HAYDEN'S
Arboricultural Consultants

Tree Survey, Arboricultural Impact Assessment
Preliminary Arboricultural Method Statement & Tree Protection Plan
In Accordance with BS 5837:2012

Proj. No **6550**	**Land off Howlett Way, Trimley St Martin, Suffolk**		
Client:		Bidwells (Chelmsford)	
Date of Report:	17/01/2020	Revision:	B

Tree Survey, Arboricultural Impact Assessment, Preliminary Arboricultural Method Statement & Tree Protection Plan – In Accordance with BS 5837: 2012

Summary

The purpose of this report is to provide a preliminary consideration of the arboricultural implications created by the proposed development. In accordance with the feasibility and planning sections of BS 5837: 2012 *"Trees in relation to design, demolition and construction – Recommendations"*, trees deemed to be within the influencing distance of the projected construction have been evaluated for quality, longevity, and initial maintenance requirements. Where trees do not have to be removed for health and safety reasons, a detailed and objective assessment has been made of the consequences of the intended layout.

In this circumstance it is intended to construct up to 340 dwellings with open space, a new Early Years Facility, new roundabout access from Howlett Way, foul water pumping station and associated landscaping. As a result twenty one individual trees, five groups of trees, nine areas of trees, nine hedgerows and one woodland were inspected. The arboricultural related implications of the proposal are as follows:

1 In addition to trees which require felling irrespective of development, it is necessary to fell one category C tree, four category C landscape features and three small sections of category B landscape features, in order to achieve the proposed layout. Additionally, seven trees and landscape features require minor pruning to permit construction space or access.

2 One group of trees have been identified for removal irrespective of any development proposals. The removal of these trees does not coincide with the requirements of the proposed layout.

3 The alignment of one garage nominally intrudes within the Root Protection Area of one tree to be retained. This has only a minor influence on the Root Protection Area and as such it is considered appropriate to undertake linear root pruning, thus obviating the need for specialist construction techniques at these locations. No other buildings are shown to encroach within Root Protection Areas.

4 The alignment of five areas of proposed hard surfaces encroach within the Root Protection Areas of trees which are to be retained, but given the use of modern "no dig" construction techniques, this is not considered to be a substantial issue.

5 The alignment of five further areas of proposed hard surfaces nominally encroach within the Root Protection Areas of trees to be retained. This has only a minor influence on the Root Protection Areas and as such it is considered appropriate to undertake linear root pruning, thus obviating the need for specialist "no dig" construction techniques at these locations.

6 The alignment of two drainage basins nominally encroach within the Root Protection Areas of an individual tree and a woodland area to be retained. This has only a minor influence on the Root Protection Areas and as such it is considered appropriate to undertake linear root pruning at these locations.

7 This report recommends that specialist advice is obtained by expert practitioners in other disciplines. Such input should always be sought prior to the submission of this report in support of a planning application in order to demonstrate that the techniques and methods hereby proposed are achievable. In this particular circumstance it is necessary to contact the following:

- Civil Engineer (“no dig” surfacing, item 4.4.2)

8 All trees and landscape features that are to remain as part of the development should suffer no structural damage provided that the findings with this report are complied with in full. This includes ensuring that protective fencing is erected as detailed at items 4.6 and 5.1 of this report.

9 Post Planning Permission – Subject to achieving Planning Permission, a detailed Arboricultural Method Statement and Tree Protection Plan will be required. This will include the following: fencing type, ground protection measures, “no dig” surfacing, access facilitation pruning specification, phasing and an extensive auditable monitoring schedule.

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1.0 Introduction

1.1 Terms of Reference

1.1.1 Hayden's Arboricultural Consultants Limited has been commissioned by Bidwells (Chelmsford) to prepare a Tree Survey, Arboricultural Impact Assessment, Preliminary Arboricultural Method Statement and Preliminary Tree Protection Plan for the existing trees at Land off Howlett Way, Trimley St Martin, Suffolk.

1.1.2 The site survey was carried out on 23rd January 2018. The relevant qualitative tree data was recorded in order to assess the condition of the existing trees, their constraints upon the prospective development and the necessary protection and construction specifications required to allow their retention as a sustainable and integral part of the completed development.

1.1.3 Information is given on condition, age, size and indicative positioning of all the trees, both on and affecting the site. This is in accordance with the British Standard 5837: 2012 *Trees in relation to design, demolition and construction - Recommendations.*

1.2 Scope of Works

1.2.1 The survey of the trees and any other factors are of a preliminary nature. The trees were inspected on the basis of the Visual Tree Assessment (VTA) method as developed by Mattheck and Breloer (1994). The trees were inspected from ground level with no climbing inspections undertaken. It is not always possible to access every tree and as such some measurements may have to be estimated. Trees with estimated measurements are highlighted in the schedule of trees. No samples have been removed from the site for analysis. The survey does not cover the arrangements that may be required in connection with the removal of existing underground services.

1.2.2 Whilst this is an arboricultural report, comments relating to non arboricultural matters are given, such as built structures and soil data. Any opinion thus expressed should be viewed as provisional and confirmation from an appropriately qualified professional sought. Such points are clearly identified within the body of the report.

1.2.3 An intrinsic part of tree inspection in relation to development is the assessment of risk associated with trees in close proximity to persons and property. Most human activities involve a degree of risk with such risks being commonly accepted, if the associated benefits are perceived to be commensurate. In general, the risk relating to trees tends to increase with the age of the trees concerned, as do the benefits. It will be deemed to be accepted by the client that the formulation of the recommendations for all tree management will be guided by the cost-benefit analysis (in terms of amenity), of the tree work.

1.2.4 Where the trees inspected stand within woodland, the frequency with which these trees/woodlands are accessed, or will be accessed, must be considered as an integral part of the recommendations given for the future management of these trees/woodlands. Priority will be given to those trees near existing and proposed footpaths, public highways and the site boundaries where it is assumed that the presence of persons and property will be more frequent and therefore of a potentially higher risk. Many of the trees surveyed within the woodland areas present little or no risk (barring exceptional circumstances) to site users and could therefore be left unmanaged.

The decision regarding the frequency of use of these areas within the site, and the management decisions taken based on this frequency, must ultimately be the responsibility of the client.

1.3 Documentation

1.3.1 The following documentation was provided prior to the commencement of the production of this report;

- Email of instruction from Elizabeth Thorogood dated 23rd November 2017
- Definition of site boundary
- Topographical survey
- Proposed site layout

2.0 The Site

2.1 Overview

2.1.1 The site is mainly area of arable land located to the east of the roundabout between High Road and Howlett Way in Trimley St Martin. The arboricultural features mostly consist of boundary hedges with early-mature and mature trees of varying conditions and species. To the eastern boundary of the site there is a linear area of mostly broadleaf woodland between the site and the A14.

2.2 Soils

2.2.1 The soil type commonly associated with this site are generally freely draining slightly acid loams. They are of low fertility and typically support neutral and acid pastures, and deciduous woodland type habitats. This soil type constitutes approximately 15.5% the total English land mass.

2.2.2 The data given was obtained from a desk top study which provides indications of likely soil types. By definition, this information is not comprehensive and therefore any decisions taken with regards the management, usage or construction on site should be based on a detailed soil analysis.

2.2.3 Further to item 2.2.2, this report provides no information on soil shrinkability. It may be necessary for practitioners in other disciplines (e.g. engineers considering foundation design) to obtain this data as required.

2.3 Statutory Tree Protection

2.3.1 Hayden's Arboricultural Consultants Limited have been informed that at the *date of the tree inspection* the trees concerned were not located within a Conservation Area or the subject of a Tree Preservation Order. As such, no written permission would be required from the local planning authority Suffolk Coastal District Council to commencing works to trees. It should be noted however, that Suffolk Coastal District Council have the power to serve Tree Preservation Orders very rapidly, and therefore it is incumbent upon owners, managers or any persons wishing to undertake work to any trees to contact the Local Planning Authority (LPA) prior to commencing works to ensure that the situation has not changed.

2.3.2 Felling Licence

All trees within the United Kingdom are protected under the Forestry Acts. In general, anyone felling more than 5 cubic metres of timber in any calendar quarter requires a Felling Licence from the Forestry Commission. There are exemptions however and these are as follows:-

A Felling License is not required in the following instances:

- To fell trees in a garden, an orchard, a churchyard or a designated open space (Commons Act 1899).
- To carry out surgery operations such as pruning, reduction, dead wooding or pollarding.
- To fell less than 5 cubic metres in a calendar quarter. (Please note that not more than 2 cubic metres in a calendar quarter may be sold).
- To fell trees which are 8 centimetres or less in diameter when measured 1.3 metres from the ground. Trees removed for thinning may have a diameter of up to 10 centimetres and trees managed under a coppice regime may have a diameter of up to 15 centimetres.
- To fell trees previously approved for removal under a Dedication Scheme, or where Detailed Planning Permission has been granted.

Substantial fines exist for not complying with the requirements of a Felling Licence.

2.3.3 Hedgerow Regulations and Inclosure Act

Certain hedgerows within the United Kingdom are protected under The Hedgerow Regulations 1997. The regulations apply to any hedgerow growing in, or adjacent to, any common land, protected land (local nature reserves and SSSI"s), or land used for agriculture, forestry or the breeding or keeping of horses, ponies or donkeys, if it: (a) has a continuous length of, or exceeding 20m; or (b) it has a continuous length of less than 20m and, at each end, meets another hedgerow. The regulations do not apply to hedgerows within the curtilage of, or marking a boundary of the curtilage of, a dwelling house.

Anybody wishing to remove or destroy a hedge must apply to their LPA for consent. Substantial fines exist for not complying with the requirements The Hedgerow Regulations.

Older hedges could be protected by old Inclosure Acts. These Acts may require that hedges are retained and managed in perpetuity.

It is recommended professional legal advice be sought before removing hedgerows to determine whether the hedgerow might be protected by the Inclosure Act. Details of the Inclosures Act are held by the Local Records Office.

3.0 Tree Survey

3.1 As part of this survey a total of twenty one individual trees, five groups of trees, nine areas of trees, nine hedgerows and one woodland have been identified. These have been numbered T001 – T021, G001 – G005, A001 – A009, H001 – H009 and W001 respectively.

3.2 A topographical survey was provided which showed the position of the trees on site. It should be noted however that topographical surveys are not always comprehensive and sometimes it is considered appropriate to record details of trees and landscape features omitted from or beyond the scope of the plan. If this circumstance occurs, the location of the individual tree or landscape feature is estimated. The position of each tree is shown on the attached drawing no. 6550-D-AIA (rev. B).

3.3 In order to provide a systematic, consistent and transparent evaluation of the trees included within this survey, they have been assessed and categorised in accordance with the method detailed in item 4.3 of *BS 5837: 2012 "Trees in Relation to Design, Demolition and Construction - Recommendations"*. For further information, please see the attached Explanatory Notes.

3.4 The detailed assessment of each tree and its work requirements with priorities are listed in the attached Schedule of Trees.

3.5 Several items would benefit from tree surgery or additional investigation, be it for health and safety, cultural, aesthetic, or structural reasons as detailed in the attached Schedule of Trees. Including the trees recommended for felling, the items requiring the **most urgent** intervention are as follows:

As soon as possible:

T013	Clear access to tree, remove ivy to ensure not masking major faults and re-inspect.

