

DETACHED GARAGE
MIDDLESTONES
GEORGE STREET
LITTLE HOUGHTON
BARNSELY

ARBORICULTURAL
INFORMATION AND
SURVEY
TO BS 5837 : 2005

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1. SURVEY

PREPARED BY :

QUILL ARCHITECTURE

Chapelfield House,
25 Hough Lane, Wombwell, Barnsley,
South Yorkshire, S73 0DP
Tel:- 01226 755446

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1.0 Introduction

1.1.1 Site residential dwelling known as Middlestones, George Street, Little Houghton, S72 OHL

1.1.2 Purpose of report

1.1.3 This report is produced to provide details of proposed measures incorporated into the above scheme in order to offer protection to two trees which lie on the north boundary of the site recorded as T3 and T4.

1.2 Terms of Reference

1.2.1 To provide arboricultural information relating to two trees to be retained and protected within the boundaries forming the site.

1.2.2 To provide dimensional information relating to the siting of the proposed garage in context

1.2.3 To provide a tree protection plan.

1.3 Scope of the Report

1.3.1 This report is compiled to the recommendations detailed in BS 5837 : 2005 (trees in relation to construction).

1.4 Survey Details

1.4.1 Survey date February 2010.

1.4.2 All measurements were taken using two modes of measurement,

1, steel tape

2, Leica electronic distancemeter

1.4.3 The survey was carried out by Quill Architecture Ltd

1.4.4 All dimensions were taken at ground level.

2.0 Land usage

- 2.1 The site forms the garden area of an existing dwelling house within a housing policy area.

2.2 Topography

- 2.2.1 The site is approximately level, with a 2000mm high boundary wall delineating the curtilage. All boundary walls are constructed of brickwork one brick in thickness. Each wall in general and adjacent to T3 & T4 are of good structural integrity and all perpendicular to the ground. See Appendix 2 photograph 2)

2.3 Treescape

- 2.3.1 Situated within the dwellings curtilage the trees provide a moderate impact on the local treescape when approaching the site from the west or east if travelling along Middlecliffe lane. (See appendix 2 photograph 1)

2.4 Amenity value

- 2.4.1 The two trees within the dwellings curtilage provide a reasonable amenity value to the surrounding area and immediate street scene. Although the sycamore displays a co - dominant stem shown in photograph 3 & 4 in appendix 2.

2.5 Age Class

- 2.5.1 Mature.

2.6 Species

- 2.6.1 Species T3 Cherry T4 Sycamore.

3.0 Tree Descriptions used in this report

3.1.1 **Height :-** measurement taken from the stem base.

3.1.3 **Stem diameter :-** measurement taken from a point 1.5metres above ground level.

3.1.4 **Crown Spread :-** measured from the centre of the stem base to the tips of the branches in all four cardinal points.

4.0 Status of the Trees

4.1 Enquiries to Barnsley Metropolitan Borough Council have highlighted that both trees T3 Cherry and T4 Sycamore are protected by a Tree Preservation Order, schedule No 2/2000.

5.0 Tree quality and Survey data

5.1.1 Table 1 Shows cascade chart for tree assessment.

5.1.2 Table 2 shows collated tree survey data.

Table 1 — Cascade chart for tree quality assessment

TREES FOR REMOVAL				
Category and definition	Criteria			Identification on plan
Category R Those in such a condition that any existing value would be lost within 10 years and which should, in the current context, be removed for reasons of sound arboricultural management	- Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other R category trees (i.e. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning). - Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline. - Trees infected with pathogens of significance to the health and/or safety of other trees nearby (e.g. Dutch elm disease), or very low quality trees suppressing adjacent trees of better quality. NOTE: Habitat reinstatement may be appropriate (e.g. R category tree used as a bat roost: installation of bat box in nearby tree).			 RGB code: 127-000-000 AutoCAD 246

