



BS 5837:2012 Arboricultural Impact Assessment and Arboricultural Method Statement

Gelderd Road, Birstall
for:

Tesla Motors Ltd

3030.020.ENZ.XX.00.RP.AR.45.102



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BS 5837:2012 Arboricultural Impact Assessment and Arboricultural Method Statement

Project:	Gelderd Road, Birstall
For:	Tesla Motors Ltd
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1.0 Non-Technical Summary

1.1 Arboricultural Survey

1.1.1 The site is an area of land located off Gelderd Road, within a largely commercial neighbourhood associated with Birstall Retail Park. It comprises a disused building with associated hardstanding and carparking space, as well as semi-mature boundary vegetation.

1.1.2 A tree survey in accordance with BS 5837:2012 was carried out by Enzygo Ltd. in April 2024. Four trees and four tree groups were surveyed within the site and within 15m of the site boundary. The surveyed trees are located along the boundary lines and are predominantly native, early mature trees of low value (BS retention category C). There are no Tree Preservation Orders on the site; the site does not sit within a local Conservation Area.

1.2 Development Proposals

1.2.1 The Client proposes the “*Development and operation of an electric vehicle ultra-rapid charging hub – comprising chargepoint upstands, supporting electrical equipment including substations and cabinet infrastructure, hard and soft landscaping, an ancillary amenity bock, site lighting, CCTV and access improvements*”. Access will be off Gelderd Road in the South.

1.3 Arboricultural Impact Assessment

1.3.1 The development including the site-set-up and construction operations will require the removal of one low value tree and approximately 105m² of one low value tree group which is expected to have a low impact on the character of the site and the local landscape.

1.3.2 Unless adequate protection measures are provided, operations linked to the development may have an adverse effect on any retained trees on site.

1.4 Arboricultural Method Statement

1.4.1 Mitigating and protective measures include crown management and the erection of a Protective Barrier along the edge of the new car parking spaces to protect all boundary trees from physical damage and the Root Protection Areas from compaction and distortion.

1.4.2 Replacement tree planting is specified within the Soft Landscape Plan submitted alongside the Planning Application, specifying replacement tree planting for the site that is considered to be adequate for the scale of tree removal proposed.

2.0 Objectives

2.1 Introduction

2.1.1 Enzygo Limited [Enzygo] have been commissioned by Tesla Motors Ltd. to prepare an Arboricultural Impact Assessment and Arboricultural Method Statement for their site off Gelderd Road in Birstall in support of a planning application for the development of an electric vehicle ultra-rapid charging hub to be linked to Birstall Retail Park to the North of the site via a new flight of steps.

2.1.2 This report should assist both the client, their design team and decision makers in understanding the impact of the development proposals both on trees on and in close proximity to the site and subsequent effects on the wider landscape and which measures should be in place to adequately protect retained trees.

2.2 Structure of the Report

2.2.1 **Chapter 2.0** provides a brief site description as well as a summary of the existing Arboricultural Survey report on which this report is based. It further gives a brief description of the development proposals.

2.2.2 **Chapter 3.0** details the direct and indirect impact the proposals are expected to have on existing trees and how any effect would influence the site and the wider landscape.

2.2.3 **Chapter 4.0** provides full details of any methodologies to be adopted in order to adequately protect any retained trees during construction and safeguard the health and safety of the trees in the future. It further makes recommendations for the mitigation of any adverse arboricultural impact.

2.3 Site Overview

2.3.1 The site is located on Gelderd Road within a largely commercial setting associated with Birstall Retail Park. The M62 Junction 27 with the M621 is located approximately 250m to the Northeast. The site falls within the Metropolitan Borough of Kirklees, within the County of West Yorkshire.

2.3.2 The application boundary for the site is approximately 2,200m² and comprises a disused building with associated hardstanding and carparking space.

2.4 Arboricultural Survey

2.4.1 A tree survey in accordance with BS 5837:2012 was carried out by Enzygo Ltd. in April 2024. (Enzygo report ref. 3030.020.ENZ.XX.00.RP.AR.45.101). Four trees and four tree groups were

surveyed within the site and within 15m of the site boundary. The surveyed trees are located along the site boundary lines and are predominantly native, early mature trees of low value (BS retention category C).

2.4.2 The report includes a full tree survey schedule which describes each tree in accordance with BS 5837:2012 clause 4.4.2.

