



BS 5837:2012 Arboricultural Impact Assessment and Arboricultural Method Statement

Caversham Primary School
for:

Ashley House Plc

CRM.1112.014.Ar.R.001.A



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1.0 Objectives

1.1 Introduction

- 1.1.1 Enzygo Limited [Enzygo] have been commissioned by Ashley House Plc to prepare an Arboricultural Impact Assessment and Arboricultural Method Statement for the site at Caversham Primary School in Reading, in support of a Planning Application for the demolition of the existing dining block to the south-west of the main school building and the construction of a replacement dining building using the same footprint.
- 1.1.2 The following section describes the existing site and is followed by a summary for the structure of this report.

1.2 Site Overview

- 1.2.1 The site is located approximately 2km north of Reading town centre in the suburb of Caversham. The site falls within the Borough of Reading in Berkshire. Hemdean Road forms the eastern boundary, Victoria Road is in the north and residential properties on Queen Street in the south. Allotment gardens lie in the west.
- 1.2.2 The application boundary for the site is approximately 0.96ha [2.37 acres]. The site is broadly L-shaped and comprises the main school building in the east and centre of the site, hard and soft play areas in the north-west and grassland in the south-west.

1.3 Arboricultural Survey

- 1.3.1 An Arboricultural Survey Report to BS 5837:2012 covering all trees both within the school site as well as within 12m of the site boundary was prepared by Mott MacDonald in November 2016.
- 1.3.2 There are 27 predominantly semi- and early mature trees and one tree group most of which are located along the northern, western and south-western boundary of the school site. Tree species include naturalised sycamore (*Acer pseudoplatanus*), native silver birch (*Betula pendula*), common lime (*Tilia x europea*) and wild cherry (*Prunus avium*) as well as non-native Lawson's cypress (*Cuprocyparis leylandii*). A number of trees along the northern boundary (T3, T4, T6 and T8) and in the south-west (T19 and T27) were assessed as being of high value (BS category A), whilst the remainder are generally of moderate value (BS category B).
- 1.3.3 The report includes a full tree survey schedule which describes each tree in accordance with BS 5837:2012 clause 4.4.2.

1.4 **Structure of the Report**

- 1.4.1 **Chapter 2.0** describes the methodology adopted for the Arboricultural Impact Assessment and Arboricultural Method Statement.
- 1.4.2 **Chapter 3.0** outlines the impact the proposed development is expected to have on existing trees and what the likely effect would be on the wider landscape.
- 1.4.3 **Chapter 4.0** then 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.
- 1.4.4 **Chapter 5.0** provides a non-technical summary whilst the appendices include a fully detailed Tree Protection Plan and specifications for protective fencing and no-dig construction in accordance with BS 5837:2012.

2.0 Methodology

2.1 Introduction

- 2.1.5 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.

2.2 Arboricultural Impact Assessment (AIA)

- 2.2.1 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.
- 2.2.2 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).
- 2.2.3 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
- 2.2.4 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.
- 2.2.5 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.

2.3 Arboricultural Method Statement (AMS)

- 2.3.1 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.
- 2.3.2 The AMS further includes a full specification for all methodologies which are necessary to protect retained trees.

- 2.3.3 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.

3.0 Arboricultural Impact Assessment (AIA)

3.1 Development proposals

- 3.1.1 This AIA is based on the development proposals as shown on Penoyre & Prasad's Proposed Site Layout ref. EFA-PPA-03-00-DR-A-30100 Revision P0.3-WIP issued 19th March 2018. In addition, the construction phase plans provided by Penoyre & Prasad's (ref. EFA-PPA-03-00-DR-A-20150 Rev. P0.1) have been used to assess the impacts expected during the set-up of the site and the demolition and construction phase.
- 3.1.2 Whilst the original tree survey included the entire school site as shown on the Tree Constraints Plan included in the report, the development site has been reduced to cover 0.96ha as shown in [Appendix 1 – Tree Protection Plan](#).
- 3.1.3 Construction access for the development is proposed from Victoria Road in the north and along the western site boundary, between the school building and the existing trees lining the boundary. A site compound will be set up in the south-west corner of the site, serving both the demolition and construction process.

