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Arboricultural Impact Assessment (Phase 2)

Oak Lodge, Holt Road, Cross Lanes, Wrexham, LL13 0TU

Prepared for:

Mr & Mrs Rigby
Cherry Hill Children's Day Nursery
2 Cottage Road
Westminster Park
Chester
CH4 7QB

Ref: 10/AIA/P2/WXM/35

04 February 2010

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1.0 INSTRUCTIONS

- 1.1 We have been instructed by Mr & Mrs Rigby to carry out an Arboricultural Impact Assessment (AIA) and Landscape Plan in order to assess the development proposal in relation to trees plotted on the plans provided and provide mitigation measures to any lost to development, in accordance with the principles of British Standard 5837 'Trees in Relation to Construction - Recommendations' 2005.
- 1.2 We are instructed to prepare a report in order to provide information to assist all parties involved in the planning process to make balanced judgements with regard to arboricultural features in relation to the proposed change of use from residential to children's day nursery at Oak Lodge, Cross Lanes, Wrexham. As such, all significant trees on and adjoining the site have been surveyed and are listed within a Tree Survey Schedule (**Appendix 1**) and plotted on a Tree Constraints Plan (**Appendix 3**) and an Impact Assessment Plan (**Appendix 4**).
- 1.3 The survey was carried out on 19 January 2010 by Alistair Henderson, Principal Consultant to Tree Solutions. Our appraisal of the mechanical integrity of trees on the site is sufficient only to inform the current project. The assessment of trees is carried out from ground level without invasive investigation and the disclosure of hidden defects cannot therefore be expected. Whilst the survey is not specifically commissioned to report on matters of tree safety, we report obvious defects that are significant in relation to the existing and proposed land use. We do not carry out detailed safety inspections unless specifically instructed to do so in writing and have not carried out such inspections of trees on the proposal site.
- 1.4 Eight individual trees (T1–T8) and three groups (G1–G3) were surveyed and mapped on a Tree Constraints Plan (Dwg No: 10/AIA/P2/WXM/35. All arboricultural information recorded during the survey is presented at **Appendix 1**.
- 1.5 The phase 2 Arboricultural Impact Assessment is based on DWG No: 092411 dated November 2009 carried out by Planning & Building Services.

2.0 STATUTORY CONTROLS & PLANNING POLICY

- 2.1 In terms of impacts on trees, the planning application will be assessed against Policy EC4 of the Wrexham County Borough Council Unitary Development Plan (2005) and Local Planning Guidance Note 17 'Trees & Development' (2006).
- 2.2 Consultation with Wrexham County Borough Council confirmed that no trees within the curtilage of the site are the subject of a Tree Preservation Order and the site does not fall within a designated Conservation Area. As such, statutory permission from the Local Planning Authority (LPA) will not be required prior to any tree works taking place.

2.2 Protected Species

- 2.2.1 Mature trees often contain cavities, crevices and hollows that offer potential habitat for species such as bats and barn owls. Both are afforded protection under the Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), as well as The Conservation (Natural Habitats, &c) (Amendment) Regulations 2007.

2.3 Wildlife Habitats

- 2.3.1 Trees and hedgerows of most species provide valuable nesting sites for a wide range of birds and it is highly likely that nesting birds will be present on the site during the period March to September.

3.0 THE SITE

- 3.1 The site is an existing detached residential dwelling with associated access driveway off Holt Road. There are two small lawn areas to the north and west that contain a number of trees and shrubs. The property has open countryside to the south and west and residential dwellings to the north and east.

4.0 DEVELOPEMENT PROPOSAL

- 4.1 Change of use from residential to children's day nursery with alterations to access and driveway.

5.0 GENERAL CONSTRAINTS DATA

- 5.1 Constraints arising from retention trees are separated into three and sometimes four types of Construction Exclusion Zone (CEZ), of which CEZ1 (the Root Protection Area - RPA) is illustrated on the Impact Assessment Plan. The CEZ's are explained further as follows:

5.2 CEZ1: Root Protection Area (RPA)

- 5.2.1 The area, calculated in m², which shall be protected during and preserved intact after construction, in order to facilitate the healthy retention of the tree(s) concerned by safeguarding a reliable quantum of functioning tree roots. This area is based on a radial measure from the centre of the stem of the tree, which is found by multiplying the stem diameter of the tree concerned, by a factor of twelve (or by a factor of ten when measuring basal diameter immediately above the root flare for multi-stemmed trees).
- 5.2.2 During this Arboricultural Impact Assessment, the derived radial measure has been converted into the actual area to be protected, having due regard to prevailing site conditions and how these may have affected the trees, particularly in relation to factors affecting their likely rooting disposition.
- 5.2.3 The means of protecting the RPA will include the installation of tree protection fencing prior to the start of work on site, including all demolition. Various activities within the RPA are prohibited (e.g. mechanical excavation, soil stripping, fire lighting, materials storage, lowering levels and creating excessive sealed surfacing), and may include the use of temporary ground protection and/or special engineering solutions where construction is proposed near to retention trees or within the RPA.

