Bloor Homes

Wickwar

Stage 1 and 2 Arboricultural Impact Assessment Report

2481614

RSK biocensus
EXPERTS IN ECOLOGY

RSK GENERAL NOTES

Project No.: 2480144

Title: Wickwar

Client: Bloor Homes

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Signature		Signature	
Date:	09.09.21	Date:	09.09.21

Where field investigations have been carried out, these have been restricted to a level of detail required to achieve the stated objectives of the work.

This work has been undertaken in accordance with the quality management system of RSK Biocensus Ltd.

CONTENTS

1 INTRODUCTION

1.1 General

This report describes the results of a survey of trees to the south west of Wickwar village Gloucestershire. The work was commissioned by Bloor Homes in December 2020 and the survey was carried out by James Butler Senior Arboricultural Consultant at RSK Biocensus, in January 2021.

1.2 Purpose of the Report

The survey was carried out in connection with proposed development, in accordance with criteria outlined in the British Standard BS5837:2012[1]. The aim was to:

- identify the quality and value of the trees;
- categorise them in respect of their suitability for retention; and
- identify the impacts of the development on the arboricultural features present.

This report is principally concerned with trees in relation to the proposed development. Although obvious structural defects and the condition of trees have been noted, this survey was not undertaken with health and safety in mind, and a detailed hazard assessment was not carried out.

The results and recommendations in this report are valid for a maximum of two years.

1.3 Site Context

1.3.1 General

The site consists of agricultural and grazing land. The site is situated within a rural location south west of Wickwar with a row of houses along the East boundary and a newly built habituated housing development further to the East. To the North, South and West are agricultural fields and farmyard buildings with associated farmhouse.

The site is predominantly flat, with all trees contained within boundary hedgerows. Trees are also present within residential gardens bordering the site on the east boundary.

[1] British Standards Institute (2012) *BS5837:2012 Trees in Relation to Design, Demolition and Construction-Recommendations.* British Standards Publications Ltd.

1.3.2 Soil

The underlying soil types will affect structural aspects of building designs and foundation depths, and this will need to be considered in relation to existing, proposed and removed trees. To avoid conflicts between trees and built structures, engineering advice will be required, and foundations will need to be designed with due regard for trees and the shrinkable soils.

British Geological Society data indicate that the survey area is sited on Westbury Formation And Cotham Member (undifferentiated) - Mudstone[2]. This is only a best estimate as no soil samples were taken or lab analysis carried out for the purpose of this report.

If shrinkable clays are present, foundation design will need to take into account mature tree heights of existing and proposed trees.

1.3.3 Protected Species

Mature trees can be used by birds and bats. All species of bat and nesting birds are protected in the UK by The Wildlife and Countryside Act 1981 (as amended), extended by the Countryside and Rights of Way Act 2000, and (for bats) the Conservation of Habitats and Species Regulations 2017 (as amended). If the presence of a legally protected species is suspected while undertaking any tree work, then the task should be halted immediately, and appropriate advice should be obtained from an ecologist.

1.4 Statutory Designations

Trees can be given statutory protection in a number of ways, including:

- tree preservation orders;
- planning conditions;
- felling licences; and
- location within a designated conservation area.

Protected trees can only be removed or pruned if permission is granted, either as part of a planning permission or in response to a separate application to the local authority (or the Forestry Commission).

The existence of a tree preservation order or conservation area does not automatically mean that a tree deserves to be a material constraint in a planning context. A formally protected tree can be in poor physiological or structural condition, making it unsuitable for retention. In that case it is inappropriate that it should influence the future use of a site.

South Gloucestershire Council has confirmed via email on the 13th January 2021 that no trees on site are protected by preservation. However, as a preservation order can be made at any time, it is always prudent to check with the council tree department prior to any tree removals or works.

[2] http://www.bgs.ac.uk/discoveringGeology/geologyOfBritain/viewer.html

[3] https://www.huntingdonshire.gov.uk/environmental-issues/trees/protected-trees/

1.5 Root Protection Area (RPA)

To ensure that a tree is not harmed by development activities, a theoretical root protection area is calculated. The British Standard (BS5837) defines the root protection area as *'the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability'*. It is initially plotted as a simple circle on the tree constraints plan with roots assumed to have colonised the ground around the tree radially.

In some instances, root growth may have been impeded by inhospitable ground conditions and so a simple circular root protection area may not be relevant to its protection. This may apply near roads, building foundations, retaining walls or water courses and, providing there is suitable rationale, the root protection area can be adjusted to reflect this. A similar overall area should be allocated to the tree so that it can continue to thrive.

Once a design layout has been completed and tree removals agreed, the retained trees should be subject to a fenced zone encompassing the root protection area or tree crown (whichever is larger) for the duration of works. No construction, level changes, installation of services, storage of spoil or materials, discharge of chemicals or any other activity which may affect tree health negatively should take place within this area.

