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BS 5837:2012 Arboricultural Impact Assessment and Arboricultural Method Statement

Islington Marina, Manchester

for:

TMV Architects

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1.0 Non-Technical Summary

1.1 Arboricultural Survey

1.1.1 The two sites of proposed development are located within Cotton Field Park south of New Islington Marina and west of Old Mill Street, in the Northern quarter of Manchester. Both sites measure circa 182sqm each in size and currently consist a boater's hut and hard standing with a security fence respectively.

1.1.2 The tree survey for the site was prepared by Hazel Irving in June 2024, recording 18 trees and 15 tree groups within the site and within 15m of the site boundary, as well as along the proposed construction routes in the South. The majority of trees within Cotton Field Park and its access points are of moderate value (BS retention category B), with smaller trees of lower value (category C) scattered between them. Two high value (category A) trees were recorded within the wider surroundings.

1.1.3 Manchester City Council has confirmed that none of the trees included in this survey are protected by Tree Preservation Order. The site is not located within a Conservation Area. There are also no non-statutory designations affecting the site.

1.2 Development Proposals

1.2.1 The Client proposes the development of an ancillary building and new build store at the site. The site will be accessed from the south side of Cotton Fields Park, via the unnamed access road which runs along the west side of the Urban Village Medical Practice, off Old Mill Street.

1.3 Arboricultural Impact Assessment

1.3.1 The development of the ancillary building and the new build store at the site, including the site-set-up and all demolition and construction operations will require the removal of a section of approximately 65m2 from tree group G8. This is expected to have a negligible impact on the character of the site.

1.3.2 Unless adequate protective measures are provided to *BS 5837 (2012) Trees in relation to design, demolition and construction* and in accordance with this report, operations linked to the development may have an adverse indirect effect on retained trees on site.

1.4 Arboricultural Method Statement

1.4.1 Protective measures include the erection of Protective Barriers.

2.0 Objectives

2.1 Introduction

2.1.1 Enzygo Limited [Enzygo] have been commissioned by TMV Architects to prepare an Arboricultural Impact Assessment and Arboricultural Method Statement for the site at Cotton Field Park south of New Islington Marina in Manchester in support of the erection of an ancillary building and new build store at the site.

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 description of the site and its location as well as a summary of the existing Arboricultural Survey report on which this report is based.

2.2.2 **Chapter 3.0** gives a brief description of the development and details the direct and indirect impact the proposals are expected to have on existing trees.

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

2.3.4 The site is located approximately 1.5km northeast of Manchester Oxford Road railway station and 1km southeast of Manchester Victoria railway station. The site is located within Cotton Field Park at the New Islington Marina, off Old Mill Street.

2.3.5 The site falls within the Northern quarter of Manchester City.

2.3.6 The site comprises two small parcels of land within Cotton Field Park, a Public Open Space (POS) south of New Islington Marina in the Northern Quarter of Manchester. Both are 182m² each in area and comprise the existing 'boaters hut' in the West of the marina and an existing compound in the East. The areas are within publicly accessible land and can be viewed from around the park and the marina; the hut and the compound are not accessible the wider public.

2.4 Arboricultural Survey

2.4.1 An Arboricultural Survey Report to BS 5837:2012 covering all trees both within the development site as well as within 15m of the site boundary was prepared by Enzygo in June 2024.

2.4.2 The majority of trees within Cotton Field Park and its access points are of moderate value (BS retention category B), with smaller trees of lower value (category C) scattered between them. Two high value (category A) trees were recorded within the wider surroundings. 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 the development of two single-storey buildings consisting of an ancillary building and a new storage facility. The ancillary building will improve existing building, which will be demolished. The new storage facility will be enclosed by a 3-metre-high fence. The site will be accessed from the south side of Cottonfields Park, via the unnamed access road which runs along the west side of the Urban Village Medical Practice, off Old Mill Street.

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 TMV's drawing ref. 1053.002 dated October 2023. Any proposals for new utilities have not been viewed, so provision for any potential proposals for services within the proximity of trees has been made below.

3.2 Tree removal

3.2.1 A section of approximately 65m2 from the Category C tree group G8 will be removed to facilitate the proposals to demolish the existing ancillary building and construct the new ancillary building.