Within six months:

A001	Remove ivy to ensure not masking major faults. Remove torn and damaged branches.
A002	Remove torn and damaged branches.
A004	Remove dead and dying specimens. Reduce branches on road side to avoid conflict.
A005	Remove ivy to ensure not masking major faults.
G003	Fell to ground level.
H002	Fell dead trees.
T003	Advise owner to remove ivy to ensure not masking major faults and have a detailed inspection undertaken of the tree.
T004	Advise owner to sever ivy and have tree inspected.
T006	Advise owner to remove ivy to ensure not masking major faults and have a detailed inspection undertaken of the tree.
T010	Remove major deadwood.
T021	Re-inspect in autumn 2018.
W001	Remove all dead and partially failed trees which are within falling distance of the public path.

3.6 In accordance with item 4.2.4 (c) of BS 5837: 2012, the items inspected and detailed within this report have been selected for inclusion due to the likely influence of any proposed development on the trees, rather than strictly adhering to the curtilage of the site. However, it must be understood that there may be trees beyond the site and not included in this survey which may exert an influence on the development. Where works for cultural, health and safety, quality of life, or development purposes have been recommended on trees outside the ownership of the site, these can only progress with the agreement of the owner, except where it involves portions of the trees overhanging the boundary.

4.0 Arboricultural Impact Assessment

4.1 The Proposal

4.1.1 The proposal is to construct up to 340 dwellings with open space, a new Early Years Facility, new roundabout access from Howlett Way, foul water pumping station and associated landscaping within the curtilage of the site.

4.2 Access

4.2.1 Site access will be unencumbered by the Root Protection Areas (RPA) of any trees to be retained. Therefore from an arboricultural perspective, it will not be necessary to install a proprietary temporary load bearing road to protect tree roots.

4.3. Demolition

4.3.1 Although a small amount of demolition is required, this will take place well beyond the influencing area of the retained trees.

4.4 Construction

4.4.1 Construction of foundations or structural supports for a garage will marginally encroach within the calculated RPA of T019. Given the minor extent of the intrusion at this location, it is considered appropriate to undertake linear root pruning as part of the access facilitation pruning (AFP) works. This operation will obviate the need for arboriculturally imperative specialised foundation construction methods in this situation. However, dependent on the soil type, species and topography, trees may have an influence on the soil beyond their calculated RPA. Given the proximity of the proposed construction to the trees to be retained, it is recommended that a Structural Engineer is consulted to assess the implications of the tree retention on the required foundation design. No other proposed buildings conflict with RPA's of tree to be retained, as shown on drawing no. 6550-D-AIA (rev. B).

4.4.2 Installation of five areas of new hard surfaces will encroach within the RPA's of trees to be retained – A001, A005, T003, T004, T005, T006, T009, T010 and W001. Provided that these work with finished levels and required load bearings without cutting into the ground, the surfaces should be attended to by the use of "no dig" construction methods. In the detailed Arboricultural Method Statement & Tree Protection Plan, Hayden's Arboricultural Consultants will supply a sample design of "no dig" surfacing. However, the exact specification (adhering to the principles the sample design) must be designed by a Civil Engineer who can confirm that the finished levels and load bearings are achievable with this type of design without cutting into the ground. In order to protect the RPA's of the affected trees, these areas should be either:

a) Constructed as a first phase of the development – i.e. immediately after the necessary tree surgery has been completed and protective fencing erected. It is recognised that the final top dressing of the hard surfaces could be added at the completion of the project, however during the construction phase the permeable surface must be sealed and protected to prevent contamination and compaction. Whatever method of sealing and protection is used, this must be removed at the completion of construction to allow for moisture penetration and gaseous exchange.

b) Alternatively, these areas should be constructed as a final phase with the RPA's initially protected behind fencing (and suitable ground protection where necessary to facilitate construction space). The protective fencing would then be re-located to the edge of the RPA's of these trees and the "no dig" surface constructed.

4.4.3 Installation of five further areas of new hard surfaces will encroach within small portions of the RPA's of the following trees to be retained – A001, A004, T001, T007 and T021. Given the minor extent of the intrusions at these locations, it is considered appropriate to undertake linear root pruning as part of the access facilitation pruning (AFP) works. This operation will obviate the need for "no dig" construction methods in this situation. In the detailed Arboricultural Method Statement & Tree Protection Plan, Hayden's Arboricultural Consultants will supply a method statement for root pruning operations.

4.4.4 Excavation of two drainage basins will encroach marginally within the RPA's of T007 and W001. Given the minor extent of the intrusions at these locations, it is considered appropriate to undertake linear root pruning as described at paragraph 4.4.3. In the case of T007 and T021, a minimum area equal to the area of the RPA's will be mulched prior to the commencement of development, with rotted woodchip to a depth of 5 – 10cm. This is will be maintained throughout the course of development, to aid improvements in the rooting environments of these trees.

4.4.5 Other than where discussed above, excavation and soil re-modelling is not shown to encroach within the RPA's of any retained trees.

4.5 Implications of Sloping Ground

4.5.1 The arboricultural implications of the proposed structures are based on an assumption that because there are no significant existing slopes on site, level changes will not occur within the RPA of trees that are shown to be retained.

4.6 Requirement for Tree Barrier Fencing

4.6.1 Prior to the commencement of demolition or construction and immediately after the completion of the necessary tree surgery and felling work, protective fencing will be erected on site. This must be fit for purpose (including any ground protection if necessary) in full accordance with the requirements of BS 5837: 2012 and positioned as shown on the attached Preliminary Arboricultural Impact Assessment & Tree Protection drawing. Full details of fencing will be supplied by Hayden's Arboricultural Consultants in the detailed Arboricultural Method Statement & Tree Protection Plan.

4.7 Compound

4.7.1 The site provides adequate internal space to locate a construction compound outside the RPA of any trees and landscape features that are to be retained.

4.8 Phasing

4.8.1 The proposal involves the integration of a number of complex aspects which affect tree protection (e.g. – but not exclusively – access, movement of materials and the installation of services). For this reason, the project must be carefully phased to ensure the highest level of protection for retained trees at all times.

As part of the detailed Arboricultural Method Statement & Tree Protection Plan, Hayden's Arboricultural Consultants will produce an in depth phasing recommendation to cover the major operations on site as they affect retained trees.

4.9 Monitoring

4.9.1 In accordance with item 6.3 of BS 5837: 2012, the site and associated development should be monitored regularly by a competent Arboriculturalist to ensure that the arboricultural aspects of the planning permission are complied with. As part of the detailed Arboricultural Method Statement & Tree Protection Plan, Hayden's Arboricultural Consultants will produce an extensive auditable monitoring schedule to assess the progress of key site events/activities.

4.10 Cultural Implications for Retained Trees

4.10.1 Low – all pruning works will be carried out in accordance with current industry standards. Details of specific works are listed in the attached Schedule of Works to Permit Development.

4.11 Landscape Implications

4.11.1 In addition to trees and landscape features necessitating removal for health and safety, cultural or quality of life reasons, (as detailed in the attached Schedule of Works - Irrespective of Development) the items listed in the table below require felling to permit the proposed development to proceed:-

Feature No	Reason for Removal	BS Category*	Visual Amenity Assessment*
A001 (section)	Easternmost tree conflicts with construction of pavement to development.	B	High
A002	Conflicts with roundabout on Howlett Way.	C	High
G001	Conflicts with construction space for garage block.	C	Low
G004	Conflicts with access to car park from Church Lane.	C	Moderate
H003	Conflicts with dwellings for five plots.	C	Moderate
H007 (section)	Conflicts with access to car park from Church Lane.	B	High
T011	Conflicts with dwelling for one plot.	C	Low
W001 (section)	Small section (mainly understory) conflicts with path and basin.	B	High

* Please see definitions in the Explanatory Notes attached to this report.

4.12 Post Development Implications

4.12.1 No adverse arboricultural implications are considered reasonably foreseeable for the trees that remain provided that the recommendations of this report are complied with in full.

4.12.2 Due to the dynamic nature of trees and their interaction with the environment, their health and structural integrity is liable to change over time. Because of this it is recommended that all trees on or adjacent to the site be inspected on an annual basis.

4.12.3 As stated in BS 5837: 2012, regular maintenance of any newly planted trees is of particular importance for at least three years during the critical post-planting period and might, where required by site conditions, planning requirements or legal agreement, be necessary for five years or more. Therefore, the designer of the new landscaping should, in conjunction with the landscape design proposals, prepare a detailed maintenance schedule covering this period, and appropriate arrangements made for its implementation.

5.0 Design Advice, Preliminary Arboricultural Method Statement & Tree Protection Plan

5.1 Securing of Tree Structure and Root Protection Areas (RPA)

5.1.1 The trees to be retained will be protected by the use of stout barrier fencing erected in the positions indicated on the attached Preliminary Arboricultural Impact Assessment & Tree Protection drawing no. 6550-D-AIA (rev. B). This fencing will be in accordance with the requirements of BS 5837: 2012 including any necessary ground protection.

5.1.2 All fencing provided for the safeguarding of trees will be erected prior to any demolition or development commencing on the site, therefore ensuring the maximum protection. This fencing, which must have all weather notices attached stating “Construction Exclusion Zone – No Access” will be regarded as sacrosanct and, once erected, will not be removed or altered without the prior consent of the LPA.

5.1.3 Where footpaths, access drives, or parking bays are constructed within the RPA of retained trees, careful attention will be paid to the type of surface treatment used in these areas, details of which are given in item 5.8, below. If possible, these should be installed as a final phase of the project, thereby protecting the RPA throughout the major construction phase of the proposed development.

5.1.4 Where fencing is impractical, consideration must be given to other forms of effective above ground tree structure protection. An example of this would be a combination of Barksavers to secure the stems and a temporary load bearing surface to shield the ground.

5.2 Location of Site Office, Compound and Parking

5.2.1 The position of the office, compound and parking will be agreed in writing with the LPA prior to commencement of any permitted development works. Any proposed re-location of these items through the various phases of development will be agreed prior to re-siting with the LPA.

5.3 On Site Storage of Spoil and Building Materials

5.3.1 Prior to and during all construction works on site, no spoil or construction materials will be stored within the RPA of any tree on, or adjacent to the site, even if the proposed development is to be within the RPA. This is to reduce to a minimum the compaction of the roots of the trees. Details of the RPA for each tree where no spoil or building materials will be stored are indicated on the attached Preliminary Arboricultural Impact Assessment & Tree Protection drawing no. 6550-D-AIA (rev. B). Any encroachment within this protected area will only be with the prior agreement of the LPA.

5.3.2 Any facilities for the storage of oils, fuels or chemicals shall be sited on impervious bases and surrounded by impervious bund walls. The volume of the bund compound shall be at least equivalent to the capacity of the tank plus 10%. If there is a multiple tankage, the compound shall be at least equivalent to the capacity of the largest tank, or the combined capacity of interconnected tanks, plus 10%. All filling points, vents, gauges and sight glasses shall be located within the bund. The drainage system of the bund shall be sealed with no discharge to any watercourse, land or underground strata. Associated pipe-work shall be located above ground and protected from accidental damage. All filling points and tank overflow pipe outlets shall be detailed to discharge downwards into the bund.

5.3.3 All material storage facilities and work areas must consider the effects of sloping ground on the movement of potentially harmful liquid spillages towards or into protected areas.