Where sites are heavily constrained by trees which can be embraced into the development, there may be a need to build very close to their root protection area and protective fencing. This often leads to issues at the construction build stage, particularly where extreme changes in levels are required. It is therefore prudent to observe a buffer from the edge of a root protection area to allow for safe working space. A 5-metre buffer should be sufficient to avoid conflicts at construction stage.

1.6 Supplied Documents

This report was prepared using data collected on site and the following reports and plans:

- BHsodwickTOPO. DWG
- B05313 - SK07 - Proposed Northern Access Road Alignment 2004. DWG
- B05313 - SK04 - Proposed Southern Access 2004. DWG

2 METHOD

2.1 General

All inspected trees and tree groups were categorised using the British Standard BS5837:2012 and the attached tree constraints plan (TCP) (Appendix 2) shows tree positions, numbers and retention categories. A schedule of the trees is included in (Appendix 1*)*, which includes species, physiological and structural condition, age, recommendations and retention values.

The survey followed the method described in (Appendix 4) in accordance with guidance in BS5837:2012. The life expectancy and condition of each tree and tree group informs its suitability for retention.

2.2 Tree Categorisation

Trees were categorised in terms of their useful life expectancy and condition as summarised below. Full details of categorisation criteria are given in Appendix 5. Each category has three sub-categories relating to arboricultural (1), landscape (2) and cultural and conservation (3) qualities. Trees that have been categorised as A, B or C should be considered in the planning process whereas trees categorised as U are not a consideration in the planning process.

Table 1:Tree categorisation table

BS5837:2012 Categories	Definitions	Retention implications to a site
Category A (marked light green on the TCP)	Trees of high quality and value able to make a substantial contribution to the site.	Every effort should be made to retain trees and amendments to a proposed scheme should be identified in preference to tree removal.
Category B (marked mid-blue on the TCP)	Trees of moderate quality and value able to make a significant contribution to the site.	Where possible amendments to a proposed scheme should be considered in preference to tree removal.
Category C (marked in grey on the TCP)	Trees of low quality and value in an adequate condition until new planting can be established, trees with impairments downgrading them from A or B category OR young trees with a stem diameter of less than 150mm.	The retention of trees may be advantageous in the short term, but they should not be seen as a constraint to development.
Category U (marked in dark red on the TCP)	Trees that have limited condition that will fail or die within 10 years and/or should be removed for reasons of arboricultural best practice	Not a material consideration in the planning process but may have other benefits.

2.3 Distinction Between Individual Trees and Tree Groups

Trees have been recorded as individuals or as groups. BS5837:2012 sets out the description of a group as follows: "*The term "group" is intended to identify trees that form cohesive arboricultural features either* ***aerodynamically*** *(e.g. trees that provide companion shelter),* ***visually*** *(e.g. avenues or screens) or* ***culturally*** *including for biodiversity (e.g. parkland or wood pasture), in respect to each of the tree subcategories."*

Where a tree in a group has characteristics that distinguish it from the rest of the group, it is generally recorded as an individual. Such trees may *inter alia* include veteran trees, trees with significant defects, and specimen trees that stand out within the feature.

2.4 Constraints and Limitations

The trees were viewed from ground-level and from within the site boundary only. The trees were inspected using the Visual Tree Assessment method (Mattheck & Breloer 2015[3]) and guidance given in *Principles of Tree Hazard Assessment* (Lonsdale 2007[4]). Detailed inspections including decay detection, soil assessment or aerial inspections have not been carried out. Inspection was restricted in some instances by dense ivy cover, being within third-party gardens or behind security fencing with restricted access.

Trees are living organisms and their health and condition is not static. Findings and recommendations in this report are therefore only valid for one year. The health and condition of the trees may also change with other factors such as extreme weather or development work.

The presence of shrinkable soils, and their relationship between tree root activity and volumetric changes in soils that may cause structural damage to buildings, is beyond the scope of this report and has not been investigated.

Where all tree positions were not shown on the supplied topographical survey, a note has been made within the tree data tables where trees were plotted without the aid of topographical survey data.

[3] Mattheck, C. Breloer, H. (2015) *The Body Language of Trees, Encyclopedia of Visual Tree Assessment*. Karlsruhe Institute of Technology.

[4] Lonsdale, D. (2007) *Principles of Tree Hazard Assessment and Management*. The Stationary Office

3 RESULTS

3.1 Summary

A total of 23 individual trees, four groups of trees and 13 hedges were recorded. The most prominent individual trees grow internally within the boundary.

