



Penistone Footbridge & Car Park

Arboricultural Impact Assessment

For **Barnsley Metropolitan Borough
Council**

Project No.: **BAR010-003**

October 2026

London & South East

Compass House
Surrey Research Park
Guildford
GU2 7AG. UK
t: +44 (0)1483 466 000

North East

Unit 4 Carrwood Park
Selby Road
Leeds
LS15 4LG. UK
t: +44 (0)113 518 2121

North West

Kennedy House
31 Stamford St
Ground floor
Altrincham
Greater Manchester

Wales & South West

Sophia House
28 Cathedral Road
Cardiff
CF11 9LJ UK
t: +44 (0)292 066 0180

Midlands

605 Holly Court,
Holly Farm Business Park
Honiley, Kenilworth
Warwickshire
CV8 1NP

East

70-72 The Havens,
Ransomes Industrial Estate,
Ipswich, Suffolk
IP3 9BF
t: +44 (0)1483 466 000



Enquiries

e: enquiries@thomsonec.com
w: www.thomsonec.com

Project Number	Report No.
BAR010-003	002

Revision No.	Date of Issue	Author	Reviewer	Approver
001	2 nd October 2026	Robert Armitage	Ka Fai Mak	Robert Armitage

Disclaimer:

Copyright Thomson Environmental Consultants Limited. All rights reserved.

No part of this report may be copied or reproduced by any means without prior written permission from Thomson Environmental Consultants Limited. If you have received this report in error, please destroy all copies in your possession or control and notify Thomson Environmental Consultants Limited.

This report has been prepared for the exclusive use of the commissioning party and unless otherwise agreed in writing by Thomson Environmental Consultants Limited, no other party may use, make use of or rely on the contents of the report. No liability is accepted by Thomson Environmental Consultants Limited for any use of this report, other than for the purposes for which it was originally prepared and provided.

Opinions and information provided in the report are on the basis of Thomson Environmental Consultants Limited using due skill, care and diligence in the preparation of the same and no explicit warranty is provided as to their accuracy. It should be noted and it is expressly stated that no independent verification of any of the documents or information supplied to Thomson Environmental Consultants Limited has been made.

Contents

1. Summary	5
2. Introduction	6
2.1 Brief and Objectives	6
2.2 Development Background	6
2.3 Limitations	7
3. Planning Policy Review	7
3.1 The National Planning Policy Framework	7
3.2 Local Plan Policy	7
4. Arboricultural Impact Assessment (AIA)	9
4.1 Introduction	9
4.2 Documents	9
4.3 Trees to be removed	9
4.4 Impacts on retained trees	11
4.5 Discussion of impacts on retained trees - Construction Phase	12
4.6 Shading	14
4.7 Tree Pruning	14
4.8 Services and Utilities	15
4.9 Protection of Trees During Construction	15
4.10 New Planting	15
4.11 Post Development Management	16
4.12 Conclusion	16
5. Recommendations	18
6. Bibliography	19
Appendix 1 - Tree Schedule	20
Appendix 2 - Trees to be Retained and Removed	27
Appendix 3 - Trees to be removed	28
Appendix 4 - Trees to be pruned	30
Appendix 5 - Table of Quality Assessment	31
Appendix 6 - Examples of tree protection fencing	32
Appendix 7 - Tree Protection Fencing Notice	34

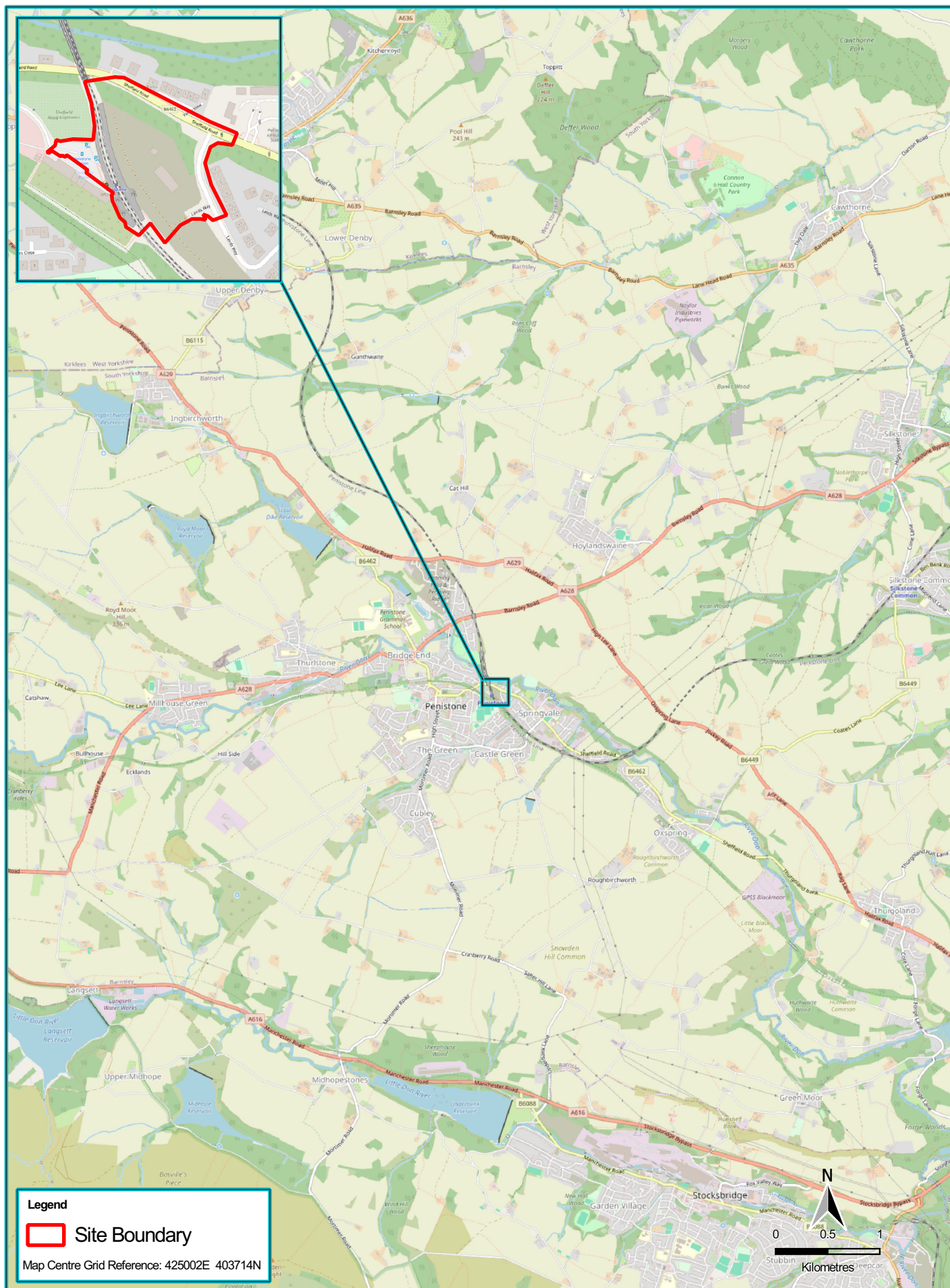
FIGURE 1: SITE LOCATION PLAN

FIGURE 2: TREE CONSTRAINTS PLAN (TCP01)

FIGURE 3: TREE RETENTION AND REMOVAL PLAN (TRRP01)

1. Summary

- 1.1.1** Barnsley Metropolitan Borough Council commissioned Thomson Environmental Consultants to conduct an Arboricultural Impact Assessment for the development proposals at Penistone Footbridge & Car Park, which involve the redevelopment and reconfiguration of land associated with Penistone Station to provide an expanded car parking facility. This report follows the Arboricultural Survey Report submitted by Thomson Environmental Consultants (document number: 261002-BAR010-003-Penistone Railway Station and Carpark-Arb Survey-002 RA merged).
- 1.1.2** The development proposals directly require the complete removal of 3 individual trees (T10, T11, T12), 2 groups of trees (G02 and G03) and the partial removal of 5 further groups of trees (G01, G04, G05, G06 and G07). A full breakdown of these trees along with their quality category is provided at Appendix 3 and at section 4.3 of this report.
- 1.1.3** This means that 31 individual trees and 5 groups of trees will be retained entirely within the scheme and where only partial removal of tree groups is required, sections of these features will also be retained. All retained trees can be integrated into the new development, providing the protection measures outlined within this report are detailed fully within a comprehensive arboricultural method statement, implemented as a condition of planning consent.
- 1.1.4** A number of impacts to retained trees have also been identified which are to be mitigated by the measures described within this report, to be detailed within a comprehensive method statement. These impacts are:
- Construction of new hard standing in areas of existing grass / soft landscaping - T03, T14, T19, T20, T21, T22
 - Installation of new services in areas of existing grass / soft landscaping - T14, T19, T20, T21, T22
- 1.1.5** Checks made on Barnsley Metropolitan Borough Council's online interactive mapping software indicate that no trees recorded as part of this report are subject to any Tree Preservation Orders.
- 1.1.6** Penistone Conservation Area lies immediately adjacent to the north-western extent of the site. However, it is not entirely clear from the available mapping whether the Conservation Area boundary extends marginally into the site beyond the railway corridor. Confirmation of the precise boundary position should therefore be sought through correspondence with the local planning authority. Based on our review of the available information, it is our opinion that the Conservation Area is unlikely to extend into the site.
- 1.1.7** The council's local plan policies have been reviewed and the proposals are in accordance with local policy.
- 1.1.8** The arboricultural impacts associated with the development of the site are considered acceptable, providing that the trees removed as part of the development are compensated for by new tree planting at the landscaping stage of the project.



Client	Barnsley Metropolitan Borough Council		Drawing Ref	BAR010-003/409450/1	
Figure Number	1		Scale at A4	1:50,000	
Figure Title	Site Location		Drawn	JTW	Checked AS
			Date	20/03/2026	Date 20/03/2026

Thomson
environmental
consultants

www.thomsonec.com
enquiries@thomsonec.com

Filepath: M:\Live Projects\Arboriculture\BAR010-003-Penistone Station PEA16 - Mapping\Working\BAR010_003_TCP_JTW_200326.ggz
This map has been drawn at a sufficient level of accuracy to fulfil the requirements of an Arboricultural survey. The level of accuracy depends on both the size of the area involved, GPS accuracy and the detail of topographic mapping. Every effort has been made to create a map that is as accurate as possible. However, this map is not intended to represent a scaled landscape survey so should not be used to pin-point accurate engineering work or as a basis for detailed site planning where an accurate topographical survey has not been provided to help inform the arboricultural survey. Contains Ordnance Survey data © Crown copyright and database right 2026. This map must not be copied or reproduced by any means without prior written permission from Thomson Environmental Consultants.



