



Arboricultural Method Statement

Covered Loading Yard, Kronospan, Chirk

Client	Kronospan
Agent	Axis
Site Address	Maesgwyn Farm, Chirk, Wrexham Wales, LL14 5NT
Arboricultural Consultant	Mike Wood
Local Authority	Wrexham County Borough Council
Project Description	Demolition of reception building and erection of covered loading yard, and associated fencing and ancillary works
Planning Reference	P/2022/0336
Planning Conditions	8
Document Reference	220908-1.0-CLY-AMS-T21



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1.0 Key Contact Details

Name	Company	Role	Contact Details
Keith Baker	Kronospan	Site Manager	Tel: 01691 773361 Email: K.Baker@kronospan.co.uk -
Bobby Clayton	Axis	Planning Consultant	Tel: 0800 8700 007 Email:bobbyclayton@axisped.co.uk
Mike Wood	Tree 21 Limited	Arboricultural Consultant	Mobile: 07971287767 Email:info@tree21.co.uk
Jon Brewin	Wrexham County Borough Council	Local Authority Tree Officer	Tel: 01978 298763 Email: jon.brewin@wrexham.gov.uk

2.0 Background

- 2.0.1 Tree 21 Limited have been instructed by Axis on behalf of Kronospan to produce an Arboricultural Method Statement (AMS) and Tree Protection Plan (TPP) to discharge planning condition 8 of planning consent: P/2022/0336.
- 2.0.2 This document is designed to inform site personnel on how trees on and around the site will be managed from commencement and throughout the enabling works and demolition of the reception building, construction, and any final landscaping. The document provides information on tree protection measures and methods that will be required to safeguard retained trees on site. The document is intended to be used as a reference on site, providing detailed information on tree management. Before the document can be implemented it will need to be approved by Wrexham County Borough Council.
- 2.0.3 The document follows best practice guidelines in accordance with BS5837:2012 Trees in relation to design, demolition, and construction – Recommendations and practical solutions, based on sound arboricultural knowledge and experience of the author.
- 2.0.4 The document has been produced by Mike Wood *Dip Arb. TechArborA*, Principal Arboricultural Consultant of Tree 21 Limited. Mike Wood has over 25 years' experience in arboriculture, with over 15 years' experience in providing BS5837 surveys, reports, and technical documents, is a certified LANTRA Professional Tree Inspector, a registered Quantified Tree Risk Assessment (QTRA) user and a member of the Arboricultural Association.
- 2.0.5 Any proposed works within areas protected by tree protection barriers known herein as Construction Exclusion Zones (CEZ) or any other works near trees or to these trees that may not covered within this document are to be agreed with the Local Planning



Authority and/or the Arboricultural Consultant, and appropriate additional methodology provided.

- 2.0.6 The document provides sequenced task methodology in table form and includes a Tree Protection Plan.

WARNING: Failure to comply with the provisions set out in this document could result in breach of planning consent and subsequently may result in an official notice to stop works by the Local Planning Authority.

The Document should be read along with the following appendices:

- Appendix A: Tree Protection Plan
- Appendix C: Tree Schedule
- Appendix E: Tree Protection Specifications
- Appendix D: Schedule of Arboricultural Supervision and Monitoring



