



BS 5837:2012 Arboricultural Survey Report

Marden Island
for:

CS District Ltd.

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BS 5837:2012 Arboricultural Survey

Project:	Marsden Island
For:	CS District Ltd.
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1.0 Non-Technical Summary

1.1 Arboricultural Survey

- 1.1.1 The site is the former Cellars Clough Wood Mill north of Marsden and comprises an access road from Manchester Road in the East, an existing bridge over the River Colne, bare ground and hard standing associated with the former wool mill and the Huddersfield Narrow Canal along the site's northern boundary. Dense woodland lines the access road, and trees and tree groups are scattered along the site boundaries.
- 1.1.2 A tree survey in accordance with BS 5837:2012 was carried out by Enzygo Ltd. in June 2025, recording 70 trees and tree groups, which are predominantly native, semi-mature to mature and of low to moderate landscape value, with three trees highlighted as having high value. A small number of trees along the northern boundary are protected by Kirklees Council Tree Preservation Order.

1.2 Design recommendations

- 1.2.1 The site layout design should consider the constraints posed by the trees on site and should seek to retain as many trees on site as possible to minimise the effect of the development on the amenity of the site and the local landscape as well as on the ecological value of the site. The retention of trees described in this report as being of high or moderate value as well as legally protected trees and trees of considerable age (ancient trees) should be prioritised.
- 1.2.2 *BS 5837:2012 Trees in relation to design, demolition and construction* chapters 5.2 and 5.3 describe the constraints posed by existing trees and outline the potential conflict between proposed structures and retained trees and how these can be avoided or minimised.
- 1.2.3 New structures, hard landscape, services and construction access should be designed outside the canopy spreads and Root Protection Areas (RPA) of retained trees as far as reasonably practicable. Lowering of ground levels within the RPA of retained trees is not acceptable. Specialist solutions to manage the conflict between the proposals and retained trees are available but may have significant impact on the costs of the construction phase. These include access facilitation pruning, no-dig construction for hard surfaces, temporary ground protection, specialist engineering for buildings and foundations and trenchless solutions for services.

2.0 Overview

2.1 Introduction

2.1.1 Enzygo Limited [Enzygo] have been commissioned by CS District Ltd. [‘the Applicant’] to prepare an Arboricultural Survey Report in accordance with BS 5837:2012 for the former Cellars Clough Wood Mill site off Manchester Road in Marsden, Huddersfield HD7 6LY in support of a planning application for a residential development on the site.

2.1.2 This report is a validation requirement for planning applications submitted to Kirklees Council. Its primary purpose is to allow the designer and other stakeholders to fully consider the arboricultural constraints on site during the design process and to understand their value for the site and the wider landscape. This includes the careful consideration of design elements near desirable trees (high and moderate value and/or trees which are found to be legally protected) and the protection of above and below ground parts of retained trees.

2.2 Structure of the Report

2.2.1 This report presents site-specific information as follows:

- Chapter 2.0 provides a brief description of the site and its location.
- Chapter 3.0 summarises the planning background, including national and local planning policies and guidelines.
- Chapter 4.0 summarises the findings of the Arboricultural Survey, describing the overall species mix, age, condition and value of the trees recorded on site.
- Chapter 5.0 provides both general and site-specific design recommendations to assist with the development of the site layout which are sympathetic to the existing trees.

2.2.2 Supportive of Chapter 4.0 and appended to this report are the Tree Constraints Plan in Appendix 1, the Arboricultural Survey Schedule in Appendix 2 and relevant site photographs in Appendix 3.

2.2.3 Where Tree Preservation Orders or Conservation Areas affect the site, this has been highlighted in Chapter 4.0. Relevant local authority maps and the legal implications of any designations can be found in Appendix 4.

2.2.4 The methodology underlying the Arboricultural Survey is described in Appendix 5 – Methodology.

2.3 Site Description

- 2.3.1 The site is located approximately 1.2km northeast of Marsden, 2.5km southwest of Slaithwaite, and approximately 9.7km southwest of Huddersfield in a rural location. The site falls within the Kirklees District of West Yorkshire. It sits within a landscape that's defined by an undulating patchwork of arable fields and woodland which is dissected by the River Colne, the Huddersfield Narrow Canal, a small number of reservoirs and Manchester Road.
- 2.3.2 The application boundary for the site is approximately 14,900m² [1.49 hectares]. It is broadly split into the access road from Manchester Road and through dense woodland in the South and the demolished mill site between the River Colne and the Huddersfield Narrow Canal in the North.
- 2.3.3 The main (northern) part of the site is comprised of an area of vacant or derelict land covered with grassland with intermittent patches of concrete and rubble from demolished buildings. It is connected to the access road via an existing bridge over the River Colne. From here, as well as from the canal towpath in the North, views into the site are open.

3.0 Planning background

3.1 National Planning Policy Framework (December 2024)

3.1.1 The National Planning Policy Framework (NPPF) published by the government and updated in December 2024 sets out the framework objectives for development in England. These are used by Local Planning Authorities (LPA) both during the preparation of their local planning policies as well as to guide them in making individual decisions for Planning Applications.

