ARBORICULTURAL IMPACT ASSESSMENT

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

Site: **land off Silver St, Barrow Upon Humber, North Lincs**

Prepared for: **Mark Van Der Boss**

Date: 30th July 2024

Reference: QU-993-24-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 revised 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/hedges.

1.3 ***Description of Development***

A revised design/layout has been prepared and made available for the purpose of this AIA. It is proposed to develop this site with the introduction of a single detached residential dwelling with associated access, driveway and amenity garden space. The principal access into the site is expected to be created just off Silver Street.

1.4 *Proposed Design / Layout*

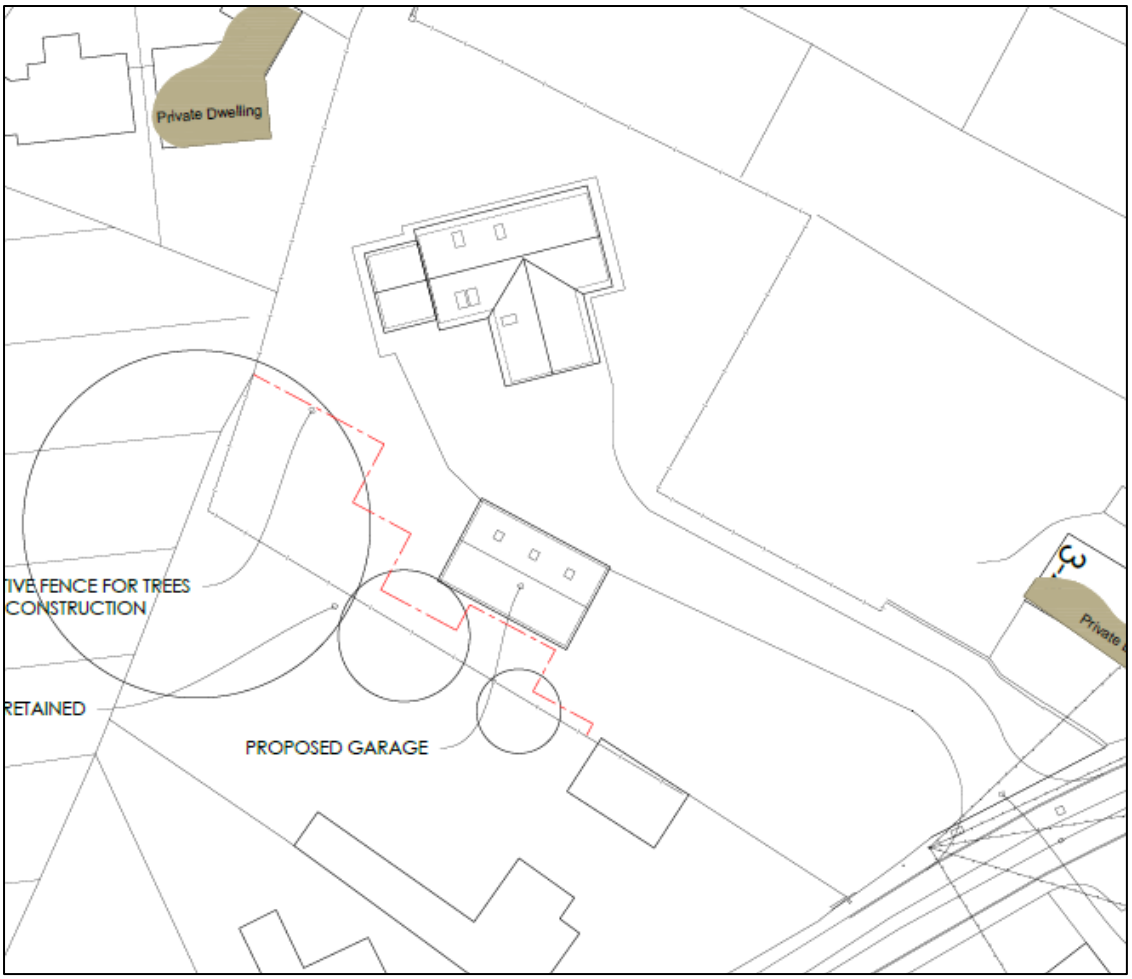

Image source: © Lincs Design Consultancy (2024) – *Plan Drw No.* ldc-4432-02B Proposed Site Plan (June 2024

