

TREE SURVEY, ARBORICULTURAL IMPACT ASSESSMENT & METHOD STATEMENT

FOR

PROPOSED ROAD IMPROVEMENTS AT JUNCTION OF POGMOOR ROAD AND DODWORTH ROAD, BARNSLEY

September 2017
Revised 28 June 2018 – Road alignment adjusted
Revised 04 Sept 2018 – Small understorey trees added
Revised 02 Dec 2018 – Noise attenuation, compound, road alignment adjusted

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On behalf of
Barnsley MBC

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HD/7122127/C-1 Rev A General Layout

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1 Introduction

1.1 Instruction

In September 2017 Wainwright Landscape Architecture were requested by Barnsley MDC to undertake a tree survey on the site of proposed road improvements near Junction 37 of the M1 at the junction of Pogmoor Road with Dodworth Road in Barnsley, in accordance with BS 5837:2012 'Trees in Relation to design, demolition and construction – Recommendations', and also to provide an arboricultural impact assessment.

This report was revised in June 2018 to take account of an updated layout plan of the proposals. (Option G) and updated in September 2018 to include smaller trees affected within understorey groups.

1.2 Scope of Report

The purpose of the tree survey is to provide detailed and accurate information which will enable the planning and successful layout of the scheme and to minimise impact on trees to be retained. The survey will also assist in development of a future maintenance strategy, and the layout of new planting. Soil Type was not assessed.

Details of the condition of existing trees and maintenance recommendations are given on a tree by tree basis or as tree groups where appropriate. Guidance is provided for the protection of existing trees during demolition and construction processes.

The term 'group' is used to define trees that form a cohesive arboriculture feature either aerodynamically, visually or culturally, including for biodiversity. Assessment of individuals within a group has still been undertaken if there is need to differentiate between them.

1.3 Tree Statement and Report Limitations

Trees are living organisms and their health and physical condition can change rapidly due to site and climatic conditions. The tree survey is based on evidence available at the time of the survey. This report is valid for one year from the date of site inspection.

Any changes to physical site conditions after the date of this survey will have the potential to change the findings and recommendations.

It is beyond the scope of this report to comment on structural damage that may be associated with tree growth or related soil subsidence.

The survey and assessment of the tree groups is intended to provide an overall average grading and recommendation for that group. If the group is partly removed the remaining trees will need to be reviewed on a tree by tree basis based on condition, context and association with the remaining trees.

2 Site Visit and Methodology

2.1 Site Visit

Site visits for the survey were undertaken by Wainwright Landscape Architecture on 14th and 15th October 2017.

2.2 Brief Description of the Site

The survey site comprises a local park area, (Penny Pie Park), bounded by Pogmoor Road and Dodworth Road to the west and south respectively. A railway runs in a cutting along the northern boundary. The eastern boundary is formed by housing.

A play area is located within the park and there is a footpath route close to the northern and eastern boundaries. The bulk of the site is mown grassland, although part is an area given over to more natural vegetation. Trees and shrubs beds are located around the borders of the grassland area.

The site appears well used by students accessing Horizon Community College on Dodworth Road, and by dog walkers.

2.3 Trees Subject to Statutory Controls

Barnsley online mapping was consulted[1] and indicates that trees on the site are not protected by a Tree Preservation Order and the site is not within a Conservation Area.

2.4 Survey Methodology

The format of the survey follows the guidelines of British Standard BS 5837:2012 'Trees in Relation to design, demolition and construction – Recommendations'

The site survey has been carried out from ground level, and is based on a site topographical survey provided by Barnsley Council.

The species and condition of all trees or groups with stems over 75mm diameter @ 1.5 above ground level were surveyed. The survey includes all trees within the site and all trees adjacent to the site boundary which may potentially be affected by the works. All trees and tree groups within the survey have been individually numbered for identification purposes in the format T1, T2, T3 (individual trees), G1, G2, G3 (tree groups), and corresponding numbers have been used both on the Tree Survey Plans and within the Tree Survey Schedule.

In the case of woodlands or substantial tree groups, only individual trees with stem diameters greater than 150mm usually need to be plotted.

Other details have been included in the survey such as: height, stem diameter, branch spread, crown clearance, life stage, and estimated remaining contribution.

Tree heights have been estimated. Crown spreads have been measured with a tape to the nearest 0.5m.

[1] https://www.barnsley.gov.uk/barnsley-maps/tree-preservation-orders/

Life Stage has been defined as: Young (self-seeded / stake dependent), Semi-mature (not sexually mature / stem up to 30cm girth capable of being transplanted), Early Mature (up to 75% of expected mature size), Mature (fully developed size), Over Mature (tree beyond mature in natural decline).

Attention in the survey has been given to the size and form of each tree or group; physiological condition (Good, Moderate, Poor, Dead); any structural defects where apparent; the location of each tree in relation to existing features.

Preliminary management recommendations have also been given including recommendations for further investigation of suspected defects that require more detailed assessment and potential for wildlife habitat (if relevant).

2.5 Tree Classification (Grade)

On the basis of this assessment and following guidelines in BS 5837 : 2012, trees have been classified into one of the following categories, differentiated by colour on the attached Tree Survey Plans (see Appendix A):

Category A - Trees of High Quality (light green);
Trees able to make a substantial contribution.

Category B - Trees of Moderate Quality (mid blue);
Trees able to make a significant contribution.

Category C - Trees of Low Quality (grey);
Trees in adequate condition.

Category U - Trees Unsuitable for Retention (dark red);
Trees that are dead, serious structural defects or disease.

BS 5837:2012 recommends a sub division of each of the above categories into 1, 2 and 3 to reflect:

(1) Mainly Arboricultural Qualities
(2) Mainly Landscape Qualities
(3) Mainly Cultural Values

On this site all trees were judged to have mainly Landscape Qualities (2). Due to the grouping of the trees there were no specimens of mainly high arboricultural value (1) and no trees of cultural value (3) were noted.

2.6 Assessment of Tree Groups

Shrub masses were surveyed separately and in accordance with BS 5837:2012 4.4.2.7. Height, species and general descriptive information has been indicated on the survey plans where relevant.

3 Site Observations and Notes on Specific Trees

3.1 Tree Overview

Trees are set mainly around the perimeter of the site, often associated with ornamental shrubs. They form a strong boundary between roads and the parkland (along Pogmoor Road and Dodworth Road), and a buffer between the park and housing on the eastern boundary. The northern boundary, next to the railway line, is less strong and less formal comprising a more native mix of trees and shrubs.

Two groups of old, tall poplars within the park are very distinctive visually and of high wildlife value.

3.2 Trees Surveyed

A total of 116 individual trees and 8 tree groups were surveyed. Trees are located as shown on the Tree Survey plans (see Appendix A). Survey data is summarised in the Tree Survey Schedule (see Appendix B).

3.3 Species Diversity

The majority of the trees are non-native species with Norway maple, sycamore and lime varieties appearing frequently. Due to the variability of these species it has been difficult to identify precise varieties so most are identified by genus or species only. Walnut, ash, horse chestnut, cherry, plum and a few large weeping willows are also represented. Occasional more unusual species, such as tulip tree and Indian bean tree, were also noted. Table 1 shows the number of individuals and groups recorded.

3.4 Age Distribution

Many of the trees along the Dodworth Road and Pogmoor Road boundaries are of a similar age. Marked as ‘mature’ on the schedule, they are likely to be 30-50years old.

The large weeping willows (T76, T79, T80) are likely to be older than this, as are the two groups of hybrid poplars in the centre of the site. The poplars could be older than 60years. They show many signs of senescence and are possibly unstable due to physiological condition, age and height. However, the poorer condition poplars have been allocated a C category rather than an U (unsuitable for retention) due to their potential wildlife value.

Table 1: Species Diversity Individual Trees

Common Name	Botanical Name	Quantity	Approx. %
Norway maple	Acer platanoides spp	28	21
Lime	Tilia spp	21	16
Maidenhair tree	Ginko biloba	1	1
Laburnum	Laburnum spp.	3	2
Sycamore	Acer psuedoplatanus spp	16	12
Black polar hybrid	Populus nigra var	15	11
Ornamental Cherry spp.	Prunus spp	10	7
Weeping willow	Salix babylonica	5	4
Walnut	Juglans regia	6	5
Ash	Fraxinus excelsior	4	3
Horse chestnut	Aesculus hippocastanum	3	2
Alder	Alnus glutinosa	2	1
Tulip tree	Liriodendron tulipifera	2	1
Plum + Purple Plum	Prunus domestica Prunus cerasifera	5	4
Crack willow	Salix fragilis	3	2
Birch	Betula pendula	1	1
Beech	Fagus sylvatica	1	1
Rowan	Sorbus aucuparia	3	2
Goat willow	Salix caprea	1	1
Cotoneaster	Cotoneaster cornubia	2	1
Indian bean tree	Catalpa bignoniodes	2	2
	Total	**134**	**100**

3.5 Grading Classification

Distribution of category grading is depicted in The Tree Survey Schedule and shows that 5 trees within the survey population achieve a grade ‘A’, 47 are grade B, 78 are grade C and 4 are grade U.

