
BS 5837 Pre-Development Arboricultural Impact Assessment & Method Statement

Oxford Road, Gomersal Rev A

Report prepared by Ross Cannon

ND (Urb.For), Tech.Cert. (Arbor.A), Tech.Arbor.A

E – tree@treeplan.co.uk

4.4.19 Rev A



SUMMARY

Treeplan was instructed by Riva Homes to undertake a pre-development arboricultural impact assessment and method statement (following recommendations in *British Standard 5837:2012 Trees in relation to design, demolition and construction*) to ensure trees were fully considered through the development process. A residential housing development is proposed on a site at land off Oxford Road, Gomersal.

15 individual and groups of trees were surveyed in January 2017. This informed a Tree Constraints Plan which further informed the final site design. The Tree Constraints Plan, found in Appendix 5 shows the current site trees, their canopy extent, root protection areas and retention category.

An Arboricultural Impact Assessment Plan, also in Appendix 5 shows the site trees, their canopy extent, root protection areas and the location of the proposed development. Table 1 in section 5.2 lists the trees affected by the proposed development

An updated site access is proposed from one previously submitted. This report and associated plans show the site access further south than the previously submitted documents. This access will see less level change from highway to site.

- Two individual trees and one group of trees need to be removed in order to enable the development
- Two trees are of poor structural condition and are recommended for removal as part of the development
- The proposed access drive encroaches in to the plan view root protection areas of three trees. The impact of this is discussed in section 5.4

A Tree Protection Plan found in Appendix 5 shows the recommended location of temporary tree protective fencing and precautionary areas to ensure the health and longevity of retained trees.

An Arboricultural Method Statement is included in section 6 which indicates how the development can be undertaken with the least impact to retained trees.

Based on the following discussions and provided all the technical recommendations in this report are followed, I consider any proposed development can be carried out in accordance with the guidance in the British Standard: BS 5837, *Trees in relation to design, demolition and construction – Recommendations* (2012).

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1. INTRODUCTION

1.1 Instruction & Terms of Reference

Treeplan was instructed by Riva Homes to undertake a pre-development arboricultural impact assessment and method statement (following recommendations in *British Standard 5837:2012 Trees in relation to design, demolition and construction*) to ensure trees were fully considered through the development process. A residential housing development is proposed on a site at land off Oxford Road, Gomersal. This report is a revision, Rev A from one previously submitted following a site access re-design and LPA comments.

1.2 Qualifications & Experience of Author

The author of this report is Ross Cannon. Conclusions and recommendations of this report are based on my site observations and experience. I have experience and qualifications in Forestry and Arboriculture which are summarised in Appendix 1.

1.3 Documents, Communications & Information Supplied

A Tree Constraints Plan was undertaken in January 2017 to inform site design.

Riva Homes provided me with the following plans in October 2018 -

- Proposed Site Plan ref: R18:GOR:001 Sept 18
- Proposed Electric Design March 18
- Indicative Draft Gas & Water Design Drawing 18.10.18

Riva Homes provided me with the following plans in April 2019 –

- Oxford Meadows, Gomersal – site layout 1.14.19

1.4 Surveying Methodology & Report Limitations

A summary of the survey methodology and report limitations is included in Appendix 2.

1.5 Plans Associated with this Report

Three plans have been annotated to include tree related data relevant to the recommendations found within BS 5837. The annotations are superimposed on the provided topographical survey.

1. Tree Constraints Plan showing pre-development site, tree locations, canopy spread, root protection areas and retention category
2. Arboricultural Impact Plan (Rev A) showing proposed development, tree locations, canopy spread, root protection areas and retention category
3. Tree Protection Plan (Rev A) showing proposed development, trees to be removed and retained, canopy spread, root protection areas and protection measures and location

2. REFERENCES, PLANNING POLICY AND GUIDANCE

2.1 National Policy

Section 197 in the Town and Country Planning Act 1990 makes it the duty of local planning authorities, 'in the interests of amenity,' to protect trees, when granting planning permission, by imposing conditions or serving Tree Preservation Orders (TPOs). Planning Policy Statements (PPS) also provide guidance on the acceptability of proposed development.

2.2 British Standard: BS 5837, Trees in relation to design, demolition and construction – Recommendations (2012)

BS 5837 contains guidance on how to assess trees in or close to proposed development sites and what information to include in a pre-development arboricultural report for submission with a planning application. Appendix 3 contains relevant extracts from BS 5837.

3. SITE VISIT & OBSERVATIONS

3.1 Site Visit

The tree survey was undertaken in January 2017. A Tree Constraints Plan and design advice was given at that time.

3.2 Site Description

The site is located to the west of Oxford Road. A public highway is found to the east, fields to the north and west and a nursing home to the south. The site is rectangular in shape, with the long axis running approximately east/west. The site is currently used for grazing and storage.

3.3 Site Observations

- The ground slopes slightly to the east
- The existing highway and footpath to the east are on higher ground levels than those found on site, immediately to the west

3.4 Soil Type

Section 4.3 of BS 5837 states that a soil assessment should be undertaken by a competent person to determine structure, pH and composition to inform new planting as well as soil volume change. I am not a soil scientist and therefore recommend a specialist in this field is consulted before the foundation design stage.

4. TREE SURVEY

4.1 Tree Survey

A survey was undertaken in accordance with section 4.4.2.5 of BS 5837. The following information was recorded where site conditions allowed and can be found in Appendix 4:

- A sequential tree (or group of trees) number
- Tree Type
- Height
- Stem diameter(dbh) at 1.5m above ground level
- Canopy/branch spread at the four cardinal compass points
- Canopy height above ground
- Height of first significant branch and direction of growth
- Age class
- Health
- Comment general condition/site comments
- Management
- Root protection area as a radius and in m²
- Estimated remaining contribution in years/life expectancy
- BS Retention category

4.2 Tree Categorisation

Section 4.5.2 of BS 5837 states *'The purpose of the tree categorisation method, which should be applied by an arboriculturist, is to identify the quality and value (in a non-fiscal sense) of the existing tree stock, allowing informed decisions to be made concerning which trees should be removed or retained in the event of development occurring'*.

There are four retention category's, U, A, B and C, with sub category's 1, 2 & 3 to reflect arboricultural, landscape or cultural values respectively. The category colours as given below are represented on all maps and plans to aid removal/retention and site design.

- **Category U – Trees in such poor** condition that they cannot realistically be retained in the context of the current land use for greater than 10 years.
- **Category A – Trees of high quality** with an estimated life expectancy of at least 40 years.
- **Category B – Trees of moderate** quality with an estimated life expectancy of at least 20 years.
- **Category C – Trees of low** quality with an estimated life expectancy of at least 10 years, or young trees with a stem diameter of less than 150mm.

