

Tree survey to BS5837:2012 for proposal to develop site for eco pods: Millom Ironworks, Millom, Cumbria

14 August 2016

Client: Barnes Walker

Author: Tom Dutson *MSc MICFor TechArborA*

Date of survey field work: 11 August 2016

Part 1. Executive summary

This survey considers trees within the overall boundary of and in close proximity to the proposed development on the site of the old Millom Ironworks. The proposed development involves the siting of approximately 30 eco pods and associated structures onto a brownfield site, formerly ironworks reservoirs that were infilled with slag some years ago.

The nature of the proposed development is such that the potential impact on trees and the woodland environment can be relatively low compared to a more conventional building proposal.

The approach to conducting this survey has been informed by the nature of the proposed development and has involved a measure of pragmatism. Whilst the established methodology for BS5837:2012 tree surveys is relevant in this situation, the implications of root protection areas (RPAs) can be interpreted with informed flexibility on site. Flexibility that is, assuming that eco pod sites, paths and tracks are constructed in such a way as to avoid undue compaction to tree roots and physical damage during construction.

The site boundary with Devonshire Road has been planted with a range of native and exotic trees and shrubs. Bramble scrub and dense tall ruderal herbs have invaded the eastern end of the site and along part of the boundary fence (see extended habitat report). The tree species present are well-suited to the brown-field site and will have some positive role in site remediation and soil formation. In particular Italian alder and white poplar have become the dominant species and the more mature specimens of these now define the structure to the southern edge of the site and around the T-junction leading to the site access road. There is prolific natural regeneration of a range of woody species, most notably, of Italian alder, white poplar and willow species.

33 individual trees are recorded in this survey, these are not exhaustive of the trees actually present (see topo plan showing all tree and group locations). However a decision was made to focus on more notable or 'principal' trees within the woodland and also to prioritise those trees that would be most directly impacted upon by the proposed development. Young trees within groups and belts have not all been individually mapped.

The phase one habitat map clearly shows the extent of woody and other vegetation.

Due to the density of the wooded areas there would actually be a benefit to selectively thinning a proportion in order to benefit the remaining trees whilst enabling the sensitive siting of the camping pods along with access and services infrastructure. The tree species present on the site are generally capable of vigorous regeneration through coppicing and there is abundant advanced regeneration that could grow on to replace more mature trees.



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The key areas of concern regarding tree protection in relation to this development proposal:

- Siting of eco pods should seek to minimise root disturbance/damage and soil compaction, particularly in relation to trees that are considered as priorities for retention in the context of visual amenity, screening and shelter from the road and beyond to the south
- Excavation and build-up of ground level should be minimised within the root protection areas of the principal trees
- Routing of services and drains should minimise tree root disturbance.
- Of the young to mid-aged trees sufficient diversity of species at appropriate stocking densities should be retained and protected in order to provide continuity of woodland cover.

In the light of the proposal to develop the site for holiday accommodation and associated recreational use it is strongly recommended that a pro-active approach to tree safety management is taken comprising an annual survey (and following very severe storms) and a programme of remedial works. This can be combined with a purposeful approach to woodland management that aims to develop a diverse and robust structure and composition.



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Part 2. General information

Brief from client

To provide a simple tree survey/report of this existing vegetation, stem diameters, canopy spreads and root protection areas etc. and the alignment of root protection fencing so this can be used as a stand-alone drawing for planning and as an overlay for the landscape layout plan. The context is that the eco pods proposed will be positioned on an ecobase foundation that do not require excavation.

Documents referred to

BS5837:2012 Trees in relation to design, demolition and construction – Recommendations is referred to throughout this report. This is the nationally recognised standard typically used by Local Planning Authorities (LPAs) to assess those aspects of planning applications that have implications for trees. It is often referred to in planning conditions to enforce protection or control of works that may be harmful to trees both on and off site.

List of documents and files received from client

- Landscape layout plan
- Topo plan including detailed tree locations – provided by Survey Operations
- Phase one habitat map
- Extended phase one habitat report
- Plans and elevations of proposed structures

Part 3 - Tree survey

Methodology

Data was collected in accordance with the requirements of British Standard 5837:2012. However, data is not recorded for every tree where such trees can be practically considered as forming part of the groups or woodland. All observations were from ground level without detailed or invasive investigations. Measurements were taken using a diameter tape, digital clinometer and laser measure (Leica Disto D8). Where this was not possible or reasonably practical, measurements have been estimated by eye. OTISS B5837 survey software is used for data recording and mapping is done with Map Maker GIS software.

BS 5837:2012 requires retention of better quality (category A and B trees) where possible. Trees in land adjacent to the site are considered where they may be impacted by development. For example when roots or branches encroach onto the site.