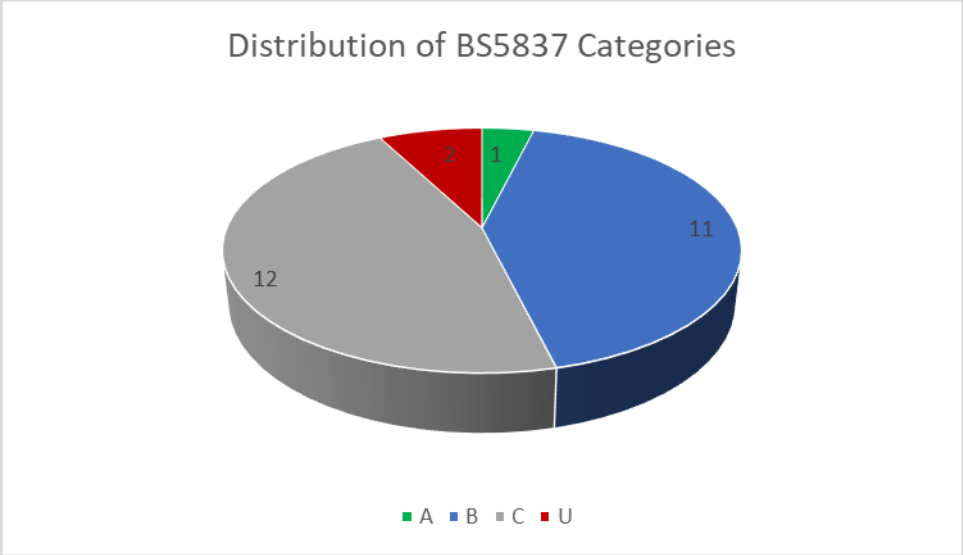
Of the 23 individual trees recorded: one was Category A; nine were Category B; 10 were Category C and two Category U.

Of the four groups recorded: two were Category B and two were category C.

Chart 1 below, shows the distribution of BS5837 quality categories recorded on site.

Further details on the individual trees and tree groups can be found in Appendix 1- Tree Survey Data.

Chart 1: Distribution of BS 5837 categories recorded



3.2 General Observations

The majority of trees recorded grow internally within the agricultural site, the fields are separated by hedges and within these boundary hedgerows are the majority of the trees. However, G1 and T1 are situated on the eastern boundary and can be viewed from the adjacent public footpath and road. T1 is a mature Ash tree that is situated outside the survey area in a residents garden which is a dominant tree when viewed from the roadside. G1 are a small group of Willow trees that act as a screen for the internal setting of the farm, both are category B class.

Tree T20 is an over mature category A Oak set within a boundary hedgerow and can be regarded as one of the best trees within the site due to its large diameter, old age and intrinsic conservation qualities.

Trees T4, T12-15 and T23 are category B class trees situated internally within boundary hedgerows. The species are predominantly Ash, one Oak and a Horse chestnut. The

three Ash trees are varied in quality with large diameter stems and established regrowth from historical pollarding with good habitat value. The Horse Chestnut is young but perfectly formed and could contribute to the site for many years to come. The Oak is large in size and a dominant tree contributing well to the local landscape.

The remaining trees are category C class and are situated within the boundary hedgerows, these trees do contribute to the site however they are of little arboricultural merit.

All hedgerows are well maintained by the landowner and are predominantly Hawthorn species which provide a good screen and numerous ecological benefits. These are also of value when considering the rural location, and they contribute well to this.

4 PROPOSALS AND IMPACTS

4.1 Development Proposal

Outline planning application (all matters reserved excluding access) for a residential development.

4.2 Tree Removals

The proposed development will require partial removal of one group (G1) to facilitate its implementation which equates to two Willow trees. This group has direct impact with the proposed northern main site access and there will be some minor loss of screening from the site to the public road.

Trees T18, T19 and H10 all have direct impact with the southern access. The loss is negligible as the trees are category C and U with limited life expectancy and poor form. The partial removal of the hedge is the northern end section, so no gaps will be created from the removal.

4.3 Retained Trees

4.3.1 General

The majority of the remaining trees can all be retained and protected to their full root protection area providing adequate tree protection is in place.

4.3.2 Root Protection Areas (RPA)

The RPA of G1, T1 and G2 have some minor incursion by the proposed northern access road/pavement. This should not cause the trees unnecessary stress as the RPA's of the groups has been buffered from the crown edge giving an ample root protection area. The trees within G2 are also small in diameter (<100mm) and the major conflicts with G1 and T1 to the west of the access has a hard surface already in place (Sodbury road) so it is highly likely that the tree roots will already have adapted to these foundations and no further root impacts are expected. If any excavation is required, this should be done with hand tools to minimise root damage under the hard surface. Therefore, the detailed design needs to incorporate this constraint using specialist construction methods such as a cellular confinement system and supervised excavation to investigate root presence should any level change be required . If any excavation is required, this should be done with hand tools to minimise root damage. If roots are found that may need to be pruned, this should be done under arboricultural supervision to avoid leaving frayed and split ends – in the hope that the tree can regenerate from the pruning points.

No significant impacts are expected providing the remainder of the RPA's are fenced off prior to works beginning. All impacts within RPA's are highlighted on the tree impact and retention plan (TIRP) with orange cross hatch (Appendix 3). All works within these areas should be done with hand tools and under the appointed arboricultural consultant.

4.3.3 Facilitation Pruning

The nature of the development is such that it is not anticipated that there will be a need for access facilitation pruning works to be carried out.

4.3.4 Services

Details of proposed drainage, and other underground services have yet to be provided. As the site is largely clear of trees it is entirely feasible to install these elements without any damage to retained trees by avoiding all RPA's.