2.5 **Project Description**

2.5.1 It is understood the planning application is for 32no. Tesla electric vehicle (EV) ultra-rapid (150kW+) charging points, supercharger equipment cabinets, substation infrastructure, hard and soft landscaping, ancillary customer amenity block, solar canopies and provision of connecting customer stairwell to Birstall Retail Park

2.5.2 Further details regarding the proposed development can be found in the information submitted with the planning application.

3.0 Arboricultural Impact Assessment (AIA)

3.1 Development proposals

3.1.1 This AIA is based on the development proposals as shown on the Soft Landscape Plan by Enzygo Ltd. (drawing ref. CRM3030020-ENZ-XX-XX-DR-Z-0001 Revision PL01 dated 26th June 2025).

3.2 Tree removal

3.2.1 One tree of low value (T03) and 105m² of low value tree group G02 will need to be removed to facilitate the construction of the amenity building.

3.2.2 The arboricultural impact of the tree removal on the site and the local landscape is considered to be low in the medium term and would likely be offset by adequate replacement tree and shrub planting.

3.3 Residual impact of development on retained trees

3.3.1 Unless adequate protection measures are provided:

- Construction operations near retained trees are likely to cause accidental damage of tree trunks and low hanging branches.
- The installation of the chargers in the West of the site would result in the loss of up to 10% of the Root Protection Area of tree T8, which may have an adverse impact on the canopy health of the tree.
- Excavations for the installation of charger infrastructure and underground services may have an impact where they are proposed within the RPA of retained trees.

3.4 Recommendations

3.4.1 All methodologies specified in the Arboricultural Method Statement (AMS) in Chapter 4.0 should be implemented to ensure any retained trees are adequately protected during site set-up, and construction.

3.4.2 All site managers and site operatives should be aware of the potential impact of the works on retained trees and follow the protection methodologies specified in the AMS in Chapter 4.0.

3.4.3 Replacement tree planting is specified within the Soft Landscape Plan submitted alongside the Planning Application, specifying tree planting for the site that is considered to be adequate for the scale of tree removal proposed.

4.0 Arboricultural Method Statement (AMS)

This AMS should be read in conjunction with Appendix 1 – Tree Protection Plan.

4.1 Tree Removal and Crown Management

4.1.1 Prior to the site being set-up, a qualified arborist will remove only the trees listed in 3.2 above and carry out any tree works included in the Preliminary Management Recommendations of the Tree Survey Schedule (as appended to Enzygo Arboricultural Survey report ref. 3030.020.ENZ.XX.00.RP.AR.45.101).

4.1.2 In addition, the canopy of tree T8 should be reduced to a 3.5m spread to the North and East to create a more balanced canopy and to mitigate the loss of up to 10% of the tree's northeastern Root Protection Area.

4.1.3 Any tree works should be carried out in accordance with BS 3998:2010- Tree works recommendations. To find a suitably qualified tree surgeon, please refer to the Arboricultural Association's list of Registered Contractors.

4.1.4 Any tree works proposed in the respective survey season should be preceded by a nesting bird and roosting bat check carried out by a suitably qualified ecologist.

4.2 Protective Barrier

4.2.1 Where construction operations are likely to cause damage to above ground parts of retained trees or compaction of the Root Protection Areas (RPA), a protective barrier should be erected prior to commencement of any works on site to create a sacrosanct Construction Exclusion Zone (CEZ). The alignment of the fence should follow the canopy line of the trees or the edges of the RPA, whichever is greater.

4.2.2 Where possible, the CEZ should be extended to include any areas proposed for soft landscaping to minimise compaction in these areas and ensure new planting can establish successfully.

4.2.3 The fence may be temporarily re-aligned in the West to allow the installation of the charger infrastructure, as indicated on the Tree Protection Plan in Appendix 1.

4.2.4 All weather notices should be firmly attached to the barrier to inform any site operatives of the purpose of the fencing, e.g. "Construction Exclusion Zone- No access".

4.2.5 The protective barrier must not be removed or realigned unless in accordance with this report or until all construction work has been completed and all construction vehicles and plant have departed from site.

4.3 Installation of Utility Apparatus

- 4.3.1 Underground services which require excavations should be located outside the Root Protection Areas (RPA) of retained trees, or outside the Tree Protection Zone as shown in Figure 1 of the National Joint Utility Group (NJUG) Volume 4- Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees (NJUG Volume 4), whichever is greater. Refer to Appendix 3 – NJUG Tree Protection Zone.
- 4.3.2 Where the location of underground services within the RPA is justified, trenchless solutions should be applied in accordance with BS 5837:2012 Clause 7.7.2 and NJUG Volume 4.