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Tree survey data

Please refer to spreadsheet and separate table for explanation of retention categories.

Tree survey plans

Please refer to associated plan showing:

- Tree locations with root protection areas overlaid onto Barnes Walker landscape layout plan. (Data on canopy extent is presented in the tree survey data spreadsheet. Almost all trees have crowns with no or minimal crown clearance as branching reaches close to ground level).

Part 4 – Recommendations for tree management

Generally, during the development of the site root protection areas of the principal trees along the southern boundary should be demarcated with Heras fencing or equivalent (please refer to plan showing alignment).

The trees (within a young woodland belt) along the eastern boundary of the proposed site are sufficiently protected by the alignment of the existing fence.

Outside the western boundary of the proposed site, there is a young mixed plantation. The root protection areas of the trees here are sufficiently protected by the alignment of the existing fence.

Of the individual trees surveyed a few a small number are noted as requiring remedial work, specifically white poplar that have limb damage or breakages.

Within the dense group at the eastern end of the southern boundary there are three white poplar. T020, 021 & 022 may fall outside of the proposed development site but there a minor limb breakages within the crowns of these trees. The Scots pine in this area are over-shadowed and over-crowded by the white poplar.

T030 has a fractured branch oriented south towards the road junction. Also, canker is possibly present. It is recommended that damaged limbs are removed and that the crown is reduced overall in order to manage the risk of further breakages by reducing the sail area of the tree.

Generally the trees are over-crowded, show vigorous growth given the challenging site conditions and would benefit from selective thinning, although this is not specifically a concern within the context of a planning application.



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If further information is required or variations on the plans are needed then please do let me know.

A handwritten signature in black ink that reads "Tom Dutson". The signature is written in a cursive, slightly slanted style.

Tom Dutson *MSc MICFor TechArborA*

Consultant & contractor in woodland management and arboriculture

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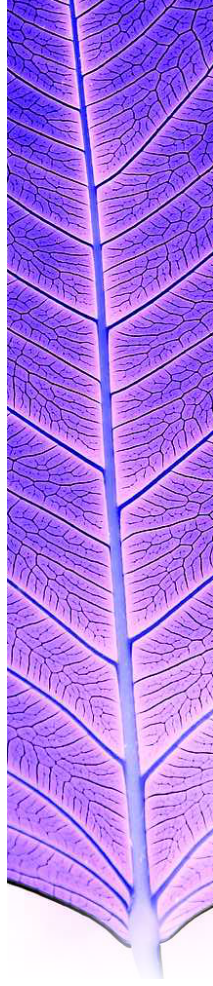
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BS5837 Preliminary Management Recommendations



Ref.	Species	Measurements	Preliminary Management Recommendations	Timescale	Category
T30	Poplar, White (Populus alba)	Height (m): 9 Stem Diam (mm): 570 Branch Spread(m): 5(N), 10(S), 10(E), 5(W) Life Stage: Early Mature	Prune to remove damaged limbs and reduce crown.	Pre Construction	B2 RPA Radius: 6.8m. Area: 145 sq m.
T01	Poplar, White (Populus alba)	Height (m): 7 Stem Diam (mm): 280 Branch Spread(m): 6(N), 3(S), 6(E), 4(W) Life Stage: Early Mature	Heras fencing around root protection areas.	During Construction	B2 RPA Radius: 3.4m. Area: 36 sq m.
T02	Poplar, White (Populus alba)	Height (m): 8 Stem Diam (mm): 300 Branch Spread(m): 5(N), 4(S), 10(E), 4(W) Life Stage: Early Mature	Heras fencing around root protection areas.	During Construction	B2 RPA Radius: 3.6m. Area: 41 sq m.
T03	Poplar, White (Populus alba)	Height (m): 7 Stem Diam (mm): 300 Branch Spread(m): 6(N), 6(S), 5(E), 3(W) Life Stage: Early Mature	Heras fencing around root protection areas.	During Construction	B2 RPA Radius: 3.6m. Area: 41 sq m.

