

NYMNPA

12/04/2022

Fox and Rabbit Farm,
Pickering,
YO18 7NQ

Arboricultural Report

April 2022

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1 Introduction

- 1.1.1.1 This report presents the results of an Arboricultural Survey undertaken at the site of the Fox and Rabbit Farm, Pickering. The study area (see Figure 1) extends to approximately 0.1 hectares and is centred at approximate grid reference SE 8468 8824.
- 1.1.1.2 The Arboricultural Survey has been undertaken to provide supporting information for proposed development of the site.
- 1.1.1.3 The Arboricultural Survey included a Tree Constraints Survey which was conducted on the 6th of April 2022 by James Blades TechArborA.
- 1.1.1.4 This report also includes an Arboricultural Impact Assessment. This will outline the impacts the proposed development will have upon the trees on site.

Figure 1. Approximate boundary of the proposed development outlined in red (aerial imagery dated 2018).



2 Methodology

- 2.1.1.1 This arboricultural survey covers those trees or groups of trees which are considered relevant for the brief. During the survey all relevant individual trees and groups of trees located within and close to the boundary of the site were assessed. Trees with an estimated stem diameter of 75 mm or more that overhang the study area or are located within a distance of up to 12 times their estimated stem diameter were included in the survey.
- 2.1.1.2 The objective of the survey was to collect tree data relevant to the proposed works at the site and to categorise individual trees or tree groups in accordance with BS 5837:2012 'Trees in relation to design, demolition and construction – Recommendations'¹ based on their condition, quality and future potential.
- 2.1.1.3 The purpose of the categories within BS 5837:2012 is not to determine whether retention of trees is desirable, 'The purpose of the tree categorization method, which should be applied by the 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 the development occurring.' (BS 5837:2012, Section 4.5.2). This survey should therefore be regarded as an initial appraisal with observations recorded for trees within and adjacent to the site. Remedial tree works, foundation design and material specification are not covered within this report.
- 2.1.1.4 The location of the trees is shown within the attached Tree Constraints Plan (TCP) (Appendix 3). A detailed inspection of the trees with respect to decay, defects and hazard is not included. The tree locations are as shown on the topographical drawing supplied.
- 2.1.1.5 The site survey was conducted on 6th April 2022 by James Blades TechArborA in accordance with the BS 5837:2012 methodology¹. The surveyor is an appropriately qualified and experienced arborist, having worked in the arboricultural industry for over 9 years, undertaken tree surveys and completed training in BS 5837:2012 survey methodology. Information collected during the survey included species, height, stem diameter, branch spread, height of crown clearance, age class, physiological condition, structural condition, estimated remaining contribution and category grade. The survey was made at ground level using visual assessment of the tree canopy and stem. No removal of vegetation, digging or drilling was undertaken during the survey and parts of the stems of some trees remained partly obscured by vegetation.
- 2.1.1.6 The TCP in Appendix 3 shows the positions, canopy spreads and Root Protection Areas RPA of the trees included within the survey. The RPA's have been calculated in accordance with Section 4.6 of BS 5837:2012. Where significant ground constraints, such as roads, walls, buildings, water bodies are likely to restrict and influence root development, the RPA circles have been adjusted to form a polygon of equivalent area, in order to show the likely rooting area for trees subjected to significant constraints, in accordance with paragraph 4.6.2 of BS5837:2012.
- 2.1.1.7 When considering the layout of the site and the retention of trees, proposals should generally be kept outside of both the RPA and the canopy spreads. However, it may be possible to encroach into these with access roads, footpaths and parking areas assuming the existing ground levels can be maintained and the appropriate construction methods are used. No liability can be accepted by Quants Environmental in respect of the trees or for events which happen after the time of the survey.

¹ British Standards Institution (BSI) BS 5837:2012. Trees in relation to design, demolition and construction – Recommendations. Published by BSI Standards Limited 2012. ISBN 978 0 58069917 7.