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
			T3			T1 *(removed)*	G1		
						T2	G2		
						T4 *(dead)*	G3 *(removed)*		

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 original tree survey data informed by the topographical survey, there are 4 individual trees and 3 groups of trees. The trees age class distribution falls mostly within the semi mature classification. In terms of tree quality and value the assessment concluded:

A1	High (quality & value)	0 individual tree
B1	Moderate (quality & value)	1 individual trees
C1	Low (quality & value)	3 individual trees
U	Unsuitable for Retention	0 individual trees

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

- G1 – approx. 15 x individual trees
- G2 – approx. 60 x individual trees
- G3 – approx. 5 x individual trees

(Total individual trees within groups 1, 2 & 3 = approx. 80

A2	High (quality & value)	0 groups of trees
B2	Moderate (quality & value)	0 groups of trees
C2	Low (quality & value)	3 groups of trees

4.0 DEVELOPMENT PROPOSAL

4.1 Previous applications to develop this site have been submitted to the Local Planning Authority with proposals for multiple residential dwellings. These have been refused by the LPA with one dismissed at appeal. Land ownership has since changed with a now different perspective on how best to develop this site. Significant changes have now been made to that of the original concept. It is now proposed to develop this site with the introduction of a single detached residential dwelling with associated infrastructure, access and amenity garden space.

4.2 Referring to the new design/layout, due 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 land use. A consequence of land management a number of trees within the site have already been removed and others pruned. Trees T1 and G3 have been removed and the overhang and spread of G1 and G2 has been lifted and cut back towards the boundary. In accordance with the original tree report and constraints plan trees T1, G1, G2, G3, within the site, these are all category 'C' trees, trees considered to have low quality and value. Although the revised design/layout is a much lesser scheme than originally proposed, the low quality, low value trees are still proposed for removal. Misplaced tree retention should be avoided. Attempts to retain unsuitable trees on site can result in unnecessary constraints associated with the development of the site and may compromise a more meaningful landscape scheme. The removal of trees as proposed is considered acceptable considering the species, low quality and low value and limited future prospects.

5.0 ARBORICULTURAL IMPLICATIONS ASSESSMENT (AIA)

5.1 For the preparation of this AIA, I have been supplied with a revised 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:

- 1 individual trees (T1) and 3 groups of trees (G1, G2 & G3) have been identified for removal in order to facilitate the successful development of the site. Trees T1 and G3 have been removed.

b) Direct Impact of Tree Loss:

The tree survey, as identified within the original arboricultural report, shows in total approx. 84 trees, inclusive of groups G1, G2 & G3. Out of the 84 trees approx. 81 trees are proposed for removal. It should be recognised that groups G1 & G2 are effectively hedgerow trees, Leylandii plants that, due to undermanagement, are establishing as individual trees. This accounts for the high numbers.

Description	Tree Nos.
Trees surveyed	84
Total trees removed	81

5.3 The tree population associated with this site is located along the site boundaries, specifically the southern boundary. The southern boundary does have a sizable density of canopy coverage as a linear feature; however, it may be reasonable to suggest that groups G1 and G2 would constitute as a hedgerow and therefore explains the high stem count. Trees T2, T3 and T4 are included as 'trees retained'. The basis for this, irrespective of categorisation, is that they are located off-site and therefore outside of the ownership and responsibility of the developer. Tree T4 appears now to be dead. Those trees identified for removal, T1, G1, G2 and G3, are considered to be of low quality and value with limited long-term prospects. Removal, as proposed, would have very little impact on the landscape character of the area and considered to be inconsequential.

