

**Arboricultural Impact Assessment, Tree  
Protection Plan, Method Statement  
Extensions to Church Barn, The Street, Morston**



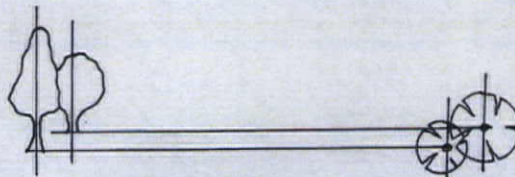
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## **1. Introduction**

1.1. This report is intended to assess the implications for existing trees and hedging within and surrounding the site of a proposed extensions to the existing house at Church Barn, The Street, Morston. The development concerns the construction of a new single story attached extension to the northern eastern corner of the house, the construction of new extension areas to the eastern side of the house and a new porch together with moving the existing summer house to another part of the garden. The development proposals are as indicated on the plans 4827/01 with arboricultural information added June 2023 and developed from plans by Robert Lord Assocs. The report and plans are intended to provide sufficient information to address the required submission of arboricultural impact, tree protection and construction method details for a proposed Planning Application for the development. This report assesses the impacts of the proposed development (as set out in the plans accompanying this document) on the trees / large shrubs on, and where relevant, adjacent to the site, and uses this information to provide details of any proposed tree protection and construction methodology in relation to trees that may be recommended.

N. B. This survey is not intended to be a tree condition survey and should not be used to identify tree hazard/risk or provide information for risk indemnity purposes. The survey was carried out at a time of year when some pathogens / faults may be visible but it should be recognised that such pathogens (fungal fruiting bodies / issues with leafing etc.) are transitory and seasonal and that they may not be present when the survey was carried out. A full inspection for Health and Safety purposes would identify faults / make relevant recommendations on appropriate seasonal inspections for faults that may not be presenting at the time of the survey.

### **1.2. How to Use this Document**

1.2.1. The document is divided into four main sections

- 1 - Introduction and Executive Summary of Findings
- 2 - Table of Trees (and Hedging if relevant) covered by the survey
- 3 - Assessment of Arboricultural Impacts of the proposed development
- 4 - Tree Protection Plan and Method Statement

1.2.2. The Executive Summary sets out the main points to consider in relation to this report and is intended to assist the Planning Officer / applicant in knowing what impacts the development will have and the general scope of tree protection and mitigation measures which we consider are necessary to employ to protect trees which are to be retained after development

1.2.3. The Impact Assessment considers the detail of what impacts we consider the development will have on the trees on the site (both in terms of trees / hedging removed and the impacts on the trees to be retained). This section provides the basis on which we then devise the Tree Protection Plan and Method Statement and is a justification for the elements which we have included in this section.

1.2.4. The Tree Protection Plan and Method Statement are the 'important / actionable' part of the document which should be presented to ALL persons who are to work on the site. It is of great importance that this part of the document AND the Tree Protection Plan which accompanies it (and which due to size may be a separate sheet) is held by the architect, the engineers (if present) and the site manager. The document should be available for inspection by all persons working on the site and held in the Site Office or on site in a suitable place. A toolbox talk should be held between the Site Manager and ALL those working on the site (as and when needed but certainly at the commencement of development and certainly at the commencement of any works which are in areas which are clearly indicated to be specially worked upon in this report) to identify working practices as recommended in this document and make sure that all those working on the site know exactly what they are doing and why. If there are any doubts over the actions to be taken please refer IMMEDIATELY to the arborist who can either attend the site / and or provide advice.

NOTE; If this document is part of a Planning Application/ or deals with works near to or within TPO/ Conservation Areas, it is likely to form a legally binding part of any Planning Permission/Tree Works Application, and failure to adhere to the recommendations in the document can either lead to prosecution (in the case of trees covered by a TPO / Conservation Area) or invalidate the Planning Permission. If in any doubt about anything related to development and trees - contact the Arboricultural Consultant...

1.2.5. This report is based upon the recommended procedure outlined in the revised version of the British Standard (5837:2012). The procedure requires that a survey of all the trees on the site is conducted which includes consideration of the following:

- The location, species, height, crown spread, condition, likely future development and projected lifespan (where appropriate) of all the trees on or adjacent to (and thereby potentially impacted on by any proposed development) the proposal site.

1.2.6. This data is then used to produce plans and document showing;

1. The Root Protection Area (RPA) for each tree based upon a formula (Diameter of trunk at 1.5m height in mm x 12 shown as a radiused circle from the base of the tree with or as a formula based on trunk diameter x number of trunks in the case of multiple trunked trees. The RPA may be offset or altered only for certain existing physiological issues within the growth area of the tree. The area of the rooting zone will not be less than that calculated.
2. The Tree Constraints Plan (TCP) - showing the RPA + any relevant other information such as tree shading issues / future growth potential of the trees.
3. The factors contained in the TCP are intended to inform the layout of the development proposals. The TCP is not a development exclusion zone, but imposes certain constraints and restrictions (in order to achieve the BS) on what can and cannot be constructed within the zones.
4. From the TCP and any submitted development layout, the arboriculturalist is intended to produce an Arboricultural Implications Assessment. This document uses the data produced to assess the risk of damage to the trees both during construction and into the future. Liveability issues should also be considered within this survey.

5. A Tree Protection Plan (TPP) will then be drawn up to show the finalised layout of the site development plan together with the location of all the trees to be removed / retained and the location and nature of any protective fencing. This will be in plan form and will constitute part of any future Arboricultural Method Statement.
6. Finally an Arboricultural Method Statement (AMS) may be required to be produced to say how any works which may impact on tree health will be undertaken to ensure that they minimise damage and comply with the standards set in the BS.

The survey was carried out on 2nd March and the 22<sup>nd</sup> April 2023 by C.J Yardley and represents a consideration of the condition of the site and trees at that time.

### **1.3. Executive Summary**

The application will have the following impacts on trees and requires the following tree protection measures;

1. Two trees are shown to be removed to facilitate the proposed development, these are;
  - T5 a moderate amenity value Corsican Pine
  - T8 a low amenity value Apple
2. As required by the policy guidance in the NPPF (2021) and NERC Act 2006, mitigation planting should be considered if there are changes to the ecological value of the site. In our opinion, the removal of the trees would require mitigation planting to be provided and this is provided within this document with tree planting distributed in appropriate locations to deliver amenity enhancements as well as biodiversity enhancement
3. No works are proposed to be undertaken to the canopies of trees to facilitate the development of the new development.
4. The development of the extensions has been designed with the benefit of a pre-design Tree Constraints Plan and assessment / discussion with the arboricultural consultant. The new extensions to the north east close to T6, and south east close to T1 and T2 present a marginal peripheral incursion of the footings for the new building into the Root Protection Areas (RPAs) of these trees, but the extent and location of such works is assessed to have a relatively limited impact on roots, although it is likely that such works will encounter roots from trees. The assessment of the impact of the works to install footings on this basis is that they would present a MINOR ADVERSE effect upon the trees but without affecting their long term health or stability if undertaken in conformity to the recommendations in Section 4 of this report.
5. The relocation of the existing summer house has been positioned to avoid incursion into the RPA of any retained tree.

6. The location of proposed foul water and surface water drainage is shown on both the proposed development plan by Robert Lord Assocs and repeated on the Tree Protection Plan. The works will require works to install some parts of the service runs within the periphery of the RPAs of T2 and T6 but more extensively within the RPA of T1. Again, the locations of the routes have been developed with the known tree constraints to minimise impacts on trees and reduce them to acceptable levels whereby harm to trees will be below that whereby noticeable impacts on the health of the trees would potentially be likely to be caused. The assessment of the impact of the works to install the foul water and surface waters services on this basis is that it would present a MINOR ADVERSE cumulative impact on T2 and T6 (assessed in conjunction with the installation of the footings in the section above) and a MINOR to MODERATE ADVERSE impact on T1 as a cumulative impact. This assumes that all works to install these services will be as set out on the Tree Protection Plan and as specified in Section 4 of this report.
7. No other information on the location of services (such as fresh water and electricity) was provided to us but from an assessment of the internal layout of the building and likely existing / required provision we would conclude that it would be possible to locate all such features in positions on the property well beyond the RPA of trees. **Therefore if any such features are proposed within the RPA of trees, this would require the submission of the route / type of service and suitable installation methodology prior to the works commencing in order to vary the findings of this report/ provide a suitable tree protection method should the report form part of a Planning Consent. It should be noted that there is no 'deemed consent' for such works as part of a Planning Consent unless otherwise expressly shown on documents which form part of that consent.**
8. Surfacing is proposed to the front of the new extension but will be located outside the RPA of trees. No alteration to the existing surface of the driveway area (gravel) is proposed.
9. The development does not propose any additional / new or replacement surfacing or boundary treatments within the RPA of trees as part of this application. If any such works – or other structures are proposed within the RPA of trees on / adjacent the site, this would invalidate the findings of this report and would require a separate application to vary the findings of this report should the report form part of a Planning Consent or should they affect trees in a Conservation Area
10. The proposed development of the south eastern extension will experience shading from T2 (Corsican Pine) and T1 (Horse Chestnut). The degree of shading and or sky lighting reduction will be slightly greater than that which is currently experienced by this part of the existing building but the alterations to light levels will be relatively minor.
11. The proposed development of the north eastern extension will experience shading / skylight reduction from the proximity and extent of the tree canopy of T6 to the eastern side of the new building. The design of the building has been purposely with windows on all three sides of the bedroom at the eastern end of the extension in order to address light levels. In addition, the canopy density of

this tree and its position to the eastern side of the building mean that it will only cast a shade in early morning and will not affect light levels to any significant degree for the majority of the 'active' day period. Overbearing has also been assessed (apprehension due to proximity to trees). We assess that the proximity to T6 could present a degree of apprehension due to overbearing but the tree is to the leeward side of the building (prevailing and damaging winds) and it is not currently of a size that would present significant overbearing although this is likely to restrict its future development (it is only Early mature and has growth potential).