- Legend**
- Canopy Extent of Category 'A' Tree
 - Canopy Extent of Category 'B' Tree
 - Canopy Extent of Category 'C' Tree
 - Canopy Extent of Category 'U' Tree
 - Root Protection Area of Tree / Group
 - Stem of Individual Tree
 - Extent of Tree Stems within Groups / Hedges
 - Site Boundary
 - Existing Site Layout



Map Centre Grid Reference: 425138E 403310N
Contains Ordnance Survey data
© Crown copyright and database right 2026.
This map must not be copied or reproduced by any means without prior written permission from Thomson Environmental Consultants.

Drawing Ref		BAR010-003/409451/1	
Scale at A3		1:1,000	
Drawn	JTW	Checked	AS
Date	01/10/2026	Date	01/10/2026
Client			
Barnsley Metropolitan Borough Council			
Figure Number		2a	
Figure Title			

Tree Constraints Plan
(TCP01)

Filepath: M:\Live Projects\Arboriculture\BAR010-003-Penistone Station PEA16 - Mapping\Working\BAR010_003_TCP_JTW_200326.qgz
This map has been drawn at a sufficient level of accuracy to fulfil the requirements of an Arboricultural survey. The level of accuracy depends on both the size of the area involved, GPS accuracy and the detail of topographic mapping. Every effort has been made to create a map that is as accurate as possible. However, this map is not intended to represent a scaled landscape survey so should not be used to plan detailed site planning work or as a basis for detailed site planning where an accurate topographical survey has not been provided to help inform the arboricultural survey. Contains Ordnance Survey data © Crown copyright and database right 2026. This map must not be copied or reproduced by any means without prior written permission from Thomson Environmental Consultants.



Thomson
environmental
consultants
www.thomsonec.com
enquiries@thomsonec.com

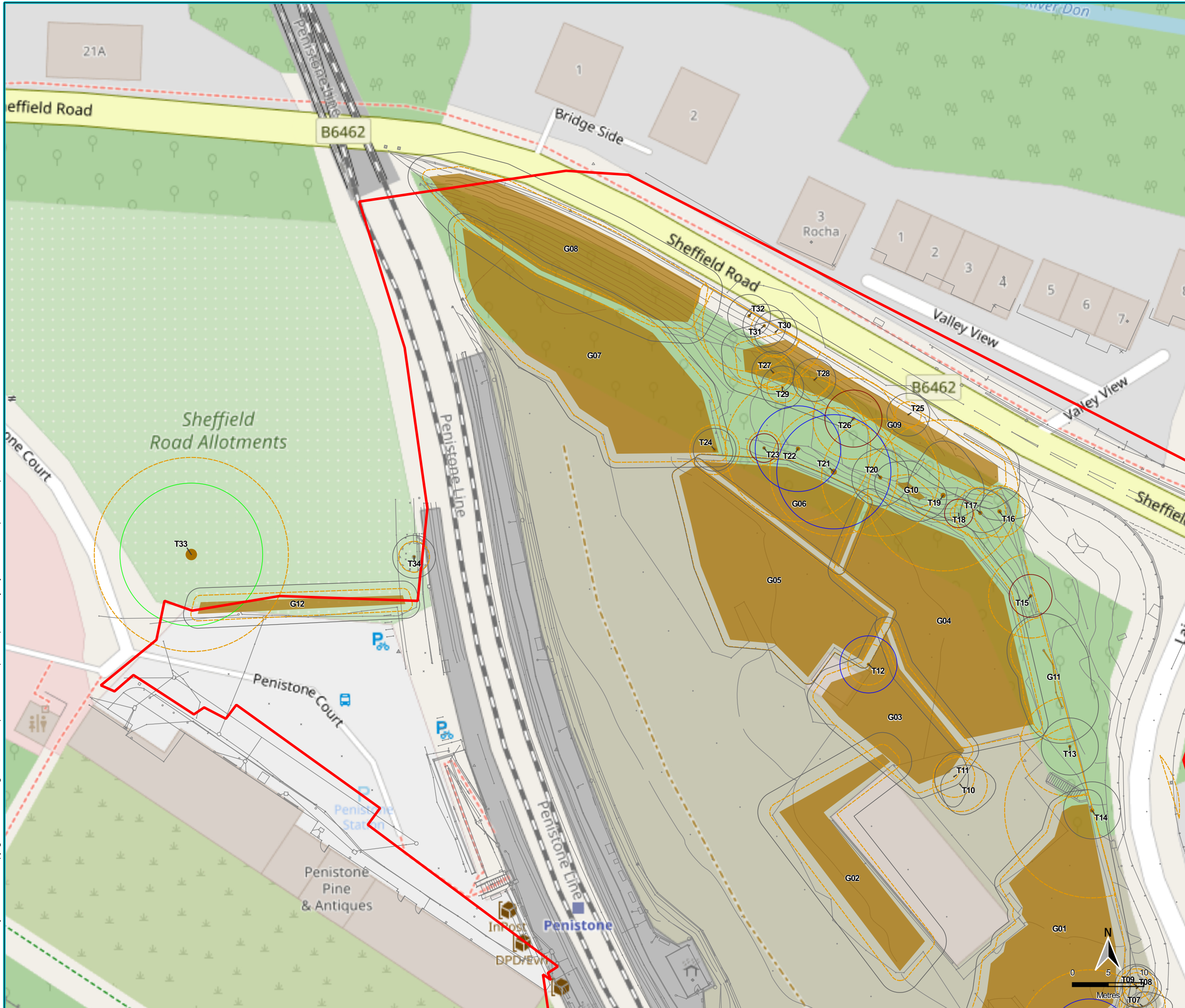
Legend

- Canopy Extent of Category 'B' Tree
- Canopy Extent of Category 'C' Tree
- Canopy Extent of Category 'U' Tree
- Root Protection Area of Tree / Group
- Stem of Individual Tree
- Extent of Tree Stems within Groups / Hedges
- Site Boundary
- Existing Site Layout

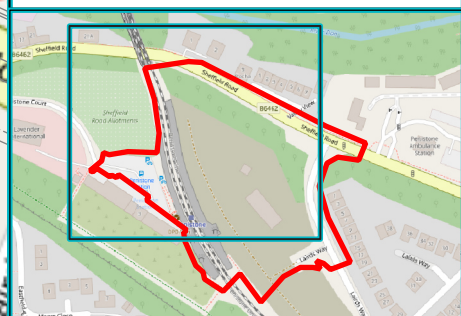
Map Centre Grid Reference: 425160E 403289N
Contains Ordnance Survey data
© Crown copyright and database right 2026.
This map must not be copied or reproduced by any means without prior written permission from Thomson Environmental Consultants.

Drawing Ref BAR010-003/409451/1	
Scale at A3 1:500	
Drawn JTW	Checked AS
Date 01/10/2026	Date 01/10/2026
Client Barnsley Metropolitan Borough Council	
Figure Number 2b	
Figure Title Tree Constraints Plan (TCP01)	

Filepath: M:\Live Projects\Arboriculture\BAR010-003-Penistone Station PEA16 - Mapping\Working\BAR010_003_TCP_JTW_200326.ggz
This map has been drawn at a sufficient level of accuracy to fulfil the requirements of an Arboricultural survey. The level of accuracy depends on both the size of the area involved, GPS accuracy and the detail of topographic mapping. Every effort has been made to create a map that is as accurate as possible. However, this map is not intended to represent a scaled landscape survey so should not be used to plan engineering work or as a basis for detailed site planning where an accurate topographical survey has not been provided to help inform the arboricultural survey. Contains Ordnance Survey data © Crown copyright and database right 2026. This map must not be copied or reproduced by any means without prior written permission from Thomson Environmental Consultants.



- Legend
- Canopy Extent of Category 'A' Tree
 - Canopy Extent of Category 'B' Tree
 - Canopy Extent of Category 'C' Tree
 - Canopy Extent of Category 'U' Tree
 - Root Protection Area of Tree / Group
 - Stem of Individual Tree
 - Extent of Tree Stems within Groups / Hedges
 - Site Boundary
 - Existing Site Layout



Map Centre Grid Reference: 425115E 403339N
Contains Ordnance Survey data
© Crown copyright and database right 2026.
This map must not be copied or reproduced by any means without prior written permission from Thomson Environmental Consultants.

Drawing Ref		BAR010-003/409451/1	
Scale at A3		1:500	
Drawn	JTW	Checked	AS
Date	01/10/2026	Date	01/10/2026
Client			
Barnsley Metropolitan Borough Council			
Figure Number		2c	
Figure Title			

Tree Constraints Plan
(TCP01)

Filepath: M:\Live Projects\Arboriculture\BAR010-003-Penistone Station PEA16 - Mapping\Working\BAR010_003_TRRP_KC_021026.ggz
This map has been drawn at a sufficient level of accuracy to fulfil the requirements of an Arboricultural survey. The level of accuracy depends on both the size of the area involved, GPS accuracy and the detail of topographic mapping. Every effort has been made to create a map that is as accurate as possible. However, this map is not intended to represent a scaled landscape survey so should not be used to pin-point accurate engineering work or as a basis for detailed site planning where an accurate topographical survey has not been provided to help inform the arboricultural survey. Contains Ordnance Survey data © Crown copyright and database right 2026. This map must not be copied or reproduced by any means without prior written permission from Thomson Environmental Consultants.



Thomson

environmental consultants

www.thomsonec.com
enquiries@thomsonec.com

Legend

- Canopy Extent of Category 'A' Tree
- Canopy Extent of Category 'B' Tree
- Canopy Extent of Category 'C' Tree
- Canopy Extent of Category 'U' Tree
- Root Protection Area of Tree / Group to be Retained
- Root Protection Area of Tree / Group to be Removed
- Stem of Individual Tree to be Retained
- Stem of Individual Tree to be Removed
- Extent of Tree Stems within Groups / Hedges to be Retained
- Extent of Tree Stems within Groups / Hedges to be Removed
- Site Boundary
- Proposed Site Layout

Map Centre Grid Reference: 425138E 403310N

Contains Ordnance Survey data
© Crown copyright and database right 2026.