5.4 *Indirect Impacts*

a) **Changes in Ground Level:**

There is not expected to be any changes in ground levels within the RPA's of retained trees.

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

There is not expected to be any significant ground surface changes within the RPA of retained trees.

c) **Structures within the RPA:**

There is not expected to be any structures placed within the RPA of retained trees that is considered to have a significant impact tree health.

5.5 *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 overhanging branches that may interfere with amenity garden space.

b) **Roads and Footpaths:**

There is not expected to be any tree management requirements for the public highway infrastructure.

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 revised layout is considered to be more sympathetic to the retained tree population. It should be recognised that the scaffold structure of the trees is such that does not raise any particular concerns; for example, there are no heavy laterally spreading branches and no particular lean of the canopy area into the amenity garden space. The trees height, measured from the base, ranges between 11m and 15m, therefore only moderate in height. There is considered to be a tolerable distance between trees and structures.

b) **Shade:**

The revised design/layout has taken account of the retained trees, and the availability of light is not expected to be a particular inconvenience. In addition, the removal of groups G1 and G2 will introduce a substantial amount of light into the site.

5.6 ***Potential Nuisance (cont.)***

d) **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 have low quality and value. Those trees that merit retention, specifically T3, a category "B" tree, has been given serious consideration and has been sympathetically incorporated into the revised design/layout. Likewise, category 'C' trees located off-site, although within influencing distance, these have also been incorporated into the revised design/layout.

6.2 It is accepted that trees located off-site may be within influencing distance to the site. However, taking into consideration the concept of development has significantly changed and is considered to be much more sympathetic to any trees located off-site.

6.3 As a consequence of this development the removal of trees, as proposed, is considered inconsequential and will not have a significant impact on the landscape character to this part of Barrow Upon Humber. Those trees that have been identified for removal are considered to be of low quality and value with very limited future prospects. For those trees identified for retention and that are located off-site, measures have been put in place to ensure successful retention.

6.4 Although groups G1 and G2 are proposed for removal the impact of removal is considered to be transient. This development proposal provides an opportunity for enhancement over the current situation. A well-planned scheme of planting would offer a strategic enhancement to the locality. This is an opportunity that would not have presented itself without the prospect of development.

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

Private Dwelling

Private Dwelling

G3 has been removed

T1 has been removed

PROPOSED TRIPLE GARAGE

G1

G2

T3

T2

T4 'dead' off-site

Private Dwelling

Private Dwelling

Appendix "A"

Tree Retention & Removal Plan

Trees to be removed

Trees to be retained

Tree Removal

1 individual tree and 3 groups of trees to be removed in order to successfully facilitate the development and/or due to condition where long-term retention is not viable:

Individual Trees:

T1 (Lilac) - Fell

Groups of Trees:
G1 (Cypress) - Fell
G2 (Cypress) - Fell
G3 (Willow) - Fell

NOTE:
T1 and G3 have already been removed as part of previous land management clearance operations.
T4 (Silver Birch) which is off-site, appears to be dead. This is outside the responsibility of the developer.

ALL NECESSARY DIMENSIONS SHALL BE CHECKED ON SITE BEFORE ANY WORK IS PUT IN HAND. DO NOT SCALE.

REVISIONS

Letter	Amendment	Drawn	Date

ARBORICULTURAL CONSULTANCY

EQUANS

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CLIENT	Mark Van Der Boss		
PROJECT	Residential Development land off Silver St, Barrow Upon Humber, North Lincs		
TITLE	Tree Retention & Removal Plan		
DRAWN: AH	CHECKED: -	APPROVED: -	
DATE: 05/08/2024	ORIGINAL SIZE: A1 (594 x 841)	SCALE: 1:150	
FILE REF: AH-EQUANS	DRAWING No.: TRR01_050824_AH	REVISION NO: -	

0 100 200 Scale Check (Millimetres), Do Not Scale from this drawing. OS Licence Number OS 100020759.

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