5.3 CEZ2: Tree Crown Protection Zone

- 5.3.1 This is the area above ground occupied by the crown of the tree, along with allowances for working space and if appropriate, for future growth. The extent of CEZ2 is determined by considering the existing and future crown spread of the tree(s), bearing in mind the possibility of this being modified by an acceptable quantum of pruning.
- 5.3.2 Arising from the above, the means of protecting CEZ2 includes providing an adequate separation distance between retention trees and the proposed residential dwelling. This will include tree removal and access facilitation pruning, where this is necessary and arboriculturally acceptable.

6.0 SURVEY METHODOLOGY

- 6.1 For the purpose of this report we have assumed that all tree positions have been accurately plotted on the topographical site survey provided.
- 6.2 The method used in the preparation of this report is based on the principles of BS 5837: 2005.
- 6.3 Tree heights were surveyed to the nearest 1m. They can be measured with a Suunto Clinometer if required.
- 6.4 Trunk diameters were measured by use of forestry girth tape.
- 6.5 The category assessment (Table 1) on which the trees is based include current and long-term arboricultural, landscape, cultural and conservation values (BS5837: 2005). This table can be found at **Appendix 2**
- 6.6 For clarity, the grading system is summarised as follows:

R grade – trees for removal, effective for less than 10 years

A grade – trees of high quality and value, effective for more than 40 years

B grade – trees of moderate quality and value, effective for more than 20 years

C grade – trees of low quality and value, effective for 10 years

7.0 JUXTAPOSITION OF TREES AND STRUCTURES

7.1 Above ground constraints

- 7.1.2 Shading from trees should not be a material consideration of this planning application as there are no alterations to the existing property.

7.2 Below ground constraints

- 7.2.1 The below ground constraints are generally summarised as the root protection area (RPA). The shape of the RPA and its exact location will depend upon arboricultural considerations including likely tolerance of the tree to root disturbance; morphology and disposition of the roots when known influenced by past or existing site conditions; soil type and structure; and topography and drainage.
- 7.2.2 The purpose of the RPA is to prevent physical damage to tree roots and to prevent damage to the soil structure. Tree roots are damaged by soil compaction, changes in soil levels or soil contamination which could reduce tree health and/or stability.
- 7.2.3 Root patterns are affected by topography and characteristics of the soil or substrate. Where trees are located within close proximity to existing hard standing they are unlikely to have an even distribution of lateral roots due to restrictions in root growth created by compacted sub-grades beneath. In such circumstances tree root distribution is predominately heavily biased towards the other side of the tree. The RPA of tree numbers 3, 4 and 8 have therefore been modified to reflect this. Tree numbers 3 and 4 have the RPA running adjacent to the edge of Holt Road and tree number 8 around the edge of the adjacent garage. The required root protection radius as defined by BS5837 for these trees has been maintained by extending the RPA to within the site in the opposite direction. All other RPA's remain unmodified as the existing driveway is a light structure that is unlikely to have a significantly compacted sub-base.

7.3 Underground Services

- 7.3.1 There is no alteration to the existing services.

8.0 DEVELOPMENT IMPLICATION TO RETAINED TREES

- 8.1 The proposed widening of the existing access off Holt Road and provision of a widened footpath outside the northern boundary in line with the Highways requests will encroach with the RPAs of all trees along the site frontage. These trees will therefore be removed and replaced with new tree and hedge planting as mitigation. The proposed widening of the driveway and installation of additional car parking bays encroach with the RPA of tree numbers 5, 6 and 8. Alternative means of construction using three dimensional cellular confinement systems have been considered; we however feel that the most appropriate solution in the long term is to remove the trees and plant good quality new specimens as indicated on the landscape plan at **Appendix 6**.

9.0 SUMMARY AND ANALYSIS OF TREES

- 9.1 A full description of all tree details is provided in **Appendix 1**.
- 9.2 The tree survey covers 8 individual trees and 3 groups. Of the trees covered there are none considered to be 'R' category, i.e. in such a condition that any existing value would be lost within 10 years and which could/should be removed for sound arboricultural reasons.
- 9.3 There are 6 individual trees and all groups considered to be 'C' category trees, which are of low quality and value or generally insignificant trees in terms of amenity or landscape value to the locale. The BS states that such trees could be considered for removal as part of the design process or retained until such time as new planting can be established; a minimum of 10 years is suggested. The BS also states that C category trees should not be considered significant constraints to development particularly if their retention would be disproportionate to the value of the development and when new tree planting can adequately mitigate their loss. This is clearly the case on this proposal.
- 9.4 Tree numbers 2 and 6 have been categorised as 'B' grade trees that are of moderate quality and value due to their landscape value. Tree number 2 (Yew) is unaffected by any proposed works, tree number 6 (Thuya) will be removed and replaced by a specimen Scots Pine tree that will in time form a valuable skyline feature tree to the locale.

10.0 PROPOSED REVISIONS TO THE SCHEME

- 10.1 We advise that all proposed revisions in respect of location of underground services, external surfacing and/or landscaping; having implications for trees should be referred to us for review.