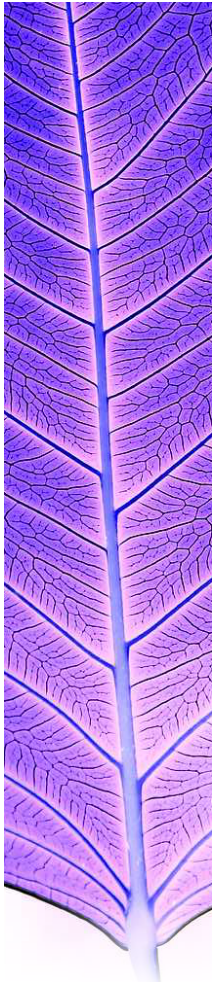
Ref.	Species	Measurements	Preliminary Management Recommendations	Timescale	Category
T04	Poplar, White (Populus alba)	Height (m): 7 Stem Diam (mm): 300 Branch Spread(m): 5(N), 3(S), 5(E), 1(W) Life Stage: Early Mature	Heras fencing around root protection areas.	During Construction	B2 RPA Radius: 3.6m. Area: 41 sq m.
T05	Alder, Italian (Alnus cordata)	Height (m): 8 Stem Diam (mm): 500 Branch Spread(m): 5(N), 6(S), 3(E), 4(W) Life Stage: Early Mature	Heras fencing around root protection areas.	During Construction	B2 RPA Radius: 6.0m. Area: 113 sq m.
T06	Alder, Italian (Alnus cordata)	Height (m): 7 Stem Diam (mm): 500 Branch Spread(m): 6(N), 6(S), 5(E), 2(W) Life Stage: Early Mature	Heras fencing around root protection areas.	During Construction	B2 RPA Radius: 6.0m. Area: 113 sq m.
T07	Alder, Italian (Alnus cordata)	Height (m): 7 Stem Diam (mm): 240 Branch Spread(m): 5(N), 5(S), 1(E), 3(W) Life Stage: Early Mature	Heras fencing around root protection areas.	During Construction	B2 RPA Radius: 2.9m. Area: 26 sq m.
T08	Alder, Italian (Alnus cordata)	Height (m): 11 3 stems, diam(mm): 450, 330, 340, Branch Spread(m): 5(N), 5(S), 3(E), 2(W) Life Stage: Early Mature	Heras fencing around root protection areas.	During Construction	B2 RPA Radius: 7.8m. Area: 191 sq m.
T09	Alder, Italian (Alnus cordata)	Height (m): 11 3 stems, diam(mm): 430, 280, 530, Branch Spread(m): 6(N), 6(S), 6(E), 3(W) Life Stage: Early Mature	Heras fencing around root protection areas.	During Construction	B2 RPA Radius: 8.9m. Area: 249 sq m.

Ref.	Species	Measurements	Preliminary Management Recommendations	Timescale	Category
T10	Alder, Italian (<i>Alnus cordata</i>)	Height (m): 8 3 stems, diam(mm): 450, 330, 340, Branch Spread(m): 6(N), 6(S), 7(E), 4(W) Life Stage: Early Mature	Heras fencing around root protection areas.	During Construction	B2 RPA Radius: 7.8m. Area: 191 sq m.
T11	Willow (<i>Salix</i> sp.)	Height (m): 7 Branch Spread(m): 5(N), 5(S), 5(E), 5(W) Life Stage: Early Mature	Heras fencing around root protection areas.	During Construction	C2 RPA Radius: 2.4m. Area: 18 sq m.
T12	Willow (<i>Salix</i> sp.)	Life Stage: Early Mature	Part of dense and extensive shrubby growth of willow and other species. No particular protection required.	During Construction	C2 RPA too small to calc.
T13	Willow (<i>Salix</i> sp.)	Life Stage: Early Mature	Part of dense and extensive shrubby growth of willow and other species. No particular protection required.	During Construction	C2 RPA too small to calc.
T14	Poplar, White (<i>Populus alba</i>)	Height (m): 8 Stem Diam (mm): 300 Branch Spread(m): 4(N), 7(S), 5(E), 5(W) Life Stage: Early Mature	Heras fencing around root protection areas.	During Construction	B2 RPA Radius: 3.6m. Area: 41 sq m.
T15	Poplar, White (<i>Populus alba</i>)	Height (m): 11 Stem Diam (mm): 400 Branch Spread(m): 8(N), 7(S), 5(E), 3(W) Life Stage: Early Mature	Heras fencing around root protection areas.	During Construction	B2 RPA Radius: 4.8m. Area: 72 sq m.
T16	Poplar, White (<i>Populus alba</i>)	Height (m): 11 Stem Diam (mm): 400 Branch Spread(m): 8(N), 7(S), 5(E), 3(W) Life Stage: Early Mature	Heras fencing around root protection areas.	During Construction	B2 RPA Radius: 4.8m. Area: 72 sq m.