5.4 Programme of Works

5.4.1 All tree surgery works, once approved by the LPA, will be carried out prior to any other site works. Once completed, the proposed protective fencing will be erected along the lines indicated above. All of this will be carried out prior to commencement of any development works on the site. Outline details of the proposed programme are given in the Design and Construction and Tree Care flow chart attached (Appendix G-1).

5.5 Tree Surgery

5.5.1 All tree work will be agreed with the LPA and will be carried out in line with BS 3998: 2010 (Recommendations for Tree Works). An arboricultural contractor approved by the Local Planning Authority will carry out the work. Any alterations to the proposed schedule of works will be agreed with the LPA prior to commencement of works.

5.6 Levels

5.6.1 Other than for any specific exception which may be referred to at item 4.0, no alterations to soil levels within the RPA of retained trees are envisaged. However, if it is necessary for these to occur, appropriate measures must be taken to prevent or minimise any detrimental effects on the affected root systems as detailed in 5.6.2 and 5.6.3 below.

5.6.2 If it is necessary to excavate so close to trees that roots greater than 50mm diameter are likely to be encountered, particular care will be taken to avoid damage. Excavation in these areas will be undertaken by hand or using an air spade, avoiding any damage to the bark. The roots will be surrounded with sharp sand prior to the replacing of any soil or other material in the vicinity.

5.6.3 If it is necessary to raise levels, it is essential that adequate supplies of water and oxygen pass through the soil to the trees' roots. Therefore, where necessary, a granular material will be used which will not inhibit gaseous diffusion. Possible options are no-fines gravel, cobbles or, Type 2 road-stone. All hard surfaces will be of suitable specification to allow such gaseous diffusion, e.g. brick pavers.

5.7 Services

5.7.1 At the time of writing this report, no details on proposed services were available. However, the following principles should be adhered to when planning for their installation.

5.7.2 It is proposed that all underground service runs will be placed outside the RPA of the trees on or adjacent to the site. Where it is not possible to do this, the proposed length infringing the RPA will be hand dug 'broken trenches' (NJUG 4 paragraph 4) to ensure the maximum protection of the trees' roots. The trenches may also be excavated using an air spade, or trenchless technology can be employed if this methodology is considered appropriate by the relevant service company (thus allowing services to pass below and through the roots without the need for traditional excavation). If it is necessary to cut any small roots as part of any of these processes, they should be severed in such a way as to ensure that the final wound is as small as possible and free from ragged, torn ends.

5.7.3 All routes for overhead services will aim to avoid the trees. Where this is not possible, any tree work will be agreed prior to commencement with the LPA.

5.7.4 All service providers (Statutory Authorities) will be consulted prior to commencement of works with the aim of minimising the number of service runs on the site.

5.7.5 All service runs/trenches where they encroach within the RPA of retained trees will be agreed with the LPA prior to commencement of works.

5.8 Hard Surface Types & Construction within the Root Protection Area

5.8.1 Where it is necessary to construct footpaths, driveways, non-adoptable roads, and other hard surfaces within the RPA as calculated in accordance with BS 5837: 2012 (item 4.6.1), it is proposed that the design will comply with the 'no-dig' principles of the Arboricultural Advisory Information Services (AAIS) Practice Note 12 "*Through the Trees to Development*" - the only difference being that instead of a geo-grid, a geo-textile base is provided, and the no-fines road stone is incorporated in and retained by a geo-web cellular confinement system. Given the individual requirements of each site, it is essential that a specialist engineer is consulted to specify the construction detail. Where it is necessary to remove any existing hard surface, or lower the ground level within the RPA, this may expose roots. This operation must be undertaken using hand tools or an air spade. Any roots found should be treated with the greatest care and surrounded by sharp sand to provide a level base. Please note that 'no-dig' surfaces are not always considered acceptable for adoption.

5.8.2 Where it is shown that the construction of a boundary wall or dwelling encroaches within the RPA of a retained tree, the foundations of the wall or dwelling will be designed in such a manner so as to minimise the detrimental effect of the construction on the tree's roots. In these situations any excavations within the RPA of an affected tree will only be undertaken following exploration of the existing root system with an air spade (or by hand digging if soil conditions preclude) and the necessary root pruning undertaken to allow excavation without unnecessary pulling and tearing of the roots to be retained. This will ensure minimal damage to tree roots where pad and beam or cantilever foundations are considered appropriate. Should a piling rig be required to create piles, any access facilitation pruning or felling necessary to allow access must be undertaken before the commencement of works and only with prior consent of the LPA.

5.8.3 If boundary fencing is to be erected within the RPA of retained trees, it is proposed that the fence posts will be secured by the use of "Met-Posts" or similar design in order to keep the disturbance and damage of the roots of the trees to a minimum.

5.9 **Reporting and Monitoring Procedures**

5.9.1 In accordance with item 6.3 of BS 5837: 2012, the site and associated development should be monitored regularly by a competent Arboriculturalist to ensure that the arboricultural aspects of the planning permission (e.g. the installation and maintenance of protective measures and the supervision of specialist working techniques) are implemented. Furthermore, regular contact between the Site Manager and the Arboriculturalist allows them to effectively deal with and advise on any tree related problems that may occur during the development process. This system should be auditable. Should any issues arise during the arboricultural monitoring of the development the Arboriculturalist will contact the LPA and appropriate action taken only with the prior permission of Bidwells (Chelmsford) and the LPA.

6.0 Recommendations

6.1 It is recommended that the measures outlined in this report are implemented in full to provide retained trees with the highest level of protection during the process of demolition and construction.

6.2 Subject to achieving Planning Permission, it is recommended that a detailed Arboricultural Method Statement & Tree Protection Plan should be provided. This will include the following: fencing type, ground protection measures, “no dig” surfacing, access facilitation pruning specification, project phasing and an extensive auditable monitoring schedule.

6.3 Tree surgery should be completed as detailed in the Schedule of Trees. Where this has been identified for reasons other than to permit development, this work should be completed within the advised timescales irrespective of any development proposals.

6.4 The tree surgery works proposed as part of this Survey are recommended to mitigate any identified problems that may be caused by trees in close proximity to the proposed development. To this end, should these recommendations be overruled, this Survey stands as the opinion of Hayden’s Arboricultural Consultants Limited, and therefore any damage or injury caused by trees recommended by this practice for felling or tree surgery works, to which the proposed schedule of works has been altered or the tree has been requested to be retained by the LPA, cannot be the responsibility of this practice.

7.0 Limitations & Qualifications

Tree inspection reports are subject to the following limitations and qualifications.

General exclusions

Unless specifically mentioned, the report will only be concerned with above ground inspections. No below ground inspections will be carried out without the prior confirmation from the client that such works should be undertaken.

The validity, accuracy and findings of this report will be directly related to the accuracy of the information made available prior to and during the inspection process. No checking of independent third party data will be undertaken. Hayden's Arboricultural Consultants Limited will not be responsible for the recommendations within this report where essential data are not made available, or are inaccurate.

This report will remain valid for one year from the date of inspection, but will become invalid if any building works are carried out upon the property, soil levels altered in any way close to the property, or tree work undertaken. It must also be appreciated that recommendations proposed within this report may be superseded by extreme weather, or any other unreasonably foreseeable events.

If alterations to the property or soil levels are carried out, or tree work undertaken, it is strongly recommended that a new tree inspection be carried out.

It will be appreciated, and deemed to be accepted by the client and their insurers, that the formulation of the recommendations for the management of trees will be guided by the following:-

1. The need to avoid reasonable foreseeable damage.
2. The arboricultural considerations - tree safety, good arboricultural practice (tree work) and aesthetics.

The client and their insurers are deemed to have accepted the limitation placed on the recommendations by the sources quoted in the attached report. Where sources are limited by time constraints or the client, this may lead to an incomplete quantification of the risk.

Signed:

January 2020
For and on Behalf of Hayden's Arboricultural Consultants Limited

8.0 References

British Standards Institute (2012) *BS 5837: 2012 Trees in Relation to Design, Demolition and Construction – Recommendations.* BSI, London.

DEFRA (1997) *The Hedgerow Regulations 1997 – A Guide to the Law and Good Practice.* Department of the Environment, Transport and the Regions, HMSO, London.

Department for Communities and Local Government (2014) *Tree Preservation Orders and trees in conservation areas.*

Forestry Commission (2007) *Tree Felling – Getting Permission.* Country Services Division, Forestry Commission, Edinburgh.

Mattheck, C. and Breloer, H. (1994) *Research for Amenity Trees No. 4: The Body Language of Trees*. HMSO, London.

NHBC Standards (2007) *Chapter 4.2 'Building Near Trees'.* National House-Building Council.

NJUG 4 Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees. Issued 16th November 2007.

Patch, D. and Holding, B. (2006) *Arboricultural Practice Note 12 (APN12)*, *Through the Trees to Development.* Arboricultural Advisory and Information Service (AAIS).

9.0 Appendices

Appendix	**A**	Species List & Tree Problems
Appendix	**B**	Schedule of Trees
Appendix	**C**	Schedule of Works - Irrespective of Development
Appendix	**D**	Preliminary Schedule of Works to Allow Development
Appendix	**E**	Explanatory Notes
Appendix	**F**	Tree Preservation Order Enquiry/Response
Appendix	**G**	Advisory Information & Sample Specifications

1. BS 5837: 2012 Figure 1 - Flow Chart – Design and Construction & Tree Care
2. European Protected Species and Woodland Operations Decision Key to aid planning of woodland operations and protecting EPS (v.1)
3. BS 5837: 2012 Figure 2 - Default specification for protective barrier
4. BS 5837: 2012 Figure 3 - Examples of above-ground stabilizing systems

Appendix	**H**	Drawing no. 6550-D-AIA (rev. B)

Appendix A - Species List & Tree Problems

Species List:

Ash	*Fraxinus excelsior*
Beech	*Fagus sylvatica*
Cherry	*Prunus* spp.
Cherry Plum	*Prunus cerasifera*
Elder	*Sambucus nigra*
Elm	*Ulmus* spp.
English Oak	*Quercus robur*
European Lime	*Tilia vulgaris*
False Acacia	*Robinia pseudoacacia*
Field Maple	*Acer campestre*
Hawthorn	*Crataegus monogyna*
Holly	*Ilex aquifolium*
Holm Oak	*Quercus ilex*
Horse Chestnut	*Aesculus hippocastanum*
Leyland Cypress	X *Cuprocyparis leylandii*
Lombardy Poplar	*Populus nigra* 'Italica'
Norway Maple	*Acer platanoides*
Oak	*Quercus robur*
Poplar	*Populus* spp.
Rowan	*Sorbus aucuparia*
Scots Pine	*Pinus sylvestris*
Spindle	*Euonymus europaeus*
Sycamore	*Acer pseudoplatanus*
Tree of Heaven	*Ailanthus altissima*

Tree Problems:

This gives a brief description of the problems identified in the attached Tree Survey.

Name: **Canker**	
Symptoms/Damage Type:	This is a clearly defined patch of dead and sunken, or malformed bark which can be caused by either bacterial or fungal agents.
Consequence:	Depending upon the affecting organism can cause death of limbs or in extreme cases death of whole tree.
Control Measures:	In some instances, it may be possible to excise the infected area by tree surgery operations however this is dependent upon the distribution of infected tissues and outcomes may vary.