3 Results

- 3.1.1.1 The survey results are shown in Appendix 2 (Tree Survey Results – Table 1) and Appendix 3 (Tree Constraints Plan). The trees included within this survey comprise of 7 individual trees.
- 5 individual trees were classified as BS5837:2012 Category C.
 - 2 individual trees were classified as BS5837:2012 Category U.
- 3.1.1.2 This report is concerned with trees found primarily along the south of a public footpath in relation to a proposed barn structure (specifically those which have a RPA close to the proposed development). The site is comprised of a single small field currently used as a caravan park. The site is located within a working agricultural farm. Tree species identified on the site consist of crack willow *Salix fragilis*, leylandii *Cupressus x leylandii*, lombardy poplar *Populus nigra* 'Italica' and scots pine *Pinus sylvestris*.
- 3.1.1.3 The site is located within the arable area of Pickering/Lockton and is approximately 6.6 km north east of the town of Pickering. The site is surrounded by further arable land on all sides. Canopy cover in the local area is high and made up primarily of mature individual trees or belts along field boundaries with the large North Riding Forest Park immediately to the west.
- 3.1.1.4 A TPO check was made via Ryedale District Council's online interactive mapping service, it was found that there are no TPO's covering the trees in question. The site is not within a conservation area.
- 3.1.1.5 T1-T5 are the principal trees in relation to the site and proposed development.
- 3.1.1.6 T1 and T2 are both willow trees in a compromised condition. T1 has suffered from several past limb failures and has a significant decay column running along the west side of the largest remaining central limb. T2 appears to have significant dieback within the crown and is considered to be standing deadwood. The trees are considered to be BS5837:2012 Category U.
- 3.1.1.7 T3 and T4 are both maturing leylandii trees with to significant defects, both have some minor included unions throughout the crown typical of the species, the trees may have suffered from some root disturbance/destruction to the southern outer root protection area's (RPA) due to the previous excavations here. Both trees are considered to be BS 5837:2012 Category C1.
- 3.1.1.8 T5 is a large poplar tree, the tree has suffered from some past limb failures which have since been pruned back. It is estimated that the tree has lost up to 40% of its total canopy due to these recent failures. Similar to T3 and T4 the tree has likely suffered from root destruction/disturbance to the outer southern RPA due to past installation of an area of hardcore (see Appendix 2, Image 5-6). It appears that the area outlined has been excavated to a depth of approximately 300-400 mm and infilled with a layer of hardcore in order to create a storage area for farm machinery and hay bales. The remaining crown does not yet appear to have suffered from any die back due to previous damage. The tree is considered to be BS5837:2012 Category C1.
- 3.1.1.9 T6 is a small scots pine tree heavily suppressed by T5. The tree is considered to be BS5837:2012 Category C2.
- 3.1.1.10 T7 is a large spreading willow tree to the south of the proposed development. The tree has had several large limbs removed in the past and also may have been historically pollarded to 1.5 m due to the multi-stemmed nature of the tree. The tree appears to be in a fair condition and is considered to be BS5837:2012 Category C1.

4 Arboricultural Impact Assessment

4.1 *Introduction*

- 4.1.1.1 The Arboricultural Impact Assessment will outline the potential impact this development will have on the trees which are to be retained. The implications will be discussed in terms of below ground constraints and above ground constraints. Possible remedial actions will be discussed where the development impacts significantly on retained trees.

4.2 *Development Proposal*

- 4.2.1.1 The proposal is for the development of a single agricultural barn structure within the north western area of the current caravan field, the structure will have no linked utilities/drainage and will face directly onto an existing access track to the south of the proposed structure.

4.3 *Tree Removal*

- 4.3.1.1 It is considered that T1 and T2 will require removal prior to any development. The trees are in a severely compromised structural condition. The proposed development will also likely impact upon the trees beyond any damage that has already occurred from the previous excavations and installation of hard standing in this area.
- 4.3.1.2 It is recommended that where possible the trees are removed and replaced on a 1:1 basis to prevent the future fragmentation of the tree line here.

4.4 *Below Ground Constraints*

4.5 *Excavation Within the RPA*

- 4.5.1.1 Previous excavation to an approximate depth of 300-400 mm has taken place within the RPA of T3, T4 and T5 (see Appendix 2, Image 5, 6, 7 and 8 and Appendix 4). Where previous excavations (for the purpose of creating an area of hard standing) have taken place it is highly likely that rooting has been destroyed/removed.
- 4.5.1.2 Although the position of the proposed structure is within the projected RPA of these trees it is considered that no impact will occur due to the previous works in this area and the removal of any rooting.
- 4.5.1.3 The south western corner of the proposed structure may have small impact on the outer RPA of T7. The proposed footprint of the structure will cover approximately 2% of the total RPA of T7.
- 4.5.1.4 Similar to T5 it appears that the area of impact has previously been excavated and filled with hardcore. Further to this, there is a heavily trafficked farm access track along the north and north eastern RPA of T7. This will likely mean that rooting in the outer northern RPA of T7 is severely limited with significant rooting here unlikely due to the heavy compaction by large agricultural vehicles.