This map must not be copied or reproduced by any means without prior written permission from Thomson Environmental Consultants.

Drawing Ref
BAR010-003/410652/1

Scale at A3
1:1,000

Drawn KC	Checked AS
Date 02/10/2026	Date 02/10/2026

Client
Barnsley Metropolitan Borough Council

Figure Number
3a

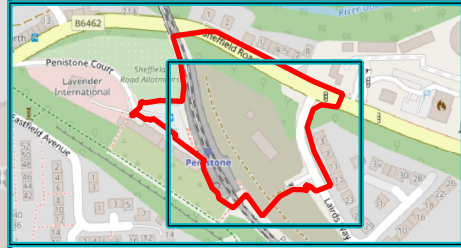
Figure Title
Tree Retention and Removal Plan (TRRP01)

Filepath: M:\Live Projects\Arboriculture\BAR010-003-Penistone Station PEA16 - Mapping\Working\BAR010_003_TRRP_KC_021026.cgz
This map has been drawn at a sufficient level of accuracy to fulfil the requirements of an Arboricultural survey. The level of accuracy depends on both the size of the area involved, GPS accuracy and the detail of topographic mapping. Every effort has been made to create a map that is as accurate as possible. However, this map is not intended to represent a scaled landscape survey so should not be used to pin-point accurate engineering work or as a basis for detailed site planning where an accurate topographical survey has not been provided to help inform the arboricultural survey. Contains Ordnance Survey data © Crown copyright and database right 2026. This map must not be copied or reproduced by any means without prior written permission from Thomson Environmental Consultants.



Legend

- Canopy Extent of Category 'B' Tree
- Canopy Extent of Category 'C' Tree
- Canopy Extent of Category 'U' Tree
- Root Protection Area of Tree / Group to be Retained
- Root Protection Area of Tree / Group to be Removed
- Stem of Individual Tree to be Retained
- Stem of Individual Tree to be Removed
- Extent of Tree Stems within Groups / Hedges to be Retained
- Extent of Tree Stems within Groups / Hedges to be Removed
- Site Boundary
- Proposed Site Layout

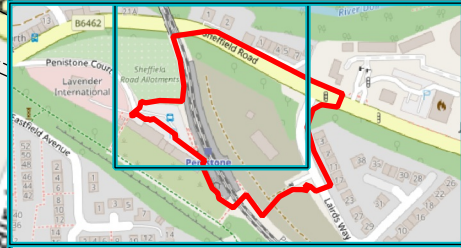


Map Centre Grid Reference: 425160E 403289N	
Contains Ordnance Survey data © Crown copyright and database right 2026.	
This map must not be copied or reproduced by any means without prior written permission from Thomson Environmental Consultants.	
Drawing Ref BAR010-003/410652/1	
Scale at A3 1:500	
Drawn KC	Checked AS
Date 02/10/2026	Date 02/10/2026
Client Barnsley Metropolitan Borough Council	
Figure Number 3b	
Figure Title Tree Retention and Removal Plan (TRRP01)	

Filepath: M:\Live Projects\Arboriculture\BAR010-003-Penistone Station PEAI6 - Mapping\Working\BAR010_003_TRRP_KC_021026.ggz
This map has been drawn at a sufficient level of accuracy to fulfil the requirements of an Arboricultural survey. The level of accuracy depends on both the size of the area involved, GPS accuracy and the detail of topographic mapping. Every effort has been made to create a map that is as accurate as possible. However, this map is not intended to represent a scaled landscape survey so should not be used to plan engineering work or as a basis for detailed site planning where an accurate topographical survey has not been provided to help inform the arboricultural survey. Contains Ordnance Survey data © Crown copyright and database right 2026. This map must not be copied or reproduced by any means without prior written permission from Thomson Environmental Consultants.



- Legend
- Canopy Extent of Category 'A' Tree
 - Canopy Extent of Category 'B' Tree
 - Canopy Extent of Category 'C' Tree
 - Canopy Extent of Category 'U' Tree
 - Root Protection Area of Tree / Group to be Retained
 - Root Protection Area of Tree / Group to be Removed
 - Stem of Individual Tree to be Retained
 - Stem of Individual Tree to be Removed
 - Extent of Tree Stems within Groups / Hedges to be Retained
 - Extent of Tree Stems within Groups / Hedges to be Removed
 - Site Boundary
 - Proposed Site Layout



Map Centre Grid Reference: 425115E 403339N

Contains Ordnance Survey data
© Crown copyright and database right 2026.

This map must not be copied or reproduced by any means without prior written permission from Thomson Environmental Consultants.

Drawing Ref
BAR010-003/410652/1

Scale at A3
1:500

Drawn KC	Checked AS
-------------	---------------

Date 02/10/2026	Date 02/10/2026
--------------------	--------------------

Client
Barnsley Metropolitan Borough Council

Figure Number
3c

Figure Title
Tree Retention and Removal Plan (TRRP01)

2. Introduction

2.1 Brief and Objectives

2.1.1 Barnsley Metropolitan Borough Council commissioned Thomson Environmental Consultants to complete an Arboricultural Impact Assessment (AIA) based on the development proposals at Penistone Footbridge & Car Park (hereafter referred to as 'the site').

2.1.2 The brief was to complete:

- An Arboricultural Impact Assessment based on the development proposals; and
- A Tree Retention & Removal Plan

2.1.3 The purpose of the AIA is to determine which existing trees will need to be removed for the development proposals and identify any impacts to retained trees.

2.2 Development Background

2.2.1 The proposals comprise the redevelopment and reconfiguration of land associated with Penistone Station to provide an expanded car parking facility, associated access arrangements, pedestrian infrastructure, sustainable drainage features (SuDS), and landscape enhancements. The scheme includes new hard surfaced parking and circulation areas, areas of paving, biodiverse planting and habitat creation measures, including native scrub and species-rich planting, together with dedicated Biodiversity Net Gain (BNG) areas located throughout the site. The works are focused on improving station parking provision whilst delivering landscape and ecological enhancements.

2.2.2 There are a number of trees within and adjacent to the site boundary that will be affected by the development.

2.2.3 Checks made on Barnsley Metropolitan Borough Council's online interactive mapping software indicate that no trees recorded as part of this report are subject to any Tree Preservation Orders.

2.2.4 Penistone Conservation Area lies immediately adjacent to the north-western extent of the site. However, it is not entirely clear from the available mapping whether the Conservation Area boundary extends marginally into the site beyond the railway corridor. Confirmation of the precise boundary position should therefore be sought through correspondence with the local planning authority. Based on our review of the available information, it is our opinion that the Conservation Area is unlikely to extend into the site.

2.2.5 A review of the DEFRA MAGIC map was also undertaken which showed that there are no designated ancient woodlands within or adjacent to the site.

2.3 Limitations

- 2.3.1 The information provided within this report and in the accompanying Tree Schedule covers only those trees that were inspected and their condition at the time of survey.
- 2.3.2 This assessment has been prepared based on the development proposal plans provided by Barnsley Metropolitan Borough Council. Any differing layouts, tree removal/retention requests or revised construction methods will need to be reviewed.
- 2.3.3 Whilst this report makes general observations on the long-term potential of the trees surveyed, trees are dynamic organisms and subject to continual change. This report should therefore not be relied upon for the purposes of development for more than 24 months from the date of survey.

3. Planning Policy Review

3.1 The National Planning Policy Framework

- 3.1.1 The National Planning Policy Framework (NPPF) (August 2026) provides planning policy guidance at a national level and sets out the Government's objectives for achieving sustainable development through the planning system. The Framework recognises the important contribution that trees, woodland and other green infrastructure make to the character, quality and resilience of places, including their role in supporting biodiversity, mitigating and adapting to climate change, improving health and wellbeing, and contributing to attractive and sustainable development.
- 3.1.2 Planning policies and decisions are expected to protect and enhance the natural environment, secure high-quality design, and take opportunities to retain existing trees and incorporate appropriate new planting within development proposals. The Framework also affords strong protection to irreplaceable habitats, including ancient woodland and ancient and veteran trees, recognising their significant environmental, cultural and amenity value. Development proposals should therefore seek to avoid adverse impacts upon such features and, where relevant, demonstrate that appropriate consideration has been given to the retention and long-term management of existing tree cover.
- 3.1.3 In considering the proposed development, regard has been had to the relevant provisions of the NPPF relating to the protection and enhancement of the natural environment, high-quality placemaking, climate resilience, biodiversity, and the conservation of irreplaceable habitats, including ancient woodland and veteran trees.

3.2 Local Plan Policy

- 3.2.1 At a local level, Barnsley Metropolitan Borough Council has a statutory obligation to ensure adequate provision is made for the preservation of trees through Section 197 of the Town and Country Planning Act (1990). The Barnsley Local Plan (adopted January 2019) is understood to be the Council's primary development control document, supported by a Trees and hedgerows supplementary planning document (adopted May 2019); within which, Policies GD1 and BIO1 apply to trees in the context of development (relevant extracts reproduced below).

3.2.2 Policy BIO1 Biodiversity and Geodiversity

Development will be expected to conserve and enhance the biodiversity and geological features of the borough by:

Protecting ancient and veteran trees where identified.

Development which may harm a biodiversity or geological feature or habitat, including ancient woodland and aged or veteran trees found outside ancient woodland, will not be permitted unless effective mitigation and/or compensatory measures can be ensured.'

3.2.3 Policy GD1: General Development

Proposals for development will be approved if:

Existing trees that are to remain on site are considered in the layout in order to avoid overshadowing.'

4. Arboricultural Impact Assessment (AIA)

4.1 Introduction

4.1.1 The purpose of this section is to determine which existing trees will need to be removed for the development proposals, which trees can be retained and identify any impacts to retained trees.

4.1.2 The protection of retained trees is paramount to their survival during the development process and their consequent long-term contribution to the site. The Root Protection Areas (RPAs) of trees identified for retention should remain protected throughout the development to avoid potential damage, such as:

- Soil compaction;
- Root severance due to excavation;
- Soil coverage with impermeable material;
- Alterations in ground level;
- Leaks and spillages from stored materials; and
- Vehicle and heavy plant collision.