3.2 Tree removal

- 3.2.1 No trees will need to be removed for the development.

3.3 Residual impact of development on retained trees

- 3.3.1 Unless adequate protection is provided, demolition and construction operations near retained trees may cause accidental damage of tree trunks and low hanging branches. Vehicle and plant movement may further cause ground compaction which could lead to irreversible damage of tree roots and the rooting environment 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 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 carry out any tree works included in the Preliminary Management Recommendations in the 2016 Tree Survey report by Mott MacDonald and in Table 1 below. Any tree works should be carried out in accordance with *BS 3998:2010- Tree works recommendations*.

Table 1 –Access Facilitation Pruning

Tree No.	Proposed tree works	Reason
T7	Reduce canopy spread to 3m east	To facilitate set-up of access route including site fencing

- 4.1.2 Any tree works should be preceded by a nesting bird and roosting bat check carried out by a suitably qualified ecologist.
- 4.1.3 To find a suitably qualified tree surgeon, please refer to the Arboricultural Association's list of Registered Contractors.

4.2 Protective Barrier

- 4.2.1 Where construction operations have potential 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 [Appendix 1 – Tree Protection Plan](#) also shows where standard “Herras” fencing is proposed. Whilst this is acceptable where it is installed to ensure site safety and security along the eastern edge of the access route, the remainder of the working area should be enclosed by a protective barrier as specified in 4.2.4 to protect trees along the western and southern site boundary.
- 4.2.6 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”.
- 4.2.7 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.

5.0 Non-technical summary

5.1 Arboricultural Survey

- 5.1.1 The site is the premises of Caversham Primary School in the north of Reading which comprises the main school building in the centre of the site, hard and soft play areas in the north and grassland in the south-west corner. The tree survey for the site was prepared by Mott MacDonald in November 2016 recording 27 trees and one tree group within the site and within 12m of the site boundary. They are semi- and early mature native and non-native trees of high and moderate value and are largely located along the north, west and south-west boundary of the site.

