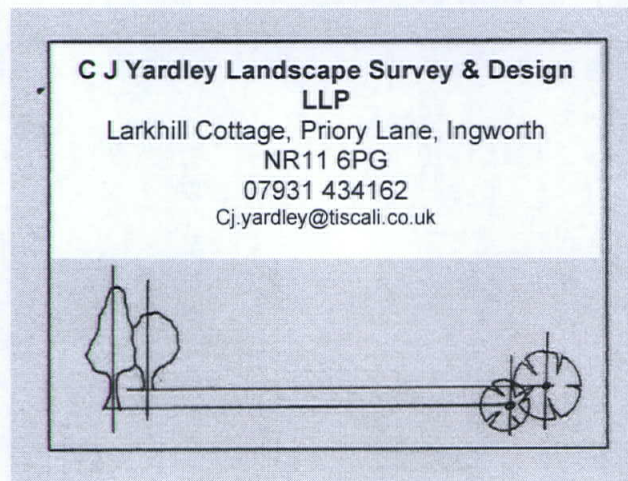


**Arboricultural Impact Assessment, Tree Protection
Plan, Method Statement
Site at Larchmount, Avenue Road, High Kelling.
Amendments to previous consented works including
extending garage**



July 2023

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1. Introduction

1.1. This report is intended to assess the implications for existing trees, shrubs and hedging within and surrounding the site of a proposed development at Larchmount, Avenue Road, High Kelling. The development concerns the works to vary the previous consent for the site (2022) which was to undertake single story extensions to the existing property and reconstruct the garage together with formation of a second access onto Avenue Road. The variations include alterations to the extent and layout of the extension, provision of a porch to the front of the dwelling and to extend the garage footprint and driveway accordingly. The development proposals are as indicated on the plans 4725/02 with arboricultural information added July 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 15th May 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. The ORIGINAL Consented development required the removal of the following trees

T8 and T9, Low amenity value Silver Birch
T10, Low amenity value Scots Pine
T16 and T18, Low amenity value Holly
T17 – dead Silver Birch
T19, Low amenity value Sycamore
T20, Low amenity value Sallow

In addition, for amenity and good arboricultural management purposes, the following trees are shown for removal

G27 – A small group of immature low amenity ornamental conifers
T32 and T37 – two low amenity ornamental Lawsons Cypress
T38 – A low amenity value Rowan

A detailed landscaping scheme was provided to address the requirements of the removals above in the previous consented Planning Permission (2022 – PF/22/1973F). This imposed replanting provisions which are included / repeated in this proposal and landscaping plan for clarity

A separate tree works application was also made in 2022 to address tree condition / safety and amenity factors and this imposed replanting provisions which are included / repeated in this proposal and landscaping plan for clarity

In addition – JULY 2023 for the construction of the extended garage the trees T25 and T26 are proposed to be removed (two moderate amenity value Birch Trees). Four new Silver Birch trees are proposed to be replanted to compensate for the loss of the two trees and these are shown in addition to the landscaping issues mentioned above

2. The southern canopy of T29 – Moderate amenity Copper Beech is proposed to be lifted to give sufficient clearance over the new flat roofed extension to the garage. The canopy lifting operation will require the canopy to be lifted from approx. 2m to approx. 4m by the removal of boughs of less than 40mm dia. The impact on the tree is assessed as NEUTRAL.

3. The development will impact the root protection areas (RPAs) of trees in the following locations

- The new extensions to the main house are located outside the root protection areas of trees. The demolition of the existing conservatory and extension and the construction of the replacement of this building is therefore assessed as producing an NEGLIGIBLE impact on trees assuming that all tree protection measures stated in Section 4 of the AIA are complied with
- The removal of the existing timber garage and store building and its replacement with a similar timber building on an extended concrete slab but retaining and utilising the existing concrete pad where it is present is assessed as producing a MINOR ADVERSE impact on tree T24 (Sweet Chestnut), T28 (Pear) and Negligible impact on T29 (Copper Beech) assuming that the construction of the new pad, the installation of the new timber framed building and the discharge of surface water discharge provision is installed as per Section 3.5.5 options and that all tree protection measures stated in Section 4 of the AIA are complied with.
- The proposed new developments should not require works to install or alter services within or close to the root protection areas of trees. If such works are required, an application for these works would be required prior to their commencement in order to comply with Tree Preservation Order legislation. There is no deemed consent to install services unless expressly shown on Approved Planning documentation
- Access to the working area for the new development will be significantly restricted by tree constraints. The property has one access point (existing driveway) and all works will need to be accessed via this point. Materials storage will also be heavily constrained by tree protection zones will need to be stored to the south and east of the main house (mainly on the existing hard standing)
- Surfacing is proposed to extend over the root protection areas of several trees to provide the new access to the re-orientated garage. The surfacing type proposed will be a permeable, no-dig type (Celweb supported) with no level changes to the existing ground surfaces excepting a dressing of topsoil to cover existing exposed roots. The extent of the surfacing will marginally exceed the recommendations in BS5837 for trees T6 (Oak), T14 (Oak) and T24 (Sweet Chestnut). In the case of T6 and T14, this is because the extent of surfacing will exceed the BS recommendation of 20% (in both cases it will be 30% and 27% respectively), in the case of T24, the width of the surfacing will exceed the recommended 3m (5 – 8m is proposed). The works are assessed as presenting a MINOR ADVERSE impact on the three trees (with a low potential for this to have a measurable impact on tree health). This assumes that all works are carried out in full accordance with the recommendations in Section 4 of this report
- There are no proposals to install other surfacing or boundary treatments within the RPA of trees with the exception of gate posts where shown (for two wooden five bar gates to swing inwards into the site – no services or other features

associated with them) which will be installed within the RPA of T14 and T24. This work is assessed (cumulatively with the surfacing) as presenting an insignificantly greater cumulative impact and therefore the cumulative impact of surfacing and gate post installation on the two trees is assessed as MINOR ADVERSE