4.5.2 *Soil Compaction Within the RPA*

- 4.5.2.1 It is not considered that soil compaction will be an issue given the extensive nature of existing hard standing over the RPA of the identified trees.
- 4.5.2.2 It is not considered that any fencing other than site boundary fencing situated along the northern edge of the existing hard standing will be required in order to protect the retained trees.

4.5.3 *Underground Utilities/Service Provision*

4.5.3.1 There are no underground services to proposed within the RPA of any retained trees.

4.6 *Above Ground Constraints*

4.7 *Access Facilitation Pruning*

4.7.1.1 It is not currently envisaged that there will be a need for access facilitation pruning.

4.7.1.2 T5 is the only tree that has a crown spread close to the proposed structure. The tree has a very high crown due to the failure of all lower limbs/branches and so no pruning will be required for clearance.

4.7.1.3 Should any pruning requirements be identified on site during the development, advice should be sought by a qualified arboricultural consultant and the relevant LPA should be consulted.

4.7.1.4 All pruning work must be carried out in accordance with BS3998:2010 Tree Work Recommendations and be completed by appropriately qualified, experienced and insured arboricultural contractors.

4.8 *Construction Access and Activities*

4.8.1.1 Access to the site for the construction of the proposed development will be directly from within the farm via existing farm access tracks.

4.8.1.2 All storage areas, cement mixing and washing points must be outside of the small areas of soft ground around the tree stems as well as the paving areas where contamination of the soils here could take place.

4.9 *Post Development Pressures*

4.9.1.1 The proposed development and associated access have been designed around the existing trees, ensuring that the relationship is acceptable and will not cause future conflict.

4.9.1.2 The processes of construction are unlikely to have a detrimental effect upon the health of the retained trees assuming recommendations made within this Arboricultural Impact Assessment and the subsequent Method Statement are adhered to at all times by the contractor, e.g. the positioning of a suitable fence between the retained trees and construction activities prior to commencement of works and that the fence remains intact and in position throughout the duration of the project.

4.9.1.3 Due to the current condition of T5 it is recommended that the trees physiological and structural condition is monitored moving forward in light of both the loss of canopy and potential root removal/disturbance.

Appendix 1. Photographs

Image 1 – Looking east to T1, coulmn of decay and previous limb failures indicated (since pruned back).



Image 2 – Looking north to T2, heavy deadwood+previous limb failures (since pruned back) indicated.