3.0 General Tree Welfare

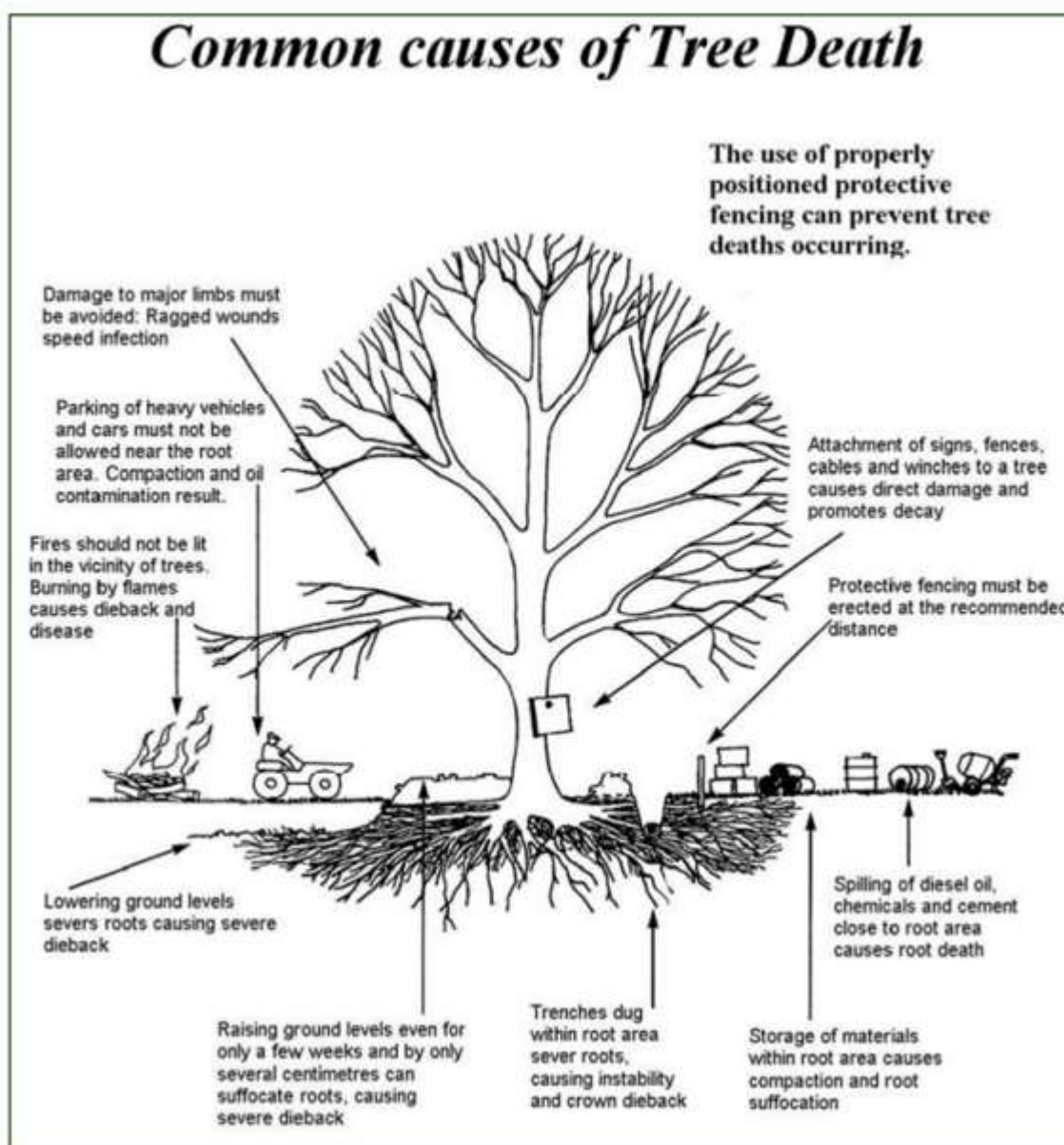
- 3.0.1 When working near trees, it is important to be aware that most tree roots are normally located in the top 600 mm of soil and can spread out horizontally to a distance at least equal to the height of the tree.
- 3.0.2 The distance from the tree in which damage is likely to occur is calculated by the Root Protection Area (RPA), which represents the minimum area around a tree deemed to contain sufficient roots and soil volume to keep the tree viable. RPAs should be treated as a precautionary area within which activities such as ground compaction, excavation, the storing of materials, ground stripping, raising of levels and building are likely to cause damage to trees and therefore should not take place. Usually, barriers are erected around the RPA to physically exclude such activities. The area within these barriers is known as the Construction Exclusion Zone (CEZ). Unavoidable activity within the CEZ must be carefully executed and must be guided by this detailed method statement.
- 3.0.3 Damage can sometimes be avoided, or at least minimised, by suitable technical measures which can be devised with consultation with an Arboricultural Consultant. The protection measures and technical construction measures, applicable to this site, are included within this document.
- 3.0.4 Tree protection fencing will be installed as set out within the Tree Protection & Removal Plan at Appendix A. The fenced-off area will become a Construction Exclusion Zone (CEZ). Any works to be undertaken in the CEZ must follow the detailed method tables set out below.

4.0 General Precautions

- 4.0.1 In general, the following procedures will also be followed. No materials that are likely to have an adverse effect on tree health will be stored or discharged within the CEZ.
- 4.0.2 Where storage of such materials is upslope of the trees, barriers will be put in place at ground level to minimise the risk of spillages leaching down-slope and contaminating the Root Protection Area of a tree. Such materials include:
- Fuel and oil
 - Bitumen
 - Cement & Concrete
 - Building Sand



- 4.0.3 Fires on sites should be avoided if possible. Where they are unavoidable, they should not be lit in a position where heat could affect foliage or branches. The potential size of a fire and the wind direction should be considered when determining its location in relation to trees, and it will be attended at all times until safe enough to leave. Any fire should be at least 50m away from the foliage of any retained tree.
- 4.0.4 Concrete will not be mixed or transported over unprotected ground within the CEZ.
- 4.0.5 Any incidents involving potential damage to retained trees will be recorded on site and a copy of the incident made available to the Local Authority Tree Officer within 48 hours.
- 4.0.6 The Poster below will be enlarged and installed in welfare areas to remind operatives of potential tree damage





5.0 Tables of Tasks and Detailed Method

- 5.0.1 The tables below provide detailed methods on each task and how they are to be undertaken, along with general tasks which may be required to complete the works. Any deviation from the methods set out in the tables below will be discussed and agreed with the Arboricultural Consultant and/or the Local Authority before being implemented.