4.2 Documents

4.2.1 This assessment has been based on documents listed within Table 1 below.

Table 1: Documents upon which this assessment has been based

Originator	RefNo	Title
Thomson Environmental Consultants	BAR010-003	Arboricultural Survey Report (including Fig 2: Tree Constraints Plan)
Barnsley Metropolitan Borough Council	PNS-SLC-XX-DRG-ARC-9001	Rev P01 Proposed Car Landscape
Barnsley Metropolitan Borough Council	PNS-SLC-XX-DRG-CIV-9009	Rev P01 Proposed Car Landscape
Met Geo Environmental	P22-01501-MET-EXT-XX-TOP-M2-G-2-2D	Topographical Survey

4.3 Trees to be removed

4.3.1 The development proposals directly require the complete removal of 3 individual trees (T10, T11, T12), 2 groups of trees (G02 and G03) and the partial removal of 5 further groups of trees (G01, G04, G05, G06 and G07).

4.3.2 The proposed tree removals are largely limited to Category C trees and groups comprising young to semi-mature, naturally regenerated goat willow, silver birch, hazel, hawthorn and buddleia. The groups affected are typically unmanaged and of relatively low arboricultural quality, with several

specifically identified during the survey as low-value regeneration. Only one Category B tree (T12) is proposed for removal, with no Category A trees affected by the development proposals.

4.3.3 The majority of the site's more prominent boundary vegetation, including the tree belts fronting Lairds Way and Sheffield Road, is to be retained. Consequently, whilst some internal and peripheral vegetation will be removed to facilitate the development, the principal landscape framework and public-facing treed boundaries will remain in place, ensuring that the outward appearance of the site is largely unchanged when viewed from the surrounding road network.

4.3.4 The Tree Retention and Removal Plan (Figure 3) has been based on the documents shown in Table 1 and identifies the relationship and conflicts between the proposals and the existing trees. A breakdown of removals and retentions by BS5837 quality category is shown in Table 2 below and at Appendix 2, which also lists the tree reference numbers.

Table 2: Summary of Trees to be removed

Removal	Tree Category				Total
	A	B	C	U	
Number of Trees	0	1	2	0	3
Number of Groups (in full)	0	0	2	0	2
Number of Groups (in part)	0	0	5	0	5
Number of Hedges (in full)	0	0	0	0	0
Number of Hedges (in part)	0	0	0	0	0
Number of Woodlands (in full)	0	0	0	0	0
Number of Woodlands (in part)	0	0	0	0	0
Total	0	1	9	0	10

4.3.5 The 'number of trees' in Table 2 above denotes individual trees as referenced within this report to be removed. Appendix 2 identifies all individual trees and groups of trees that are to be removed and gives a reason as to why removal is required. The table also includes whether partial or full removal of groups of trees is required.

4.4 Impacts on retained trees

- 4.4.1** Table 3 below provides a summary of the anticipated impacts to retained trees associated with the enabling and demolition phase, and construction phase of the development. A rating is also provided for each impact; either negligible, significant or high.
- 4.4.2** 'Negligible' impacts are works that are proposed within the RPA of a retained tree but that will not cause damage which will have any implications for the long-term health and retention of the tree, providing very basic tree protection measures are adhered to. Encroachment into an RPA amounting to less than 10% of the total RPA and/or excavations (i.e. new hard standing / service trenches etc) located up to 20% into an RPA radius towards the tree stem will ordinarily be considered a 'negligible' impact.
- 4.4.3** 'Significant' impacts are works that are proposed within the RPA of a retained tree and, in the absence of suitable tree protection measures, have the potential to cause damage that could have implications for the long-term health and retention of the tree. Encroachment into an RPA amounting to between 10% and 20% of the total RPA and/or excavations (i.e. new hard standing / service trenches etc) located between 20-50% into an RPA radius towards the tree stem will ordinarily be considered a 'significant' impact.
- 4.4.4** 'High' impacts are works that are proposed within the RPA of a retained tree and, in the absence of suitable tree protection measures, will cause damage that will have implications for the long-term health and retention of the tree. Encroachment into an RPA amounting to above 20% of the total RPA and/or excavations (i.e. new hard standing / service trenches etc) located beyond 50% into an RPA radius towards the tree stem will ordinarily be considered a 'High' impact.

Table 3: Summary of Impacts on Retained Trees

Construction Phase			
Tree	Category	Impact	Rating
T03	B 1	Construction of new hard standing in areas of existing grass / soft landscaping	Significant
T20	C 1	Installation of new services in areas of existing grass / soft landscaping	Significant
		Construction of new hard standing in areas of existing grass / soft landscaping	Significant
T21	B 1	Installation of new services in areas of existing grass / soft landscaping	Significant
		Construction of new hard standing in areas of existing grass / soft landscaping	Significant
T14	C 1	Construction of new hard standing in areas of existing grass / soft landscaping	Negligible
		Installation of new services in areas of existing grass / soft landscaping	Negligible

Construction Phase			
Tree	Category	Impact	Rating
T19	C 1	Construction of new hard standing in areas of existing grass / soft landscaping	Negligible
		Installation of new services in areas of existing grass / soft landscaping	Negligible
T22	B 2	Construction of new hard standing in areas of existing grass / soft landscaping	Negligible
		Installation of new services in areas of existing grass / soft landscaping	Negligible

4.4.5 In the next section, the impacts listed above are grouped by impact type and discussed in order of their rating. ‘High’ impacts are addressed first, followed by ‘Significant’ and then ‘Negligible’ impacts, where relevant to each impact type and phase. Grouping them this way ensures that all works relating to a specific impact type (e.g., construction of new hard standing in existing grassed areas) are reviewed together, making it easier to compare how similar works may affect different trees in slightly different ways and the implications of this.

4.5 Discussion of impacts on retained trees - Construction Phase

4.5.1 Construction of new hard standing in areas of existing grass / soft landscaping.

Impact rating: Significant - Applies to: T20, T21

4.5.2 The new car park is proposed within an existing grassed area and encroaches into the root protection areas of the trees listed above (11% incursion for T20 and 17% for T21). It is considered acceptable that excavations in these areas are carried out using a mini-excavator; however, it will need to be positioned outside of the RPAs at all times, reaching in towards the trees.

4.5.3 Whilst the extent of RPA incursion falls within the significant range of impacts as defined within this assessment, the actual impact on the root systems of T20 and T21 is anticipated to be notably lower than the percentage encroachment figures alone would suggest. Both trees are located immediately adjacent to dense groups of self-seeded trees and vegetation to the south, which are likely to have restricted and competed with root development in the direction of the proposed car park. Consequently, root colonisation within the affected area is expected to be limited.

4.5.4 Furthermore, both trees retain extensive opportunities for root development beyond the proposed works, particularly to the north where unimpeded rooting conditions exist within established soft landscaped areas. As such, it is anticipated that the actual root loss associated with the proposed excavations is likely to be negligible and considerably less than the level of impact implied by the RPA encroachment, likely falling below the 10% threshold typically associated with significant effects.

4.5.5 Taking the above factors into account, it is not considered necessary to adopt specialist no-dig or other engineered construction solutions in these locations. Subject to careful excavation under arboricultural supervision, any roots encountered can be assessed on site and retained where

practicable, with the proposed works considered unlikely to result in a material adverse effect on the long-term retention of T20 and T21.

- 4.5.6** Furthermore, excavations associated with the proposed car park are located no closer than 4m from either tree stem and therefore significant severance of structural roots is not considered likely. As such, adverse effects on tree stability are not anticipated.

4.5.7 *Impact rating: Significant - Applies to: T03*

- 4.5.8** The proposed extension of the existing footpath and site access road encroaches into the root protection area of T03. The footpath is to be constructed entirely within an area of existing soft landscape and represents only a 4% incursion into the RPA, which would typically be considered negligible. However, the works are located within approximately 3m of the tree stem and therefore there remains some potential for damage to structural roots. As such, excavations within this area should be undertaken under arboricultural supervision.

- 4.5.9** Although mapped as soft landscape, the area contains compacted gravel associated with the site's former use and root development is therefore likely to be somewhat restricted. Similarly, the section of access road to be extended within the RPA is currently formed of compacted hardcore and rubble, and it is anticipated that these existing ground conditions extend to sufficient depth to facilitate conventional construction without exposing significant roots.

- 4.5.10** Taking the above factors into account, specialist no-dig or other engineered construction methods are not considered necessary in this location. It is anticipated that the proposed works can be completed using conventional construction techniques with arboricultural supervision. Should roots be encountered in greater quantities than anticipated during supervision, the construction methodology can be reviewed on site; however, this is not currently expected to be necessary.

Impact rating: Negligible - Applies to: T14, T19, T22

- 4.5.11** The proposed car park also encroaches into the root protection areas of T14, T19 and T22 by approximately 8%, 7% and 7% respectively. These incursions are considered negligible and affect only a small proportion of the available rooting area. Thus, it is considered acceptable that excavations within these areas are carried out using a mini-excavator; however, the machine should remain outside of the RPAs at all times and reach into the affected areas where required.

- 4.5.12** Considering the limited extent of RPA encroachment and the separation distances between the proposed works and the tree stems, excavations associated with the new car park can extend below existing ground level as required to achieve the proposed construction build-up. Given the small proportion of rooting area affected, significant impacts on the root systems of these trees are not anticipated.

- 4.5.13** Any roots exposed during excavation works should be retained where practicable. Where root severance is unavoidable, roots should be pruned cleanly back to the soil face using sharp hand tools appropriate to the task, under arboricultural supervision.

- 4.5.14** The proposed hardstanding is expected to result in only a very minor reduction in permeability and gas diffusivity when compared to the existing grassed surface. Given the limited extent of the

encroachment and the substantial rooting area remaining available to each tree, the impact is considered negligible. Subject to careful construction and arboricultural supervision, specialist no-dig or other engineered construction methods are not considered necessary in these locations, and the proposals are unlikely to have a material effect on the long-term retention of T14, T19 or T22.

4.5.15 *Installation of new services in areas of existing grass / soft landscaping.*

Impact rating: Significant - Applies to: T20, T21

4.5.16 There is a proposed SuDS drainage feature to be installed along the edge of the proposed car park within the RPAs of T20 and T21. Although this impact is categorised as significant because it is located between 20-50% into an RPA radius, the works comprise a shallow linear excavation and will not require the complete removal of roots from the affected area.