12. Construction access to the site will be via the existing driveway access to the property from to the south. There are significant tree constraints operating in this area of the property and in relation to the zone near to the new north eastern extension which will require the use of a weight restriction on access in the vicinity of T1 and T2 beside the driveway and the provision of protective fencing and ground protection matting both on the driveway and in areas of the garden near to both the south eastern and north eastern development areas to prevent compaction and crushing to near surface roots
13. In general, the works will require tree protection fencing, ground protection matting for access to the front, side and rear of the dwelling for the construction of the new extensions and a suitable methodology for the installation of footings and services. The areas for materials storage and handling will be designated to be areas to the east of the main house or in front of the garages and outside the Root Protection Areas of trees
14. Subsequent landscaping to the site will need to be undertaken with due regard for the root protection areas of trees

#### **1. 4. Site Description.**

1.4.1. The site is located to the eastern edge of the small village of Morston. The property is situated to the north of the main coast road (The Street / Blakeney Road) and is accessed by a shared driveway to an area to the south of the main house. An existing modern garage building is located just outside the 'garden' enclosure wall and a gated access provides entry to a gravelled parking area to the south of the property within this walled area. The property consists of a converted barn which is orientated to look mainly eastwards over a large garden mainly laid to lawns and with a number of mature trees and smaller garden trees (remnant orchard) within it. The land to the east of the property also belongs to the barn and is a large grassed / grazed field. A small wet woodland copse is positioned to the south east and also belongs to the property. Land to the north is separated from the site by a combination of mature garden type hedging and an older flint and brick wall and separates the property from two adjacent areas of garden belonging to adjacent properties to the north and west.

1.4.3. The site is shown in plan below



Figure 1 – site area as of 2020 - shown outlined in Red.

#### Development Proposal for Site

1.4.4 The development concerns the construction of a new north eastern single story extension, extension of the existing building to the eastern side and the relocation of the existing summer house to the northern side of the garden. These are all shown on the development plans 4827/01 which are a development of the plans by Robert Lord Assocs Ltd, and which combine the existing site features with the proposed features

#### 1.5. Services

1.5.1. We have been provided with and assisted in developing the locations of, foul water and surface water drainage routes. These are shown on the Tree Protection Plan and development plans. Other services are not known and assumed to be retained as existing to the existing property.

#### 1.6. Current Ground Cover and Boundary Treatments

1.6.1. The existing site comprises areas of lawns, individual trees and hard surfaced driveway / access areas

1.6.2. The relevant boundaries of the site are as follows;

1. The eastern boundary is formed by a 1.2m post and wire fence.
2. The western boundary is formed by both the existing house and a 1.8m high brick and flint wall (northern side) and 1.4m high brick and flint wall (southern side)
3. The southern boundary is formed by a 1.4m high brick and flint wall / garage and



- further from the dwelling a post and wire fence
4. The northern boundary is formed by 2m high mixed hedging

1.6.3. There are no hedges on or adjacent to the site which would be subject to the Hedgerow Regulations 1997

#### 1.7. Levels

1.7.1. The site has some moderate to significant level changes but not in the vicinity of the new extensions. The land falls gently from the northern boundary of the garden but there is a short but steeper decline to the east of the eastern boundary

#### 1.8. Soil Type

1.8.1. The soil type across the site is a complex structure of sands and gravels interspersed possibly and occasionally with layers (which could give localised shrink ability) – British Geological Society online maps. On site discharge of water to ground soakaways should be functional. Detailed investigation of the soil structure on the site should inform construction footings depths, and should be aware of the potentially shrinkable soils especially near trees

#### 1.9. Trees on/adjacent to the Site

1.9.1. There are 12 individual trees and groups of trees, together with 2 hedges on the site which are potentially affected by the proposed development and which are included within the survey. The trees near to the proposed development will need to be protected by suitable ground protection / fencing during the construction process to the requirements of BS5837:2012 - and or by other mitigation and protection measures as considered necessary.

1.9.2. As far as we are aware (North Norfolk District Council tree preservation orders on website – 11<sup>th</sup> June 2023 – note that this is not an exhaustive assessment and should not be relied upon legally) there are no Tree Preservation Orders affecting trees on the site. The site is however within a Conservation Area and therefore is subject to the Conservation Area Regulations as affecting trees which require all works to above and below ground features of trees (including general excavation / installation of services / installation of surfacing as well as above ground lopping of boughs) to be notified to the Council a minimum of 6 weeks prior to commencement. It is not known if the trees are subject to any residual Planning Condition affecting their retention or management. **These factors are not fixed and may be liable to change, and it is therefore recommended that prior to any works commencing on trees on or adjacent to the site - above or below ground (including excavating trenching for services or installing surfacing) - that reference is made to the Council to ascertain if consents are required. This is particularly important where known TPOs /Conservation Areas are present which would affect the installation of surfacing, boundary treatments and any service installations which required excavation**

#### Local Policies

1.9.5. The Council has planning policies in place to protect important trees as part of the planning process (by the serving of Tree Preservation Orders or placing of Planning

Conditions on Permissions) as part of planning policy within the emerging Local Plan (formerly LDF) Development Control policy structure.

1.9.6. Normally accepted scope of inclusion of trees to 15m from the site boundaries have been included in this survey unless otherwise agreed due to relevance.

## **2. Tabulated Assessment of the Trees on the Site - Tree Constraints Details**

2.1. The trees on the site have been assessed in relation to the provisions in the BS and the information is presented in tabular format. The tables include all the relevant data required to assess the constraints (in construction terms) that the trees present and this data has been used to develop the Tree Protection Plan which accompanies this document. Details of the features included in the data collection and assessment are set out below in the Notes.

### Notes on Tables

- All measurements are given in metres.
- 'DBH' is the diameter of the trunk/s at breast height (1.5m)
- Crown Spread is the limit of the crown of the tree at its maximum and is recorded as a diameter. On the plans the crown spread is shown in its actual form i.e. frequently asymmetrical.
- Age Class is assessed and described as set out in BS 5837 Table 1, where; Young Trees are aged less than 1/4 life expectancy; semi-Mature Trees are between 1/4 and 1/2 life expectancy; Early Mature Trees are over 1/2 life expectancy, Mature trees are over 2/3ds life expectancy and Over Mature are effectively in decline.
- Tree Vigour is assessed as being either Good, Fair, Poor or Dead as set out in BS 5837
- Root Protection Distance (as shown as a dashed and dotted line on accompanying plans) is assessed based on the BS 5837 section 4.6 based on the diameter of the trunk at 1.5m height in mm x 12 and shown as an area based on the premise that the distance - diameter x 12 = radius of circle of RPA area. Trees with more than one stem are calculated differently. Trees with 2 - 5 stems are calculated as the square root of the combined (added) stem diameters all of which are individually squared. For more than five stems, the result is the square root of the mean stem diameter squared which has been multiplied by the number of stems.
- Canopy Spread is shown at the four cardinal points and is also shown as a constraint (continuous or repeated line on accompanying plans).
- Shading issues (as described in Section 5.3.1) are shown on accompanying plans as a 'segment with its centre at the centre of the tree and radiating outwards as straight lines to the North West and east with the area between them radiused with a dashed line.