Task 1: Tree Pruning and Removal

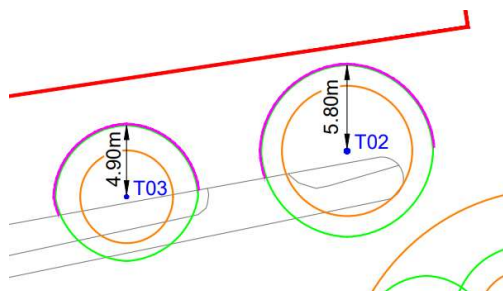
Method and Action Required
1. None of the trees surveyed require pruning or felling to facilitate this project. 2. If a need to prune a tree arises, contact with the Arboricultural Consultant will be made who will assess the proposed work and discuss with the Local Authority Tree Officer before confirming the work can proceed. 3. Any works which are agreed will be undertaken in accordance with BS3998:2010 guidelines by an appropriately competent arborist.



Task 2: Installation and Management of Tree Protection Fencing

Method and Action Required

- 1) The Tree Protection Fencing will be installed before any other works associated with the demolition or construction works, begins on site.
- 2) Fencing should be aligned as shown on the final agreed Tree Protection Plan (Appendix A). Once the fencing alignment has been set out (this can be achieved with wooden pegs or road pins) the Arboricultural Consultant will check the alignment, confirm any alterations, and sign this off. A second visit will also be undertaken once the fence has been installed to check it meets the specified criteria.
- 3) The tree protection fencing will be constructed, following the criteria set out in BS 5837:2012 (specification shown at Appendix E). Depending on the activity nearby this will either be figure 2 or figure 3. This will be agreed on site, following the setting out of the alignment. The fenced off area will form the Construction Exclusion Zone (CEZ) for the duration of the works.
- 4) A tree protection information sign (example shown at Appendix E) will be secured to every third fencing panel at eye level, facing into the site. This will aid identification of the CEZ and inform site operatives of its importance.
- 5) The tree protection fencing will remain in place, not moved, and kept in good condition until all works are complete, except for any final landscaping works planned within the CEZ, which will follow the method in task 6, below or otherwise agreed with the Arboricultural Consultant.
- 6) Once installed and during the active construction stage, the tree protection fencing will be checked once per month by an Arboricultural Consultant and any repairs, damage or realignment advised on site will be rectified within 2 working days.
- 7) An example of Tree Protection Fencing Alignment in Tree Protection Plan is shown below (pink line). Measurements have been provided on the TPP to aid the setting out work.





Task 3: Demolition of the Reception Building

Method and Action Required
1) Before demolition begins, the tree protection must be installed and signed off by the Arboricultural Consultant. 2) The Arboricultural Consultant will need to review the proposed access/egress routes for removal of the demolished building and review the location of any proposed storage/welfare areas associated with this task. 3) Once the building has been demolished, the Arboricultural Consultant will check the site and the condition of the tree protection barriers. 4) Any requirements to improve the site at that point, to improve the conditions for retained trees will be undertaken within 48 hours. If this is required, another visit will take place by the Arboricultural Consultant to ensure the work has been undertaken as instructed. Such an occurrence will be recorded in a site monitoring form and a copy made available to the Local Authority Tree Officer.



Task 4: Site Preparation, Materials & Welfare/Storage Set up

Method and Action Required
1) Once the reception building has been cleared, access will become available for the wider site. 2) The site facilities including welfare areas, site offices, material storage compounds etc. can then be set up. 3) Work can then proceed as planned.



Task 5: Site Rules & Contingencies

Method and Action Required
1) Movement and storage of earthworks and materials are to remain outside of all tree protection barriers, as these areas are a Construction Exclusion Zone.
2) If any damage to tree protection barriers happens during this work (or other work), the damage is to be repaired at the first available opportunity and not more than 48 hours.
3) Any incident of damage to barriers or retained, protected trees are to be reported to the Arboricultural Consultant and the Local Authority immediately and no longer 48 hours.
4) Any damage that may have caused damage to a protected tree, or the protected ground within the CEZ, defined with tree protection barriers will require a site visit from the Arboricultural Consultant and addendum methods provided to repair or mitigate any damage. This could include soil compaction, ground contamination, or level alterations.
5) The tree protection barrier is to remain in place in good repair throughout the project duration, whilst there is demolition and construction related activity.
6) On completion of all works associated with the construction, including movement of soil and ground materials and once all construction related equipment, machinery, storage, and welfare areas have been removed from site, the tree protection fencing can be removed.
7) Once removed the Arboricultural Consultant will visit the site and check all retained trees within 15m of the tree protection to ensure the site is left in satisfactory condition.
8) Any improvements required will be confirmed in writing and another visit will take place to check the improvements have been made.

