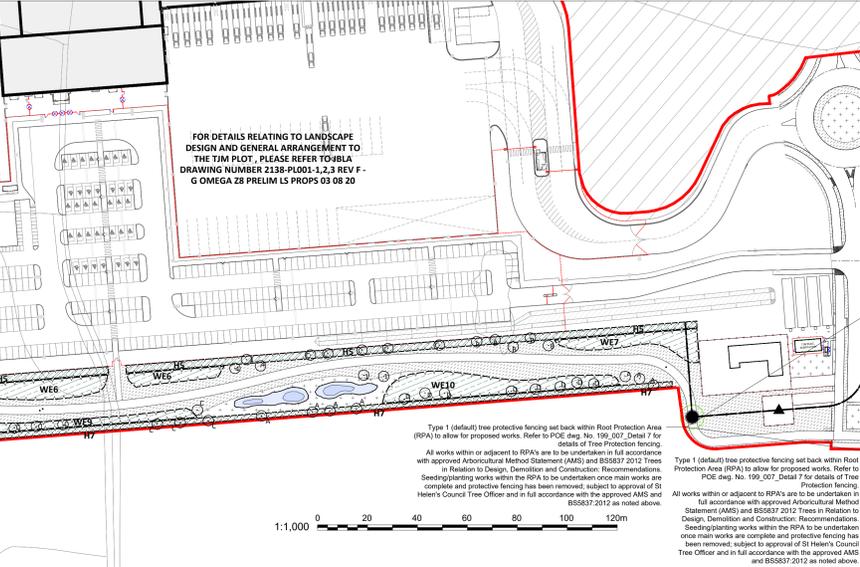
All native woodland edge transplants to be planted in accordance with an approved planting detail and specification. Transplants to be planted within 600mm high green Tubex Shrub shelters or similar approved with timber stake and 2No. ties in accordance with approved planting detail.



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REFER TO INSET 1 FOR CONTINUATION OF AREA



Type 1 (default) tree protective fencing set back within Root Protection Area (RPA) to allow for proposed works. Refer to POE dwg. No. 199\_007\_Detail 7 for details of Tree Protection fencing.

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REFER TO INSET 1 FOR CONTINUATION OF AREA

**OMEGA ZONE 8 PLANTING SCHEDULE**

Individual Specimen Trees

Ref. No	SPECIES	HEIGHT (cm)	GIRTH (cm)	DENSITY	TYPE	No.
1	Acer campestre	350-400	14-16	AS SHOWN	Extra Heavy Standard. Root Balled	20
2	Prunus avium	350-400	14-16	AS SHOWN	Extra Heavy Standard. Root Balled	13
3	Quercus robur	350-400	14-16	AS SHOWN	Extra Heavy Standard. Root Balled	29
4	Tilia cordata	350-400	14-16	AS SHOWN	Extra Heavy Standard. Root Balled	15

**Native Hedgerow Trees**

Ref. No	SPECIES	HEIGHT (cm)	GIRTH (cm)	DENSITY	TYPE	No.
A	Acer campestre	250-300	8-10	AS SHOWN	Standard. Root Balled	19
B	Prunus avium	250-300	8-10	AS SHOWN	Standard. Root Balled	13
C	Quercus robur	250-300	8-10	AS SHOWN	Standard. Root Balled	22
D	Quercus petraea	250-300	8-10	AS SHOWN	Standard. Root Balled	8

**Native Woodland Transplant Planting (W)**

SPECIES	SIZE (cm)	TYPE	DENSITY	% IN MIX	W1	W2	W3	TOTAL
Acer campestre	40-60	1u1 BR	1.5m Centres	10	145	305	285	735
Alnus glutinosa	40-60	1u1 BR	1.5m Centres	5	75	155	140	370
Betula pendula	40-60	1u1 BR	1.5m Centres	10	145	305	285	735
Betula pubescens	40-60	1u1 BR	1.5m Centres	5	75	155	140	370
Crataegus monogyna	40-60	1u1 BR	1.5m Centres	10	145	305	285	735
Corylus avellana	40-60	1u1 BR	1.5m Centres	10	145	305	285	735
Prunus avium	40-60	1u1 BR	1.5m Centres	8	115	245	225	585
Quercus robur	40-60	1u1 BR	1.5m Centres	20	290	755	705	1750
Quercus petraea	40-60	1u1 BR	1.5m Centres	10	145	305	285	735
Sambucus nigra	40-60	1u1 BR	1.5m Centres	5	75	155	140	370
Tilia cordata	40-60	1u1 BR	1.5m Centres	5	75	155	140	370
<b>TOTAL</b>					<b>1460</b>	<b>3050</b>	<b>2630</b>	<b>7,340</b>