Ref.	Species	Measurements	Preliminary Management Recommendations	Timescale	Category
T17	Pine, Scots (Pinus sylvestris)	Height (m): 11 Stem Diam (mm): 270 Branch Spread(m): 0(N), 4(S), 3(E), 3(W) Life Stage: Semi Mature	Heras fencing around root protection areas.	During Construction	B2 RPA Radius: 3.2m. Area: 32 sq m.
T18	Alder, Italian (Alnus cordata)	Height (m): 11 2 stems, diam(mm): 400, 450, Branch Spread(m): 0(N), 6(S), 7(E), 5(W) Life Stage: Early Mature	Heras fencing around root protection areas.	During Construction	B2 RPA Radius: 7.2m. Area: 163 sq m.
T19	Pine, Scots (Pinus sylvestris)	Height (m): 9 Stem Diam (mm): 270 Branch Spread(m): 2(N), 3(S), 1(E), 4(W) Life Stage: Semi Mature	Heras fencing around root protection areas.	During Construction	C2 RPA Radius: 3.2m. Area: 32 sq m.
T20	Poplar, White (Populus alba)	Height (m): 9 2 stems, diam(mm): 350, 250, Branch Spread(m): 7(N), 6(S), 5(E), 6(W) Life Stage: Early Mature	Heras fencing around root protection areas.	During Construction	B2 RPA Radius: 5.2m. Area: 85 sq m.
T21	Poplar, White (Populus alba)	Height (m): 9 2 stems, diam(mm): 250, 350, Branch Spread(m): 7(N), 7(S), 5(E), 4(W) Life Stage: Early Mature	Heras fencing around root protection areas.	During Construction	B2 RPA Radius: 5.2m. Area: 85 sq m.
T22	Poplar, White (Populus alba)	Height (m): 9 Stem Diam (mm): 350 Branch Spread(m): 4(N), 5(S), 9(E), 0(W) Life Stage: Early Mature	Heras fencing around root protection areas.	During Construction	B2 RPA Radius: 4.2m. Area: 55 sq m.

Ref.	Species	Measurements	Preliminary Management Recommendations	Timescale	Category
T23	Pine, Scots (<i>Pinus sylvestris</i>)	Height (m): 6 Stem Diam (mm): 250 Branch Spread(m): 1(N), 4(S), 2(E), 0(W) Life Stage: Semi Mature	Heras fencing around root protection areas.	During Construction	C2 RPA Radius: 3.0m. Area: 28 sq m.
T24	Pine, Scots (<i>Pinus sylvestris</i>)	Height (m): 7 Stem Diam (mm): 250 Branch Spread(m): 1(N), 3(S), 3(E), 0(W) Life Stage: Semi Mature	Heras fencing around root protection areas.	During Construction	C2 RPA Radius: 3.0m. Area: 28 sq m.
T25	Alder, Italian (<i>Alnus cordata</i>)	Height (m): 9 Stem Diam (mm): 420 Branch Spread(m): 5(N), 6(S), 3(E), 5(W) Life Stage: Early Mature	Heras fencing around root protection areas.	During Construction	B2 RPA Radius: 5.0m. Area: 79 sq m.
T26	Alder, Italian (<i>Alnus cordata</i>)	Height (m): 9 Stem Diam (mm): 470 Branch Spread(m): 6(N), 5(S), 6(E), 3(W) Life Stage: Early Mature	Heras fencing around root protection areas.	During Construction	B2 RPA Radius: 5.6m. Area: 99 sq m.
T27	Alder, Italian (<i>Alnus cordata</i>)	Height (m): 9 Stem Diam (mm): 520 Branch Spread(m): 7(N), 5(S), 5(E), 1(W) Life Stage: Early Mature	Heras fencing around root protection areas.	During Construction	B2 RPA Radius: 6.2m. Area: 121 sq m.
T28	Alder, Italian (<i>Alnus cordata</i>)	Height (m): 9 2 stems, diam(mm): 450, 500, Branch Spread(m): 6(N), 6(S), 4(E), 5(W) Life Stage: Early Mature	Heras fencing around root protection areas.	During Construction	B2 RPA Radius: 8.1m. Area: 206 sq m.