Category U trees are those that should be removed in the short term and should not be considered further in the planning process unless there is ecological/habitat value. All other category trees are material considerations in the planning process.

4.3 Tree Constraints

4.3.1 Above Ground Constraints – Tree Trunk and Canopy

The trees current canopy/crown spread is marked on plans to aid site design. Consideration needs to be made to the following pre development:

- Mature height and spread
- Species characteristics such as evergreen or deciduous, honeydew (sap) drip, fruit fall
- Shade potential
- Potential incompatibilities between layout and trees proposed for retention
- Working/access space needed for construction phase
- Protection of tree canopies from machinery impact or scaffold clearance
- Infrastructure requirements- easements, lighting, solar collectors, CCTV

4.3.2 Below Ground Constraints – Root Protection Area

BS 5837 states a ‘*root protection area (RPA) is a layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree’s viability, and where the protection of the roots and soil structure is treated as a priority*’.

For single stems the RPA is calculated as an area equivalent to a circle with a radius 12 times the stem diameter.

The RPA is plotted on plans as a circle, but where pre-existing site conditions are considered to have altered the rooting area a polygon will be produced. Trees T3 to T9 and T12 to T13 have had their RPA’s altered in shape as limited rooting area is considered available beyond 2m under the highway/retaining wall to the east. These RPA’s are accurate in m².

The default position is that proposed structures should be located outside the RPA’s of retained trees. If operations are proposed within the RPA, the arboriculturalist should:

- Demonstrate that the tree can remain viable and that the area lost to encroachment can be compensated for elsewhere, contiguous with its RPA
- Propose a series of mitigation measures to improve the soil environment that is used by the tree for growth

If utility operations within the RPA are proposed consideration should be given to NJUG4 (National Joint Utilities Group Volume 4 (Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees)).

5. ARBORICULTURAL IMPACT ASSESSMENT

5.1 Development Proposals

A residential housing development is proposed.

5.2 Tree Management Required to Implement Development

Table 1

	Impact/ work required	BS Retention Category			
		U	A	B	C
1	Trees to be removed to enable development	-	-	T5	T6, G14
2	Trees recommended to be removed as part of the development	T11	-	-	T10
3	Trees to be pruned to enable development	-	-	T8	T7
4	Trees recommended for pruning as part of the development	-	-	T3, T4	-

5.3 Above Ground Constraints – Tree Trunk and Canopy

Table 1 above highlights the impact the proposed development will have on the site trees.

Trees in row 1 of Table 1 above are found within the footprint of the proposed development. Therefore to implement the development these trees will have to be removed.

Trees in row 2 of Table 1 above are of poor structural form and are recommended for removal as part of the development.

Trees in row 3 of Table 1 above have low or lateral branches that require pruning in order to enable site access/new eastern access road to high sided vehicles.

Trees in row 4 of Table 1 above are recommended for pruning – to clear the canopy away from street lights. This can be undertaken while a contractor is on site undertaking other works but is not essential to enable the development.

A tree works schedule is included in the preliminary management column in Appendix 4.

No shade diagrams have been included on the site plans. Due to the orientation of the site plots 1 and 22 will see some shade to their eastern gardens in the morning. Both plots will then receive full sun from mid-morning onwards.

5.4 Below Ground Constraints – Root Protection Area

Trees T3 to T9 and T12 to T13 have had their RPA's altered in shape as limited rooting area is considered available beyond 2m under the highway/retaining wall to the east. These RPA's are semi-circular in shape, biased to the site and accurate in m².

Trees in row 1 of Table 1 above would see all or a significant portion of their RPA's removed in order to enable the development.

Trees T4, T7 and T8 will see alteration to their on-plan rooting area as a result of the proposed access route from Oxford Road, to the site. The impact of this may not be as significant as indicated on the Arboricultural Impact Plan as roots from trees T5 and T6 (to be removed) will have prevented any significant root (competition) growth from occupying the soils at this location.

Tree No.	Type	BS Category	% Plan View RPA Lost to Highway Specification	% Plan View RPA Surfaced with a no-dig 3DCCS *	Impact
T4	Sycamore	B	0	7.7	None – alternative rooting to west
T7	Sycamore	C	19	0	Potentially some – see paragraph above, alternative rooting area to west
T8	Sycamore	B	10	7	Potentially some – see paragraph above, alternative rooting area to west

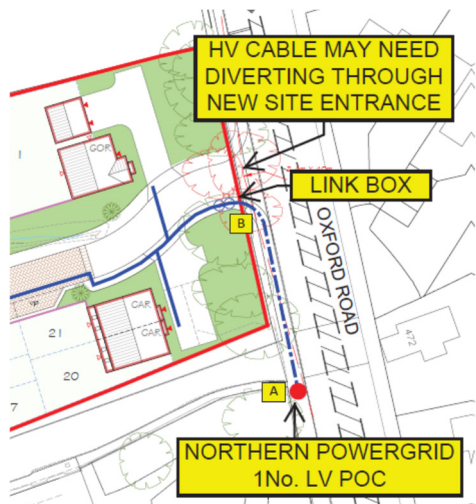
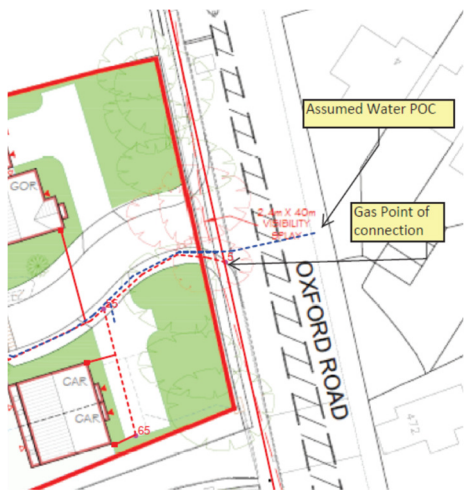
3DCCS – Three-dimensional cellular confinement system

A cross section of the highway detail will include some raising of ground levels (to north and south, immediately adjacent the road) in order to support the access drive (site being lower than the highway). Ground levels in this area (see Precautionary Area on Tree Protection Plan) to be made up with a granular/no-fines angular material in a three-dimensional cellular confinement system (3DCCS) in order to maintain rooting area soil aeration and support the access drive which will be to a Highways specification – see cross section in section 6.6 below and Tree Protection Plan.

T3 will see a small peripheral alteration to its RPA to enable the installation of a turning head/drive for plot 22. This is unlikely to be detrimental to this tree, other alternative rooting area is available to its north.

A watercourse (to be retained in-situ) to the south of G15 will protect its rooting area and canopy. Some minor pruning may be required at its eastern end to enable a re-course of this feature.