11.0 NEW TREE PLANTING

11.1 Advance tree planting & aftercare

As mitigation for the trees being removed new landscaping will be provided in order to enhance the new site boundary and provide an attractive visual landscape to the street scene along Holt Road. The proposed new tree and hedge planting will establish quickly to form an important screen to the car parking within the site and is in our view a vast improvement on the current unkempt coniferous existing frontage. Planting details are contained within the landscape plan at **Appendix 6** to this report.

12.0 CONCLUSIONS

- 12.1 BS 5837: 2005 contains clear and current recommendations for a best practice approach to the assessment, retention and protection of trees on development sites. The proposed development has followed this guidance by:
- Seeking arboricultural advice and undertaking a phase 1 preliminary tree survey to inform the layout and design of the proposed development
 - Respecting the constraints posed to development of the site by high or moderate quality trees
 - Acting upon arboricultural advice throughout the design process in order to obtain the best development proposal whilst considering the current and future tree requirements
- 12.2 New landscaping will be incorporated within the scheme to enhance the site boundaries and provide valuable native habitat making this proposal the most sustainable approach to continued tree cover in the area.
- 12.3 The protection of retained trees will be in accordance with recommendation contained within the BS and as detailed on the Tree Protection Plan at **Appendix 6** and within the Arboricultural Method Statement at **Appendix 7**.
- 12.4 Inspection of the tree protective fencing will ensure that all works comply with the provisions of this report.

13.0 LIMITING CONDITIONS

Unless stated otherwise:

Information contained in this report covers only those trees that were examined and reflects the condition of those trees at the time of the inspection.

The inspection is limited to visual examination of the subject trees from ground level only and without dissection, excavation, probing or coring. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the subject trees may not arise in the future.

This report has been prepared for the sole use and benefit of the client. Any liability of Tree Solutions shall not be extended to any third party.

No part of this report can be reproduced without the authorisation of Acer Consulting Limited trading as *Tree Solutions*.

14.0 REFERENCES

- *BS 5837; 2005 'Trees in Relation to Construction - Recommendations'* British Standards Institute, London
- *BS 3998; 1989 'Recommendations for Tree Work'* British Standards Institute, London
- *'Tree Roots in the Built Environment 2006 - Dept. for Communities & Local Government (DCLG)*

Appendix One
Tree Survey Schedule

TREE SURVEY SCHEDULE

SITE:	OAK LODGE, CROSS LANES, WREXHAM
CLIENT:	MR & MRS RIGBY
BRIEF:	ARBORICULTURAL IMPACT ASSESSMENT

SURVEYOR:	A. HENDERSON
ASSESSMENT DATE:	29/01/2010
VIEWING CONDITIONS:	CLEAR
JOB REFERENCE:	10/AIA/P2/WXM/35

PAGE: 1 OF 3

Tree No.	Species	Age	Height (m)	Crown Spread (m)	D.B.H (mm)	Vitality	Comments	Management	BS 5837 Retention Category	BS5837 RPA Radius (m)
T1	Leyland Cypress	EM	10 C- 3	N: 1.5 S: 1.5 E: 1.5 W: 1.5	200	G	- Located on neighbouring land with canopy encroaching onto site - Insignificant tree to streetscape & easily replaced by more appropriate specimen tree - E.R.C 20+	Consider removal and replacement if granted consent from land owner	C1 & 3	2.4 18m ²
T2	Yew	EM	8 C- 0	N: 1.8 S: 3 E: 3.2 W: 1.6	220	M/G	- Small Ivy clad tree on boundary - No defects & worth retaining as evergreen screen - E.R.C 20+	N/A	B1 & 2	2.7 22m ²
T3	Lime	M	13 C- 0	N: 1.6 S: 1.5 E: 4.6 W: 4.2	550	M/P	- Unattractive tree on site frontage - Previously topped to 10m on main stem, subsequent re-growth topped to 12m - Large limb removed at 2m south - Mass epicormic growth at base impeding inspection of stem - E.R.C 20+	Tree ok to retain due to species but could easily be replaced by better quality tree	C1	6.6 137m ²

HEADINGS & ABBREVIATIONS

TREE NO.

AGE RANGE:

DBH:

CROWN SPREAD:

VITALITY:

BS 5837 RETENTION CATEGORY:

BS 5837 RPA RADIUS:

E.R.C.

REFERENCE NUMBER. REFER TO PLAN OR NUMBERED TAGS WHERE APPLICABLE

Y = YOUNG, SM = SEMI MATURE, EM = EARLY MATURE, M = MATURE, FM = FULLY MATURE, PM = POST MATURE

STEM DIAMETER – MEASURED AT 1.5 METRES

MEASURED DIAMETER OF CROWN AT 4 CARDINAL COMPASS POINTS

A MEASURE OF PHYSIOLOGICAL CONDITION. D = DEAD, MD = MORIBUND, P = POOR, M = MODERATE, G = GOOD

RETENTION VALUE BASED ON TABLE 1 BS 5837 (2005)

RADIUS FROM STEM TO THE LINE OF THE TREE PROTECTION AS SET OUT IN TABLE 2 OF THE STANDARD

ESTIMATED REMAINING CONTRIBUTION (YEARS)