Ref.	Species	Measurements	Preliminary Management Recommendations	Timescale	Category
T29	Alder, Italian (Alnus cordata)	Height (m): 9 Stem Diam (mm): 490 Branch Spread(m): 6(N), 6(S), 6(E), 2(W) Life Stage: Early Mature	Heras fencing around root protection areas.	During Construction	B2 RPA Radius: 5.9m. Area: 109 sq m.
T30	Poplar, White (Populus alba)	Height (m): 9 Stem Diam (mm): 570 Branch Spread(m): 5(N), 10(S), 10(E), 5(W) Life Stage: Early Mature	Heras fencing around root protection areas.	During Construction	B2 RPA Radius: 6.8m. Area: 145 sq m.
T31	Poplar, White (Populus alba)	Height (m): 10 Stem Diam (mm): 410 Branch Spread(m): 2(N), 7(S), 7(E), 2(W) Life Stage: Early Mature	Heras fencing around root protection areas.	During Construction	B2 RPA Radius: 4.9m. Area: 75 sq m.
T32	Poplar, White (Populus alba)	Height (m): 10 Stem Diam (mm): 400 Branch Spread(m): 4(N), 2(S), 7(E), 5(W) Life Stage: Early Mature	Heras fencing around root protection areas.	During Construction	B2 RPA Radius: 4.8m. Area: 72 sq m.
T33	Poplar, White (Populus alba)	Height (m): 12 2 stems, diam(mm): 350, 330, Branch Spread(m): 7(N), 3(S), 9(E), 4(W) Life Stage: Early Mature	Heras fencing around root protection areas.	During Construction	B2 RPA Radius: 5.8m. Area: 106 sq m.



Ref.	Species	Measurements	Physiological and structural condition	Preliminary Management Recommendations	Rem. Contrib. (years)	Category
T01	Poplar, White (Populus alba)	Height (m): 7 Stem Diam (mm): 280 Branch Spread(m): 6(N), 3(S), 6(E), 4(W) Life Stage: Early Mature	One of several trees defining entrance to site.	During construction: Heras fencing around root protection areas.	20+ Years	B2
		Other Reference: Distance1: Distance2: Custom Number 3: Physical Condition: Good Amenity Value: Medium Bat Habitat:	Additional Comments: none			
T02	Poplar, White (Populus alba)	Height (m): 8 Stem Diam (mm): 300 Branch Spread(m): 5(N), 4(S), 10(E), 4(W) Life Stage: Early Mature	One of several trees defining entrance to site.	During construction: Heras fencing around root protection areas.	20+ Years	B2
		Other Reference: Distance1: Distance2: Custom Number 3: Physical Condition: Good Amenity Value: Bat Habitat:	Additional Comments: none			

Ref.	Species	Measurements	Physiological and structural condition	Preliminary Management Recommendations	Rem. Contrib. (years)	Category
T03	Poplar, White (Populus alba)	Height (m): 7 Stem Diam (mm): 300 Branch Spread(m): 6(N), 6(S), 5(E), 3(W) Life Stage: Early Mature	One of several trees defining entrance to site.	During construction: Heras fencing around root protection areas.	20+ Years	B2
		Other Reference: Distance1: Distance2: Custom Number 3: Physical Condition: Amenity Value: Bat Habitat:	Additional Comments: none			RPA Radius: 3.6m. Area: 41 sq m.
T04	Poplar, White (Populus alba)	Height (m): 7 Stem Diam (mm): 300 Branch Spread(m): 5(N), 3(S), 5(E), 1(W) Life Stage: Early Mature		During construction: Heras fencing around root protection areas.	20+ Years	B2
		Other Reference: Distance1: Distance2: Custom Number 3: Physical Condition: Amenity Value: Bat Habitat:	Additional Comments: none			RPA Radius: 3.6m. Area: 41 sq m.
T05	Alder, Italian (Alnus cordata)	Height (m): 8 Stem Diam (mm): 500 Branch Spread(m): 5(N), 6(S), 3(E), 4(W) Life Stage: Early Mature		During construction: Heras fencing around root protection areas.	30+ Years	B2
		Other Reference: Distance1: Distance2: Custom Number 3: Physical Condition: Amenity Value: Bat Habitat:	Additional Comments: none			RPA Radius: 6.0m. Area: 113 sq m.

Ref.	Species	Measurements	Physiological and structural condition	Preliminary Management Recommendations	Rem. Contrib. (years)	Category
T06	Alder, Italian (Alnus cordata)	Height (m): 7 Stem Diam (mm): 500 Branch Spread(m): 6(N), 6(S), 5(E), 2(W) Life Stage: Early Mature	Low spreading crown of coarse branches.	During construction: Heras fencing around root protection areas.	30+ Years	B2
		Other Reference: Distance1: Distance2: Custom Number 3: Physical Condition: Amenity Value: Bat Habitat:	Additional Comments: none			RPA Radius: 6.0m. Area: 113 sq m.
T07	Alder, Italian (Alnus cordata)	Height (m): 7 Stem Diam (mm): 240 Branch Spread(m): 5(N), 5(S), 1(E), 3(W) Life Stage: Early Mature		During construction: Heras fencing around root protection areas.	30+ Years	B2
		Other Reference: Distance1: Distance2: Custom Number 3: Physical Condition: Amenity Value: Bat Habitat:	Additional Comments: none			RPA Radius: 2.9m. Area: 26 sq m.
T08	Alder, Italian (Alnus cordata)	Height (m): 11 3 stems, diam(mm): 450, 330, 340, Branch Spread(m): 5(N), 5(S), 3(E), 2(W) Life Stage: Early Mature		During construction: Heras fencing around root protection areas.	30+ Years	B2
		Other Reference: Distance1: Distance2: Custom Number 3: Physical Condition: Amenity Value: Bat Habitat:	Additional Comments: none			RPA Radius: 7.8m. Area: 191 sq m.

