



Arboricultural Impact Appraisal



Meadow Farm Nursery, Hayling Island



Arboricultural Impact Appraisal Meadow Farm Nursery, Hayling Island

Prepared by

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Summary

Tree data

Data in relation to the trees within the scope of the survey are included in the **tree schedule** contained at the **appendices**.

Purpose of Report

The purpose of the report is to provide sufficient information to the local planning authority (LPA) on the impact of the development proposal on trees and their contribution to local character and amenity. This information is provided so that the LPA may determine the planning application to which it is associated.

Report Contents

The report comprises the following elements which should be read in conjunction and subject to cross reference:

- **arboricultural impact appraisal** (AIA) which provides a description, analysis and conclusion in respect of the impact of development on trees;
- **tree survey plan** (TSP) showing, *inter alia*, the location of the trees, trees to be removed and replacement trees
- **appendices** providing relevant additional information including the tree survey schedule.

Summary of impact on trees

My client is seeking retrospective planning consent for an area of scaffolding material and equipment storage at Meadow Farm Nursery, Hayling Island.

The trees that could be affected by the development have been surveyed. The details of the tree survey and root protection area calculations are shown at appendix one of this report and on the associated tree survey plan.

I have reviewed the condition of the trees on site and the nature and extent of the development activity carried out. The scaffolding store has placed in an area previously laid to hard surfacing comprising scalplings and other such surfacing material. I have reviewed historic aerial images and such surfacing can be clearly seen in the area as far

back as 1999 with an extended drive added to serve the dwelling appearing in images in 2005.

The storage area itself comprises a number of storage blocks for various components required for scaffolding activity. I have looked at these carefully and all are either pre-formed bins with legs or larger storage blocks constructed of scaffolding components built up from timber feet laid upon the surfacing.

I saw nothing to indicate any ground disturbance, excavation of other such activity that could impact upon roots, albeit there are present an electric hook up point and a water stand pipe. Both of these are of some age given their condition and appear to be historical features of the area rather than recent additions.

I consider the oak trees (T1, T2 and T6) in close proximity to the scaffold store to be in good health and of good quality (category B).

Given the above I conclude that no noticeable or significant impact has occurred to these trees from the positioning of the storage area in this location.

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Introduction

- 1 The client is seeking retrospective planning consent for development at Meadow Farm Nursery, Hayling Island.
- 2 My advice has been sought on the arboricultural issues relating to this project in order to satisfy the requirements of the local planning authority in respect of trees and development. Where applicable, methodologies, practices and recommendations, made or referred to by the project arboricultural consultant, follow relevant guidance contained in *British Standard 5837:2012 Trees in relation to design, demolition and construction – Recommendations* [hereafter referred to as BS5837:2012].

Client's brief and scope of report

- 3 Instructions have come from Georgina Newell, Meadow Farm Nursery, Woodgaston Lane, Hayling Island, Hants, PO11 0RL.
- 4 I have been instructed to assess the significant trees that could be affected by the development proposal and to prepare the following information to accompany the planning submission:
 - a schedule of relevant trees including basic data and a condition assessment based on the guidance criteria within BS5837:2012;
 - an appraisal of the impact of the proposal on trees and any resulting impact that the proposal will have on local amenity (retrospective).
- 5 This report provides an analysis of the implications of the development proposal on trees and local amenity.
- 6 The primary purpose of this report is for the local planning authority to review the tree related information in support of the planning submission and utilise it as the basis for issuing a planning consent, formulating tree related planning conditions or engaging in further discussions towards that end. Any use outside the planning application context is not intended or authorised.
- 7 Although this document is not meant to be a full and detailed report on tree health and safety, any significant visible structural defects or physiological conditions identified, together with preliminary tree works, are noted in the appropriate columns in the tree schedule. However, a full post development tree inspection is recommended to establish that the trees retained during

construction present acceptable levels of risk once the development has been completed.

- 8 Any plans, tables, figures or attachments whether within this document, appendices or supplied as associated drawings are illustrative, and based on layout drawings, topographical surveys or other information provided. Therefore, all scaled measurements should be checked against the original design documents.
- 9 Any plans, tables, figures or attachments whether within this document, appendices or supplied as associated drawings should only be used for dealing with the tree protection issues and all other uses are prohibited, unless authorised by Technical Arboriculture Limited.

Document disclosure

- 10 The following text and plans have been provided in order to fulfil the client's brief:

- Existing site layout: OS mastermap (supplied by client) January 2019
- Proposed site layout: OS mastermap (annotated by client) January 2019

Land survey

- 11 I have been provided with site plans which I understand to be based upon an accurate land survey. This includes plots of tree locations and other topographical information relevant for the preparation of this report and appendices. All information in this report and appendices presumes accuracy of the land survey supplied and no responsibility for accuracy can be guaranteed by the author of this document.