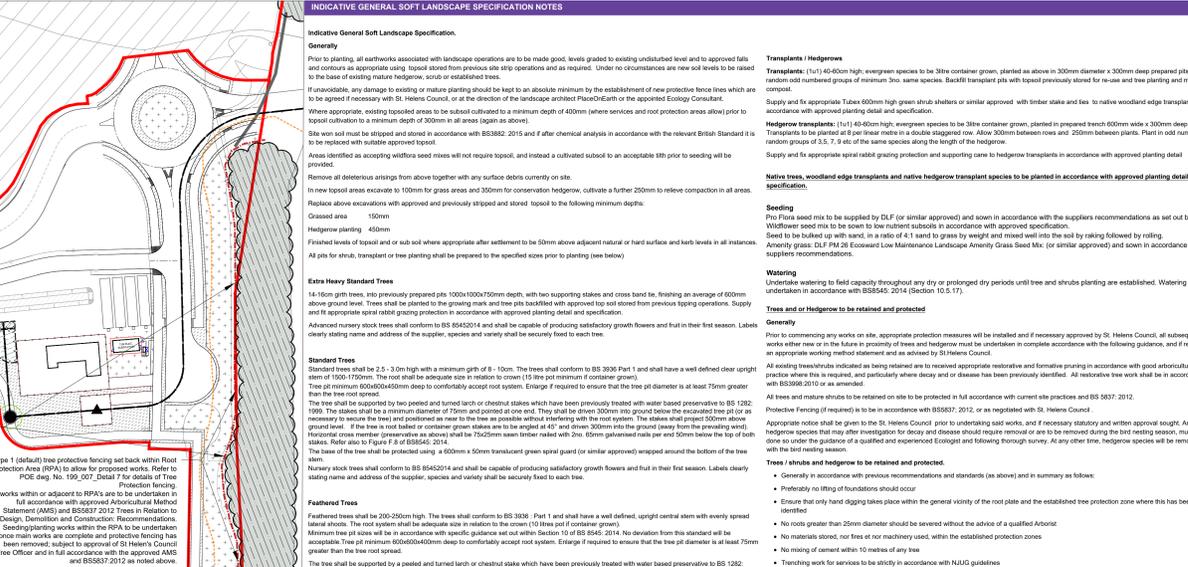
**Native Woodland Whip Planting (WHP)**

SPECIES	SIZE (cm)	TYPE	DENSITY	% IN MIX	WHP1	WHP2	WHP3	TOTAL
Acer campestre	125-150	1+2 BR	1.5m Centres	10	55	150	50	255
Alnus glutinosa	125-150	1+2 BR	1.5m Centres	5	30	75	25	130
Betula pendula	125-150	1+2 BR	1.5m Centres	10	55	150	50	255
Betula pubescens	125-150	1+2 BR	1.5m Centres	5	30	75	25	130
Crataegus monogyna	125-150	1+2 BR	1.5m Centres	10	55	150	50	255
Corylus avellana	125-150	1+2 BR	1.5m Centres	10	55	150	50	255
Prunus avium	125-150	1+2 BR	1.5m Centres	8	40	120	45	205
Quercus petraea	125-150	1+2 BR	1.5m Centres	7	35	100	35	170
Quercus robur	125-150	1+2 BR	1.5m Centres	20	100	285	110	495
Sorbus aucuparia	125-150	1+2 BR	1.5m Centres	10	55	150	50	255
Tilia cordata	125-150	1+2 BR	1.5m Centres	5	30	75	25	130
<b>TOTAL</b>					<b>540</b>	<b>1480</b>	<b>520</b>	<b>2540</b>