Generally, the trees contribute to the wider collective landscape value as a group providing an important element of the local streetscape, despite their sometimes slightly impaired individual condition.

Most of the trees have been well managed to maintain a safe parkland space and clear roadways, although the proximity of trees to each other has lead to crown suppression in many of the individual trees.

3.6 Trees and Woodland to be removed

The following table lists all trees proposed to be removed as part of the scheme. This shows the worst-case scenario.

Table 4: Trees and Tree Groups to be removed or thinned

Ref.	Description	Grade	Quantity
	% Grade of individual trees removed	A - 4% B – 29% C – 62% U – 5%	
T1, T2, T15, T19, G3 (2no.), T65, T66, T67, T68, T71, G8(1no.)	Norway Maple		12 no.
T11, T12, G1 (3no.), T16, T50, T64	Sycamore		8 no.
T13, T17, T37, T38, T42, T52, T55, T69, T70, T77, T83, T85, T86	Lime		13 no.
T14, G1 (1no.), T41, T75	Ash		4 no.
T18, T89	Poplar		2 no.
T20, T22, T51, G8(1no.), T116	Walnut		5 no.
T21, T23, G3(2no.), T82, T109, T112, T115	Ornamental Cherry		8 no.
T5	Beech		1 no.
T6	Alder		1 no.
T39, T40	Cotoneaster		2 no.
T53, G2 (5no.), G4(2no.), T81	Plum		9 no.
T54, T79, T80	Weeping Willow		3 no.
T56	Tulip Tree		1 no.
G4(1no.)	Rowan		1 no.
G4(2no.), T113	Laburnum		3 no.
T84, T114	Indian Bean Tree		2 no.
G8(1no.)	Dead stem unknown spp.		1 no.
		Total	76 no.

Many of the trees that will be lost due to the road-junction improvement proposals are located along the edge of Penny Pie Park and A628 Dodworth Road. They are part of a belt of trees visible along this route into Barnsley, contributing significantly towards a positive 'green' impression of Barnsley when approaching the town from the west. It is important to try and maintain this green approach as far as possible.

It is recommended that the details of the design layout are explored to try and reduce the numbers of mature trees lost. Consideration could be given to re-routing the footway on the north side of Dodworth Road through the park to retain a greater proportion of the existing roadside trees.

4 Tree Constraints and Protection Measures

4.1 Root Protection Area

The protection of existing trees is vital if trees are to be successfully retained within or adjacent to new development. All trees to be retained should be protected by barriers and / or ground protection. Barriers should be fit for excluding construction activity and appropriate to the degree and proximity of work taking place around the retained trees. Special attention should be paid to ensuring that barriers remain rigid and complete.

To avoid damage to tree roots or rooting environment, a minimum area or Root Protection Area (RPA) in m2 should be left undisturbed around each tree to be retained.

4.2 Root Protection Area Calculation

The RPA for individual trees has been plotted on the Tree Survey Plans as a circle centred on the base of that stem. The RPA for tree several groups is estimated based on the RPA of significant ends or canopy edge of large trees, then linked together.

4.3 Protective Fencing

The recommended location of protective fencing is shown on the Tree Survey Plans in Appendix A (also the 'Tree Protection Plans').

Protective fencing and barriers should be constructed in accordance with Section 6.2 and Figure 2 + 3 of BS 5837:2012 and fit for excluding construction activity.

5 Strategic Overview, Future Management and Recommendations for New Planting

5.1 Tree Constraints During Design and Development

It is essential when selecting trees to be retained to make practical provision for protection during the development work. Root Protection Areas and the location for barrier fencing have been indicated on the Tree Survey plans.

Careful consideration should also be taken of the location of services. If possible, service layout should be designed to follow common trenches, and leaving suitable space for tree planting and avoiding Root Protection Areas. This will also avoid subsequent disruption of trees during routine maintenance of services.

Future post development maintenance of new and existing trees is vital if new trees are to become successfully established, and the older trees are to be safely retained. Maintenance of new planting is also important during the establishment period.

5.2 Design Considerations for New Planting

All new tree planting should take into consideration the future use, layout and design of the new road, constraints of the soil and climate, the local landscape character and contextual surroundings.

There will be a loss of just under 50% of the tree cover on the site, most of it along Dodworth Road. The unaffected trees located immediately behind these removed trees should be supplemented by new planting to form a dense roadside tree belt to recreate and enhance the existing vegetation pattern. (Alternatively, consideration could be given to re-routing the footway behind the perimeter trees as para 3.6 above)

All new planting should be designed in conjunction with the proposed new ‘Gateway Feature’ and the design for the remaining areas of Penny Pie Park.

6 Tree Removal and Surgery of Trees to be Retained

6.1 Tree Works

The tree by tree survey indicates all trees which should be removed, and all work needed to individual trees or groups. Consideration should be given during the tree works operations to balance and form, in association with the adjacent trees to be retained within a group. A system should be adopted where all trees to be felled and all stumps grubbed up should be removed first, so that subsequent crown shaping work may be considered within the context of the remaining space.

Tree removal and surgery work should be made following the recommendations of BS 3998, and a qualified tree works contractor / arboriculturalist should be used to carry out any of the works.

6.2 Bats - Protected Species

All British bat species are protected under Schedule 5 of the Wildlife and Countryside Act 1981, as updated by the Countryside and Rights of Way Act 2000. All British bats are also included on Schedule 2 of the Conservation (Natural Habitats etc) Regulations 1994 as European Protected Species.

It is an offence to intentionally or recklessly kill, injure or capture bats; deliberately or recklessly disturb bats (whether in roots or not); damage, destroy or obstruct access to bat roosts.

6.3 Birds - Protected Species

The main bird nesting season is between March and August inclusive. Contractors have a legal responsibility to comply with current legislation relating to breeding birds.

Under the Wildlife and Countryside Act 1981 and the Countryside and Rights of Way Act 2000, all birds, their nests and eggs are protected and it is an offence to take, damage or destroy the nest of any wild bird; take or destroy the egg of any wild bird; disturb any wild bird on Schedule 1 while it is nest building, at nest containing young, or disturb the dependent young of such a bird.

7 Arboricultural Method Statement

7.1 Work Covered by the Method Statement

The Arboricultural Method Statement (AMS) shall apply to installation of temporary tree protection fencing and other works within the RPA or beneath canopies. Work within the RPA includes the construction of noise attenuation barriers near the north and east boundaries. To the north a 1.5m high gabion wall is to be constructed. To the east an acoustic fence 2.4m high is to be constructed (see tree survey plans).

7.2 Tree Protection Fencing

The tree protection fencing (TPF) in accordance with BS5837:2012 will be erected on the lines shown on Drg Nos J207/01C to J207/05C to create construction exclusion zones before any equipment or material is brought onto site. TPF will be maintained in a good and effective condition for the duration of the construction works.

Advanced written notice is required to inform the local planning authority that the fence is in place to allow inspection and approval of it. Contact address: Ed Jowett, Tree Officer, Planning and Building Control, Economic Regeneration, Place Directorate, Barnsley MBC, PO Box 634, S70 9GG Tel: 01226 772557, email: : DevelopmentControl@barnsley.gov.uk giving planning permission reference.

7.3 Watching Brief

Where work is to be carried out in the RPA near tree roots, a professionally qualified arboriculturist is to check the setting out of the line of the gabion and the acoustic fence before any work starts and is to be present when the exploratory holes for posts are being dug. Where practical and possible, minor adjustments should be agreed to avoid adverse effects.

7.4 Construction of Gabion Wall

The gabion wall will be 1.5m high and 1m wide, and will be constructed on a foundation of 200mm of MOT Type 1 with 100mm of concrete. The wall foundation will be locally raised to minimise excavation within the RPA or under the canopy of the trees.

The exact line of the gabion wall will be agreed on site with arboriculturist and BMBC Tree Officer to avoid the RPA and minimise impact on the trees.

7.5 Construction of Acoustic Fence

The acoustic fence will be 2.4m high (typically a close boarded timber construction). Posts spacing will be adjusted to find the best alignment between trees, to avoid tree stems and reduce impact or the root zone (following NJUG 10 guidelines).