3.1.2 The NPPF sets out several objectives concerning the natural environment, including trees, woodland and hedgerows. In addition to broad objectives addressing biodiversity and the challenges posed by climate change (e.g. flood resilience, species selection), the following paragraphs ask for the recognition of existing trees in relation to development:

- Paragraph 136 states that *“Trees make an important contribution to the character and quality of urban environments, and can also help mitigate and adapt to climate change. Planning policies and decisions should ensure (...) that existing trees are retained wherever possible.”*
- Paragraph 187 requests that *“Planning policies and decisions should contribute to and enhance the natural and local environment by [...] recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland”.*

3.2 Local Planning Policy

3.2.1 The site falls within the administrative boundary of Kirklees Council, therefore the application must adhere to the Kirklees Local Plan – *Kirklees Local Plan Strategy and Policies*¹ – Adopted 27 February 2019.

3.2.2 **Policy LP33: Trees** requests that *“The Council will not grant planning permission for developments which directly or indirectly threaten trees or woodlands of significant amenity. Proposals should normally retain any valuable or important trees where they make a contribution to public amenity, the distinctiveness of a specific location or contribute to the environment, including the wildlife habitat network and green infrastructure networks.”*

¹ <https://www.kirklees.gov.uk/beta/planning-policy/pdf/local-plan-strategy-and-policies.pdf>

- 3.2.3 It further highlights that *“Proposals will need to comply with the relevant national standards regarding the protection of trees in relation to design, demolition and construction Where tree loss is deemed to be acceptable, developers will be required to submit a detailed mitigation scheme.”*

4.0 Arboricultural Survey

4.1 Overview

- 4.1.4 The arboricultural survey in accordance with BS 5837:2012 was carried out by Matt Pearson, Arboricultural Consultant at Treefellas in June 2025 when all trees were fully in leaf.
- 4.1.5 22 groups and 47 individual trees as well as one hedgerow were recorded during the walk-over survey. They form part of the dense woodland to either side of the access road off Manchester but are also scattered along the main site's boundary. There are no trees within the centre of the site.
- 4.1.6 A plan of the site illustrating the location, canopy spread and Root Protection Area of each feature is included in in Appendix 1, with the schedule in Appendix 2 providing survey details of each tree. A selection of photographs showing both the site and notable individual trees and tree groups is included in Appendix 3 – Site photographs.

4.2 Tree survey summary

- 4.2.1 Given the site's rural location, its tree population largely comprises native or naturalised species, with the dominant species being sycamore (*Acer pseudoplatanus*), pedunculate oak (*Quercus robur*), ash (*Fraxinus excelsior*), beech (*Fagus sylvatica*) and goat willow (*Salix caprea*). They vary considerably in age, following a natural woodland succession, with mature canopy trees and a semi-mature understorey, as well as pioneer vegetation around the former mill site.
- 4.2.2 The majority of trees are either of low or moderate landscape or arboricultural value (BS retention categories C1/C2 or B1/B2). They form a dense woodland along Manchester Road which provides an important part of the local green infrastructure. There are three trees which were assessed as being of high value (retention categories A1/A2); these are T03- beech, T14- oak and T30- beech.

4.3 Root Protection Areas (RPA)

- 4.3.1 The Root Protection Areas for each Category A to C tree and tree group has been calculated based on measured stem diameters. Both the radius and the area of each RPA are shown on the plan included in Appendix 1 and detailed in the schedule in Appendix 2.

4.4 Tree Preservation Orders (TPO) and Conservation Areas

4.4.1 The online tool provided on the Kirklees Council website has confirmed that a small number of trees near the northern site boundary are protected by Tree Preservation Order ref. 02A/13 as summarised below. This means that all trees covered by this TPO are legally protected as outlined in Appendix 4 – Kirklees Council Tree Preservation Orders.

Table 1 –Trees protected by Kirklees Council Tree Preservation Order ref. 02A/13

No.	TPO ref.	Species	Notes
G60	02a/13/g5 and 02a/13/t13	Beech, Holly, Sycamore, Lime	Outside northern boundary
T61	02a/13/t12	Sycamore	Inside northern boundary, along canal

4.4.2 The record further shows two TPO trees inside the site boundary, annotated as 02a/13/t11 and 02a/13/t10, no trees were found and Enzygo understand that Kirklees Council are aware of their removal.

4.5 Non-statutory Designations

4.5.1 There are no non-statutory arboricultural designations affecting the site.

5.0 Design recommendations

5.1 General recommendations

- 5.1.1 Design decisions should be based on the recommendations in chapters 5.2 and 5.3 of *BS 5837:2012 Trees in relation to design, demolition and construction* which describe the constraints posed by existing trees and outline the potential conflict between proposed structures and retained trees and how these can be avoided or minimised.

5.2 Maximise tree retention

- 5.2.1 It is recommended that the site layout design considers the safe retention of any trees which have been assigned the retention categories A, B and C as far as practicable to retain the ecological value and the mature character of the site and to minimise the potential visual impact the development may have on the surrounding landscape. The retention of legally protected trees should be a priority.

5.3 Minimise residual effect of trees on development

- 5.3.1 In addition to the desired retention of existing trees as described in 5.2 above, it is advised to consider the impacts any retained trees would have on the development, including excessive shading of sensitive building elevations and open spaces and the increased requirement for routine tree management near built structures (i.e. regular crown reduction near buildings).