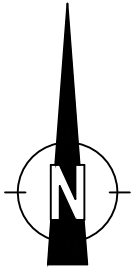
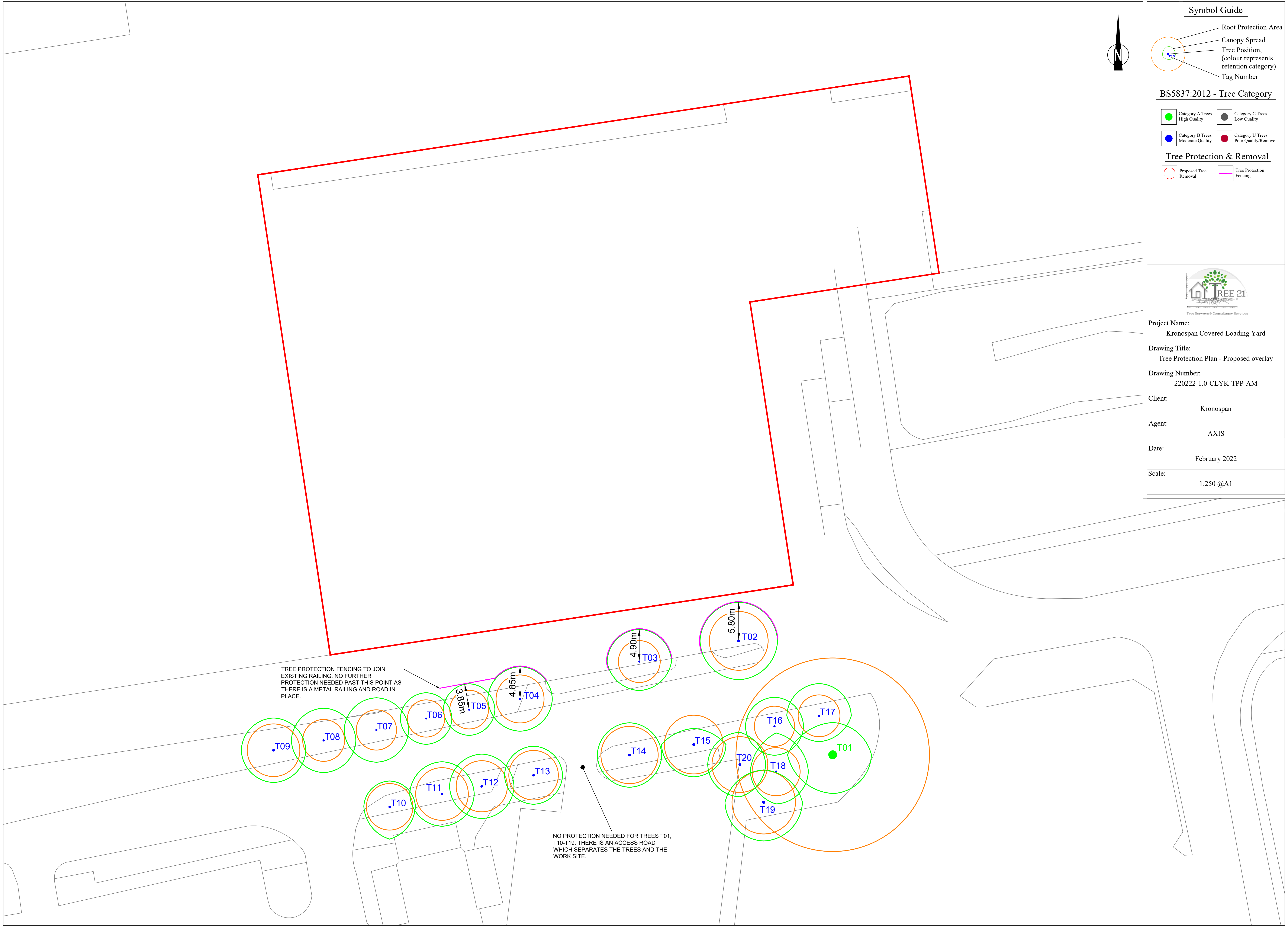


Task 6: Landscaping Operations

Method and Action Required
1) The Arboricultural Consultant will review any landscape operation that involves works within the RPAs of retained trees and input additional site-specific methodology where necessary. Additional methodology will be agreed with the Local Authority Tree Officer before proceeding with the work. General rules for post and fence installation are listed below. 2) No plant or vehicles will enter soft areas of ground within the RPA. 3) No excavation will occur within the RPA, with the exception of small localised post holes for fencing. 4) Post holes will be dug by hand and if significant roots are encountered (>25mm), the hole will be backfilled and an adjacent location found. 5) Small roots can be pruned flush with the soil profile with clean disinfected secateurs or a pruning saw. 6) If concrete is to be used to secure posts in holes, then an impermeable barrier is to be used between the concrete and the soil profile to prevent potential toxicity to tree roots. 7) If undulations need to be levelled, then sharp sand (not marine-derived sand, e.g., builders' sand, which is too alkaline) will be used and no excavation will be undertaken. 8) Fence panels will be fixed to posts and span between the posts without digging trenches.