3.2.1 The impact of these tree removals is expected to be negligible due to its limited extent and the retention of a significantly larger proportion of this boundary group.

3.3 Residual impact of development on retained trees

3.3.1 Unless adequate protective measures are provided to *BS 5837 (2012) Trees in relation to design, demolition and construction* and in accordance with this report:

- Demolition and construction operations near retained trees are likely to cause accidental damage of tree trunks and low hanging branches.
- Vehicle and plant movement during demolition and construction may further cause ground compaction which could lead to irreversible damage of tree roots and the rooting environment within the RPA of retained trees.
- Excavations for underground services may have an impact where they are proposed within the RPA of retained trees. Proposed above ground services may further conflict with parts of tree canopies.

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, demolition 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.

4.0 Arboricultural Method Statement (AMS)

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

4.1 Tree Removal and Access Facilitation Pruning

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 (refer to Arboricultural Survey Report report by Enzygo Ltd. dated June 2024).

4.1.2 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.

4.1.3 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 alignment of the barrier, including indicative setting-out information, is shown on the drawing included in Appendix 1 – Tree Protection Plan.

4.2.4 The protective barrier should be installed in accordance with *BS 5837:2012 Figure 2 Default specification for protective barrier* which consists of a horizontal and vertical scaffold framework that should be braced to resist impact from construction plant and vehicles. Please refer to Appendix 2 – Protective barrier to BS5837:2012 for further information and a detailed specification.

4.2.5 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".

4.2.6 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 Level Changes

4.3.1 The reduction of ground levels and the skimming of ground within the RPA of retained trees is not permitted.

4.3.2 Where it is required to raise levels within the RPA of retained trees, this should be achieved by use of an inert granular material which remains gas- and water-permeable throughout its design life.

