Arboricultural Report

Assessment of trees in relation to development for planning purposes

Land East of Holt Road
Horsford
Norfolk
NR10 3ED

December 2016

230311-PD-21b
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1 SUMMARY REPORT

1.1 The proposal is for a new housing development including roadways, parking and associated landscape and ecological improvements at Land East of Holt Road, Horsford, Norfolk, NR10, 3ED. This report is for a revised application and takes into account comments from the council's arboricultural consultant in relation to the previous application for this site.

1.2 This report includes:

- an assessment of the trees and hedges, their quality and value and constraints to development posed by these;
- the site context;
- observations on the trees;
- planning policies relevant to the consideration of the trees on the site;
- the impact of the proposed development upon the tree population in and around the site;
- changes from the previous application in relation to trees
- methods of reducing impacts on trees; and
- Measures to be taken to protect trees during the proposed works.

1.3 My conclusions are that to facilitate the proposed development no trees of significance will need to be removed and that, provided the recommendations for tree protection as set out within this report are adhered to all trees can be successfully retained.
2 INTRODUCTION

Instructions

2.1 My name is Tim Moya. I am a Fellow of the Arboricultural Association, a Chartered Arboriculturist, a Chartered Environmentalist, a Registered Consultant of the Institute of Chartered Foresters and I hold a postgraduate qualification in arboriculture and community forest management.

2.2 This arboricultural report has been commissioned by David Wilson Homes (Eastern) to provide information to assist all parties involved in the planning process to make balanced judgements with regard to arboricultural features in relation to the proposed Phase 2 development at Land East of Holt Road, Horsford, Norfolk, NR10, 3ED.

Scope and limitations

2.3 The contents of this report are copyright of Tim Moya Associates and may not be distributed or copied without the author’s permission. Tim Moya Associates Standard Limitations of Service apply to this report and all associated work relating to this site.

Background and documents provided

2.4 My report has been prepared with reference to the following supplied information:

- Topographical survey; and
- Architects layout (16.2105/010 Rev E).

Methodology and guidance

2.5 I have referred to British Standard 5837: Trees in relation to design, demolition and construction (2012) which provides a methodology for the assessment of trees and other significant vegetation on development sites.

2.6 BS 5837 (2012) is intended to assist decision making with regard to existing and proposed trees and sets out the principles and procedures to be applied to achieve a harmonious relationship between existing and new trees and structures that can be sustained for the long term.

2.7 The Building Research Establishment (BRE) has also produced several documents between 1998 and 2011 in relation to trees and site layout planning, sunlight, daylight, shading and urban cooling. These documents consider trees and their
relationship with buildings and garden usage, including the benefits they bring in terms of welcome shade or urban cooling, advising a balanced approach to these issues in design.

**Supporting Information**

2.8 All TMA documents relevant to this report are listed at section 9, and included within the Appendices.
3 OBSERVATIONS AND CONTEXT

Site visit

3.1 The site was visited by myself and my colleague Luke Beecham in April 2016, to survey the trees and vegetation which may be significant in relation to the proposed development.

Description of the local area

3.2 The site is located on the north eastern edge of the urban area of Horsford adjacent to housing to the west and agricultural land to the east. Mill Lane is to the south. The wider area consists primarily of agricultural and forestry land.

Soil conditions

3.3 Soil conditions will have a significant effect upon tree growth and will influence:

- The species that will grow successfully.
- Rooting depths for different species.
- The available soil volume that can be used by roots and therefore the likely tolerance of trees and other vegetation to soil disturbance.

3.4 The British Geological Survey information for the site indicates that the soil is sand and gravel of glacial origin. Soils of this type are suitable for the growth of a large number of tree species but may be prone to drought in dry summer periods and may also be slightly acidic.

Policy context

3.5 Planning policy at national level is set out in the government’s National Planning Policy Framework (NPPF) which came into immediate effect on 27 March 2012. The NPPF replaces the previous national planning policy documents including Planning Policy Guidance (PPGs) and Planning Policy Statements (PPSs). The NPPF is a material consideration in determining planning applications.

3.6 The NPPF sets out overarching planning policy and at its core is a presumption in favour of sustainable development. Sustainable development is defined in the NPPF as having economic, social and environmental strands that are interdependent and in
these areas planning should meet the needs of the present without compromising the ability of future generations to meet their own needs.