- The Useful Life Expectancy of the tree is shown in periods ranging between <10 yrs, 10+, 20+, 40+yrs (in accordance with Section 4.4.2)
- Where any work that may, in the opinion of the surveyor, be required to the tree in order to enable the proposed development to take place, or where changes to the use of the land (i.e. to garden) may change the risk posed by the tree/s, such work is indicated in the Comments section of the table. All work recommended will accord to BS 3998:2010, and be based on the principle that the tree takes primacy over the proposed development (unless it is adjudged to be of poor amenity value), and works will only be recommended that accord with the retention of the tree in good health.
- Tree Retention Category this is the product of the surveyor's opinion of the importance of the tree in terms of its individual features. The assessment is made on the basis of the criteria set out in BS5837:2012 and is described in the Table 1 summarised from the British Standard on the following page;

Table 1 Cascade chart for tree quality assessment

Category and definition	Criteria (including subcategories where appropriate)		
<b>Trees unsuitable for retention (see Note)</b>			
<p><b>Category U</b></p> <p>Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years</p>	<ul style="list-style-type: none"> <li>• Trees that have a serious, irremediable, structural defect, such that their early loss is expected including those that will become unviable after removal of other category U trees (e.g. reason, the loss of companion shelter cannot be mitigated by pruning)</li> <li>• Trees that are dead or are showing signs of significant, immediate, and irreversible over</li> <li>• Trees infected with pathogens of significance to the health and/or safety of other trees quality trees suppressing adjacent trees of better quality</li> </ul> <p><i>NOTE Category U trees can have existing or potential conservation value which it might be see 4.5.7.</i></p>		
	<b>1 Mainly arboricultural qualities</b>	<b>2 Mainly landscape qualities</b>	<b>3 M incl</b>
<b>Trees to be considered for retention</b>			
<p><b>Category A</b></p> <p>Trees of high quality with an estimated remaining life expectancy of at least 40 years</p>	<p>Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)</p>	<p>Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features</p>	<p>Trees of s hist oth tree</p>
<p><b>Category B</b></p> <p>Trees of moderate quality with an estimated remaining life expectancy of at least 20 years</p>	<p>Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation</p>	<p>Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality</p>	<p>Trees con cult</p>
<p><b>Category C</b></p> <p>Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm</p>	<p>Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories</p>	<p>Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits</p>	<p>Trees con cult</p>

**Table 2 -**

How to read the tree table -

The tree table below is split into sections which detail the height, spread and form of the tree together with other important information - trunk - DBH - (which provides the data for determining the root protection area (RPA)), age class of the tree (what stage of its development condition and the amenity contribution that it makes together with its formally assessed 'retention category' or amenity rating (see table 1) criteria. These factors are used to provide the data which is transposed onto the development plan and which provides the 'Tree Condition' then used to help determine our assessment of the impacts of development, the location of any tree protection and any remedial measures and ensure the health and retention of those trees which are shown to be retained after the development is completed

Tree No.	Species	Height Metres	Crown Spread metres	DBH mm /Radius RPA m	Vigour / Age Class	Condition / amenity contribution / under crown clearance
The number given to each tree on the plan	Given as the common name unless the Latin name only is known	The height of the tree	The spread of the tree either as a radius from the centre (to each cardinal point N, S, E or W) or as a diameter where this is acceptable	The 'diameter of the trunk at breast height' - this is used to work out the radius of the root protection area (in metres)	The vigour is either low or normal. The age class varies from Young to Over Mature in five more or less equal sections relating to the five 'stages' of development of the tree - varies with the species as to how many years this may be.	A broad guide to the condition of the tree from superficial ground level inspection. The condition rating is not to be used for health and safety purposes and is not a substitute for a detailed tree condition survey but will indicate the approximate condition of the tree and highlight any major faults if clear. Where these are not visible (ivy obscuring the trunk) this may be highlighted. It is always advisable to have a formal tree condition survey for indemnity purposes. Amenity contribution highlights any special amenity value that the tree/s may present. Under crown clearance is intended to provide a guide to allow assessment of whether or not crown clearance would be needed to gain access beneath the tree for development or other purposes.

Table 2 – Trees which are included in the Tree Survey

	Tree No.	Species	Height metres	Crown Spread metres	DBH/RPA in mm	Vigour / Age Class and remaining years	Comments:
T	1.	Horse Chestnut	7	3	550 / 6.6m	N/M 40+	Fair condition – recently pollarded
T	2.	Corsican Pine	11	5N 5E 4W 4S	Est 550 / 6.6m	N/M 40+	Fair condition what can be seen – iv canopy
G	3.	3x crack Willow	9-12 N-S	8,8,9	Av 4x300+ 400 (S) 4x200(N) / 6m	L/OM 10+	Fair condition – starting to collapse c significant lower T decay
T	4.	Plum	6	3W 2N 2.5S 2E	370 / 4.4m	N/M 20+	Fair condition
T	5.	Corsican Pine	14	6.5W 6S 3E 4N	600 / 7.2m	N/M 40+	Reasonable condition one of three – unified canopies
T	6.	Corsican Pine	14	2W 6S 5N 5E	500 / 6m	N/M 40+	Fair condition. Canopy structure sup side by T 5
T	7.	Corsican Pine	12	7S 6W 5N 5E	600 / 7.2m	N/M 40+	Reasonable condition – well formed
T	8.	Apple	3	2.5	3x150	L/OM 10+	Fair condition

	Tree No.	Species	Height metres	Crown Spread metres	DBH/RPA in mm	Vigour / Age Class and remaining years	Comments:
T	9.	Apple	4	6	3x280	N/M 10+	Fair condition
T	10.	Apple	4	4	350 base	N/M 10+	Fair condition
T	11.	Apple	3	2	350 base	N/M 10+	Fair condition
T	12.	Apple	3.5	3	250/100	L/OM 10+	Fair condition
T	13.	Strawberry Tree	5	5	Multi 4m	N/M 40+	Fair condition
H	1	Mixed	1.5m	700mm	100 / 1.2m	N/M 40+	Reasonable condition – closely man
H	2	Mixed	2m	1m	100 / 1.2m	N/M 40+	Reasonable condition – closely man

Condition Key (Vigour / Maturity)

Vigour: L Low  
N Normal

Maturity: Y Young  
EM Early Mature  
SM Semi Mature  
M Mature  
OM Over Mature

- Good condition – no obvious faults which would reduce the life expectancy of the tree, a good form with a full canopy.
- Reasonable condition. Some minor to moderate faults which will reduce the life expectancy of the tree or a tree with some di good form and reasonable canopy density for the species.
- Fair condition. A tree with significant faults which will reduce the life expectancy. Probably with faults that require surgery and the tree. A tree with poor form and thin canopy.
- Poor condition. A tree near the end of its life or one with sever faults which may be correctable with surgery or may not but w in a form which is poorly structured.

### **3. Arboricultural Implications Assessment of trees on the site from the details contained in Table 2 above**

3.0.1. The assessment has considered all the trees and hedges in the vicinity of the proposed development together with those which in our opinion may be affected by the requirements to access the working area to construct the new development, or where new services may be installed - the survey does not include all trees on the site. The trees which are included within the survey area comprise the following groups;

The trees in the survey area effectively fall into three main groupings

There are a number of larger garden trees consisting of four Corsican Pines and one pollarded Horse Chestnut.

To the south of the site is a wet woodland copse of trees – mainly willow and most over mature and partially collapsing

A small grouping of fruit trees are present to the northern part of the garden

3.0.2. The assessment below has been carried out to the recommendations contained in the British standard BS 5837:2012. Where necessary, and due to the specific nature of the trees and constraints / development imposed, interpretation within the Guidance has been made.

3.0.3. Development proposals contained on the plans 4827/01 developed from plans by Robert Lord Assocs with arboricultural information added May 2023 show the layout of the proposed development and access etc. and indicates the relationship between the trees and the proposed structures.

3.0.3. These features have all been considered in detail in the following assessment process and have been used to develop protection and mitigation strategies which are included in the final chapter of the report 'Tree Protection Plan and Method Statement'

3.0.4. The plan 4827/01 developed from plans by Robert Lord Assocs with arboricultural information added May 2023 indicates the location and extent of proposed development of the site. The location and canopy spread of the trees is also indicated together with the Root Protection Area. Additional information is added in the form of the location of protective fencing around the trees and special measures areas (for certain construction processes). This additional information forms the elements of the Tree Constraints Plan and Method Statement.

#### **3.1. Overall Conclusions of the Amenity Value of the Trees on the Site/ Tree Constraints**

3.1.1. Some indication of the relative amenity value of the trees on and adjacent to the site has been discussed above, this section provides additional detailed assessment of the site and the area.



3.1.2. The individual British Standard amenity classification value of the trees is appended to each tree in Table 2 and varies between tree/s which are of High amenity value as individuals trees (A1) together with a larger number of moderate amenity value trees which are either members of groups of trees or individuals (B1 and B2 respectively). There are a small number of low amenity trees. Hedging is classified as moderate amenity value as it is both visible from the public realm and has ecological value

3.1.3. The principle tree within the survey group is T7 which is the most attractively formed of the group of Corsican Pines and is located in a position where it has good public amenity value from the coastal and coast road areas. The grouping of wet woodland to the south of the site is – as an overall feature – classified as high amenity for its public amenity value (visual) and ecological value, but the individuals within the grouping are classified as moderate amenity value due to condition. The remaining larger trees in the site are all classified as moderate amenity value for their contribution to the setting and amenity of this village fringe location. They partially screen and reduce the massing of buildings whilst also providing a softer and more rural setting which is in character with the rest of the village.

### **3.2. Future Development of the Trees.**

3.2.1. This assessment has only considered those trees which in the opinion of the surveyor may be impacted upon by the proposed development (constrained).