Appendix A: Tree Protection Plan



Symbol Guide

- Root Protection Area
- Canopy Spread
- Tree Position, (colour represents retention category)
- Tag Number

BS5837:2012 - Tree Category

Category A Trees High Quality	Category C Trees Low Quality
Category B Trees Moderate Quality	Category U Trees Poor Quality/Remove

Tree Protection & Removal

Proposed Tree Removal	Tree Protection Fencing
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Project Name:	Kronospan Covered Loading Yard
Drawing Title:	Tree Protection Plan - Proposed overlay
Drawing Number:	220222-1.0-CLYK-TPP-AM
Client:	Kronospan
Agent:	AXIS
Date:	February 2022
Scale:	1:250 @A1



Appendix B: Tree Schedule

BS5837 Survey Data



Ref.	Species	Measurements	General Observations	Category	Recommendations
T01	Pedunculate Oak (<i>Quercus robur</i>)	Height (m): 14 Stem Diam (mm): 1300 Spread (m): 5N, 6E, 6S, 7W Crown Clearance (m): 2.5 Lowest Branch (m): 5(E) Life Stage: Veteran Rem. Contrib.: 40+ Years	Historic upper crown reduction, minor deadwood, cavity on North aspect from Historic large limb removal. Epicormics through crown.	A1 RPA Radius: 15.0m. Area: 707 sq m.	Pre construction: No action required. During construction: No action required.
T02	European Lime (<i>Tilia x europaea</i>)	Height (m): 13 Stem Diam (mm): 380 Spread (m): 6N, 6E, 6S, 6W Crown Clearance (m): 3 Life Stage: Early Mature Rem. Contrib.: 40+ Years	Good overall Physiological and Structural condition. Forms part of a wider avenue of Lime.	B2 RPA Radius: 4.6m. Area: 66 sq m.	During construction: Protect trees with protective barriers - as shown on plans.
T03	European Lime (<i>Tilia x europaea</i>)	Height (m): 11 Stem Diam (mm): 270 Spread (m): 5N, 5E, 4.5S, 5W Crown Clearance (m): 3 Life Stage: Early Mature Rem. Contrib.: 40+ Years	Good overall Physiological and Structural condition. Forms part of a wider avenue of Lime.	B2 RPA Radius: 3.2m. Area: 32 sq m.	During construction: Protect trees with protective barriers - as shown on plans.
T04	European Lime (<i>Tilia x europaea</i>)	Height (m): 11 Stem Diam (mm): 310 Spread (m): 5N, 5E, 5S, 5W Crown Clearance (m): 3 Life Stage: Early Mature Rem. Contrib.: 40+ Years	Good overall Physiological and Structural condition. Forms part of a wider avenue of Lime.	B2 RPA Radius: 3.7m. Area: 43 sq m.	During construction: Protect trees with protective barriers - as shown on plans.

Ref.	Species	Measurements	General Observations	Category	Recommendations
T05	European Lime (Tilia x europaea)	Height (m): 8 Stem Diam (mm): 250 Spread (m): 4N, 4E, 4S, 4W Crown Clearance (m): 3 Lowest Branch (m): 2(W) Life Stage: Early Mature Rem. Contrib.: 40+ Years	Good overall Physiological and Structural condition. Forms part of a wider avenue of Lime.	B2 RPA Radius: 3.0m. Area: 28 sq m.	During construction: Protect trees with protective barriers and tie into the existing railings- as shown on plans.
T06	European Lime (Tilia x europaea)	Height (m): 9 Stem Diam (mm): 240 Spread (m): 4N, 4E, 4S, 4W Crown Clearance (m): 3 Lowest Branch (m): 2(N) Life Stage: Early Mature Rem. Contrib.: 40+ Years	Good overall Physiological and Structural condition. Forms part of a wider avenue of Lime.	B2 RPA Radius: 2.9m. Area: 26 sq m.	During construction: No action required. Existing railings in place which are suitable as tree protection.
T07	European Lime (Tilia x europaea)	Height (m): 10 Stem Diam (mm): 260 Spread (m): 5N, 5E, 5S, 5W Crown Clearance (m): 3 Lowest Branch (m): 3(S) Life Stage: Early Mature Rem. Contrib.: 40+ Years	Good overall Physiological and Structural condition. Forms part of a wider avenue of Lime.	B2 RPA Radius: 3.1m. Area: 30 sq m.	During construction: No action required. Existing railings in place which are suitable as tree protection.
T08	European Lime (Tilia x europaea)	Height (m): 11 Stem Diam (mm): 270 Spread (m): 5N, 5E, 5S, 5W Crown Clearance (m): 3 Life Stage: Early Mature Rem. Contrib.: 40+ Years	Good overall Physiological and Structural condition. Forms part of a wider avenue of Lime.	B2 RPA Radius: 3.2m. Area: 32 sq m.	During construction: No action required. Existing railings in place which are suitable as tree protection.
T09	European Lime (Tilia x europaea)	Height (m): 11 Stem Diam (mm): 340 Spread (m): 5N, 5E, 5S, 5W Crown Clearance (m): 3 Life Stage: Early Mature Rem. Contrib.: 40+ Years	Fair overall Physiological and Structural condition. Fork with included bark at 2.5m. Forms part of a wider avenue of Lime.	B2 RPA Radius: 4.1m. Area: 53 sq m.	During construction: No action required. Existing railings in place which are suitable as tree protection.
T10	European Lime (Tilia x europaea)	Height (m): 10 Stem Diam (mm): 300 Spread (m): 4N, 4E, 5S, 4W Crown Clearance (m): 4 Life Stage: Early Mature Rem. Contrib.: 40+ Years	Good overall Physiological and Structural condition. Forms part of a wider avenue of Lime.	B2 RPA Radius: 3.6m. Area: 41 sq m.	Pre construction: No action required. During construction: No action required.