Utility routes are indicated on the previous site plans below. These indicate the routes can be through the new engineered access.

Proposed Electric Design	Proposed Water & Gas Design
 HV CABLE MAY NEED DIVERTING THROUGH NEW SITE ENTRANCE LINK BOX OXFORD ROAD NORTHERN POWERGRID 1No. LV POC	 Assumed Water POC Gas Point of connection OXFORD ROAD 4m x 40m visibility

Retained trees and their rooting areas will have to be protected by the installation of temporary tree protective fencing (see 6.4 below and Tree Protection Plan) and considerate construction/precautionary techniques during the construction phase, controlled through an Arboricultural Method Statement.

5.5 Tree Work Standard

Tree work should be undertaken following guidance found in British Standard 3998:2010 Tree Work – Recommendations.

5.6 Contractor/Construction Operations & Equipment

Site access will initially be from the south and the existing field gate access. The new proposed access route will then be installed from within the site.

Contractor parking, storage of materials, cabins and facilities will then be located within the site.

5.7 Impact on Amenity

Trees T3 to T13 are the subject of a Tree Preservation Order. Significant trees are retained either side of the proposed access drive which will retain the linear feature these trees provide. As such the general character of the site as seen from the users of the highway is unlikely to be significantly/detrimentally changed.

5.8 Proposed Tree Planting

Tree planting schemes should meet British Standard 8545 (2014) Young Trees: From Nursery to Independence in the Landscape.

6. ARBORICULTURAL METHOD STATEMENT

6.1 Project Arboriculturist

BS 5837 recommends the appointment of a Project Arboriculturist to ensure that on and off-site trees are fully considered during the development process.

6.2 Requirements to Protect Retained Site Trees

It is **essential** that the following methodologies are followed in order that the proposed development is not to have a significant impact on the retained trees

- Physical protection – by the use of protective fencing and ground protection to limit or prevent the physical impact on above ground tree parts or below ground rooting areas
- Site management – by detailing suitable methods for activities where they may influence trees which may include arboricultural supervision
- See the **Tree Protection Plan** in Appendix A for locations of protection measures
- Pre-commencement on-site meeting with Project Arboriculturist, Architect, Project Management and Construction companies to agree on-site limitations of retained trees rooting areas and how best to be protected through development. Key points of meeting and attendees recorded and sent to LPA

6.3 Tree / Ground Protection – Generic Precautions

I suggest enforcing these general precautions within the RPAs during the construction phase:

- No soil disturbance, including compaction or level change by stripping or filling unless controlled
- No excavation, without prior discussion with the Project Arboriculturist and/or the Local Planning Authority
- No redirection of surface water runoff into or out of the RPA
- No temporary buildings, sheds, or offices, without prior discussion with the Project Arboriculturist and/or the Local Planning Authority
- No storage of materials or fuel
- No dumping of materials, whether into a skip or onto the ground
- No fires within 10m of the RPA or tree canopy, whichever is greater
- No refuelling of mechanical equipment
- No storage or mixing of cement
- No washing of cement mixers within or uphill of the RPA
- Follow the guidance contained within the National Joint Utilities Group Volume 4 (Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees (Issue 2, 2007); www.njug.org.uk) when installing underground services inside or other excavation in the RPA of a tree.

6.4 Tree Protective Fence – Construction Exclusion Zone

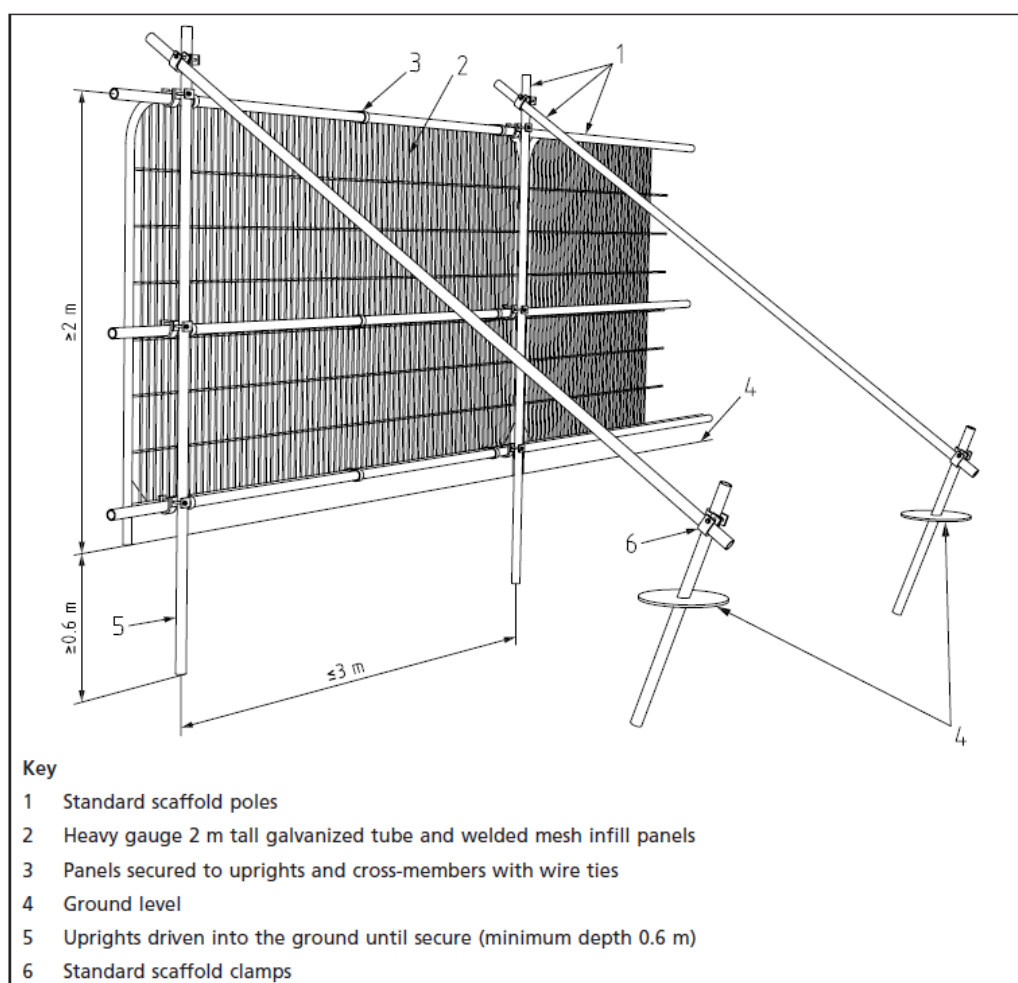
Temporary tree protective fencing should be erected along the line shown on the Tree Protection Plan in Appendix 5. The area inside this fence becomes the 'Construction Exclusion Zone' (CEZ). A dimensioned plan is available on request – tree@treeplan.co.uk

This fence will prevent construction activity that could cause damage occurring close to the retained trees. No plant, equipment or vehicles should operate inside the protective fencing without suitable ground protection and agreement from the Project Arboriculturist or Local Planning Authority. Further to this no activities as listed in Section 6.3 above should occur inside the protective fence/construction exclusion zone.