3.2.2. The proximity of T1, T2 and T6 to the existing house and proposed extensions means that future growth potential in all these trees will be to varying degrees constrained. The relationship of the new extensions to T2 and T6 – given that both trees are only early mature and therefore have a moderate amount of growth potential over the next few decades, means that works will be required periodically to restrict the canopy development and probably height development of the trees (which if left unchecked will be likely to present an overbearing / apprehension factor to residents). Realistically the canopies of T2 and T6 will be able to enlarge by around 0.7m – 1m radius and height by around 3m before intervention will be required. Mature size may be expected to be larger than this at around 5m additional height and around 2m canopy spread. Therefore, the proposed development will constrain their future development and the impact on this aspect on trees from development is assessed as MINOR ADVERSE

3.2.3. The impact of the proposed extension developments on constraining the canopy development of T1 is assessed as NEGLIGIBLE as the location of the tree means that closest proximity to the dwelling is to existing areas of the building and has resulted in a periodic requirement to pollard the tree

### **3.3. Tree / hedge Removals and Replacements**

3.3.1. Two trees are shown to be removed to facilitate the proposed development, these are;

T5 a moderate amenity value Corsican Pine  
T8 a low amenity value Apple

3.3.2. In addition, as the proposed works will constrain and impact on the growth of two retained trees, this impact also is a factor

3.3.3. As required by the policy guidance in the NPPF (2021) and NERC Act 2006, mitigation planting should be considered if there are changes to the ecological value of the site. In our opinion, the removal of the trees would require mitigation planting to be provided and this is provided within this document with tree planting distributed in appropriate locations to deliver amenity enhancements as well as biodiversity enhancement

3.3.5. A proposed landscaping scheme is provided in Section 5 (and the landscaping plan 4827/02) in this document

#### **3.4. Canopy Spread and Canopy Clearance Issues**

3.4.1. No works are proposed to be undertaken to the canopies of trees to facilitate the development of the new extension **although it should be noted that we do recommend the reduction of two areas of the lower north and southern canopy of T6 to compensate for the removal of T5 and its protective influence on the canopy of T6. We therefore are recommending that the lower outer canopy of the tree on the north and southern sides is thinned back to reduce the canopy spread by approx. 1m from 6m south to 5m south and from 5m north to 4m north. All works to be carried out by qualified arborists working to BS3998:2010 and to be reduced back to branch unions.**

#### **3.5. Root Protection Area**

3.5.1. The root protection area of trees is shown as a dotted and dashed circle around trees on the plan. The British Standard default recommendation suggests that no development should be undertaken within the root protection area of trees unless it is unavoidable or unless the tree/s concerned are of low amenity value. The BS does however allow for some works to be undertaken within the RPA of trees subject to the assessment of a suitably qualified arboricultural surveyor but generally assumes that these will be minimal, peripheral and localised, and that the area of the RPA will be part of an exclusion zone (construction exclusion zone CEZ) around the trees which will be fenced off from all access during construction. Therefore, usually such an area will be closed off from works until any which are deemed acceptable (such as driveway constructions) actually need to take place and preferably at the conclusion of other developments on the site.

3.5.2. The development has considered the RPA of the trees adjacent to the site in relation to the proposed development. The key points which are considered relevant are;

##### **Removal of T5**

3.5.3. The removal of T5 and the possible grubbing out of tree roots / stump from this tree could present a significant harm to entwined tree roots of T6 etc if not carried out with suitable care as set out in Section 4 below. If works are carried out as set out in Section 4, the impact on retained trees is assessed as NEGLIGIBLE

#### Construction of new extensions near trees

3.5.4. The development of the extensions has been designed with the benefit of a pre-design Tree Constraints Plan and assessment / discussion with the arboricultural consultant. The new extensions to the north east close to T6, and south east close to T1 and T2 present a marginal peripheral incursion of the footings for the new building into the Root Protection Areas (RPAs) of these trees, but the extent and location of such works is assessed to have a relatively limited impact on roots, although it is likely that such works will encounter roots from trees. The assessment of the impact of the works to install footings on this basis is that they would present a MINOR ADVERSE effect upon the trees but without affecting their long term health or stability if undertaken in conformity to the recommendations in Section 4 of this report.

#### Relocation of Summer House

3.5.5. The relocation of the existing summer house has been positioned to avoid incursion into the RPA of any retained tree.

#### Services installation

3.5.6. The location of proposed foul water and surface water drainage is shown on both the proposed development plan by Robert Lord Assocs and repeated on the Tree Protection Plan. The works will require works to install some parts of the service runs within the periphery of the RPAs of T2 and T6, but more extensively within the RPA of T1. Again, the locations of the routes have been developed with the known tree constraints to minimise impacts on trees and reduce them to acceptable levels whereby harm to trees will be below that where noticeable impacts on the health of the trees would potentially be likely to be caused. The assessment of the impact of the works to install the foul water and surface water services on this basis is that it would present a MINOR ADVERSE cumulative impact on T2 and T6 (assessed in conjunction with the installation of the footings in the section above) and a MINOR to MODERATE ADVERSE impact on T1 as a cumulative impact. This assumes that all works to install these services will be as set out on the Tree Protection Plan and as specified in Section 4 of this report.

3.5.7. No other information on the location of services (such as fresh water and electricity) was provided to us but from an assessment of the internal layout of the building and likely existing / required provision we would conclude that it would be possible to locate all such features in positions on the property well beyond the RPA of trees. **Therefore if any such features are proposed within the RPA of trees, this would require the submission of the route / type of service and suitable installation methodology prior to the works commencing in order to vary the findings of this report/ provide a suitable tree protection method should the report form part of a Planning Consent. It should be noted that there is no 'deemed consent' for such works as part of a Planning Consent unless otherwise expressly shown on documents which form part of that consent.**

### Changes to Surfacing or Boundary Treatments

3.5.8. Surfacing is proposed to the front of the new extension but will be located outside the RPA of trees. No alteration to the existing surface of the driveway area (gravel) is proposed

3.5.9. The development does not propose any additional / new or replacement surfacing or boundary treatments within the RPA of trees as part of this application. If any such works – or other structures are proposed within the RPA of trees on / adjacent the site, this would invalidate the findings of this report and would require a separate application to vary the findings of this report should the report form part of a Planning Consent or should they affect trees in a Conservation Area

### Construction Access in relation to Trees

3.5.10. Inadvertent damage during construction is one of the principle causes of damage to trees resulting from development activities. Careful consideration of and provision of suitable tree protection measures / materials handling locations etc can avoid these.

3.5.11. Construction access to the site will preferably be to the area of the existing paddock to the east of the site via an existing field gate off Blakeney Road. Alternatively for smaller items access is also possible via the existing driveway access to the property from to the south. There are significant tree constraints operating in this area of the property (southern side) and in relation to the zone near to the new north eastern extension which will require the use of a weight restriction on access in the vicinity of T1 and T2 beside the driveway and the provision of protective fencing and ground protection matting both on the driveway and in areas of the garden near to both the south eastern and north eastern development areas to prevent compaction and crushing to near surface roots

3.5.12. The areas for materials storage and handling will be designated to be areas to the east of the main house or in front of the garages and outside the Root Protection Areas of trees

3.5.13. In general, the works will require tree protection fencing, ground protection matting for access to the front, side and rear of the dwelling for the construction of the new extensions and a suitable methodology for the installation of footings and services.

**If for any reason this is altered, this will invalidate this report and a revised report and Tree Protection Plan will need to be submitted and agreed with the LPA prior to commencement of development.**

### 3.6. Shading Issues

3.6.1. The issue of liveability - particularly shading and perceived tree hazard - to occupants' resident within the properties should be considered carefully. Whilst these are not physical constraints to development of the properties, they should inform the nature of the development. The BRE have produced a considerable amount of guidance upon shading related issues which is distilled in two booklets (Environmental Site Layout Planning – Littlefair P. J. et al 2000; and Site Layout Planning for Daylight and Sunlight – a guide to good practice; Littlefair P. J 1991 revised 2011. The BS 5837:2012 makes

reference to seeking guidance from these sources. However it remains as 'guidance' and does not confer rules even to the same degree as that for root protection areas, nevertheless they are good starting points for considering the relationship between housing, gardens and peoples reaction to trees within their proximity.

3.6.2. The main issues that tend to present with liveability of trees in relation to property are;

- Shading – direct and indirect light obstruction by trees.
- Overbearing and the 'fear' of trees falling or being 'close'

#### Shading Impacts

##### South eastern extension – near T2

3.6.3. The proposed development of the south eastern extension will experience shading from T2 (Corsican Pine) and T1 (Horse Chestnut). The degree of shading and or sky lighting reduction will be slightly greater than that which is currently experienced by this part of the existing building but the alterations to light levels will be relatively minor.

##### North eastern extension near T6

3.6.4. The proposed development of the north eastern extension will experience shading / skylight reduction from the proximity and extent of the tree canopy of T6 to the eastern side of the new building. The design of the building has been purposely with windows on all three sides of the bedroom at the eastern end of the extension in order to address light levels. In addition, the canopy density of this tree and its position to the eastern side of the building mean that it will only cast a shade in early morning and will not affect light levels to any significant degree for the majority of the 'active' day period.

#### Overbearing Impacts

3.6.5. Overbearing has also been assessed (apprehension due to proximity to trees). We assess that the proximity to T6 could present a degree of apprehension due to overbearing but the tree is to the leeward side of the building (prevailing and damaging winds) and it is not currently of a size that would present significant overbearing although this is likely to restrict its future development (it is only Early mature and has growth potential).

#### Alterations to target potential from trees

3.6.5. In tandem to this we have also assessed the change in target (risk) potential offered by the trees to the new building. The target potential will increase marginally for T2 and moderately for T6 which will impose additional stringencies / levels of demonstrable condition which they need to present to be acceptable – increasing the likelihood that there will be greater degrees of surgery resulting from a higher bar to the condition assessment. The impact to trees T2 and T6 is likely to be in the realm of MINOR ADVERSE over the long term but would be addressed (probably) by the impact of the constraining factors to the tree canopy size as detailed in Section 3.2 above (i.e. the altered risk factors would not significantly cumulatively add to the canopy works

already assessed as likely to be requested as a result of the factors detailed in Section 3.2).

