ARBORICULTURAL IMPACT ASSESSMENT

(in accordance with BS 5837:2012 - *Trees in relation to design, demolition and construction – Recommendations)*

Site: **land at Broughton Saw Mill, Ermine Street, Broughton, Brigg, DN20 0AJ**

Prepared for: **John Holmes / Lewis Holmes**

Date: **2nd February 2024**

Reference: QU-939-24-EQUANS

Surveyor/Report Author: **Andrew Hudson** ND Btec Forestry/Arb / TechArborA

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APPENDICES

Note: This AIA should be read in conjunction with the submitted formal Arboricultural Report, Tree Survey Schedule, Tree Constraints Plan and accompanying plan/s

1.0 PURPOSE OF ASSESSMENT

1.1 Using the information detailed within the formal Arboricultural Report and the preparation of a design/layout for the site, this assessment will evaluate the direct and indirect effects of the proposed residential development. This assessment is supported by and should be read in conjunction with the following:

- Arboricultural Report – (Arboricultural Report/Survey)
- Tree Survey Schedule - (Appendix "A" of the Arboricultural Report)
- Tree Constraints Plan – (Appendix "B" of the Arboricultural Report)

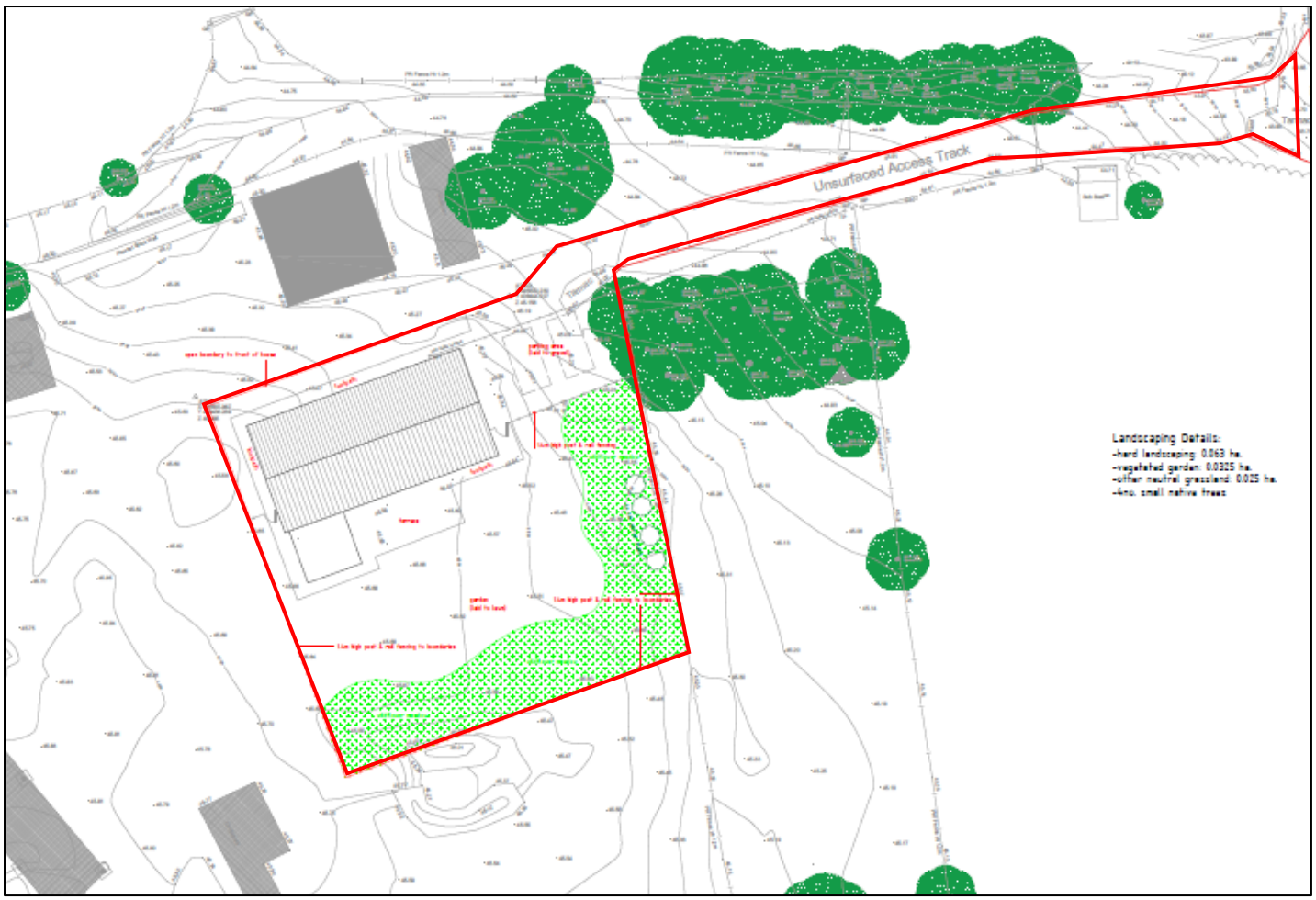
1.2 ***Terms of Reference***

Equans Arboricultural Consultancy has been instructed to prepare an Arboricultural Impact Assessment (AIA). This assessment will comply with the recommendations and guidance set out within the BS 5837:2012 Trees in Relation to Design, Demolition and Construction and will take account of the effects of any tree loss required to implement the design, and any potentially damaging activities proposed in the vicinity of retained trees.

1.3 ***Description of Development***

A final design/layout has been prepared and made available for the purpose of this AIA. It is proposed to develop this site with development of a single detached residential dwelling with associated infrastructure and amenity garden space.

1.4 ***Proposed Design / Layout***



Snip Shot: © Flynn Architecture (2024) – ref: *BR/HO/MF/05 Proposed Site Plan*

2.0 CURRENT ARBORICULTURAL BASELINE DATA

2.1 Referring to the tree survey data and formal Arboricultural Report the quality and value of the existing tree stock has been evaluated (also see Appendix "B" – 'Tree Constraints Plan' within the Arboricultural Report) with the following conclusion:

Category Grading (see 2.2 Cascade Chart)									
A1	A2	A3	B1	B2	B3	C1	C2	C3	U
			T1	G1		T2			
				G2		T3			
						T4			

2.2 ***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

Image source: © The British Standards Institution (2012) – *Cascade chart for tree quality and assessment* – British Standard BS 5837:2021

3.0 TREE SURVEY