The posts will be driven in, avoiding the need for concrete foundation blocks.

Exploratory holes for posts will be hand dug to an approximate depth of 40cm to check for any structural roots, with an arboriculturist present. If no roots are present, the post will be driven in with a mechanical driver until firm, and the top sawn off to the required height. The excavated soil will then be returned to the hole in two layers, firming each layer thoroughly with the heel.

Once the work is complete, unless in the dormant season (November to March), a high phosphate fertiliser should be applied and worked into the disturbed ground at a rate of 75g/m2.

7.6 Other General Requirements

All other construction work (including the site compound) shall be located outside the RPA and tree canopies.

Specific areas for working room, storage and vehicle manoeuvring will be agreed before setting up on site within the area set aside for working and storage outside the construction exclusion zones on Drg Nos J207/01C to J207/05C.

Areas for storage of substances harmful to trees should not be located uphill of a tree or within 10m of a tree trunk.

No fires should be lit where the flames might be within 5m of tree foliage, trunk or branches, which will be dependent on the size of fire and wind direction.

Within the construction exclusion zone, no equipment, machinery or materials shall be used, stored or burnt.

The main contractor will be responsible for informing all subcontractors that the areas beyond the protective fence are out of bounds, and for ensuring that the fence is repaired quickly.

Should any works be required within the protected areas, prior written approval is required from the local planning authority.

8 Summary

8.1 The Site

The survey site is a small park of mainly open grassland with a belt of trees and shrubs along its southern (Dodworth Road) and western (Pogmoor Road) boundaries. A railway cutting of native trees and shrubs forms the northern boundary and a wider woodland belt buffers the eastern boundary from adjacent housing.

8.2 Individual trees, Groups of trees and shrubs

Most of the trees are of ornamental or semi-native species and of a similar age, 30-50years old, with several older poplar trees.

The trees are set mainly around the perimeters of the park. Those on the Dodworth Road boundary form a visually important roadside tree belt. Trees and shrubs along Pogmoor Road form a similar screening function but are a less continuous belt.

8.3 Specific Tree Observations

The groups of black poplar hybrids near the centre of the park are all over mature and most show signs of senescence and instability but are not recommended for removal due to their potential wildlife value. Of the five trees allocated a grade A, three are the trees set on the road verge on Pogmoor Road where space has allowed the formation of well-balanced trees. (T77, T85, T86).

8.4 Impact Assessment and Recommendations

Generally the trees are a mix of category B and C, with a scattering of category A trees. Many have supressed or one-side crowns due to proximity to other trees. However, they have been generally well managed and have significant collective value to the landscape as a group features.

Approximately 76 no. will be lost as result of the proposed works. Of these 4% are grade A, 29% are grade B , 62% are grade C, and 5% are Unsuitable for retention.

It is recommended that substantial replacement tree planting is undertaken, particularly along Dodworth Road frontage. This should be linked in design and species to the design of the Gateway Feature and the remainder of Penny Pie Park. Consideration could be given to re-routing the footway on the north side of Dodworth Road through the park to retain a greater proportion of the existing roadside trees.

Tree protection fencing is recommended to protect the roots of the trees to be retained, all in accordance with the recommendations of BS 5837:2012 and the Tree Protection Plan.

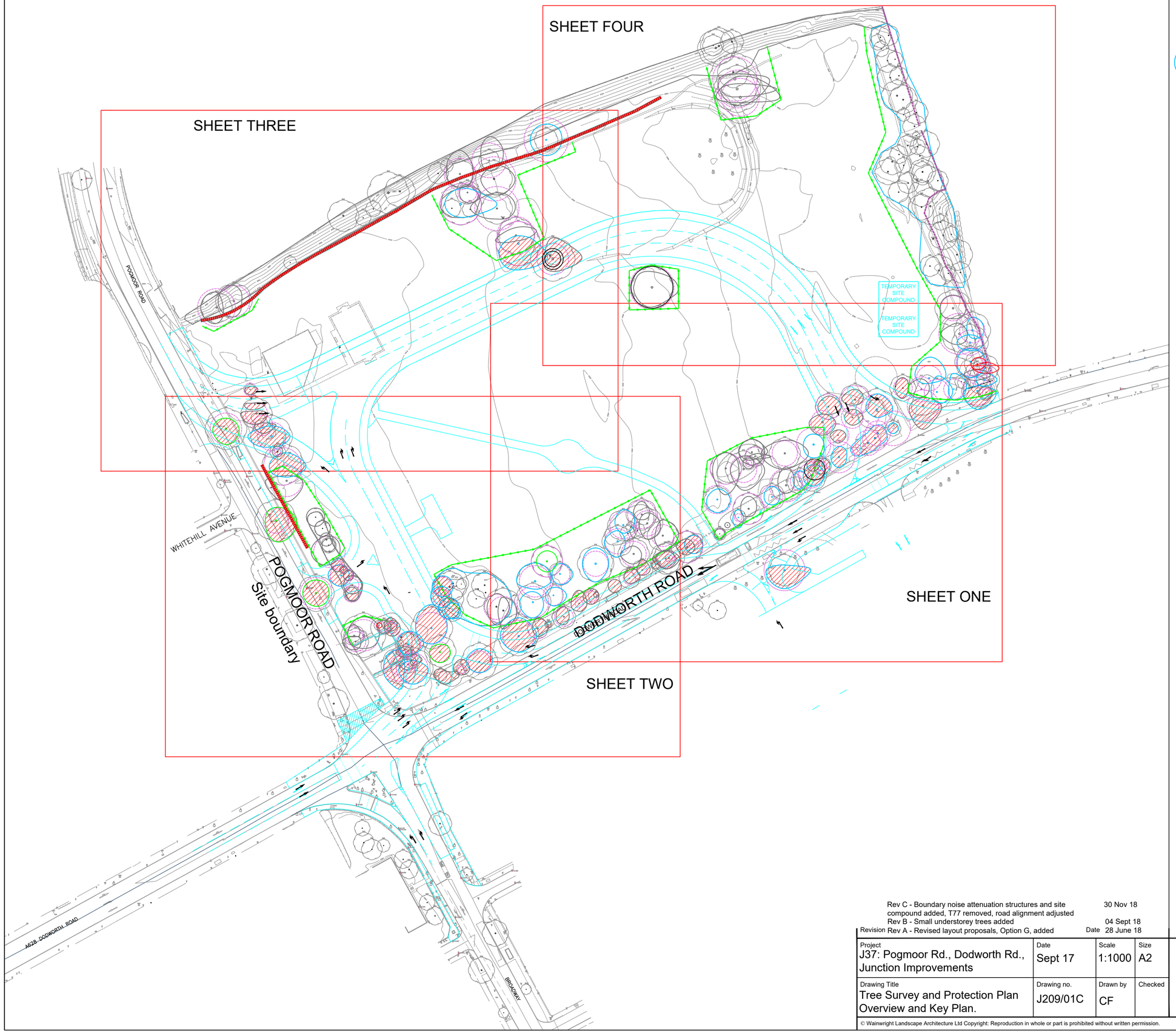
This report includes and arbricultural method statement for construction of acoustic attenuation barriers within the Root Protection Areas.

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Appendix A Drawings

J209/01C Overview and Key Plan
J209/02C Tree Survey & Tree Protection Plan (sheet 1/4)
J209/03C Tree Survey & Tree Protection Plan (sheet 2/4)
J209/04C Tree Survey & Tree Protection Plan (sheet 3/4)
J209/05C Tree Survey & Tree Protection Plan (sheet 4/4)

HD/7122127/C-1 Rev A General Layout



KEY

REFERENCE
BS 5837:2012 Category.

- T22 A — A - High quallity
- T22 B — B - Moderate quality
- T22 C — C - Low quality
- T22 U — U - Trees Unsuitable for Retention
- Other tree groups and hedgerows
- Trees to be removed due to proposed works
- Tree protection fencing to BS5837
- Root Protection Areas (RPA)
- Proposed gabion wall
- Proposed acoustic fence

Alignment of gabion wall and acoustic fence - to be confirmed on site with arboriculurist and BMBC Tree Officer

N

Tree numbers refer to schedule in Tree Survey Report .

The RPA should be created using a robust barrier fence that fully meets the requirements of BS 5837:2012.

Barrier fence to be 2m high 'Heras' type weldmesh fencing panels, well braced to resist impacts, or a framework of vertical and horizontal tubular scaffold poles braced sufficiently to receive weld mesh which should itself be securely fixed with wire or scaffold clamps.