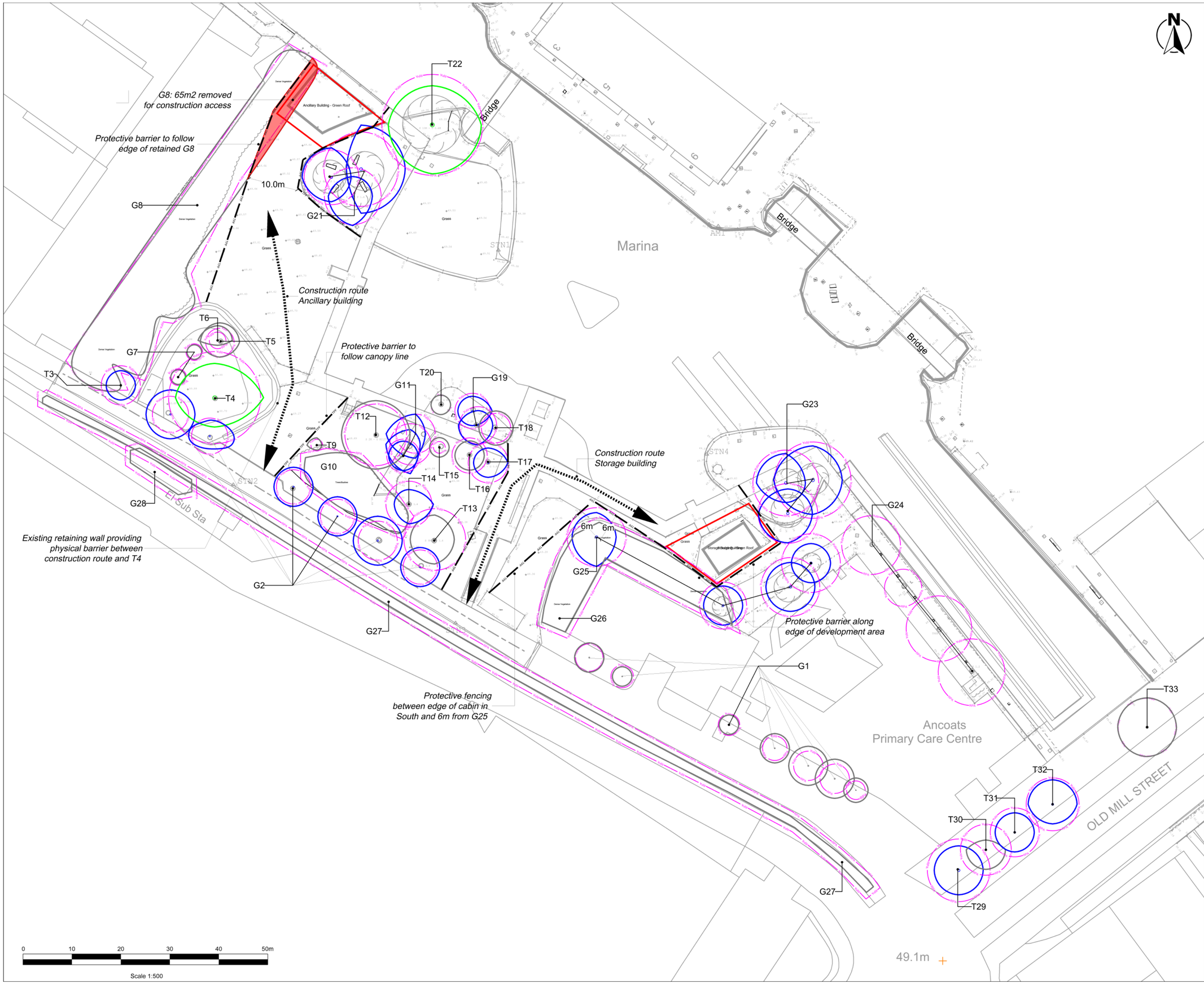
4.4 Installation of Utility Apparatus

4.4.1 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.

4.4.2 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*.

4.4.3 Above ground services, including CCTV cameras and lighting, should be sited and installed to avoid the need for detrimental tree pruning in the short and long-term. Installation of above-ground services should further be carried out in accordance with *BS 5837:2012 Clause 7.7.3* 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)
- Vegetation to be removed
- Protective barrier BS 5837 (2012) Figure 2

Rev	Date	Description			
PL01	08/07/24	For Planning	VM	HI	VM
			DRA	CHK	APP

Project
Islington Marina
Manchester

Client
TMV Architects

Drawing Title
Tree Protection Plan

Status	Date	Scale
For Planning	08/07/24	1:500 @ A2

Drawn	Designed	Checked	Approved
HI	--	VM	VM

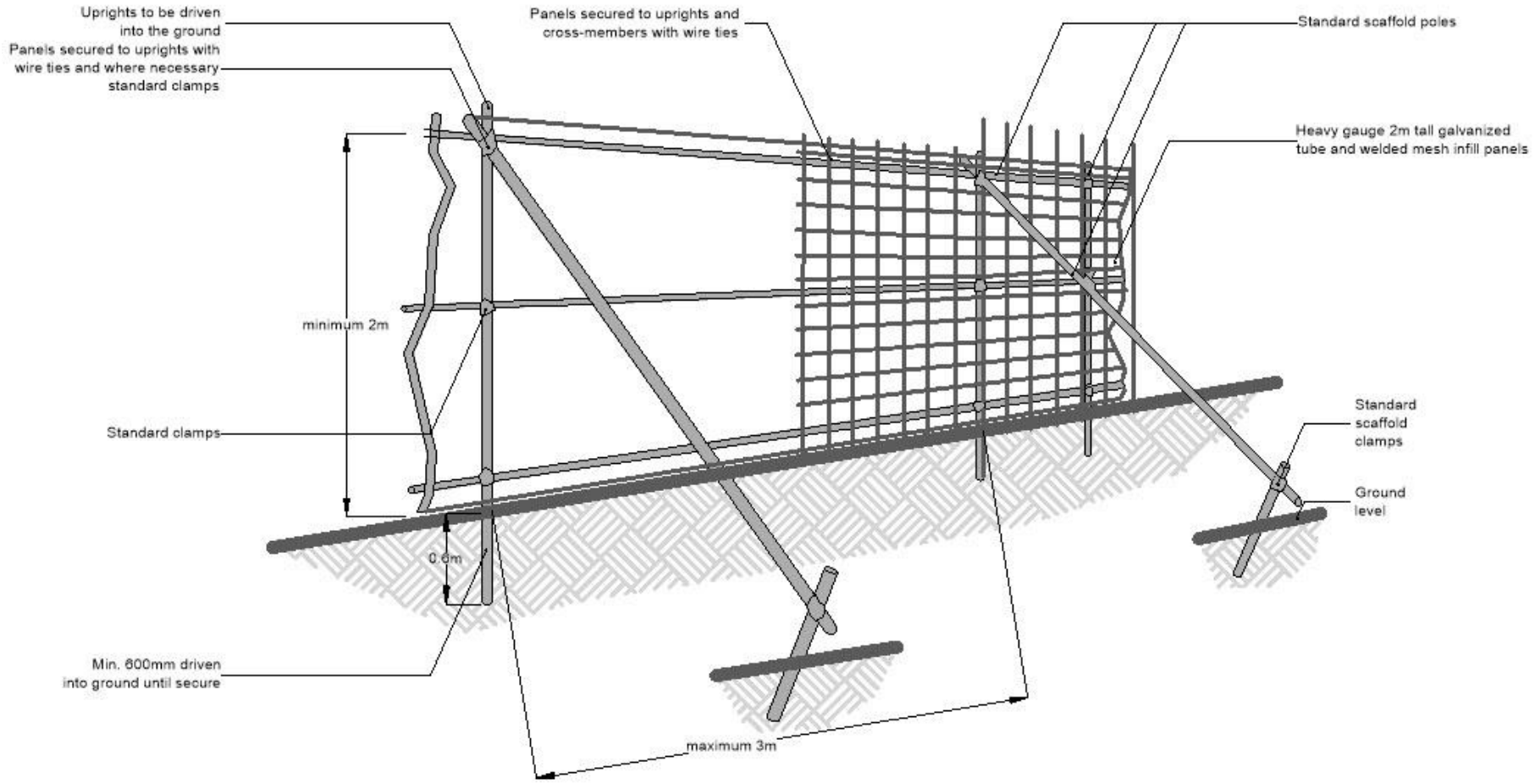
DWG No. CRM.944.001.ENZ.XX.00.DR.AR.45.102