Ref.	Species	Measurements	General Observations	Category	Recommendations
T11	European Lime (Tilia x europaea)	Height (m): 10 Stem Diam (mm): 340 Spread (m): 5N, 5E, 5S, 5W Crown Clearance (m): 4 Life Stage: Early Mature Rem. Contrib.: 40+ Years	Good overall Physiological and Structural condition. Forms part of a wider avenue of Lime.	B2 RPA Radius: 4.1m. Area: 53 sq m.	Pre construction: No action required. During construction: No action required.
T12	European Lime (Tilia x europaea)	Height (m): 10 Stem Diam (mm): 330 Spread (m): 5N, 5E, 5S, 5W Crown Clearance (m): 4 Lowest Branch (m): 2(N) Life Stage: Early Mature Rem. Contrib.: 40+ Years	Good overall Physiological and Structural condition. Forms part of a wider avenue of Lime.	B2 RPA Radius: 4.0m. Area: 50 sq m.	Pre construction: No action required. During construction: No action required.
T13	European Lime (Tilia x europaea)	Height (m): 9.5 Stem Diam (mm): 320 Spread (m): 4.5N, 4.5E, 4.5S, 4.5W Crown Clearance (m): 4 Lowest Branch (m): 2(N) Life Stage: Early Mature Rem. Contrib.: 40+ Years	Good overall Physiological and Structural condition. Forms part of a wider avenue of Lime.	B2 RPA Radius: 3.8m. Area: 45 sq m.	Pre construction: No action required. During construction: No action required.
T14	European Lime (Tilia x europaea)	Height (m): 9 Stem Diam (mm): 370 Spread (m): 5N, 5E, 5S, 5W Crown Clearance (m): 4 Lowest Branch (m): 2(S) Life Stage: Early Mature Rem. Contrib.: 40+ Years	Good overall Physiological and Structural condition. Forms part of a wider avenue of Lime.	B2 RPA Radius: 4.4m. Area: 61 sq m.	Pre construction: No action required. During construction: No action required.
T15	European Lime (Tilia x europaea)	Height (m): 9 Stem Diam (mm): 380 Spread (m): 2.5N, 5E, 5S, 5W Crown Clearance (m): 4 Lowest Branch (m): 2(N) Life Stage: Early Mature Rem. Contrib.: 40+ Years	Good overall Physiological and Structural condition. Forms part of a wider avenue of Lime. Pruned around lamp on North aspect.	B2 RPA Radius: 4.6m. Area: 66 sq m.	Pre construction: No action required. During construction: No action required.