TREES TO BE CONSIDERED FOR RETENTION				
Category and definition	Criteria – Subcategories			Identification on plan
	1 Mainly arboricultural values	2 Mainly landscape values	3 Mainly cultural values, including conservation	
Category A Those of high quality and value: in such a condition as to be able to make a substantial contribution (a minimum of 40 years is suggested)	Trees that are particularly good examples of their species, especially if rare or unusual, or essential components of groups, or of formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands which provide a definite screening or softening effect to the locality in relation to views into or out of the site, or those of particular visual importance (e.g. avenues or other arboricultural features assessed as groups)	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	 RGB code: 000-255-000 AutoCAD 90
Category B Those trees of moderate quality and value: those in such a condition as to make a significant contribution (a minimum of 20 years is suggested)	Trees that might be included in the high category, but are downgraded because of impaired condition (e.g. presence of remediable defects including unsympathetic past management and minor storm damage)	Trees present in numbers, usually as groups or woodlands, such that they form distinct landscape features, thereby attracting a higher collective rating than they might as individuals but which are not, individually, essential components of formal or semi-formal arboricultural features (e.g. trees of moderate quality within an avenue that includes better, A category specimens), or trees situated mainly internally to the site, therefore individually having little visual impact on the wider locality	Trees with clearly identifiable conservation or other cultural benefits	 RGB code: 000-000-255 AutoCAD 170
Category C Those trees of low quality and value: currently in adequate condition to remain until new planting could be established (a minimum of 10 years is suggested), or young trees with a stem diameter below 150 mm	Trees not qualifying in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater landscape value, and/or trees offering low or only temporary screening benefit	Trees with very limited conservation or other cultural benefits	 RGB code: 91-91-91 AutoCAD 252
	NOTE: Whilst C category trees will usually not be retained where they would impose a significant constraint on development, young trees with a stem diameter of less than 150 mm should be considered for relocation.			

Table 2

Tree No	Species	Height (m)	Stem Dia (mm)	Crown Radius				Crown Ht (m)	Age Class	Remaining Contribution	Structural and Physiological Condition	Preliminary Management Recommendations	Retention Category
				N	E	S	W						
T3	Cherry (Prunus.)	7	365	3.5	3.0	3.2	4.3		Mat	10– 15	Normal	None	B1
T4	Sycamore (Acer pseudoplatanus)	12	600	6.1	6.5	5.9	6.5		Mat	20 – 40	Normal	None	B1

6.0 Tree Protection plan

- 6.1.1 In context a tree protection plan is provided as part of this report, because it is considered that the proposed detached garage is a minor development, within the grounds of a residential dwelling. As shown on plan No **CAD/QA/0101**.
- 6.1.2 The proposed garage is set at a distance of 6.1metres away from the closest existing retained cherry T3 and is within the 12 metres required convention of the British Standard 1192 pt4. Drawing No **CAD/QA/010**
- 6.1.3 Block plan **CAD/QA/0101** shows dimensional details of the existing cherry and sycamore trees in relation to the proposed garage and residential dwelling occupying the site. Note all dimensions have been taken on site
- 6.1.4 A tree protection exclusion zone has been determined to provide protection for the trees in accordance with table 1 and fig2 of BS 5837 2005 and this zone will remain completely undisturbed for the duration of the works on site
- 6.1.5 Both T3 & T4 shall be protected by a 2.3 metre high steel mesh fence fitted 1.0metre forward of the tree crown spread and the existing wall which forms a pre existing root barrier. Fence panels are to be mounted on a scaffold framework set at 600mm into the ground as anchoring, with backstays at 3.000 metre centres. Plan of barrier shown on drawing CAD/QA/0101.
- 6.1.6 All fencing shall be retained and maintained in good condition for the full duration of the construction period and considered sacrosanct unless otherwise agreed in writing with the LPA.
- 6.1.7 Site notices affixed to the fencing, are to be pre printed laminated waterproof signs A3 in size and should be fixed securely to the fencing panels surrounding the enclosure. Signs should be fitted at a minimum of 5.000 metre centres. Notices should read either "**PROTECTED TREE ZONE OR CONSTRUCTION EXCLUSION ZONE KEEP OUT**".
- 6.1.8 Root protection areas for each tree have been calculated from BS 5837 : 2005 using the following stem diameters Cherry T3 = 365mm (RPA of 60.0 m²)
Sycamore T4 = 600mm (RPA of 163m²)
- 6.1.9 Due to the sites constraints the sycamore T4 is growing within 300mm of the 2000mm high brick boundary wall which forms the north boundary of the site. Therefore from BS 5837 this wall is assumed to be a pre – existing root barrier and the normal root development would have been interrupted and expected to have developed asymmetrically. Therefore to achieve the area required the protection fence will be erected as shown in drawing **CAD/QA/010**.
- 6.1.10 No roots over 50mm in diameter shall be cut.