Ref.	Species	Measurements	Physiological and structural condition	Preliminary Management Recommendations	Rem. Contrib. (years)	Category
T09	Alder, Italian (Alnus cordata)	Height (m): 11 3 stems, diam(mm): 430, 280, 530, Branch Spread(m): 6(N), 6(S), 6(E), 3(W) Life Stage: Early Mature		During construction: Heras fencing around root protection areas.	30+ Years	B2
T10	Alder, Italian (Alnus cordata)	Other Reference: Distance1: Distance2: Custom Number 3: Physical Condition: Amenity Value: Bat Habitat:	Additional Comments: none		30+ Years	RPA Radius: 8.9m. Area: 249 sq m.
				During construction: Heras fencing around root protection areas.		
T11	Willow (Salix sp.)	Other Reference: Distance1: Distance2: Custom Number 3: Physical Condition: Amenity Value: Bat Habitat:	Additional Comments: none		30+ Years	RPA Radius: 7.8m. Area: 191 sq m.
			Multi-stemmed, low shrubby/coppice form. Consider as part of more extensive shrubby group.	During construction: Heras fencing around root protection areas.		
		Other Reference: Distance1: Distance2: Custom Number 3: Physical Condition: Amenity Value: Bat Habitat:	Additional Comments: none			RPA Radius: 2.4m. Area: 18 sq m.

Ref.	Species	Measurements	Physiological and structural condition	Preliminary Management Recommendations	Rem. Contrib. (years)	Category
T12	Willow (Salix sp.)	Life Stage: Early Mature	Multi-stemmed, low shrubby/coppice form. Consider as part of more extensive shrubby group.	During construction: Part of dense and extensive shrubby growth of willow and other species. No particular protection required.	Not Recorded	C2
		Other Reference: Distance1: Distance2: Custom Number 3: Physical Condition: Amenity Value: Bat Habitat:	Additional Comments: none			
T13	Willow (Salix sp.)	Life Stage: Early Mature	Multi-stemmed, low shrubby/coppice form. Consider as part of more extensive shrubby group.	During construction: Part of dense and extensive shrubby growth of willow and other species. No particular protection required.		C2
		Other Reference: Distance1: Distance2: Custom Number 3: Physical Condition: Amenity Value: Bat Habitat:	Additional Comments: none			
T14	Poplar, White (Populus alba)	Height (m): 8 Stem Diam (mm): 300 Branch Spread(m): 4(N), 7(S), 5(E), 5(W) Life Stage: Early Mature		During construction: Heras fencing around root protection areas.	20+ Years	B2
		Other Reference: Distance1: Distance2: Custom Number 3: Physical Condition: Amenity Value: Bat Habitat:	Additional Comments: none			

RPA
Radius: 3.6m.
Area: 41 sq m.

Ref.	Species	Measurements	Physiological and structural condition	Preliminary Management Recommendations	Rem. Contrib. (years)	Category
T15	Poplar, White (Populus alba)	Height (m): 11 Stem Diam (mm): 400 Branch Spread(m): 8(N), 7(S), 5(E), 3(W) Life Stage: Early Mature		During construction: Heras fencing around root protection areas.	20+ Years	B2
		Other Reference: Distance1: Distance2: Custom Number 3: Physical Condition: Amenity Value: Bat Habitat:	Additional Comments: none			RPA Radius: 4.8m. Area: 72 sq m.
T16	Poplar, White (Populus alba)	Height (m): 11 Stem Diam (mm): 400 Branch Spread(m): 8(N), 7(S), 5(E), 3(W) Life Stage: Early Mature		During construction: Heras fencing around root protection areas.	20+ Years	B2
		Other Reference: Distance1: Distance2: Custom Number 3: Physical Condition: Amenity Value: Bat Habitat:	Additional Comments: none			RPA Radius: 4.8m. Area: 72 sq m.
T17	Pine, Scots (Pinus sylvestris)	Height (m): 11 Stem Diam (mm): 270 Branch Spread(m): 0(N), 4(S), 3(E), 3(W) Life Stage: Semi Mature		During construction: Heras fencing around root protection areas.	40+ Years	B2
		Other Reference: Distance1: Distance2: Custom Number 3: Physical Condition: Amenity Value: Bat Habitat:	Additional Comments: none			RPA Radius: 3.2m. Area: 32 sq m.