This product is to be installed before any plant or vehicle comes on site or soil stripping occurs. If existing stored material is within the RPAs and needs removing then machine should park as far away as possible from the trees and use a back actor at its full extent to lift and pull material towards it. Use temporary Ground Protection (see section 6.5) if required.

This product is to remain in situ until all construction work is completed.

The diagram below demonstrates the required fence specifications of BS 5837.



The pictures below show the required fencing specification used elsewhere as examples



This sign (below) must be laminated and securely fixed to the outside/site side of the Tree Protective Fence line every 6m. Replace when weathered or lost. Available as a pdf on request.



6.5 Temporary Ground Protection

Where machinery movements are required within a retained trees RPA temporary ground protection must be used. BS 5837 recommends *'temporary ground protection should be capable of supporting any traffic entering the site without being distorted or causing compaction of underlying soil*

a) for pedestrian movements only, a single thickness of scaffold boards placed either on top of a driven scaffold frame, so as to form a suspended walkway, or on top of a compression-resistant layer (e.g. 100mm depth of woodchip), laid onto a geotextile membrane;

b) for pedestrian-operated plant up to a gross weight of 2t, a proprietary, interlinked ground protection boards placed on top of a compression resistant layer (e.g. 150mm depth of woodchip) laid on a geotextile membrane;

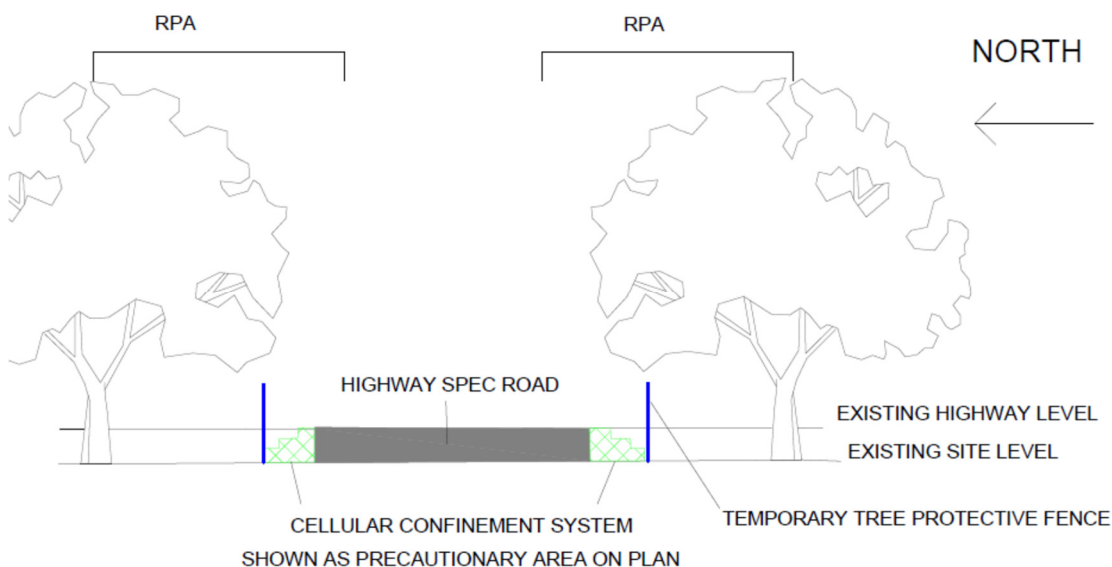
c) for wheeled or tracked construction traffic exceeding 2t gross weight, an alternative system (engineer approved) designed with arboricultural input to accommodate the likely loading to which it will be subjected'

6.6 Precautionary Area – 3DCCS

See Precautionary Area labelled on Tree Protection Plan. Treat this area as a CEZ and avoid all vehicle movements, or ground level alterations where possible. It is recommended that no excavation takes place in these areas where possible, however if it is required it is envisaged that hand digging, or a combination of slow and considerate back actor use will be required within the RPA:-

- Roots of 25mm diameter or less should be moved to one side of the excavation or be cut back with a sharp tool, such as secateurs, leaving as small a wound as possible, except where they occur in clumps
- Roots greater than 25mm in diameter to be retained. These must be wrapped in damp hessian to prevent damage and desiccation, but removed prior to backfilling
- Installation of new surfacing should take place as soon as possible after excavation to reduce the time roots will be exposed

Ground levels are to be raised in order to support the proposed access drive. A three-dimensional cellular confinement system (3DCCS) to be initially laid on the existing surface between the temporary tree protective fencing and edge of Highways Specified access road. The 3DCCS to be infilled with no fines angular material and surfaced with a geotextile to prevent contamination. Remove geotextile and lay another layer of 3DCCS on top of previous as and when slope angle needs matching/building up to match. No plant/machinery to traverse 'Precautionary Area'. Consult with supplier of 3DCCS on final surface specification. Perceived cross section below –



6.7 Work, Design or Build Variation

Any deviation in design or ground work activities that will occur within the RPA's of retained trees that has not been discussed or controlled in this document must be brought to the attention of the Project Arboriculturist at the earliest opportunity to determine any impact on retained trees.

Such variations are likely to require local planning authority approval.

Uncontrolled activities which are detrimental to the health or longevity of retained trees can lead to prosecution under the Town & Country Planning Act to both instructing parties and the contractors themselves.

6.8 Responsibilities and Order of Works.

6.8.1 Responsibilities

All enquiries relating to trees should be addressed to the Project Arboriculturist, no matter how trivial. Consultation is time well spent.

Responsibility	Title	Name	Organisation	Contact
Building design	Architect		Riva Homes	0113 8187840
Local Planning Authority (LPA)	Arboricultural Officer (Planning)		Kirklees Council	01484 414746
Trees in relation to development	Project Arboriculturist	Ross Cannon TBC	Treeplan TBC	07599 358056 TBC
Site/Project Management	Builder/Developer		Riva Homes	0113 8187840
Protective fencing & Build	Builder/Developer		Riva Homes	0113 8187840

6.8.2 Order of Tree Related Works

This list **must** be followed to ensure the health and longevity of the retained trees. Where operations need to be carried out that are not listed here then consideration should be made to the retained trees. Contact the Project Arboriculturist if in any doubt.

Keep this document, in its entirety in site office so it can be reviewed and an auditable series of operations is maintained.

