

ARBORICULTURAL IMPACT ASSESSMENT

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

Site: **land adj. A17-A151 junction, Holbeach Food Enterprise Zone, Holbeach, Spalding**

Prepared for: **South Holland District Council**

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APPENDICES

Appendix "A"	Tree Retention and Removal Plan
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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 to facilitate the concept to deliver new development by granting outline planning permission for a range of appropriate uses, this assessment will evaluate the direct and indirect effects of the proposed 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

The Food Enterprise Zone and Local Development Order - Delivery of the Holbeach Food Enterprise Zone (FEZ). The Holbeach FEZ is expected to deliver accommodation for new, relocated and expanding companies. The Local Development Order (LDO) will facilitate the delivery of new development by granting outline planning permission for a range of appropriate uses, subject to planning conditions. The FEZ site lies to the southwest of the A151/A17 junction, known as Peppermint Junction to the west of Holbeach.



1.4 **Proposed Concept for Future Development (subject to appropriate Planning Conditions)**



Image source: © Robert Doughty Consultancy Limited (2022) – ref: *Statement of reasons in support of Holbeach Food Enterprise Zone Local Development Order 2018*



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
T12	W2		T2	G2		T1	G1		
	W3		T6	G3		T3			
			T7	G4		T4			
			T8	G5		T5			
			T9	G6		T10			
			T13	W1		T11			
				W4		T14			

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	<ul style="list-style-type: none"> 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 <p><i>NOTE</i> Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.</p>			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 7 - 2.3). 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 informed by the topographical survey, there are numerous 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) - 1 individual tree
- A2 - High (quality & value) - 0 groups of trees
- A2 - High (quality & value) - 2 woodland areas
- B1 - Moderate (quality & value) - 6 individual trees
- B2 - Moderate (quality & value) - 5 group of trees
- B2 - Moderate (quality & value) - 2 woodland areas
- C1 - Low (quality & value) - 7 individual trees
- C2 - Low (quality & value) - 1 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 6 groups of trees have been assessed. The group tree stock numbers are as follows:

- G1 – 4 x individual trees
- G2 – 5 x individual trees
- G3 – 3 x individual trees
- G4 – 3 x individual trees
- G5 – 22 x individual trees
- G6 – 34 x individual trees

Total individual trees within groups, inclusive = 71

3.5 **Woodland**

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

3.6 4 woodland areas have been assessed. The woodland areas are as follows:

- W1 – 1179.5sq m (approximately)
- W2 – 3095.4sq m (approximately)
- W3 – 2165.2sq m (approximately)
- W4 – 1283.1sq m (approximately)

4.0 **DEVELOPMENT PROPOSAL**

4.1 This site is subject to a ‘Local Development Order’, helping set the planning framework for this site and bring forward development. The Local Development Order (LDO) will facilitate the delivery of new development by granting outline planning permission for a range of appropriate uses. The ‘Local Development Order’ provides outline planning permission only for a mixture of uses. It does not remove the need to obtain statutory consents that may be subject to a range of planning conditions. As new development is brought forward the implications of development on trees may vary. It would be reasonable to suggest that any concerns the LPA may have in regard to trees and development can be dealt with as Reserved Matters.

4.2 The concept proposal for development provides an opportunity for improvement over the current situation. As each phase of development is brought forward a detailed landscape scheme can be secured. It will be important that the landscaping for each phase of development corresponds in terms of character and appearance.



5.0 ARBORICULTURAL IMPLICATIONS ASSESSMENT (AIA)

5.1 For the preparation of this AIA, I have been supplied a concept plan for the site. The implications of development in accordance with the supplied concept is as follows:

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

a) Direct Loss of Trees:

7 individual trees and 1 group of [4] trees (T1, T3, T4, T5, T10, T11, T14 & G1) have been identified for removal due to their condition and/or having limited long-term prospects

b) Direct Impact of Tree Loss:

The tree survey, as identified within the arboricultural report, shows in total 86 trees, inclusive of groups G1 to G6.