5.4 Minimise residual effect of development on retained trees

Proposed buildings, structures and hard surfacing

- 5.4.1 The site layout design should allow generous distances between vertical structures and tree canopies and allow for the expected future expansion of crowns.
- 5.4.2 The location of new structures and hard surfacing within the canopy spread of existing trees and tree groups should be considered carefully. Excessive management of these trees to facilitate any such elements may cause an imbalance of stem/crown ratio, unbalanced crowns or unnatural shape of specific tree species. The future requirement for continuous tree management to limit any conflicts should remain minimal.
- 5.4.3 Where built structures and hard landscape elements are proposed within the Root Protection Areas of existing trees, specialist methodologies may have to be adopted to manage the conflict. These solutions may have an impact on costs of the construction phase and it may be desirable to keep this to a minimum by developing a layout which is sensitive to the existing

trees. Any vertical elements such as fences should be proposed at such a distance from tree stems as to allow for the future increase of the stem diameter and root buttresses.

Utilities and earthworks

- 5.4.4 Underground services and any proposed design elements requiring foundations (e.g. boundary treatments, street furniture, hard surfaces) should be placed outside of Root Protection Areas where possible.
- 5.4.5 Excavations for underground services may have an impact where they are proposed within the RPA of retained trees. Proposed above ground services may further conflict with parts of tree canopies.
- 5.4.6 The reduction of ground levels within the Root Protection Areas of retained trees are not acceptable. Where this can't be avoided, the removal of the tree may have to be considered.

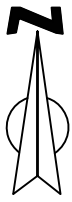
Construction operations

- 5.4.7 Construction operations near retained trees are likely to cause accidental damage of tree trunks and low hanging branches. Where possible, the design should allow for reasonable distances between new structures and above ground parts of retained trees, including sufficient clear working areas around those structures.
- 5.4.8 Vehicle and plant movement during construction may further cause ground compaction which could lead to irreversible damage of tree roots and the rooting environment within the RPA of retained trees. The construction phase plans should ensure that site access routes, site compounds and internal routes are proposed outside the Root Protection Areas (RPA) of retained trees.

5.5 Trees to be removed or managed

- 5.5.1 Whilst a number of tree and tree groups were assessed to be “unsuitable for retention” it is recommended to retain these if practicable in the context of the development proposals and risk management. Tree and group management should be considered instead, for example height reduction if this allows the development of standing deadwood without compromising the safety of persons or assets both on site and on third party land.

6.0 Appendix 1 – Tree Constraints Plan



- KEY:**
- Site Boundary
 - Tree Category A
 - Tree Category B
 - Tree Category C
 - Tree Category U
 - Root Protection Area (RPA)
 - Kirklees Council Tree Preservation Order ref. 02a/13

PL01	02/10/25	Client name amended	MP	VM	GB
P01	24/07/25	Issued for comment / approval	MP	VM	GB
Rev	Date	Description	DRA	CHK	APP

Project
Marsden Island

Client
CS District Ltd.

Drawing Title
Tree Constraints Plan

Scale 1:500@A1	Date 24/07/25	Status Planning
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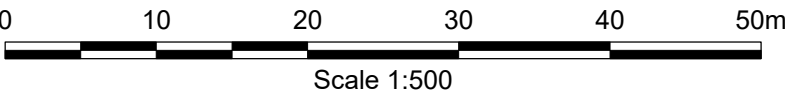
DWG No. SHF9022001-ENZ-XX-XX-DR-AR-0001PL01	Revision
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7.0 Appendix 2 - Arboricultural Survey Schedule

Ref	Species	Ht (m)	Stem Dia. @ 1.5m (mm)	Crown Spread				Clear Crown	Life Stage	RULE	Cond.	Notes		BS Cat.	RPA (m)	RPA (m ²)
				N	E	S	W					Comments	Management			
T001	Beech (Fagus sylvatica)	26.0	620	4.5	8.5	13	9.0	4.0	Mature	40+ Years	Good	Growing on steep bank. Minimal stem taper. Southerly lean. Evidence of historical limb failures at approx 9m to 14m to S. Minor deadwood throughout crown.		B1	7.4	172
T002	Beech (Fagus sylvatica)	22.0	470	8.0	5.0	3.0	6.0	3.5	Mature	40+ Years	Good	Growing on steep bank. Slight northern lean. Suppressed form. Occasional minor deadwood throughout crown.		B1	5.6	99
T003	Beech (Fagus sylvatica)	26.0	980	8.0	8.5	10	9.0	4.0	Mature	40+ Years	Good	Growing on steep bank and against wall to S. In contact with lamp post to S. Slight Southerly lean. Moderate (approx 200mm diameter) partially failed branch to N over footpath at approx 14m. Minor and occasional moderate deadwood throughout crown.		A1	11.8	437
T004	Sycamore (Acer pseudoplatanus)	22.0	510	5.0	6.5	3.5	0.5	3.5	Mature	40+ Years	Fair	Growing on steep bank. Slight NE lean. Suppressed form. Occasional minor deadwood throughout crown.		B1	6.1	117
T005	Sycamore (Acer pseudoplatanus)	17.0	450	0.5	2.5	5.0	6.0	4.0	Mature	20+ Years	Fair	Growing on steep bank. Slight S lean. Suppressed form. Growing against wall. Bark damage to stem just above wall level to S. Historical stem failure at approx 12m . Occasional minor and moderate deadwood low in crown.	Safety assessment recommended	C1	5.4	92
T006	Sycamore (Acer pseudoplatanus)	22.0	440	2.5	4.5	5.5	7.0	3.5	Mature	40+ Years	Fair	Slight NE lean. Suppressed form. Minor and occasional moderate deadwood throughout crown.		B1	5.3	88
T007	Sycamore (Acer pseudoplatanus)	24.0	630	7.5	7.5	10	10	6.0	Mature	40+ Years	Fair	Exposed roots to S. Slight N lean. Occasional moderate deadwood low in crown. Occasional historical pruning wound.		B1	7.6	181
T008	Sycamore (Acer pseudoplatanus)	23.0	630	7.5	4.0	9.0	10	5.0	Mature	40+ Years	Fair	Exposed roots to S. Slight N lean. Occasional moderate deadwood low in crown. Occasional historical pruning wound.		B1	7.6	181