Ref.	Species	Measurements	Physiological and structural condition	Preliminary Management Recommendations	Rem. Contrib. (years)	Category
T18	Alder, Italian (Alnus cordata)	Height (m): 11 2 stems, diam(mm): 400, 450, Branch Spread(m): 0(N), 6(S), 7(E), 5(W) Life Stage: Early Mature		During construction: Heras fencing around root protection areas.	30+ Years	B2
		Other Reference: Distance1: Distance2: Custom Number 3: Physical Condition: Amenity Value: Bat Habitat:	Additional Comments: none			RPA Radius: 7.2m. Area: 163 sq m.
T19	Pine, Scots (Pinus sylvestris)	Height (m): 9 Stem Diam (mm): 270 Branch Spread(m): 2(N), 3(S), 1(E), 4(W) Life Stage: Semi Mature		During construction: Heras fencing around root protection areas.	30+ Years	C2
		Other Reference: Distance1: Distance2: Custom Number 3: Physical Condition: Amenity Value: Bat Habitat:	Additional Comments: none			RPA Radius: 3.2m. Area: 32 sq m.
T20	Poplar, White (Populus alba)	Height (m): 9 2 stems, diam(mm): 350, 250, Branch Spread(m): 7(N), 6(S), 5(E), 6(W) Life Stage: Early Mature		During construction: Heras fencing around root protection areas.	20+ Years	B2
		Other Reference: Distance1: Distance2: Custom Number 3: Physical Condition: Amenity Value: Bat Habitat:	Additional Comments: none			RPA Radius: 5.2m. Area: 85 sq m.

Ref.	Species	Measurements	Physiological and structural condition	Preliminary Management Recommendations	Rem. Contrib. (years)	Category
T21	Poplar, White (Populus alba)	Height (m): 9 2 stems, diam(mm): 250, 350, Branch Spread(m): 7(N), 7(S), 5(E), 4(W) Life Stage: Early Mature		During construction: Heras fencing around root protection areas.	20+ Years	B2
		Other Reference: Distance1: Distance2: Custom Number 3: Physical Condition: Amenity Value: Bat Habitat:	Additional Comments: none			RPA Radius: 5.2m. Area: 85 sq m.
T22	Poplar, White (Populus alba)	Height (m): 9 Stem Diam (mm): 350 Branch Spread(m): 4(N), 5(S), 9(E), 0(W) Life Stage: Early Mature		During construction: Heras fencing around root protection areas.	20+ Years	B2
		Other Reference: Distance1: Distance2: Custom Number 3: Physical Condition: Amenity Value: Bat Habitat:	Additional Comments: none			RPA Radius: 4.2m. Area: 55 sq m.
T23	Pine, Scots (Pinus sylvestris)	Height (m): 6 Stem Diam (mm): 250 Branch Spread(m): 1(N), 4(S), 2(E), 0(W) Life Stage: Semi Mature		During construction: Heras fencing around root protection areas.	30+ Years	C2
		Other Reference: Distance1: Distance2: Custom Number 3: Physical Condition: Amenity Value: Bat Habitat:	Additional Comments: none			RPA Radius: 3.0m. Area: 28 sq m.

Ref.	Species	Measurements	Physiological and structural condition	Preliminary Management Recommendations	Rem. Contrib. (years)	Category
T24	Pine, Scots (Pinus sylvestris)	Height (m): 7 Stem Diam (mm): 250 Branch Spread(m): 1(N), 3(S), 3(E), 0(W) Life Stage: Semi Mature		During construction: Heras fencing around root protection areas.	30+ Years	C2
		Other Reference: Distance1: Distance2: Custom Number 3: Physical Condition: Amenity Value: Bat Habitat:	Additional Comments: none			RPA Radius: 3.0m. Area: 28 sq m.
T25	Alder, Italian (Alnus cordata)	Height (m): 9 Stem Diam (mm): 420 Branch Spread(m): 5(N), 6(S), 3(E), 5(W) Life Stage: Early Mature		During construction: Heras fencing around root protection areas.	30+ Years	B2
		Other Reference: Distance1: Distance2: Custom Number 3: Physical Condition: Amenity Value: Bat Habitat:	Additional Comments: none			RPA Radius: 5.0m. Area: 79 sq m.
T26	Alder, Italian (Alnus cordata)	Height (m): 9 Stem Diam (mm): 470 Branch Spread(m): 6(N), 5(S), 6(E), 3(W) Life Stage: Early Mature		During construction: Heras fencing around root protection areas.	30+ Years	B2
		Other Reference: Distance1: Distance2: Custom Number 3: Physical Condition: Amenity Value: Bat Habitat:	Additional Comments: none			RPA Radius: 5.6m. Area: 99 sq m.