TREE SURVEY SCHEDULE

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CLIENT:	MR & MRS RIGBY
BRIEF:	ARBORICULTURAL IMPACT ASSESSMENT

SURVEYOR:	A. HENDERSON
ASSESSMENT DATE:	29/01/2010
VIEWING CONDITIONS:	CLEAR
JOB REFERENCE:	10/AIA/P2/WXM/35

PAGE: 2 OF 3

Tree No.	Species	Age	Height (m)	Crown Spread (m)	D.B.H (mm)	Vitality	Comments	Management	BS 5837 Retention Category	BS5837 RPA Radius (m)
T4	Lime	M	10 C- 0	N: 2 S: 2 E: 1.8 W: 1	560	P	- All as T4 - E.R.C 20+	As T4	C1	6.7 142m²
T5	Irish Yew	SM	4 C- 0	N: 1.5 S: 1.5 E: 1.5 W: 1.5	200 (multi)	G	- Good quality small specimen tree with no significant defects - Not visible from outside site boundary so loss would not be detrimental to character and setting of area - E.R.C 20+	N/A	C 3	2 13m²
T6	Thuja	M	16 C- 1	N: 4 S: 3.8 E: 4.2 W: 4	610	G	- Tall prominent tree with no significant defects - E.R.C 40+	N/A	B2	7.3 168m²
T7	Cypress	M	11 C- 6	N: 2 S: 2 E: 2 W: 2	390	M	- All lower branches removed to a height of 6m leaving an unattractive form with top heavy crown - Insignificant to retain and better removed and replaced by specimen tree - E.R.C < 10	Fell & replace	C1 & 2	6.7 69m²
T8	Beech	M	13 C- 3	N: 4.2 S: 5 E: 4.4 W: 4.5	630	M/P	- Garage built at 200mm west of stem – root damage likely during excavation for foundation - Dieback in crown - Minor decay cavity at 2m south - Hard standing (paviments) over primary roots - E.R.C < 20	N/A	C1	7.6 180m²

TREE SURVEY SCHEDULE

SITE:	OAK LODGE, CROSS LANES, WREXHAM
CLIENT:	MR & MRS RIGBY
BRIEF:	ARBORICULTURAL IMPACT ASSESSMENT

SURVEYOR:	A. HENDERSON
ASSESSMENT DATE:	29/01/2010
VIEWING CONDITIONS:	CLEAR
JOB REFERENCE:	10/AIA/P2/WXM/35

PAGE: 3 OF 3

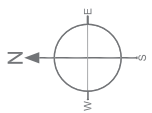
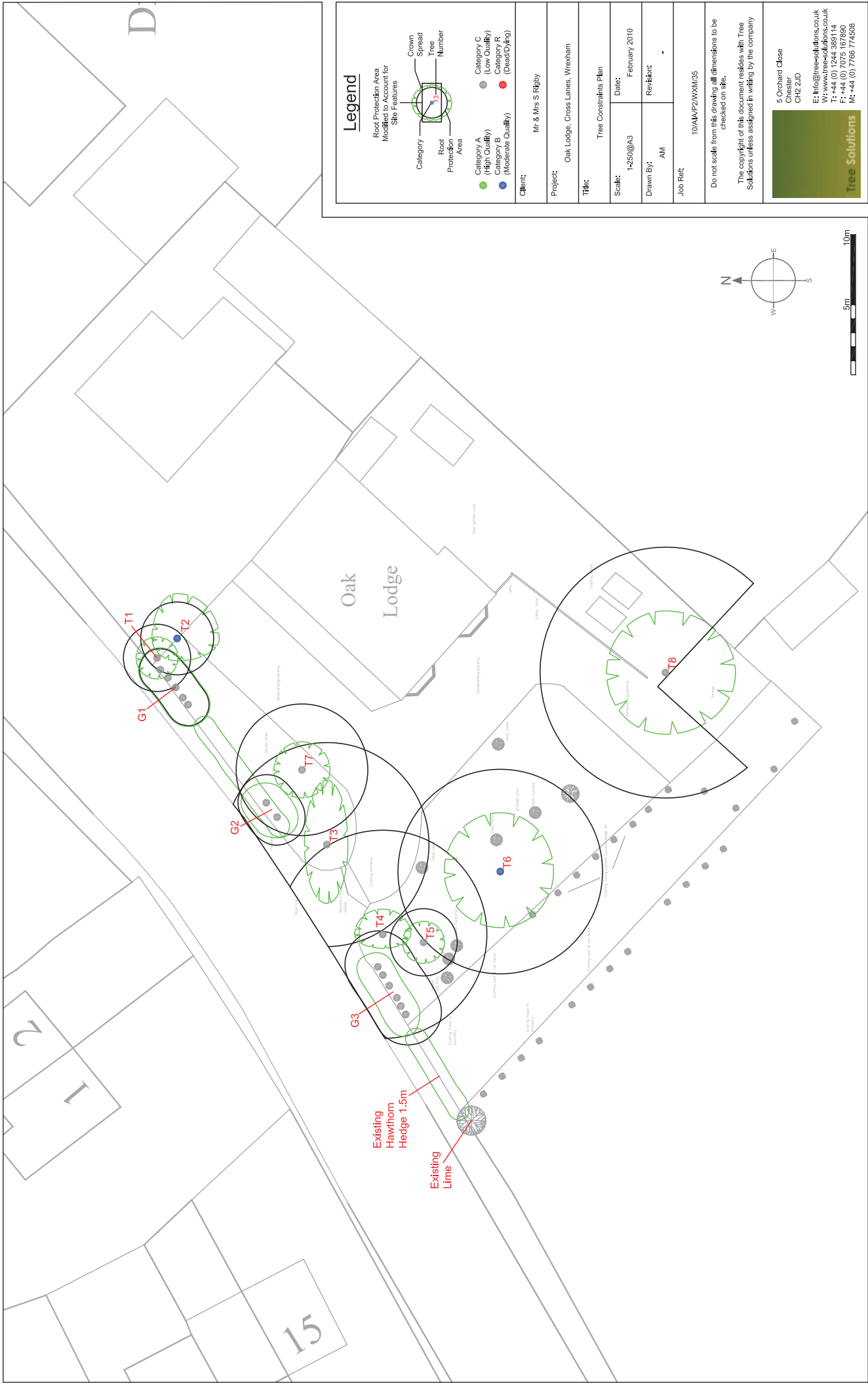
Tree No.	Species	Age	Height (m)	Crown Spread (m)	D.B.H (mm)	Vitality	Comments	Management	BS 5837 Retention Category	BS5837 RPA Radius (m)
G1	5 x Leyland cypress	Y/ SM	3 C- 0	N: 1.5 S: 1.5 E: 1.5 W: 1.5	≤150	M	- Small group of cypresses planted for screening - Unattractive trees & easily replaced by formal hedge - E.R.C 0	• Fell & replace	C1&3	1.8 10m²
G2	2 x Cherry & Leyland cypress	Y/ SM	3 C- 1	N: 1.8 S: 1.5 E: 1.4 W: 1.5	≤200	P	- Two small cherries in poor health and vigour - Line of low Leyland cypress 2m high forming unattractive boundary feature - E.R.C 0	• Fell & replace	C1&3	2.4 18m²
G3	11 x Leyland cypress	EM	10 C- 0.5	N: 1.5 S: 1 E: 1 W: 1.6	≤200	M/G	- Small group of cypresses planted as a hedge for screening - Sided up to 4m to clear adjacent footpath leaving wide top growth - Unattractive trees & easily replaced by formal hedge - E.R.C 0	• Fell & replace	C1&3	2.4 18m²