Ref	Species	Ht (m)	Stem Dia. @ 1.5m (mm)	Crown Spread				Clear Crown	Life Stage	RULE	Cond.	Notes		BS Cat.	RPA (m)	RPA (m ²)
				N	E	S	W					Comments	Management			
T009	Sycamore (<i>Acer pseudoplatanus</i>)	22.0	530	5.0	5.0	7.5	4.0	3.0	Mature	40+ Years	Fair	Minor and occasional moderate deadwood throughout crown. Occasional historical pruning wound.		B1	6.4	129
T010	Sycamore (<i>Acer pseudoplatanus</i>)	24.0	710	8.5	6.5	5.5	9.0	6.0	Mature	10+ Years	Poor	Minor deadwood throughout. Occasional historical pruning wound. Dieback or retrenchment at crown extents. Appears to be in decline.	<i>Safety assessment recommended</i>	B1	8.5	227
G011	Hazel (<i>Corylus avellana</i>) Ash (<i>Fraxinus excelsior</i>) Elm (<i>Ulmus glabra</i>)	9.0	110 avg	See Plan				1.0	Young	<10 Years	Poor	Linear group. Several dead elm stems. All ash within group showing symptoms consistent with ADB infection. AHC 3 / 4.	<i>Removal advised</i>	U	-	-
G012	Beech (<i>Fagus sylvatica</i>) Oak (<i>Quercus robur</i>) Sycamore (<i>Acer pseudoplatanus</i>) Willow (<i>Salix caprea</i>)	24.0	370 avg	See Plan				4.0	Early Mature	40+ Years	Good	Ealy mature group with occasional mature oak and sycamore. Growing on steep bank. Occasional dead branch or stem on the ground. Major, moderate & minor deadwood throughout.		B2	-	-
T013	Willow (<i>Salix caprea</i>)	18.0	610	4.0	6.0	7.0	6.0	7.0	Mature	20+ Years	Fair	Twin stemmed at 2m with included bark union. Major deadwood from neighbouring tree hanging in crown. Minor and occasional moderate deadwood throughout.		B1	7.3	167
T014	Oak (<i>Quercus robur</i>)	20.0	830	9.0	6.0	11	6.0	5.0	Mature	40+ Years	Good	Moderate deadwood on stem. Occasional moderate and major deadwood in crown.		A1	10.0	314
T015	Sycamore (<i>Acer pseudoplatanus</i>)	23.0	740	5.0	6.0	7.0	7.5	5.0	Mature	20+ Years	Fair	Tagged with number 1917. Dense epicormic growth at base. Twin stemmed at approx 3m. Occasional historical pruning wound throughout. Diminished leaf size, chlorotic.		B1	8.9	249

Ref	Species	Ht (m)	Stem Dia. @ 1.5m (mm)	Crown Spread				Clear Crown	Life Stage	RULE	Cond.	Notes		BS Cat.	RPA (m)	RPA (m ²)
				N	E	S	W					Comments	Management			
G016	Elm (<i>Ulmus glabra</i>) Rowan (<i>Sorbus aucuparia</i>) Willow (<i>Salix caprea</i>) Sycamore (<i>Acer pseudoplatanus</i>)	18.0	270 avg	See Plan				4.0	Semi Mature	40+ Years	Fair	Semi mature group with occasional mature tree within. Minor deadwood throughout. Occasional snapped branch.		C2	-	-
H017	Privet (<i>Ligustrum vulgare</i>)	4.5	50 avg	See Plan				1.0	Semi Mature	40+ Years	Fair	Lapsed hedgerow.		C2	-	-
T018	Lime (<i>Tilia x europaea</i>)	23.0	630	5.5	5.5	5.5	5.5	8.0	Early Mature	40+ Years	Good	Tagged with number 1921. Twin stemmed at approx 8m. Minor and occasional moderate deadwood throughout crown. Dense foliage limited observation of upper crown.		B1	7.6	181
T019#	Ash (<i>Fraxinus excelsior</i>)	17.0	330	4.5	4.0	4.5	4.5	6.0	Early Mature	10+ Years	Fair	Slight S lean over road. Symptoms consistent with ADB infection. AHC 2/3. Minor and occasional moderate deadwood throughout crown		C1	4.0	50
T020	Ash (<i>Fraxinus excelsior</i>)	9.5	130, 150	4.0	1.5	2.5	2.0	2.0	Semi Mature	20+ Years	Good	Growing out of wall. Twin stemmed at base. No clear evidence of ADB infection.		C1	2.4	18
T021	Sycamore (<i>Acer pseudoplatanus</i>)	7.0	160, 110	5.0	3.5	4.5	4.0	2.0	Semi Mature	20+ Years	Fair	Growing out of wall. Exposed roots to E & W.		C1	2.3	17
T022	Sycamore (<i>Acer pseudoplatanus</i>)	13.0	510	6.5	7.0	4.0	6.0	3.0	Early Mature	10+ Years	Poor	Occasional historical pruning wound. Minor deadwood throughout crown. Diminished leaf size & relatively sparse crown.		C1	6.1	117
G023	Willow (<i>Salix caprea</i>) Elm (<i>Ulmus glabra</i>)	11.0	280 avg	See Plan				2.5	Semi Mature	20+ Years	Fair	Group of self set trees growing out of wall. Occasional dead elm stem.		C1	-	-
T024	Willow (<i>Salix caprea</i>)	20.0	870	7.0	10	7.0	6.5	8.0	Mature	40+ Years	Good	Growing at base of wall. Multistemmed at approx 2m. Occasional minor deadwood and occasional branch stub throughout.		B1	10.4	340