7.0 General Recommendations

- 7.1.1 Any materials likely to be injurious to the trees, such as the mixing of cement or the discharge of cement, oil, bitumen or other should not be permitted directly outside the fence where contaminated fluids could drain towards the tree.
- 7.1.2 No fires shall be lit within the spread of any branches pertaining to either the cherry or sycamore tree.
- 7.1.3 The sycamore tree which overhangs the public footway and carriageway will require future maintenance in order to achieve the clear heights required for pedestrian and vehicular traffic. The corresponding heights in this instance should be 5.6metres above the carriageway and 2.5metres above the footway.
- 7.1.4 The position of the detached garage is such that it will not influence the existing canopy of the cherry or sycamore tree or be detrimental to their natural development.
- 7.1.5 No issues will be raised regarding natural light and the positioning of the proposed garage.
- 7.1.6 Exploratory excavations for roots will be carried out on the proposed site of the garage, prior to the construction phase. This will identify whether any substantial root systems exist in the area of the foundation plan.
- 7.1.7 No equipment, machinery or materials are to be brought on site for the purpose of development until written consent is obtained from Barnsley Metropolitan Borough Council.

APPENDIX 1 : Glossary of general Terms

Arboriculture	The cultivation of trees in order to produce individual specimens of the greatest ornament, for shelter or any primary purposes other than the production of timber.
Co-dominant Stem	A stem which has grown in direct competition to the main stem and which has formed a substantial size influencing the appearance of the tree.
Stem	The main axis of a tree (trunk)
Height	The overall height of the tree from ground level.
Age Class	Young tree in the first third of its life expectancy. Middle age tree. Mature tree. Over Mature Veteran
Retention Category	A/B/C/R – In accordance with BS 5837:2005 (Trees in relation to construction). Attached plan indicates rooting areas (circled in red). The colours used to mark their stems indicate the following: Category A = High quality – stems are marked in green on the attached plan. Category B = Moderate quality – stems are marked in dark blue. Category C = Low quality – stems are marked in grey. Category R = Trees for removal – stems are marked in dark red.

Appendix 2



Photograph 1 taken at the junction of George Street and Middlecliffe lane as you approach the site.



Photograph 2 showing the gated entry off George Street adjacent to the junction with Middlecliffe Lane. Photograph also indicates the 2.000metre high perimeter brickwork wall which forms the boundary of the site.



Photograph 3 view showing elevation of the existing dwelling house facing Middlecliffe Lane, with T4 Sycamore to the left and T3 Cherry to the right of the picture all set behind the boundary 2.000metre brick boundary wall.



Photograph 4 shows opposing side of photograph 3 from garden side. Photograph also shows existing dwarf walls in the foreground with the 2.000metre high boundary wall in the background.



Photograph 5 shows stem of sycamore tree T4 in relation to the existing 2000mm high boundary wall.