The tree survey, as identified within the arboricultural report, shows in total a woodland area, inclusive of woodlands W1 to W4 of 7,723sq m.

Description	Tree Nos.
Trees surveyed (individual & group inclusive)	86
Total trees removed due to condition (individual & group inclusive)	11
Total trees removed to facilitate development (individual & group inclusive)	0

Description	Tree area.
Total woodland area surveyed [inclusive] (W1-W4)	7,723sq m
Total area of woodland removed to facilitate development	0

5.3 At this time, with the preparation of a concept plan for development, the only trees proposed for removal are those considered to have limited quality and value / and or trees with limited long-term prospects. It should be acknowledged that as each development phase is brought forward there may be a need for variation to retention of tree stock. However, any detailed design/layout should seriously consider the moderate to high quality trees and sympathetically incorporate these into the scheme/s.



5.4 *Indirect Impacts*

a) Changes in Ground Level:

At this stage there is not expected to be any changes in ground levels.

b) Changes in Ground Surfaces within the RPA:

At this stage there is not expected to be any changes in ground surfaces within the RPA of trees.

c) Structures within the RPA:

At this stage there is not expected to be any structures within the RPA of trees

5.5 *Changes in Site Use and Tree Management*

a) General:

Future management requirements resulting development may be periodic crown lifting of the canopies with the reduction of any overextending branches that may interfere with the access roads, structures, and amenity open 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.

b) Roads and Footpaths:

Future management requirements resulting development may be periodic crown lifting of the canopies with the reduction of any overextending branches that may interfere with the access roads and footpaths.

c) Potential Root Damage to Infrastructure:

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

5.6 *Potential Nuisance*

a) Apprehension: At this stage there is not expected to be a nuisance from apprehension.

b) Shade: At this stage there is not expected to be a nuisance from shade.

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

- 6.7 The formal tree report and survey reveals an existing tree stock, generally of good quality and value. As each phase of development is brought forward those trees that merit retention, category "A" and "B" trees, should be given serious consideration and sympathetically incorporated into the proposed design/layout/s.



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.



Appendix "A"

Tree Retention & Removal Plan



Tree Removal		
6 individual trees and 1 group of trees to be removed in order to successfully facilitate the development		
T2	(Hazel)	- Fell
T3	(Laurel)	- Fell
T4	(Beech)	- Fell
T5	(Beech)	- Fell
T10	(Ash)	- Fell
T11	(Silver Birch)	- Fell
T14	(Cypress)	- Fell
G1	(x4 Beech)	- Fell

Tree Retention		
2 individual trees to be retained and incorporated into the design/layout		
T2	(Whitebeam)	- Retain
T6	(Field Maple)	- Retain
T7	(Field Maple)	- Retain
T8	(Lime)	- Retain
T9	(Cypress)	- Retain
T12	(Silver Birch)	- Retain
T13	(Silver Birch)	- Retain
T15	(Lombardy Poplar)	- Retain
G2	(x5 Lombardy Poplar)	- Retain
G3	(x2 Lombardy Poplar)	- Retain
	(x1 Ash)	- Retain
G4	(x3 Lombardy Poplar)	- Retain
G5	(x19 Goat Willow)	- Retain
	(x3 Alder)	- Retain
G6	(x24 Willow)	- Retain
	(x10 Alder)	- Retain
W1	(Mixed Broadleaf)	- Retain
W2	(Mixed Broadleaf)	- Retain
W3	(Mixed Broadleaf)	- Retain
W4	(Mixed Broadleaf)	- Retain

REVISIONS			
Letter	Amendment	Drawn	Date

ARBORICULTURAL CONSULTANCY



CLIENT	South Holland District Council		
PROJECT	Commercial Development Land adj. A17/A151 junction, Holbeach, Lincs.		
TITLE	Tree Retention & Removal Plan		

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