Ref	Species	Ht (m)	Stem Dia. @ 1.5m (mm)	Crown Spread				Clear Crown	Life Stage	RULE	Cond.	Notes		BS Cat.	RPA (m)	RPA (m ²)
				N	E	S	W					Comments	Management			
G025	Sycamore (<i>Acer pseudoplatanus</i>)	22.0	760, 500, 610, 480 #, 410 #, 510 #	See Plan				4.0	Mature	40+ Years	Good	Growing on steep bank. Under story of rhododendron. Occasional historical pruning wound throughout. Minor and moderate deadwood throughout. Occasional minor bark damage. Southernmost tree multistemmed at approx 1.8m. Diminished leaf size across all trees.		B1	-	-
G026	Rowan (<i>Sorbus aucuparia</i>) Willow (<i>Salix caprea</i>) Sycamore (<i>Acer pseudoplatanus</i>)	16.0	310 avg	See Plan				4.0	Semi Mature	40+ Years	Fair	Growing on steep bank. Occasional partially failed limb. Occasional minor and moderate deadwood throughout.		C2	-	-
T027	Sycamore (<i>Acer pseudoplatanus</i>)	18.0	480	8.0	6.5	7.0	4.0	3.0	Mature	40+ Years	Good	Twin stemmed at approx 1.8m. Occasional minor deadwood.		B1	5.8	106
T028	Willow (<i>Salix caprea</i>)	16.0	780	8.0	6.0	10	7.0	5.0	Mature	10+ Years	Fair	Exposed roots to W. High proportion of minor and moderate deadwood throughout. Relatively sparse foliage.		C1	9.4	278
T029	Sycamore (<i>Acer pseudoplatanus</i>)	23.0	460	5.5	5.0	5.5	5.0	6.0	Early Mature	40+ Years	Good	Moderate deadwood low in crown. Occasional historical branch stub.		B1	5.5	95
T030	Beech (<i>Fagus sylvatica</i>)	25.0	860	10	12	13	8.5	3.0	Mature	40+ Years	Good	Slight lean to SE. Occasional minor deadwood and small snapped branch over road to S.		A1	10.3	333
T031	Sycamore (<i>Acer pseudoplatanus</i>)	23.0	560	5.5	7.0	7.5	6.5	4.0	Mature	40+ Years	Good	Occasional minor deadwood. Occasional historical pruning wound over road to S.		B1	6.7	141
T032	Sycamore (<i>Acer pseudoplatanus</i>)	22.0	560	6.0	5.0	7.5	7.5	4.0	Mature	40+ Years	Good	Occasional minor deadwood.		B1	6.7	141
T033	Willow (<i>Salix caprea</i>)	20.0	520, 780	7.5	6.0	7.0	7.0	4.0	Mature	20+ Years	Good	Very large for species. Twin stemmed at base. Minor and occasional moderate deadwood throughout.		B1	11.2	394
T034	Ash (<i>Fraxinus excelsior</i>)	25.0	470	9.0	3.0	6.0	6.5	6.0	Mature	10+ Years	Fair	Growing on steep bank. Symptoms consistent with ADB infection. AHC 2.		C1	5.6	99

Ref	Species	Ht (m)	Stem Dia. @ 1.5m (mm)	Crown Spread				Clear Crown	Life Stage	RULE	Cond.	Notes		BS Cat.	RPA (m)	RPA (m ²)
				N	E	S	W					Comments	Management			
G035	Oak (Quercus robur)	25.0	510, 500, 690	See Plan				5.0	Mature	40+ Years	Good	Group of 3 trees growing in a tight group. Occasional minor deadwood & occasional historical branch stub throughout. Occasional major deadwood to E.		B2	-	-
T036	Oak (Quercus robur)	25.0	500	10	7.0	7.0	5.0	11.0	Mature	40+ Years	Good	Occasional minor deadwood & occasional historical branch stub throughout.		B1	6.0	113
T037	Oak (Quercus robur)	18.0	220, 380, 500	7.0	5.5	6.0	2.0	11.0	Mature	40+ Years	Good	Suppressed form. Occasional minor deadwood & occasional historical branch stub throughout. Epicormic growth throughout.		B1	8.0	201
T038	Laurel (Prunus laurocerasus)	14.0	240, 300, 190, 210	11	6.0	3.0	7.0	5.0	Mature	40+ Years	Good	Minor deadwood and occasional branch stub throughout.		C2	5.7	102
G039	Ash (Fraxinus excelsior) Oak (Quercus robur) Beech (Fagus sylvatica) Birch (Betula pendula)	20.0	300 avg	See Plan				7.0	Semi Mature	40+ Years	Good	Mixed deciduous woodland. Occasional small diameter standing dead stem. minor & moderate deadwood throughout, occasional major deadwood.		B2	-	-
T040#	Willow (Salix caprea)	9.0	110 avg	4.5	4.5	4.5	4.5	1.5	Semi Mature	40+ Years	Fair	Multistemmed at base. Occasional pruning wound throughout. Snapped branch in N crown at approx 3m.		C1	4.2	55
G041	Willow (Salix caprea) Ash (Fraxinus excelsior) Privet (Ligustrum vulgare)	5.0	100 avg	See Plan				1.5	Semi Mature	40+ Years	Fair	Dense unmanaged group. Occasional failed included union and split branch. Becoming overgrown with brambles centrally.		C2	-	-
T042 #	Willow (Salix caprea)	9.0	130 avg	6.0	5.0	5.5	4.0	2.0	Semi Mature	40+ Years	Fair	Multistemmed at base. Minor deadwood throughout. Occasional historical pruning wound over road.		C1	6.0	113
T043	Willow (Salix caprea)	15.0	340, 380, 410, 240	6.0	6.0	4.5	6.0	2.0	Mature	20+ Years	Fair	Various historical branch stubs throughout. Significant historical pruning wounds to E. Minor and occasional moderate deadwood throughout.		C1	8.4	222