3.7 The NPPF states that planning should be “not only about scrutiny, but instead be a creative exercise in finding ways to enhance and improve the places in which people live their lives.” And should “always seek to secure high quality design and a good standard of amenity for all existing and future occupants of land and buildings;” Also that planning should contribute to conserving and enhancing the natural environment and reducing pollution.”

3.8 The NPPF identifies thirteen aspects contributing to the delivery of sustainable development, including:

- establishing a strong sense of place;
- responding to local character and history; and
- providing developments that are visually attractive as a result of good architecture and appropriate landscaping

3.9 Paragraph 61 of the NPPF states “planning policies and decisions should address the connections between people and places and the integration of new development into the natural, built and historic environment.”

Core Strategy (2014)

3.10 Policy 20 (Implementation) of the Broadlands Core Strategy refers to the provision of infrastructure including the creation of habitats, open spaces, recreation facilities, trees, hedgerows, woodlands and landscaping. Spatial Objective 9 is “To protect, manage and enhance the natural, built and historic environment, including key landscapes, natural resources and areas of natural habitat or nature conservation value”


3.11 The Broadlands District Council DPD policies EN2 and EN3 set out the council’s expectations in regard to landscape and green infrastructure.

3.12 EN2 (Landscape) requires the protection and enhancement where appropriate of green spaces and natural and semi-natural features which make a significant contribution towards defining the character of an area.
3.13 EN3 (Green Infrastructure) requires that development maximises opportunities for habitat creation and makes adequate arrangements for the management and maintenance of green infrastructure.
4 TECHNICAL INFORMATION

Tree Data

4.1 The location of trees and groups of trees are shown on the tree survey drawing 230311-P-20 (6 drawings) at Appendix A, this plan illustrates the location of trees and the extent of the spread of their crowns. Dimensions, comments and information for each tree are given in the tree schedule 230311-PD-20 at Appendix B.

Life Stage Analysis

4.2 Unlike age in numerical terms (years), this description is used to describe the physical form of a tree in relation to its typical life expectancy and varies between species; for example, an oak may have a young form after 20 years while a cherry tree will be middle-aged after 20 years and will have developed the appearance of a mature tree with a spreading rounded crown whilst the oak remains tall and slender with strong apical dominance.

4.3 The following numbers refer to individual trees and groups of trees (groups have been counted as individual entries). Of the 218 survey entries (41 of which were groups):

- 6 were young;
- 55 were semi-mature;
- 105 were early mature;
- 50 were mature; and
- 2 were late mature.

Tree quality

4.4 Trees and tree groups were assessed according to BS5837 guidance:

- 6 were found to be of high quality and value (A category);
- 78 were found to be of moderate quality and value (B category);
- 127 were found to be of low quality and value (C category); and
- 7 were found to be of poor quality and value (U category).
5 ANALYSIS OF THE PROPOSAL IN RESPECT OF TREES

Proposed development

5.1 The layout for the proposed development is shown on plan 230311-P-21b (6 drawings) at Appendix A and is for the construction of a new housing development with associated access, roadways, parking and landscaping. The proposals include significant landscape and ecological enhancements including the planting of a large number of new trees.

Loss of trees and hedgerows to facilitate development

5.2 In total the proposals require the removal of 2 B category trees, 1 small B category tree group and 4 sections of hedgerow. The proposed tree removals are shown in drawings 230311-P-21b at Appendix A.

5.3 Although some U category trees were recorded in the tree survey, they have not been included in the tree works schedule as they are assumed to be in neighbouring ownership.

5.4 The proposals include significant new tree planting in areas which do not presently have any trees and robust buffer landscaping to provide separation between the proposals and neighbouring properties.

5.5 Details of the landscaping proposals and ecological enhancements have been submitted separately.

Loss of trees and hedgerows to provide access

5.6 The proposals include the creation of a vehicle access from Green Lane to the north of the site. These proposals also include highway improvements to the existing junction between Green Lane and Holt Road (B1149).

5.7 The area of Green Lane affected by these proposals runs east/west with mature trees on the northern boundary and hedgerows and some smaller trees on the southern boundary. The highway works proposed have been designed to avoid impacts on the mature trees to the north and have widened and diverted the roadway on the southern side of Green Lane. Larger, more significant trees have, therefore, been retained.
5.8 Tree and hedgerow losses to facilitate the northern access to the site and highway safety improvements will result in the part removal of hedgerow H197; the removal of tree group G151 and the removal of tree group G196 which consists of elder trees.