4. Shading and overbearing issues will be presented to the new western extension from proximity to trees, but these have been minimised by the provision of a tree constraints plan as a basis prior to the development of a layout for the site. The design and layout of the extension has therefore had the benefit of this information and this has been used as one of the primary drivers for the design of this building. The shading and overbearing factors include the following;
 - The western outlook from the single story extension will not sit within the shade quadrant of the grouping of trees to the west side of the site (located both on and off site on adjacent property) but will experience some degree of later afternoon shading (lower than the BS guidance considers significant) and some degree of sky lighting reduction. To address this the design has provided dual aspect rooms to this extension with rooms having windows on two sides (south and west and north and west respectively). Our assessment is that whilst the building is moved out marginally further than the existing building footprint (for the existing south west and north west extensions) the change in light / shade levels will be only very marginally worsened by the alterations and the inclusion of the dual aspect will mean that there is no material difference between the existing and proposed situation in terms of light levels. However it is acknowledged that the height of the vegetation does pose a light level issue and that in the past and currently, applications to reduce the height of these trees has been made and works carried out (several of the trees are pollarded for this reason)
 - Overbearing has similarly been considered. Again, whilst the new north western extension brings the building further towards the canopy of T34, the degree of change from the existing situation is marginal and whilst there is an overbearing issue from this and other trees (namely T31) to the property, this is not significantly different from the existing situation. An application to reduce by a modest amount the canopies of both trees has been made as part of this application to improve amenity / light and overbearing
 - The future growth of trees has been considered as part of this development and it is assessed that whilst fully grown, T31 and T34 will demonstrate some degree of canopy growth or canopy droop (due to additional mass being added to the canopy). The proposed development will only present a marginally additional constraint (over that currently existing) this to a minor degree and future canopy growth will need some minor additional management which will have a NEGLIGIBLE to MINOR ADVERSE impact on the trees
5. 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 central area of the extended settlement of High Kelling which comprises an area of plots situated within a woodland context and developed from open heath and woodland between approx. 1900 and now. The site is an older plot with a large detached two story house located centrally upon it. The property is accessed by an existing driveway to the south eastern corner near to the junction of Avenue Road and Cromer Road (a dangerous junction) situation. The site comprises a woodland garden type with driveway and parking areas to the south and east of the main house. A single story attached wooden garage is located to the north east of the house. There are plots with bungalows to the north and west adjoining the property. The overall character of the site is wooded and the roadway of Avenue Road is unadopted / private

1.4.2. The location and extent of the site are shown in the google earth image below. This also indicates the type of habitats and landscapes surrounding the site



1.5. Development Proposal for Site

1.5.1. The previous consented development (PF/22/1973) was for development proposals concerning the partial demolition of existing extensions to the north and west of the main house and their replacement with a new single story extension wrapping around the building on these sides on a similar footprint. In addition a new porch is proposed to the south of the main house and the existing timber garage is to be replaced on the same footprint and using the existing concrete slab. A new driveway loop is proposed to the property (in and out) to improve safety in relation to the road junction to the south of the dwelling and will serve a re-orientated garage

The revised proposals in July 2023 will amend the consented details in the following areas in relation to trees;

The proposed altered attached extensions to the main house remain outside the RPA of trees

The new garage footprint will be extended to the north and will impact more on trees

The new garage will require an small extension to the northern side of the driveway to increase the driveway surface area.

1.5.2. Services are assumed to be installed in to connect with existing services located to the property with no significant alterations required more than a few metres from the main house. An existing foul drain appears to run from the main house to the north of the building and presumably to services within Avenue Road.

1.6. Current Ground Cover and Boundary Treatments

1.6.1. The existing site comprises a garden area with grassed and lawn areas, shrubberies and flower beds. The western / southern and northern part of the garden has more formal planting and that to the east is more tree'd. Hard standing (tar bound gravel) is present to the south and east of the house

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

1. The northern boundary is formed by a 1.6m high close boarded fence with some conifer hedging to parts
2. The eastern boundary to the site is formed by a 1.6m high close boarded fence
3. The southern boundary is 1.3m high close boarded fence
4. The western boundary is formed by a 1.6m high close boarded fence

1.6.3. Hedgerow Regulations 1997; there are no boundary hedgerows.

1.7. Levels

1.7.1. The site is more or less level with no significant features.

1.8. Soil Type

1.8.1. The soil type across the site is light sands and gravels. The soils are unlikely to be unstable and shrinkable. Detailed investigation of the soil structure will be necessary to determine the depths of footings etc.