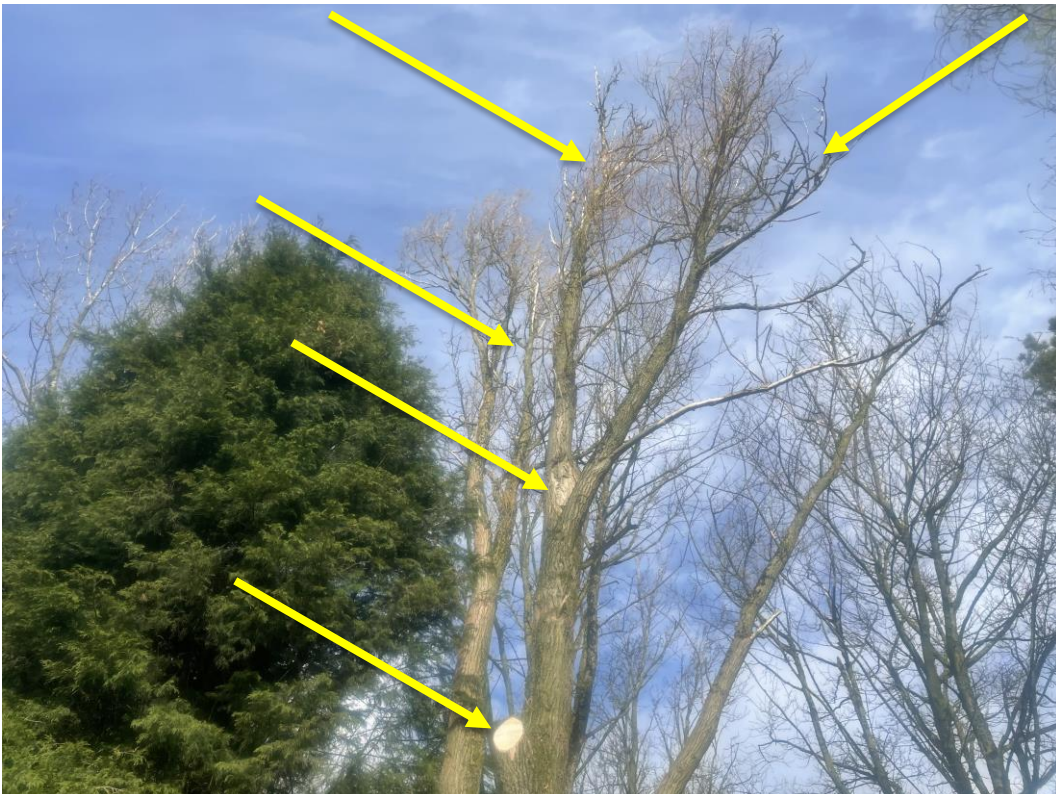


Image 3 – Looking north to T3 and T4 (right to left).



Image 4 – Looking north to T5 and T6 (right to left), large limb failure on T5 indicated (since pruned back).

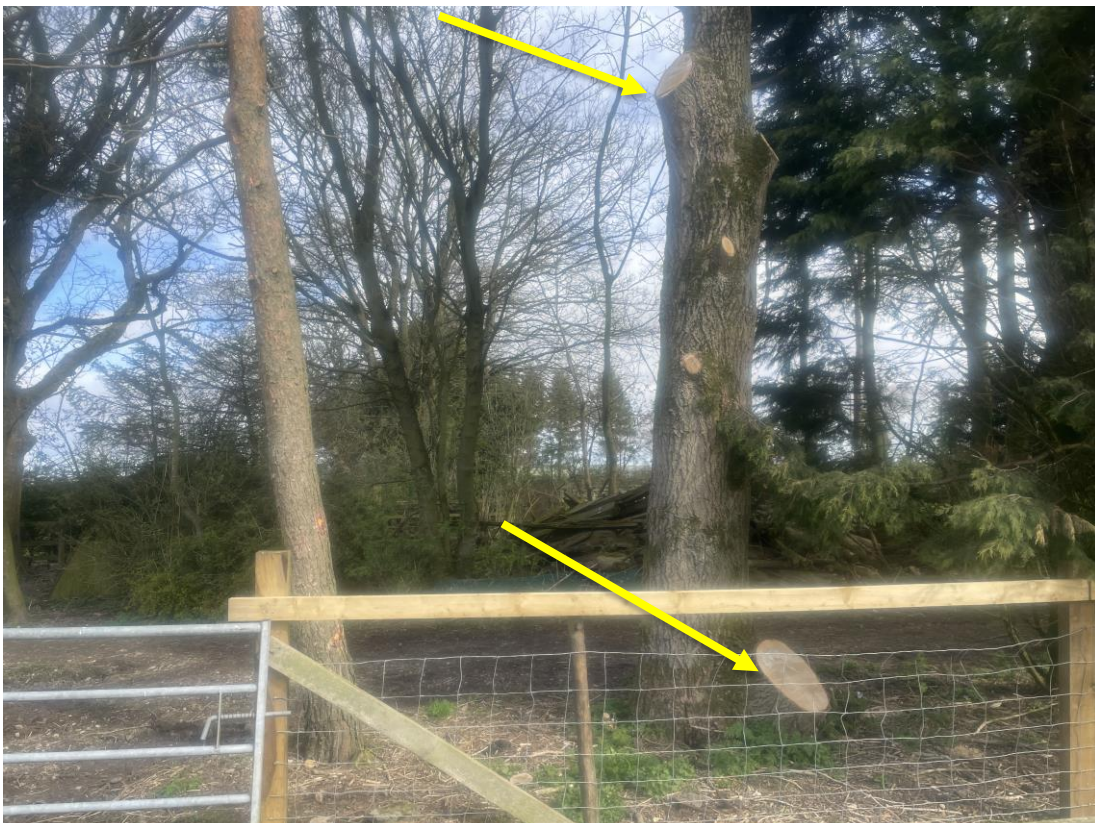


Image 5 – Looking east along tree line, area of previous excavation can clearly be seen. Blue poles show the approximate proposed north wall of the barn (indicated).