4.3.5 Post-development Pressure

It is unlikely that there will be any post-development pressure as no retained trees are in close proximity to the proposed new buildings.

Foundations will need to take account of all trees (including those proposed in landscape schemes) and their mature heights, irrespective of the need to prune, to ensure that risk of below-ground damage is reduced as this may result in pressure to remove trees in the future.

4.4 Impact Assessment Summary

Whilst the proposed development will require the removal of a small amount trees the retention of the most significant trees and groups has been accommodated where possible. Additionally, where trees are to be retained there is a low likelihood of them being impacted by the proposed development.

It is understood that, to mitigate the tree removals that will occur on the site, new tree and landscape planting will be undertaken as part of the development. This will ensure that the site benefits from a sustainable long-term treescape and that losses caused by development are mitigated.

5 GENERAL PROTECTION MEASURES

5.1 Pre-construction

5.1.1 Arboricultural Method Statement (Stage 3)

Once the construction details are provided, a detailed arboricultural method statement (AMS) should be compiled detailing the exact location and nature of protective fencing, tree pruning, signage, timings and methods of works and other protection measures. All site operatives must be made aware of the nature of the protection detailed in the AMS and it should remain in place throughout construction.

5.1.2 Tree Works

Any tree works or tree removals required to facilitate the development should be carried out before construction begins and be in accordance with the British Standard, BS 3998:2010 Tree Work – Recommendations, once planning approval has been granted.

5.1.3 Tree Protection Measures

Any site offices, welfare units, and storage areas must respect the trees and their root protection areas, shown in purple on the supplied plans. These should be sited outside tree protection areas.

Tree protection fencing should be installed prior to demolition and any construction. This is to avoid damage to trees and preserve soil structure. The default BS5837 specification for fencing should be used for the large part of the site.

The fenced area will form a Construction Exclusion Zone and must remain undisturbed for the duration of demolition and construction unless approved works are required within it, such as removal of hard surfaces or installation of boundary treatments under arboricultural supervision and in line with an approved method statement. All site operatives should be made aware of the need to respect the fencing, and signage should be affixed to every third panel to ensure it is not moved.

Service runs and installation of utility cables also need to respect trees and their root protection areas. If any conflicts are highlighted, then the advice of either a consultant arboriculturist or the council Arboricultural Officer should be obtained.

The following precautions should be observed when working near to the Construction Exclusion Zone.

- No fires should be lit on site.
- No spoil, plant, machinery, construction materials or vehicles should track or be stored within the fenced area or leant against the fence panels.
- No fuel, chemical or other contaminated liquids must be discharged in proximity to trees or where it may flow toward tree root protection areas.
- No construction activity of any kind should take place within the fenced areas and fencing must not to be moved.
- No spoil or materials to be stored or leant against fencing.

- Damage to fencing must be reported to the site manager and rectified as soon as possible. All fencing should be maintained so that it is fit for purpose.

5.2 Post-construction

5.2.1 Replacement Planting

A suitable landscaping scheme incorporating replacement planting will go some way to mitigate for the losses on the site. This should aim to integrate trees of differing sizes appropriate for the space afforded to them.

Suitable ground conditions and aftercare are vital to the success of new trees, and the recommendations provided in the British Standard, BS 8545[5] and the Trees and Design Action Group publication – Trees in the hardscape[6] should be followed. This includes ensuring that soils are not compacted prior to planting and that adequate below ground space is provided with suitable volume requirements to support mature root growth and withstand compaction. Aftercare in the form of watering and sympathetic formative pruning in the first five years after planting will also help to ensure that the replacement trees thrive.

[5] British Standards Institute (2014) *BS 8545:2014 Trees: from nursery to independence in the landscape – Recommendations.* British Standards Publications Ltd.

[6] Trees and Design Action Group (2014) *Trees in Hard Landscapes: A Guide for Delivery.* TDAG Publication.