1.9. Trees on/adjacent to the Site

1.9.1. There 40 individual and groups of trees / large shrubs and two hedges on and adjacent to the site which are included in the survey as being relevant to the construction of the new building / ancillary features such as services

1.9.2. All the trees on and adjacent to the site are covered by Tree Preservation Orders (a parish wide Order). This requires that all works to trees above or below ground are applied for and agreed in writing with the District Council prior to commencement of such works. There is no 'deemed consent' for ancillary works to Planning Permissions such as installation of services or surfacing / boundary treatments if these are not expressly shown on a plan / document which forms part of the approved Permission. Works stated in this report (if submitted and approved as part of a Planning Application) would constitute such application. 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 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.

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

Identification on plan	Category and definition Criteria (including subcategories where appropriate)
See Table 2	<p>Category U</p> <ul style="list-style-type: none"> Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality <p><i>NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.</i></p>
	Trees unsuitable for retention (see Note)
See Table 2	<p>Category A</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>
See Table 2	<p>Category 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>
See Table 2	<p>Category C</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>
See Table 2	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. wood-pasture trees or wood-pasture)
See Table 2	Trees with material conservation or other cultural value
See Table 2	Trees with no material conservation or other cultural value
	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features
	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality
	Trees 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
	1 Mainly arboricultural qualities
	2 Mainly landscape qualities
	3 Mainly cultural values, including conservation

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 relating to the diameter of the trunk - DBH - (which provides the data for determining the root protection area (RPA)), age class of the tree (what stage of its development it has reached); its condition and the amenity contribution that it makes together with its formally assessed 'retention category' or amenity rating (see table 1) as assessed using the BS criteria. These factors are used to provide the data which is transposed onto the development plan and which provides the 'Tree Constraints' on this plan. The data is then used to help determine our assessment of the impacts of development, the location of any tree protection and any remedial measures which will help to protect 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	Retention category
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 a 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 clearly visible. 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 lifting would be needed to gain access beneath the tree for development or other purposes	The formal British standard amenity classification which ranges from 'A to U' see Table 1

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:	First main branches (N, S, E, W) and minor bough outer canopy clearance (CC). Amenity Classification
T	1.	N Map Red	10	5W 4N 3E 2S	170 2.1m	N/SM 40+	Fair condition – suppressed	CC 2m B2
T	2.	Oak	15	7W 3E 4N 5S	500 6m	L/M 20+	Fair condition, thin canopy considerable lower dead wood Note overhead electricity wires S under canopy – insulated	CC 6W 6N 7S B2
T	3.	Oak	14	5SW	470 5.6m	L/M <10	More or less dead. Remove urgently	U
T	4.	Oak	18	7N 10W 10S 9E	750 9m	N/M 40+	Fair condition, minor dead wood lower canopy	CC 5E 6N 5S A2
T	5.	Sycamore	14	8	150 1.8m	L/SM	Fair condition – sparse canopy	CC 3m C2
T	6.	Oak	18	6W 5N 6E 3S	470 5.6m	N/M 40+	Fair condition. Minor dead wood	Epicormic growth 2-4m main canopy above 10m A2
T	7.	Scots Pine	7	4W 2S 2N 1E	170 12.1m	L/SM 40+	Fair condition, suppressed	CC 2.5 < 20m dia S&W C2
T	8.	Silver Birch	14	4W 2S 1N 0E	150 1.8m	L/SM 20+	Fair condition some sign of regeneration E following removal of neighbouring tree	CC 5m C2
T	9	Silver Birch	15	3 dia	200 2.4m	L/SM 20+	Fair condition – comments as above	CC >6m C2
T	10.	Scots Pine	16	4 dia	270 3.5m	L/EM 20+	Fair condition. Sparse lower canopy Note T9 buttress girdle this tree	CC 7m W 9m E B2 just
T	11.	Scots Pine	16	4dia	320 4m	N/EM 40+	Reasonable condition	CC 3m W < 30m 9m E B2
T	12.	Lawsons	7	3	150 1.8m	N/Y 40+	Fair condition. Not topped	CC 1.5m C2
T	13.	Lawsons	10	4	200 2.4m	N/SM 40+	Reasonable condition – not topped One of several forming senior avenue trees both sides of The Avenue	CC 2.5m B2
T	14.	Oak	22	4W 6E 5S 5N	550 6.6m	N/M 40+	Fair condition	Sub canopy SW @ 4m (50m) main canopy above 10m A2
T	15.	Lawsons	9	5	250 3m	N/SM 40+	Fair condition – suppressed by T14	CC 2.2m B2