Abbreviations – AMS = Arboricultural Method Statement. TPP = Tree Protection Plan. LPA = Local Planning Authority

Stage	Operation detail	Responsible person	Completion signature & date
1	Pre-commencement on-site meeting with Project Arboriculturist, Architect, Project Management and Construction companies to agree on-site limitations of retained trees rooting areas and how best to be protected through development. Key points of meeting and attendees recorded and sent to LPA	Architect/Project Management to liaise with Project Arboriculturist	
2	Install Tree Protective Fence as per TPP and section 6.4 of AMS. Inform and invite Project Arboriculturist to check fence type and location	Builder/Developer to liaise with Project Arboriculturist	
3	Once ensuring fence is fit for purpose - Photograph Tree Protective Fence and email LPA to inform them of development stage. Invite LPA to inspect fencing location 7 days before work commences	Project Arboriculturist	
4	Confirm acceptance of fencing from LPA	Project Arboriculturist	
5	Undertake tree works	Builder/Developer	
6	Undertake development as per AMS	Builder/Developer	
7	email to LPA to approve removal of protective fence when build, hard landscaping and plant/machinery are completed or removed.	Builder/Developer to liaise with Project Arboriculturist	

7. GENERIC LEGAL CONSIDERATIONS

7.1 Protected Trees

Where a tree preservation order protects these trees, or they are located in a conservation area, or protected by planning conditions, it will be necessary to obtain permission from or notify the local planning authority (LPA) before carrying out any work, except for certain exemptions. The tree management conclusions and recommendations in this report are considered to be acceptable but clients must be aware that the LPA may take an alternative view and can refuse permission.

7.2 Wildlife Conservation Legislation

Most bird's nests have legal protection while in use; also, bats and their roosts have legal protection whether in use or not.

Tree surgeons and forestry contractors should be aware of their duties under the following legislation. Wildlife & Countryside Act 1981 & Countryside & Rights of Way Act 2000.

7.3 Tree Safety

Owners of trees have a duty of care, in so far as is reasonably practical to ensure their trees do not harm others. Reasonable management appropriate to the size of the tree stock and the resources available to the landowner are expected by the courts. For more advice visit <http://ntsgroup.org.uk/>

7.4 Felling Licence

A Felling License is required if greater than (volume of wood) 5 cubic metres is felled in any calendar quarter (e.g., Jan to Mar, Apr to Jun, Jul to Sep and Oct to Dec), and more than two cubic metres are sold. Felling Licences are administered by the Forestry Commission. For more advice visit [http://www.forestry.gov.uk/pdf/FellingLicenceFAQJuly2005.pdf/\\$FILE/FellingLicenceFAQJuly2005.pdf](http://www.forestry.gov.uk/pdf/FellingLicenceFAQJuly2005.pdf/$FILE/FellingLicenceFAQJuly2005.pdf)

8. CONCLUSIONS

Based on the above discussions, and provided all the technical recommendations in this report are followed, I consider any proposed development can be carried out in accordance with the guidance in the British Standard: BS 5837, *Trees in relation to design, demolition and construction – Recommendations* (2012).

It is recommended that key members of the project team, including the Project Arboriculturist should be assigned so the trees are properly considered throughout the planning and construction phases.

Ross Cannon *ND (Urb.For), Tech.Cert. (Arbor.A), Tech. Arbor.A*
4.4.19

Arboricultural Consultant
07599 358 056
tree@treeplan.co.uk

APPENDIX 1

The Qualifications and Experience of the Author, Ross Cannon

1. Qualifications

In 2001 I was awarded a National Diploma in Urban Forestry.

In 2006 I was awarded the Arboricultural Associations Technicians Certificate.

In 2011 I became a Technical Member of the Arboricultural Association.

2. Experience

I have been working and studying within the field of arboriculture since 1999, first as a tree surgeon and latterly in an advisory capacity. Between 2001 and November 2007 I was a tree surgeon for a large local authority. Between November 2007, and December 2008 I worked as a Tree Surveyor and then Arboricultural Officer for Leeds City Council. This involved various large-scale tree condition and management surveys and carrying out detailed tree inspections. Between December 2008 and December 2011 I was a Trees & Woodlands Officer for the Yorkshire Dales National Park Authority administering tree preservation orders, trees in conservation areas and providing advice to the development control section on matters relating to trees in relation to proposed development. From December 2011 to present I have been undertaking independent tree consultancy services.

3. Continuing professional development

I attend courses, conferences, seminars and workshops run by land management, forestry and arboricultural organisations, colleges and universities. I have been a member of the Arboricultural Mortgage & Insurance User Group since 2006 and Consulting Arborist Society since 2009.

APPENDIX 2

Survey Methodology, Tree Risk Assessment & Report Limitations

Trees were inspected using the 'Visual Tree Inspection' methodology (Mattheck). No decay detection equipment was used.

Methodology of survey is in accordance with BS 5837:2012 'Trees in relation to design, demolition and construction – Recommendation and is not a tree hazard, tree risk or subsidence/subsidence potential survey.

All vertical and horizontal measurements were taken using laser rangefinder, which I consider are accurate enough for the purpose of this report.

Maps and plans are for illustrative purposes only to inform site design and planning requirements.

Trees are living and dynamic structures subject to extreme weather, vandalism, physical, chemical and biological changes that can quickly have an impact on a tree's condition and its growing environment. As such, even with robust tree inspections unforeseen changes, hidden defects and resulting structural failures can occur. All trees have a tolerance to the expected weather at a site they have grown in, but even then healthy defect free trees can still fail in extremes of weather.

This report is valid for one year from the date given on the front page or in the header or footer under normal weather conditions and site conditions.

The validity of this report ceases

- after a significant weather event, such as but not limited to severe winds, extremes in temperature, floods and drought not normal for the area.
- an outbreak of a virulent pest or disease which the author cannot foresee.
- pruning or works recommended are not undertaken to British Standard 3998:2010 or to the specification recommended in the report.
- if groundwork operations/level changes or use are/have been undertaken, that I was not aware of, within the vicinity of the trees that could alter their rooting environments, such as but not limited to underground utility work that doesn't meet the recommendations in NJUG 10 or British Standard 5837:2012 or their successors.
- significant change in on or off site conditions, such as, but not limited to adjacent tree/building removal, ground/surface water alteration.

No attempt has been made to assess soil subsidence/heave risk potential, nor should any be construed.

This survey and report is for the recipient(s) named in the Introduction only; any third-party relying on the contents of this report does so entirely at their own risk.

I recommend that the trees are inspected at least every year or after any significant weather event by a suitably qualified and insured arboricultural consultant.