**Native Feathered Trees (within Woodland (W) and Whip (WHP) areas: 10% of area)**

SPECIES	HEIGHT (cm)	TYPE	% IN MIX	W1/WHP1	W2/WHP2	W3/WHP3	TOTAL
Acer campestre	200-250	Feathered. Root Balled	15	70	155	115	340
Betula pendula	200-250	Feathered. Root Balled	15	70	155	115	340
Crataegus monogyna	200-250	Feathered. Root Balled	10	45	105	75	225
Prunus avium	200-250	Feathered. Root Balled	10	45	105	75	225
Quercus robur	200-250	Feathered. Root Balled	25	115	255	190	560
Quercus petraea	200-250	Feathered. Root Balled	5	20	50	40	110
Sorbus aucuparia	200-250	Feathered. Root Balled	12.5	55	130	95	280
Tilia cordata	200-250	Feathered. Root Balled	7.5	35	75	60	170
<b>TOTAL</b>			<b>455</b>	<b>1030</b>	<b>765</b>	<b>2,250</b>	

Notes: WBS has been omitted from the schedule and plan. All native woodland edge transplants to be planted in accordance with an approved planting detail and specification. Transplants to be planted within 600mm high green Tubex Shrub-shelters or similar approved with timber stake and 2No. ties in accordance with approved planting detail.



**INDICATIVE GENERAL SOFT LANDSCAPE SPECIFICATION NOTES**

**Indicative General Soft Landscape Specifications**

**General**

Prior to planting, all earthworks associated with landscape operations are to be made good, levels graded to existing undisturbed level and to approved falls and contours as appropriate using topsoil stored from previous site site-operations and as required. Under no circumstances are new soil levels to be raised to the base of existing mature hedgerow, scrub or established trees.

If unavoidable, any damage to existing or mature planting should be kept to an absolute minimum by the establishment of new protective fence lines which are to be replaced with suitable approved topsoil.

Where appropriate, existing topsoil areas to be subject to a minimum depth of 400mm (where surface and root protection areas allow) prior to topsoil cultivation to a minimum depth of 300mm in all areas (as per above).

Site work shall include strip and stored in accordance with BS3882:2015 and if after chemical analysis in accordance with the relevant British Standard it is to be approved by the local Council, or the division of the landscape architect/Planner/Earth or the approved Ecology Consultant.

Areas identified as accepting wildlife seed mixes will not require topsoil, and instead a cultivated sward to an acceptable 18th prior to seeding will be provided.

Remove all deleterious plants from above together with any surface debris currently on site.

In new topsoil areas excavate to 100mm to grass areas and 300mm for conservation hedgerow, cultivate a further 200mm to relieve compaction in all areas. Replace above excavations with approved and previously stripped and stored topsoil to the following minimum depths:

- Grassed area: 150mm
- Hedgerow planting: 450mm

Finalised levels of sward and soil surface appropriate after settlement to be 50mm above adjacent natural or hard surface and herb levels in all instances.

All pits for herb, transplant or tree planting shall be prepared to the specified sizes prior to planting (see below).

**Extra Heavy Standard Trees**

14-16m girth trees, into previously prepared pits 1000x1000x700mm depth, with two supporting stakes and cross band tie, finishing an average of 600mm above ground level. Trees shall be planted to the growing trunk and the pits backfilled with approved topsoil stored from previous landscaping operations. Supply and fit appropriate spiral rabbit grazing protection in accordance with approved planting detail and specification.

Advanced nursery stock trees shall conform to BS 8642:2014 and shall be capable of producing satisfactory growth flowers and fruit in their first season. Labels clearly stating name and address of the supplier, species and variety shall be securely fixed to each tree.

**Standard Trees**

Standard trees shall be 2.5 - 3.0m high with a minimum girth of 8 - 10cm. The trees shall conform to BS 3098 Part 1 and shall have a well defined stem, upright stem of 100-1700mm. The root shall be adequate size in relation to crown (15 tree pit minimum / container grown).

The pit minimum 400x400x300mm deep to comfortably accept root system. Enlarge if required to ensure that the tree pit diameter is at least 30mm greater than the tree root spread.

The tree shall be supported by two peeled and turned larch or chestnut stakes which have been previously treated with water based preservative to BS 1202:1999. The stakes shall be a minimum diameter of 75mm and pointed at one end. They shall be driven 300mm into ground below the excavated tree pit (or as necessary) to secure the tree and positioned as near to the tree as possible without interfering with the root system. The stakes shall project 300mm above ground level. If the tree is root balled or container grown stakes are to be angled 45° and driven 300mm into the ground (away from the prevailing wind). The base of the tree shall be protected using a 150x25mm square timber batten with 2No. 15mm galvanneal nails per side and 50mm below the top of the stakes. Refer also to Figure F of BS8545:2014.