	Tree No.	Species	Height metres	Crown Spread metres	DBH/RPA in mm	Vigour / Age Class and remaining years	Comments:	First main branches (N, S, E, W) and minor bough outer canopy clearance (CC). Amenity Classification
T	16.	Holly	6	5	170 2.1m	L/SM 40+	Poor – sparse canopy Note fire damage to N canopy	CC 2.5 C2
T	17.	Silver Birch	12	3	270	Dead	Felled with consent Aug 2022 - and shown to be replaced in the landscaping plan as required by the previous consent	U
T	18.	Holly	6	4	2x70 1.2m	L/SM 40+	Fair condition	CC 1.6m C2
T	19.	Sycamore	10	3W 3N 2E 1S	150 1.8m	N/SM 40+	Fair condition	CC 3m C2
T	20.	Sallow	8	6E 5N 1S 1W	250 3m	N/M 40+	Fair condition – strong canopy bias	CC 5m E&N C2
G	21.	Holly	5-6	As shown	Av70 1m	N/SM 40+	Fair condition, group of suckers forming a small shrubbery	CC 2m C2
T	22.	Silver Birch	16	5E 3N 2S 2W	370 4.5m	N/M 10+	Felled with consent Aug 2022 - and shown to be replaced in the landscaping plan as required by the previous consent	CC 6m C2
T	23.	Holly	7	3	300 3.6m	N/M 40+	Fair condition. Parent of G21	CC 1.6m B2
T	24.	Sweet Chestnut	20	8E 7S 8N 6W	1200 14.4m	N/M 40+	Reasonable condition what can be seen due to dense canopy	CC 5S 5E A2
T	25.	Silver Birch	16	6dia	350 4.2m	N/M 10+	Fair condition what can be seen. Decay to buttress root SE	CC > 8m B2
T	26.	Sweet Chestnut	8	4S 4W 2E 1N	170 2.1m	N/Y 40+	Reasonable condition canopy liftable to 4m all round	CC 2m SW – branching @ 4m S&W < 40m dia B2
G	27.	Lawsons	6-8	1-3	100-270 3.5m	L/SM 20+	Poor condition – felled with consent Aug 2022	C2
T	28.	Pear	9	4	250/3m	L/M 10?	Poor condition – much dieback	CC 6m C3
T	29	Copper Beech	16	6S, 5E, 3W, 5N	350 / 4.2m	N/EM 40+	Reasonable condition	CC 2m < 20mm B2
T	30	Copper Beech	16	5S, 2E, 2W, 5N	350 / 4.2m	N/EM 40+	Reasonable condition	CC 2m < 20mm B2
T	31	Oak	17	7S, 4E, 4W, 5N	450 / 5.4m	N/M 40+	Fair condition	S @ 3m (150mm dia) lateral B2
T	32	Lawsons	7	4 dia	15 + 100 /	N/SM	Fair condition – ornamental variety Felled with	C2

	Tree No.	Species	Height metres	Crown Spread metres	DBH/RPA in mm	Vigour / Age Class and remaining years	Comments:	First main branches (N, S, E, W) and minor bough outer canopy clearance (CC). Amenity Classification
		cypress			1.9m	20+	consent Aug 2022	
T	33	Oak	16	6N 1S, 7NW, 4E	370 / 4.5m	N/EM 40+	Fair condition	CC 3m N B2
T	34	Oak	17	7S, 5W, 5E, 3N	500 / 6m	N/M 40+	Reasonable condition	S @ 4m (100mm dia) lateral. CC 3m A2
T	35	Oak	16	3S, 6W, 3E, 5N	400 / 4.8m	N/EM 40+	Fair condition	CC 7m B2
T	36	Lawsons cypress	8	4 dia	270 / 3.3m	N/EM 40+	Fair condition	Cc 3m C2
T	37	Lawsons cypress	6	2 dia	150 / 1.8m	L/Y 40+	Fair condition	C2
T	38	Rowan	9	4E, 4S, 1W, 1N	4 c 110 / 3m	L/M 20+	Fair condition – sparse canopy. Felled with consent Aug 2022	CC 3m C2
G	39	Beech x 3 Cherry Oak x 2 Holly x 3 Sweet Chestnut	7 - 9	3 – 7 dia	Largest 300 / 3.6m	N/Sm 20 - 40	Fair – some suppressed others pollarded for amenity in the past	CC E 3m B2
T	40	Rowan	6	6 dia	2 x 150	L/M <10	Poor condition – decayed base Felled with consent Aug 2022 - and shown to be replaced in the landscaping plan as required by the previous consent	U

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 degree of decline but which has 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 which will reduce the amenity of 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 which will probably leave the tree 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 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 proposed development features, or where new services may be installed to the new building - the survey does not include all trees within the site. The trees on and adjacent to the site comprise a range of species and sizes commensurate with various phases of garden planting within the context of a large older house which has been constructed within a woodland area and comprise

A number of large mature trees of Beech, Sweet Chestnut and Oak which have some historical relationship to the former wooded nature of the area before the house was constructed. Most are concentrated to the north and east of the site

Younger trees of Beech, Lawsons cypress, Birch, Holly, Sycamore and Sallow etc which comprise later phases of additional (largely non-structural) landscape design or simply remnants of the former wooded character of the area which were incorporated into 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 4725/02 developed from plans by Robert Lord Assoc's with arboricultural information added July 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 4725/02 developed from plans by Robert Lord Assoc's with arboricultural information added July 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 members of groups of trees in landscape / character terms (A2), moderate amenity value as individuals or as members of groups of trees (B1 and B2 respectively). There are also several trees and large shrubs which are classified as C2 or low amenity value. There are also three unclassified trees in the survey which demonstrate particularly poor condition.

3.1.3. The high amenity trees are those which are the oldest and largest trees on or adjacent to the site and comprise four oak trees (T4, T6, T14 and T34) and one large Sweet Chestnut (T24). These trees pre-date the development of High Kelling and are part of the woodland. Other trees within the site which contribute positively to the amenity of the garden but in the context of the 'wooded' character of the settlement and wider area are classified as moderate amenity value and include a range of native and non-native trees (with Scots Pine, Copper Beech and lesser Oaks forming members of this group). The line of trees forming a boundary to the western side of the site have also been included in this moderate classification as a group feature where the individual members of the group would not of themselves be so classified because they form a strong feature, divide up built forms and provide ecological value.