5.9 Details of all tree and hedgerow removal works are listed at Appendix B.

Juxtaposition of buildings and retained trees

5.10 Retained trees have been considered in the layout of the proposed development and where these are within garden areas or in neighbouring properties adjacent to proposed dwellings the relationship with the properties has been considered in relation to the future growth of the trees, sunlight and daylight shading.

5.11 Some minor tree pruning works have been specified in order to provide sufficient crown clearance and improve the separation between low growing canopies and single storey garages. This is required for poplar trees T105 & T107. The extent of pruning works recommended are considered to be insignificant and will not have an impact on the overall condition of the trees concerned or the local surrounding area.

5.12 While, in some cases mature trees have been retained to the south of buildings, these relationships are typical of properties in the local and wider area and are considered harmonious. Where trees are located to the south of proposed dwellings the benefits of sunlight shading can be balanced against any perceived problems. The Building Research Establishment has pointed out that “Deciduous trees give shade in summer but allow access to sunlight in winter.” [Site layout planning for daylight and sunlight: a guide to good practice BR 209 1998 page 22].

5.13 This revised application has increased separation distances between trees and proposed buildings; this particularly applies to trees T154 and T155 in the northern area of the site, and; offsite trees T189, T191 and T194 in the southwestern part of the site.

5.14 While the previous application proposed some built form marginally within the RPAs of retained trees (T189, T191 and T194), layout changes have now removed built form from within RPAs.
Proposed hard surfacing within the RPA of retained trees

5.15 The proposals include the construction of pathways and parking areas within the RPAs of retained trees; T165; T167 & T168. The overall percentage of incursion within these RPAs are as follows:

- T165 – 19.5%;
- T167 – 17%;
- T168 – 32.5%.

5.16 Considering the overall percentage and position of the proposed incursions within the RPAs of these trees, it will be necessary to construct the surfaces using no dig methods. This will avoid root damage or damage to the soil structure in which roots are growing and allow for water infiltration and gas exchange to the rooting environment. Although the overall percentage of the incursion within the RPA of T168 is above 20%, it is not considered that the proposed works will impact the long term health of the tree given the no-dig methods that will be used.

5.17 Guidance on the construction of no dig surfaces is attached at Appendix C. Further details can be submitted in response to planning conditions.

Arboricultural consultant’s comments

5.18 The council’s arboricultural consultant has made a number of comments in relation to the previous application. These comments are:

- That G151 should be shown removed – G151 has now been shown removed.

- That some works were necessary to trees T33, T35 and T43 to achieve appropriate highway clearance – These works are now specified in the tree work schedule at Appendix B.

- That the construction of the access will require extensive works close to trees to the north of Green Lane – We have been in discussion with the highway engineers who have suggested that the new road surface can be constructed using the old surface as a sub-base in sensitive areas. However, in most cases the larger trees are set back to the north of the road and the trees closest to the road are generally young and more resilient.

- That the two B category oak trees (T158 and T159) are shown removed and should if possible be retained – This has been reviewed but it has not been
possible to retain these trees. Tree losses have been kept to a very low number and trees which are visually prominent in the wider landscape have been priorities for retention. The proposed planting of 297 new trees will more than mitigate for the loss of these two trees.

- That the juxtaposition of tree, T153 – T155 is too close to adjacent proposed properties – This has been reviewed and property 105 has been redesigned to provide greater separation. Property 98 does not need adjustment as it is only a flank wall which faces these trees.

- That the gardens of plots 52-54 to the north of trees T173, T177, T178 and T179 will be dominated by these trees – This is not considered to be a reasonable objection as all these trees are deciduous and shading by trees is, as a matter of policy and guidance, to be encouraged. The Building Research Establishment advises in relation to sunlight and buildings that “Deciduous trees give shade in summer but allow access to sunlight in winter” [Site layout planning for daylight and sunlight: a guide to good practice BR 209 1998 page 22] and “Tree locations are also important; deciduous species are best because they are leafless when solar gains are most valuable, while providing some shade in summer.” [BR 380 - Environmental site layout planning: solar access, microclimate and passive cooling in urban areas. 2000. Page 69]. In addition, The BRE advises “Where possible, use vegetation for sun shading and wind protection; transpiration helps to moderate high temperatures” [Climate and site development. BRE Digest 350 Part 2 1990]. Guidance generally, and for some time, has encouraged the use of trees to reduce increasing temperatures in buildings. For example: “The cooling, shading, humidifying and filtering effects of green space are likely to become more important as climate change leads to summers becoming increasingly warm and dry with more periods of higher temperatures. Climate change may threaten the viability of some tree species while favouring others. Since an urban tree may live for many decades, there is a need to think ahead and plant species that will tolerate a different climate. [The Urban Environment – Royal Commission on Environmental Pollution. March 2007]. In addition to these considerations we have noted that large trees, including coniferous trees, can be seen very close to the southern elevations of several properties in the immediate area and that these juxtapositions do not appear to have led to unacceptable tree removals or pruning. The local authority has wide powers to protect trees and can use these powers if required. The objection that trees which shade proposed development will lead to
pressure to prune or fell is commonly raised but there is little or no research evidence to support this suggestion. In most urban and rural areas close juxtaposition of trees and buildings is the norm. For all these reasons we consider the proposed juxtaposition to be both acceptable and desirable.