4.5.17 Initial excavations may be undertaken using a mini-excavator to strip surface vegetation and topsoil. Excavations beyond 100mm depth should proceed under arboricultural supervision using hand tools as necessary. Structural roots should be retained wherever practicable, with the drainage feature routed beneath or around retained roots.

4.5.18 All machinery should be positioned outside the RPA. Given the shallow nature of the excavation and the retention of significant roots, the impact on T20 and T21 is expected to be limited. Subject to arboricultural supervision and implementation of an Arboricultural Method Statement, the works are not considered likely to materially affect the long-term retention of either tree.

4.5.19 *Impact rating: Negligible - Applies to: T14, T19, T22*

4.5.20 The proposed SuDS drainage feature is also to be installed within the RPAs of T14, T19 and T22. However, the resulting impacts are considered negligible due to the limited extent of RPA encroachment and the separation distances between the proposed works and the tree stems.

4.5.21 Given the distance from the trees and the small proportion of rooting area affected, any root loss associated with the drainage installation is not considered likely to adversely affect the health or stability of T14, T19 or T22. Consequently, there is greater flexibility to sever roots where necessary to facilitate construction, should they be encountered during excavation works. Subject to implementation of the methodology described above, the proposed drainage installation is not expected to have a material impact on the long-term retention of these trees.

4.6 Shading

4.6.1 Given the sites proposed use, the impact of shading cast by trees is not an important consideration and does not pose a significant constraint on the site's functionality or usability. As a result, shading can be considered a negligible factor in the site's design and development.

4.7 Tree Pruning

4.7.1 The details for any trees requiring pruning works, whether that be for access facilitation or to mitigate any risk, are provided at Appendix 4. Providing that these works are controlled and carried out in accordance with BS3998: 2010 Tree work - Recommendations, then the visual impact of

the work will be minimal and will not cause any significant implications for the health of the trees. These works should be included within a comprehensive arboricultural method statement, which will also detail the specifics of protecting retained trees.

4.8 Services and Utilities

4.8.1 Detailed drawings for all underground services are not available at this time. This assessment therefore only considers the proposed SuDS drainage feature shown on the submitted drawings. Any additional underground services will require arboricultural review once detailed layouts become available.

4.8.2 If new services are to be introduced into the site they should be located outside of the RPAs where they will not interfere with tree roots. Final positions of any proposed services should be verified and approved by an arboricultural consultant and the Local Authority Tree Officer before implementation.

4.8.3 If service installation is required within RPAs then the guidelines within National Joint Utilities Group publication 'Guidelines for the planning, installation and maintenance of utility services in proximity to trees' (NJUG 4, 2007) should be adhered to.

4.8.4 Where possible, trenchless techniques should be employed and only as a last resort should a traditional trench be used. If a traditional trench cannot be avoided, excavations should be carried out under the supervision of a suitably qualified arboriculturist using a 'hand-dig' approach or excavation using compressed air. An air-spade would be one example of this.

4.9 Protection of Trees During Construction

4.9.1 Where construction works are located within and immediately adjacent to Root Protection Areas (RPAs), the RPAs of the retained trees should be protected by tree protection fencing to the specification laid out in BS5837:2012. The area protected by the fencing shall be known as the Construction Exclusion Zone (CEZ) this will be detailed within the arboricultural method statement that includes a tree protection plan.

4.9.2 The method statement will also include the requirement for any ground protection and specialised construction methodologies that may be required to ensure the protection of retained trees. These details will also be included on the tree protection plan.

4.10 New Planting

4.10.1 New tree planting should be appropriate for the future use of the development and not just aim to replace the number of trees that have been removed.

4.10.2 Trees removed as part of the development should be replaced as part of a landscape strategy for the site, in line with local plan requirements, that integrates the development into the surrounding landscape. This should include a mixture of native and ornamental species within planting schemes, where those species are suited to the site and local landscape.

4.10.3 Well-informed planting aims to maximise the benefits of trees whilst minimising or mitigating any adverse effects new trees may pose. This can be achieved through careful choice of tree species,

planting location and considering the future context of the planting. Trees make a significant contribution to ecosystem services and this should be taken into account in the design of new tree planting projects.

4.10.4 Guidance on how newly planted trees can be successfully grown and planted and flourish in their environment without excessive maintenance can be found in British Standard BS8545:2014 '*Trees: from nursery to independence in the landscape - Recommendations*' (BS8545:2014).

4.10.5 Local government authorities produce local plans and supporting documents which often include area action plans and policies on trees within defined areas. These should be consulted during the landscaping design process. Where appropriate, the design of new tree planting projects should be informed by the responses to community consultation and local interest groups.

4.11 Post Development Management

4.11.1 Retained trees and any new trees planted as part of the final landscaping scheme would benefit from a tree management system. Guidance on the level of tree management required can be found in the National Tree Safety Group publication, '*Common sense risk management of trees*' (NTSG, 2024).

4.12 Conclusion

4.12.1 Tree removals are limited primarily to Category C trees and groups comprising low-value, naturally regenerated vegetation, together with a single Category B tree. No Category A trees are affected by the proposals and the principal boundary vegetation fronting Lairds Way and Sheffield Road is to be retained.

4.12.2 A number of retained trees will experience incursions into their Root Protection Areas as a result of the proposed car park, access improvements and associated drainage infrastructure. Whilst some of these impacts fall within the significant range as defined by this assessment, detailed consideration of site conditions indicates that the likely level of actual root loss is substantially lower than that suggested by RPA encroachment figures alone. In particular, existing ground disturbance, areas of compacted made ground and competition from adjacent self-seeded vegetation are all factors that are likely to have restricted root development within the affected areas.

4.12.3 Subject to the implementation of the recommendations contained within this report, including arboricultural supervision of key excavations, retention of significant roots where practicable and the installation of suitable tree protection measures, the identified impacts are considered acceptable. Specialist no-dig or other engineered construction solutions are not considered necessary in the locations assessed, with conventional construction methods judged suitable provided works are undertaken in accordance with an Arboricultural Method Statement.

4.12.4 Overall, it is considered that the development can be implemented without causing significant harm to the long-term health, stability or retention of the trees identified for retention. The proposals are therefore considered to be arboriculturally acceptable and capable of being delivered in accordance with the principles of BS5837:2012.

5. Recommendations

- 5.1.1** A detailed Arboricultural Method Statement, supported by appropriate technical drawings, should be prepared to set out the protection measures required for retained trees during construction. This should be secured by planning condition and include details of tree protection fencing, arboricultural supervision, auditing of protection measures and reporting to the Local Planning Authority. Details of proposed levels and underground service routes should also be incorporated within the Arboricultural Method Statement.
- 5.1.2** A detailed landscape scheme should be prepared for the site, including, where feasible, the planting of a mixture of native and ornamental trees, shrubs and hedges. The scheme should be implemented in accordance with an approved landscaping plan secured by planning condition.
- 5.1.3** Once final detailed drawings for underground services have been produced, these should be reviewed by a suitably qualified arboricultural consultant to ensure compatibility with retained trees and approved tree protection measures. Any services proposed within RPAs should be assessed and incorporated within the Arboricultural Method Statement prior to construction.

6. Bibliography

British Standards Institution (2014) BS8545:2014 *Trees: from nursery to independence in the landscape - Recommendations*. BSI, London.

British Standards Institution (2012) BS5837:2012 *Trees in Relation to Design, Demolition and Construction - Recommendations*. BSI, London.

British Standards Institution (2010) BS3998:2010 *Recommendations for tree work*. BSI, London.

British Standards Institution (2005) *Publicly Available Specification 100 (PAS 100:2005)*. BSI, London.

HM Government. The Town and Country Planning (Tree Preservation) (England) Regulations 2012. London: Office of Public Sector Information (OPSI).

Lonsdale, D. (1990) *Principles of Tree Hazard Assessment and Management*. The Stationery Office, London.

Matheny, N. & Clark, J.R. (1998) *Trees and Development*. ISA, Champaign, IL.

Mattheck, C. & Breloer, H. (1994) *The Body Language of Trees*. The Stationery Office, London.

Johnson, O. & More, D. (2004) *Collins Tree Guide*. London: HarperCollins

National Joint Utilities Group (NJUG) (2007) *Guidelines for the planning, installation and maintenance of utility services in proximity to trees*. NJUG, London.

National Tree Safety Group - Second Edition (2024) *Common Sense Risk Management of Trees* Forestry Commission & Arboricultural Association, Edinburgh

Robertson, J, Jackson, N & Smith, M (2006) *Tree Roots in the Built Environment*. The Stationery Office, London.

Rose, B. (2020) Guidance Note 12: *The use of cellular confinement systems near trees. A guide to good practice*. The Arboricultural Association.

Santamour, F.S. (2002) *Trees for urban planting: diversity uniformity, and common sense*. U.S. Department of Agriculture. Washington D.C.

Appendix 1 - Tree Schedule

Tree/ Group No	Species	Height (m)	Stem diameter (mm)	N	E	S	W	Height of lowest limb and direction	Crown clearance (m)	Age class	Estimated remaining contribution	Physiological condition	Structural condition	Comments	Preliminary management recommendations	BS category	RPA (m2)	RPA radius (m)
T01	goat willow; Salix caprea	10.0	130	2	2	4	3	0 SW	0.5	Semi-mature	10+	Fair	Poor	Growing on bank. Surface roots can be seen on the east side of the tree. Crown is been suppressed by neighbouring tree	No works required	C 1	7.64	1.56
T02	silver birch; Betula pendula	10.0	180	2	3	4	3	0 SW	0.5	Semi-mature	10+	Fair	Poor	Growing on bank with hard standing near base. Surface roots can be seen on the east side of the tree. Crown is been suppressed by neighbouring tree	No works required	C 1	14.65	2.16
T03	goat willow; Salix caprea	13.0	9 x 280	6	6	6	6	3 S	3	Early mature	20+	Good	Fair	Old pruning wounds can be seen around the stem on North and East side. Multi-stemmed at 0.5 and again at 1m.	No works required	B 1	319.08	10.08
T04	silver birch; Betula pendula	15.0	150	3	3	3	3	4 NE	4	Semi-mature	10+	Good	Fair	Old pruning wounds seen around base and stem of tree. Slight lean on stem of 23 degrees. Tree competing for space.	No works required	C 1	10.17	1.80
T05	hawthorn; Crataegus monogyna	7.0	90	1	1	1	1	2 S	2	Semi-mature	10+	Fair	Fair	Pruning work seen around stem. Tree is being suppressed by neighbouring tree which is near the entrance to the site.	No works required	C 1	3.66	1.08
T06	goat willow; Salix caprea	7.0	90, 75	1	1	1	1	2 S	2	Semi-mature	10+	Fair	Fair	Pruning work seen around stem on the east side only. Tree is being suppressed by neighbouring tree.	No works required	C 1	6.24	1.41