3.1.5. The smaller and less visible garden trees are classified as low amenity.

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. Most of the significant retained trees in close proximity to the new features to the dwelling are mature but they still have some growth potential or development issues which may impact on the future use of the new built elements but we assess that this will not be significantly more than the current relationship with built elements except perhaps in relation to T29 southern canopy, and in relation to the south eastern canopy of T34. The principle issues are the potential for the canopies to extend closer to the roof lines of the buildings and to droop due to increased mass on the tree boughs tending to lead to branches dropping and reducing light to rooms. We assess that the future growth will lead to residents desiring the trees to be retained or reduced in size to a some what greater degree than at present for T29 (where the canopy over sails the new garage and will probably require periodic works to lift the canopy as it 'droops') and T34 only - which will have a MINOR ADVERSE impact on the amenity and form of the tree, but not significantly upon its future lifespan.

3.2.3. It should be noted that we have recommended a canopy reduction to tree T29 and canopy reductions have been applied for / consented and completed in 2022 for T31 and T34 to anticipate this.

3.3. Tree / hedge Removals and Replacements

3.3.1. The ORIGINAL Consented development required the removal of the following trees

T8 and T9, Low amenity value Silver Birch
T10, Low amenity value Scots Pine
T16 and T18, Low amenity value Holly
T17 – dead Silver Birch
T19, Low amenity value Sycamore
T20, Low amenity value Sallow

In addition, for amenity and good arboricultural management purposes, the following trees are shown for removal

G27 – A small group of immature low amenity ornamental conifers
T32 and T37 – two low amenity ornamental Lawsons Cypress
T38 – A low amenity value Rowan

A detailed landscaping scheme was provided to address the requirements of the removals above in the previous consented Planning Permission (2022 – PF/22/1973F). This imposed replanting provisions which are included / repeated in this proposal and landscaping plan for clarity

A separate tree works application was also made in 2022 to address tree condition / safety and amenity factors and this imposed replanting provisions which are included / repeated in this proposal and landscaping plan for clarity

In addition – JULY 2023 for the construction of the extended garage the trees T25 and T26 are proposed to be removed (two moderate amenity value Birch Trees). Four new Silver Birch trees are proposed to be replanted to compensate for the loss of the two trees and these are shown in addition to the landscaping issues mentioned above

3.3.2. The trees to be removed have an amenity value which is not all that great, however, as required under the NERC Act 2006 and NPPF (2018) (Development should seek to maintain, mitigate and enhance biodiversity), provisional indicative landscaping is shown on the plans by Robert Lord Assoc's which indicate locations where new hedging and trees can be planted to mitigate for the loss of the planting listed above. Details of landscaping can be secured by suitable Planning Conditions to any permission

3.3.3. Proposed landscaping;

9no Silver Birch – to replace previously consented tree works (August 2022), previously consented planning works (PF/22/1973) and also to provide tree replacements for trees to be removed in this planning application.

2no Common Oak trees to replace one oak removed with consent (June 2022) and to replace other trees removed for PF/22/1973 and this application

1no Rowan to replace tree removed with consent August 2022

All trees to be sized at 120cm / 150cm bare rooted stock supported by a cane and 75mm deep bark mulch weed suppressant layer around the rooting base

A length of mixed native species hedgerow to offset tree removals in PF/22/1973 and this application – species to be Hazel (50%, Field Maple 20%, Holly 30%) in a double staggered row of plants set 0.5m between rows and 0.5m between plants in rows.

All hedging plants to be sized at 60 / 90cm bare rooted stock (20 – 40cm cell grown for Holly) supported by a cane and 75mm deep bark mulch weed suppressant layer around the rooting base

3.3.4. All plants to be planted by the next available planting season following the commencement of development or such later period as the District Council may allow in writing

3.4. Canopy Spread and Canopy Clearance Issues

3.4.1. The southern canopy of T29 – Moderate amenity Copper Beech is proposed to be lifted to give sufficient clearance over the new flat roofed extension to the garage. The canopy lifting operation will require the canopy to be lifted from approx. 2m to approx. 4m by the removal of boughs of less than 40mm dia. The impact on the tree is assessed as NEUTRAL

3.4.2. All works must be carried out by suitably qualified arborists to BS3998:2010.

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 with great care. The key points which are considered relevant are;

Extensions to the House

3.5.3. The demolition of the existing conservatory and partial extensions shown to be removed, and the construction of the new wrap around extension to the north and west, and the porch to the south of the main house are all located well beyond the RPA of trees. The demolition and replacement of this building is therefore assessed as producing a NEGLIGIBLE impact on trees assuming that all tree protection measures stated in Section 4 of the AIA are complied with.

Replacement Garage

3.5.4. The removal of the existing garage and its replacement of a new timber framed flat roof garage building on the new extended footprint will take place within the RPA of four trees (T11 – moderate amenity small Scots Pine, T24 large high amenity Sweet Chestnut, T28 Low amenity Pear and T29 Moderate amenity value Copper Beech). The works are intended to partially utilise the existing concrete base for the building but also provide a new extension to this surface to the north of the existing structure (of approx. 3.6m wide). This new slab is proposed to be constructed without a sub-base and on a 'no-dig' basis using the existing ground levels (which contain a high proportion of gravel and a low shrink ability factor) uncompacted. Whilst the extension to the garage will add to the total surfaced area within the RPA of T24, the amount of extent into the RPA of T11, T28 and T29 is either unchanged (T11) or is minor and peripheral. If the works are carried out as specified in the Section 4 of this report, the impact of undertaking the demolition and replacement/extension of this building is assessed as producing a MINOR ADVERSE impact on tree T24 and T28 and NEGLIGIBLE on T11 and T29 assuming that all tree protection measures stated in Section 4 of the AIA are complied with.