Soil Assessment

- 12 I have not been supplied with any detailed site soil analysis or been engaged to undertake such investigations by our client. A site-specific soil assessment may inform decisions relating to the root protection area (RPA), tree protection, new planting design and foundation design to take account of retained, removed and new trees. As and when such information becomes available results should be forwarded to the project arboricultural consultant and other relevant

professionals involved in site layout, planning and design (e.g. structural engineer, landscape architect).

Tree Survey – categorisation and assessment of tree stock

- 13 I conducted a tree survey on 9th January 2019. Where practicable, the survey was carried out in accordance with guidance contained at section 4.4 (tree survey) and 4.5 (tree categorization method) of BS5837:2012. The results of the survey may be viewed at appendix one.
- 14 Observations were made from ground level without detailed investigations. The survey involved a visual inspection of the trunk, together with the major branches and forks of the canopy. The examination was restricted to those views available within the survey site and the neighbouring area.
- 15 The position of the trees is shown on the submitted tree survey and protection plan drawing based on the site plan provided to us by our client or their representative. British Standard colour coding and root protection area information has been added. See appendix two.
- 16 The height measurements are approximations and have not been calculated using a clinometer. Where the canopy extends over an adjacent property, or where the under storey is very dense, the canopy spread has been estimated and stated as such with the tree schedule.
- 17 This report is based on the condition of the trees at the time of inspection. Trees are dynamic and their condition changes throughout their lives. No inspection has been made of the soil structure. No account has been taken of the effects of the tree/s or their removal directly or indirectly on any building/s or structure/s relating to the possibility of subsidence or heave. Regular inspections of the tree/s should be undertaken to monitor their health and determine appropriate management.
- 18 This report is to be used for the purposes for which it is prepared as specified in paragraphs three to nine of this document.
- 19 The trees identified in the tree survey are those upon which development of the land may have potential impact in line with guidance at paragraph 4.2.4 (b) of BS5837:2012.

Tree constraints

Above and below ground constraints

- 20 Following our tree survey, the data gathered was plotted onto the tree survey plan and used to gain better understanding of the situation on the ground in relation to trees and the installed scaffold store.

Defining and plotting root protection areas (RPAs)

- 21 The root protection areas (RPAs) have been calculated (see appendix one) in accordance with guidance contained at section 4.6 (root protection area) of BS5837:2012.
- 22 The RPAs have been plotted on the tree survey plan in accordance with guidance contained in paragraph 4.6.2 of BS5837:2012 (please refer to appendix two). RPAs are shown as a circle around each of the category A, B and C graded trees (BS5837:2012 paragraph 5.2.1.).
- 23 It should be noted that BS5837:2012 states (section 4.6.2) that *"the RPA for each tree should initially be plotted as a circle centred on the base of the stem. Where pre-existing site conditions or other factors indicate that rooting has occurred asymmetrically, a polygon of equivalent area should be produced. Modifications to the shape of the RPA should reflect a soundly based arboricultural assessment of likely root distribution"*.

Furthermore, *"Any deviation in the RPA from the original circular plot should take account of the following factors whilst still providing adequate protection for the root system:*

- a) The morphology and disposition of the roots, when influenced by past or existing ground conditions (e.g. the presence of roads, structures and underground apparatus);*
- b) Topography and drainage;*
- c) The soil type and structure;*
- d) The likely tolerance of the tree to root disturbance or damage, based on factors such as species, age, condition and past management"*.

Legal constraints

- 24 I have not been asked to ascertain the protection status of the trees although I understand a Tree Preservation Order (TPO) is in place on the oak trees. If trees are subject to statutory protection any arboricultural work recommended by this report may only be carried out following the issue of formal planning consent, notwithstanding any restrictions placed by planning conditions contained therein. If tree work is to commence prior to the issue of consent we recommend that the client, or project arboricultural consultant, liaise with the local planning authority.
- 25 A licence from the Forestry Commission is normally required to fell growing trees (Forestry Act, 1967). However, an occupier may fell up to 5 cubic metres per calendar quarter without a licence provided that no more than 2 cubic metres are sold. A felling licence is not required if the work is undertaken in accordance with an approved planning permission or the trees are dead, dying or dangerous.
- 26 The Wildlife and Countryside Act 1981, as amended by the Countryside and Rights of Way Act 2000, provides statutory protection to birds, bats and other species that inhabit trees. In addition, European Protected Species legislation places a duty upon landowners to ensure that best practice is followed or an appropriate license issued prior to any work commencing which may affect bats, reptiles or dormice. These could impose constraints on the use and timing of access to the site in addition to any of the tree matters considered in this report. These issues are not the subject of this report. However, our client is advised to seek ecological advice and this may be provided by Technical Arboriculture Limited.