Name: **Deadwood**	
Symptoms/Damage Type:	This relates to dead branches in the crown of the tree. In the majority of cases, this is caused by the natural ageing process of the tree or shading due to its close proximity to neighbouring trees. However, in some situations, it may be related to fungal, bacterial or viral infection.
Consequence:	Depending upon the location and mass of dead wood removal of the affected tissue may be necessary to prevent harm to persons or property as the wood will become unstable as it decays and in some circumstances, is likely to fall from the tree with little or no warning.
Control Measures:	Detailed monitoring should be undertaken on those trees showing signs of excessive deadwood production to identify the underlying cause.

Name: **Dutch Elm Disease** (*Ophiostoma ulmi)*	
Symptoms/Damage Type:	The first symptom is the yellowing of the leaves from July onwards. It spreads rapidly often causing death in the same season - it is very rare for a tree to survive once the fungus has occurred. Dark brown streaks are evident when the bark and outer wood are peeled from the infected branches. Brown blotches may also be seen on infected branches if they are cut cleanly in a transverse section. The tree is infected by the Elm Bark Beetle which carries the disease. Once active in the tree, the fungus produces yeast like cells in the wood which are transported within the trees water conducting tissues. These cause blockages of the tissue and hence both the wilting of the leaves and the brown staining of the infected wood mentioned above.
Consequence:	This is the most serious disease in Elm trees and is still common in Britain. Infected trees decline and die rapidly.
Control Measures:	Control by fungicidal injections has been successful in specimen trees of high value however the cost of this recurrent procedure usually outweighs the value of the affected tree.

Name: **Ivy** (*Hedera helix*)	
Symptoms/Damage Type:	Ivy may grow to varying degrees on all areas of a tree from the base to the upper crown. It is possible that in doing so it will out-compete the host tree for available light thereby suppressing the host.
Consequence:	This is generally only harmful to the tree on already unhealthy specimens which may be constricted by large ivy stems around the trunk or may have their top growth suppressed by a mass of flowering shoots in the crown.
Control Measures:	Ivy should only be removed if absolutely necessary because it provides abundant cover to wildlife and then by severing twice close to the ground and removing a length of stem thereby causing the gradual dying away of the aerial parts of the plant providing extended benefit to wildlife whist relieving the pressure on the tree.

Appendix B

Schedule of Trees

SCHEDULE OF TREES (AIA) Land off Howlett Way, Trimley St Martin, Suffolk

Surveyed By: Ben Figg Date: 23/01/2018
Managed By: Ben Figg

TreeNo	Species	DBH	Height		Visual	Crown Spread	Problems / Comments	BS Cat	Work Required (TS)	Priority (TS)	Work Required (AIA)	Priority (AIA)
		Min Dist	Crown Base	Lowest Branch	Age	Water Demand						
On site		RPA (m^2)	Aspect	Aspect	SULE	Ground Cover						
A001	Oak, Hawthorn, Horse Chestnut, Norway Maple, Sycamore and Cherry	660	13		High	N6, E6, S6, W6	Line of trees providing high screening. Some stems are covered in Ivy. Some minor cavities and defects. Some trees have been reduced or have had other forms of tree surgery undertaken. Eastern field aspect shows some branch damage where they have been.	B2	Remove Ivy to ensure not masking major faults. Remove torn and damaged branches.	2	Fell one tree at east end of feature to permit development. Crown lift sections as indicated on drawing no. 6550-D-AIA (rev. B) to 3m to provide construction space. Undertake linear root pruning as indicated on drawing no. 6550-D-AIA (rev. B).	0
		7.92	0-2m		EM	High						
Yes		197.1			20+ years	Grass						
A002	Cherry, Beech, Oak and Sycamore	500	10		High	N5, E5, S5, W5	Small area providing a good level of screening. Eastern field aspect shows some branch damage where they have been. Some cavities at the base of stems. Some trees feature tight stem unions.	C2	Remove torn and damaged branches.	2	Fell to permit development.	0
		6	0-2m		EM	High						
Yes		113.1			10 + years	Grass						
A003	Norway Maple, Cherry and Hawthorn	450	12		High	N4, E4, S4, W4	There are some natural gaps in this small area, though it still provides some level of screening.	C2	No work required.	4		
		5.4	0-2m		EM	High						
Yes		91.6			10 + years	Dense undergrowth						
A004	Elm, Holm Oak, Poplar and Cherry	500	14		Moderate	N7, E7, S7, W7	Small area of mostly poor condition trees with minor defects throughout. Overhanging branches on road side. Dead and dying specimens should be removed.	C2	Remove dead and dying specimens. Reduce branches on road side to avoid conflict.	2	Crown lift/reduce over proposed road and pavement to provide 5m clearance over the road and 3m clearance over the pavement. Undertake linear root pruning as indicated on drawing no. 6550-D-AIA (rev. B) to facilitate construction of pavement.	0
		6	0-2m		M	High						
Yes		113.1			10 + years	Grass						
A005	Elm, Oak and Beech	500	15		Moderate	N6, E6, S6, W6	Area of trees on the boundary of site where the ownership is unclear. Provides a good level of screening. Most trees are heavily covered with Ivy hindering a detailed inspection and all dimensions are estimated. Damage can be seen on eastern aspect from farm machinery.	C2	Remove Ivy to ensure not masking major faults if within site ownership.	2		
		6	0-2m		M	High						
Yes		113.1			10 + years	Bare earth, Grass						
A006	Elm, Elder, Oak and Hawthorn	200	12		Moderate	N4, E4, S4, W4	Area of trees of varying sizes. Damage from farm machinery evident. Oak specimens are located away from boundary line. All dimensions estimated.	C2	No work required.	4		
		2.4	0-2m		EM	High						
Yes		18.1			10 + years	Bare earth						

TreeNo	Species	DBH	Height		Visual	Crown Spread	Problems / Comments	BS Cat	Work Required (TS)	Priority (TS)	Work Required (AIA)	Priority (AIA)
		Min Dist	Crown Base	Lowest Branch	Age	Water Demand						
On site		RPA (m^2)	Aspect	Aspect	SULE	Ground Cover						
A007	Hawthorn	180	6		Moderate	N2.5, E2.5, S2.5, W2.5	A remnant of a boundary hedge, now unmanaged and heavily covered with Ivy. This feature could usefully be improved by removing the Ivy, coppicing the live trees and interplanting with new trees to provide a good quality, long term feature for screening and ecological purposes.	C2	No work required.	4		
		2.16	0-2m		M	High						
Yes		14.7			10 + years	Ivy, Dense undergrowth						
A008	Leyland Cypress, Eucalyptus and Cherry Plum	300	16		Moderate	N4, E4, S4, W4	An area of off-site trees located near the boundary in a neighbouring garden. Most previously overhanging branches have been cut back to the boundary line.	C2	No work required.	4		
		3.6	0-2m		EM	High						
No		40.7			10 + years	Grass, Dense undergrowth						
A009	Elm Species	150	4		Low	N1, E1, S1, W1	An area of mostly dead Elm, which is a remnant of an old hedge, but most trees have succumbed to Dutch Elm Disease, which will be a reoccurring theme over time unless managed or replaced. The dimensions are based on live trees which are considerably smaller than the dead trees, which will need to be removed if the site is to be used frequently in the future.	U	No work required.	4		
		1.8	0-2m		SM	High						
Yes		10.2			<10 Years	Light undergrowth						
G001	2x Hawthorn	180	5.5		Low	N3, E3, S3, W3	A pair of maturing Hawthorns.	C2	No work required.	4	Fell to ground level.	0
		2.16	0-2m		M	High						
Yes		14.7			10 + years	Grass, Light undergrowth						
G002	3x Scots Pine	350	11		Moderate	N6, E6, S6, W6	A group of three Pines located on the edge of site. All trees are heavily covered with Ivy. None of these trees could be singled out, but collectively provide some landscape interest. Some recent poor pruning over the farmland has affected their amenity value, though this should not be detrimental in the long term. Besides stubs from poor pruning, there is some deadwood in the lower canopies.	B2	Remove Ivy to ensure not masking major faults. Remove major deadwood. Remove old stubs.	3		
		4.2	0-2m		M	Moderate						
Yes		55.4			20+ years	Ivy, Light undergrowth						

TreeNo	Species	DBH	Height		Visual	Crown Spread	Problems / Comments	BS Cat	Work Required (TS)	Priority (TS)	Work Required (AIA)	Priority (AIA)
		Min Dist	Crown Base	Lowest Branch	Age	Water Demand						
On site		RPA (m^2)	Aspect	Aspect	SULE	Ground Cover						
G003	False Acacia	410	15.5		High	N7.5, E7.5, S7.5, W7.5	Direct access to bases of trees not possible due to dense undergrowth, though some basal decay is evident in one multi-stemmed tree where a stem has previously failed. There are other defects evident in these trees including exit holes in stem from bark boring insects and cracking/lifting bark in other places. Because one tree should be felled, the others should also as they make a tightly grown group where no trees could be singled out for retention and they are all likely to be of a similarly poor condition.	U	Fell to ground level.	2		
		4.92	0-2m		M	Moderate						
Yes		76			<10 Years	Dense undergrowth, Water						
G004	Ash	230	8.5		Moderate	N4, E4, S4, W4	A group of densely growing Ash growing along the boundary. It appears that all trees were coppiced due to overhead power cables, though it is not possible to see due to dense Ivy. Inspection is therefore of a limited nature. These trees are at a stage where re-coppicing is necessary, though there will be a continual conflict. Complete removal and replacement with a mixed species hedge which can be maintained without future conflict may therefore be a worthwhile consideration.	C2	Re-coppice or remove and replace.	3	Fell to permit development.	0
		2.76	0-2m		EM	Moderate						
Yes		23.9			10 + years	Grass, Dense undergrowth, Tarmac						
G005	2x Tree Of Heaven	750	14		High	N9, E9, S9, W9	A pair of off-site Tree of Heaven. The larger tree has suffered some major branch failures in the past and would benefit from some weight reduction in the crowns to promote their longevity. The canopies of both trees overhang the site. Despite the loss of some branches, these trees are still attractive specimens.	B2	No work required.	4		
		9	2.1-4m		M	Moderate						
No		254.5			10 + years	Grass, Dense undergrowth						
H001	Hawthorn	100	4		Low	N1, E1, S1, W1	Small unmanaged hedge located on bank.	C2	No work required.	4		
		1.2	0-2m		SM	High						
Yes		4.5			10+ years	Bare earth						