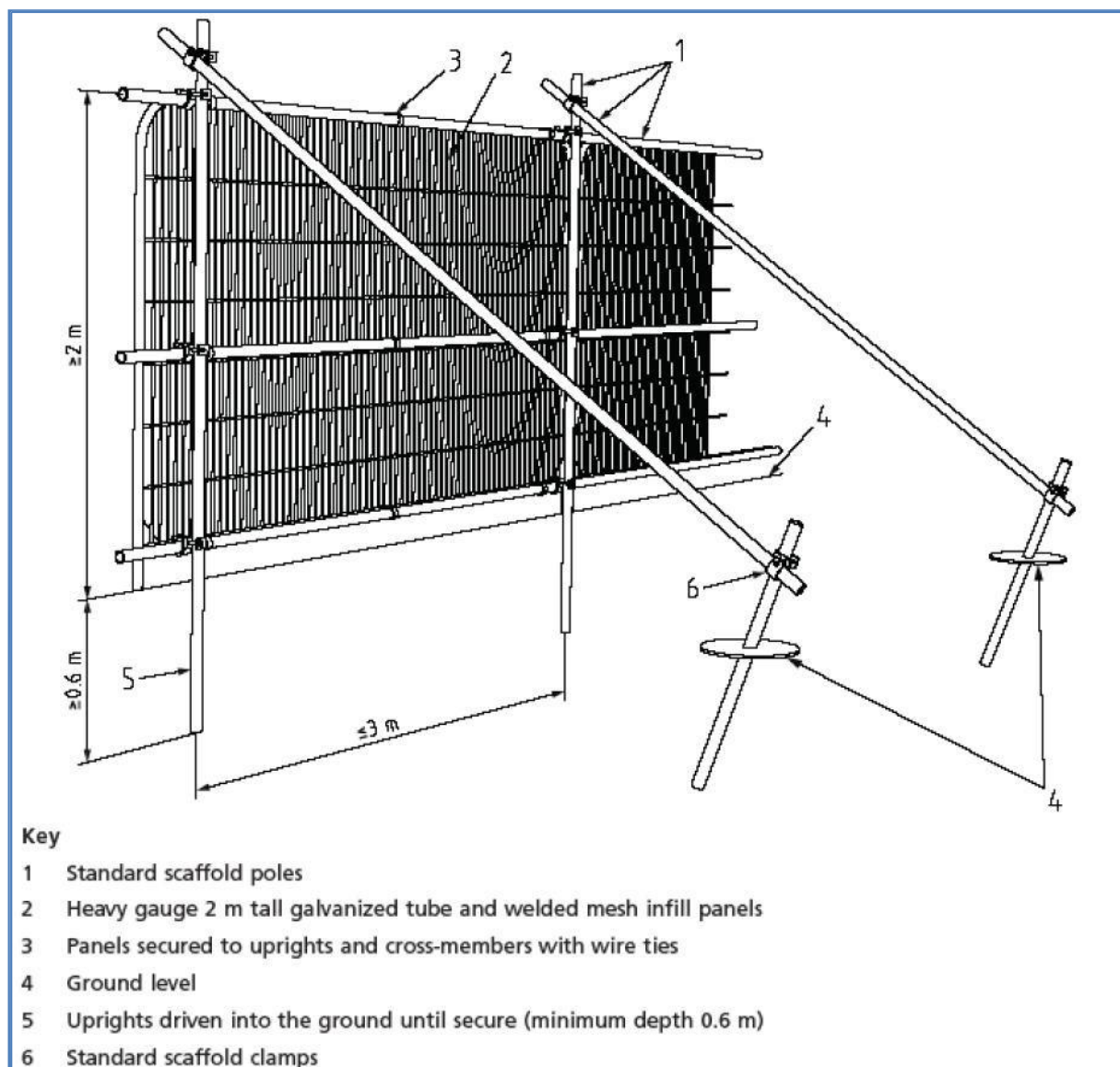
Ref.	Species	Measurements	General Observations	Category	Recommendations
T16	European Lime (Tilia x europaea)	Height (m): 9 Stem Diam (mm): 260 Spread (m): 4.5N, 4.5E, 4.5S, 4.5W Crown Clearance (m): 4 Life Stage: Early Mature Rem. Contrib.: 40+ Years	Good overall Physiological and Structural condition. Forms part of a wider avenue of Lime.	B2 RPA Radius: 3.1m. Area: 30 sq m.	Pre construction: No action required. During construction: No action required.
T17	European Lime (Tilia x europaea)	Height (m): 9 Stem Diam (mm): 270 Spread (m): 5N, 5E, 4S, 5W Crown Clearance (m): 4 Life Stage: Early Mature Rem. Contrib.: 40+ Years	Good overall Physiological and Structural condition. Forms part of a wider avenue of Lime. Recent minor pruning to south aspect.	B2 RPA Radius: 3.2m. Area: 32 sq m.	Pre construction: No action required. During construction: No action required.
T18	Wild Cherry (Prunus avium)	Height (m): 11 Stem Diam (mm): 310 Spread (m): 6N, 5E, 5S, 4W Crown Clearance (m): 2 Life Stage: Mature Rem. Contrib.: 20+ Years	Part of group of 3 amenity trees.	B2 RPA Radius: 3.7m. Area: 43 sq m.	Pre construction: No action required. During construction: No action required.
T19	Wild Cherry (Prunus avium)	Height (m): 11 Stem Diam (mm): 410 Spread (m): 5N, 6E, 6S, 6W Crown Clearance (m): 2 Life Stage: Mature Rem. Contrib.: 20+ Years	Part of group of 3 amenity trees.	B2 RPA Radius: 4.9m. Area: 75 sq m.	Pre construction: No action required. During construction: No action required.
T20	Wild Cherry (Prunus avium)	Height (m): 10 Stem Diam (mm): 360 Spread (m): 5N, 4E, 5S, 5W Crown Clearance (m): 2 Life Stage: Mature Rem. Contrib.: 20+ Years	Part of group of 3 amenity trees.	B2 RPA Radius: 4.3m. Area: 58 sq m.	Pre construction: No action required. During construction: No action required.