The base of the tree shall be protected using a 600mm x 30mm translucent green spiral guard (or similar approved) wrapped around the bottom of the tree stem.

Nursery stock trees shall conform to BS 8642:2014 and shall be capable of producing satisfactory growth flowers and fruit in their first season. Labels clearly stating name and address of the supplier, species and variety shall be securely fixed to each tree.

**Feathered Trees**

Feathered trees shall be 200-250cm high. The trees shall conform to BS 3098 Part 1 and shall have a well defined, upright stem with evenly spread lateral shoots. The root system shall be adequate size in relation to the crown (10 tree pit / container grown).

Minimum tree pit shall be in accordance with specified guidelines set out within Section 10 of BS 8545:2014. No deviation from this standard will be acceptable. The pit minimum 400x400x300mm deep to comfortably accept root system. Enlarge if required to ensure that the tree pit diameter is at least 30mm greater than the tree root spread.

The tree shall be supported by a peeled and turned larch or chestnut stakes which have been previously treated with water based preservative to BS 1202:1999. The stakes shall be a minimum diameter of 60mm and pointed at one end. They shall be driven 300mm into ground below the excavated tree pit (or as necessary) to secure the tree and positioned as near to the tree as possible without interfering with the root system. The stakes shall project 300mm above ground level. If the tree is root balled or container grown stakes are to be angled 45° and driven 300mm into the ground (away from the prevailing wind). Refer also to Figure F of BS 8545:2014.

The base of the tree shall be protected using a 600mm x 30mm translucent green spiral guard (or similar approved) wrapped around the bottom of the tree stem.

**Whips**

Whips shall be 100-150mm high (Whips should be 1-2.3 year old seedling transplant (one year in seed bed and transplanted and grown on for 2 years). The trees shall conform to BS 3098 Part 1 and shall have a well defined, upright central stem with evenly spread lateral shoots. The root system shall be adequate size in relation to the crown.

The pit minimum 400x400x300mm deep to comfortably accept root system. Enlarge if required to ensure that the tree pit diameter is at least 30mm greater than the tree root spread.

The whip shall be supported by a peeled and turned larch or chestnut stakes which have been previously treated with water based preservative to BS 1202:1999. The stakes shall be a minimum diameter of 50mm and pointed at one end. They shall be driven 100mm into ground below the excavated tree pit (or as necessary) to secure the tree and positioned as near to the tree as possible without interfering with the root system. The stakes shall project 300mm above ground level. If the tree is root balled or container grown stakes are to be angled 45° and driven 300mm into the ground (away from the prevailing wind). Refer also to Figure F of BS 8545:2014.

The base of the tree shall be protected using a 600mm x 30mm translucent green spiral guard (or similar approved) wrapped around the bottom of the tree stem.

**Native Woodland Edge Transplant Planting (WE)**

SPECIES	SIZE (cm)	TYPE	DENSITY	% IN MIX	WE1	WE2	WE3	WE4	WE5	WE6	WE7	WE8	WE9	WE10	TOTAL
Acer campestre	40-60	1u1 BR	1m Centres	15	585	965	55	700	135	90	50	100	50	100	2730
Corylus avellana	40-60	1u1 BR	1m Centres	15	585	965	55	700	135	90	50	100	50	100	2730
Crataegus monogyna	40-60	1u1 BR	1m Centres	25	975	1615	95	1170	225	150	90	175	85	175	4530
Ilex aquifolium	40-60	2Lr CG	1m Centres	10	390	645	40	465	90	60	35	30	70	1825	
Malus sylvestris	40-60	1u1 BR	1m Centres	7.5	295	485	30	350	70	45	25	50	50	1375	
Prunus spinosa	40-60	1u1 BR	1m Centres	15	585	965	55	700	135	90	50	100	50	100	2730
Sambucus nigra	40-60	1u1 BR	1m Centres	2.5	100	160	10	115	20	15	10	15	15	455	
Rosa canina	40-60	1u1 BR	1m Centres	5	195	325	20	235	45	30	20	10	15	30	915
Viburnum opulus	40-60	1u1 BR	1m Centres	5	195	325	20	235	45	30	20	10	15	30	915
<b>TOTAL</b>					<b>3995</b>	<b>6450</b>	<b>380</b>	<b>4670</b>	<b>900</b>	<b>600</b>	<b>350</b>	<b>170</b>	<b>330</b>	<b>670</b>	<b>18,255</b>