Ref	Species	Ht (m)	Stem Dia. @ 1.5m (mm)	Crown Spread				Clear Crown	Life Stage	RULE	Cond.	Notes		BS Cat.	RPA (m)	RPA (m ²)
				N	E	S	W					Comments	Management			
T044	Sycamore (<i>Acer pseudoplatanus</i>)	23.0	800	10	10	7.0	10	2.0	Mature	40+ Years	Fair	Growing beside stream. Significant exposed roots to NE. Relatively sparse crown. Slightly chlorotic leaf.		B1	9.6	290
T045#	Willow (<i>Salix caprea</i>)	14.0	280, 310	3.0	10	4.0	0.0	2.0	Semi Mature	40+ Years	Fair	Severe E lean. Base is by stream. Pruning wounds to E over road.		C1	5.0	79
T046	Willow (<i>Salix caprea</i>)	16.0	430, 250, 250, 260, 360, 240	6.0	6.0	7.0	6.0	3.0	Semi Mature	40+ Years	Good	Multistemmed at base. Pruning wounds to E over road. Minor deadwood throughout. Small ash growing within to N.		C1	9.0	254
G047	Ash (<i>Fraxinus excelsior</i>)	8.0	100 avg	See Plan				1.5	Young	<10 Years	Poor	Linear group. All trees showing symptoms consistent with ADB infection. AHC 2 to 4.	Removal advised	U	-	-
G048	Beech (<i>Fagus sylvatica</i>) Sycamore (<i>Acer pseudoplatanus</i>) Horse Chestnut (<i>Aesculus hippocastanum</i>)	20.0	370, 450, 710, 730	See Plan				2.0	Mature	40+ Years	Good	2 sycamore, 1 beech and 1 horse chestnut. Growing on a bank below the height of the road. Epicormic growth at base of NE sycamore. Occasional exposed roots. Minor and moderate deadwood throughout.		B2	-	-
G049	Willow (<i>Salix caprea</i>)	14.0	230 avg	See Plan				3.0	Semi Mature	40+ Years	Good	Growing below road level by stream. Occasional minor deadwood.		C1	-	-
T050	Sycamore (<i>Acer pseudoplatanus</i>)	11.0	180, 200, 200	4.5	4.5	4.0	3.0	2.0	Semi Mature	20+ Years	Poor	Growing out of top of wall. Multistemmed near base. Occasional minor deadwood throughout. Sparse foliage, chlorotic leaf.		C1	4.0	50
G051	Willow (<i>Salix caprea</i>) Elm (<i>Ulmus glabra</i>) Sycamore (<i>Acer pseudoplatanus</i>)	12.0	200 avg	See Plan				3.0	Semi Mature	20+ Years	Poor	Growing by stream, approx 2m below the level of the site. Occasional dead elm stem. Sycamores within group have diminished leaf size and chlorotic foliage. Occasional minor deadwood throughout.		C2	-	-
T052	Willow (<i>Salix caprea</i>)	13.0	320	4.0	4.0	4.0	4.0	2.5	Semi Mature	40+ Years	Fair	Growing out of wall. Twin stemmed at approx 2m.		C1	3.8	45

Ref	Species	Ht (m)	Stem Dia. @ 1.5m (mm)	Crown Spread				Clear Crown	Life Stage	RULE	Cond.	Notes		BS Cat.	RPA (m)	RPA (m ²)
				N	E	S	W					Comments	Management			
G053	Rhododendron (Rhododendron ponticum) Alder (Alnus glutinosa) Sycamore (Acer pseudoplatanus) Holly (Ilex aquifolium) Hawthorn (Crataegus monogyna) Hazel (Corylus avellana)	7.5	180 avg	See Plan				1.0	Semi Mature	40+ Years	Fair	Dense group of shrubs with larger trees centrally. No visible defects.		C2	-	-
T054	Holly (Ilex aquifolium)	12.0	330, 310	3.0	5.0	5.0	4.0	0.5	Mature	20+ Years	Fair	Occasional superficial bark damage to stem. Rope around S stem at approx 1m. Sparse crown.		C1	5.4	92
T055	Alder (Alnus glutinosa)	14.0	520	6.0	6.0	6.0	6.0	2.5	Early Mature	40+ Years	Good	Occasional historical pruning wound and branch stub throughout.		B1	6.2	121
T056	Holly (Ilex aquifolium)	12.0	480	5.5	5.5	5.5	5.5	0.5	Mature	40+ Years	Good	Occasional superficial bark damage to stem. Occasional snapped or damaged branch to N.		B1	5.8	106
G057	Elder (Sambucus nigra) Ash (Fraxinus excelsior) Hawthorn (Crataegus monogyna)	8.0	120 avg	See Plan				1.0	Semi Mature	40+ Years	Good	Lapsed hedgerow establishing as a small group of trees.		C1	-	-
T058	Sycamore (Acer pseudoplatanus)	16.0	220, 230	5.0	5.0	5.0	5.0	4.0	Semi Mature	40+ Years	Good	Growing S of retaining wall by stream. Twin stemmed near base.		C1	3.8	45
T059	Sycamore (Acer pseudoplatanus)	20.0	510, 610	6.5	6.5	6.5	6.5	3.0	Mature	40+ Years	Good	Growing S of retaining wall by stream. Twin stemmed near base. Occasional historical pruning wound and moderate deadwood.		B1	9.5	284