TreeNo	Species	DBH	Height		Visual	Crown Spread	Problems / Comments	BS Cat	Work Required (TS)	Priority (TS)	Work Required (AIA)	Priority (AIA)
		Min Dist	Crown Base	Lowest Branch	Age	Water Demand						
On site		RPA (m^2)	Aspect	Aspect	SULE	Ground Cover						
H002	Beech, Oak and Elm	180	9		Moderate	N3, E3, S3, W3	A line of trees which form an unmanaged hedge, many are leaning and dead which should be removed. Provides some screening, overall poor condition.	U	Fell dead trees.	2		
		2.16	0-2m		EM	High						
Yes		14.7			<10 Years	Bare earth						
H003	Hawthorn	160	4		Moderate	N2, E2, S2, W2	A hedgerow which is currently unmanaged, but still an attractive feature of ecological importance. The western section could be improved by clearing some of the bramble and interplanting with new plants.	C2	Clear brambles from western section of hedge and interplant with new trees.	3	Fell to permit development.	0
		1.92	0-2m		M	High						
Yes		11.6			40 + years	Grass, Light undergrowth						
H004	Hawthorn	250	5		Moderate	N1.5, E1.5, S1.5, W1.5	A remnant of a boundary hedge located on a slight bank near the edge of site. This hedge is now heavily covered with Ivy and the Hawthorn have been heavily cut back. This feature may regenerate from coppicing if the Ivy is removed at the same time.	U	No work required.	4		
		3	0-2m		M	High						
Yes		28.3			<10 Years	Bare earth						
H005	Hawthorn	120	5.5		Moderate	N1.5, E1.5, S1.5, W1.5	A lightly managed section of hedge which provides essential screening to the neighbouring properties.	B2	Continue annual maintenance.	3		
		1.44	0-2m		M	High						
Yes		6.5			40 + years	Bare earth						
H006	Hawthorn	50	1.2		Low	N0.5, E0.5, S0.5, W0.5	A very closely trimmed Hawthorn hedge.	C2	Continue annual maintenance.	3		
		0.6	0-2m		M	High						
Yes		1.1			10 + years	Bare earth						
H007	Hawthorn, Elm, Field Maple and Holly	200	2.3		High	N1, E1, S1, W1	A mixed native hedge, most of which is managed. This feature provides excellent screening and ecological value to the site. A section of mostly Holly around a telegraph pole has been left unmanaged in height and should be reduced down to the height of the rest of the hedge to remove conflict with the overhead power cables.	B2	Continue annual maintenance and reduce height of section as shown on drawing no. 6550-D.	3	Fell section to permit development.	0
		2.4	0-2m		M	High						
Yes		18.1			40 + years	Grass, Ivy, Tarmac						

TreeNo	Species	DBH	Height		Visual	Crown Spread	Problems / Comments	BS Cat	Work Required (TS)	Priority (TS)	Work Required (AIA)	Priority (AIA)
		Min Dist	Crown Base	Lowest Branch	Age	Water Demand						
On site		RPA (m^2)	Aspect	Aspect	SULE	Ground Cover						
H008	Hawthorn	160	6		Moderate	N1.5, E1.5, S1.5, W1.5	A remnant of a boundary hedge, mostly consisting of Hawthorn, with a few gaps throughout. This feature could be improved through cutting back the existing plants to encourage dense regrowth and interplanting with new plants.	C2	No work required.	4		
		1.92	0-2m		M	High						
Yes		11.6			10 + years	Ivy, Dense undergrowth						
H009	Holly	80	2		Moderate	N1, E1, S1, W1	A hedge of mostly Holly, which has all been trimmed, except one tree which has been allowed to grow to mature height. Some of this hedge is becoming covered with Ivy and shaded out.	C2	Continue annual maintenance.	3		
		0.96	0-2m		M	Low						
No		2.9			10 + years	Light undergrowth						
T001	English Oak	690	15		High	N7, E8, S6, W7	Tree located on bank which has presumably been undermined and this has resulted in some exposed roots. Tree has been reduced in the past. Major deadwood.	C2	Remove major deadwood.	3	Undertake linear root pruning as indicated on drawing no. 6550-D-AIA (rev. B).	0
		8.28	2.1-4m		M	High						
Yes		215.4			10 + years	Bare earth, Grass						
T002	Ash	590	14		High	N7.5, E9.5, S6, W6.5	Very poor form. Multi-stemmed from base with very tight stem unions. Poor condition, growing on side of bank. Some cavities and wounds on stems.	C2	Monitor annually - tight stem unions.	3		
		7.08	0-2m		EM	Moderate						
Yes		157.5			10 + years	Bare earth						
T003	English Oak	1100	15		High	N6, E7, S6, W6.5	No access to tree as it is located in neighbouring property, so dimensions estimated and inspection is of a limited nature. Major deadwood. Cavity can be seen at base though this cannot be assessed due to no access. Tree is typical for a specimen of this age. Heavily covered in Ivy making stem assessment not possible. Tree has been damaged by farm machinery and poorly pruned in other places. There is evidence of historic hollowing at base, which may be due to Oak Bracket, though no brackets were seen at time of survey. The tree appears to be producing reactive wood around the outside.	B2	Advise owner to remove Ivy to ensure not masking major faults and have a detailed inspection undertaken of the tree.	2		
		13.2	0-2m		M	High						
No		547.4			20+ years	Bare earth						

TreeNo	Species	DBH	Height		Visual	Crown Spread	Problems / Comments	BS Cat	Work Required (TS)	Priority (TS)	Work Required (AIA)	Priority (AIA)
		Min Dist	Crown Base	Lowest Branch	Age	Water Demand						
On site		RPA (m^2)	Aspect	Aspect	SULE	Ground Cover						
T004	English Oak	350	13		Moderate	N5, E4, S4, W4	Off site tree so no direct access and all dimensions estimated and inspection is of a limited nature. Tree heavily covered in Ivy.	C2	Advise owner to sever Ivy and have tree inspected.	2		
		4.2	2.1-4m		EM	High						
No		55.4			10 + years	Bare earth						
T005	English Oak	330	12		Moderate	N6, E3, S3, W5	Off site tree so no direct access and all dimensions estimated and inspection is of a limited nature. Tree is suppressed by adjacent tree.	C2	No work required.	4		
		3.96	2.1-4m		EM	High						
No		49.3			10 + years	Bare earth						
T006	Lombardy Poplar	950	19		High	N4, E3, S3, W5	Off site tree so no direct access and all dimensions estimated and inspection is of a limited nature. Tree heavily covered in Ivy. Very large tree.	B2	Advise owner to remove Ivy to ensure not masking major faults and have a detailed inspection undertaken of the tree.	2		
		11.4	0-2m		M	High						
No		408.3			20+ years	Bare earth						
T007	English Oak	950	17.5		High	N6.5, E7, S6, W10	One of two mature Oaks located in field, which is the better quality specimen of the two. Levels change due to cultivation at around 2m away from the stem. Some cavities at the base have occluded. Some stubs in the canopy. Canopy appears dense.	A1	No work required.	4	Undertake linear root pruning and apply 5-10cm rotted woodchip mulch as shown on drawing no. 6550-D-AIA (rev. B).	0
		11.4	4.1-6m		M	High						
Yes		408.3			40 + years	Bare earth, Grass						
T008	Rowan	150	5.5		Low	N2, E2, S2, W2	A small Rowan of moderate quality and good health, growing on the edge of a slight bank at the rear of some existing gardens.	C1	No work required.	4		
		1.8	0-2m		EM	Moderate						
Yes		10.2			10 + years	Grass						
T009	English Oak	900	17		High	N9.5, E10, S9.5, W9	A large mature English Oak which has good structural form and shape and is a major feature within the landscape. There was no direct access to the tree at the time of survey due to dense undergrowth, so some dimensions are estimated. There is a cavity in the main union at approximately 3-3.5m, though it is not possible to determine the extent of any decay associated with this from ground level. There are some large pieces of deadwood within the canopy.	A1	Clear around base of tree and re-inspect. Undertake aerial inspection of cavity in main union if area around tree is to become high use.	3		
		10.8	0-2m		M	High						
Yes		366.4			40 + years	Grass, Dense undergrowth						

TreeNo	Species	DBH	Height		Visual	Crown Spread	Problems / Comments	BS Cat	Work Required (TS)	Priority (TS)	Work Required (AIA)	Priority (AIA)
		Min Dist	Crown Base	Lowest Branch	Age	Water Demand						
On site		RPA (m^2)	Aspect	Aspect	SULE	Ground Cover						
T010	Elm (Ulmus 'Sapporo Autumn Gold')	700	15.5		High	N6.5, E7.5, S7.5, W6	A triple stemmed Elm located near the edge of site and overhanging a footpath. This tree has tight main unions with included bark. Although there does not appear to be any major defects as a result at present, it may lead to failure of parts of this tree in future, particularly if the site use alters. Some branches appear to have been shed in the past as a result of poorly formed unions. A three way dynamic brace may be a worthwhile consideration, particularly if surrounding frequency of use changes. Despite these structural flaws, this is an attractive tree. There is some deadwood in the canopy. The exact variety is uncertain, though it may be a specimen of Ulmus 'Sapporo Autumn Gold'.	B1	Remove major deadwood.	2	Crown lift on west side to 3m to provide construction space for path.	0
		8.4	0-2m		M	High						
Yes		221.7			10 + years	Bare earth, Dense undergrowth						
T011	Elm Species	200	7		Low	N4.5, E4.5, S4, W3.5	A young Elm located on the edge of an existing field, which appears healthy at present.	C1	No work required.	4	Fell to permit development.	0
		2.4	0-2m		EM	High						
Yes		18.1			10 + years	Grass, Dense undergrowth						
T012	English Oak	200	8.5		Moderate	N3.5, E3.5, S3.5, W3.5	A young English Oak located in a neighbouring rear garden. This tree appears healthy.	B1	No work required.	4		
		2.4	0-2m		EM	High						
No		18.1			40 + years	Grass						
T013	False Acacia	430	14.5		High	N4.5, E4.5, S4.5, W5	Direct access not possible as tree is located on the opposite side of a water filled ditch and within dense undergrowth. All dimensions are therefore estimated and inspection is of a limited nature. The stem is covered with dense Ivy, further hindering inspection.	C1	Clear access to tree, remove Ivy to ensure not masking major faults and re-inspect.	1		
		5.16	0-2m		M							
Yes		83.6			10 + years	Dense undergrowth, Water						
T014	Sycamore	350	10.5		Moderate	N5.5, E5.5, S5.5, W5.5	A maturing Sycamore located near the boundary of site within a neighbouring garden. No direct access to tree as it is off-site, though no visible defects are evident.	B1	No work required.	4		
		4.2	0-2m		EM	Moderate						
No		55.4			40 + years	Grass, Unknown						

TreeNo	Species	DBH	Height		Visual	Crown Spread	Problems / Comments	BS Cat	Work Required (TS)	Priority (TS)	Work Required (AIA)	Priority (AIA)
		Min Dist	Crown Base	Lowest Branch	Age	Water Demand						
On site		RPA (m^2)	Aspect	Aspect	SULE	Ground Cover						
T015	Spindle	100	3.5		Low	N2, E2.5, S2.5, W3	A small Spindle set within a boundary hedge which has been grown as a standard form.	C1	No work required.	4		
		1.2	0-2m		M	Moderate						
Yes		4.5			10 + years	Grass, Light undergrowth						
T016	Cherry Species	550	12		High	N7, E6, S7, W6	A mature Cherry located near the boundary of site but in a neighbouring garden. No direct access or sightlines to tree, so all dimensions are estimated and inspection is of a limited nature.	C1	No work required.	4		
		6.6	2.1-4m		M	Moderate						
No		136.8			10 + years	Other Unknown						
T017	Sycamore	400	11.5		High	N6, E6, S6, W6	A maturing Sycamore located near the boundary and within a neighbouring garden. This tree is heavily covered with Ivy and there is no direct access, so all dimensions estimated and inspection is of a limited nature. There are however no visible indicators of ill-health. This tree has a mature form with only short annual extension growth, so is considered unlikely to grow much bigger.	B1	No work required.	4	Crown lift to 3m over site to provide construction space.	0
		4.8	0-2m		M	Moderate						
No		72.4			40 + years	Ivy, Dense undergrowth						
T018	English Oak	180	8.5		Low	N4, E2.5, S2, W3	A young Oak growing from within a hedge. Two side stems and lower branches have been repeatedly cut back to form part of the hedge. This tree has an asymmetric form due to the neighbouring Sycamore.	C1	No work required.	4		
		2.16	0-2m		SM	High						
No		14.7			10 + years	Grass, Dense undergrowth						
T019	English Oak	550	13		High	N7, E7, S7, W7	A maturing Oak located near the boundary of site but within a neighbouring property. This tree has excellent structural form and good health.	A1	No work required.	4	Crown lift over site to 3.5m to provide construction space and undertake limited linear root pruning as indicated on drawing no. 6550-D-AIA (rev. B).	0
		6.6	0-2m		EM	High						
No		136.8			40 + years	Light undergrowth						
T020	English Oak	500	12		High	N7, E7, S7, W7.5	A maturing Oak located near the boundary of site but within a neighbouring property. This tree has excellent structural form and good health.	A1	No work required.	4	Crown lift over site to 2.5m to facilitate installation of protective fencing.	0
		6	0-2m		EM	High						
No		113.1			40 + years	Light undergrowth						