Appendix Two
BS 5837 Category Grading Chart

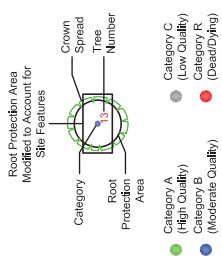
Table 1 — Cascade chart for tree quality assessment

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).			DARK RED 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)	LIGHT GREEN 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	MID BLUE 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	GREY 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.			

Appendix Three
Tree Constraints Plan



Legend



- Category A (High Quality)
- Category B (Moderate Quality)
- Category C (Low Quality)
- Category D (Dead/Dying)

Client: Mr & Mrs S Raby

Project: Oak Lodge, Cross Lanes, Wrexham

Title: Tree Constraints Plan

Scale: 1:250@A3

Date: February 2010

Drawn By: AM

Revised: -

Job Ref: 10/AM/P2/WXM/35

Do not scale from this drawing all dimensions to be checked on site.

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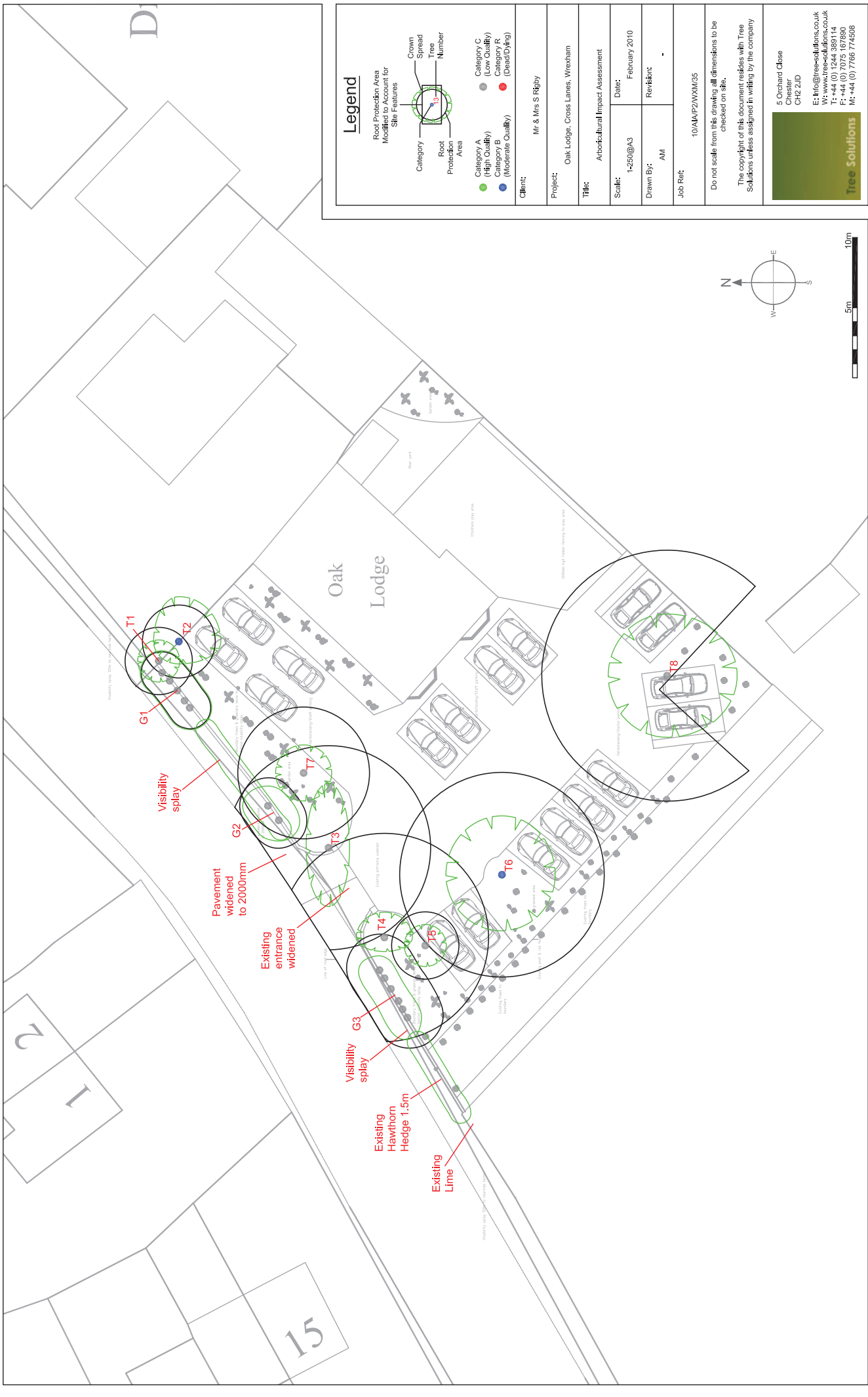
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Appendix Four

Arboricultural Impact Plan



Legend

Root Protection Area
Modified to Account for
Site Features

Category A
(High Quality)

Category B
(Moderate Quality)

Category C
(Low Quality)

Category D
(Dead/Dying)

Crown
Spread

Tree
Number

Protection
Area

Category A
(High Quality)

Category B
(Moderate Quality)

Category C
(Low Quality)

Category D
(Dead/Dying)

Client:	Mr & Mrs S Raby		
Project:	Oak Lodge, Cross Lanes, Wrexham		
Title:	Arboricultural Impact Assessment		
Scale:	1:250@A3	Date:	February 2010
Drawn By:	AM	Revised:	-
Job Ref:	10/AM/P2/WXM/35		
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Tree Solutions

D

Oak
Lodge

15

2

1

Appendix Five
Trees to Fell & Retain Plan

Appendix Six
Landscape Plan/Tree Protection Plan

Total: 8 Plants

24

Garden Proposal

gives the opportunity

The new tree planting will include two fastigate Oaks in order to provide a formal entrance feature within the confined planting areas and a standard Oak will be planted in the southern corner as a landscape feature tree. The use of Oaks will be more symbolic with Oak Lodge than the existing topped Lime trees. The remaining garden areas on the frontage will be planted with four weeping Birch trees to add height and structure to the boundary whilst creating a mature screen to the access drive and dwelling.