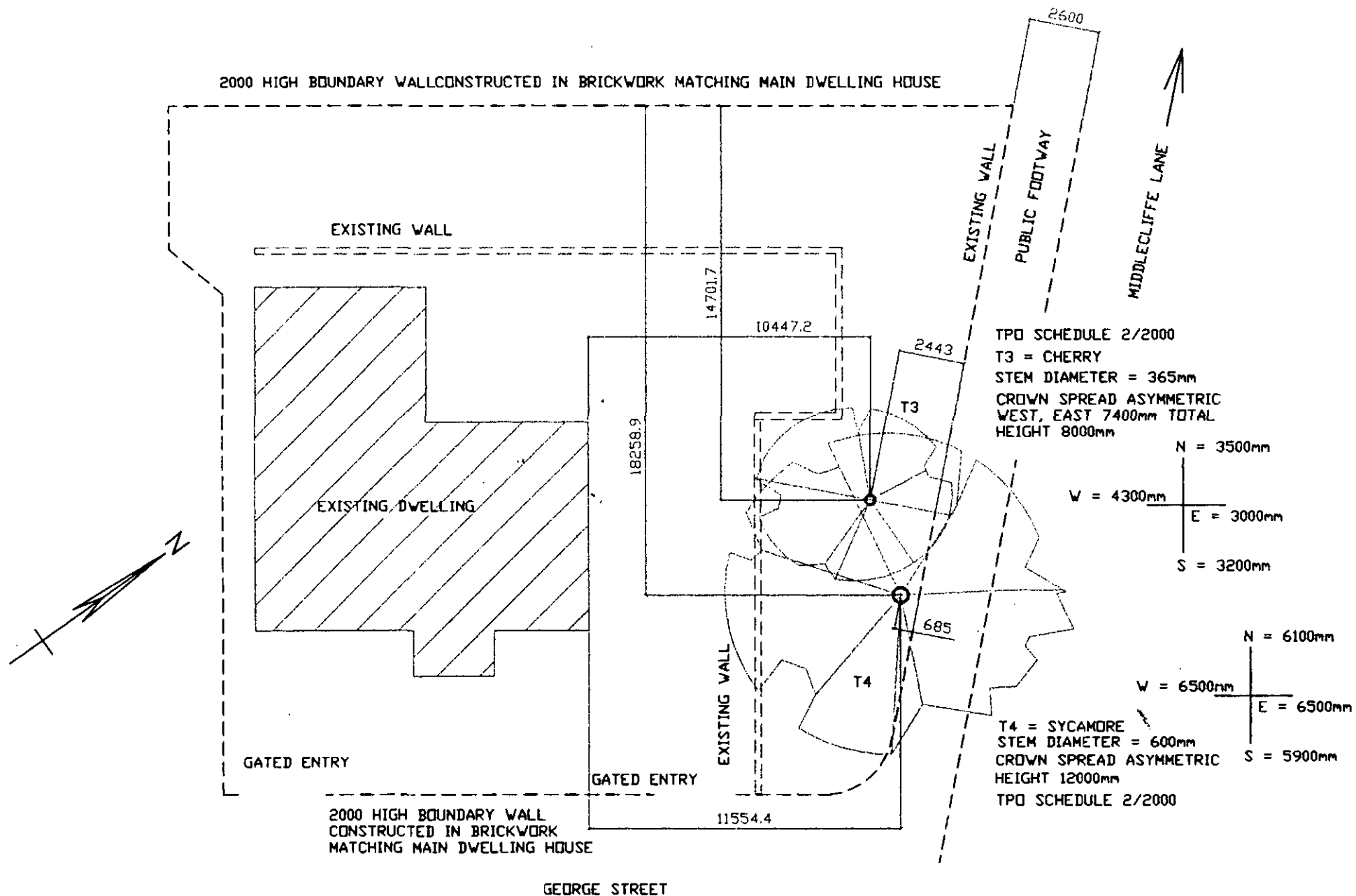


Photograph 6 shows existing drive which will lead to the proposed garage. The garage will be positioned at the head of the existing drive and in line with the bungalow shown in the background.