Revision PL01

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6.0 Appendix 2 – Protective barrier to BS5837:2012

6.1 Default specification for protective barrier

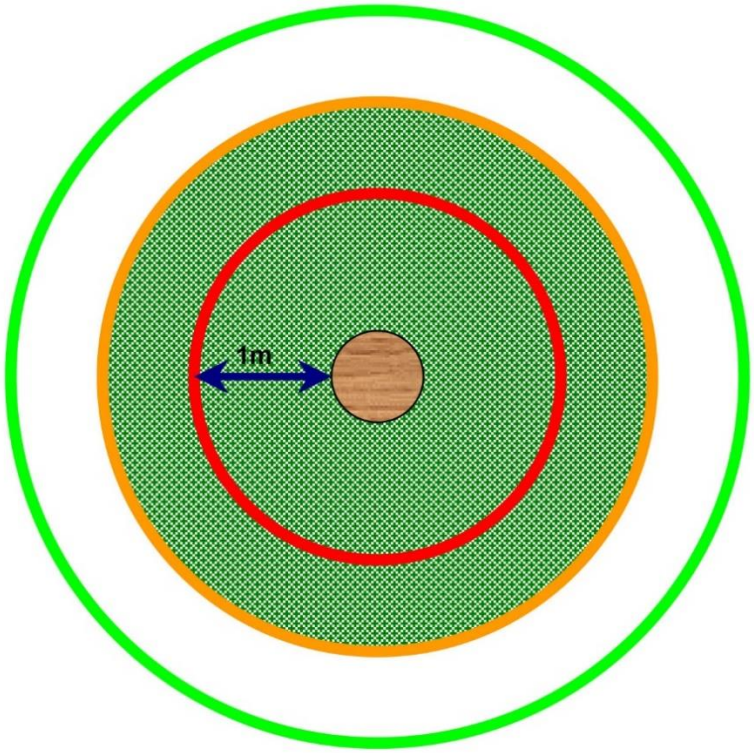


7.0 Appendix 3 – NJUG Tree Protection Zone

The National Joint Utilities Group

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

8.1 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.

8.2 Arboricultural Impact Assessment (AIA)

8.2.1 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.

8.2.2 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).

8.2.3 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

8.2.4 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.

8.2.5 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.

8.3 Arboricultural Method Statement (AMS)

8.3.6 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.

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

8.3.8 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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