3.1 In accordance with the BS 5837:2012 *Trees in Relation to Design, Demolition and Construction – Recommendations,* a tree survey has been undertaken, recording the relevant data regarding the sites tree population, enabling a distinction of the tree stock according to quality and value. This assessment is informed primarily by the condition of the trees and their future potential. As well as the quality and value of the tree stock, trees are assessed according to an estimate over remaining time over which trees can be reasonably retained. Four categories are set out within the BS 5837:2012, as per the 'Cascade chart for tree quality assessment' (see Page 6 - 2.2). Species longevity, age class, physiological condition and structural integrity are all taken into consideration in order to arrive at the appropriate category grading.

3.2 *Tree Stock*

Referring to the tree survey data , there are several trees that have a stem diameter of 150mm or above, measured at 1.5m from ground level. The age class distribution falls within the semi-mature to mature classification. In terms of tree quality and value the assessment concluded:

- A1 - High (quality & value) - 0 individual tree
- A2 - High (quality & value) - 0 groups of trees
- A2 - High (quality & value) - 0 woodland areas
- B1 - Moderate (quality & value) - 1 individual trees
- B2 - Moderate (quality & value) - 2 group of trees
- B2 - Moderate (quality & value) - 0 woodland areas
- C1 - Low (quality & value) - 3 individual trees
- C2 - Low (quality & value) - 0 groups of trees
- C2 - Low (quality & value) - 0 woodland areas
- U – Unsuitable for retention - 0 individual trees
- U – Unsuitable for retention - 0 group of trees
- U – Unsuitable for retention - 0 woodland areas

3.3 *Groups of Trees*

The tree survey has determined it appropriate to include some trees within the "Group" classification. The term "Group" is intended to identify trees that form as cohesive arboricultural features. However, an assessment of individual trees within the group has still been undertaken in order to highlight any significant variation in attributes, including physiological and structural condition.

3.4 2 groups of trees have been assessed. The group tree stock numbers are as follows:

- G1 – 18 x individual trees
- G2 – 14 x individual trees

Total individual trees within groups, inclusive = 32

4.0 DEVELOPMENT PROPOSAL

4.1 Following the results of the formal arboricultural report and tree constraints plan, a final design/layout has been prepared and made available. Consideration has been given to the existing tree stock and a balanced judgement has now been made with regards to the future relationship with trees in context with the proposed use of the site. In accordance with the proposed layout none of the trees surveyed are expected to be removed in order to facilitate the development of the site.

4.2 It is proposed to introduce a single detached residential dwelling with associated infrastructure and amenity garden space. A realistic judgement has been made in terms of the probable impact the trees may have on the development of the site and its future users.