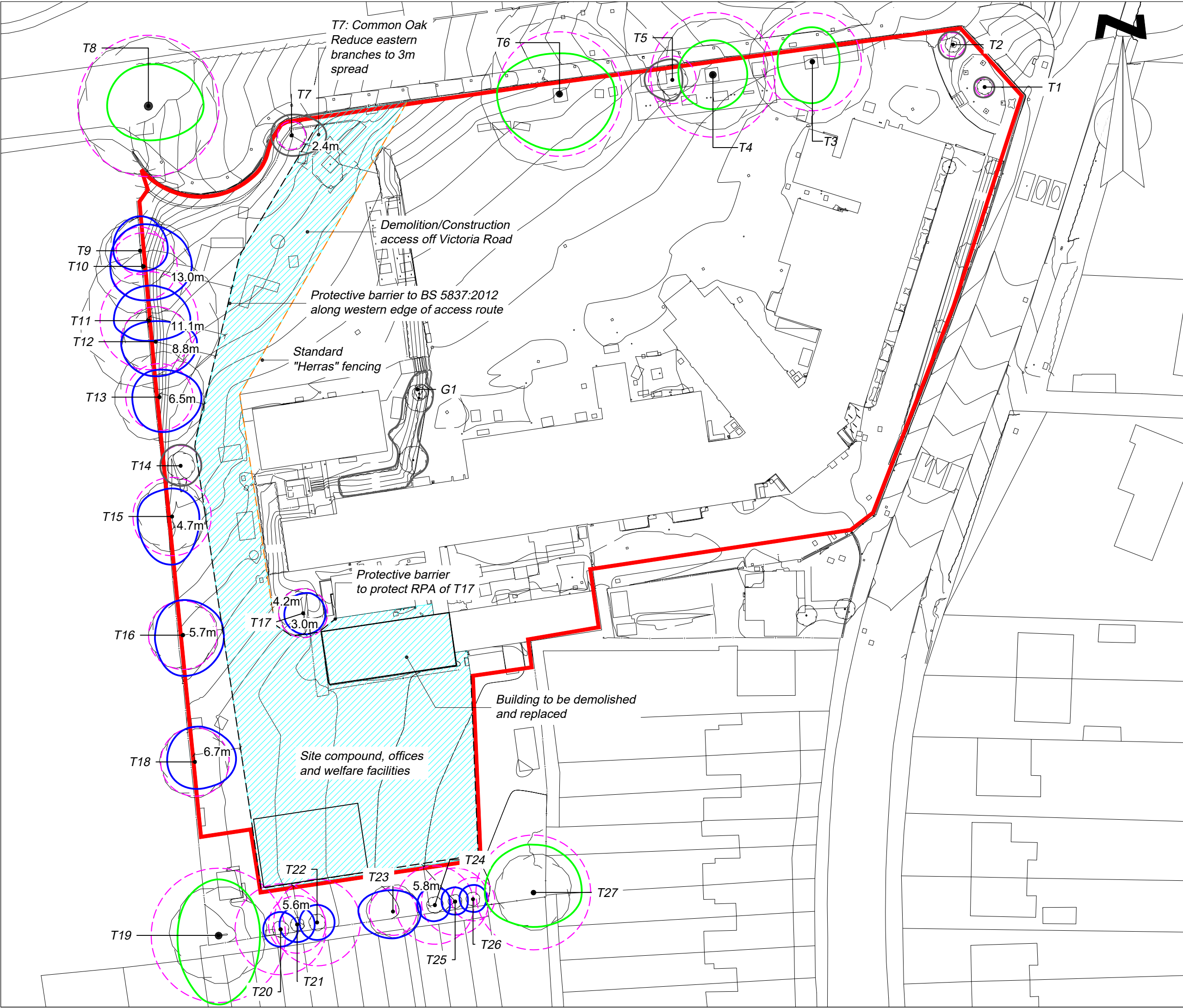
5.2 Arboricultural Impact Assessment

- 5.2.1 The re-development of the school site including the site-set-up and all demolition and construction operations will not require any tree removal.
- 5.2.2 Provided that adequate tree protection in line with the Arboricultural Method Statement is established prior to any site-set up, demolition or construction work commencing on site, operations linked to the development are not expected to have an adverse effect on any retained trees on site.

5.3 Arboricultural Method Statement

- 5.3.3 Protective measures include minor Access Facilitation Pruning to one tree along Victoria Road and the erection of a Protective Barrier between the working area and trees along the western and southern site boundary.

6.0 Appendix 1 – Tree Protection Plan



KEY - Tree Protection Plan

Tree Categories BS 5837 (2012)

- Tree Category A
- Tree Category B
- Tree Category C
- Tree Category U
- Tree to be removed
- Root Protection Area (RPA)
- Tree location (Topographic survey)
- Tree location (Estimated by Enzygo Ltd.)
- Protective barrier BS 5837 (2012) Figure 2
- Standard "Herras" fencing for site safety/security
- Construction/Demolition Working Area
- Application boundary

REV	DATE	BY	COMMENTS
-	28/03/2018	VM	Final
A	29/03/2018	VM	Construction compound reduced