Ref.	Species	Measurements	Physiological and structural condition	Preliminary Management Recommendations	Rem. Contrib. (years)	Category
T27	Alder, Italian (Alnus cordata)	Height (m): 9 Stem Diam (mm): 520 Branch Spread(m): 7(N), 5(S), 5(E), 1(W) Life Stage: Early Mature		During construction: Heras fencing around root protection areas.	30+ Years	B2
		Other Reference: Distance1: Distance2: Custom Number 3: Physical Condition: Amenity Value: Bat Habitat:	Additional Comments: none			RPA Radius: 6.2m. Area: 121 sq m.
T28	Alder, Italian (Alnus cordata)	Height (m): 9 2 stems, diam(mm): 450, 500, Branch Spread(m): 6(N), 6(S), 4(E), 5(W) Life Stage: Early Mature		During construction: Heras fencing around root protection areas.	30+ Years	B2
		Other Reference: Distance1: Distance2: Custom Number 3: Physical Condition: Amenity Value: Bat Habitat:	Additional Comments: none			RPA Radius: 8.1m. Area: 206 sq m.
T29	Alder, Italian (Alnus cordata)	Height (m): 9 Stem Diam (mm): 490 Branch Spread(m): 6(N), 6(S), 6(E), 2(W) Life Stage: Early Mature		During construction: Heras fencing around root protection areas.	30+ Years	B2
		Other Reference: Distance1: Distance2: Custom Number 3: Physical Condition: Amenity Value: Bat Habitat:	Additional Comments: none			RPA Radius: 5.9m. Area: 109 sq m.

Ref.	Species	Measurements	Physiological and structural condition	Preliminary Management Recommendations	Rem. Contrib. (years)	Category
T30	Poplar, White (Populus alba)	Height (m): 9 Stem Diam (mm): 570 Branch Spread(m): 5(N), 10(S), 10(E), 5(W) Life Stage: Early Mature	One of several trees defining entrance to site. Some limb damage to S/SE and possible canker.	Pre construction: Prune to remove damaged limbs and reduce crown. During construction: Heras fencing around root protection areas.	20+ Years	B2
		Other Reference: Distance1: Distance2: Custom Number 3: Physical Condition: Amenity Value: Bat Habitat:	Additional Comments: none			RPA Radius: 6.8m. Area: 145 sq m.
T31	Poplar, White (Populus alba)	Height (m): 10 Stem Diam (mm): 410 Branch Spread(m): 2(N), 7(S), 7(E), 2(W) Life Stage: Early Mature	One of several trees defining entrance to site.	During construction: Heras fencing around root protection areas.	20+ Years	B2
		Other Reference: Distance1: Distance2: Custom Number 3: Physical Condition: Amenity Value: Bat Habitat:	Additional Comments: none			RPA Radius: 4.9m. Area: 75 sq m.
T32	Poplar, White (Populus alba)	Height (m): 10 Stem Diam (mm): 400 Branch Spread(m): 4(N), 2(S), 7(E), 5(W) Life Stage: Early Mature	One of several trees defining entrance to site.	During construction: Heras fencing around root protection areas.	20+ Years	B2
		Other Reference: Distance1: Distance2: Custom Number 3: Physical Condition: Amenity Value: Bat Habitat:	Additional Comments: none			RPA Radius: 4.8m. Area: 72 sq m.

Ref.	Species	Measurements	Physiological and structural condition	Preliminary Management Recommendations	Rem. Contrib. (years)	Category
T33	Poplar, White (Populus alba)	Height (m): 12 2 stems, diam(mm) : 350, 330, Branch Spread(m): 7(N), 3(S), 9(E), 4(W) Life Stage: Early Mature	One of several trees defining entrance to site.	During construction: Heras fencing around root protection areas.	20+ Years	B2
		Other Reference: Distance1: Distance2: Custom Number 3: Physical Condition: Amenity Value: Bat Habitat:	Additional Comments: none			
						RPA Radius: 5.8m. Area: 106 sq m.



Milton townworks - Eco pod development

Tree location

Retention cat. B - root protection area

Retention cat. C - root protection area

Crown extent

Proposed fence - proposed line to avoid RPA's

Tom Dudson MSc: MCFor TechAbora
Hearwood Enterprises
For: Barnes Walker
Tree survey plan overlaid on topo
plan from:
Survey Operations
Scale 1:500 (printed at A2)

479500N



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