APPENDIX 3

Trees and the Planning System (Development)

A copy of table B.1 from BS 5837 is found below. Trees whether subject to statutory protection or not are material considerations taken into account when dealing with planning applications. Table B.1 provides some advice to both developers and local planning authorities (LPA) on the appropriate amount of information required during the application process. Minimum detail includes information that is expected, additional information identifies further details that might be reasonable be sought by the LPA.

Table B.1 – Delivery of tree-related information into the planning system

Stage of process	Minimum detail	Additional information
Pre-application	Tree survey	Tree retention/removal plan (draft)
Planning application	Tree survey (in the absence of pre-application discussions) Tree retention/removal plan (finalised) Retained trees and RPA's shown on proposed layout Strategic hard and soft landscape design, including species and location of new planting Arboricultural impact assessment	Existing and proposed finished levels Tree protection plan Arboricultural method statement – heads of terms Details for all special engineering within the RPA and other relevant construction details
Reserved Matters/ Planning conditions	Alignment of utility apparatus (including drainage), where outside the RPA or where installed using a trenchless method. Dimensioned tree protection plan Arboricultural method statement – detailed Schedule of works to retained trees, e.g. access facilitation pruning Detailed hard and soft landscape design	Arboricultural site monitoring schedule Tree and landscape management plan Post-construction remedial works Landscape maintenance schedule

APPENDIX 4

Tree Data Schedule & Site Photographs

Tree Data – Glossary

N, S, E, W = Compass direction

= An estimated measurement.

1. Tree Number/ tags - Individual tree = T+ Number, Group of trees = G+ Number
2. Species - Common and or scientific names where appropriate
3. Height - Over all tree height, measured in M
4. Diameter at breast height - Measurement of stem @1.5m in mm
5. Canopy spread - Extent of tree branches taken at each compass point in m.
6. Low canopy height - Height of lowest branch above the ground.
7. Height of first significant branch and its direction of growth
8. Age Class / Life Stage - Y =Young, SM= Semi mature, EM=Early Mature, M= Mature, OM=Over Mature, V= Veteran.
9. Physiological condition - Good = Normal growth, Fair = Reduced twig extension, but other than that few signs of ill health, Poor = Small internodes, thinning canopy, Dead.
10. Structural Condition – Comment on defects or issues that could affect tree or tree part stability
11. Condition comments - Significance of physiological and structural condition
12. Preliminary management
13. Root Protection Area - As per section 4.6 of BS 5837(2012).
14. Estimated remaining contribution in years - More than 40 years, 20-40, 10-20, less than 10
15. U or A to C Category grading - See BS 5837(2012) Table 1 For details of each Category

TREE NO.	SPECIES	HEIGHT	DBH	CANOPY SPREAD				LOW CANOPY HEIGHT	FIRST SIG. BRANCH	AGE CLASS	PHYSIOLOG. CONDITION	STRUCTURAL & CONDITION COMMENTS	PRELIMINARY MANAGEMENT	RPA RADIUS	REMAIN. YEARS CONTRIB.	CATEGORY
				N	E	S	W							RPA M ²		
1	Ash	13	300	4	5	5	3.5	3	6	E M	G	Off-site tree not fully inspected, ivy prevents full inspection, branch stubs suggest poor pruning history	-	3.6 41	30?	B
2	Chestnut	14	550	5	6	4	7	3	3	E M	G	Off-site tree not fully inspected. Appears to have historic bleeding canker wounds	-	6.6 137	20?	C
3	Sycamore	16	500 450	4	6.5	6.5	7	3	4.5	E M	G	Single stem divides into two at 1m, union stable, wound to west at 1m, 35x50cm occluding little apparent decay. Highways and footpath to east and south	If permission given Prune to clear street light by 2m	8.1 204	40	B
4	Sycamore	15	500	4	4	4.5	9	3	3	E M	G	Stem wound to south at 0.5m, 15x25cm, occluding little apparent decay. Branch removal wound at 1m 20x20cm occluding some socket decay	If permission given Prune to clear street light by 2m	6 113	40	B
5	Ash	13	450	5.5	3	6	9	2	2	E M	G	Structural branches and canopy weight biased to west	If permission given remove to enable development	5.4 91	40	B
6	Sycamore	13	420	3.5	7	3.5	3	3	5	E M	G	Stem wounds to west at 0.2m, 19x5cm and at 0.7m, 40x25cm, occluding little apparent decay. Barbed wire constricting stem at 1m, occluding	If permission given remove to enable development	5 79	30	C
7	Sycamore	14	340 300	3.5	3.5	4.5	6	2	3.5	E M	G	Single stem at base divides into two at 0.7m, union stable. Stem wounds to west and south at <1m, occluding little apparent decay, 44x20 cm and 30x30 cm, broken branch stub to west at 1m, socket decay	If permission given crown lift to 6m over proposed access drive to south of tree	5.5 93	30	C
8	Sycamore	14	460	4	8.5	6	3	2	6	E M	G	Single stem weight bias to east, canopy weight biased to east, possible historic wire constricting/included at 1.8m to west	If permission given crown lift to 6m over proposed access drive to south of tree	5.5 95	40	B
9	Sycamore	13	550	4	7.5	3.5	7.5	1	0.5	E M	G	Girdling root to west, branch stubs <2m long to west with maturing epicormic growth, bark wound on these	-	6.6 137	40	B
10	Cherry	4	130	0	2.5	4	0	1.5	1.5	E M	F	Poor, weight biased to south east, suppressed, possibly sucker growth from T11, decay at base	If permission given recommend removal and replacement	1.5 7.6	10	C

TREE NO.	SPECIES	HEIGHT	DBH	CANOPY SPREAD				LOW CANOPY HEIGHT	FIRST SIG. BRANCH	AGE CLASS	PHYSIOLOG. CONDITION	STRUCTURAL & CONDITION COMMENTS	PRELIMINARY MANAGEMENT	RPA RADIUS	REMAIN. YEARS CONTRIB.	CATEGORY
				N	E	S	W							RPA M ²		
11	Cherry	12	47 0	1	4	6	6	2.5	2	M	G	Poor condition, wood decay fungi at base to west, strip of dead bark base to 2m to east	If permission given recommend removal and replacement	5.6 99	<10	U
12	Sycamore	14	45 0	5	7	6	5.5	2	2	E M	G	Stem wound to north at 1m, 15x15cm occluding little apparent decay	-	5.4 91	40	B
13	Sycamore	14	50 0	6.5	4	2.5	6	2	2.5	E M	G	Branch removal wound at 2m to west, upright stem, canopy weight biased to NNW	-	6 113	40	B
14	Group of Hawthorn, 1 x crab apple	<6	<2 00	4	4	4	4	0	0	M	G	Fair, approx. 17 stems/individual trees in a linier group	If permission given remove to enable development	2.4 18	30	C
15	Hawthorn hedge	<5	30 0	3	3	3	3	0	0	M	F	Hedge previously topped, possibly flailed at 2m, 2/3m of regrowth	-	3.6 40	30	C