The fencing should be sufficiently strong to withstand impacts likely to be caused during building operations.

All-weather signs should also be affixed to the fencing at regular intervals stating; "CONSTRUCTION EXCLUSION ZONE KEEP OUT."

Revision		Date
	Rev C - Boundary noise attenuation structures and site compound added, T77 removed, road alignment adjusted	30 Nov 18
	Rev B - Small understorey trees added	04 Sept 18
	Rev A - Revised layout proposals, Option G, added	28 June 18

Project	Date	Scale	Size
J37: Pogmoor Rd., Dodworth Rd., Junction Improvements	Sept 17	1:1000	A2
Drawing Title	**Drawing no.**	**Drawn by**	**Checked**
Tree Survey and Protection Plan Overview and Key Plan.	J209/01C	CF	

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Alignment of gabion wall and acoustic fence - to be confirmed on site with arboriculurist and BMBC Tree Officer

N

TEMPORARY SITE COMPOUND

DODWORTH ROAD

T105 T103 T104 T102 T7 T6 T5 T4 T3 T10 T13 T8 T11 T9 T2 T1 T12 T15 T16 T14 T17 T19 T18 T20 T108 T21 G1 T36 T35 T34 T30 T32 T33 T109 T22 T23 T24 T25 T26 T31 T27 T28 T110 T29 T48 T47 T49 T43 T46 T44 T37 T38 T39 T40 T41 T112 T45 T58 T59 T57 T61 T60 T62 T63 T113 T42 T114 T50 T51 T52 T53 T115 T54 T55 T107

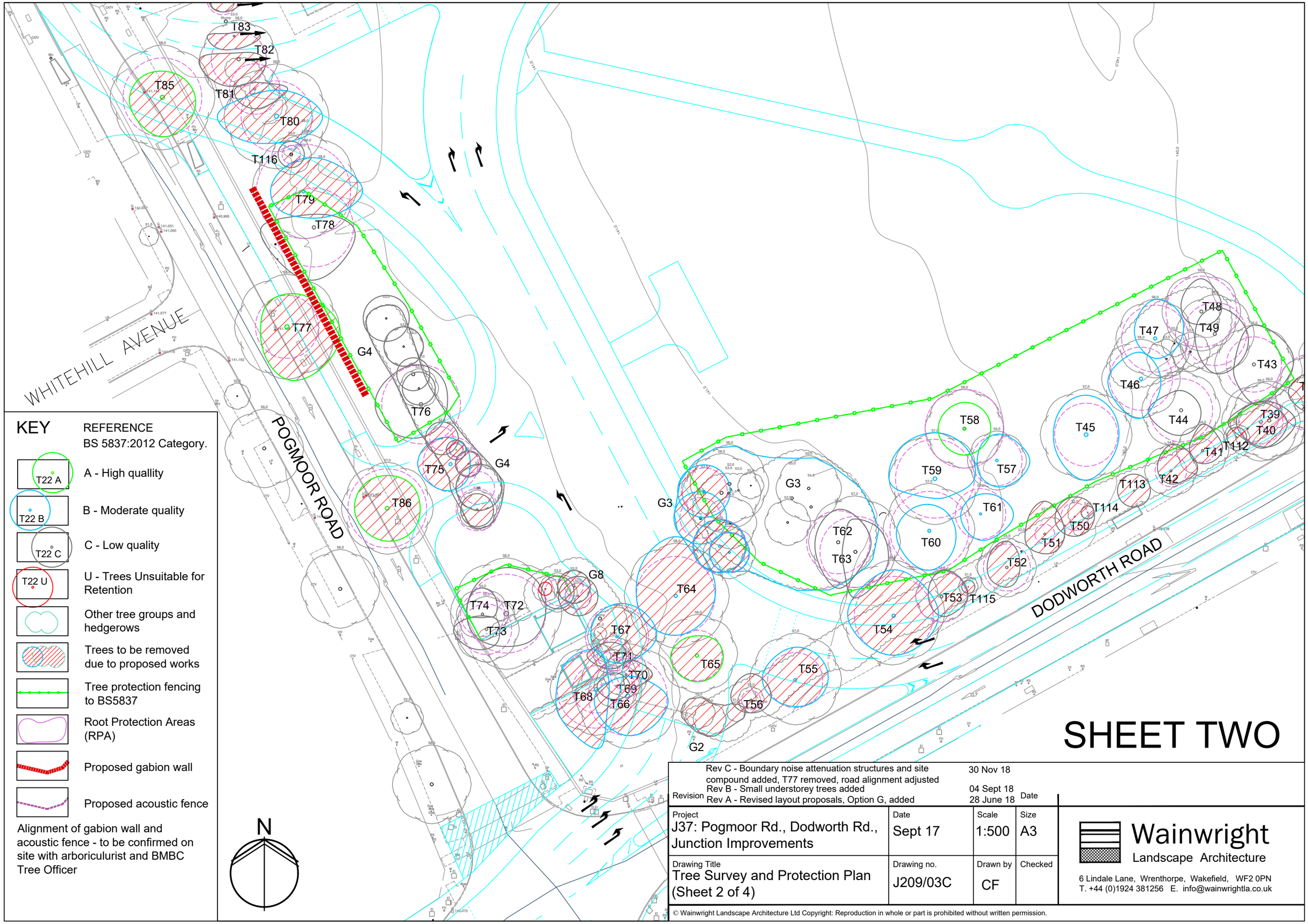
SHEET ONE

Revision		Date
	Rev C - Boundary noise attenuation structures and site compound added, road alignment adjusted	30 Nov 18
	Rev B - Small understorey trees added	04 Sept 18
	Rev A - Revised layout proposals, Option G, added	28 June 18

Project	Date	Scale	Size
J37: Pogmoor Rd., Dodworth Rd., Junction Improvements	Sept 17	1:500	A3
Drawing Title	**Drawing no.**	**Drawn by**	**Checked**
Tree Survey and Protection Plan (Sheet 1 of 4)	J209/02C	CF	

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SHEET TWO

KEY

REFERENCE
BS 5837:2012 Category.

- T22 A — A - High quallity
- T22 B — B - Moderate quality
- T22 C — C - Low quality
- T22 U — U - Trees Unsuitable for Retention
- Other tree groups and hedgerows
- Trees to be removed due to proposed works
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- Proposed gabion wall
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Alignment of gabion wall and acoustic fence - to be confirmed on site with arboriculurist and BMBC Tree Officer

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Project	Date	Scale	Size
J37: Pogmoor Rd., Dodworth Rd., Junction Improvements	Sept 17	1:500	A3
Drawing Title	**Drawing no.**	**Drawn by**	**Checked**
Tree Survey and Protection Plan (Sheet 2 of 4)	J209/03C	CF	

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SHEET THREE

KEY

REFERENCE
BS 5837:2012 Category.

- T22 A — A - High quallity
- T22 B — B - Moderate quality
- T22 C — C - Low quality
- T22 U — U - Trees Unsuitable for Retention
- Other tree groups and hedgerows
- Trees to be removed due to proposed works
- Tree protection fencing to BS5837
- Root Protection Areas (RPA)
- Proposed gabion wall
- Proposed acoustic fence

Alignment of gabion wall and acoustic fence - to be confirmed on site with arboriculurist and BMBC Tree Officer

N

T98 T94 T95 T93 T97 T96 T92 G5 T91 T90 T89 G6 T86 T87 T84 T83 T82 T85 T81 T80 T116 T79

Revision		
	Rev C - Boundary noise attenuation structures and site compound added, road alignment adjusted	30 Nov 18
	Rev B - Small understorey trees added	04 Sept 18
	Rev A - Revised layout proposals, Option G, added	28 June 18