#### **4. Method Statement and Tree Protection Plan**

4.0. The tree protection plan details set out below provide information on how to protect and avoid damage to trees on and adjacent to the site during and after the development process. Damage to trees occurs in several main ways from construction processes and these are set out below.

- Tracking of vehicles over root protection areas
- Excavating within root protection areas
- Storage of materials within root protection areas
- Leakage of toxic chemicals within root protection areas - or near to them
- Physical damage to above ground parts of the trees by collision with vehicles or equipment

4.0.1. The tree protection plan therefore sets out to provide information which can be followed to avoid the risk of damage occurring, and / or where damage is inevitable (such as where vehicles have to cross over a root protection area of a tree) minimise the amount of damage occurring.

4.0.2. The tree protection operations below relate to specific items on the site in specific locations and this should therefore be read with the plans, as each area within the site is unique and presents different tree protection requirements.

4.0.3. These physical constraints have been taken into account as far as practicable, the relevant sections of the Tree Protection / Method Statement recommendations below. To a large extent, the constraints actively militate to assist in protecting trees by restricting the size and type of vehicle and construction process that can be used. The development requires a number of specific procedures and these have been considered in relation to the tree protection issues discussed in Section 3 above. The main points are set out in the summary below with each point being expanded upon in the following text;

#### **4.1. Summary of Construction Method Processes in relation to Trees on and Adjacent to the Site**

1. Prior to the commencement of development, the trees to be removed to facilitate the proposed development (and or others as detailed in this report) will be removed by hand and the stumps ground out.
2. On completion of the removal of trees but prior to any other development occurring on the site including storage of materials, access the site with construction vehicles, scraping the surface vegetation from the site or undertaking site level changes, protective fencing and or ground protection will be erected around the trees and hedging to be retained as indicated by the YELLOW

HATCHED area on the plans for ground protection (to specification BS5837<sup>4</sup>) and SOLID YELLOW line indicates where existing or Herras type fencing must be retained or installed to prevent access into areas within the RPA of trees which do not have ground protection measures. This will ensure that the trees are protected adequately from accidental damage. The construction of the ground protection and fencing is detailed below.

3. Where shown by the BLUE OUTLINE on the plans, the installation of the footings for the new building close to the tree rooting areas will be installed as set out below
4. The installation of any services (excepting those which are shown on the Tree Protection Plan and which conform to the statements in the text section below) to and from the building within the Root Protection Areas of trees will be agreed in writing with the District Council prior to installation (if applicable).
5. No other structures or surfacing – including replacement surfacing if not just adding gravel to existing gravel surfaced areas - will be installed within the RPA of trees unless otherwise agreed in writing with the District Council.
6. All post development landscaping to the site will be carried out as set out in the Landscaping Section below.

#### **4.2. Removal of trees**

4.2.1. Prior to any other development commencing on site including site clearance / delivery/storage of materials etc, the tree/s which are required to be removed to facilitate the proposed development (T5), shall be removed using the process detailed below

4.2.2. All trees will be dismantled by hand operated equipment and the stumps ground out in preference to any other removal method in order to prevent damage to the roots of adjacent trees

All works will be carried out to conform to BS3998:2010 by suitably qualified arborists

#### **4.3. Protective Fencing/ Construction Exclusion Zone site Access.**

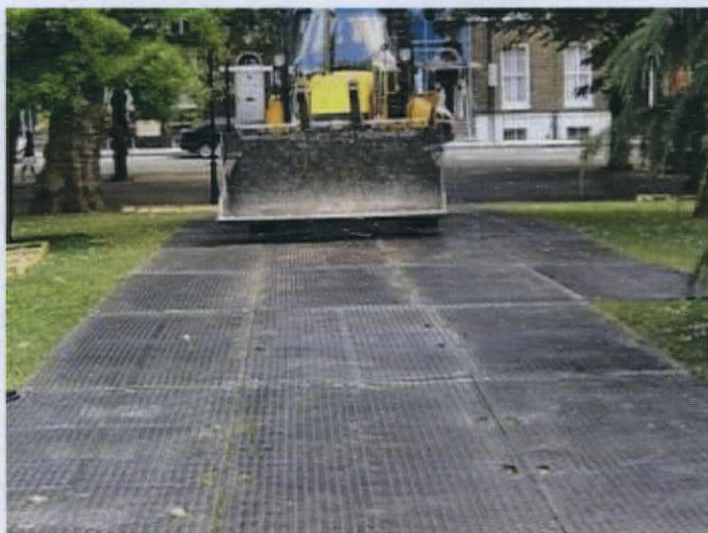
4.3.1. Following the removal of trees but prior to the commencement of any development on the site including site clearance, access by vehicles, storage of materials or demolition, ground protection and or temporary protective fencing (as shown on the plans by the YELLOW HATCHED / YELLOW LINE areas respectively) will be installed where shown. **Both shall conform to BS5837:2012 specifications as shown in the Appendix.**

##### Ground Protection Specification - summary

4.3.2. Ground protection will be provided which is adequate for the type of usage to which it will be subjected and must conform to the specification set out in the Appendix – a summary is set out below.



- For pedestrian access and vehicles up to approx. 3.5 tons, either scaffold boards or plywood sheeting approx. 20mm thick will be laid over an impermeable plastic membrane (DPM sheeting is adequate) and layer (min 100mm) of wood chippings or washed aggregate to level the ground and ensure that the pressure of traffic is evenly distributed over the ground.
- For larger vehicles a proprietary system such as Rola Trac, Ground Guards or similar (including steel sheeting of min 8mm thick) can be used - again over a bedding layer of aggregate or wood chippings (min 150mm) to ensure that the pressure is evenly distributed over the area of the panels



#### Fencing Specification - summary

4.3.3 Where new temporary protective fencing is required to provide an exclusion zone around the Root Protection Areas of trees, this is shown as a SOLID YELLOW line on the plans. Only at the completion of the main works to construct the development (or where it is necessary to remove existing features within CEZs such as surfacing as discussed in the section below) and where it is necessary to remove the fencing in order to construct specific features within the CEZ (e.g. garden works/fencing – see Boundary Features and Landscaping Sections below) the fencing can be moved or dismantled **ONLY** after all other construction works on the site have been largely completed.

4.3.4. No materials, chemicals, machinery or access shall be stored or gained within this fenced off area during the entire period of the subsequent development of the site.

4.3.5. This fencing shall be either the existing boundary fencing type or to a specification as indicated in BS 5837:2012 and shall comprise weldmesh (Herras type) fencing attached to the ground by posts driven into it to hold the fence rigidly and semi-permanently during construction. Notices shall be attached to the fencing stating that no access, machinery, equipment or materials will be allowed within the fenced off area during the construction period.

***NOTE - it is not acceptable to erect fencing only and leave ground protection measures until the commencement of the development of the specific feature***

*nearby. IF ground protection is NOT provided then the temp protective fencing MUST be located at the outer edge of where the ground protection WOULD have been provided until such time as the ground protection is installed.*

#### **Construction access and materials storage / handling areas**

4.3.6. Two alternative construction access routes are provided. The preferred route will be via the adjoining paddock to the east of the site which has access off Blakeney Road. This will give vehicular access to a compound on the paddock (higher ground near to the garden boundary) and will enable a clear route to be provided to the house through the eastern part of the garden. Alternatively for smaller vehicles and for working access to the southern side of the main house construction access can be made via the existing driveway area to the south of the site. NOTE that ground protection / weight restrictions apply in areas of the existing driveway and over the garden area where shown by YELLOW HATCHING. Where the existing driveway is present a weight restriction of 3.5 tons applies but on garden areas, ground protection will be applied regardless of whether the area is used for vehicle or pedestrian usage. NOTE that regardless of the chosen principle construction access route, all tree protection fencing and ground protection measures will be installed – if however the southern access is to be used only for limited access, only those areas where construction personnel / vehicles are accessing will require ground protection matting – i.e. it may be possible to reduce the extent of the ground protection matting somewhat.

Materials storage will be located outside the RPA of trees – we suggest using the paddock to the east of the site (higher ground) or for smaller items using a combination of areas to the frontage of the existing garages for lighter materials. NOTE that cement mixing / sand and heavy items must be located on the paddock

All chemicals including cement, together with the mixing of cement, must be located at least 3m beyond the root protection areas (dotted and dashed circles around trees) (this is to prevent spillages / leeching of chemicals into the soil). They may not be placed within areas which are provided with temp ground protection unless agreed in writing with the District Council

#### **4.4. Excavation and installation of footings near trees**

4.4.1. Where the new footings for the building shown outlined in BLUE are to be installed, these features will be installed as set out below

1. The ground protection matting must be retained in situ whilst excavation is being undertaken
2. The footings will be dug by hand digging or use of a mini-digger with toothless bucket. All roots will be cleanly severed back to the sides of the trench by lopper or saw.
3. The works will be overseen by a suitably qualified arborist who will also be required to check and confirm that all other suitable tree protection measures are in place and that the statements in this report are being

**complied with. A photographic report will be sent to the District Council to confirm compliance**

4. Immediately on completion of the excavation work for any one trench run in any one day, the side of the trench nearest to the tree/s will be lined with a damp proof plastic membrane to prevent the soils / rooting area exposed from drying out.