6 APPENDICES

APPENDIX 1: TREE SURVEY DATA

Tree Data Table **Wickwar** **RSK**

Ref	Species	Stems	**Dbh**	Height	Lwr CH	Canopy Spread (m)				Age class	Struc Condition	Phys Condition	General Observations	Est remaining LE	BS cat	Sub Cat	RPA Radius M	RPA Area M2
						N	S	E	W									
T1	Fraxinus excelsior	1	500	13	9	8	8	3	6	Mature	Fair	Fair	Situated outside boundary in residents garden. Ivy clad stem. Dbh estimated. Major poor pruning wounds present due to highway pruning. Dominant roadside tree.	20+	B	1	6.00	785.40
T2	Aesculus hippocastanum	1	400	11	3	5	7	3	5	Middle Aged	Fair	Good	Situated in residents garden. Splits into three competing mature leaders all with good u shaped unions. Healthy and sound branch network.	30+	B	1	4.80	502.65
T3	Quercus robur	1	400	13	5	6	6	6	6	Mature	Good	Good	No significant defects noted. Situated within residents garden. Measurement and observations estimated.	40+	B	1	4.80	502.65
T4	Fraxinus excelsior	1	350	10	2	8	8	8	8	Mature	Fair	Good	Situated within hedge line. Ivy clad stem. Over extended branches. Low branches overhanging field.	30+	B	1	4.20	384.85
T5	Fraxinus excelsior	1	300	11	3	8	4	6	6	Middle Aged	Poor	Fair	Situated in hedge line. Poor crown form with failed central branches. Competing central leaders.	20+	C	1	3.60	282.74
T6	Fraxinus excelsior	1	250	7	2	6	6	5	4	Middle Aged	Fair	Poor	Situated within hedge line. Hawthorn growing within crown break. Poor crown form with short growth extension. Minor die back.	10+	C	1	3.00	196.35
T7	Fraxinus excelsior	4	740	12	4	7	5	6	7	Mature	Fair	Fair	Mature regrowth from stump with 4 stems. Barbwire encapsulated within two trunks. Lower pruning wounds present. Included bark at base of trunks.	20+	C	1	8.88	1720.34
T8	Fraxinus excelsior	1	350	13	3	4	4	5	4	Mature	Poor	Poor	Situated outside boundary within hedge line. Ivy clad stem. Major dead wood and die back present in lower crown.	20+	C	1	4.20	384.85
T9	Fraxinus excelsior	1	120	7	2	4	4	4	4	Young Mature	Fair	Good	Small tree set within hedge line. Twin stemmed at 1m.	30+	C	1	1.44	45.24
T10	Quercus robur	N/A	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Failed tree on ground.	N/A	N/A	N/A	0.00	0.00
T11	Fraxinus excelsior	1	280	9	3	6				Middle Aged	Fair	Fair	No significant defects noted. Minor kink in lower stem and a small hawthorn rubbing trunk.	30+	C	1	3.36	246.30
T12	Fraxinus excelsior	1	520	8	2	1	2	7	3	Veteran	Poor	Fair	Failed tree at trunk, now has established lower regrowth, over extended large branch to the east with high chance of failure. Trunk has severe decay. Excellent habitat qualities.	10+	B	3	6.24	849.49
T13	Fraxinus excelsior	1	900	12	3	6	6	6	6	Over Mature	Good	Fair	Large diameter coppard that splits into three stems. Some minor pruning wounds but overall in a good condition.	40+	B	13	10.80	2544.69
T14	Fraxinus excelsior	1	1000	14	6	0	5	0	7	Veteran	Poor	Poor	Declining tree with severe hollow andf ongoing decay. Previous failure leaving a monolith structure with some lower crown reiteration. High bat potential.	10+	C	3	12.00	3141.59
T15	Fraxinus excelsior	1	900	10	5	8	4	6	7	Over Mature	Fair	Fair	Old pollard with regrowth. Minor dead wood. Major branches are sound with good structure.	30+	B	13	10.80	2544.69
T16	Fraxinus excelsior	1	320	11	3	3	4	4	3	Middle Aged	Poor	Poor	Decay throughout. Major terminal decline. Twin stemmed at 3m. Ivy clad throughout.	<10	U	1	3.84	321.70
T17	Aesculus hippocastanum	1	200	6	2	3	3	3	3	Young Mature	Good	Good	No significant defects noted.	40+	B	1	2.40	125.66
T18	Aesculus hippocastanum	1	250	5	2	3	1	5	3	Young Mature	Poor	Poor	Central stem has failed and die back present.	<10	U	1	3.00	196.35
T19	Crataegus monogyna	1	240	5	2	3	1	0	0	Young Mature	Poor	Poor	Ivy clad with poor form.	20+	C	1	2.88	180.96
T20	Quercus robur	1	1250	13	3	8	8	8	8	Over Mature	Good	Fair	Large diameter tree. Evidence of animal burrowing at base. Some minor tip die back .	30+	A	1	15.00	4908.74
T21	Crataegus monogyna	1	170	4	0	1	1	1	1	Young Mature	Fair	Fair	Small multi-stemmed at ground level. Within hedge line.	20+	C	1	2.04	90.79
T22	Quercus robur	1	800	8	4	9	6	2	5	Mature	Poor	Fair	Decayed buttress roots on north side with cavities. Kink in trunk and poor crown form due to suppressed from adjacent tree. Minor dead wood throughout.	10+	C	13	9.60	2010.62
T23	Quercus robur	1	1150	12	6	8	10	6	4	Over Mature	Fair	Fair	Large diametre Oak tree with assymetric crown.	20+	B	2	13.80	4154.76