- That the no dig construction required for hard surfaces close to T165 and T167 will require a full arboricultural method statement which can be provided in response to planning conditions – *This can be dealt with by condition.*

- That proposed garage buildings close to T189, T191 and T194 are too close to these trees and that consideration should be given to moving these garages – *Garages close to these trees have been moved and are no longer within the RPAs or crown spreads of these trees. Tree protection locations have been adjusted accordingly.*
6 DISCUSSION

General Change

6.1 The proposed development is a change from agricultural land use to residential. However, this change is in principle agreed. The proposals have taken into account the potential impacts on trees and have ensured that important trees can be retained. This particularly applies to boundary trees which contribute to public and private amenity, and trees along Green Lane and the junction with Holt Road where the proposals allow for the retention of all important trees.

6.2 The development proposal does not require the removal of any visually prominent trees. As part of the wider development of the site there is a significant amount of planting and large landscaped amenity areas are proposed. The change in terms of tree cover and amenity landscaping will therefore be positive over the medium to long term.

6.3 The revised layout has significantly reduced the potential impacts and need to special protection measures in relation to retained trees and has addressed the council's concerns.

6.4 The proposals include indicative landscaping, open areas and tree planting which includes the planting of 297 new trees on the site.

How do the changes relate to planning policy?

6.5 The proposal has taken account of all visually significant trees and does not involve the removal of any of the high quality trees. Tree and hedgerow losses have been kept to a few individuals with the majority being retained. The proposed new tree planting is in accordance with the principles of good design.

6.6 The opportunity to provide new trees of good quality which are appropriate to the site and setting is very much in line with the policies in the NPPF.

6.7 Local planning policies have been addressed in relation to trees: those trees that make an important contribution to local character have been retained; and opportunities have been taken to provide space for the planting and growth of new trees and landscape features.
7 CONCLUSIONS

Sustainable development

7.1 The best and most visually prominent trees have been retained in these proposals. The layout has been influenced by trees on and surrounding the site and all retained trees can be adequately protected throughout the construction process. The revised layout has reduced the requirement for special measures to manage the risks to retained trees.

7.2 The development proposal will result in a neutral impact on trees and has the potential, with substantial new tree planting, to result in a positive gain in terms of the tree population providing a positive impact over time.
8 RECOMMENDATIONS

The use of planning conditions to safeguard trees

8.1 Section 197 of the Town and Country Planning Act 1990 places a duty on the Local Planning Authority to ensure that planning permissions are granted making adequate provision for the preservation and planting of trees by the imposition of conditions.

8.2 Appropriately worded planning conditions can ensure that trees are adequately protected during construction work.
## 9 TMA SUPPORTING INFORMATION

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APPENDIX A - PLANS

Tree Survey 230311-P-20-01
Tree Survey 230311-P-20-02
Tree Survey 230311-P-20-03
Tree Survey 230311-P-20-04
Tree Survey 230311-P-20-05
Tree Survey 230311-P-20-06

Proposed Layout and Tree Removals 230311-P-21-01b
Proposed Layout and Tree Removals 230311-P-21-02b
Proposed Layout and Tree Removals 230311-P-21-03b
Proposed Layout and Tree Removals 230311-P-21-04b
Proposed Layout and Tree Removals 230311-P-21-05b
Proposed Layout and Tree Removals 230311-P-21-06b

Tree Protection Plan 230311-P-22-01b
Tree Protection Plan 230311-P-22-02b
Tree Protection Plan 230311-P-22-03b
Tree Protection Plan 230311-P-22-04b
Tree Protection Plan 230311-P-22-05b
Tree Protection Plan 230311-P-22-06b

Tree Protection Specification 230311-P-25a