This membrane will be retained in situ after completion of the excavation work and will act as a barrier membrane between the cement based products in the concrete and the tree roots.

#### **4.5. Installation of new Services**

4.5.1. Foul and surface water drainage routes are shown located on the Tree Protection Plan and development plans. These will be adhered to where they pass within the Root Protection Areas of trees unless otherwise agreed in writing with the District Council. All works to install services shown PINK DASHED LINES will be installed as set out below.

4.5.2. Any new services runs as described above must be installed to conform to the National Joint Utilities Group NJUG Publication No. 4 'Guidelines for the Planning and Installation and Maintenance of Utility Services in Proximity to Trees' as augmented with additional information below.

- All works within RPAs will be carried out by a suitably qualified persons experienced using hand excavation processes. (Where works may require longer runs within more important tree root protection areas, an air spade will be used by suitably qualified Arboricultural Contractors to undertake the excavation works).
- Where possible, all roots over 10mm to be retained. No root over 20mm to be removed unless absolutely unavoidable. Where roots have to be removed, they shall be cut back flush with the sides of the trench. Where roots are retained and the trench to be left open for more than 7 hours, the roots shall be wrapped in either wet sacking or polythene to reduce moisture loss. The trench shall be infilled as soon as possible thereafter with the removed topsoil or a WASHED aggregate with no fines. If the trench is left open for more than 12 hours, it will be covered with a plastic sheet to prevent drying

**4.5.3. The works to excavate the trenches for services will be overseen by a suitably qualified arborist who will provide a written / photographic report to the District Council to demonstrate compliance.**

**Note; There is no 'deemed' consent to install services within the Root Protection Areas of trees as a result of grant of planning unless this is specifically indicated. If it is proposed to install/open/connect to or modify any services within or closer to the RPA of trees or hedging than that indicated on the plans this will require the prior written consent of the District Council**

#### **4.6. Post Construction Landscaping Procedures**

4.6.1. Following the completion of the construction of the development, when landscaping to the site is undertaken, special procedures will be carried out where these might conflict with trees. Where landscaping impinges within the Root Protection Area of trees to be retained, the following procedures will be adopted;

4.6.2. Only glyphosate based weed killers will be used on any surface vegetation. All use of weed killers will be restricted to pre-physical clearance of the area within the RPAs of trees to be retained in order to prevent spray contacting exposed tree roots.

4.6.3. All removals of existing landscaping, hedging etc. will be carried out by hand operated machinery and tools only. The use of backactors etc. to remove items will not be used. No excavation beyond that absolutely necessary to remove existing plants and structures (fence posts etc.) will be used.

4.6.4. Following removals of existing landscaping, **no use of rotorvators will be undertaken within the RPA of trees, all levelling and tilthing will be carried out by hand to a maximum depth of 100mm.** Any importation of topsoil will be restricted to a maximum of 150mm above previous ground levels. No topsoil to be made up within 500mm radius of the base of any tree (to prevent 'rotting off')

## 5. Landscaping

### 5.1. Landscape intention / mitigation justification

5.1.1. The proposed mitigation planting as required to address NPPF/NERC guidance (see Section 3.3) will take the form of three elements all of which are intended to enhance both the setting and amenity of the site, mitigate for tree losses and soften and integrate the new development into the landscape. The design and nature of landscaping is intended to conform to the guidance in the NNDC Landscape Character Assessment document which forms supplementary planning guidance

5.1.2. External lighting will be limited to the number and location of units as proposed on the site plan and will use a light unit (as detailed in Table 4 below) in order to conform with recommendations in the ecological survey and policy requirements in NNDC Local Plan / supplementary planning guidance (NNDC Landscape Character Assessment document)

### Proposed Planting as shown on Plans 4827/02

Table 4

Species	Number	Size
<b>Trees</b>		
Betula pendula (small Silver Birch)	3	'Feathered' size (1.2+.m) supported two post 'H' support at ¼ height, proprietary irrigation tube and 75mm bark mulch and strimmer guard
Quercus robur (common oak)	2	""
Prunus domestica (Damson local variety from EAAOP)	2	""
Malus sp (local variety of apple from EAAOP)	2	""
Salix fragilis (crack willow)	7	Plants to be 60 / 90cm high bare root whips protected with bark mulch weed suppressant
Alnus glutinosa (Common Alder)	6	""
Crataegus monogyna (hawthorn)	11	""
Ulex europea (Gorse)	27	20cm high cell grown with shrub shelters and bark mulch weed suppressant

### Grass seeding/Turfing

Replacement grassing will be undertaken where grass is removed during the construction process

The front and rear garden areas will be turfed with a standard amenity turf containing no more than 50% ryegrass mix

All grass seed will be sown / planted as recommended by the supplier and managed as they recommend in their provided literature. Note that this is best sown in early spring or autumn when it is fairly damp.

### Lighting units for external use

Where shown on the plans, external lighting units may be placed. These must conform to the standards set out below and no additional or alternative unit types may be used unless otherwise agreed in writing with the District Council

#### Astrid outdoor downlighter with PIR

All external lighting units will be Astrid units operated with a PIR and incorporating a fully enclosed light source with flat glass / full cut off to prevent any horizontal light spill above 80° from vertically downwards to the horizontal. The light source will be a warm light spectrum (no more than 2700 kelvins) and the light unit will not emit more than 400 lumens



## **5.2. Plants and Planting**

### **Implementation**

5.2.1. The landscaping as shown on the plans appended to this document will be undertaken in the next available planting season (for the relevant plant types as set out below) following the commencement of development, or such longer period as shall be agreed with the LPA. The works for bare rooted planting and tree planting should be undertaken in the period November to March in any year, and other planting can be undertaken at any time during the year as long as adequate irrigation is undertaken, but is better undertaken avoiding the months of May to July. Grass laying can be undertaken at any time of year but should try to avoid May to July – again adequate irrigation is required. Grass seeding is only effective in March to April and late August to early October.

## Appendix

Inc;

### **Photographs of trees on the site**

Schematic of protective fencing to BS 5837:2012 Type 1 and 2 versions as necessary

Ground protection matting specification to BS5837:2012

NJUG Guidance Note 4 - Installation of Services near trees

Arboricultural Impact Assessment Plan / Tree Protection Plan / Development Plan shown  
superimposed on plan 4827/01 with arboricultural information added May 2023  
Developed from plans by Robert Lord Assocs