Image 6 – Previous power utilities for caravan bay also likley to have contributed to historic root removal in this area (indicated).



Image 7 – Looking west along the tree line, again blue poles indicate approximate position of proposed barn.



Image 8 – Depth of excavation is between 300-400 mm below the existing ground level, back fill with hardcore and subsequent compaction of the area will have removed the majority of rooting here.



Image 9 – Looking south to T7.



Image 10 – Heavily compacted access track (blue) and south extent of previous excavations is indicated (yellow).



Appendix 2. Tree Survey Results – Table 1

Tree/ Group Ref.No.	Species	Height (m)	Crown Spread (m)				Crown Clearance	Stem diameter (mm)	Age class	Physiological Condition	Structural Condition	Condition	Management recommendations	ERC	Cat Grade	Radius of Nominal Circle (m)	RPA SqM
			W	N	S	E											
T1	Crack willow	15	3	10	4	7	3	750	M	F	P	large spreading willow along public right of way, previously lost two large limbs at the base south side since pruned back, heavy centralised decay column running from base west side along largest central stem to 4 m, poor form and condition, minor landscape value to the immediate area	remove	<10	U	9	254.50
T2	Crack willow	15	3	5.5	1	3	4	760	M	P	P	mature willow, standing deadwood with over 80% crown dead, large previous limb failure south side since pruned back, minor landscape value to the immediate area	remove	<10	U	9.12	261.33
T3	Leylandii	15	2.5	2.5	2.5	2.5	0	280x170	M	G	F	maturing leylandii, in a fair condition with an included union between the two primary stems at 0.5 m typical of the species, minor landscape value to the immediate area	Retain or remove as per development plan	10+	C1	3.9	48.50
T4	leylandii	15	3	3	3	3	0	370	M	G	F	maturing leylandii, in a fair condition with several small included unions typical of the species, minor landscape value to the immediate area	Retain or remove as per development plan	10+	C1	4.44	61.94
T5	lombardy poplar	18	4.3	4.3	4.3	4.3	6.5	640	M	F	F	large poplar along public footpath, tree has had two large limb failures recently that have since been pruned back at both ground level south side and 4 m west side,	Retain or remove as per development plan	10+	C2	7.68	185.32

Tree/ Group Ref.No.	Species	Height (m)	Crown Spread (m)				Crown Clearance	Stem diameter (mm)	Age class	Physiological Condition	Structural Condition	Condition	Management recommendations	ERC	Cat Grade	Radius of Nominal Circle (m)	RPA SqM
			W	N	S	E											
											has lost approximately 40% of total crown, remaining crown appears to be in fair condition with minor deadwood, roots appear to have been destroyed south side 4 m from stem due to area of hardcore for storage, Minor landscape value to immediate area						
T6	Scots pine	10	3.5	3.5	0.5	0.5	3.5	260	M	F	F	small established pine by gate, heavy North Western crown/stem lean due to suppression by T5, in fair condition, very minor landscape value	Retain or remove as per development plan	10+	C1	3.12	30.59
T7	crack willow	14	9.5	5	6.5	3	2	350x520x260 x320x150	M	F	F	large spreading willow south of farm access track, several large limbs have been removed east side at 0.5 m in the past, co dominant at base and then multi-stemmed at 1.5 m with, possible previous pollard at this point, heavy co paction to the north and east from farm traffic, some trenching evidence for minor services to the east and north, mi or landscape value to the immediate area	Retain or remove as per development plan	10+	C1	9.2	264.90

Key:

* - Denotes estimated measurement where access to tree stems was restricted or not accessible.

Tree/ Group Ref No. – tree/group number, to be recorded on tree survey plan where necessary.

Species – common and scientific names where possible.

Height – overall height of tree in metres.

Stem Dia – stem diameter, in millimetres at 1.5m above adjacent ground level (on sloping ground to be taken on the upslope of the tree base) or immediately above the root flare for multi-stemmed trees.

Branch spread – in meters taken at the four cardinal points to derive an accurate representation of the crown (to be recorded on the tree survey plan where necessary).