5.0 Appendix 1 – Tree Protection Plan



- NOTES**
- Do not scale from this drawing for construction purposes
 - This drawing is to be read in conjunction with all relevant drawings and documents associated with this project.
 - All surveyed information including levels and layout is provided by others
 - All existing and proposed dimensions, levels and locations to be checked and verified by the main contractor on site prior to the commencement of the works and any anomalies reported to the engineer.

KEY - Tree Protection Plan

Tree Categories BS 5837 (2012)

-  Tree Category A
-  Tree Category B
-  Tree Category C
-  Tree Category U
-  Root Protection Area (RPA)
-  Tree to be removed
-  Partial removal of tree group
-  Protective barrier BS 5837 (2012) Figure 2

PL01	30/06/25	For Planning	VM	CG	TB
Rev	Date	Description	DRA	CHK	APP

Project
Gelderd Road, Birstall

Client
Tesla Motors Ltd.

Drawing Title
Tree Protection Plan

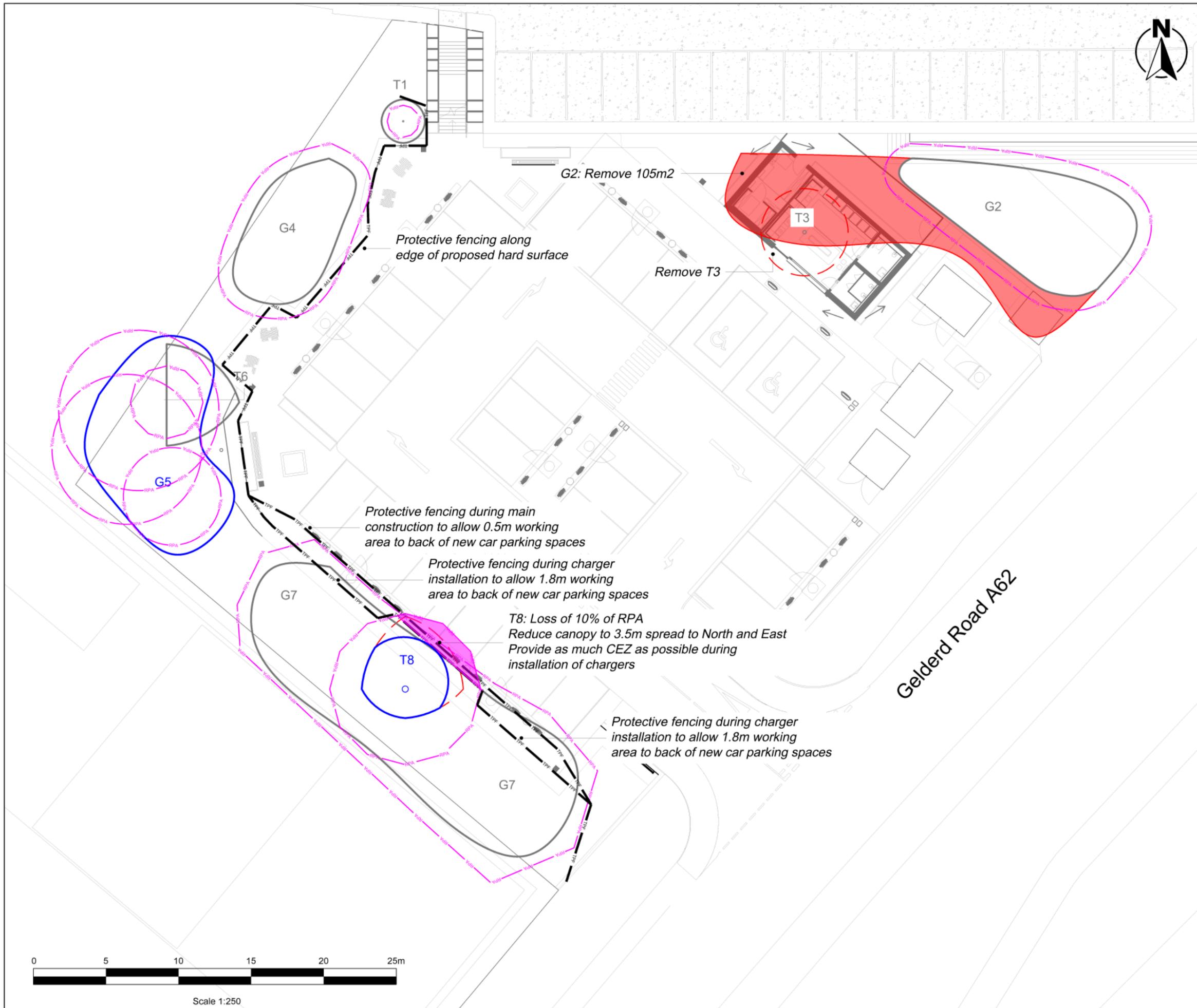
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For Planning	23/04/24	1:250 @ A3