Photographs of Site Features

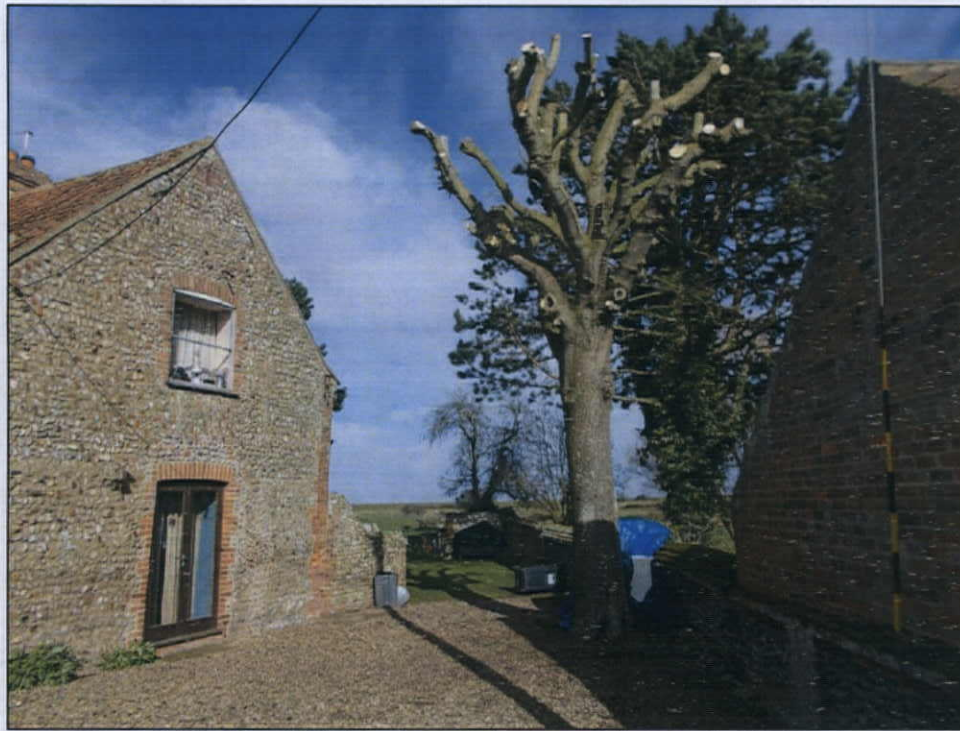


Figure 2, T1, T2 and T4 from the existing car parking area looking north east



Figure 3 – G3 with T2, T6 and T7 arrowed looking north west from coast road



Figure 4 – T5 – T7 looking north



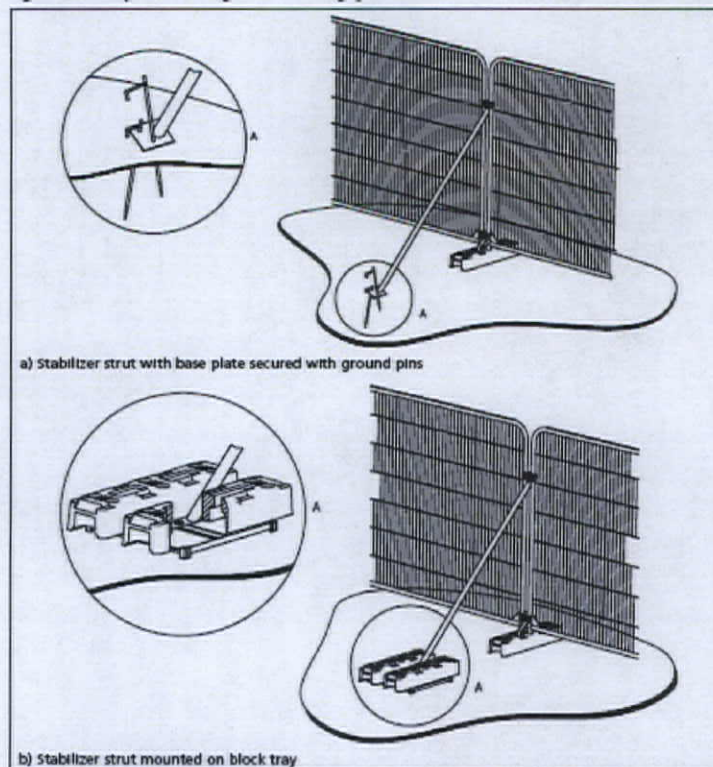
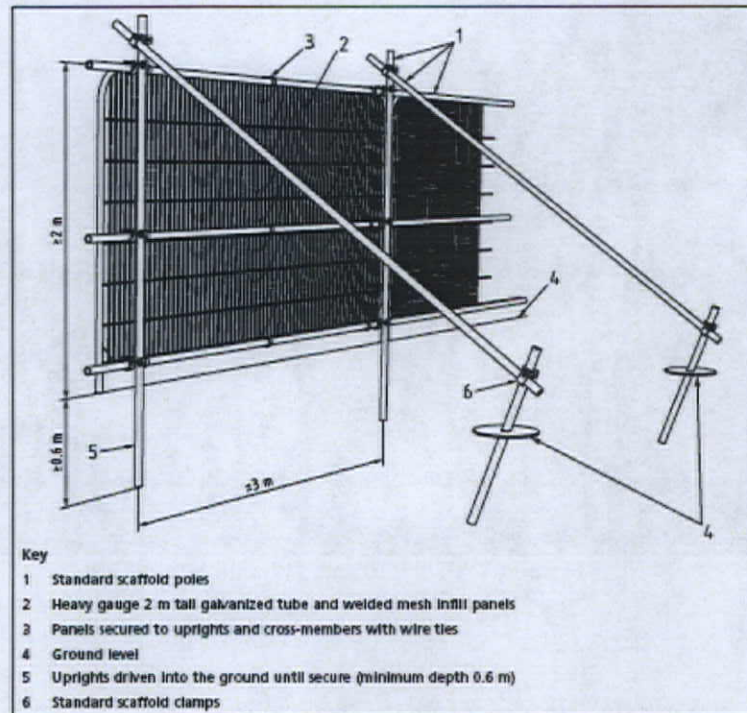
Figure 5 – T7 and H2



Figure 6 – TT9, T10 and T12 with H1 and H2

## Tree Protection Barriers - Type 1 designs

The standard design which BS5837:2012 now requires as the 'default' design is shown below. In certain circumstances (where there is hard surfacing or other physical features which prevent the use of this type)



## Ground protection during demolition and construction

Designs for Ground protection in relation to construction can vary considerably according to the location and terrain. These can be simple scaffolding boards over a plastic membrane where scaffolding or other pedestrian access is required, more sophisticated and heavy duty arrangements such as plywood sheeting which may be suitable for locations where a mini-digger up to 2.5 tons is working / light vehicle access is required, up to heavy vehicle access provision where a proprietary system such as Ground Guards or Rola Track is required. In all cases three main principles apply and these are set out in more detail below

1. The ground support must be adequate to prevent compaction of the ground type being tracked over – soft ground requires better protection than hard / wet than dry etc.
2. The ground support must be adequate for the weight of traffic using it
3. There must be both a compression layer of wood chippings / washed aggregate to distribute the loading and a plastic membrane to prevent cement or other leachate spills from contaminating the soil under the ground protection surface.

Where construction working space or temporary construction access is Justified within the RPA, this should be facilitated by a set-back in the alignment Of the tree protection barrier. In such areas, suitable existing hard surfacing that Is not proposed for re-use as part of the finished design should be retained to act as temporary ground protection during construction, rather than being removed during demolition. The suitability of such surfacing for this purpose should be evaluated by the project arboriculturist and an engineer as appropriate.

Where the set-back of the tree protection barrier would expose unmade ground to construction damage, new temporary ground protection should be installed as part of the implementation of physical tree protection measures prior to work starting on site.

New temporary ground protection should be capable of supporting any traffic entering or using the site without being distorted or causing compaction of underlying soil.

*NOTE The ground protection might comprise one of the following:*

*a) for pedestrian movements only, a single thickness of scaffold boards placed either on top of a driven scaffold frame, so as to form a suspended walkway, or on top of a compression-resistant layer (e.g. 100 mm depth of woodchip), laid onto a geotextile membrane;*

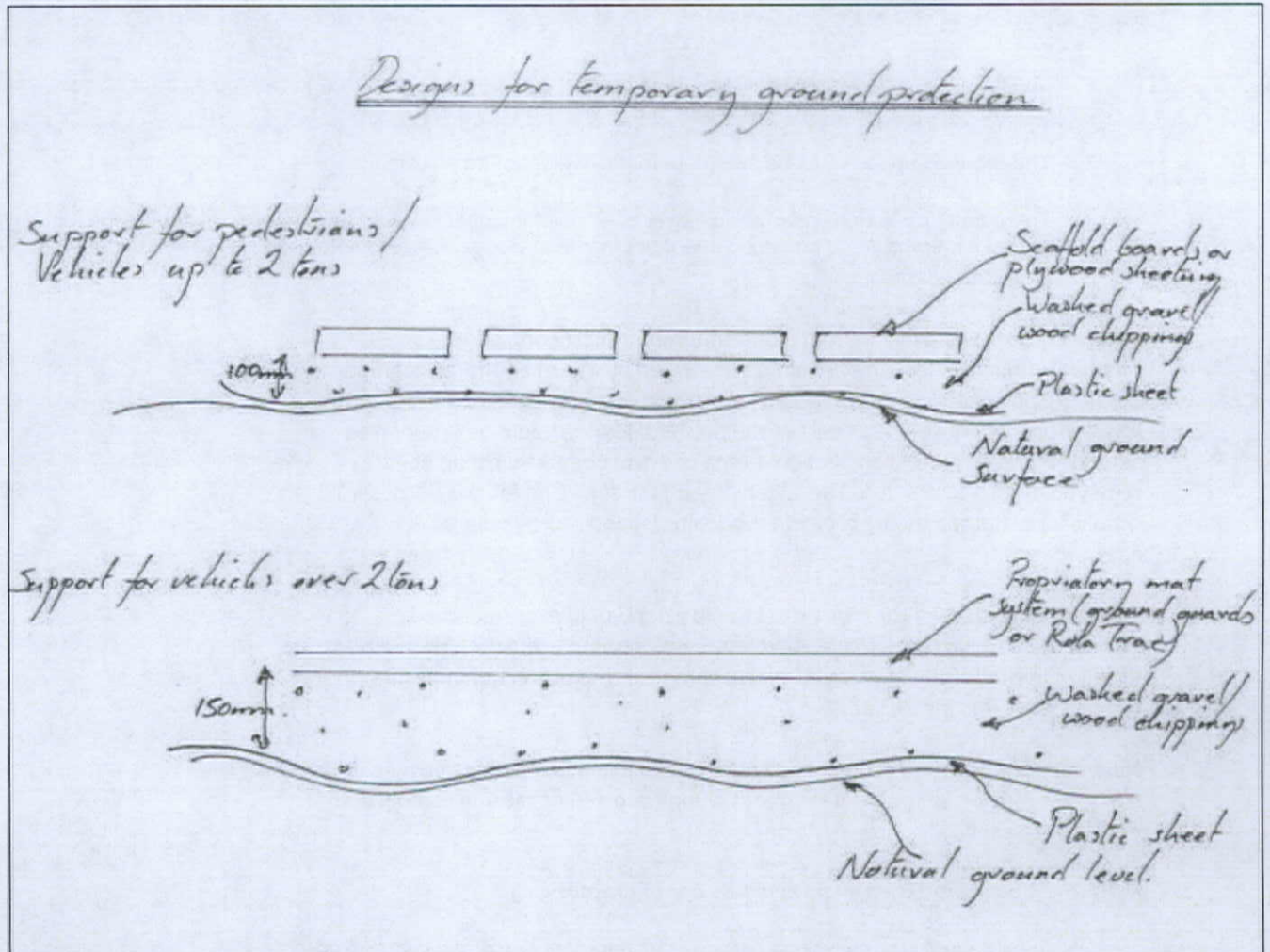
*b) for pedestrian-operated plant up to a gross weight of 2 t, proprietary, inter-linked ground protection boards placed on top of a compression-resistant layer (e.g. 150 mm depth of woodchip), laid onto a geotextile membrane;*

*c) for wheeled or tracked construction traffic exceeding 2 t gross weight, an alternative system (e.g. proprietary systems or pre-cast reinforced concrete slabs) to an engineering specification designed in conjunction with arboricultural advice, to accommodate the likely loading to which it will be subjected.*

The locations of and design for temporary ground protection should be

shown on the tree protection plan and detailed within the arboricultural method statement (see 6.1). – see overleaf

In all cases, the objective should be to avoid compaction of the soil, which can arise from the single passage of a heavy vehicle, especially in wet conditions, so that tree root functions remain unimpaired.