TreeNo	Species	DBH	Height		Visual	Crown Spread	Problems / Comments	BS Cat	Work Required (TS)	Priority (TS)	Work Required (AIA)	Priority (AIA)
		Min Dist	Crown Base	Lowest Branch	Age	Water Demand						
On site		RPA (m^2)	Aspect	Aspect	SULE	Ground Cover						
T021	English Oak	940	0		Moderate	N7, E10.5, S10.5, W5.5	A mature Oak which is one of a pair of trees located at the centre of an arable field. The area around these trees has been cultivated very close to the bases, within approximately 2m of the base of the stems. This tree has a large area of missing bark with dysfunctional tissue on the north side of the stem, to at least 3m, though it is not possible to see the exact extent due to a dense mat of dead Ivy on the stem. It does appear that this tree has undergone some historic hollowing at the centre, but this is not thought to be ongoing and the tree appears to have produced reactive growth on the outside. There is some damage around the root collar as well as the stem. This damage is most likely from a fire. There are two brackets growing from the area of dysfunction, though they are too old to identify with much confidence (though they are most likely Chicken of the Woods, re-inspection during autumn 2018 is considered prudent). This tree has some large dead wood in the canopy, probably where branches have died back due to stress from root damage and the column of dysfunction in the stem. Despite these defects, the tree appears remarkably healthy in the live portions of the crown and should be considered an important tree within the site where there are few mature or large open grown trees. It's health could be greatly improved in the future by providing it with more root space and improvements to the soil.	A3	Re-inspect in autumn 2018.	2	Undertake linear root pruning and apply 5-10cm rotted woodchip mulch as shown on drawing no. 6550-D-AIA (rev. B).	0
		11.28	4.1-6m		M	High						
Yes		399.7			10 + years	Grass, Light undergrowth						

TreeNo	Species	DBH	Height		Visual	Crown Spread	Problems / Comments	BS Cat	Work Required (TS)	Priority (TS)	Work Required (AIA)	Priority (AIA)
		Min Dist	Crown Base	Lowest Branch	Age	Water Demand						
On site		RPA (m^2)	Aspect	Aspect	SULE	Ground Cover						
W001	Sycamore, Scots Pine, Elm, Ash, Field Maple and Oak	530	19.5		High	N7, E7, S7, W7	An area of mixed species, unmanaged woodland located along the edge of site and next to the A14. A footpath runs through this feature. There are dead trees throughout as would be expected, as well as a number of trees which have partially failed on the root plates. The understorey is thin in places and mostly of poor quality; this could be greatly improved through some management of the woodland to increase light levels to the understorey. Some interplanting along the southern edge would provide an opportunity to increase species diversity as well as screening value.	B2	Remove all dead and partially failed trees which are within falling distance of the public path.	2	Remove small trees/shrub growth and crown lift larger trees to 4m within section indicated on drawing no. 6550-D-AIA (rev. B) to facilitate excavation of drainage basin. Undertake linear root pruning along edge of drainage basin. Remove/crown lift any trees which conflict with construction of path to provide construction space.	0
		6.36	0-2m		M	High						
Yes		127.1			40 + years	Woodland floor						

Appendix C

Schedule of Works - Irrespective of Development

SCHEDULE OF WORK IRRESPECTIVE OF DEVELOPMENT

Land off Howlett Way, Trimley St Martin, Suffolk

Surveyed By: Ben Figg
Surveyed: 23/01/2018
Managed By: Ben Figg

Tree No.	Species	Work required	Priority
T013	False Acacia	Clear access to tree, remove Ivy to ensure not masking major faults and re-inspect.	**1**
A001	Oak, Hawthorn, Horse Chestnut, Norway Maple, Sycamore and Cherry	Remove Ivy to ensure not masking major faults. Remove torn and damaged branches.	**2**
A002	Cherry, Beech, Oak and Sycamore	Remove torn and damaged branches.	**2**
A004	Elm, Holm Oak, Poplar and Cherry	Remove dead and dying specimens. Reduce branches on road side to avoid conflict.	**2**
A005	Elm, Oak and Beech	Remove Ivy to ensure not masking major faults if within site ownership.	**2**
G003	False Acacia	Fell to ground level.	**2**
H002	Beech, Oak and Elm	Fell dead trees.	**2**
T003	English Oak	Advise owner to remove Ivy to ensure not masking major faults and have a detailed inspection undertaken of the tree.	**2**
T004	English Oak	Advise owner to sever Ivy and have tree inspected.	**2**
T006	Lombardy Poplar	Advise owner to remove Ivy to ensure not masking major faults and have a detailed inspection undertaken of the tree.	**2**
T010	Elm (Ulmus 'Sapporo Autumn Gold')	Remove major deadwood.	**2**
T021	English Oak	Re-inspect in autumn 2018.	**2**
W001	Sycamore, Scots Pine, Elm, Ash, Field Maple and Oak	Remove all dead and partially failed trees which are within falling distance of the public path.	**2**
G002	3x Scots Pine	Remove Ivy to ensure not masking major faults. Remove major deadwood. Remove old stubs.	**3**
G004	Ash	Re-coppice or remove and replace.	**3**
H003	Hawthorn	Clear brambles from western section of hedge and interplant with new trees.	**3**
H005	Hawthorn	Continue annual maintenance.	**3**
H006	Hawthorn	Continue annual maintenance.	**3**
H007	Hawthorn, Elm, Field Maple and Holly	Continue annual maintenance and reduce height of section as shown on drawing no. 6550-D.	**3**
H009	Holly	Continue annual maintenance.	**3**
T001	English Oak	Remove major deadwood.	**3**
T009	English Oak	Clear around base of tree and re-inspect. Undertake aerial inspection of cavity in main union if area around tree is to become high use.	**3**

Schedule of Enhanced Monitoring

Land off Howlett Way, Trimley St Martin, Suffolk

Surveyed By: Ben Figg
Surveyed: 23/01/2018
Managed By: Ben Figg

Tree No.	Species	Work required	Priority
T002	Ash	Monitor annually - tight stem unions.	**3**

Appendix D

Preliminary Schedule of Works to Allow Development

SCHEDULE OF WORKS (AIA)

Land off Howlett Way, Trimley St Martin, Suffolk

Surveyed By: Ben Figg
Surveyed: 23/01/2018
Managed By: Ben Figg

Tree No.	Species	Work required	Priority
A001	Oak, Hawthorn, Horse Chestnut, Norway Maple, Sycamore and Cherry	Fell one tree at east end of feature to permit development. Crown lift sections as indicated on drawing no. 6550-D-AIA (rev. B) to 3m to provide construction space. Undertake linear root pruning as indicated on drawing no. 6550-D-AIA (rev. B).	**0**
A002	Cherry, Beech, Oak and Sycamore	Fell to permit development.	**0**
A004	Elm, Holm Oak, Poplar and Cherry	Crown lift/reduce over proposed road and pavement to provide 5m clearance over the road and 3m clearance over the pavement. Undertake linear root pruning as indicated on drawing no. 6550-D-AIA (rev. B) to facilitate construction of pavement.	**0**
G001	2x Hawthorn	Fell to ground level.	**0**
G004	Ash	Fell to permit development.	**0**
H003	Hawthorn	Fell to permit development.	**0**
H007	Hawthorn, Elm, Field Maple and Holly	Fell section to permit development.	**0**
T001	English Oak	Undertake linear root pruning as indicated on drawing no. 6550-D-AIA (rev. B).	**0**
T007	English Oak	Undertake linear root pruning and apply 5-10cm rotted woodchip mulch as shown on drawing no. 6550-D-AIA (rev. B).	**0**
T010	Elm (Ulmus 'Sapporo Autumn Gold')	Crown lift on west side to 3m to provide construction space for path.	**0**
T011	Elm Species	Fell to permit development.	**0**
T017	Sycamore	Crown lift to 3m over site to provide construction space.	**0**
T019	English Oak	Crown lift over site to 3.5m to provide construction space and undertake limited linear root pruning as indicated on drawing no. 6550-D-AIA (rev. B).	**0**
T020	English Oak	Crown lift over site to 2.5m to facilitate installation of protective fencing.	**0**
T021	English Oak	Undertake linear root pruning and apply 5-10cm rotted woodchip mulch as shown on drawing no. 6550-D-AIA (rev. B).	**0**
W001	Sycamore, Scots Pine, Elm, Ash, Field Maple and Oak	Remove small trees/shrub growth and crown lift larger trees to 4m within section indicated on drawing no. 6550-D-AIA (rev. B) to facilitate excavation of drainage basin. Undertake linear root pruning along edge of drainage basin. Remove/crown lift any trees which conflict with construction of path to provide construction space.	**0**

Appendix E

Explanatory Notes

Explanatory Notes

HAYDEN'S Arboricultural Consultants

Categories

Below is an explanation of the categories used in the attached Tree Survey.

No Identifies the tree on the drawing.

Species Common names are given to aid understanding for the wider audience.

BS 5837 Main Category Using this assessment (BS 5837:2012, Table 1), trees can be divided into one of the following simplified categories, and are differentiated by cross-hatching and by colour on the attached drawing:

Category A - Those of high quality with an estimated remaining life expectancy of at least 40 years;

Category B - Those of moderate quality with an estimated remaining life expectancy of at least 20 years;

Category C - Those of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm;

Category U - Those trees 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.

BS 5837 Sub Category Table 1 of BS 5837:2012 also requires a sub category to be applied to the A, B, C, and U assessments. This allows for a further understanding of the determining classification as follows:

Sub Category 1 - Mainly arboricultural qualities;

Sub Category 2 - Mainly landscape qualities;

Sub Category 3 - Mainly cultural values, including conservation .

Please note that a specimen or landscape feature may fulfil the requirements of more than one Sub Category.

DBH (mm) Diameter of main stem in millimetres at 1.5 metres from ground level. Where the tree is a multi-stem, the diameter is calculated in accordance with item 4.6.1 of BS 5837:2012.

Age Recorded as one of seven categories:

Y Young. Recently planted or establishing tree that could be transplanted without specialist equipment, i.e. less than 150 mm DBH.