A large specimen Scots Pine will be planted as a replacement to tree number 6 (Thuja). This tree will integrate well within the local landscape as there are other mature Pine trees within the vicinity.

BI ANTIC NOYES-

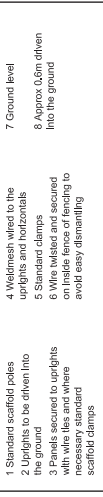
Tree Planting – All trees to be in accordance with BS 3398/5236, to be planted and securely staked and tied in pits 1000x1000x750mm backfilled with topsoil mixed with 40L of mushroom compost, ensuring that tree pits are a minimum of 75mm deeper and 150mm wider than the tree roots. Base of pit to be broken up to a depth of 150mm. The bases of trees to be planted in grass areas are to be covered with 75mm depth bark mulch to 1.0 metre diameter and kept weed free.

Hedge Planting - All existing Leyland cypress and Cherry trees on the northern boundary will be grubbed out and the ground made good for planting. Hedge plants to be in accordance with BS 3936. All plants shall be 40-60cm or 1+1 transplants, notched planted in double staggered rows at 300mm centres (or as scheduled). Well watered immediately after planting and prior to spreading of mulch. Planted areas to be covered with 75mm depth bark mulch.

and kept weed free and protected from rabbits by spiral guards.

WEED CLEARANCE: Areas to be planted shall be cleared of any grass and weed growth physically and/or chemical with translocated herbicide (glyphosate based) prior to cultivation operations. All roots of perennial weeds shall be

The landscape contractor shall maintain an on-site pruning crew for a period of 12 months following project completion. All pruning areas are to be kept weed free for the duration of the maintenance period. All plants that are found dead, diseased or dying at the end of the first growing season shall be replaced at the contractors own expense in the next available growing season.