Arboricultural Impact Assessment

Summary of impact on trees:

27 Table 1: Summary of trees that may be affected by development.

RETAINED TREES – Potential damage through disturbance to RPA	Tree No	BS Cat
Demolition Some existing site features will require careful demolition to prevent damage to root protection areas and above ground parts of trees to be retained.	nil	
Access and car parking Installation of some elements of parking bays and access will need to be carried out using suitable no dig solution to prevent tree root damage e.g. Geoweb cellular confinement system or similar.	nil	
Foundation design Where elements of some buildings encroach into the plotted RPA of retained trees a suitable low impact foundation design will be required.	nil	
Construction activity – working space requirements Areas of RPA requiring suitable ground protection or scaffolding precaution.	nil	
Construction activity – encroachment into RPA Minor encroachment into plotted RPA to install site features.	nil	
Construction – low impact development Areas where small, low impact structures (e.g. bin or cycle store) are to be located within plotted RPA.	nil	
RPA correction Area where pre-existing site conditions (e.g. levels, services, compaction, slope, etc.) do not favour rooting. RPA adjusted to reflect arborist's professional opinion of prevailing root spread. Adjustment noted on tree survey and protection plan.	nil	

RETAINED TREES: Pruning	Tree No	BS Cat
Access pruning Minor crown lifting or pruning may be required to facilitate and/or improve access to the development or to install site features.	nil	
Ecological considerations (see note below) Retention as veteran tree or habitat feature. Ecological considerations refer to arboricultural features only, where trees or tree features are considered noteworthy in relation to their potential to provide habitat or ecological benefit. Assessment is preliminary and client should refer to project ecologist for full ecological site appraisal.	nil	
Recommended pre-development arboricultural work Refer to tree survey schedule.		

TREES TO BE REMOVED: Actual tree loss	Tree No	BS Cat
Trees not viable for retention or poor grade trees Trees which should not be considered a constraint to development (category U or category C).	T4 T5	U U
Trees lost to development footprint Built form.	nil	
Trees lost to development footprint Car park and access requirements.	nil	
Trees lost to construction activity Demolition.	nil	
Trees lost to construction activity Working requirements.	nil	

TREES TO BE REMOVED: Potential tree loss

None anticipated.

Detailed impact appraisal

Trees to be retained and protected

- 28 Demolition – my understanding is that the storage area was constructed on an area of hardstanding. Any previously stored items were likely removed but no demolition activity appears to have occurred.
- 29 Access and car parking – I have reviewed historical aerial images (courtesy of google earth). Image one below shows the site on 1/1/1999. I have outlined

the area where the scaffolding storage is now located. This shows there was hard surfacing on the land at that time. I have reviewed the surfacing in place during my tree survey. It appears somewhat aged. Therefore I have no reason to doubt that this was the original surfacing from some time ago having possibly been topped up on occasion but certainly not new.

- 30 Image one – aerial image from 1999 showing hard surfacing extending to southern boundary including area where scaffold store now stands.



Image courtesy of google earth

- 31 Foundation design - Some sections of the scaffold store are located within the root protection areas of retained trees. However, the storage bins have feet and sit upon the hard standing. The main structure itself is comprised of scaffolding components and it too sites upon legs which in turn are placed on timber feet; the whole structure sitting on the hardstanding. I could see no evidence of any excavation or any object which required any footings or foundations.
- 32 Low impact construction – I consider the structures to fall within the definition of low impact. All aspects sit upon the ground on feet, most with timber cushion

upon the hardstanding with a reasonable air gap between the ground and the main storage level.

- 33 I have considered the situation carefully and it is my opinion that these trees may be successfully retained in situ and continue to flourish without any adverse effects resulting from the installation of the scaffold store.

Tree losses

- 34 It is likely that some of the elm specimens will succumb to Dutch elm disease in the next few years.
- 35 The primary landscape trees (oaks) appear to be in very good health.
- 36 Tree loss by category

Category	No. of Trees
A	-
B	-
C	-
U	2

Future Growth

- 37 The proximity of trees offers sufficient clearance to the development. In general, the trees on the site will assist in screening and aid its integration into the local area. No containment pruning is required or expected.
- 38 The majority of the trees are subject of Tree Preservation Order giving control over future tree works to the local planning authority.

Shading, windows and orientation

- 39 The site location offers good opportunity for solar gain at various parts of the day. No issues from excessive shade or proximity of trees are envisaged.

Conclusion

- 40 I have considered the impact to trees and the effect of tree loss, pruning and other site operations on local tree cover, amenity and character.
- 41 I consider impact to be negligible and acceptable.

Appendix one - Tree survey and classification in accordance with table one of BS5837

These tree survey notes have been guided by the recommendations of British Standard 5837:2012 and define the criteria for pre-development tree surveys.

