

DAVIESLANDSCAPE

A R C H I T E C T S

Suite F1, Stroud House
Russell Street, Stroud
Gloucestershire
GL5 3AN



**Land Adjacent to The Croft
Practice, Eastergate**

**Arboricultural Impact
Assessment and Method
Statement**

**Prepared by Tim Pursey
April 2017**

1.0 Date of survey

1.1 September 2016

2.0 Surveyor

2.1 Tim Pursey

3.0 Instructions

3.1 I am instructed to undertake an arboricultural impact assessment with regards to a proposed new access road at the site and to provide details of tree protection measures to be employed.

4.0 Report limitations

4.1 All inspections were made from ground level, using binoculars where necessary. Should a more detailed inspection, by climbing or by elevated platform, be required then this will be highlighted within the survey recommendations.

4.2 I have not contacted the local planning authority to determine the legal status of the trees on site. If any trees are the subject of an order, or the land forms part of a Conservation Area then it will be necessary to properly notify, or to obtain prior permission from, the local authority before carrying out any works on the trees.

4.3 This assessment should be read in conjunction with a Tree Survey and Constraints Plan issued by Tim Pursey on 10th September 2016.

5.0 Proposals

5.1 It is proposed to construct a new scheme on existing grazing land.

5.2 Removal of low quality trees and occasional shrubs is proposed to facilitate works.

6.0 Assessment of Impact

6.1 The site consists mostly of what was presumably grazing land. The site is somewhat overgrown although some individual trees grow within the site; these are of low quality.

6.2 The site is bounded mostly by more mature vegetation except where it is adjoined by residential gardens.

- 6.3 A mature Oak, tree T5, grows near to the boundary on the eastern side. The tree appears to grow on adjacent land.
- 6.4 The proposals include a new access road which runs up the eastern side of the property. In order to minimise impact upon the Oak, the new road has been diverted slightly away from the tree.
- 6.5 The new access road crosses part of the root protection area (RPA) of the tree.
- 6.6 The degree of encroachment (assuming the RPA to be circular) is around 44.5 square metres which represents just over 15% of its total. If traditional excavation were used to form the new road, this would effectively remove around 15% of the RPA which may be considered unacceptable.
- 6.7 To minimise impact, the section of access road within the RPA will be constructed using a no-dig system. Correct installation of this system means that no excavation will take place within this area thereby retaining the entire RPA.
- 6.8 Excavation to install services etc will also need to be installed outside the RPA to eliminate risk of damage. Services may be laid to the west side of the access drive without affecting the RPA.
- 6.9 Provided that these two precautions are properly observed coupled with protective fencing as shown, the effect upon Oak T5 will be minimal and there is no reason why the tree cannot be retained long term.

7.0 Provisional Method Statement to Mitigate Impact

7.1 Tree Works

Tree works and tree removals will be carried out by persons both qualified and experienced to do so. Works will be undertaken in accordance with BS3998:2010 Tree Work Recommendations.

7.2 Protective Fencing

Trees as identified will be protected from the impact of construction by a protective fencing to be erected in accordance with BS5837:2012 Trees in Relation to Design, Demolition and Construction – Recommendations.

- 7.3 This fencing is designed to protect all parts of the tree, both above and below ground. It will be erected using Heras panels affixed to a rigid scaffold frame. It is particularly important that the fencing be completely rigid and immobile. To ensure fencing is erected in the correct

locations, setting out is required. Once erected the fencing will not be moved or relocated.

- 7.4 The fence will be erected in the positions shown on the attached plan, TP 2160/1704/TPP and will be erected before any work commences. The protective fencing will remain in situ until all construction works are completed.
- 7.5 The protective fencing will be clearly marked indicating its purpose to all persons on site. Signs will be minimum A3 in size and will clearly state that the protective fencing will not be moved under any circumstances. The protected area inside the fencing will be considered sacrosanct and no entry into this area will be permitted for *any* reason except to maintain the protective fencing. No excavation is permitted, no changes in ground level, no plant will track across this area at any time, and no storage of any materials within this area will be permitted.
- 7.6 **Services**
Services nearest Oak tree T5 will be installed in a 2m wide strip beneath the new access roadway furthest from the tree. The strip is indicated in drawing TP 2160/1704/TPP.
- 7.7 **No-Dig Construction**
Construction of the new access roadway nearest tree T5 will employ a 'no dig' policy in line with APN12 'Through the Trees to Development' published by the Arboricultural Advisory and Information Service.
- 7.7.1 In order for the system to be successfully installed, it is important initial operations are overseen by the project arboriculturist. Incorrect installation is potentially damaging to tree roots. No vehicles or plant will be permitted within the area prior to installation of the surface.
- 7.7.2 The section of roadway as shown in drawing TP 2160/1704/TPP will be constructed upon existing ground using a cellular confinement system (such as Geocell or Cellweb) laid upon a permeable membrane and filled with washed no fines gravel such as 20-40mm clean washed angular stone. The final surface, to be laid upon this grid, will be permeable to both air and water. Examples of acceptable surfaces are brick paviours, clean gravel, grass or porous tarmac.
- 7.7.3 Ground vegetation beneath the proposed roadway should ideally be killed using a translocated herbicide such as glyphosate. All organic material should then be removed to prevent any build-up of anaerobic conditions beneath the construction.
- 7.7.4 Rocks and other obstacles should be removed. Any stumps of trees or shrubs in this area will be ground out rather than excavated.