NOTE:
All tree positions
are approximate.



TREE PROTECTION AREA
KEEP OUT!
(TOWN & COUNTRY PLANNING ACT 1990)
TREES EMPLOYED BY THIS FIRM ARE PROTECTED BY
PLANNING CONDITIONS AMONGST ARE THE SUBJECTS OF
TREE PRESERVATION ORDERS.
CONTINUATION OF A TREE PRESERVATION ORDER MAY
LEAD TO CRIMINAL PROSECUTION
ANY INCURSION INTO THE PROTECTED AREA MUST BE
WITH THE WRITTEN PERMISSION OF THE LOCAL
PLANNING AUTHORITY



PROTECTIVE FENCING. THIS FENCING MUST BE MAINTAINED IN ACCORDANCE WITH THE APPROVED PLANS AND DRAWINGS FOR THIS DEVELOPMENT.

TREE PLANTING:
proposed standard
tree planting.

TREE PLANTING:
proposed standard
tree planting.

EXISTING TREES:
existing trees to be
retained in accordance
with BS 5837.

NEW HEDGE PLANTING

Tree Protection
Fencing

Mr & Mrs S Rigby

— Continued from p. 100

Date:

Revision:	
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0/AIA/P2WXM/35

in this drawing all dimensions checked on site.

if this document resides v
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Appendix Seven

Arboricultural Method Statement

SEQUENCE OF WORKS

From commencement of the above development, the following methodology shall be implemented in the manner and sequence described:

1. Pre-contract site meeting
2. Arboricultural works
3. Landscape works
4. Erection of temporary protective fencing
5. Underground services
6. Main construction phase
7. Removal of temporary fencing

1. PRE-CONTRACT SITE MEETING

To outline working methods in relation to trees prior to any construction activity on site, a site meeting of the following shall take place:

1. Client
2. Architect/Planning Consultant
3. Structural Engineer
4. Main Contractor
5. Arboriculturist
6. Site Agent

2. ARBORICULTURAL WORKS

1. Before the erection of the temporary protective fencing, all tree removal shall be implemented in accordance with the Tree Survey Schedules
2. All possible efforts must be made to prevent damage to retained trees including potential root incursion or compaction caused by vehicle access.
3. All arboricultural works shall conform to the recommendations of BS 3998 (1989) 'Recommendations for Tree Work' as amended.
4. All operatives shall be equipped with and use personal protective equipment (PPE) in accordance with current Health & Safety Executive current directives and industry codes of practice.
5. Wound sealants shall not be used on any tree.
6. Performance of all arboricultural operations and use of equipment shall be in accordance with current Health & Safety Executive current directives and industry codes of practice.

3. LANDSCAPE WORKS

1. Landscaping works will be implemented in accordance with the landscape plan at Appendix 6.
2. There shall be no rotovation of ground within any area designated as a Root Protection Area (RPA) and Construction Exclusion Zone (CEZ) and enclosed by Temporary Protective Fencing.
3. No hard landscaping works or excavation for cables or any other service should be installed within the Root Protection Area (RPA) and Construction Exclusion Zone (CEZ) without the written consent of Planning Service.

4. TEMPORARY PROTECTIVE FENCING ERECTION

- 1 Following completion of the tree felling and prior to construction, the main contractor shall erect the temporary protective fencing as detailed in the 'Tree Protection Plan'. Prior to commencement of any site demolition, construction, preparation, excavation or material deliveries, the Arboricultural Consultant will inspect installation of the temporary fencing. Any damage occurring to protective fencing during the demolition or construction phase shall be made good by the main contractor.

4. UNDERGROUND SERVICES

Unless an emergency arises, there shall be no new excavation for the installation, renewal, or repair of underground services within any area designated as a Root Protection Area (RPA) and Construction Exclusion Zone (CEZ) and enclosed by Temporary Protective Fencing (unless very low root volume is established beforehand).

5. MAIN CONSTRUCTION PHASE

There shall be no storage of construction material, site parking, site accommodation or equipment in any area designated as the Root Protection Area (RPA) and Construction Exclusion Zone (CEZ) and enclosed by Temporary Protective Fencing. No fires shall be lit.

The site agent shall supervise deliveries by self-loading crane, with vehicles positioned in such a manner that retained trees are not at risk of damage.

6 REMOVAL OF TEMPORARY FENCING

1. Temporary protective fencing shall be removed only upon written approval of the Local Planning Authority.

TREE PROTECTION SPECIFICATION

The Root Protection Area (RPA) and Construction Exclusion Zone (CEZ) enclosed by temporary protective fencing shall:

1. Be erected prior to any demolition works, delivery of site accommodation or materials and shall remain for the duration of construction works.
2. Preclude all construction activity with the sole exception of specified arboricultural works and as such works as have been agreed by all parties and to be carried out under supervision.
3. Be protected by temporary protective fencing and other measures as specified.
4. Preclude the storage or tipping of all materials and substances, in addition, toxic substances such as fuels, oils, additives, cement, or other deleterious substances within 5.0 meters of an exclusion zone.
5. Clearly legible weatherproof signage, stating "Protected Trees – Exclusion Zone" shall be attached to the fencing 1.5m from the ground, facing out of the Tree Protection Zone located at regular intervals along the fence line. The notice will be A3 in size as per **Appendix 9**.
6. Other than works detailed within this method statement or approved in writing by the Local Planning Authority (LPA), no works including storage or dumping of materials shall take place within the exclusion zones defined by the protective fencing.
7. Any incursion into the Root Protection Area (RPA) and Construction Exclusion Zone (CEZ) must be by prior arrangement, following consultation with the LPA.