Services installation

3.5.5. The works to install the new extensions are anticipated to require revised connections to existing services to the property but we assess that these will not be required to be altered except in close proximity to the house and outside the RPA of trees (RED AREAS). The only exception to this will be the discharge of surface water from the new garage roof. This may be discharged in one of three ways.

- The surface water can be ducted to existing soakaways – by minimal hand excavation to connect to existing pipework. NOTE where surface water is to be drained from the roof of the new garage, this will be directed either to the existing soakaway facilities or to a new permeable pipe to be located to the northern side of the of building and running within the edge of the new Driveway (Celweb) matrix – without excavation in order to maintain the water discharge loading to the existing rooting areas of trees
- New soakaways may be provided but must be located to the south of the site and outside the RPA of trees with drainage routed from the south western corner of the new building (which is outside the RPA of trees) to the new soakaways
- Or – Surface water can be ducted to permeable drains located in the new topsoil dressing to be placed under the Celweb permeable gravel driveway surface and undertaken as a 'no-dig' operation

All the above avoid the need to excavate for new soakaways or drainage runs within the RPA of trees and are therefore assessed as presenting a NEUTRAL impact on trees. is minimised.

Development access, tree protection and development phasing

3.5.6. Access to the working area for the three main operations of house extension / internal works; replacement garage and new driveway will be significantly restricted by tree constraints. The existing driveway is proposed to be used for all access and for construction of the new extensions, this will be achieved via the south and west sides of the main house. For the new garage this will be achieved via the southern side of the garage with ground protection matting around the building for construction working. For the new driveway, this will be carried out from the southern end as a 'roll out' procedure with all delivery of materials to the working area conducted from the 'rolled out' surface (so that all vehicles are always on a support system and not on unprotected soil surfaces). Materials storage will also be constrained by tree protection zones with the main areas to be used to be to the south of the site – particularly cement mixing operations

3.5.7. At all times temporary ground protection will be required to access different areas of the site and this must be maintained for the full duration of the development or until development is completed on a 'Phase' and no further development access, storage of materials or other development related activity is carried on in that area and the area can be clearly demarcated and annexed from any development work on other parts of the site

Surfacing

3.5.8. Surfacing is proposed to extend over the root protection areas of several trees to provide access to the barn annex and new house. The surfacing type proposed will be a permeable, no-dig type (Celweb supported) with no level changes to the existing ground surfaces. The extent of the surfacing will exceed the recommendations in BS5837 for trees T5, Sycamore, T6, (Oak), T7 (Birch), T11 (Pine), T14 (oak) and T24 (sweet chestnut) and T28 (pear), some of which already have a degree of impermeable long established hard surfacing within their RPAs but the new surfacing will add to this and is assessed as presenting a MINOR ADVERSE impact on all trees (with a low potential for this to have a measurable impact on tree health). This assumes that all works are carried out in full accordance with the recommendations in Section 4 of this report

Boundary treatments

3.5.9. There are no proposals to install new boundary treatments but two new wooden gate posts will be installed to the new access (for manual operated wooden five bar gates). The cumulative impact of this work (with that of the new driveway surface) is still assessed as MINOR ADVERSE (assuming all works are carried out to conform to the specification set out in Section 4)

Overall

3.5.8. The overall cumulative impact of the development is assessed as having a MINOR ADVERSE impact on the rooting areas of trees T5, T6, T7, T11, T14, T24 and T28 primarily occasioned by the construction of the new driveway construction installations). Other trees on the site are assessed as having NEUTRAL impacts on their rooting areas from the proposed development. This assumes that all works will be installed as set out

in Section 4 of this report, would have any noticeable or long term adverse impacts on the tree.

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 and overbearing to the new extension

3.6.3. The western outlook from the single story extension will not sit within the shade quadrant of the grouping of trees to the west side of the site (located both on and off site on adjacent property) but will experience some degree of later afternoon shading (lower than the BS guidance considers significant) and some degree of sky lighting reduction. To address this the design has provided dual aspect rooms to this extension with rooms having windows on two sides (south and west and north and west respectively). Our assessment is that whilst the building is moved out marginally further than the existing building footprint (for the existing south west and north west extensions) the change in light / shade levels will be only very marginally worsened by the alterations and the inclusion of the dual aspect will mean that there is no material difference between the existing and proposed situation in terms of light levels. However it is acknowledged that the height of the vegetation does pose a light level issue and that in the past and currently, applications to reduce the height of these trees has been made and works carried out (several of the trees are pollarded for this reason)

3.6.4. Overbearing has similarly been considered. Again, whilst the new north western extension brings the building further towards the canopy of T34, the degree of change from the existing situation is marginal and whilst there is an overbearing issue from this and other trees (namely T31) to the property, this is not significantly different from the existing situation. An application to reduce by a modest amount the canopies of both trees has been made as part of this application to improve amenity / light and overbearing

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 any development on site including storage of materials, access to the site with construction vehicles, scraping the surface vegetation from the site or undertaking site level changes, the trees and shrubs shown for removal / tree works will be removed using the method as set out below
2. Following removal of the vegetation set out above, but prior to the commencement of any other works associated with the proposed development 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 HATCHED YELLOW line on the plans for ground protection 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. NOTE that NO SCRAPING OF SURFACES, MECHANICAL CLEARANCE OR VEGETATION REMOVAL within tree protection areas may be undertaken