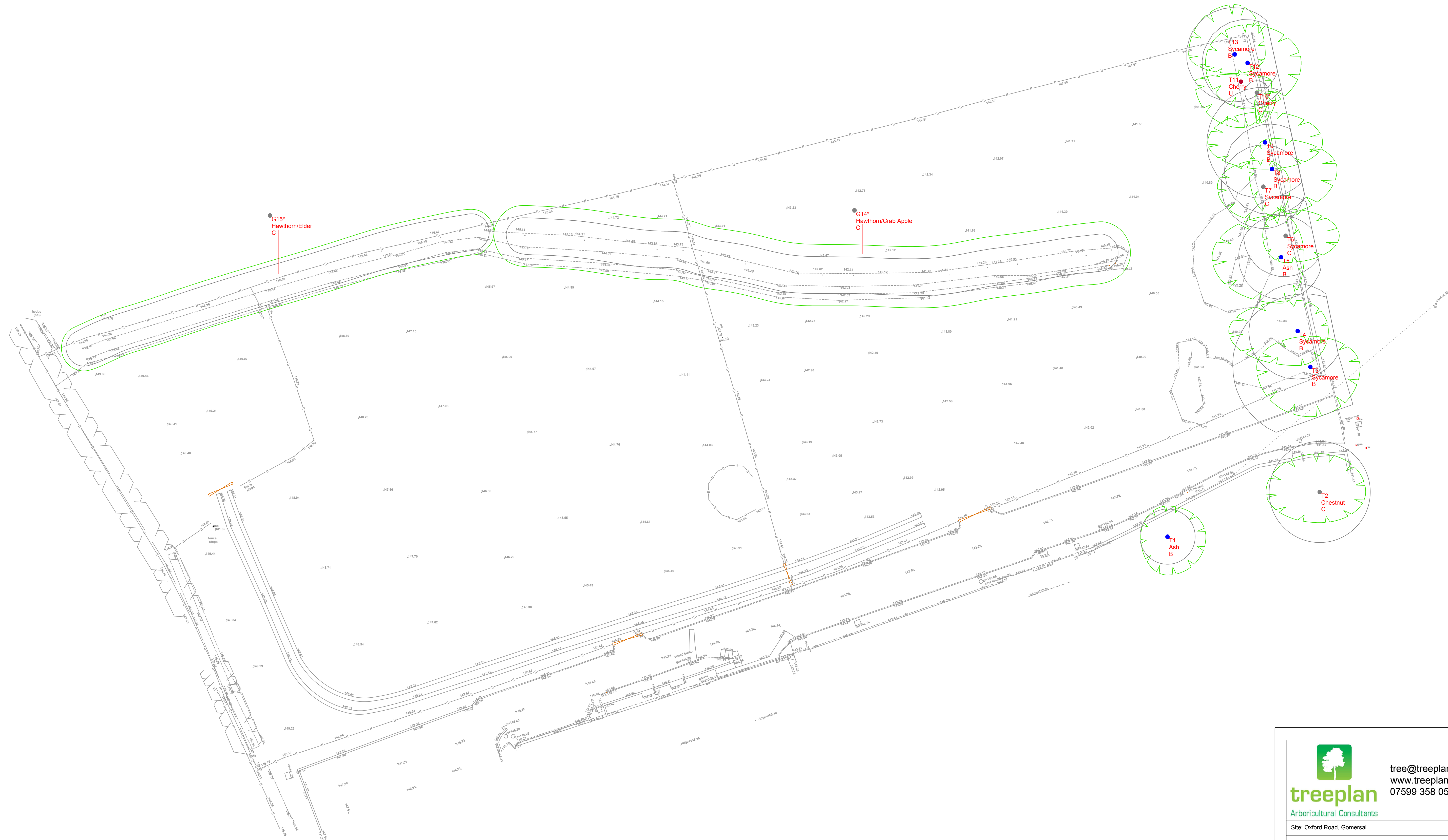
APPENDIX 5

Tree Plans

Tree Constraints Plan

Arboricultural Impact Plan Rev A

Tree Protection Plan Rev A





treeplan
Arboricultural Consultants

tree@treeplan.co.uk
www.treeplan.co.uk
07599 358 056

Site: Oxford Road, Gomersal	1:250 @ A1
Drawing Title: Tree Constraints Plan	January 2017

Key:

● Category A

● Category B

● Category C

● Category U

Category

Root Protection Area

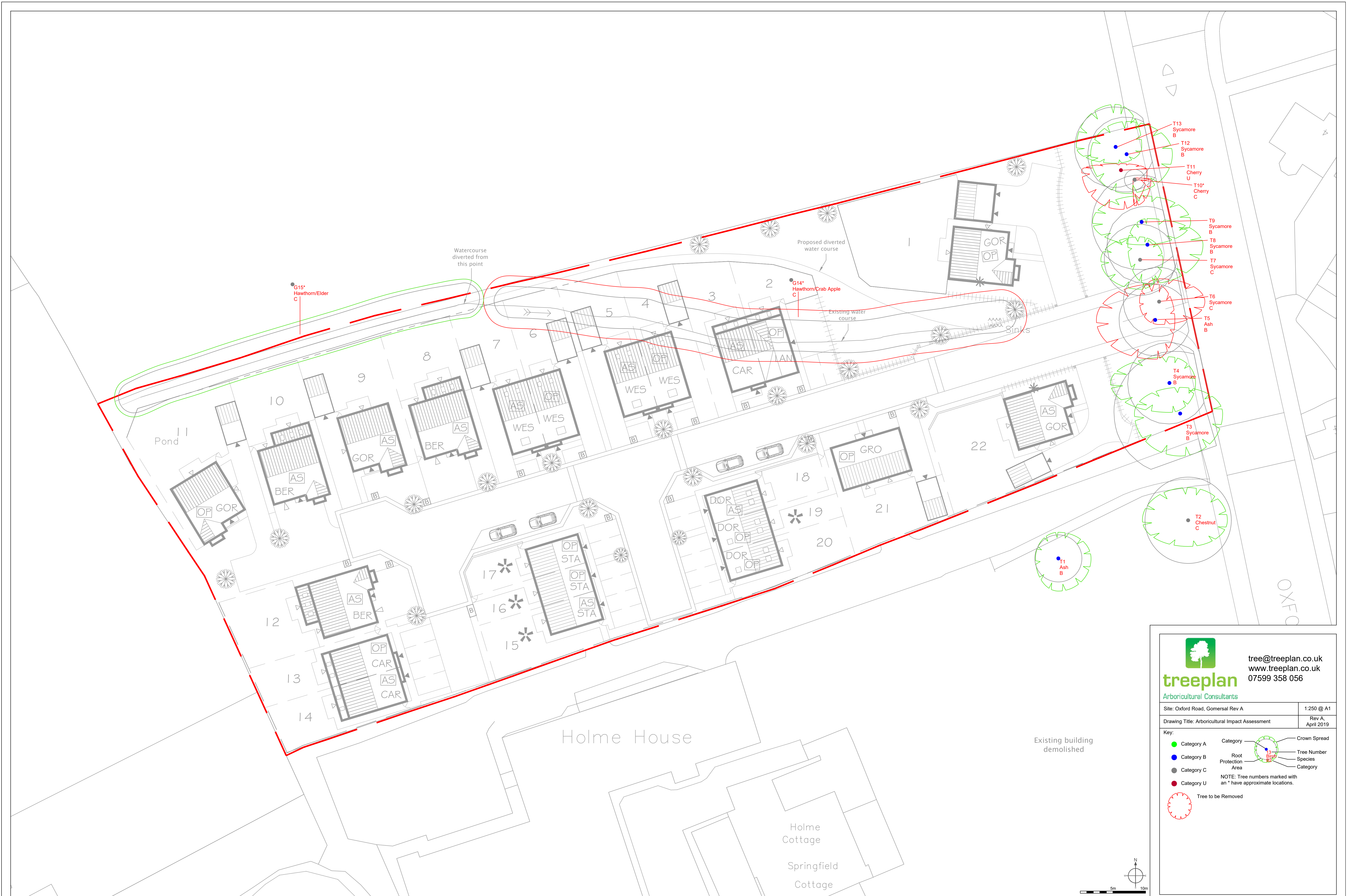
Crown Spread

Tree Number

Species

Category

NOTE: Tree numbers marked with an * have approximate locations.





tree@treeplan.co.uk
www.treeplan.co.uk
07599 358 056

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Site: Oxford Road, Gomersal Rev A	1:250 @ A1
Drawing Title: Arboricultural Impact Assessment	Rev A April 2019

Key:

● Category A

● Category B

● Category C

● Category U

○ Tree to be Removed

Category

Root Protection Area

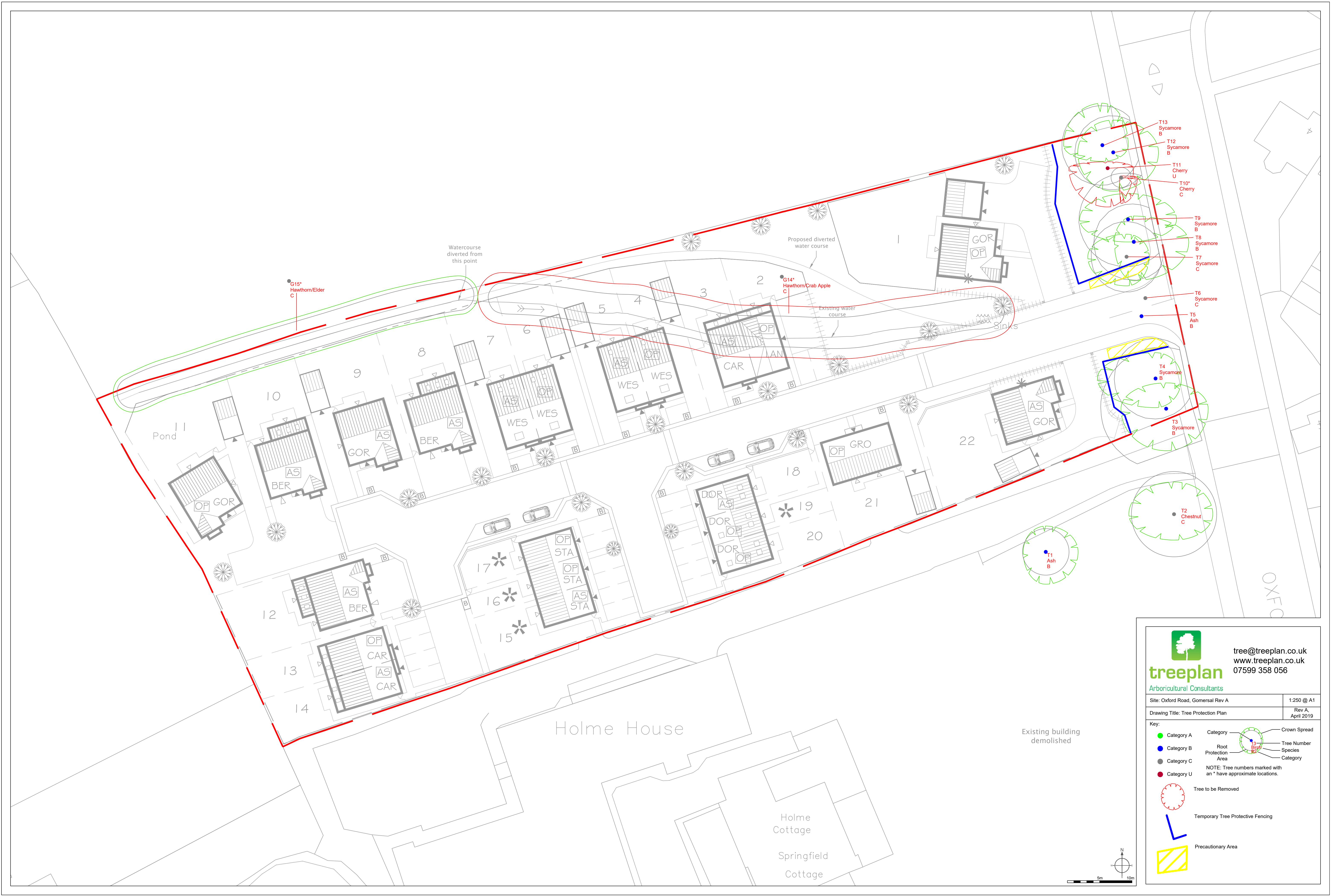
NOTE: Tree numbers marked with an * have approximate locations.

○ Crown Spread

○ Tree Number

○ Species

○ Category





tree@treeplan.co.uk
www.treeplan.co.uk
07599 358 056

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Site: Oxford Road, Gomersal Rev A	1:250 @ A1
Drawing Title: Tree Protection Plan	Rev A April 2019

Key:

● Category A

● Category B

● Category C

● Category U

Category

Root Protection Area

NOTE: Tree numbers marked with an * have approximate locations.

Tree to be Removed

Temporary Tree Protective Fencing

Precautionary Area

Crown Spread

Tree Number

Species

Category