Height of cc – height of crown clearance – in meters above adjacent ground level to inform on ground clearance, crown stem ratio and shading.

Age class – young (Y), young mature (YM), mature (M), over mature (OM) and veteran (V).

Physiological condition – e.g. good (G), fair (F), poor (P) and dead (D).

Structural condition – e.g. collapsing, the presence of decay and any physical defect.

Management recommendations – including further investigations of suspected defects that require more detailed assessment and potential wildlife habitat.

ERC – estimated remaining contribution – in years e.g. less than 10, 10-20, 20-40, more than 40.

Cat grade – category grade – U or A to C, to be recorded in plan on the tree survey plan where possible.

RPA – Root protection area calculated from BS5837:2012 Trees in Relation to Design, Demolition and Construction – Recommendations in sq/m. Where indicated, dimensions of radius of circle or sides of square based around centre point of trunk calculated for design purposes.

Table 2. Cascade Chart for the Quality Assessment²

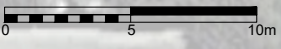
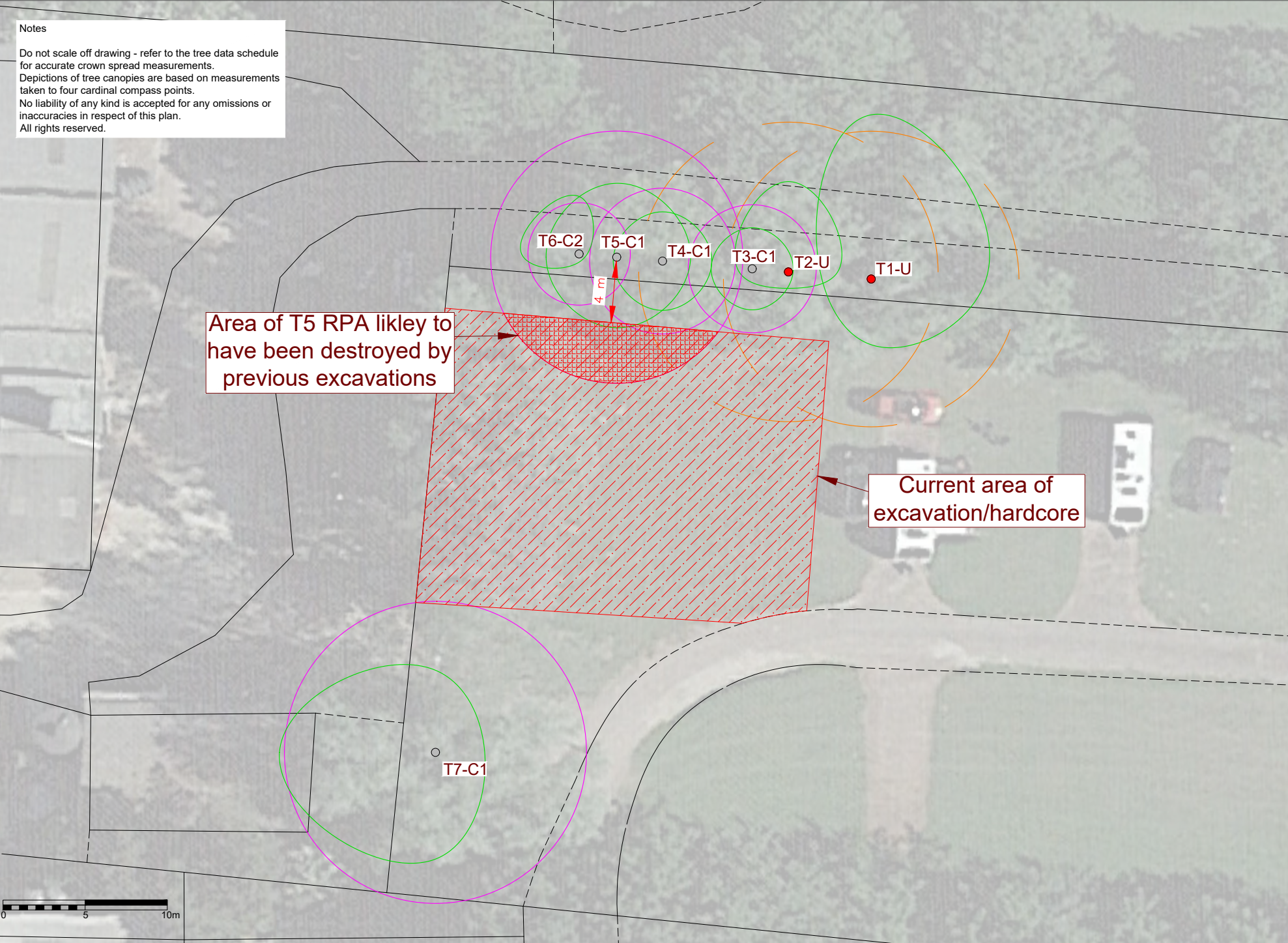
Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention				
<p>Category U</p> <p>Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.</p>	<p>Trees that have 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).</p> <p>Trees that are dead or are showing signs of significant, immediate or irreversible overall decline.</p> <p>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.</p> <p><i>Note: Category U trees can have existing or potential conservation value which it might be desirable to preserve.</i></p>			See Table 2
	1 Mainly arboricultural qualities	2 Mainly landscape qualities	3 Mainly cultural values, including conservation	
Trees to be considered for retention				
<p>Category A</p> <p>Trees of high quality with an estimated remaining life expectancy of at least 40 years</p>	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 or trees or wood pasture).	See Table 2
<p>Category B</p> <p>Trees of moderate quality with an estimated remaining life expectancy of at least 20 years</p>	Trees that might be included in Category A, but were 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 groups or woodlands, such that they attract a higher collective rating than they might attract 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
<p>Category C</p> <p>Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter of <150mm.</p>	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