7.7.5 Major hollows may be filled with sharp sand. A suitable permeable membrane will be laid directly onto the ground/sand and a cellular confinement system will be laid directly upon the membrane.

7.7.6 Where the new space meets an area of soft landscaping ie along the southwestern edge of the new roadway, it will be necessary to construct an edging (ideally) with timber boards attached to pegs driven into the ground through the cellular confinement system. Pegs should be long enough to give sufficient support for the construction. Alternative kerbing may be discussed with the project arboriculturist.

7.7.7 Aggregate (20-40mm clean stone), to fill the cellular confinement system, will be placed at one end and then pushed onto the grid so that machinery moves on the spread sub-base, not directly on the unfilled cellular confinement system and not on the ground either side of it.

7.7.8 The final surface, which must also remain permeable, can then be installed.

7.7.9 For the roots of the trees to remain undamaged there must be no excavation, soil stripping or site grading within the protected area – in other words, NO DIGGING. This means that the new roadway will be above existing ground level.

7.7.10 Ground levels in areas adjacent the roadway will be made up to marry using good quality top soil.

7.8 General

No storage or mixing of cement/concrete will be permitted anywhere within 10 metres of any retained tree. Account will be taken of any slopes in order to avoid the possibility of cement washings running into the rooting areas of retained trees.

7.9 Oil, bitumen or other material likely to be injurious to a tree should not be stacked or discharged within 10 metres of the trunk. Materials generally should not be stacked or discharged within 5 metres of the trunks.

7.10 Arboricultural Supervision

A pre-commencement meeting will be held between the project arboriculturist, site manager and possibly the local tree officer. The purpose of such a meeting will be to finalise protective measures and to ensure that protective fencing is adequate and erected in the correct positions. It is also to ensure contractors are fully aware of the need to comply with the contents of this document.

7.11 It is particularly important that this meeting take place prior to works commencing on site.

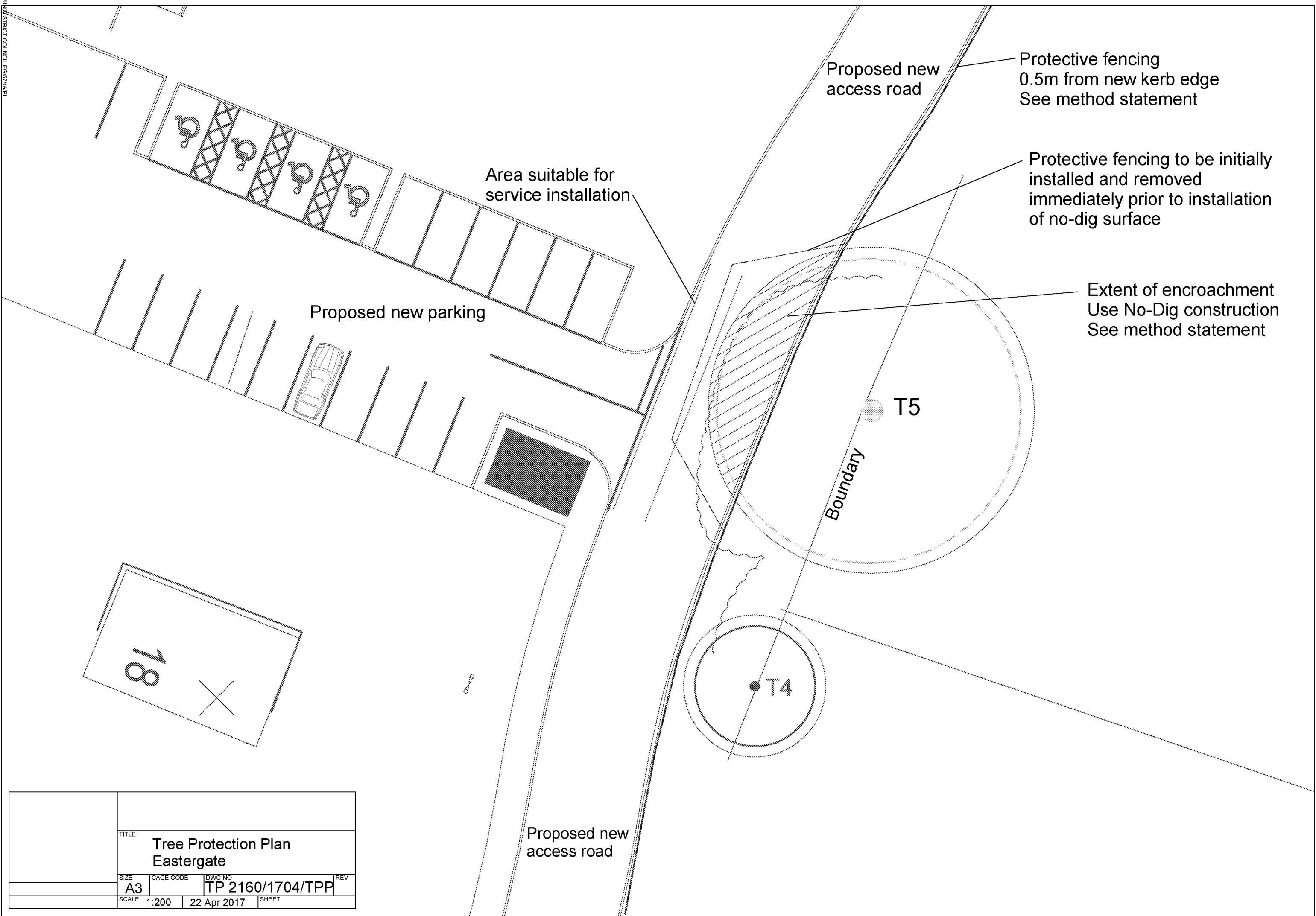
- 7.12 Installation of the no-dig system will be overseen by the project arboriculturist to ensure it is fitted correctly.
- 7.13 Periodic site visits will be made by the project arboriculturist at a frequency agreed with the local authority tree officer. The purpose of such visits is to ensure protective measures are adhered to whilst providing contractors with the opportunity to seek further advice and guidance where necessary.