APPENDIX 3

CONTENTS

1. ARCHITECTURAL DRAWINGS



CLIENT
Miss H GARDNER
MIDDLESTONES
GEORGE STREET, LITTLE HOUGHTON

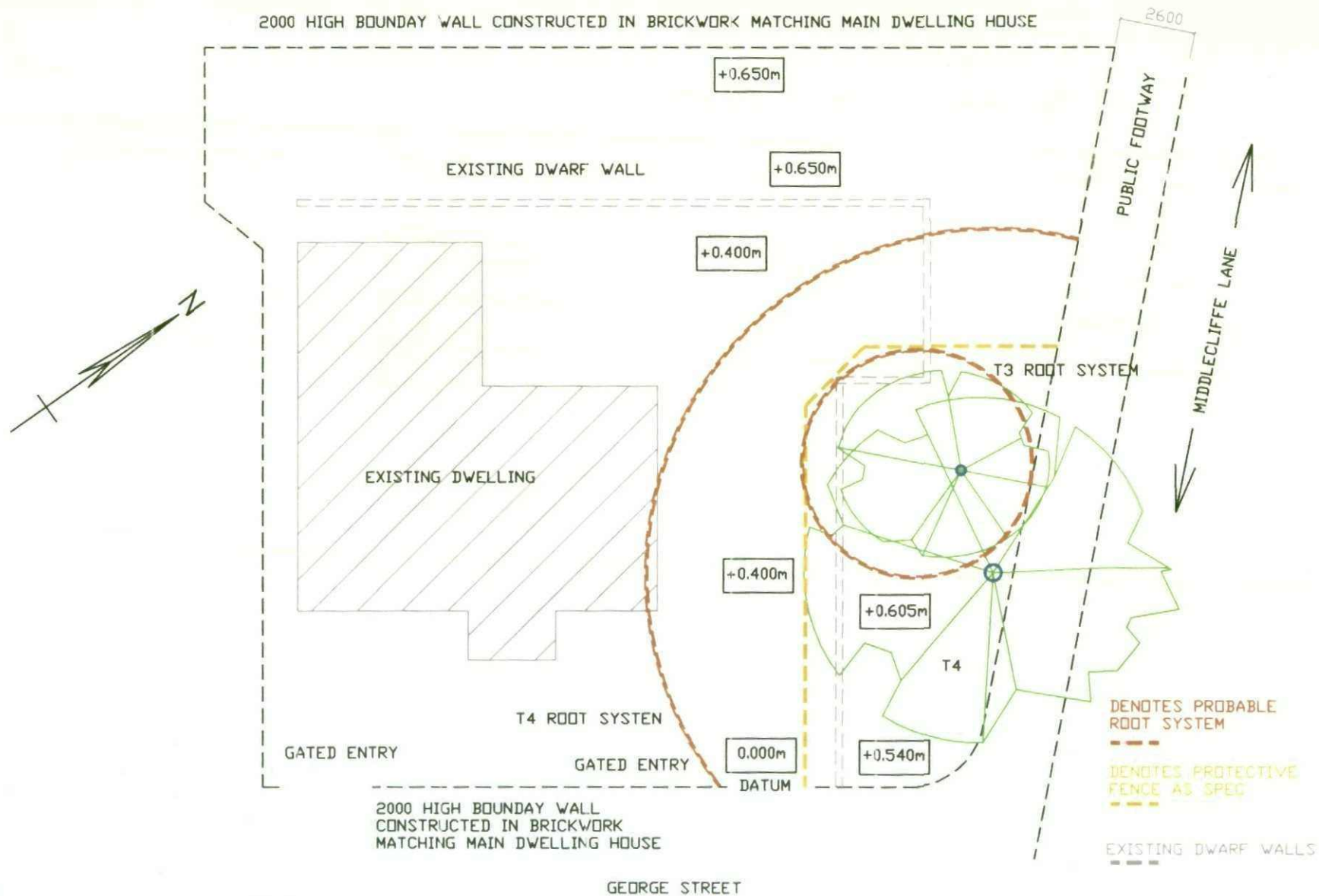
TITLE
EXISTING SITE LAYOUT SHOWING ARBORICULTURAL
INFORMATION IN RELATION TO TWO TREES UNDER
TREE PRESERVATION ORDER 2/2000

Quill
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TELEPHONE (01226) 755446 REG No 5210984

SCALE 1 : 200	DRAWN AD
DATE 10/02/10	REV
DRG No CAD/QA/1005	



CLIENT
Miss H GARDNER
MIDDLESTONES
GEORGE STREET, LITTLE HOUGHTON

TITLE
EXISTING SITE LAYOUT SHOWING ARBORICULTURAL
INFORMATION, SITE LEVELS, POSITION OF PROTECTIVE
FENCE & PROBABLE ROOT EXTENTS

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SCALE 1 : 250	DRAWN AD
DATE 10/02/10	REV
DRG No CAD/QA/1006	

Appendix 4

Foundation design.

Depending on the findings of statement 7.1.6 in section 7 (General recommendations) of this report it is proposed that:-

1. To alleviate any major conflict with the rooting system of trees T3 & T4 it is proposed that the new structures foundation take the form of a structural raft.
2. This design will consist of a steel reinforced concrete slab type C35 laid over the pre defined site area.
3. The datum level taken as the top of the finished floor of the garage will be set at 100mm above the ground level of the existing driveway. To allow a slight ramp to be formed to the main openings of the garage.
4. It is envisaged at this stage that the structural slab will be in the region of 300mm in thickness. In addition to this a further excavation of 300mm will be required for the MOT type1 Hardcore to be installed under the slab. Total excavation depth of 500mm from the existing driveway finish.
5. Due to the sites constraints a detailed foundation plan will be submitted to the local authority for approval before any work commences on site.