S/M Semi-mature. An established tree, but one which has not reached its prospective ultimate height.

E/M Early-mature. A tree that is reaching its ultimate potential height, whose growth rate is slowing down but if healthy, will still increase in stem diameter and crown spread.

M Mature. A mature specimen with limited potential for any significant increase in size, even if healthy.

O/M Over-mature. A senescent or moribund specimen with a limited safe useful life expectancy. Possibly also containing sufficient structural defects with attendant safety and/or duty of care implications.

V Veteran. An over-mature specimen, usually of high value due to either its age, size and/or ecological significance

D Dead.

Height	Recorded in metres, measured from the base of the tree.
Crown Base	Recorded in metres, the distance from ground and aspect of the lowest branch material.
Lowest Branch	Recorded in metres, the distance from ground and aspect of the emergence point of the lowest significant branch.
Life Expectancy	Relates to the prospective life expectancy of the tree and is given as 4 categories: 1 = 40 years+; 2 = 20 years+; 3 = 10 years+; 4 = less than 10 years.
Crown Spread	Indicates the radius of the crown from the base of the tree in each of the northern, eastern, southern and western aspects.
Minimum Distance	This is a distance equal to 12 times the diameter of the tree measured at 1.5 metres above ground level for single stemmed trees and 12 times the average diameter of the tree measured at 1.5 metres above ground level tree for multi stemmed specimens. (BS 5837:2012, section 4.6).
RPA	This is the Root Protection Area, measured in square metres and defined in BS5837:2012 as "a layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority". The RPA is shown on the drawing.. Ideally this is an area around the tree that must be kept clear of construction, level changes of construction operations. Some methods of construction can be carried out within the RPA of a retained tree but only if approved by the Local Planning Authority's tree officer.
Water Demand	This gives the water demand of the species of tree when mature, as given in the NHBC Standards Chapter 4.2 "Building Near Trees".
Visual Amenity	Concerns the planning and landscape contribution to the development site made by the tree, hedge or tree group, in terms of its amenity value and prominence on the skyline along with functional criteria such as the screening value, shelter provision and wildlife significance. The usual definitions are as follows: Low — An inconsequential landscape feature. Moderate — Of some note within the immediate vicinity, but not significant in the wider context. High — Item of high visual importance.
Problems/ Comments	May include general comments about growth characteristic, how it is affected by other trees and any previous surgery work; also, specific problems such as deadwood, pests, diseases, broken limbs, etc.
Work Required (TS)	Identifies the necessary tree work to mitigate anticipated problems and deal with existing problems identified in the "Problems/comments" category.

Work Required (AIA)	Identifies the tree work specifically necessary to allow a proposed development to proceed.
Priority	This gives a priority rating to each tree allowing the client to prioritise necessary tree works identified within the Tree Survey. **1** Urgent – works required immediately; **2** Works required within 6 months; **3** Works required within 1 year; **4** Re-inspect in 12 months, **0** Remedial works as part of implementation of planning consent.

BS 5837:2012 Terms and Definitions

Access Facilitation Pruning	One-off tree pruning operation, the nature and effects of which are without significant adverse impact on tree physiology or amenity value, which is directly necessary to provide access for operations on site.
Arboricultural Method Statement	Methodology for the implementation of any aspect of development that is within the root protection area, or has the potential to result in loss of or damage to a tree to be retained.
Arboriculturist	Person who has, through relevant education, training and experience, gained expertise in the field of trees in relation to construction.
Competent Person	Person who has training and experience relevant to the matter being addressed and an understanding of the requirements of the particular task being approached. *NOTE - a competent person is expected to be able to advise on the best means by which the recommendations of this British Standard may be implemented.*
Construction	Site-based operations with the potential to affect existing trees.
Construction Exclusion Zone	Area based on the root protection area from which access is prohibited for the duration of a project.
Root Protection Area (RPA)	Layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority.
Service	Any above or below ground structure or apparatus required for utility provision. **NOTE** - examples include drainage, gas supplies, ground source heat pumps, CCTV and satellite communications.
Stem	Principal above ground structural component(s) of a tree that supports its branches.
Structure	Manufactured object, such as a building, carriageway, path, wall, service run, and built or excavated earthwork.
Tree Protection Plan	Scale drawing, informed by descriptive text where necessary, based upon the finalized proposals, showing trees for retention and illustrating the tree and landscape protection measures.
Veteran Tree	Tree that, by recognized criteria, shows features of biological, cultural or aesthetic value that are characteristic of, but not exclusive to, individuals surviving beyond the typical age range for the species concerned. **NOTE** - these characteristics might typically include a large girth, signs of crown retrenchment and hollowing of the stem.

Appendix F

Tree Preservation Order Enquiry/Response

Melanie McKenzie

From: Nicholas Newton [Nicholas.Newton@eastsuffolk.gov.uk]
Sent: 26 January 2018 10:30
To: Melanie McKenzie
Subject: RE: TPO Enquiry : 6550 - Land off Howlett Way, Trimley St Martin, Suffolk

Dear Melanie,

There are no TPOs or Conservation Areas on the indicated land.

Regards
Nicholas

Nicholas Newton BA(Hons) MSc.
Arboriculture and Landscape Manager
Development Management
Suffolk Coastal and Waveney District Councils
Tel: 01394 444241 Mob: 07825 927804

mailto:Nicholas.Newton@eastsuffolk.gov.uk

From: Melanie McKenzie [mailto:MelanieMcKenzie@TreeSurveys.co.uk]
Sent: 26 January 2018 10:17
To: Nicholas Newton
Subject: TPO Enquiry : 6550 - Land off Howlett Way, Trimley St Martin, Suffolk

Dear Nicholas,

Could you please advise if the above mentioned site is covered by TPO or is located within a Conservation Area? I have attached a map for your use.

I look forward to hearing from you.

Kind Regards

Melanie McKenzie
Administrator

(Please note my working hours are: 9am - 3pm term times and 9am - 1pm school holidays)

HAYDEN'S
Arboricultural Consultants

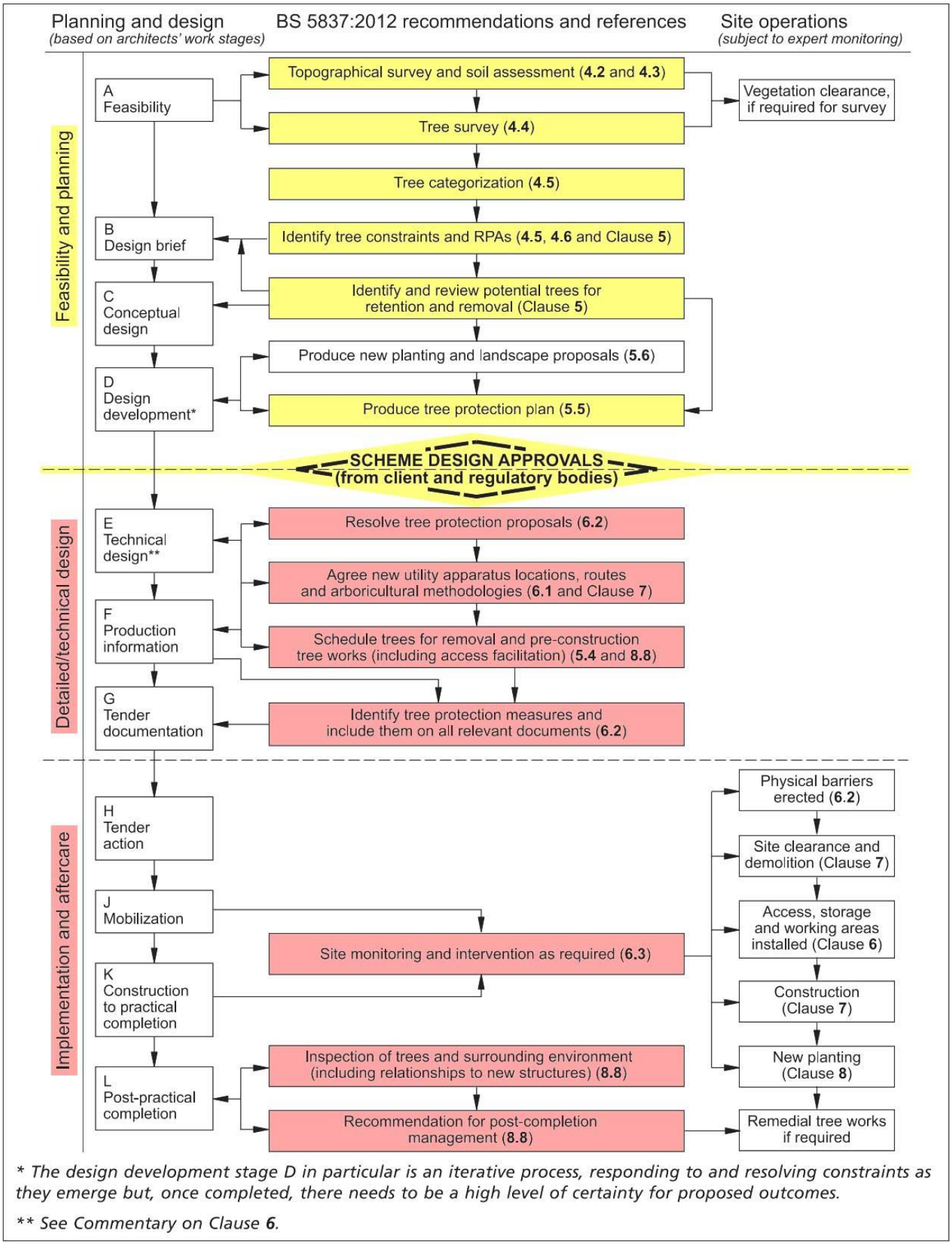
Tel: 01284 765391 DD: 01284 715014 info@treesurveys.co.uk **www.treesurveys.co.uk**

Head Office: 5 Moseley's Farm Business Centre, Fornham All Saints, Bury St. Edmunds, Suffolk, IP28 6JY
South West Office: Unit 7, Enterprise House, Cherry Orchard Lane, Salisbury, Wiltshire, SP2 7LD

Appendix G

Advisory Information & Sample Specifications

1. BS 5837:2012 Figure 1 - Flow Chart – Design and Construction & Tree Care



** The design development stage D in particular is an iterative process, responding to and resolving constraints as they emerge but, once completed, there needs to be a high level of certainty for proposed outcomes.*

*** See Commentary on Clause **6**.*

2.