Ref	Species	Ht (m)	Stem Dia. @ 1.5m (mm)	Crown Spread				Clear Crown	Life Stage	RULE	Cond.	Notes		BS Cat.	RPA (m)	RPA (m ²)
				N	E	S	W					Comments	Management			
G060	Beech (<i>Fagus sylvatica</i>) Holly (<i>Ilex aquifolium</i>) Sycamore (<i>Acer pseudoplatanus</i>) Lime (<i>Tilia x europaea</i>)	25.0	330 avg	See Plan				1.0	Mature	40+ Years	Good	Group of 5 mature limes & 2 sycamore with understory of other species. Occasional historical snapped limb. Occasional moderate deadwood & historical pruning wound throughout. Central smaller lime has extensive epicormic growth likely as a result of light exposure after neighbouring trees to W were removed.		B2	-	-
T061	Sycamore (<i>Acer pseudoplatanus</i>)	15.0	660	6.0	6.0	6.0	6.0	2.0	Semi Mature	40+ Years	Fair	Historical branch failures in crown to NW. Crown sparse in this location. Occasional minor deadwood.		B1	7.9	196
T062	Sycamore (<i>Acer pseudoplatanus</i>)	13.0	460	4.5	4.5	4.5	4.5	3.0	Semi Mature	40+ Years	Good	Historical inexpert pruning wounds to W & N over canal path. Minor deadwood throughout.		B1	5.5	95
G063	Elm (<i>Ulmus glabra</i>) Sycamore (<i>Acer pseudoplatanus</i>) Hawthorn (<i>Crataegus monogyna</i>)	6.5	80 avg	See Plan				1.0	Young	20+ Years	Fair	Elm in decline. Some sycamore withering group with diminished leaf size and chlorotic leaf.		C1	-	-
G064	Sycamore (<i>Acer pseudoplatanus</i>)	8.0	80 avg	See Plan				1.5	Young	40+ Years	Fair	Growing by towpath to N of the site. Some inexpert pruning to NW.		C1	-	-
T065	Sycamore (<i>Acer pseudoplatanus</i>)	5.0	140, 60	1.5	1.5	1.5	1.5	1.0	Young	40+ Years	Fair	Growing by towpath to N of the site. Some inexpert pruning to NW.		C1	1.8	10
G066	Sycamore (<i>Acer pseudoplatanus</i>) Ash (<i>Fraxinus excelsior</i>)	4.0	70 avg	See Plan				1.0	Young	40+ Years	Poor	Primarily dead ash stems with one sycamore. Sycamore within group has diminished leaf size and slightly chlorotic leaf.		C1	-	-

Ref	Species	Ht (m)	Stem Dia. @ 1.5m (mm)	Crown Spread				Clear Crown	Life Stage	RULE	Cond.	Notes		BS Cat.	RPA (m)	RPA (m ²)
				N	E	S	W					Comments	Management			
G067	Elm (<i>Ulmus glabra</i>) Oak (<i>Quercus robur</i>) Holly (<i>Ilex aquifolium</i>) Birch (<i>Betula pendula</i>) Sycamore (<i>Acer pseudoplatanus</i>)	10.0	90 avg	See Plan				3.0	Young	40+ Years	Fair	Growing beside towpath and beside dilapidated structure/wall. Some inexpert pruning to NW of group. Becoming overgrown with brambles to SE.		C2	-	-
G068	Willow (<i>Salix caprea</i>) Rowan (<i>Sorbus aucuparia</i>) Birch (<i>Betula pendula</i>) Ash (<i>Fraxinus excelsior</i>)	9.0	90 avg	See Plan				1.0	Young	40+ Years	Good	Growing between towpath and Site. Occasional small dead ash stem.		C2	-	-
G069	Willow (<i>Salix fragilis</i>) Willow (<i>Salix caprea</i>)	9.0	90 avg	See Plan				0.5	Semi Mature	40+ Years	Good	Linear group, growing besides a small stream.		C2	-	-
T070	Sycamore (<i>Acer pseudoplatanus</i>)	4.5	80, 60, 90, 90	2.0	1.5	2.0	1.5	1.0	Young	40+ Years	Fair	Growing from top of dilapidated walkway/wall. Slightly chlorotic leaf.		C1	1.9	11