Tree Number (No) Numbers relate to those marked on the Tree Constraints Plan and Tree Protection Plan drawings. Where specifically instructed small durable numbered metal tags have been applied to each tree surveyed. Common Name Species of tree listed by common name. Height (Hgt) Height assessments are estimated in metres. Where accurate heights become a critical issue it will be necessary to return to site, as a separately commissioned exercise, to collect accurate measurements with the aid of optical instruments. Stem Dia. Measurement of tree stem(s) in accordance with annex C of <i>BS5837:2012</i>. In the case of multiple stems, the measurement quoted is that resulting from the appropriate calculation in line with annex C. Branch Spread Radial crown spread assessments are estimated in metres from the centre of the trunk / group to each of the four primary points of the compass (North, East, South, West) in order to achieve a representation of the crown shape which will be recorded on the accompanying tree protection plan.	These provide a general guide to the outline of a tree / group crown but do not constitute tape measured dimensions. These would only be undertaken as part of a separately commissioned exercise where precise dimensions are critical to the project. HAG Existing height above ground level of canopy, in metres. Life stage An assessment of age class is made in terms of site specific maturity as part of the surrounding landscape, taking into account overall shape and form in that setting and is recorded thus: Y = Young EM = Early mature M = Mature OM = Over mature V = Veteran Phys Cond An assessment of a tree / group's overall physiological condition is recorded as: Good / Fair / Poor / Dead Struct Cond An assessment of a tree / group's overall structural condition is recorded as: Good / Fair / Poor	Rem Con Estimated remaining contribution in years (yrs) (<10, 10+, 20+ 40+) Cat British Standard category grading (U or A to C) - see guidance extracted from <i>BS5837:2012</i> on following page. RPA Root protection area based on <i>BS5837:2012</i> calculations and stated as Radius in metres (m) and Area in square metres (m²). Condition comments Data on the structural condition of the tree / group is provided, as appropriate, to give an indication of the visual appearance and any significant health and safety issues. Management recommendations <i>As per British Standard 3998:2010 Tree Work – Recommendations</i> Unless otherwise stated: All measurements are in metres (m) or millimetres (mm). All heights are stated above ground level (AGL) of tree stem. All distances are from base of tree. Cardinal points are abbreviated e.g. SW = South West All trees – crown lift to 4m over site as required for construction access
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Category and definition	Criteria (including sub categories where appropriate)			Identification on plan
Trees unsuitable for retention				
Category U Those in such 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.			Red
Trees to be considered for retention				
	1 Mainly arboricultural qualities	2 Mainly landscape qualities	3 mainly cultural values, including conservation	
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).	Green
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 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 benefits.	Blue
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 150mm.	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 very limited conservation or other cultural benefits.	Grey

Tree Survey Schedule

Tree No	Common name	Hgt m	Stem Dia m	Branch Spread m	HAG m	Life stage	Phys Cond	Struct Cond	Rem Con Yrs	Cat	RPA Radius (m)	RPA Area (m ²)
T1	Oak	18	0.8	9N 9E 8S 8W	2m	Mature	Fair	Fair	30+	B2	RPA9.6m	290
	Condition Comments Dense ivy prevents full survey. Off site.						Management Recommendations Remove/sever ivy.					
T2	Oak	16	0.45	8N 7E 6S 3W	2m	Mature	Fair	Fair	20+	B2	RPA5.4m	92
	Condition Comments Ivy prevents full survey. Off site. Deadwood. Electric hook up point within RPA. Water supply point within RPA.						Management Recommendations No work required at time of survey.					
T3	Elm	14	0.280; 0.200	6N 3E 4S 3W	2m	Mature	Fair	Fair	10+	C2	RPA4.2m	55
	Condition Comments Dens ivy prevents full survey. Off site. Shared rootstock. Lost stem. Water supply point under crown.						Management Recommendations No work required at time of survey.					
T4	Elm	10	0.150; 0.100	2N 2E 3S 2W	0.5m	Mature	Dead	Dead	<10	U		
	Condition Comments						Management Recommendations Remove for sound arboricultural management reasons.					
T5	Elm	10	0.15	3N 3E 2S 1W	0.5m	Mature	Dead	Dead	<10	U		
	Condition Comments						Management Recommendations Remove for sound arboricultural management reasons.					
T6	Oak	18	1	11N 10E 9S 8W	1m	Mature	Good	Fair	40+	B2	RPA12m	452
	Condition Comments Off site.						Management Recommendations No work required at time of survey.					

Appendix two - Tree survey plan

PDF version – see separate PDF document supplied.



Expert witness

Tree risk assessment surveys

TPO Review

Local Government officer contracts

Woodland management plans

Protected species

Habitat management plans



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