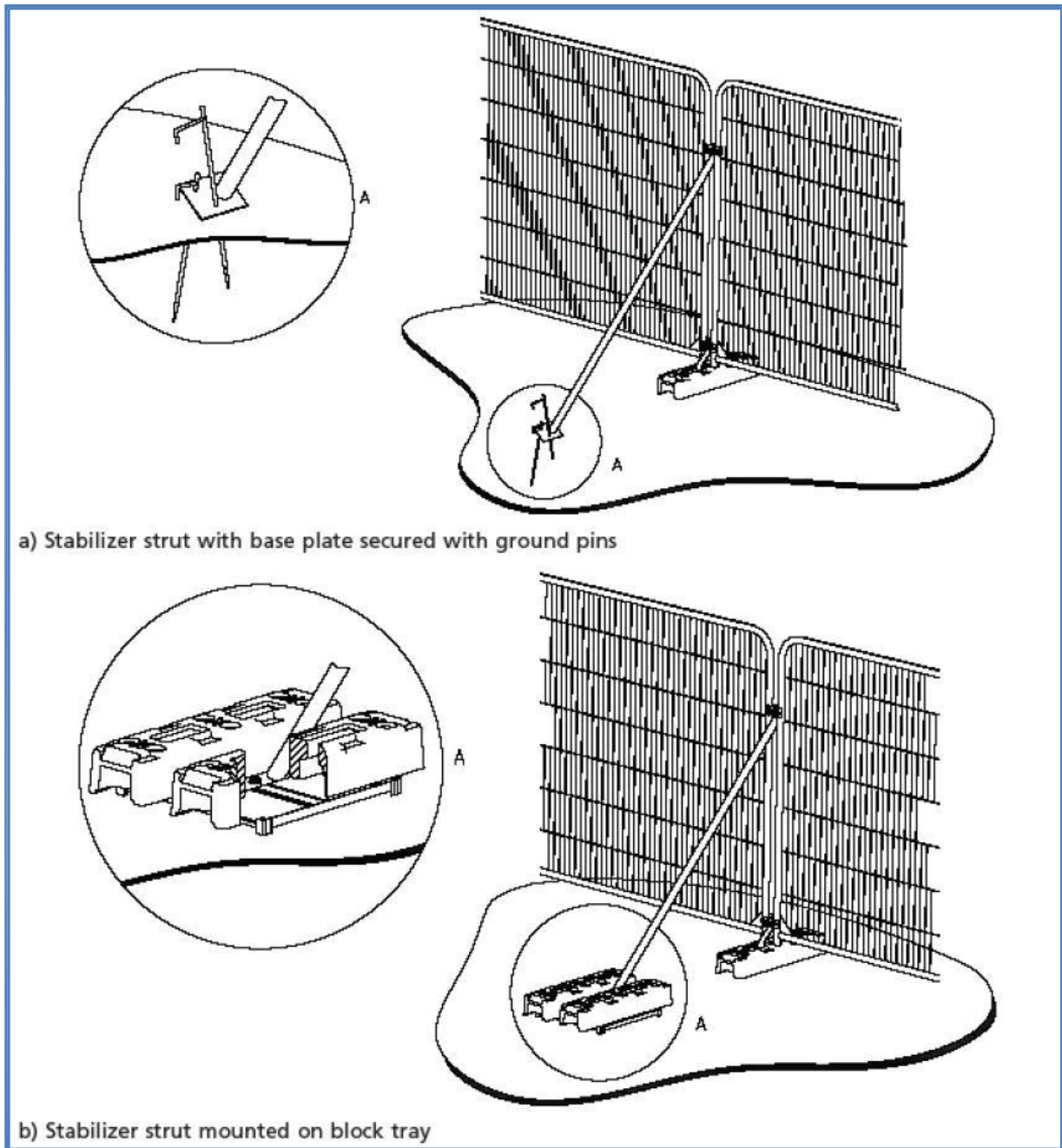
Appendix C: Tree Protection Specifications



Example Tree Protection Fencing Sign



BS5837: 2012 - Figure 2 – Tree Protective Barrier



BS5837: 2012 - Figure 3 – Examples of Above Ground Stabilisation Systems



Appendix D: Schedule of Arboricultural Supervision and Monitoring



Schedule of Arboricultural Supervision and Monitoring

Site	Kronospan (Covered Load Area and Existing Reception Building)
Contractor	TBC
Site Contact	Keith Baker
Telephone	01691 773361
Email	K.Baker@kronospan.co.uk
Local Authority	Wrexham County Borough Council
Arboricultural Consultant	Mike wood Telephone: 07971 287767 Email: info@tree21.co.uk



Task Number & Description	Arboricultural Role	Expected Duration
Task 2: Checking alignment Of Tree Protection Fencing	Once the tree protection alignment has been set out with wooden pegs or similar the Arboricultural Consultant (AC) will check the setting out against the Root Protection Area radius of retained trees and the Tree Protection Plan. A site operative will be required to assist and alter the alignment if this is required by the AC.	1-2 hours
Task 2: Post-Installation of Tree Protection Fencing	The AC will need to check the specification of tree protection fencing and confirmed it is suitable once installed. Note: Any deviation to the tree protection specification set out in the AMS will need to be confirmed with the AC before it is used, as it may not be acceptable.	1-2 hours
Task 2: Inspecting the Tree Protection fencing	The tree protection fencing will be checked once per month and immediately after the demolition of the reception building by the AC. Any repairs, damage or realignment advised on site will be rectified within 48 hours. During these visits a general check retained the welfare will be undertaken and any improvement required, will be advised.	1-2 hours
Task 5: Final tree welfare checks	The AC will inspect the site and the welfare of trees, following completion of all associated construction works and advise on any measures required to improve the welfare of retained trees if applicable.	1-2 hours