22 April 2017
Tim Pursey
Chartered Arboriculturist

Bibliography

- British Standard 3936-1:1992 Nursery Stock- Specification for Trees and Shrubs
British Standard 3998:2010 Recommendations for Tree Work
British Standard 4428:1989 Code of Practice for General Landscaping Operations
British Standard 5837:2012 Trees in Relation to Design, Demolition and
Construction – Recommendations
- Tree Preservation Orders: A Guide to The Law and Good Practice 2000
- Subsidence of Low-Rise Buildings 2000 Institution of Structural Engineers
Standards-Chapter 4.2 Building Near Trees 2003 National House Building Council
- Guidelines for The Planning, Installation and Maintenance of Utility Services in
Proximity to Trees 1995 National Joint Utilities Group
- Controlling Water Use of Trees to Alleviate Subsidence Risk
2004 Horticulture Link Project 212
- Inspection of Highway Trees Roads 52/75 1975 Department of the Environment Circular
- Forestry Commission Information Notes
Phytophthora Pathogens of Trees: Their Rising Profile in Europe FCIN030 1999
Forests, Carbon and Climate Change: the UK Contribution FCIN048 2003
- Forestry Commission Bulletin Climate Change: Impact on UK Forests FCBU125 2002
- Essential Soil Science 2003 Ashman, M.R. & Puri, G.
Visual Amenity Valuation of Trees and Woodlands
2003 Helliwell, D.R.
- The Hillier Manual of Trees and Shrubs 2004 Hillier, J. & Coombes, A.
The Arboriculturalist's Companion 1990 James, N.D.G.
Collins Tree Guide 2004 Johnson, O. & More, D.
Habitat Management for Invertebrates 2001 Kirby, P.
Dead Wood Matters: The Ecology and Conservation of Saproxylic Invertebrates in Britain
1992 Kirby, K.J. & Drake, C.M.
- Physiology of Woody Plants 1979 Kramer, P.J. & Kozlowski, T.T.
Hazards from Trees: A General Guide 2000 Lonsdale, D.
Principles of Tree Hazard Assessment and Management
2001 Lonsdale, D.
- The Body Language of Trees 2003 Mattheck, C. & Breloer, H
Trees of Britain and Northern Europe 1978 Mitchell, A.
Fungal Strategies of Wood Decay in Trees 2004 Schwarze, F., Engels, J, Mattheck, C.
Modern Arboriculture 2003 Shigo, A.L.
Diagnosis of Ill-Health in Trees 2000 Strouts, R.G. & Winter, T.G.
Soil Types: A Field Identification Guide 1989 Trudgill, S.
Manual of Wood Decays in Trees 2003 Weber, K. & Mattheck, C.
Reducing Infrastructure Damage by Tree Roots
2003 Costello L.R. & Jones K.S.

Tree Roots in the Built Environment	2006	Roberts, Jackson, Smith
Publications from Arboricultural Advisory and Information Service		
APN1 Driveways Close to Trees		Patch, D. & Dobson, M.
APN12 Through the Trees to Development		Patch, D.
ARIN 130/95/ARB Tree Root Systems		Dobson, M.



TITLE			
Tree Protection Plan Eastergate			
SIZE	CAGE CODE	DWG NO	REV
A3		TP 2160/1704/TPP	
SCALE	1:200	22 Apr 2017	SHEET