Drawn	Designed	Checked	Approved
VM	VM	GB	TB

DWG No.	Revision
3030.020.ENZ.XX.00.DR.AR.45.102	PL01



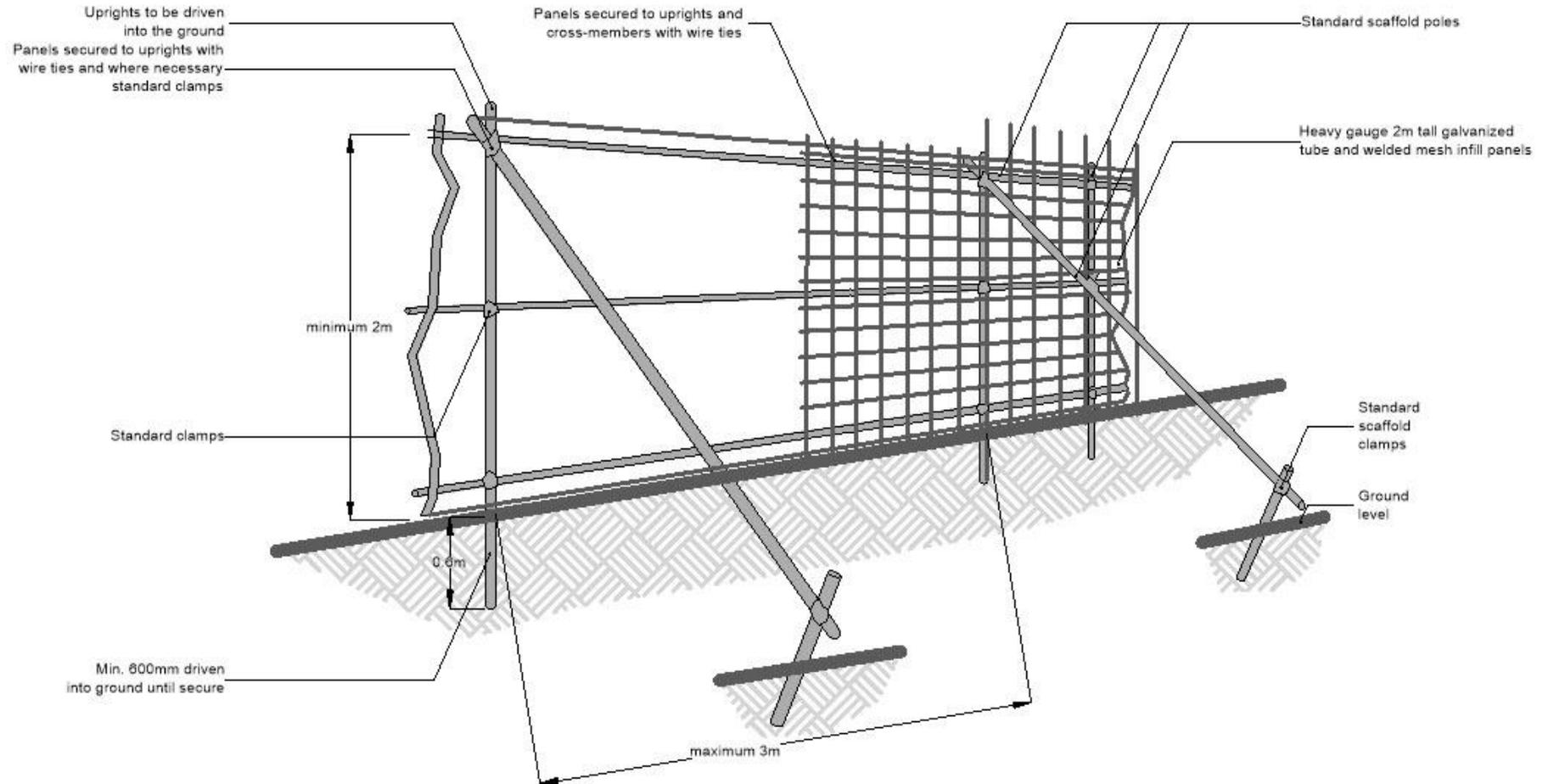
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Scale 1:250