Group Data Table **Wickwar** **RSK**

Ref. No.	Dominant Species	Lesser Species	Av Diameter	Av Height	Lwr CH	Av spread	Age class	Struc Condition	Phys Condition	General Observations	Est remaining LE	BS cat	Sub Cat	RPA Radius M	RPA Area M2
G1	Salix sp		400	12	1	5	Middle Aged	Fair	Fair	Small group of Willow trees in filed that can be seen from the roadside. Provides a small screen to the farm filed.	20+	B	2	4.80	502.65
G2	Cupressocyparis leylandii		50	3	0	1	Young Mature	Fair	Fair	Boundary screen hedge with no significant defects.	10+	C	2	0.60	7.85
G3	Crataegus monogyna;Ulmus sp		50	3	0	1	Young Mature	Fair	Fair	Hedge that has now developed into small trees.	10+	C	2	0.60	7.85
G4	Populus nigra 'Italica'	Prunus spp.	400	16	1	3	Middle Aged	Fair	Fair	Group of maturing poplars and Willow in garden on boundary.	20+	B	2	4.80	502.65

Hedge Data Table

Wickwar

RSK

Ref	Dominant species	Lesser species	Av height	Av spread	Comments
H1	Crateagus monogyna		2	1	Agricultural field boundary hedgerow. Maintained and in good condition.
H2	Crateagus monogyna;Umlus		1	1	Agricultural field boundary hedgerow. Maintained and in good condition.
H3	Crateagus monogyna;Umlus		3	1	Agricultural field boundary hedgerow. Maintained and in good condition.
H4	Crateagus monogyna		1	1	Agricultural field boundary hedgerow. Maintained and in good condition.
H5	Crateagus monogyna;Umlus		3	1	Agricultural field boundary hedgerow. Maintained and in good condition.
H6	Crateagus monogyna		1	1	Agricultural field boundary hedgerow. Maintained and in good condition.
H7	Crateagus monogyna		1	1	Agricultural field boundary hedgerow. Maintained and in good condition.
H8	Crateagus monogyna	Ulmus spp, Acer spp	3	1	Agricultural field boundary hedgerow. Maintained and in good condition.
H9	Crateagus monogyna;Prunus		1	1	Agricultural field boundary hedgerow. Maintained and in good condition.
H10	Crateagus monogyna;Prunus		1	1	Agricultural field boundary hedgerow. Maintained and in good condition.
H11	Crateagus monogyna;Prunus		1	1	Agricultural field boundary hedgerow. Maintained and in good condition.
H12	Crateagus monogyna;Prunus		1	1	Agricultural field boundary hedgerow. Maintained and in good condition.
H13	Crateagus monogyna;Prunus		2	1	Agricultural field boundary hedgerow. Maintained and in good condition.

APPENDIX 2: TREE CONSTRAINTS PLAN

RSK biocensus
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18 Frogmore Rd
Hemel Hempstead
HP3 9RT
01442 437500