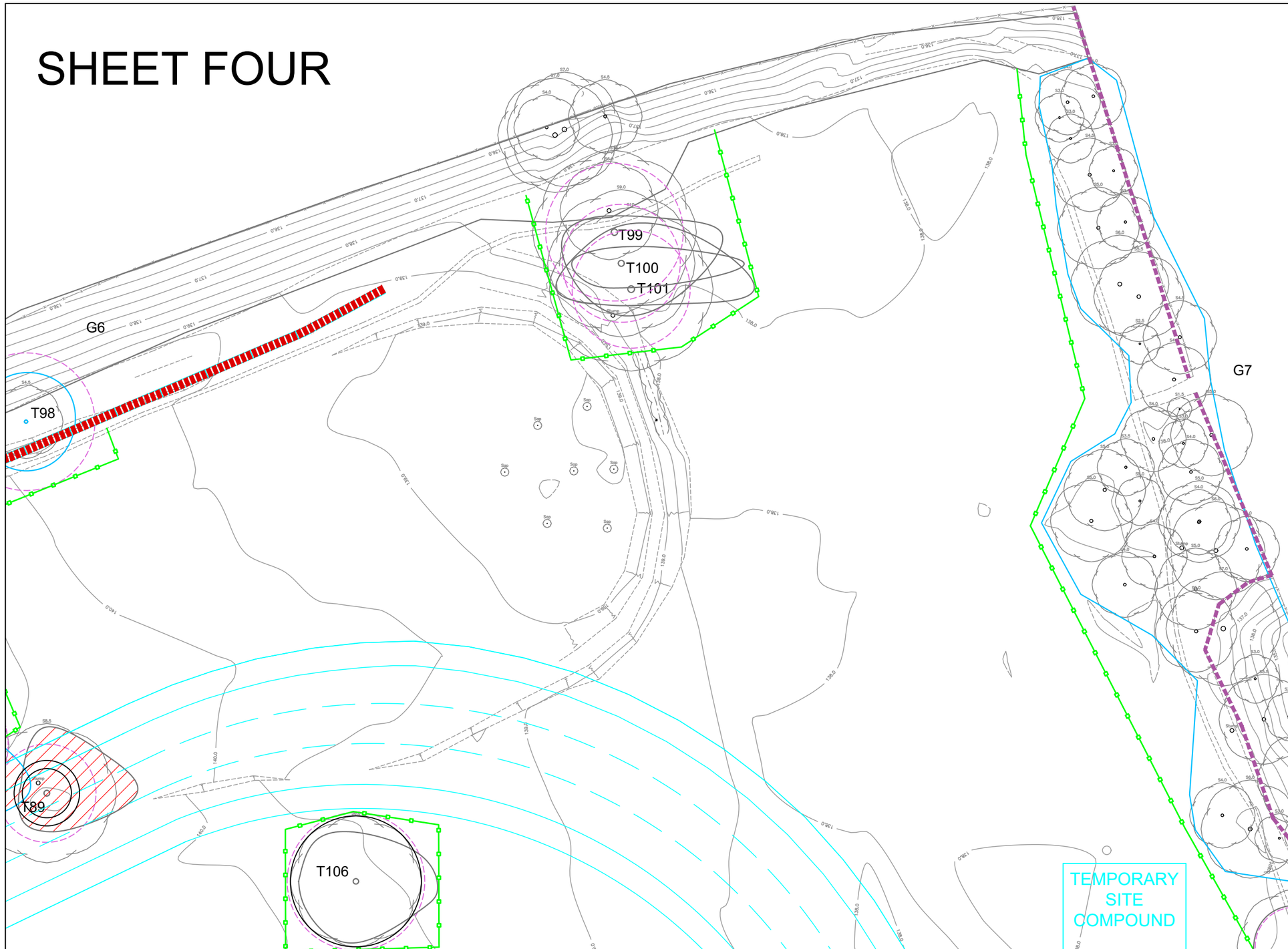
Date

Project	Date	Scale	Size
J37: Pogmoor Rd., Dodworth Rd., Junction Improvements	Sept 17	1:500	A3
Drawing Title Tree Survey and Protection Plan (Sheet 3 of 4)	**Drawing no.** J209/04C	**Drawn by** CF	**Checked**

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SHEET FOUR



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Appendix B Tree Survey Schedule

Ref	Species	Height (m)	Stem Ø (mm)	Branch Spread (m)	Height Crown Clearance (m)	Life Stage	PC	Structural Condition General Observations	Preliminary Management Recommendations	ERC (Yrs)	Grade
T1	Norway maple *(Acer platanoides)*	18	450	N 2 E 7 S 5 W 5	4	Mature	Good	Light, well balanced crown. Stem leans very slightly	Recommend remove to allow construction	20+	B
T2	Norway maple *(Acer platanoides)*	6	120	N 2 E 2 S 3 W 1	3	Early mature	Medium	Leader bends at top of bole. Slightly spindly growth due to growing within the crown of T1.	Recommend remove to allow construction	40+	C
T3	Sycamore cultivar *(Acer pseudoplatanus spp)*	16	300	N 2.5 E 5 S 2.5 W 3	4	Mature	Good	Narrow crown affected by neighbouring trees	None	20+	B
T4	Silver birch *(Betula pendula)*	18	300	N 2 E 5 S 2 W 5	4	Mature	Medium	Frequent dead branches in lower crown	Cut out deadwood	20+	C
T5	Beech cultivar *(Fagus spp)*	18	300	N 2 E 5 S 2 W 5	4	Mature	Poor	Significant deadwood in crown. Very close to adjacent house	Remove	10+	U
T6	Alder *(Alder glutinosa)*	16	200	N 2.5 E 5 S 2 W 2.5	6	Mature	Poor	Extremely sparse crown, due to overshadowing of adjacent trees.	Remove	10+	U
T7	Horse chestnut *(Aesculus hippocastanum)*	18	450	N 5 E 6 S 6 W 5	4	Mature	Good	Well balanced crown, but dense	Crown thin	20+	B

Ref	Species	Height (m)	Stem Ø (mm)	Branch Spread (m)	Height Crown Clearance (m)	Life Stage	PC	Structural Condition General Observations	Preliminary Management Recommendations	ERC (Yrs)	Grade
T8	Alder *(Alder glutinosa)*	15	320	N 6 E 5 S 4 W 2	3	Mature	Good		None	20+	B
T9	Sycamore cultivar *(Acer pseudoplatanus spp)*	17	400	N 6 E 6 S 4 W 2	4	Mature	Good		None	20+	B
T10	Sycamore cultivar *(Acer pseudoplatanus spp)*	17	400	N 8 E 6 S 2 W 5	4	Mature	Good		None	20+	B
T11	Sycamore cultivar *(Acer pseudoplatanus spp)*	17	400	N 4 E 3 S 3 W 5	4	Mature	Good	Ivy taking hold on stem. Some poorly pruned branches on east side of canopy	Prune stumps left from poor pruning. Remove ivy	20+	C
T12	Sycamore cultivar *(Acer pseudoplatanus spp)*	18	500	N 3 E 7 S 9 W 5	4	Mature	Good	Stem covered with ivy	(Remove ivy) Recommend remove to allow construction	20+	C
T13	Lime *(Tilia spp.)*	16	300	N 4 E 2 S 4 W 3	3	Mature	Moderate	Leans to east. Bi-furcates @2m H to one large and one small stem. Interstitial growth	(Remove interstitial growth) Recommend remove to allow construction	20+	C
T14	Ash *(Fraxinus excelsior)*	18	500	N 6 E 6 S 3 W 4	4	Mature	Good	A few dead branches within areas of heavy shade	(Remove dead branches) Recommend remove to allow construction	20+	B

Ref	Species	Height (m)	Stem Ø (mm)	Branch Spread (m)	Height Crown Clearance (m)	Life Stage	PC	Structural Condition General Observations	Preliminary Management Recommendations	ERC (Yrs)	Grade
G1	Group of 3 sycamore close together + 1 Lime *(Acer pseudoplatanus spp + Tilia spp)*		400 Each tree + 160	N 3 E 4 S 5 W 4	4	Mature	Good	Part of roadside trees, therefore well pruned.	Recommend remove to allow construction	20+	B
T15	Norway maple *(Acer platanoides)*	16	450	N 4 E 3 S 2 W 5	3	Mature	Moderate	Main stem leans quite strongly. Splits into 5 limbs @ 2.5m H; possible future weak point.	Recommend remove to allow construction	20+	C
T16	Sycamore cultivar *(Acer pseudoplatanus spp)*	16	400	N 4 E 5 S 3 W 4	4	Mature	Good	Slight lean to trunk.	Recommend remove to allow construction.	20+	C
T17	Lime *(Tilia spp.)*	17	350	N 3 E 4 S 3 W 3	4	Mature	Good	Slight lean to trunk	Recommend remove to allow construction.	20+	C
T18	Black Poplar hybrid *(Populus nigra)*	16	350	N 2 E 2 S 2 W 1	4	Early Mature	Moderate	Main stem cut previously @ 4m ht., leaving spindly leader	Recommend remove to allow construction.	40+	C
T19	Norway maple *(Acer platanoides)*	17	550	N 3 E 5 S 5 W 5	4	Mature	Good	Slight lean to trunk. Splits into main stems @ 4m ht.; possible future weak point	Recommend remove to allow construction	20+	C
T20	Walnut *(Juglans regia)*	12	100	N 2 E 2 S 2 W 1	4	Early Mature	Good		Recommend remove to allow construction	40+	B