Temporary Protective Fencing Type:

Protective Barrier (Fig. 2)

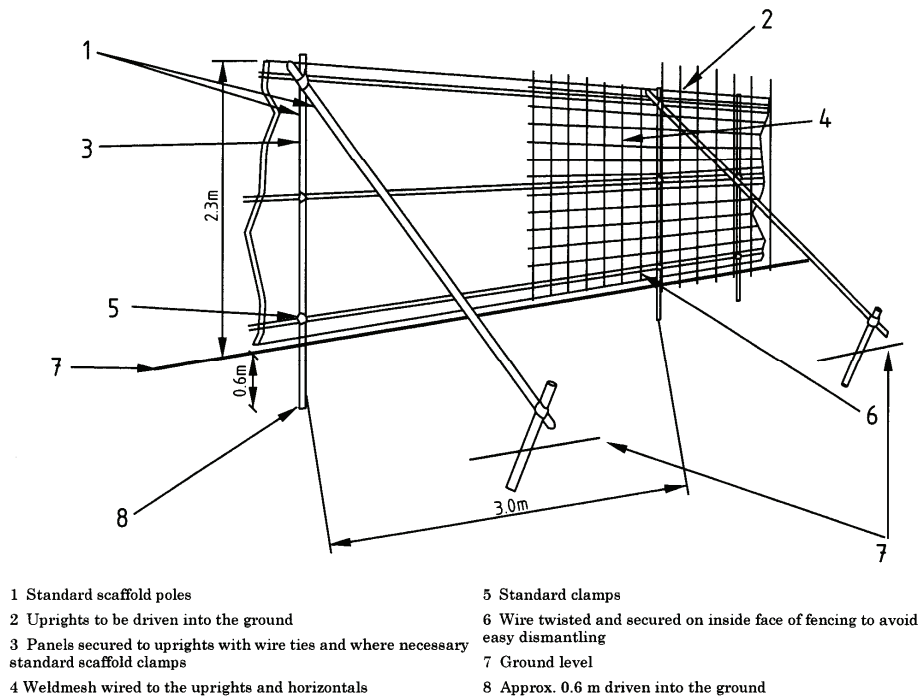


Figure 2 – Protective barrier

GENERAL PRECAUTIONS

No materials that are likely to have an adverse effect on tree health such as oil, bitumen or cement will be stored or discharged within 10 metres of the trunk of a tree that is to be retained.

No fires will be lit within 20 metres of the trunk of any tree that is to be retained.

On Site Storage of Spoil and Building Materials

Prior to and during all site works no spoil or construction material will be stored within the crown spread on any tree on or adjacent to the site even if proposed site work is to be within the crown spread. Any encroachment within this protected area will only be with the prior agreement of the LPA Arboricultural Officer.

Avoiding Damage to Stems and Branches

Care shall be taken when planning site operations in proximity to trees to ensure that wide or tall loads or plant with booms, jibs and counterweights can operate without coming into contact with retained trees. Such contact can result in serious injury resulting in safe retention impossible.

Should pruning be required for access purposes it shall be kept to the barest minimum necessary to facilitate development and shall be carried out strictly in accordance with BS 3998 Recommendations for Tree Works (1989) as amended. It shall only be carried out by suitably qualified and experienced professional arborists, working according to a specification prepared by Tree Solutions. **Under no circumstances shall construction personnel undertake any tree pruning operations.**

Appendix Eight

Site Photographs



Photo 1 – Tree number 8 (Beech), poor quality with garage and hard standing around base



Photo 2 – Site frontage viewed from west – note poor past management & unkempt appearance



Photo 3 – Site frontage viewed from east – tree numbers 1 & 2 in foreground to be retained



Photo 4 – Topped Limes at entrance (T3 & T4)



Photo 5 – Unsightly Leyland cypress hedge (Group 3)



Photo 6 – Small poor quality trees within grass area to west of dwelling

Appendix Nine
Tree Protection Sign



**PROTECTIVE FENCING. THIS
FENCING MUST BE
MAINTAINED IN ACCORDANCE
WITH THE APPROVED PLANS
AND DRAWINGS FOR THIS
DEVELOPMENT.**



**TREE PROTECTION AREA
KEEP OUT !**

**(TOWN & COUNTRY PLANNING ACT 1990)
TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY
PLANNING CONDITIONS AND/OR ARE THE SUBJECTS OF A
TREE PRESERVATION ORDER.
CONTRAVENTION OF A TREE PRESERVATION ORDER MAY
LEAD TO CRIMINAL PROSECUTION**

**ANY INCURSION INTO THE PROTECTED AREA MUST BE
WITH THE WRITTEN PERMISSION OF THE LOCAL
PLANNING AUTHORITY**