² The British Standards Institute 2012, Page 9 – Table 1.

Appendix 3. Tree Constraints Plan

Notes

Do not scale off drawing - refer to the tree data schedule for accurate crown spread measurements.
 Depictions of tree canopies are based on measurements taken to four cardinal compass points.
 No liability of any kind is accepted for any omissions or inaccuracies in respect of this plan.
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Key

	Trees Showing Canopy extents, category colour and tag number (with category).
	Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years.
	Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.
	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.
	Category U Trees in such a condition that they can not realistically be retained as living trees in the context of the current land use for longer than 10 years.
	Tree Groups Shown as dashed centre/boundary line. Colour represents category (see above).
	BS 5837:2012 Root Protection Area
	Category U BS 5837:2012 Root Protection Area



Tree Constraints Plan			
Client: Graham Cockerill			
Site/Project: Fox and Rabbit Farm, Lockton, Pickering, YO18 7NQ			
Scale/Sheet: 1:150 - A2	Date: 08/04/2022		
Drawing No: 1701	Rev: 1	Drawn By: JB	Checked By: JS

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Appendix 4. Tree Assessment Plan

Notes

Do not scale off drawing - refer to the tree data schedule for accurate crown spread measurements.
 Depictions of tree canopies are based on measurements taken to four cardinal compass points.
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Area of T5 RPA likely to have been destroyed by previous excavations

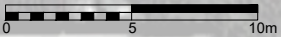
Minor area of encroachment on T7, <2% of total RPA

T1 and T2 require removal due to compromised condition

Current area of excavation/hardcore

Proposed location of barn structure

Existing historic access track heavily compacted by agricultural machinery likely limiting root growth



Key

- Trees**
Showing Canopy extents, category colour and tag number (with category).
T1-B
- Category A**
Trees of high quality with an estimated remaining life expectancy of at least 40 years.
- Category B**
Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.
- 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.
- Category U**
Trees in such a condition that they can not realistically be retained as living trees in the context of the current land use for longer than 10 years.
- Tree Groups**
Shown as dashed centre/boundary line. Colour represents category (see above).
- BS 5837:2012 Root Protection Area**
- Category U BS 5837:2012 Root Protection Area**
- Trees Proposed for Removal**
- Area of Previous Excavation/Hardcore**
- RPA within footprint of proposed development**
- Current heavily compacted access track**
- Proposed Structure**



Tree Assessment Plan

Client: Graham Cockerill

Site/Project: Fox and Rabbit Farm, Lockton, Pickering, YO18 7NQ

Scale/Sheet: 1:150 - A2	Date: 08/04/2022
Drawing No: 1701	Rev: 1
Drawn By: JB	Checked By: JS

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