Ref	Species	Height (m)	Stem Ø (mm)	Branch Spread (m)	Height Crown Clearance (m)	Life Stage	PC	Structural Condition General Observations	Preliminary Management Recommendations	ERC (Yrs)	Grade
T21	Ornamental Cherry *(Prunus spp.)*	16	500	N 4 E 3 S 4 W 3	4	Mature	Good	Large limb junction @ 3m ht.	Recommend remove to allow construction (Investigate limb junction)	20+	B
T22	Walnut *(Juglans regia)*	15	150	N 3 E 3 S 3 W 3	3	Early Mature	Good	Well pruned tree on roadside	Recommend remove to allow construction	40+	C
T23	Ornamental Cherry *(Prunus spp.)*	16	40	N 4 E 5 S 4 W 3	4	Mature	Good	Well pruned tree on roadside	Recommend remove to allow construction	20+	B
T24	Sycamore cultivar *(Acer pseudoplatanus spp)*	17	300	N 4 E 3 S 3 W 2.5	4	Mature	Good	Well pruned tree on roadside	None.	20+	B
T25	Sycamore cultivar *(Acer pseudoplatanus spp)*	18	350 1# 400 2#	N 7 E 3 S 3 W 3	4	Mature	Good	Double –stemmed from 0.5m ht	None	20+	C
T26	Lime *(Tilia spp.)*	17	350	N 4 E 3 S 3 W 3	4	Mature	Good	Well balanced crown	None	20+	B
T27	Sycamore cultivar *(Acer pseudoplatanus spp)*	17	350 1# 350 2#	N 4 E 3 S 3 W 3	4	Mature	Good-mod	Multi-stemmed tree. Splits to 2 stems @ 0.3mht., then each branch splits to 3 @ 1-1.5m H but appears to be sound structurally.	None	20+	C
T28	Walnut *(Juglans regia)*	14	120	N 3 E 2 S 4 W 2	3	Early Mature	Good		None	20+	B

Ref	Species	Height (m)	Stem Ø (mm)	Branch Spread (m)	Height Crown Clearance (m)	Life Stage	PC	Structural Condition General Observations	Preliminary Management Recommendations	ERC (Yrs)	Grade
T29	Tulip tree (*Liriodendron tulipifera*)	12	150	N 2 E 2 S 2 W 2	4	Early mature	Good		None. .	40+	C
T30	Black Poplar hybrid *(Populus nigra)*	17	400	N 5 E 9 S 6 W 4	4	Mature	Good-mod	Very low, heavy limb to east. Basal growth. Several joints in crown appear damp.	Further investigation of joints required	20+	C
T31	*Norway maple (Acer platanoides)*	18	450	N 4 E 5 S 5 W 4	4	Mature	Good	Basal growth	Remove basal growth	20+	B
T32	Ornamental Cherry *(Prunus spp.)*	16	500	N 6 E 5 S 10 W 6	3.5	Mature	Good	Ivy strong on stem. Dense crown, including dead laterals	Remove ivy. Crown thin, removing dead branches	20+	C
T33	Ornamental Cherry *(Prunus spp.)*	16	300 500	N 5 E 8 S 8 W 5	3.5	Mature	Good	Double stemmed tree. Some ivy on stem	Remove ivy	20+	C
T34	Rowan *(Sorbus aucuparia spp)*	4	100	N 2 E 2 S 2 W 2	1.5	Early Mature	Moderate	Poor shape. Growing in strong shade of neighbouring trees	None	40+	C
T35	Purple Norway maple *(Acer platanoides Crimson King)*	16	300	N 1 E 6 S 1 W 2	3.5	Mature	Moderate	Sound, but crown one-sided due to overshadowing	None	20+	C

Ref	Species	Height (m)	Stem Ø (mm)	Branch Spread (m)	Height Crown Clearance (m)	Life Stage	PC	Structural Condition General Observations	Preliminary Management Recommendations	ERC (Yrs)	Grade
T36	Norway maple *(Acer platanoides)*	17	400	N 5 E 6 S 3 W 5	4	Mature	Good	Good roadside tree	None	20+	B
T37	Lime *(Tilia spp.)*	16	150	N 3 E 3 S 2 W 2	3.5	Early mature	Good	Good roadside tree	Recommend remove to allow construction	20+	B
T38	Lime *(Tilia spp.)*	18	500	N 3 E 3 S 3 W 4	3.5	Mature	Good	Stem splits @ 2m ht., then one stem bends sharply. Generally sound	Recommend remove to allow construction	20+	C
T39 And 40	Cotoneater Cornubia	16	100 100 150 150 100 100	N 3 E 4 S 4 W 5	4	Mature	Moderate	Group of 6 stems probably arising from a single old base. Crown of dense, crossing stems	(Crown thin) Recommend remove to allow construction	20+	C
T41	Purple ash	8	150	N 4 E 3 S 2 W 2	3	Mature	Good	Dense crown, a little uneven due to neighbouring trees	(Crown thin) Recommend remove to allow construction	20+	C
T42	Lime *(Tilia spp.)*	10	200	N 4 E 4 S 2 W 3	3	Early mature-Mature	Good	Slight lean	Recommend remove to allow construction	40+	C
T43	Norway maple *(Acer platanoides)*	20	350	N 6 E 6 S 6 W 3	4	Mature	Good	Stem splits into many stems at 5m ht., possible area of future weakness	None	20+	C

Ref	Species	Height (m)	Stem Ø (mm)	Branch Spread (m)	Height Crown Clearance (m)	Life Stage	PC	Structural Condition General Observations	Preliminary Management Recommendations	ERC (Yrs)	Grade
T44	Black Poplar hybrid *(Populus nigra)*	18	400	N 3 E 3 S 4 W 5	4	Mature	Good	Damage to bark near base	None	20+	C
T45	Norway maple *(Acer platanoides)*	19	400	N 6 E 5 S 7 W 5	4	Mature	Good	Well balanced crown	None	20	B
T46	Lime *(Tilia spp.)*	17	400	N 4 E 3 S 6 W 5	4	Mature	Good		None	20+	B
T47	Norway maple *(Acer platanoides)*	18	425	N 6 E 4 S 3 W 3	4	Mature	Moderate	Dark area at major joint. Bark partly stripped	Further investigation required	20+	C
T48	Norway maple *(Acer platanoides)*	18	450	N 5 E 3 S 2 W 3	4	Mature	Moderate	Severe damage to trunk	None, but monitor due to trunk damage	20+	C
T49	Norway maple *(Acer platanoides)*	18	400	N 4 E 5 S 6 W 3	4	Mature	Good		None	20+	C
T50	Sycamore cultivar *(Acer pseudoplatanus spp)*	12	175	N 3 E 3 S 3 W 3	3	Early Mature	Good	Stem leans slightly. Bifurcates @ 1.5m ht., but otherwise well balanced.	Recommend remove to allow construction	40+	C
T51	Walnut *(Juglans regia)*	12	125	N 5 E 3 S 3 W 3	3-4	Early Mature	Good		Recommend remove to allow construction	40+	C

Ref	Species	Height (m)	Stem Ø (mm)	Branch Spread (m)	Height Crown Clearance (m)	Life Stage	PC	Structural Condition General Observations	Preliminary Management Recommendations	ERC (Yrs)	Grade
T52	Lime *(Tilia spp.)*	12	8 stems 125 x 3 100 x 4 75 x1	N 4 E 2 S 3 W 3	3-4	Early Mature	Good	Difficult to inspect due to shrub growth	Recommend remove to allow construction	40+	C
T53	Purple plum *(Prunus cerasifera)*	10	325 below flare	N 4 E 4 S 3 W 2	3-4	Mature	Moderate	Divides @0.4m ht., to 2 stems. Heavy pruning has led to a ragged crown. Suppressed by weeping willow (T54), on west.	(Prune truncated branches back to main stems.) Recommend remove to allow construction	20+	C
T54	Weeping willow *(Salix babylonica)*	16	500	N 7 E 7 S 6 W 7	4	Mature	Good	Leaning trunk but otherwise sound. Good roadside presence	Recommend remove to allow construction	20+	B
T55	Lime *(Tilia spp.)*	16	350	N 5 E 5 S 4 W 5	5	Mature	Good		Recommend remove to allow construction	20+	B
T56	Tulip tree *(Liriodendron tuliperfera)*	10	120	N 4 E 3 S 2 W 3	4	Early Mature	Good	Slightly leaning	Recommend remove to allow construction	40+	C
G2	Group of 5 small multi-stemmed plums *(Prunus domestica var)*	10	75-150	N 4 E 3 S 3 W 3	NA	Mature	Moderate	Many stems arising from 1-2 main boles at ground level. Forms shrubby group.	(Light thinning of stems) Recommend remove to allow construction	20+	C
T57	Norway maple *(Acer platanoides)*	16	320	N 4 E 5 S 4 W 3	4	Mature	Good	Bifurcates at sharp joint @ 1.8m ht., but well balanced crown.	None	20+	B
T58	Norway maple *(Acer platanoides)*	19	500	N 4 E 4 S 4 W 4	6	Mature	Good	Well proportioned	None	20+	A