Tree/ Group No	Species	Height (m)	Stem diameter (mm)	N	E	S	W	Height of lowest limb and direction	Crown clearance (m)	Age class	Estimated remaining contribution	Physiological condition	Structural condition	Comments	Preliminary management recommendations	BS category	RPA (m ²)	RPA radius (m)
T07	goat willow; Salix caprea	7.0	170, 170, 90, 80	2	5	3	1	4 S	4	Semi- mature	10+	Good	Fair	Old pruning wounds can be seen around the stem on North and East side. Multi-stemmed at 0.5 and again at 1m.	No works required	C 1	32.76	3.23
T08	goat willow; Salix caprea	10.0	170, 120, 90	3	4	3	2	1 E	1	Semi- mature	10+	Poor	Poor	Growing on top of hard surface. The stem looks to have failed in the past and has regrown from there. Crown is suppressing neighbouring tree.	No works required	C 1	23.23	2.72
T09	Sambucus sp.	8.0	75, 80, 75, 75	3	3	3	3	1 E	1	Semi- mature	10+	Poor	Poor	Growing next to brick wall. Fungal fruiting body seen growing on stem. Impact damage seen from the wall on stem.	No works required	C 1	10.52	1.83
T10	goat willow; Salix caprea	12.0	7 x 120	3	6	5	3	0 W	-	Semi- mature	10+	Fair	Poor	Growing over hard standing. Multi-stemmed from base. Small cavity on larger stem in group this is 5cm in depth.	No works required	C 1	45.59	3.81
T11	goat willow; Salix caprea	12.0	150, 140, 90, 90	4	2	5	3	0 SW	0.5	Semi- mature	10+	Fair	Poor	Multi-stemmed at base. Crown is being suppressed by neighbouring trees and also its own limbs competing for the space.	No works required	C 1	26.41	2.90
T12	silver birch; Betula pendula	15.0	240	4	4	4	4	2 S	2.5	Semi- mature	20+	Good	Fair	Growing next structure. Slight lean on stem, but the tree is self correcting. The crown is growing close to the structure and will cause future damage to the structure.	No works required	B 1	26.05	2.88
T13	goat willow; Salix caprea	9.0	30, 300, 320	4	4	4	4	1 N	1	Early mature	10+	Fair	Fair	Tree located at the top of the wall.	None	C 1	87.55	5.28

Tree/ Group No	Species	Height (m)	Stem diameter (mm)	N	E	S	W	Height of lowest limb and direction	Crown clearance (m)	Age class	Estimated remaining contribution	Physiological condition	Structural condition	Comments	Preliminary management recommendations	BS category	RPA (m2)	RPA radius (m)
T14	sycamore; Acer pseudoplatanus	9.0	6 x 300	4	4	4	4	1 N	1	Early mature	10+	Fair	Fair	Tree located at the top of the wall. Die back in several areas of the canopy.	Remove due to location	C 1	244.29	8.82
T15	ash; Fraxinus excelsior	10.0	320, 180	3	3	3	3	2 W	2	Semi-mature	<10	Poor	Fair	Well established dieback. Low value.	None	U	61.07	4.41
T16	ash; Fraxinus excelsior	15.0	300	4	5	1	3	2 N	3	Semi-mature	10+	Fair	Fair	Some reduced vitality. Die back in an areas.	None	C 1	40.70	3.60
T17	ash; Fraxinus excelsior	15.0	300	4	5	3	3	2 N	3	Semi-mature	10+	Fair	Fair	Some reduced vitality. Die back in an areas.	None	C 1	40.70	3.60
T18	ash; Fraxinus excelsior	9.0	100	2	2	2	2	2 N	3	Semi-mature	<10	Poor	Fair	Well established dieback.	None	U	4.52	1.20
T19	goat willow; Salix caprea	15.0	6 x 360	9	7	4	6	5 N	5	Early mature	10+	Fair	Fair	Typical form for a multi-stemmed goat willow.	No works required	C 1	351.52	10.58
T20	goat willow; Salix caprea	11.0	6 x 280	4	4	4	4	5 N	4	Semi-mature	10+	Fair	Fair	Slight lean on stem. Crown has long length of deadwood seen on North side of crown. Crossed and rubbing limbs seen.	None	C 1	212.70	8.23
T21	goat willow; Salix caprea	10.0	560, 350, 350	8	8	8	8	2 N	2	Early mature	20+	Good	Fair	Interesting form for species. Small diameter deadwood.	Remove deadwood	B 1	252.67	8.97
T22	goat willow; Salix caprea	11.0	8 x 300	6	6	6	6	5 N	5	Early mature	20+	Fair	Fair	One of the larger goat willows in area. Not a particularly good example of species.	None	B 2	325.44	10.18

Tree/ Group No	Species	Height (m)	Stem diameter (mm)	N	E	S	W	Height of lowest limb and direction	Crown clearance (m)	Age class	Estimated remaining contribution	Physiological condition	Structural condition	Comments	Preliminary management recommendations	BS category	RPA (m2)	RPA radius (m)
T23	ash; Fraxinus excelsior	9.0	200	2	6	6	6	5 N	5	Young	<10	Poor	Fair	Well established dieback.	None	U	18.09	2.40
T24	silver birch; Betula pendula	12.0	290	3	6	6	6	2 N	2	Semi- mature	10+	Good	Good	Some small diameter dead wood. Developing relatively well.	None	C 1	38.03	3.48
T25	sycamore; Acer pseudoplatanus	6.0	150	3	3	3	3	2 N	2	Semi- mature	10+	Good	Fair	Small self seeded tree.	Remove deadwood	C 1	10.17	1.80
T26	ash; Fraxinus excelsior	20.0	350, 250, 200	4	3	3	3	5 N	5	Semi- mature	<10	Poor	Fair	Dieback class 3 75-50%. Epicormic growth seen around crown.	Remove deadwood	U	101.67	5.69
T27	ash; Fraxinus excelsior	20.0	200	3	3	3	3	2 S	3	Semi- mature	10+	Fair	Fair	The crown is showing signs of Ash Dieback class 3 75- 50% of the crown remaining. Epicormic growth seen around crown indicating that the tree is in stress.	Remove deadwood	C 1	18.09	2.40
T28	ash; Fraxinus excelsior	16.0	180	3	3	3	3	2 S	3	Semi- mature	10+	Fair	Fair	The crown is showing signs of Ash Dieback class 3 75- 50% of the crown remaining. Epicormic growth seen around crown indicating that the tree is in stress.	None	C 1	14.65	2.16
T29	ash; Fraxinus excelsior	16.0	180	3	3	3	3	2 S	3	Semi- mature	10+	Fair	Fair	The crown is showing signs of Ash Dieback class 3 75- 50% of the crown remaining. Epicormic growth seen around crown indicating that the tree is in stress.	None	C 1	14.65	2.16
T30	grey willow; Salix cinerea	11.0	210, 100	3	3	3	3	2 E	2	Semi- mature	10+	Fair	Fair	Multi-stemmed from base. Included unions seen a typical example of the	No works required	C 1	24.44	2.79

Tree/ Group No	Species	Height (m)	Stem diameter (mm)	N	E	S	W	Height of lowest limb and direction	Crown clearance (m)	Age class	Estimated remaining contribution	Physiological condition	Structural condition	Comments	Preliminary management recommendations	BS category	RPA (m2)	RPA radius (m)
														species. Growing behind a stone wall.				
T31	grey willow; <i>Salix cinerea</i>	10.0	6 x 220	3	3	3	3	2 E	2	Semi-mature	10+	Poor	Fair	Multi-stemmed from base. Included unions seen a typical example of the species. Growing behind a stone wall. Reduced vitality.	No works required	C 1	131.46	6.47
T32	grey willow; <i>Salix cinerea</i>	10.0	210, 250, 250, 250	3	3	3	3	2 E	2	Semi-mature	10+	Fair	Fair	Included union seen, a typical example of the species. Growing behind a stone wall.	No works required	C 1	104.55	5.77
T33	sycamore; <i>Acer pseudoplatanus</i>	24.0	850, 750	10	10	10	10	1 S	4	Mature	40+	Good	Good	Limited access, unable to see from public open space. Growing on third party land. Ivy developing up stem. Small diameter deadwood seen in crown	Remove deadwood	A 1	580.84	13.60
T34	common alder; <i>Alnus glutinosa</i>	10.0	180	3	3	3	3	3 SE	3	Semi-mature	10+	Fair	Poor	Tree has been heavily pruned with epicormic growth seen around stem. Old pruning wounds can be seen. Tree looks to have been topped in the passed.	No works required	C 1	14.65	2.16
G01	goat willow; <i>Salix caprea</i> / hazel; <i>Corylus avellana</i> / silver birch; <i>Betula pendula</i>	9.0	100	2	2	2	2	-	2	Semi-mature	10+	Fair	Fair	Un-managed group located near boundary fence. All trees are similar age.	No works required	C 2	-	1.20
G02	goat willow; <i>Salix caprea</i> / hazel; <i>Corylus avellana</i> / silver birch; <i>Betula pendula</i>	12.0	110	3	3	3	3	-	0	Semi-mature	10+	Fair	Fair	Un-managed group of trees located near structure.	No works required	C 2	-	1.32