European Protected Species and woodland operations. (V4)

Complete all sections of the Checklist

Checklist

1 Are you within, or close to, the known mapped range of any of the protected species OTHER THAN BATS which are potentially everywhere? Tick any that apply.
See distribution maps in the Good Practice Guidance for each species -

- ☐ Dormice
- ☐ Otters
- ☐ Great crested newts
- ☐ Sand lizards
- ☐ Smooth snakes

YES / NO

2 Does your wood contain any of the following habitats? Tick any that apply.

- ☐ Old trees with holes and crevices which might be used bats
- ☐ Species rich scrub/coppice, early growth stage plantations and forest interfaces
- ☐ Rivers on which otters might be found
- ☐ Ponds which might be occupied by great crested newts
- ☐ Open areas on heathy soils

YES / NO

3 Have any of the protected species been recorded in this wood or on adjoining sites? Tick any that apply.
Indicate which sources of information you have checked:

- ☐ National Biodiversity Network (www.nbn.org.uk)
- ☐ Local Biological Records Centre
- ☐ Local Wildlife Trust
- ☐ Other

Specify Other:

YES / NO

4 Have your inspections or any expert surveys found any of the following signs or evidence? Tick any that apply.

- ☐ Signs (e.g. otter spraint, nuts gnawed by dormice, leaves folded by newts)
- ☐ Sightings (or echo-location)
- ☐ Potential breeding or roosting sites (e.g. veteran trees, old trees with crevices, riverside hollow trees, ponds, timber stacks, large fallen deadwood)
- ☐ Confirmed breeding or roosting sites (i.e. evidence of sites actually being used)

Details:

YES / NO

CHECK POINT

If you have answered NO to ALL of the above then only bats need to be considered in your operations.

If you have answered YES to any of the above then the species concerned must be considered as well as bats.

5 Do the operations comply with Good Practice for bats and any other species found (or likely to be found in your wood) or can the operations be modified to do so?
Details: Use reverse of form to expand as required:

YES / NO

6 Whether or not a licence is required...
Has the information been communicated to operators (including the location of breeding sites and sensitive areas)? Tick any that apply.

- ☐ Included in documentation (e.g. contract, letter of instruction, site assessment or other management plan)
- ☐ Shown to operators and/or their supervisor
- ☐ Marked with paint or hazard tape
- ☐ Shown on the site plan

Other means:

YES / NO

7 Have arrangements for supervision been made to ensure Good Practice guidance is complied with during the operations?
Details:

YES / NO

Details

Name of Wood:

Grid Reference:

Area: (ha)

Date of Assessment:

Name of Assessor:

Notes

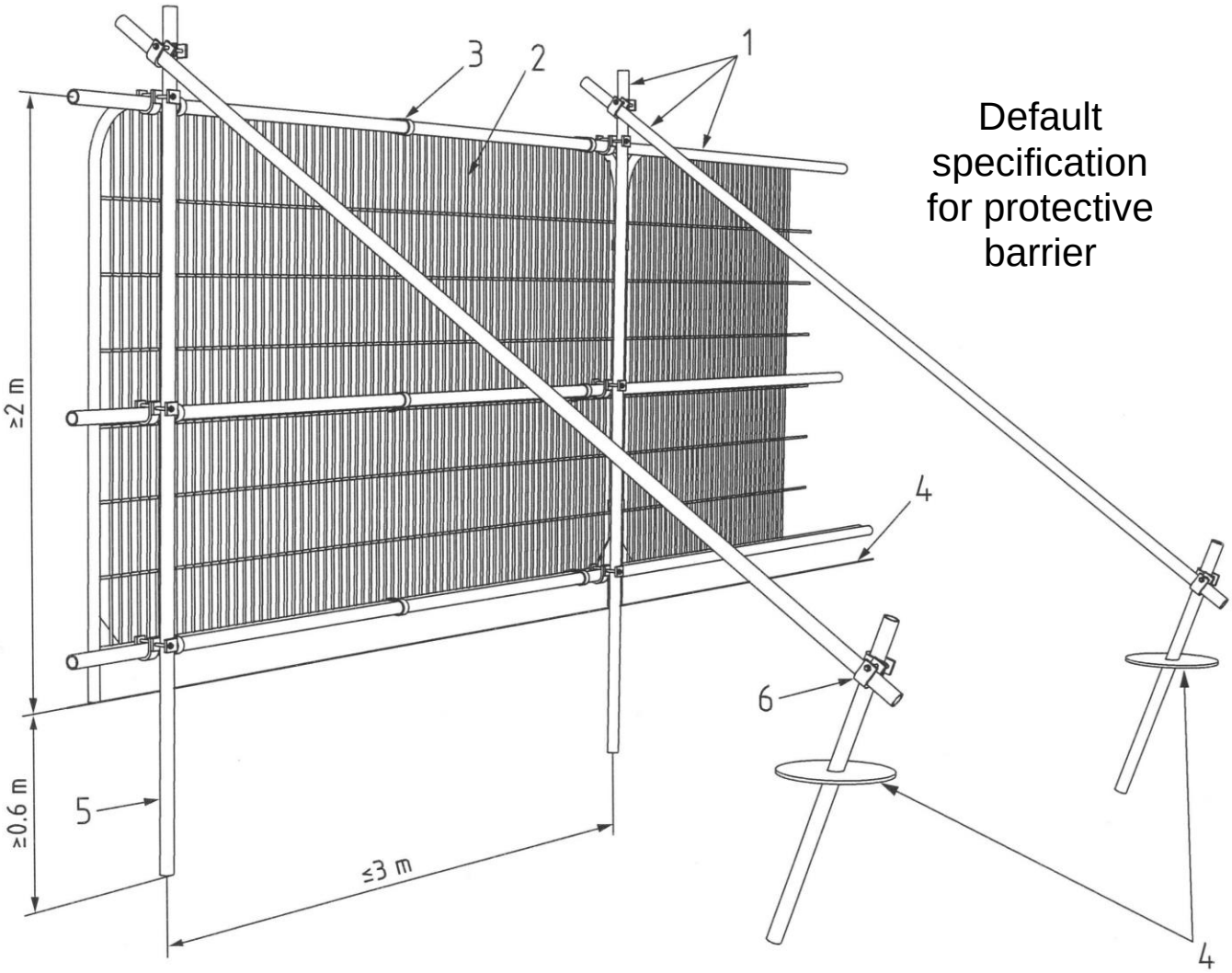
A licence is not required but continue to sections 6 and 7 below

You will need to obtain a licence BEFORE carrying out the work (see EPS Licence Application Forms and Notes)

You may commit an offence if you do not tell your operators about the protected species in your wood.

You may commit an offence if you do not take steps to ensure that your operators comply with the Good Practice guidance.

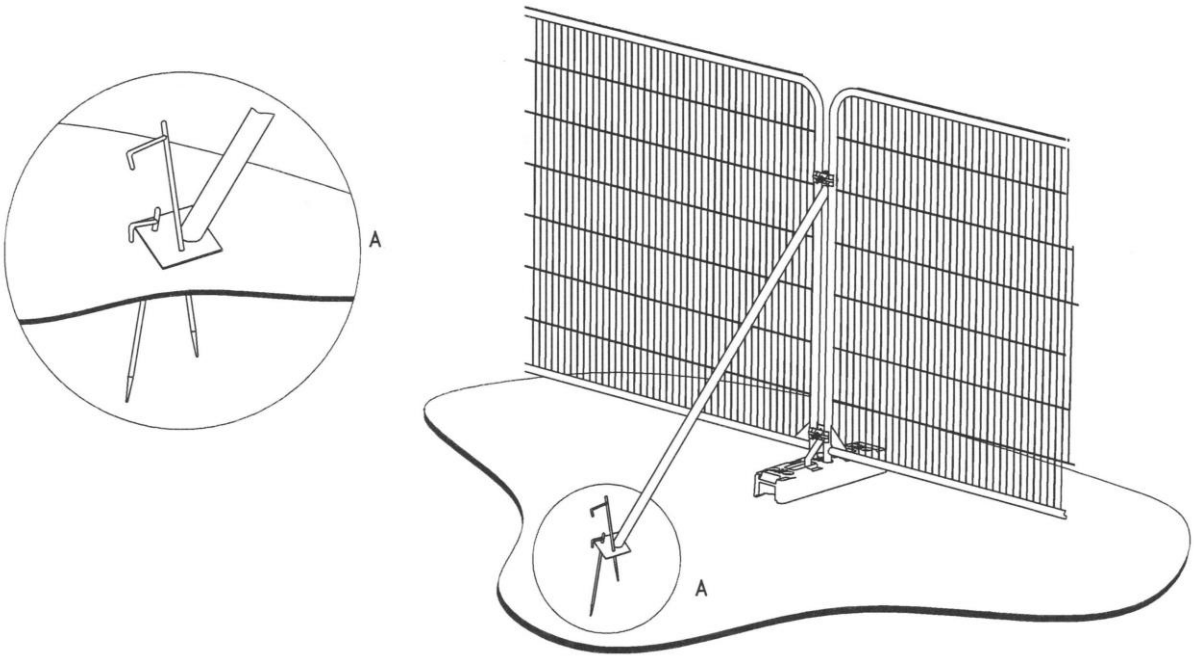
3. BS 5837:2012 Figure 2: Default specification for protective barrier



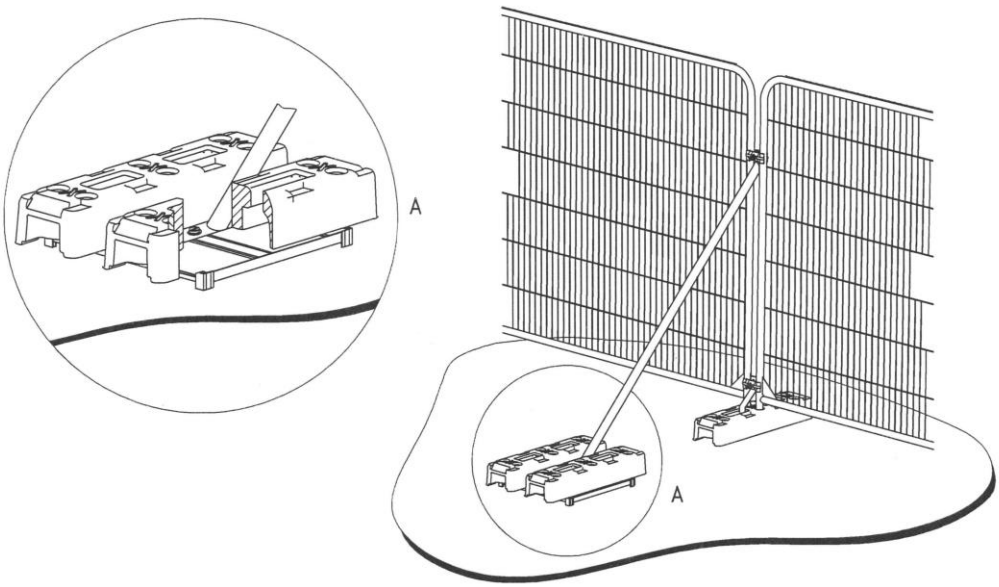
Key

1	Standard scaffold pole
2	Heavy gauge 2m tall galvanised tube and welded mesh infill panels
3	Panels secured to uprights and cross-members with wire ties
4	Ground level
5	Uprights driven into the ground until secure (minimum depth 0.6m
6	Standard scaffold clamps

4. BS 5837:2012 Figure 3: Examples of above-ground stabilizing systems



a) Stabilizer strut with base plate secured with ground pins



b) Stabilizer strut mounted on block tray

Appendix H

Hayden’s Drawing

- Arboricultural Impact Assessments
- Arboricultural Method Statements
- Tree Constraints Plans
- Arboricultural Feasibility Studies
- Shade Analysis
- Picus Tomography
- Arboricultural Consultancy for Local Planning Authority
- Quantified Tree Risk Assessment
- Health & Safety Audits for Tree Stocks
- Tree Stock Survey and Management
- Mortgage and Insurance Reports
- Subsidence Reports
- Woodland Management Plans
- Project Management
- Ecological Surveys