Ref	Species	Height (m)	Stem Ø (mm)	Branch Spread (m)	Height Crown Clearance (m)	Life Stage	PC	Structural Condition General Observations	Preliminary Management Recommendations	ERC (Yrs)	Grade
T59	Ash *(Fraxinus excelsior)*	19	500	N 7 E 6 S 3 W 7	4	Mature	Good	Crown supressed to south	None	20+	B
T60	Horse chestnut *(Aesculus hippocastanum)*	19	500	N 4 E 4 S 6 W 5	4	Mature	Good	Dense overcrowding where stem divides @2m ht. Some bark damage.	None	20+	B
T61	Horse chestnut *(Aesculus hippocastanum)*	17	320	N 3 E 5 S 4 W 3	4	Mature	Good	Dense overcrowding where stem divides @2m ht.	None	20+	B
G3	Group of cherry, Norway maple, lime, whitebeam underplanted with dogwood and snowberry.	NA	NA	NA	NA	Mature	Good	Good stand of trees and shrubs behind and separate from roadside trees. Largest trees identified separately in T62-63 below	2 Norway maple and 2 cherry to be removed for construction	20+	B
T62	Lime *(Tilia spp.)*	18	400	N 5 E 5 S 7 W 2	4	Mature	Good	Crown suppressed by adjacent trees	None	20+	C
T63	Lime *(Tilia spp)*	18	450	N 3 E 2 S 5 W 3	4	Mature	Good	Crown suppressed by adjacent trees	None	20+	C
T64	Sycamore cultivar *(Acer pseudoplatanus spp)*	17	500	N 9 E 6 S 6 W 6	4	Mature	Good	Bifurcates @ 2m H then into several heavy limbs.	Recommend remove to allow construction	20+	B

Ref	Species	Height (m)	Stem Ø (mm)	Branch Spread (m)	Height Crown Clearance (m)	Life Stage	PC	Structural Condition General Observations	Preliminary Management Recommendations	ERC (Yrs)	Grade
T65	Purple Norway maple (Acer platanoides Crimson King)	16	320	N 3 E 4 S 4 W 3	4	Mature	Good	Good structure	Recommend remove to allow construction	20+	A
T66	Norway maple *(Acer platanoides)*	17	500	N 3 E 6 S 6 W 5	4	Mature	Good	Leans very slightly. Bi-furcates @2m ht., potential rot at this junction.	Recommend remove to allow construction	20+	B
T67	Norway maple *(Acer platanoides)*	18	400	N 5 E 6 S 4 W 4	4	Mature	Good	Leans very slightly. Good crown but some die-back on lower laterals	(Crown thin, remove dead wood) Recommend remove to allow construction	20	B
T68	Norway maple *(Acer platanoides)*	16	300	N 6 E 2 S 9 W 6	4	Mature	Good	Leans very slightly towards light, west.	Recommend remove to allow construction	20+	B
T69	Lime *(Tilia spp)*	17	200	N 2 E 2 S 2 W 3	5	Early Mature	Good	Good, but supressed by adjacent trees.	Recommend remove to allow construction	40+	C
T70	Lime *(Tilia spp)*	17	200	N 2 E 4 S 2 W 0.5	5	Early Mature	Good	Good, but supressed by adjacent trees.	Recommend remove to allow construction	40+	C
T71	Norway maple *(Acer platanoides)*	17	200	N 2 E 2 S 2 W 4	5	Early mature	Good	Good, but supressed by adjacent trees.	Recommend remove to allow construction	40+	C
T72	Norway maple *(Acer platanoides)*	18	500 below flare	N 2 E 6 S 8 W 8	4	Mature	Good	Pruned heavily on west for sub-station clearance. Wire passes through crown. Bi-furcates to 2 main stems @ 2m ht. Crack in bark.	Further investigation of bark damage required	20+	C

Ref	Species	Height (m)	Stem Ø (mm)	Branch Spread (m)	Height Crown Clearance (m)	Life Stage	PC	Structural Condition General Observations	Preliminary Management Recommendations	ERC (Yrs)	Grade
T73	Lime *(Tilia spp)*	18	320	N 2 E 2 S 3 W 5	4	Mature	Good	Pruned heavily on west for sub-station clearance. Wire passes through crown. Bi-furcates to 2 main stems @ 2m ht.	None	20+	C
T74	Lime *(Tilia spp)*	17	280	N 4 E 2 S 0.5 W 4	4	Mature	Good	Pruned heavily on west for sub-station clearance. Crown suppressed by adjacent trees. Wire passes through crown	None	20+	C
G4	Group of shrubs and trees. Plum, rowan, ash, weeping willow, laburnum, purple plum, cherry, laurel, holly, redcurrent					Mature	Good	Shrubs and trees together making reasonable group. T75 and T76 are within group.	Recommend remove 1 Rowan, 2 plum, 2 Laburnum to allow construction	20+	C
T75	Ash *(Fraxinus excelsior)*	18	350	N 4 E 3 S 4 W 5	4	Mature	Good	Good specimen	Recommend remove to allow construction	20+	B
T76	Weeping willow *(Salix babylonica)*	18	500	N 6 E 4 S 5 W 7	4	Mature	Good	Strong kink in main stem. Some lower branches broken or damaged. Distinctive tree on roadside	Remove broken branches	20+	C
T77	Lime variety *(Tilia spp)*	20	400	N 5 E 8 S 8 W 4	5	Mature	Good	Stately tree in roadside verge. Well pruned to keep crown above road vehicles.	Recommend remove to allow construction	20+	A
T78	Norway maple *(Acer platanoides)*	18	500 below flare	N 2 E 6 S 8 W 8	4	Mature	Good-mod	Splits into 3 at 1m height. Some bark damage near base.	None	20+	C
T79	Weeping willow *(Salix babylonica)*	18	500 450 400 300 350	N 5 E 9 S 4 W 5	2	Over Mature	Good	5 main stems, a few broken laterals, but otherwise appears stable. Distinctive tree visually.	Recommend remove to allow construction	10+	B

Ref	Species	Height (m)	Stem Ø (mm)	Branch Spread (m)	Height Crown Clearance (m)	Life Stage	PC	Structural Condition General Observations	Preliminary Management Recommendations	ERC (Yrs)	Grade
T80	Weeping willow *(Salix babylonica)*	18	450	N 4 E 7 S 4 W 9	2	Mature	Good	Strong lean of main stem combined with heavy, wide spreading laterals may lead to instability	Recommend remove to allow construction	10+	B
T81	Purple plum *(Prunus cerasifera)*	12	320	N 1 E 5 S 3 W 3	3	Over Mature	Moderate	Some poor pruning of crown. Suppression by adjacent trees.	Recommend remove to allow construction	20+	C
T82	Ornamental cherry *(Prunus spp)*	13	350	N 1 E 4 S 4 W 6	3	Over Mature	Good	Dense limbs where main stem divides into 3 @ 2m ht. Uneven crown stretching towards the west.	(Crown thinning) Recommend remove to allow construction	10+	C
T83	Lime variety *(Tilia spp)*	14	200	N 0.5 E 4 S 2 W 4	3	Early Mature	Good	Bark split in stem, but growing over. Slight lean of main stem. Very suppressed crown to the north by a tree that is no longer there.	Recommend remove to allow construction	40+	C
T84	Indian bean tree (*Catalpa bignoniodes*)	10	200	N 1 E 3 S 3 W 2	5	Early Mature	Good	Long straight stem with poor crown, mainly developed to the east. Some bark damage near base.	Recommend remove to allow construction	40+	C
T85	Lime variety *(Tilia spp)*	20	500	N 4 E 5 S 6 W 5	4	Mature	Good	Stately tree in roadside verge. Well pruned to keep crown above road vehicles. Acute angled junction with limbs @ 2m ht., may be susceptible to rot.	Recommend remove to allow construction	20+	A
T86	Lime variety *(Tilia spp)*	19	500	N 5 E 5 S 5 W 5	4-5	Mature	Moderate	Stately tree in roadside verge. Well pruned to keep crown above road vehicles	Recommend remove to allow construction	20+	A
T87	Goat willow *(Salix caprea)*	18	600	N 6 E 3 S 6 W 6	2	Over Mature	Poor	On slope of railway cutting. Open structure where main limbs meet stem, substantial rot/decay evident here. Danger of falling limbs towards rail line.	Remove all broken/ damaged limbs	10+	C