T13

Location of summer house as moved from existing location near house

H1

T11

T12

T10

T9

T7

T3

T6

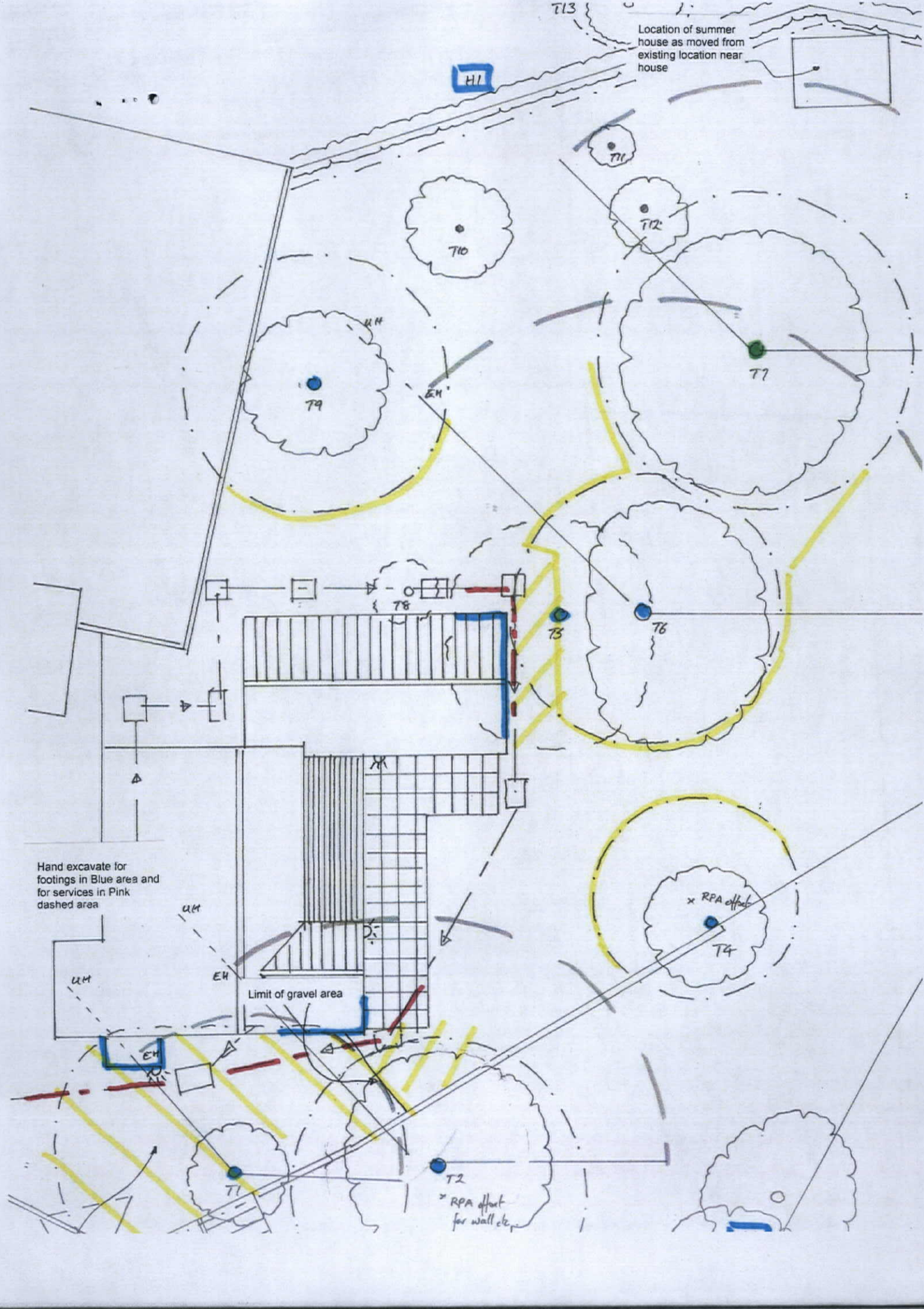
T4

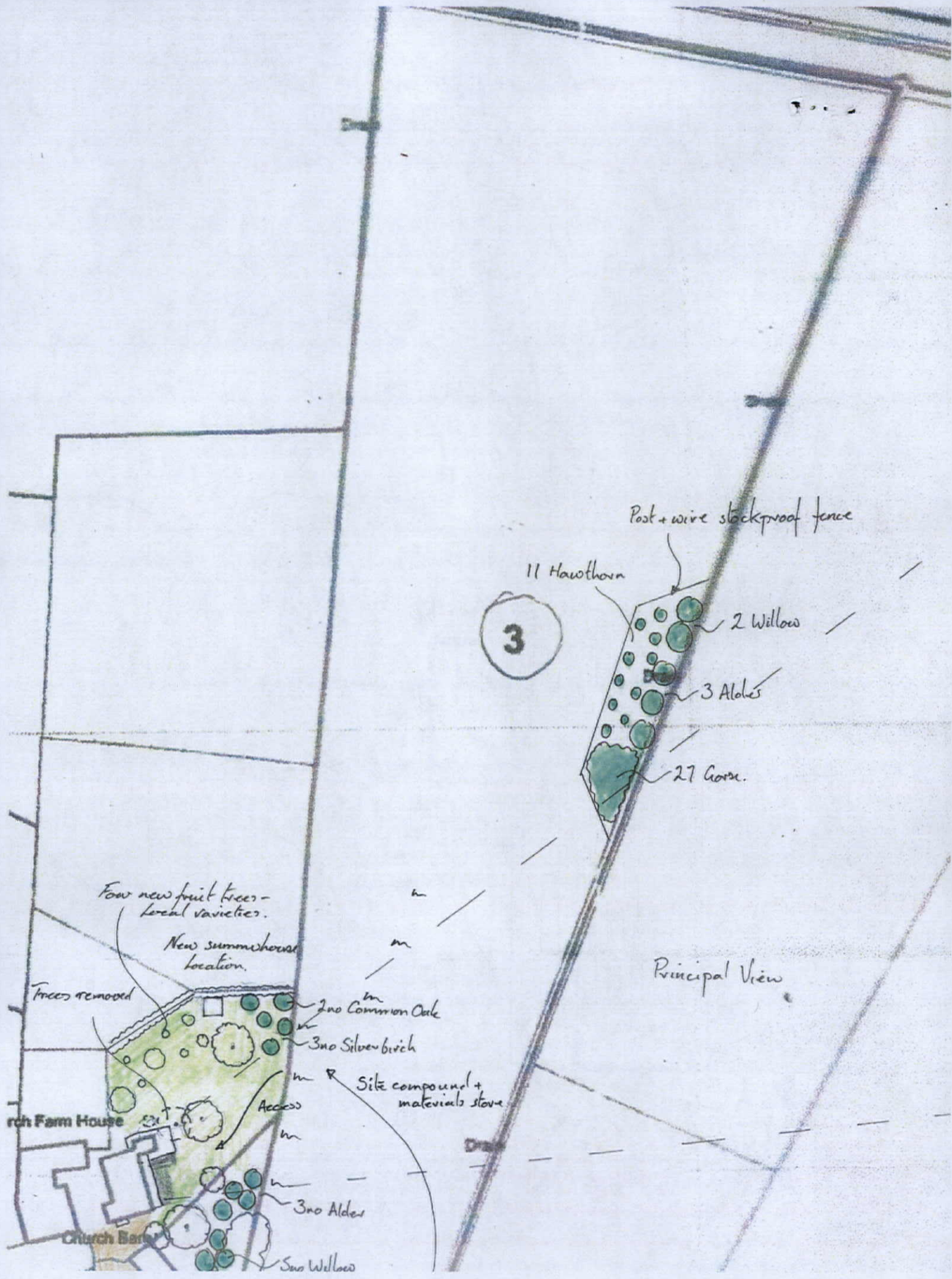
Limit of gravel area

T2

RPA effort for wall etc.

Hand excavate for footings in Blue area and for services in Pink dashed area





Post + wire stockproof fence

11 Hawthorn

3

2 Willow

3 Alder

27 Gorse

Principal View

Fow new fruit trees - local varieties.

New summerhouse location.

Fences removed

orch Farm House

Church Barn

2no Common Oak

3no Silver birch

Access

Site compound + materials store

3no Alder

3no Willow