3. The development will be phased to allow sufficient space for materials delivery, storage and handling and to prevent excessive requirements for space and access on the site.
4. No information on the proposed routing of services has been provided to us although initial discussions with the architect and builder indicate that only minor works near to the house will be required and can be addressed outside the RPA of retained trees. Therefore unless otherwise agreed in writing with the District Council no works to install, open, repair or connect to services will be undertaken within the RPA of trees (Red Shaded Area on the plans / dotted and dashed circles around trees) unless with the written consent of the District Council (noting this is required not only for planning but also to comply with Tree Preservation Order requirements).
5. The demolition and reconstruction of the garage will be undertaken as set out below with special consideration given to the installation of the new section of concrete base slab (shown BLUE outlined on the plans) and discharge of surface water provision
6. No-dig Celweb supported surfacing will be installed to the specification shown below in the relevant section and in the diagram in the Appendix where shown outlined in GREEN on the tree protection plan
7. The construction of the Gate Posts shown ORANGE on the plans will be constructed as set out below unless otherwise agreed in writing with the District Council
8. Finally landscaping will be carried out as described below

4.2. Removal of trees and shrubs

4.2.1. Where trees and vegetation as detailed in the Section 3 above are to be removed these will be felled to ground level by hand operated equipment and the stumps will be ground out in preference to any other removal system. The works will NOT involve the use of mechanical diggers to grub out vegetation as roots are usually entwined in adjacent retained plants and this causes significant harm to retained plant features.

4.2.2. The works will not use any form of mechanised site clearance within areas shown RED SHADED (root protection zones).

4.2.3. The canopy of T29 will be lifted from 2m to the southern side to 4m ground clearance by the removal of boughs not exceeding 40mm dia

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

4.3. Protective Fencing/ Construction Exclusion Zone site Access.

4.3.1. Following the removal of the shrubs and trees, but prior to the commencement of any other development on the site including further 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. The ground protection should be adequate for the type of traffic it will be expected to accommodate (see Section 4.2 above for type).

4.3.2. 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.

4.3.3. 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.

4.3.4. 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.

4.3.5. 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).

4.3.6. All construction access will be via the existing access off Avenue Road. The access within the site to the new extension will be either through the garage or via the south side of the main house / western side of the house

All materials storage must be located outside the fenced off areas of the site and should – in the main – be located to the south / west of the main house

4.4. Development Phasing to enable sufficient space for storage and materials handling etc

4.4.1. The new driveway should be installed at the end of the development process after the new extension and garage have been constructed.

4.5. Installation of new Services

4.5.1. All service installations and connections – including foul water, fresh water and

surface water – will be located outside the root protection areas of trees (dotted and dashed circles shaded red on the Tree Protection Plan) unless otherwise agreed in writing with the District Council prior to commencement of works.

4.5.2. There are three options of the installation of surface water drainage from the new garage as set out below;

- The surface water can be ducted to existing soakaways – by minimal hand excavation to connect to existing pipework
- New soakaways may be provided but must be located to the south of the site and outside the RPA of trees with drainage routed from the south western corner of the new building (which is outside the RPA of trees) to the new soakaways
- Or – Surface water can be ducted to permeable drains located in the new topsoil dressing to be placed under the Celweb permeable gravel driveway surface and undertaken as a 'no-dig' operation – THIS OPTION SHOULD BE USED FOR DISCHARGE OF WATER FROM THE NEW EXTENDED AREA OF THE GARAGE

4.5.3. All the above avoid the need to excavate for new soakaways or drainage runs within the RPA of trees and are therefore assessed as presenting a NEUTRAL impact on trees.
is minimised.

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 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. Demolition and construction of the new Garage

4.6.1. The existing garage will be demolished to ground level by hand only.

4.6.2. The existing concrete slab will be retained in situ and used for the reconstructed garage in part.

4.6.3. The new garage slab will be constructed as an entirely NO-DIG operation using the following method

1. The existing ground surface will be dressed with topsoil to level it
2. The ground will not be compacted or a hard core sub-base used
3. An impermeable plastic membrane will be used beneath any concrete surface material
4. An engineer will have advised on suitable reinforcement and tie in to join the old and new slab.

5. The concrete will be poured into the new slab area using the existing slab as the access point.
6. The new garage will be constructed by hand using the ground protection matting access as shown on the Tree Protection Plan for access around the new building
7. Roof water discharge will preferably be ducted to a permeable pipework set within the northern edge area of the new no-dig driveway (not dug in but set within the new permeable gravel surface / celweb)

The works to install the new concrete slab will be overseen by a suitably qualified arborist who will make a brief report to the Council to confirm that the methodology detailed above has been adhered to

4.7. Driveway No Dig celweb / Core supported driveway surface

4.7.1. Where shown on the plans outlined in GREEN the new permeable SUDS type surface will be constructed as set out below. The surface should be installed after all other development is completed to enable access to services if required. NOTE that temporary ground protection matting (Shown Yellow Hatched) will have been installed and maintained for the full length of the development prior to the installation of the new Celweb surface and at no time will any area of the zone shown to be protected NOT HAVE ground protection as detailed in this report. This will ensure that there is adequate vehicular support over the RPA of retained trees for construction traffic.