8.0 Appendix 3 – Site photographs



Plate 1: Scattered trees along towpath in the North



Plate 2: G68 in west of the site



Plate 3: T003 within mature woodland on Manchester Road



Plate 4: Tree T22 in woodland to either side of access road

9.0 Appendix 4 – Kirklees Council Tree Preservation Orders

9.1 Kirklees Council Tree Preservation Order ref. 02a/13



- 9.1.1 Trees covered by Tree Preservation Order (TPO) are legally protected from lopping, topping, damaging, being wilfully destroyed and uprooting unless written consent has been obtained by the Local Planning Authority.
- 9.1.2 Where TPOs protect individual trees and tree groups (Group TPO), these will specify exactly which trees are covered by including a TPO location map showing the exact location of protected trees. A schedule will further list the species of the protected trees which enables any stakeholders to identify the protected trees on site.
- 9.1.3 Where a Woodland TPO or an Area TPO has been served, these will cover all trees within a boundary shown on the map accompanying the notice. However, only trees which were present when an Area TPO is served are legally covered. Any trees established after the TPO was served will not be included in the TPO unless this has been updated.
- 9.1.4 Written permission needs to be sought from the Local Planning Authority before any works are carried out which may directly or indirectly affect protected trees, including any works included in the preliminary management recommendations in the schedule in Appendix 2.

- 9.1.5 Consent for the proposed works can further be assumed if they are included in an Arboricultural Impact Assessment and/ or Tree Protection Plan and where these documents are listed as approved documents under the relevant planning permission.
- 9.1.6 Where the TPO information provided by the council is ambiguous, e.g. based on historic or inaccurate map information, confirmation should be sought from the relevant council officer on which trees are protected, which may require a meeting on site and subsequent written confirmation of accurate TPO information.

10.0 Appendix 5 – Methodology

This report and the methodology adopted to carry out the Arboricultural Survey is based on recommendations outlined in *British Standard (BS) 5837:2012 Trees in relation to design, demolition and construction- Recommendations*. This was published by BSI Standards Limited and came into effect on 30th April 2012. It supersedes BS 5837:2005 which is withdrawn.

Arboricultural Survey - Site Visit

- 10.1.1 A tree survey or arboricultural survey is a ground-based visual assessment of existing trees and tree groups on a site. It records the location of trees, the species, the estimated height and canopy spread, the stem diameter, and the tree's life stage, remaining useful life expectancy (RULE) and overall condition. Any distinctive features and abnormalities such as structural defects and physiological condition which may or may not have an adverse effect on the health or stability of the tree are also recorded, together with any signs of nesting birds and bat roost potential. Where ground conditions may influence the tree's growth, health and stability, such as water logging, ground compaction and severe level changes, this would also be recorded.
- 10.1.2 The site walkover includes an assessment of the overall value and quality of the trees on site by assigning a retention category to each tree and tree group. This assists stakeholders in deciding which trees should be removed or retained in the event of development occurring. There are four categories: A (high quality), B (moderate quality), C (low quality) and U (unsuitable for retention). For trees in categories A to C, these should qualify under one or more subcategories: 1 (mainly arboricultural qualities), 2 (mainly landscape qualities) and 3 (mainly cultural values).
- 10.1.3 The findings of the tree survey are recorded in an Arboricultural Survey Schedule supported by a Tree Survey and Tree Constraints Plan, both appended to the report.
- 10.1.4 The survey includes all trees which have a stem diameter of at least 75mm at 1.5m height or measured in accordance with BS 5837:2012 Annex C.
- 10.1.5 The tree survey usually records individual trees (labelled "T" on the Tree Survey and Tree Constraints Plan and in the Tree Survey Schedule), but may also group trees of similar age, species and condition into Groups (labelled "G"). Trees may also be grouped where they form a homogeneous unit (e.g. tree belts and woodland groups) which is unlikely to be directly affected by the development (labelled "G" for small groups or "W" for Woodland Groups, as appropriate). Hedgerows are also recorded where present (labelled "H").

- 10.1.6 To determine the location of trees, groups and hedgerows on site, Enzygo Ltd. and any surveyor sub-consultants use a handheld GPS tracking device with an accuracy of up to 1-2m. It enables the surveyor to plot trees onto a base plan, usually a digital copy of a topographic survey or an OS map tile, and to simultaneously record all tree survey information required for a full tree survey schedule to BS 5837:2012.
- 10.1.7 The survey includes any trees outside the site boundary which may be affected by any development proposals by overhanging canopies or by Root Protection Areas which are likely to extend into the site. These trees are normally found within 15m from the site boundary.
- 10.1.8 The presence of Ancient and Veteran Trees is established using the second edition of the “Recognition of Ancient, Veteran & Notable Trees” (RAVEN 2) assessment methodology, as published by Forbes-Laird Arboricultural Consultancy in 2018.

Arboricultural Survey – Desk Study

- 10.1.9 Following the completion of the site survey this is then uploaded into a Computer Aided Design (CAD) programme in order to produce the Tree Constraints Plan, with the tree survey information converted into a corresponding Arboricultural Survey Schedule.
- 10.1.10 In addition to a site walk-over survey, a desk-study is carried out which includes the calculation of Root Protection Areas (RPA) in accordance with BS 5837:2012 clause 4.6 as the minimum area of land around the stem of a tree which should be protected during construction.
- 10.1.11 The desk study also includes liaison with the relevant local authority to establish whether any of the trees on site are protected by Tree Preservation Order (TPO) or whether Conservation Areas affect the legal status of any trees. Some local authorities provide online mapping tools on their website which identify any legal tree protection.
- 10.1.12 The Governments MAGIC map application available at <https://magic.defra.gov.uk/> as well as the Woodland Trust’s Ancient Tree Inventory (ATI) on <https://ati.woodlandtrust.org.uk/> is then searched for any Ancient Woodland designations or Ancient or Veteran Trees on or near the site respectively.



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