Tree Constraints Plan

SCALE : 1 : 2500 @ A3

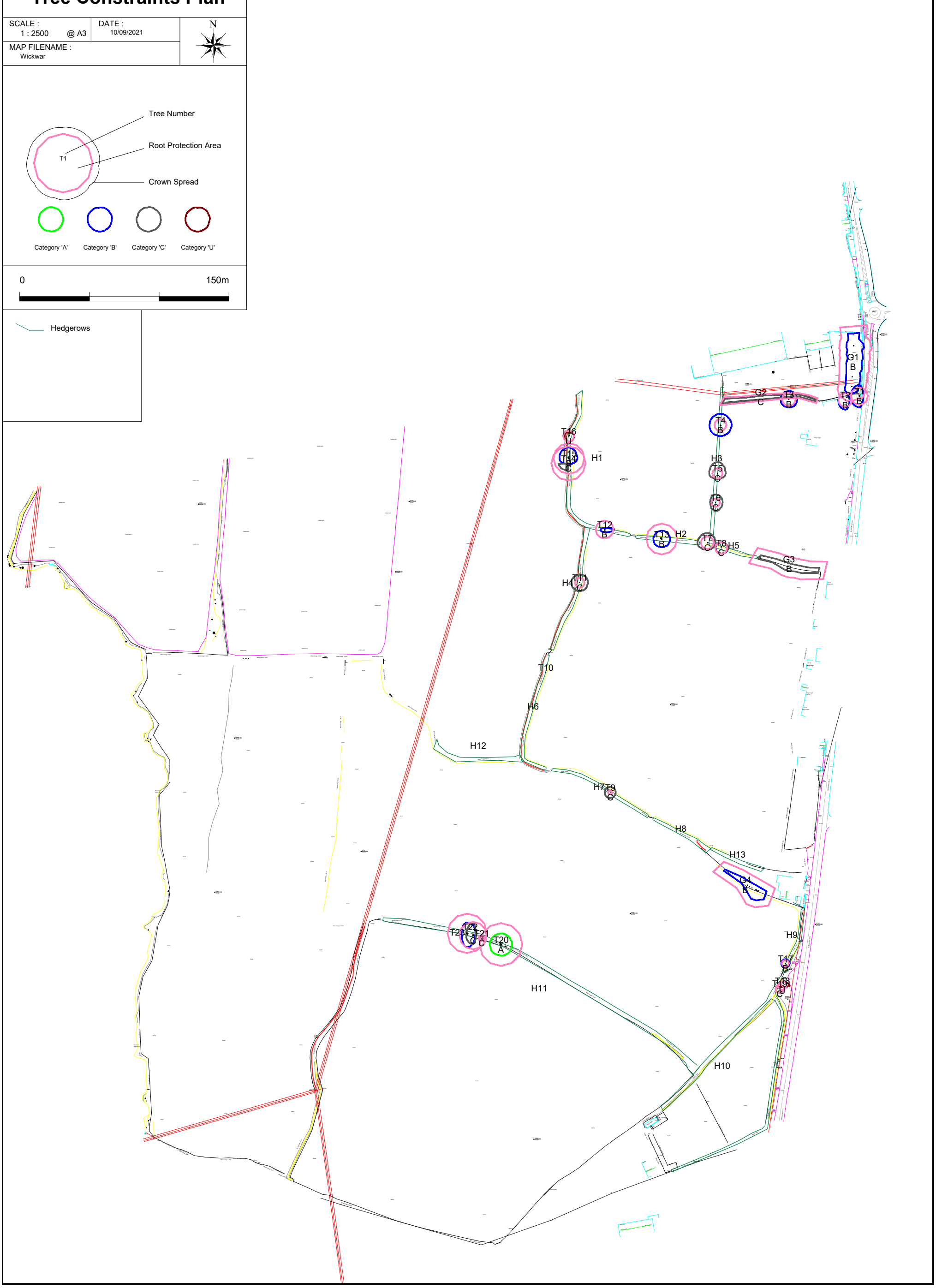
DATE : 10/09/2021

MAP FILENAME : Wickwar

N

0 150m

Hedgerows



APPENDIX 3: TREE IMPACT AND RETENTION PLAN

RSK biocensus
EXPERTS IN ECOLOGY
18 Frogmore Rd
Hemel Hempstead
HP3 9RT
01442 437500