**Native Hedgerow Transplant Planting Mix (HW)**

SPECIES	SIZE (cm)	TYPE	DENSITY	% IN MIX	H1	H2	H3	H4	H5	H6	H7	TOTAL
Corylus avellana	40-60	1u1 BR	8 per linear metre. Double Staggered Row	5	20	10	30	30	135	115	390	
Crataegus monogyna	40-60	1u1 BR	8 per linear metre. Double Staggered Row	80	330	175	480	1280	2200	1855	6,320	
Ilex aquifolium	40-60	2Lr CG	8 per linear metre. Double Staggered Row	5	20	10	30	30	135	115	390	
Rosa canina	40-60	1u1 BR	8 per linear metre. Double Staggered Row	5	20	10	30	30	135	115	390	
Viburnum opulus	40-60	1u1 BR	8 per linear metre. Double Staggered Row	5	20	10	30	30	135	115	390	
<b>TOTAL</b>					<b>410</b>	<b>215</b>	<b>600</b>	<b>1600</b>	<b>2740</b>	<b>110</b>	<b>2315</b>	<b>7,880</b>

Notes: WBS has been omitted from the schedule and plan. All native woodland edge transplants to be planted in accordance with an approved planting detail and specification. Transplants to be planted within 600mm high green Tubex Shrub-shelters or similar approved with timber stake and 2No. ties in accordance with approved planting detail.

**Transplants / Hedgerow**

(1u1) 40-60cm high, evergreen species to be 30cm container grown, planted as above in 300mm diameter x 300mm deep prepared pits in random odd numbered groups of 3, 5 or 7, same species. Balled transplants pits with topsoil previously stored for re-use and tree planting and watering compound.

Supply and fit appropriate Tubex 600mm high green shrub shelters or similar approved with timber stake and tie to native woodland edge transplants in accordance with approved planting detail and specification.

**Hedgerow transplants:** (1u1) 40-60cm high, evergreen species to be 30cm container grown, planted in prepared trench 600mm wide x 300mm deep above ground level. Trees shall be planted to the growing trunk and the pits backfilled with approved topsoil stored from previous landscaping operations. Supply and fit appropriate spiral rabbit grazing protection and supporting cane to hedgerow transplants in accordance with approved planting detail and specification.

**Native tree, woodland edge transplants and native hedgerow transplant species to be planted in accordance with approved planting detail and specification.**

**Seeding**

Pit Flora seed mix to be supplied by DLF (or similar approved) and sown in accordance with the suppliers recommendations as set out below. Wildflower seed mix to be sown to low nutrient substrate in accordance with approved specifications.

Seed to be bulked up with sand, in a ratio of 4:1 sand to grass by weight and mixed well into the soil by raking followed by rolling. Amenity grass, DLF Pit 20 Lowwood Low Maintenance Landscaping Amenity Grass Seed Mix (or similar approved) and sown in accordance with suppliers recommendations.

**Watering**

Underwater watering to field capacity throughout any dry or prolonged dry periods until tree and shrub planting are established. Watering to be undertaken in accordance with BS5545:2014 (Section 10.5.17).

**Tree and Hedgerow to be retained and protected**

**General**

Prior to commencing any work on site, appropriate protection measures will be installed and if necessary approved by St Helens Council. All subsequent work either now or in the future in proximity of trees and hedgerows must be undertaken in complete accordance with the following guidance, and if required in an appropriate working method statement and as advised by St Helens Council.

All existing trees/hedges indicated as being retained are to be retained in full accordance with BS5837:2012. All retained tree work shall be in accordance with BS5837:2012 as noted above.

All trees and mature shrubs to be retained on site to be protected in full accordance with current site practices and BS5837:2012. Protective Fencing (if required) to be in accordance with BS5837:2012, or as negotiated with St Helens Council.

Appropriate notice shall be given to the St Helens Council prior to undertaking any work, and if necessary statutory written approval sought. Any hedgerow species that may be affected by the proposed works shall be investigated for decay and disease should require removal are to be removed during the best nesting season, must only be done so under the guidance of a qualified and experienced Ecologist and following thorough survey. At any other time, hedgerow species will be removed with the best nesting season.

**Trees / shrubs and hedgerow to be retained and protected.**

- Generally in accordance with previous recommendations and standards (as above) and in summary as follows:
  - Preferably no felling of foundations should occur
  - Ensure that only hand digging takes place within the general