6.0 Appendix 2 – Protective barrier to BS5837:2012

6.1 Default specification for protective barrier

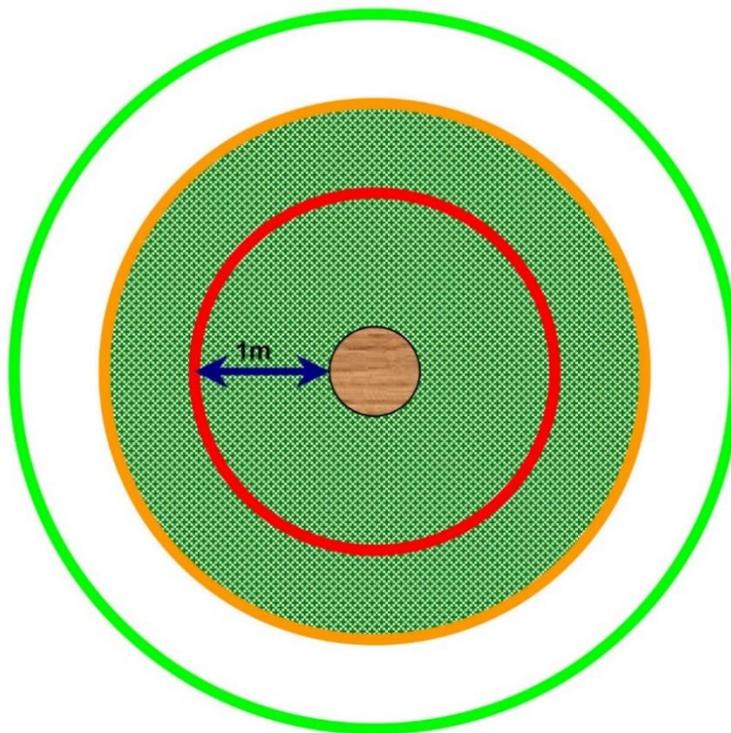


7.0 Appendix 3 – NJUG Tree Protection Zone



NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees

FIGURE 1 – Tree Protection Zone



Key



Trunk of tree



Canopy or branch spread



PROHIBITED ZONE – 1m from trunk. Excavations of any kind must not be undertaken within this zone unless full consultation with the local authority Tree Officer is undertaken. Materials, plant and spoil must not be stored within this zone.



PRECAUTIONARY ZONE – 4 x tree circumference. Where excavations must be undertaken within this zone the use of mechanical excavation plant should be prohibited. Precautions should be undertaken to protect any exposed roots. Materials, plant and spoil should not be stored within this zone. Consult with the local authority Tree Officer if in any doubt.



PERMITTED ZONE – outside of the precautionary zone. Excavation works may be undertaken within this zone, however caution must be applied and the use of mechanical plant limited. Any exposed roots should be protected.

8.0 Appendix 4 – Methodology

Introduction

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

Arboricultural Impact Assessment (AIA)

8.1.1 Once the Tree Survey and Tree Constraints Plan has been prepared and a site layout is available, these are superimposed to establish the potential impact of the development, including the construction phase, on the existing tree stock.

8.1.2 The requirement for tree removal is ascertained where tree stems are located within or very close to proposed building footprints and hard landscape and/or within areas with significant proposed level changes and other works requiring soil movement (incl. excavations).

8.1.3 In a second stage an assessment is carried out of the impact both the construction operations and the development proposals may have of retained trees, including hard landscape in RPA, vertical structures and tree canopies

8.1.4 Using information provided by the client on construction operations, including site access, construction vehicle and plant movement and location of the site compound and material storage areas, the potential impact on both below and above ground parts of retained trees is assessed.

8.1.5 In addition to assessing the impact of the development on existing trees, Enzygo also include an assessment of the impact of existing trees on the future use of the site, including shading, spatial constraints and the use of gardens, open spaces, paths and roads. Potential conflicts between trees and the safety of the site have also been analysed.

Arboricultural Method Statement (AMS)

8.1.1 The Arboricultural Method Statement (AMS) gives an overview on all methodologies to be adopted to minimise the effects the development, including construction operations, are expected to have on retained trees.

8.1.2 The AMS further includes a full specification for all methodologies which are necessary to protect retained trees.

8.1.3 Methodologies include protective barriers installed to create a Construction Exclusion Zone (CEZ) around retained trees, temporary ground protection where Root Protection Areas (RPA) cannot be fully fenced off, access facilitation pruning where there are conflicts between parts of the canopy and the development, specialist construction methods for buildings within the RPA and any methodologies to be adopted for utilities within the RPA.



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