5.0 ARBORICULTURAL IMPLICATIONS ASSESSMENT (AIA)

5.1 For the preparation of this AIA, I have been supplied with a final design/layout for the site. The implications of development in accordance with the supplied design/layout are as follows:

5.2 ***Implications of Development*** *(also refer to Appendix "A" Tree Retention & Removal Plan)*

a) Direct Loss of Trees:

None of the trees surveyed require removal in order to facilitate the development of the site.

b) Direct Impact of Tree Loss:

N/A

Description	Tree Nos.
Trees surveyed (individual & groups G1 & G2 inclusive)	36
Total trees removed due to condition (individual & groups G1 & G2 inclusive)	0
Total trees removed to facilitate development (individual & groups G1 & G2 inclusive)	0

5.3 ***Indirect Impacts***

a) **Changes in Ground Level:**

No ground level changes expected within the RPA of retained trees.

b) **Changes in Ground Surfaces within the RPA:**

No changes to ground surfaces expected within the RPA of retained trees

c) **Structures within the RPA:**

No structures expected within the RPA of retained trees

5.4 ***Changes in Site Use and Tree Management***

a) **General:**

Once the initial trees work has been carried out, future management requirements resulting from the proposed development may be periodic crown lifting of the canopies with the reduction of any overextending branches that may interfere with the amenity garden space. Further management requirements would be the regular removal of epicormic/sucker growth along with a clean out of any dead wood that may be present as well as the continued management of any ivy growth.

5.5 *Changes in Site Use and Tree Management (cont.)*

b) **Roads and Footpaths:**

Continued management of overhang and encroaching branches to the access road.

c) **Potential Root Damage to Infrastructure:**

There is no evidence to suggest the roots of the trees have damaged structures or hard surfaces. Provided the proposed development is constructed taking into consideration the below ground constraints, it is unlikely damage will occur from roots.

5.6 *Potential Nuisance*

a) **Apprehension:**

The proposed design layout is sympathetic to the retained tree population. Apprehension is not expected to be a concerning factor.

b) **Shade:**

The proposed design/layout has been designed to take account of retained trees and the availability of light is not expected to be a particular inconvenience. The availability of light to the areas most used is not expected to be a particular constraint.

c) **Tree Litter:**

All trees produce a litter of some description, which is only a natural occurrence that is unavoidable. Management requirements such as the removal of leaf litter and the cleansing of hard surfaces will be the responsibility of the dwelling occupier. Occasionally the amount of litter a tree produces could be reduced slightly through appropriate pruning; however, it would never be eradicated. Where conflicts may arise through seasonal nuisance, the detailed design could address these issues, e.g., use of non-slip paving and provision of leaf guards or grills on gutters and gullies.

6.0 CONCLUSION

6.1 The formal tree report and survey reveals an existing tree stock that is mostly considered to be of moderate quality and value. The trees surveyed are all off-site, outside the sites proposed development 'red edge'. Although trees may be within influencing distance, the impact this development proposal may have on trees is minimal. I am confident this site can be developed, as proposed, without any negative impact on the retained tree population.

7.0 PERSONAL PROFESSIONAL STATEMENT

(Andrew Hudson ND Btec Forestry/Arboriculture / TechArborA)

Acting consultant preparing reports for various organisations including British Standard reports for architects and developers in supporting planning applications.

Andrew holds a Btec National Diploma in Forestry and Arboriculture which was awarded at distinction level.

Andrew began working with trees as a forestry contractor, obtaining extensive knowledge and practical experience on various contracts throughout Lincolnshire, East Midlands, East Yorkshire, and East Anglia. Having worked for a number of years within the forestry sector Andrew moved to arboriculture, eventually becoming a fully qualified tree surgeon. This presented a broad spectrum of experience in arboriculture, which was enough to acquire the position of Arboricultural Officer at Local Authority level. This provided valuable experience in all aspects of arboriculture providing him with an inclusive insight into the social, legal and safety issues associated with the management of urban trees in the planning system and Local Authority owned tree stock.

Andrew is part of EQUANS Arboricultural Consultancy providing a service advising on a whole range of tree issues.

Arboricultural ASSOCIATION
Technician Member
No. TE04053

Appendix "A"

Tree Retention & Removal Plan

Trees to be removed

Trees to be retained

NO TREES BEING REMOVED

REVISIONS

Letter	Amendment	Drawn	Date

ARBORICULTURAL CONSULTANCY

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CLIENT: John Holmes / Lewis Holmes		
PROJECT: Residential Development land at Broughton Saw Mill, Ermine St, Broughton		
TITLE: Tree Retention & Removal Plan		
DRAWN: AH	CHECKED: -	APPROVED: -
DATE: 2nd February 2024	ORIGINAL SIZE: A1 (594 x 841)	SCALE: 1:200
FILE REF: AH-EQUANS	DRAWING No.: TRRP01050224_AH	REVISION NO: -

Scale Check (Millimetres). Do Not Scale from this drawing. OS Licence Number OS 100020759.

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