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CLIENT:
Ashley House Plc

SCALE: 1:500@A3
PROJECT REF: CRM.1112.014

DRAWN: VM
CHECKED: SF
DATE: March 2018

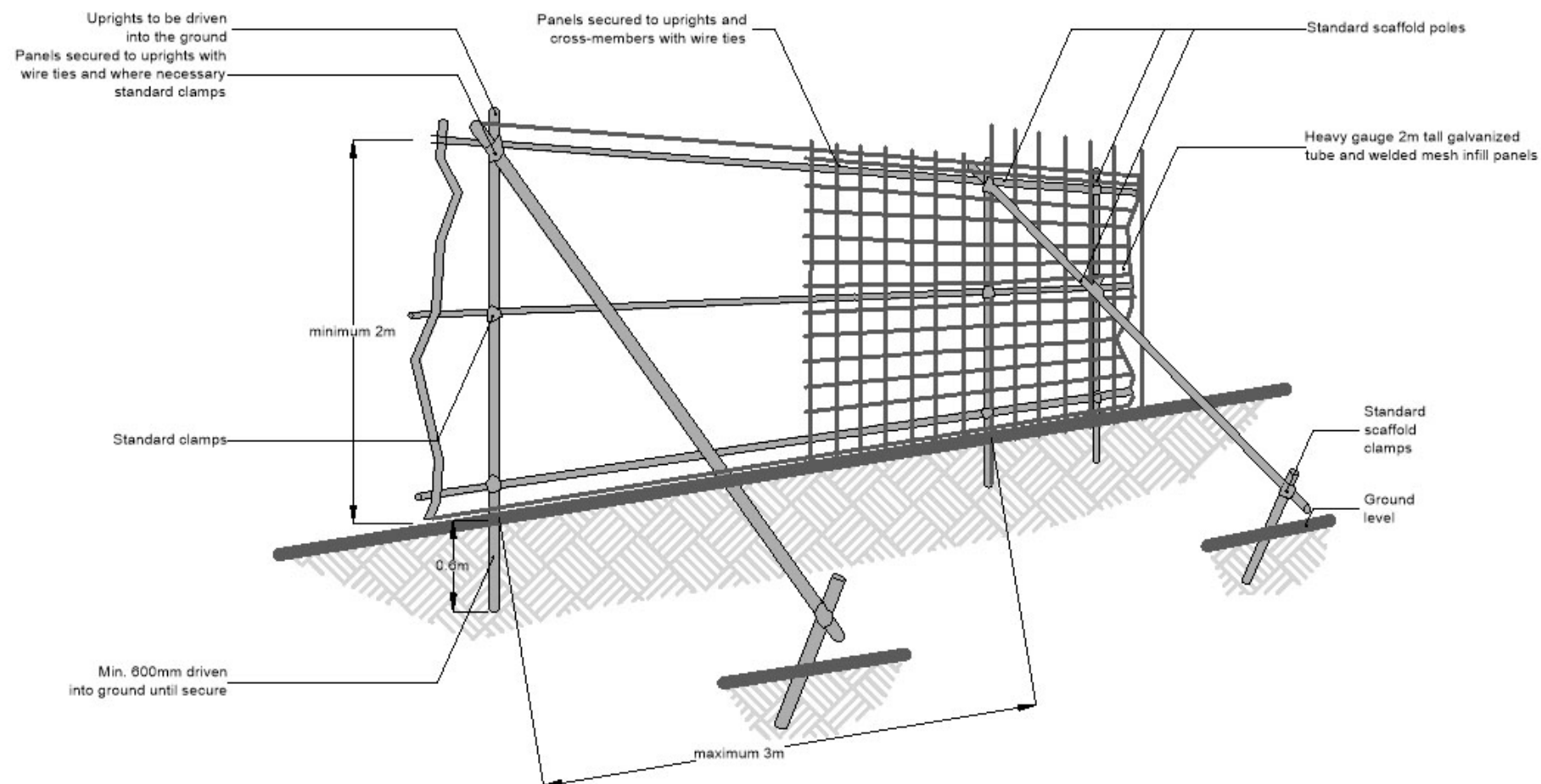
PROJECT:
Caversham Primary School

TITLE:
Tree Protection Plan

FIGURE NO:
CRM.1112.014.Ar.D.001

7.0 Appendix 2 – Protective barrier to BS5837:2012

7.1 Default specification for protective barrier





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