Ref	Species	Height (m)	Stem Ø (mm)	Branch Spread (m)	Height Crown Clearance (m)	Life Stage	PC	Structural Condition General Observations	Preliminary Management Recommendations	ERC (Yrs)	Grade
T88	Sycamore *(Acer pseudoplatanus)*	20	500	N 6 E 7 S 7 W 7	3	Mature	Good	Densely branched tree on slope of railway cutting. Leans slightly	None	20+	B
G6	Willow spp., poplar, elder, apple, bramble	Varies	Varies	N NA E S W	NA	NA	NA	Self-set trees and shrubs, mainly native species, along railway corridor	None		C
T89	Black Poplar hybrid *(Populus nigra var.)*	18	500	N 8 E 11 S 4 W 3	4	Over Mature	Moderate	Leans to south. Sparse, uneven crown, heavily pruned in past and supressed by adjacent trees, now removed. Some ivy on stem.	Recommend remove to allow construction	10+	C
T90	Black Poplar hybrid *(Populus nigra var.)*	25	700	N 3 E 13 S 9 W 10	5	Over Mature	Good	Crown mixed with T91. Leader broken and some damage in crown, open at one side.	Would overhang road, recommend remove to allow construction	20+	B
T91	Black Poplar hybrid *(Populus nigra var.)*	23	600 below flare	N 3 E 8 S 2 W 8	5	Over Mature	Moderate	Bi-furcates @ 0.6m to one strong and one less strong limb. Broken, drooping limbs to east	Remove broken limbs	20+	C
T92	Black Poplar hybrid *(Populus nigra var.)*	20	700 below flare	N 6 E 7 S 4 W 10	5	Over Mature	Poor	Bi-furcates @ 0.6, bark missing at split. Substantial die-back in sparse crown	Remove	10+	U
T93	Black Poplar hybrid *(Populus nigra var.)*	23	700	N 5 E 8 S 6 W 5	5	Over Mature	Moderate	Broken/dying branches evident in fairly sparse, decaying crown.	Remove broken limbs	10+	C
T94	Black Poplar hybrid *(Populus nigra var.)*	14	550	N 9 E 5 S 4 W 3	4	Over Mature	Poor	Crown sparse, decaying. Main leader lost @ 8m ht.	None	10+	C

Ref	Species	Height (m)	Stem Ø (mm)	Branch Spread (m)	Height Crown Clearance (m)	Life Stage	PC	Structural Condition General Observations	Preliminary Management Recommendations	ERC (Yrs)	Grade
T95	Black Poplar hybrid *(Populus nigra var.)*	10	500	N 9 E 5 S 5 W 5	4	Over Mature	Poor	Centre of tree lost. Tree in senescence	None	10+	C
T96	Black Poplar hybrid (Populus nigra var.)	20	650	N 6 E 14 S 5 W 6	5	Over mature	Good	Reasonable structure. Some crown completion with purple plum to west	None	10+	B
T97	Crack willow (Salix fragilis)	15	300	N 3 E 5 S 4 W 3	3	Early mature	Moderate	Bark damage, some clumsy pruning. Crown affected by proximity to T97 and T95	Cut back severed limbs to a main limb	40+	C
G5	Goat willow, purple plum snowberry	NA	NA	N E S W	NA	Mature	Moderate	Group of small trees and shrubs encompassing T96 and 97. Dense growth affecting good formation of individual specimens	Thin	20+	C
G7	Trees forming woodland belt on eastern site boundary with housing	15-20	varies	N E S W	NA	Early mature to Mature	Good	Norway maple, horse chestnut, ash, crack willow, whitebeam reasonably spaced to form woodland belt, thickening out to small woodland group towards the south.	None	40+	B
T98	Sycamore *(Acer pseudoplatanus)*	20	700	N 6 E 6 S 6 W 6	4	Mature	Good	Dense crown, but generally sound	None	20+	B
T99	Black Poplar hybrid *(Populus nigra var.)*	25	700	N 2 E 13 S 10 W 6	3	Over mature	Moderate	Leans significantly. Some heavy horizontal laterals including one supported with a stake.	None	10+	C
T 100	Black Poplar hybrid *(Populus nigra var.)*	25	600	N 2 E 15 S 3 W 6	5	Over Mature	Good	Some heavy horizontal laterals	None	10+	C

Ref	Species	Height (m)	Stem Ø (mm)	Branch Spread (m)	Height Crown Clearance (m)	Life Stage	PC	Structural Condition General Observations	Preliminary Management Recommendations	ERC (Yrs)	Grade
T 101	Black Poplar hybrid (Populus nigra var.)	25	600	N 8 E 15 S 2 W 9	5	Over Mature	Good	Major limb growing horizontally @ 2m height. Appears over-heavy.	None	10+	C
T 102	Norway maple *(Acer platanoides)*	19	400	N 3 E 5 S 3 W 5	5	Mature	Good	Good, but crown influenced by neighbouring trees	None	40+	B
T 103	Norway maple *(Acer platanoides)*	19	400	N 5 E 4 S 3 W 2	4	Mature	Good	Good, but crown influenced by neighbouring trees	None	40+	B
T 104	Crack willow *(Salix fragilis)*	25	600	N 4 E 3 S 4 W 7	4	Mature	Good	Some shortened or broken laterals. Crown a little supressed by neighbours	None	20+	C
T 105	Norway maple *(Acer platanoides)*	19	400	N 5 E 5 S 4 W 5	4	Mature	Good		None	20+	C
T 106	Black Poplar hybrid *(Populus nigra var.)*	20	700	N 6 E 10 S 8 W 7	3	Over Mature	Moderate	Some heavy limbs, a main lateral broken in western part of crown.	Remove broken limb	10+	C
T 107	Weeping willow	18	700	N 6 E 10 S 8 W 7	4	Mature	Good	Generally good specimen. Pruned on north to prevent growing over road and footway		20+	B
T 108	Norway maple *(Acer platanoides)*	14	540	N 4 E 4 S 5 W 4	4	Mature	Good	Generally good specimen.	None	20+	B

Ref	Species	Height (m)	Stem Ø (mm)	Branch Spread (m)	Height Crown Clearance (m)	Life Stage	PC	Structural Condition General Observations	Preliminary Management Recommendations	ERC (Yrs)	Grade
T 109	Ornamental Cherry *(Prunus spp.)*	10	130	N 4 E 2 S 1 W 2	2	Mature	Moderate	Shaded, part of understorey. Distorted crown into park. As part of a group, with T22 + T23	Remove/ retain as group with T22 / T23 Recommend remove to allow construction	20+	C
T 110	Maidenhair Tree *(Ginko biloba)*	8	-	N 1 E 1 S 1 W 1	2	Mature	Poor	Small tree, Shaded, part of understorey.	None	10+	C
T 112	Ornamental Cherry *(Prunus spp.)*	10	130	N 4 E 2 S 1 W 2	2	Mature	Moderate	Tall, drawn, part of shrubby understorey group.	Recommend remove to allow construction	10+	C
T 113	Laburnum *(Laburnum spp.)*	6	-	N 2.5 E 2.5 S 2.5 W 2.5	2	Mature	Poor	Small tree, multi stemmed, near bus shelter, stem inaccessible.	Recommend remove to allow construction	10+	C
T 114	Indian bean tree (*Catalpa bignoniodes*)	6	101	N 1 E 1 S 1 W 1	2	Mature	Poor	Small tree, Shaded, part of understorey.	Recommend remove to allow construction	10+	C
T 115	Ornamental Cherry *(Prunus spp.)*	6	111 + 70	N 1 E 1 S 1 W 1	2	Mature	Poor	Small tree, shaded, part of understorey. Poor at stem base.	Recommend remove to allow construction	10+	C
G8	Group of 1Norway Maple, 1 Walnut, 1 Willow, 1 small dead tree - unknown	NA	NA	NA	NA	Early Mature	Poor	Poor stand of small trees, growing as understorey. Light drawn. One dead tree.	Recommend remove for construction 1 Norway Maple, 1 Walnut, 1 dead tree stem.	10+	C + U
T 116	Walnut ? *(Juglans regia)*	6	117	N 2 E 2 S 2 W 2	-	Early Mature	Moderate	Small tree growing in close group. Old tree stakes remaining.	Recommend remove for construction	40+	C