Tree Impact and Removal Plan

SCALE : 1 : 2500 @ A3

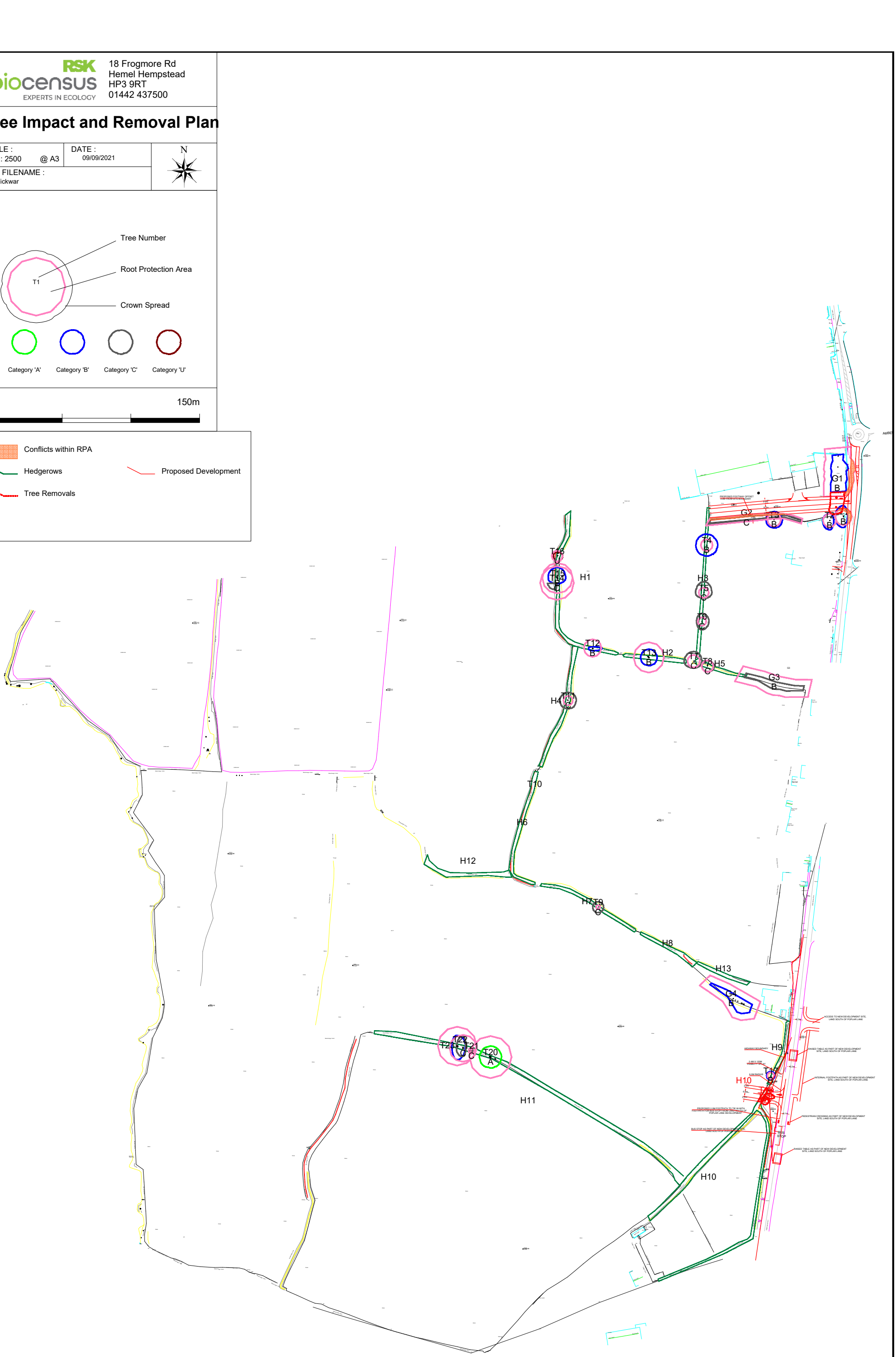
DATE : 09/09/2021

MAP FILENAME : Wickwar

N

0 150m

Conflicts within RPA
Hedgerows
Proposed Development
Tree Removals



APPENDIX 4: TREE SURVEY KEY

Reference

Each tree or group has been assigned a sequential number.
T- Tree
G-Group

Species

Represents the genus, species and if appropriate cultivar of the tree. The information is given first in the scientific name and common in brackets.

Stems

Number of stems present.

Measurements

- DBH - Stem diameter in millimetres measured at 1.5m above ground level. Where the stem is divided below 1.5m, measurement is taken as directed by BS 5837 Annex C.
- Height – Tree height measure in metres to the nearest half metre,
- Lower crown height – Lower crown height above ground in metres of the first lowest significant branch.

Age Classification

The following classification is employed:

- Y - Young: Saplings and young trees under 10 years of age
- SM – Semi Mature: Trees older than 10 years but less than one third of the life expectancy of their species, normally making substantial extension growth.
- EM – Early Mature: Trees between one third and two thirds of the life expectancy of their species. More or less full Height and large girth, increasing only slowly.
- M – Mature: Trees beyond two thirds of the life expectancy of their species. No significant extension growth.
- OM – Over Mature - a tree having reached its maximum life span and is declining in health and size due to old age.
- V – Veteran: Trees that shows features of biological, cultural or aesthetic value that are characteristic of an individual surviving beyond the typical age range for the species.

Structure Condition

An assessment of the structural/safe condition of the tree categorised into:

- GOOD - a tree in a safe condition with no significant defects,

- FAIR - a tree in a safe condition at present but with defects or with significant defects that can be remediated,
- POOR - a tree with significant defects that can't be remediated.

Physiological Condition

An assessment of the physiological condition (i.e. health/vitality) of the tree categorised into:

- GOOD - a tree in a healthy condition with no significant problems
- FAIR - a tree generally in good health with some problems that can be remediated
- POOR - a tree in poor health with significant problems that can't be remediated
- DEAD - a tree without sufficient live material to sustain life

General Observations

Observations made by the assessor relating to the category classification and arboricultural merits or concerns.

Estimated Remaining Contribution in Years

The estimated remaining contribution in years is an estimate based on currently known factors of the possible remaining life of the tree as an asset. Clearly, it is impossible to predict changes in condition which may occur in the future and this reflects what is considered reasonable under existing circumstances, the classification that has been used is in accordance with the British Standard 5837.
The estimated remaining contribution in years will be dependent on the interaction of the typical longevity of the species, its current age and condition with prevailing environmental factors. The estimated remaining contribution in years also dependent on future tree management that can extend useful life in some instances.

Tree Categorisation Using BS 5837 Methodology

The trees surveyed were categorised using the method explained in BS5837 Trees in Relation to Construction 2012. This method categorizes individual trees, groups and woodlands in a systematic way.

Groups are identified as those trees forming a single arboricultural feature with trees that provide companion shelter, are avenues or screens or cultural.

Initially the surveyor will determine if the tree should be regarded as a U category tree. U category trees are those that are low value trees that have little future due to physiological and structural condition.

Other trees are graded A, B or C. The initial category should reflex the trees value in making an important contribution to the amenity of the site over a period of time. The higher the tree category the longer the perceived time period.
A subcategory is included 1, 2 or 3. This subcategory reflects the type of value the surveyor feels the tree presents in regards its value to 1 – arboricultural, 2 – landscape, 3 – cultural or conservation.

The cascade chart used is included as Appendix 5 of this report.

APPENDIX 5: BS5837:2012 CASCADE CHART

Table 1 **Cascade chart for tree quality assessment**

Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention (see Note)				
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	• 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 category U trees (e.g. 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, or very low quality trees suppressing adjacent trees of better quality *NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see **4.5.7**.*			See Table 2
	1 Mainly arboricultural qualities	**2 Mainly landscape qualities**	**3 Mainly cultural values, including conservation**	
Trees to be considered for retention				
Category A **Trees of high quality** with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	See Table 2
Category B **Trees of moderate quality** with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value	See Table 2
Category C **Trees of low quality** with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	See Table 2