Tree/ Group No	Species	Height (m)	Stem diameter (mm)	N	E	S	W	Height of lowest limb and direction	Crown clearance (m)	Age class	Estimated remaining contribution	Physiological condition	Structural condition	Comments	Preliminary management recommendations	BS category	RPA (m2)	RPA radius (m)
G03	goat willow; Salix caprea / hazel; Corylus avellana / silver birch; Betula pendula	9.0	100	2	2	2	2	-	2	Semi-mature	10+	Fair	Fair	Un-managed group located near boundary fence. All trees are similar age.	No works required	C 2	-	1.20
G04	goat willow; Salix caprea / hazel; Corylus avellana / silver birch; Betula pendula	9.0	100	2	2	2	2	-	2	Young	10+	Fair	Fair	All trees are similar age. Low value regeneration.	No works required	C 2	-	1.20
G05	goat willow; Salix caprea / hazel; Corylus avellana / silver birch; Betula pendula	8.0	80	1	1	1	1	-	2	Young	10+	Fair	Fair	All trees are similar age. Low value regeneration.	No works required	C 2	-	0.96
G06	goat willow; Salix caprea / hazel; Corylus avellana / silver birch; Betula pendula	9.0	90	1	1	1	1	-	2	Young	10+	Fair	Fair	Un-managed group located near boundary fence. All trees are similar age.	No works required	C 2	-	1.08
G07	goat willow; Salix caprea / hazel; Corylus avellana / silver birch; Betula pendula / Buddleia; Buddleja davidii / hawthorn; Crataegus monogyna	6.0	100	2	2	2	2	-	2	Young	10+	Fair	Fair	Un-managed group located near boundary fence. Limited access to group due to dense brambles and felled trees. Low value regeneration.	No works required	C 2	-	1.20
G08	silver birch; Betula pendula / ash; Fraxinus excelsior / goat willow; Salix caprea	14.0	100	3	1	1	1	-	1	Young	10+	Fair	Fair	Growing on bank providing screening to railway area.	No works required	C 2	-	0.96

Tree/ Group No	Species	Height (m)	Stem diameter (mm)	N	E	S	W	Height of lowest limb and direction	Crown clearance (m)	Age class	Estimated remaining contribution	Physiological condition	Structural condition	Comments	Preliminary management recommendations	BS category	RPA (m2)	RPA radius (m)
G09	goat willow; Salix caprea / silver birch; Betula pendula / holly; Ilex aquifolium / hazel; Corylus avellana / hawthorn; Crataegus monogyna	10.0	90	3	3	3	3	-	3	Young	10+	Fair	Fair	Group of trees that have been un-managed.	No works required	C 2	-	1.08
G10	goat willow; Salix caprea	11.0	250	3	3	3	3	-	2	Semi-mature	10+	Fair	Fair	Spindly self set goat willow.	No works required	C 2	-	1.08
G11	goat willow; Salix caprea / hazel; Corylus avellana / silver birch; Betula pendula	9.0	30, 320, 320, 320	5	2	2	2	-	3	Early mature	10+	Fair	Fair	Multi-stemmed self-seeded goat Willows at the top of the wall. Some indications of reduced vitality.	No works required	C 2	-	2.97
G12	sycamore; Acer pseudoplatanus / ash; Fraxinus excelsior	10.0	80	2	2	2	2	-	2	Young	10+	Fair	Fair	Growing on third party land, limited access to trees.	No works required	C 2	-	0.96

Appendix 2 - Trees to be Retained and Removed

Remove or Retain	Quality Category	Number of Individual Trees	Tree Numbers	Number of Groups	Group Numbers	Number of Hedges	Hedge Numbers	Number of Woodlands	Woodland Numbers	Total
Remove Entirely	A	0	-	0	-	0	-	0	-	0
	B	1	T12	0	-	0	-	0	-	1
	C	2	T10, T11	2	G02, G03	0	-	0	-	4
	U	0	-	0	-	0	-	0	-	0
	All	3		2		0		0		5
Remove / Retain in Part	A	N/A	N/A	0	-	0	-	0	-	0
	B	N/A	N/A	0	-	0	-	0	-	0
	C	N/A	N/A	5	G01, G04, G05, G06, G07	0	-	0	-	5
	U	N/A	N/A	0	-	0	-	0	-	0
	All	N/A		5		0		0		5
Retain Entirely	A	1	T33	0	-	0	-	0	-	1
	B	3	T03, T21, T22	0	-	0	-	0	-	3
	C	23	T01, T02, T04, T05, T06, T07, T08, T09, T13, T14, T16, T17, T19, T20, T24, T25, T27, T28, T29, T30, T31, T32, T34	5	G08, G09, G10, G11, G12	0	-	0	-	28
	U	4	T15, T18, T23, T26	0	-	0	-	0	-	4
	All	31		5		0		0		36
Total		34		12		0		0		46

Appendix 3 - Trees to be removed

Tree /Group No	Species	BS Category	Height (m)	DBH (mm)	Reason
T10	goat willow; Salix caprea	C 1	12.0	120	To accommodate the new car park.
T11	goat willow; Salix caprea	C 1	12.0	117	To accommodate the new car park.
T12	silver birch; Betula pendula	B 1	15.0	240	To accommodate the new car park.
G01 (in part)	goat willow; Salix caprea / hazel; Corylus avellana / silver birch; Betula pendula	C 2	9.0	100	To accommodate the new car park.
G02	goat willow; Salix caprea / hazel; Corylus avellana / silver birch; Betula pendula	C 2	12.0	110	To accommodate the new car park.
G03	goat willow; Salix caprea / hazel; Corylus avellana / silver birch; Betula pendula	C 2	9.0	100	To accommodate the new car park.
G04 (in part)	goat willow; Salix caprea / hazel; Corylus avellana / silver birch; Betula pendula	C 2	9.0	100	To accommodate the new car park.
G05 (in part)	goat willow; Salix caprea / hazel; Corylus avellana / silver birch; Betula pendula	C 2	8.0	80	To accommodate the new car park.

Tree /Group No	Species	BS Category	Height (m)	DBH (mm)	Reason
G06 (in part)	goat willow; Salix caprea / hazel; Corylus avellana / silver birch; Betula pendula	C 2	9.0	90	To accommodate the new car park.
G07 (in part)	goat willow; Salix caprea / hazel; Corylus avellana / silver birch; Betula pendula / Buddleia; Buddleja davidii / hawthorn; Crataegus monogyna	C 2	6.0	100	To accommodate the new car park.

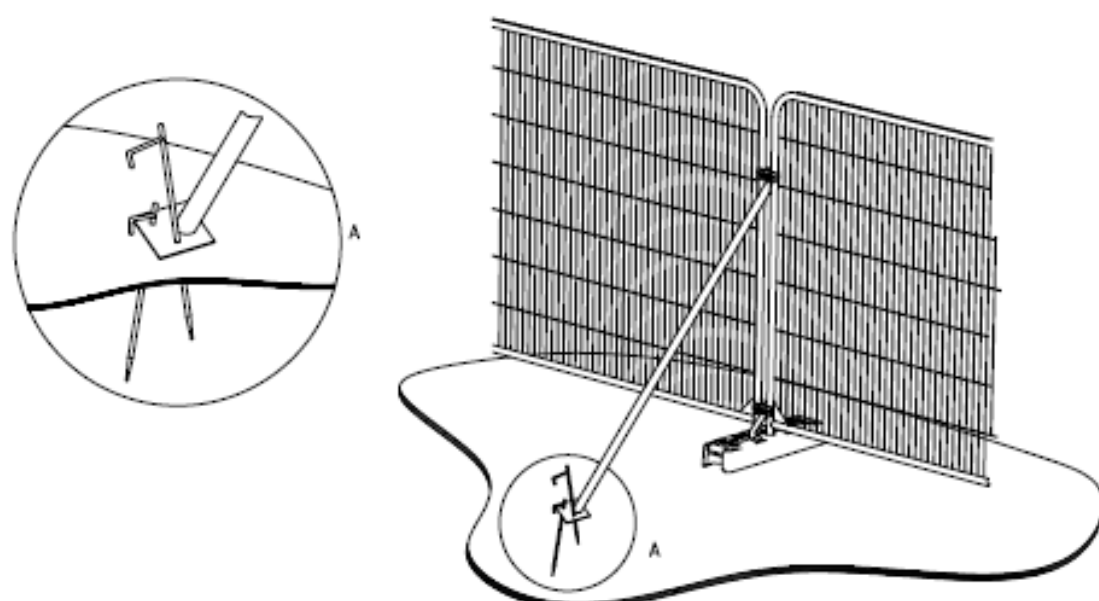
Appendix 4 - Trees to be pruned

Tree /Group No	Species	BS Category	Height (m)	DBH (mm)	Works required
T21	goat willow; Salix caprea	B 1	10.0	420	Lift the canopy to 3m above ground level on the southern side of the crown only and reduce branch tips by up to 1m on the southern side only.
T22	goat willow; Salix caprea	B 2	11.0	300	Reduce branch tips by up to 1m on the southern side only.

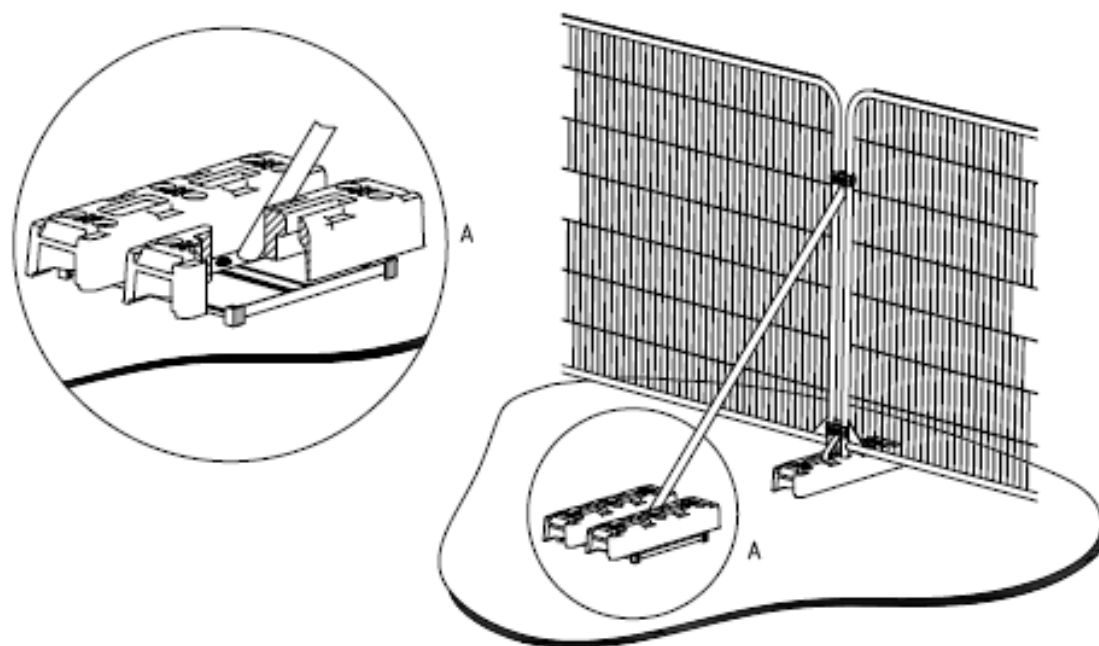
Appendix 5 - Table of Quality Assessment

Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention (see Note)				
Category U Those in such a condition that they cannot be retained as living trees in the context of the current land use for longer than 10 years	- Trees that have serious, irremediable, structural defects, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) - Trees that are dead or are showing signs of significant, immediate and irreversible overall decline - Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low-quality trees suppressing adjacent trees of better quality NOTE Category U trees can have existing or potential conservation value which might be desirable to preserve			DARK RED
	1 Mainly arboricultural values	2 Mainly landscape values	3 Mainly cultural values, including conservation	
Trees to be considered for retention				
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or of formal or semi-formal arboricultural features (e.g. the dominant and/or principle trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical commemorative or other value (e.g. veteran trees or wood-pasture)	LIGHT GREEN
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value	MID BLUE
Category C Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	GREY

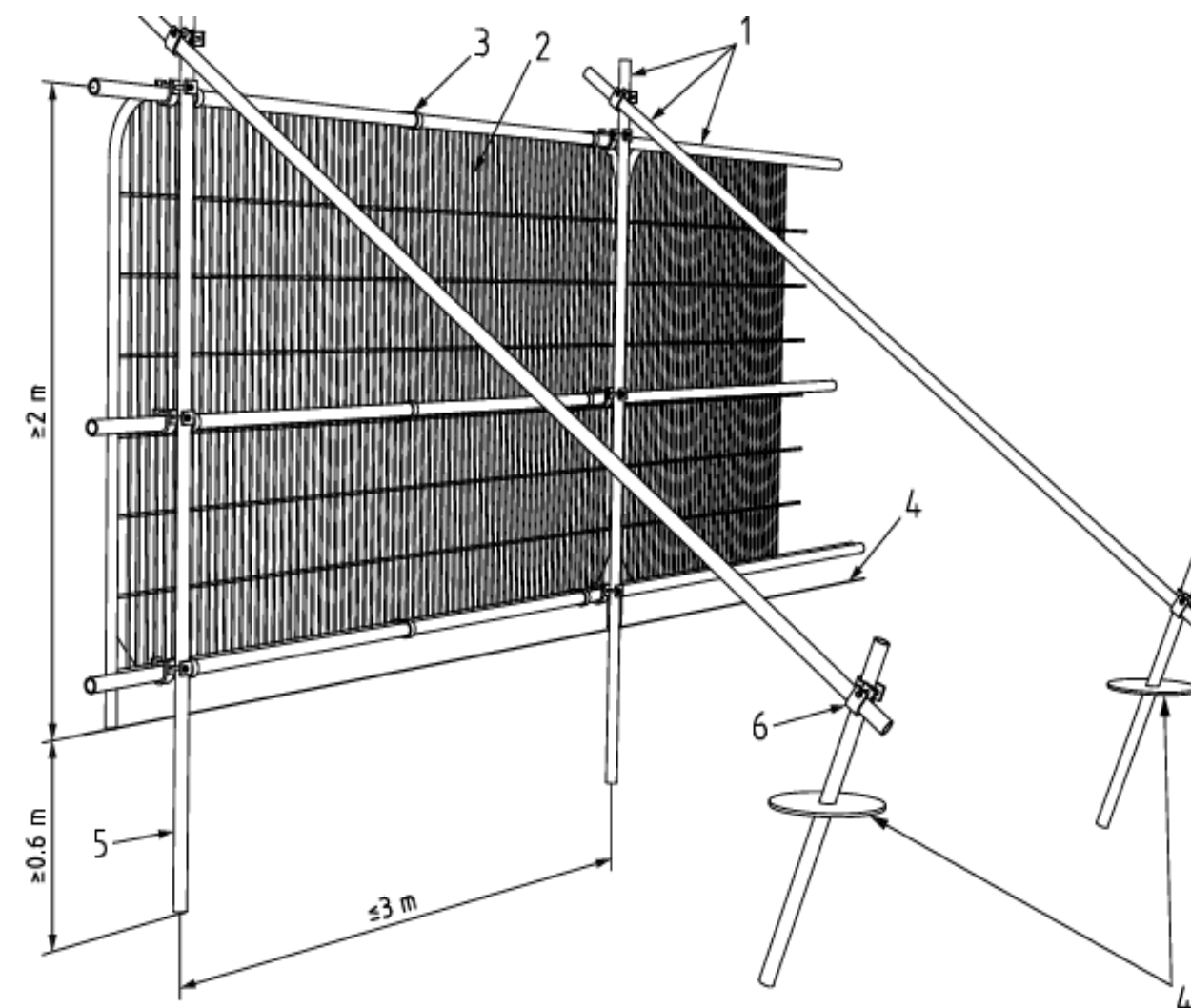
Appendix 6 - Examples of tree protection fencing



a) Stabilizer strut with base plate secured with ground pins

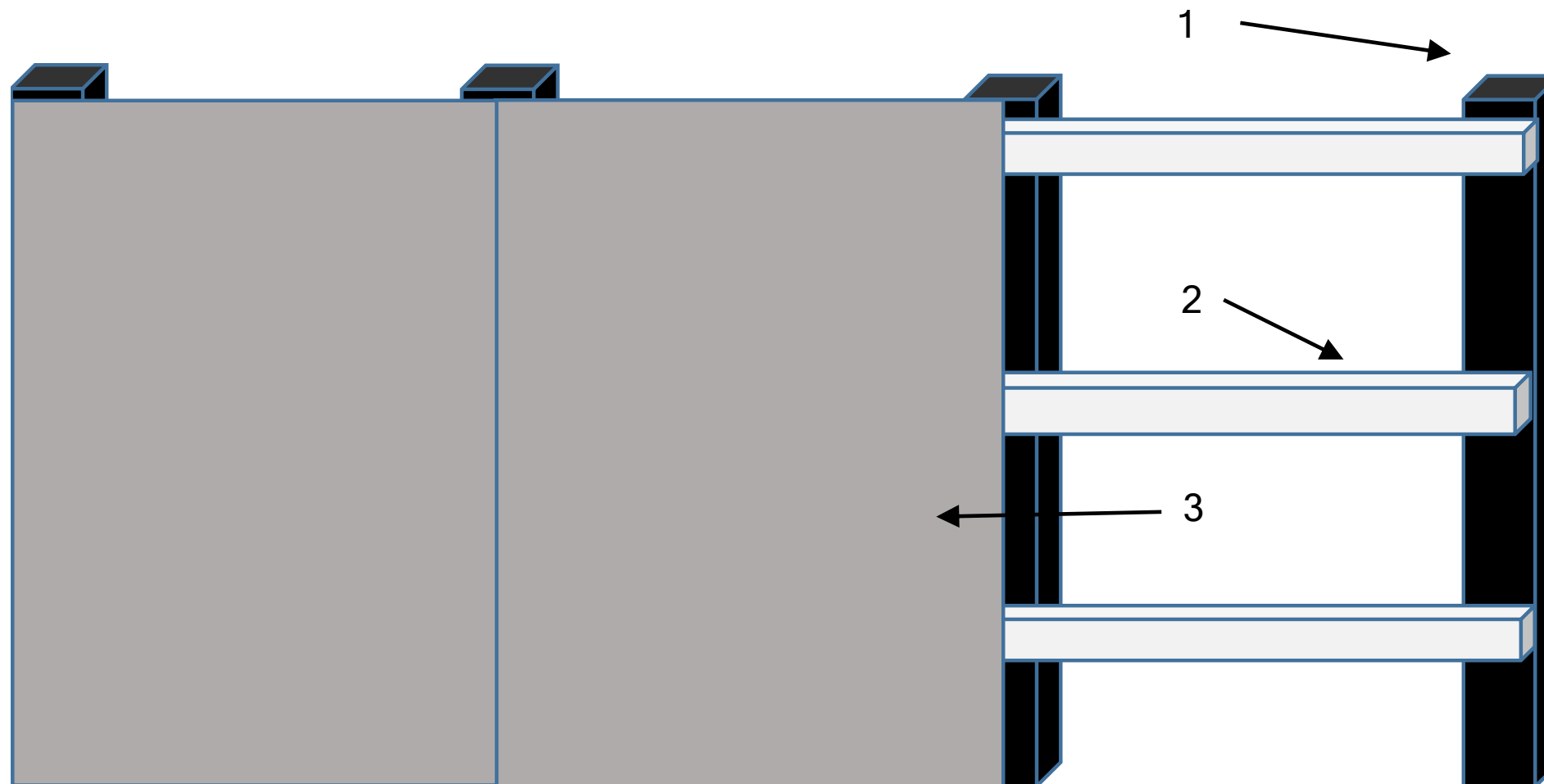


b) Stabilizer strut mounted on block tray



Key

- 1 Standard scaffold poles
- 2 Heavy gauge 2 m tall galvanized tube and welded mesh infill panels
- 3 Panels secured to uprights and cross-members with wire ties
- 4 Ground level
- 5 Uprights driven into the ground until secure (minimum depth 0.6 m)
- 6 Standard scaffold clamps



1. 100mm x 100mm timber posts at 1.2m centres
2. Three 100mm x 50mm timber rails
3. 12mm WBP Virola hardwood through plywood framed panels

Appendix 7 - Tree Protection Fencing Notice



**PROTECTIVE FENCING. THIS
FENCING MUST BE
MAINTAINED IN ACCORDANCE
WITH THE APPROVED PLANS
AND DRAWINGS FOR THIS
DEVELOPMENT.**



**TREE PROTECTION AREA
KEEP OUT !**

(TOWN & COUNTRY PLANNING ACT 1990)

**TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY
PLANNING CONDITIONS AND/OR ARE THE SUBJECTS OF A
TREE PRESERVATION ORDER.
CONTRAVENTION OF A TREE PRESERVATION ORDER MAY
LEAD TO CRIMINAL PROSECUTION**

**ANY INCURSION INTO THE PROTECTED AREA MUST BE
WITH THE WRITTEN PERMISSION OF THE LOCAL
PLANNING AUTHORITY**