4.7.2. The surface will be installed by building up (not excavating) the existing surface of the site (except within the verge onto Avenue Road where the new driveway where the existing turf may be lifted to a depth of no more than 50mm with the edge of the celweb surface chamfered down to meet the level of the hard surfaced roadway. This must be done by hand (NO USE OF MECHANICAL EXCAVATION) etc.

4.7.3. The land levels within the site which are to be surfaced will be built up using a dressing of topsoil to cover the existing exposed surface roots of trees and approx. level the site - and the remaining imperfections in levels will be made up by adding WASHED aggregate to the ground surface over a geotextile which will be laid between wooden edge boarding to retain it and the aggregate filled celweb support system.

4.7.4. A celweb support system will be used over a geotextile retaining base layer, and will be filled with the suppliers recommended aggregate mix (which is normally a washed (to remove fines and salts – both of which are harmful to trees) of 5 – 14mm dia angular stone.

4.7.5. The works to install the Celweb surface should be commenced from the southern end of the driveway and 'rolled out' with a working head extending from the point of commencement. All delivery of new aggregate must be made along the part completed and filled Celweb surface and no vehicle may track over unsurfaced areas during construction unless these otherwise have ground protection matting in place.

4.7.6. The works to install the celweb surfaces will be overseen by a suitably qualified arborist who will make a brief report to the Council to confirm that the methodology detailed above has been adhered to.

4.8. Post Construction Landscaping Procedures – including fencing

4.8.1. Where the two new WOODEN GATE POSTS are proposed to be installed within or close to the root protection areas of trees – shown ORANGE on the plans or in other locations we have not anticipated, it will be constructed as set out below

- Post holes will be dug by hand. Any roots encountered over 20mm dia will be retained and the post hole / post moved accordingly to retain the roots.
- No post will be located closer than 1m to the base of any tree
- All post holes will be lined with a damp proof membrane (rubble sack is effective) and this will be used to contain the concrete post base.
- No part of any repaired or altered fence will rest against or be within 300mm of the trunk of any retained tree and no part will be attached to any tree - this is to allow for tree growth and movement

4.8.2. No other details of additional surfacing or boundary treatments (apart from that included in this report) are presented as part of this planning application and it is assumed that the existing boundary treatments and surfacing type (gravel) will be retained after development. If any other landscaping is undertaken to the areas near or within the rooting areas of trees after development, then this should conform to the specification below. Other features such as surfacing and or fencing etc may also require special installation methods or may be unsuitable for installation within the root protection area of trees - we would recommend strongly that you consult either the Council tree officer or an arborist if there are such proposals which are not part of this planning application process.

4.8.2. 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;

4.8.2. 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.

4.8.3. 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.

4.8.4. 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')

Appendix

Inc;

Photographs of trees on the site

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

Specification for ground protection matting to BS5837:2012

Diagramme of no dig celweb supported driveway surface

NJUG Guidance Note 4 - Installation of Services near trees

Arboricultural Impact Assessment Plan / Tree Protection Plan / Development Plan shown
superimposed on plan 4725/02 with arboricultural information added July 2023
Developed from plans by Robert Lord Assoc's

Photographs of Site Features



Figure 1 – T1 and existing entrance



Figure 2 – T14, T15, T19 and T20 and location of new proposed exit



Figure 3 – Area to the east of garage – looking north (T7 in foreground)



Figure 4 – As above



Figure 5 – Exposed roots in area to east of garage



Figure 6 – T30, T29 and G27 – with garage building – looking north east














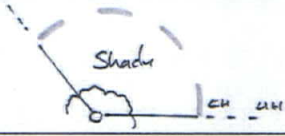


Figure 7 – Looking at north western corner of garden with G39 to left, T38 and T37



Figure 8 – G39 looking south west

Legend for Plans (overleaf)

<p>Trees shown with crown extent as continuous black line (circ or cusped) - approx</p> <p>Trees retained  trees to be removed </p>
<p>Root Protection Area shown as line extent  </p>
<p>Zone of root protection area shown </p>
<p>Temporary tree protection fencing shown </p>
<p>Temporary ground protection matting shown </p>
<p>Celweb supported permeable gravel surface shown </p>
<p>Special concrete slab construction for garage shown </p>
<p>Special installation of gate posts shown</p>
<p>Trees coloured to indicate Tree Retention Category as recommended by BS 5837:2012</p>
<p>Category A - Trees of high quality and value (shown green on the plan) </p>
<p>Category B - Trees of moderate quality or value (shown blue on the plan) </p>
<p>Category C - Trees of low quality or value (shown grey on the plan) </p>
<p>Category U - Trees in very poor condition or which would be lost within 10 years </p>
<p>Shading (by the tree) (in accordance with BS 5837:2012) shown as a factor of height - indicated within the area shown as a segment with two solid lines running East and North West from the centre of the tree and a dashed line marking the circumference. Height of tree shown as sides of segment with existing height (EH) solid line and ultimate projected growth height (UH) as broken line</p> 
<p>Client Ms S Jones</p>
<p>Job Title Larchmount, Avenue Road, High Kelling. Tree Protection Plan to be read with Arboricultural Impact Assessment.</p>
<p>Plan No. 4725/02 based on plans by Robert Lord Associates - Scale 1:200 at A3</p>
<p>Date 4th July 2023</p>
<p>C. J. Yardley Landscape Survey and Design LLP Priory Lane, Ingworth NR11 6PG 01263 479691</p>