Arboricultural Impact Assessment
The Poplars, Land South of Clifton Road,
Deddington
Crange 27th November 2020

TG Tyler Grange

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# **Executive Summary**

- S.1. This Arboricultural Impact Assessment has been prepared by Tyler Grange Group Limited on behalf of Blue Cedar Homes to accompany a full planning application for new residential development on a parcel of land to the south of Clifton Road at Deddington.
- S.2. This report provides details of a tree survey and assessment of arboricultural impact for the proposed development. This report has been guided by the recommendations set out within the British Standard BS5837:2012 'Trees in Relation to Design, Demolition and Construction Recommendations'.
- S.3. No trees of high arboricultural value, veteran or ancient trees are present on the site to be affected by the proposed development. The development requires the removal of a select few low value small-stature trees (Category C), which require improved management irrespective of the proposed development.
- S.4. New planting proposed as part of the development will provide arboricultural benefits given the limited number of tree removals required. This accords with local planning policy aspirations to protect existing trees of merit and provide additional trees through new planting within development.
- S.5. Trees will be retained in proximity to construction areas of the proposed development and therefore an initial strategy for tree protection has been prepared to demonstrate how existing tree will be safeguarded. Should consent be granted, an Arboricultural Method Statement (AMS) should be secured by way of a suitably worded planning condition.



# Section 1: Introduction

# Purpose

- 1.1. This Arboricultural Impact Assessment report has been prepared by Tyler Grange Group Limited on behalf of Blue Cedar Homes to accompany their full planning application for new residential development at land to the south of Clifton Road, Deddington.
- 1.2. Full planning permission is sought for the erection of one and two storey dwellings for use by the elderly with access, landscaping, and associated infrastructure. The proposed development layout is shown at Appendix
   1.
- 1.3. The application is to be submitted to Cherwell District Council (CDC). CDC's local planning policy and national planning policy pertinent to trees is set out at **Appendix 2**.
- 1.4. This report provides details of a tree survey of the site and assesses the impact of the proposed development towards existing trees. This report has been guided by the recommendations set out within the British Standard BS5837:2012 'Trees in Relation to Design, Demolition and Construction Recommendations' (hereafter referred to as BS5837).



# Section 2: Baseline Information

## Site Description

2.1 The application site boundary is demarcated by the red line as illustrated on the Tree Constraints Plan (TCP) located at the rear of this report **(See Plan 1)**. The boundary is shown using a blue line on the TCP. The application site comprises the north-western corner of a single grassland field. The site is located south off Clifton Road on the eastern settlement edge of Deddington in Oxfordshire.

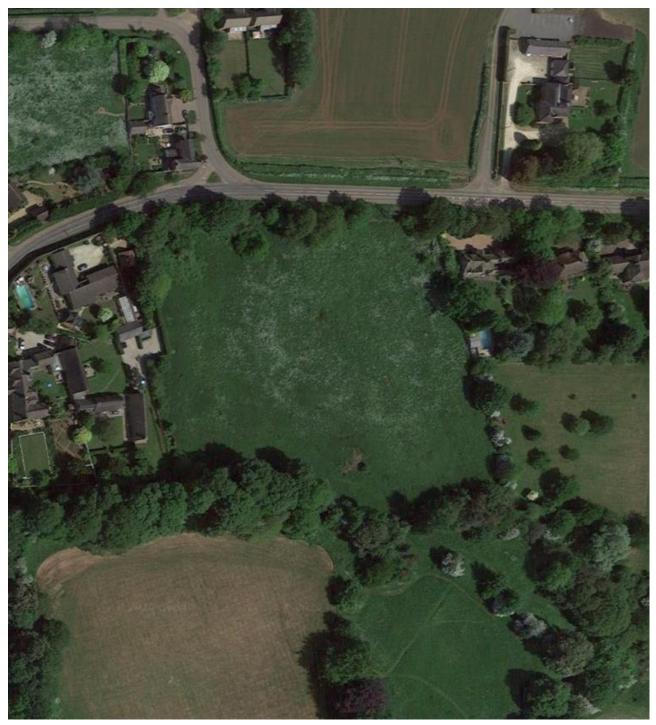


Figure 1. Satellite Image of the wider land parcel, incorporating the application site (Imagery  $\mbox{\sc c}$  2020 Google Maps).



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## **Tree Survey Summary**

- 2.2 A tree survey was undertaken by a suitably qualified tree consultant of Tyler Grange on the 15<sup>th</sup> August 2019. A second site visit was completed on 18<sup>th</sup> November 2020 to verify the previous tree survey data for the application site.
- 2.3 The survey was completed in accordance with BS5837 and the methodology as detailed at **Appendix 3**. A measured topographical survey (supplied by others) was used to inform the location of trees and their surrounding context. The survey extended across the entire field parcel which incorporates the application site. A previous planning application for new development extending across the wider survey was refused under concerns around impacts towards the setting of a nearby Ancient Monument. The proposed application site is therefore reduced in size to contain the development in the north-western corner of the site, thus the reasoning behind the extended tree survey area.
- 2.4 The distribution of the trees surveyed is illustrated on the TCP together with details of their constraints to new development in accordance with BS5837, including:
  - Tree Quality Gradings;<sup>1</sup>
  - Root Protection Areas (RPA's);<sup>2</sup>
  - Tree canopy spreads;<sup>3</sup>
  - Tree Shading.<sup>4</sup>
- 2.5 Findings for each of the trees surveyed are detailed in the Tree Survey Schedule (See Appendix 5). This provides a tabulated record of the trees surveyed, including reference numbers, species composition, tree dimensions, life stage, physiological and structural condition, and the arboricultural value of each survey entry.
- 2.6 Trees located within the application site, or adjacent to this within the wider survey boundary, include the following:

T1 (sycamore), T2 (sycamore), T3 (sycamore), T4 (lime), T5 (ash), T6 (beech), G1, G2, G3, G9 and H1 (mixed species).

- 2.7 Trees located off-site, but adjacent to the application site, include tree T19 (sycamore) and group G10 (mixed). The remaining trees surveyed are located away from the proposed development in so far as they will remain unaffected. This includes the higher value trees T7 and T8 (mature English oaks). The initial tree constraints advice highlighted these trees as important, and therefore the proposed development area and access point was located away from them.
- 2.8 The trees surveyed have been categorised using the 'cascade chart for tree quality assessment' (see **Appendix 3**) recommended by the BS5837. Grading subcategories (1, 2 and 3) are intended to reflect the arboricultural, landscape and cultural values, respectively. The grading system allows informed decisions to be made concerning the design and impact of potential development in relation to the arboricultural value of the trees surveyed.

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<sup>1</sup> The value of arboricultural features surveyed in accordance with the methodology set-out in Appendix 3.

<sup>&</sup>lt;sup>2</sup> A layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority. See further explanation at Appendix 3.

<sup>&</sup>lt;sup>3</sup> Dimensions of the trees crown spread and clearance from ground level. See further explanation at Appendix 3.

<sup>&</sup>lt;sup>4</sup> Shade cast by existing trees which may affect the availability of sunlight and daylight within a new development. See further explanation at Appendix 3.

- 2.9 Trees of moderate arboricultural value (Category B) are denoted by a 'Blue' tree canopy outline as illustrated on the TCP. They include those with a degree of maturity and those with limited to no defects. They provide a moderate degree of visual amenity to the site, albeit remain as unremarkable specimens.
- 2.10 Trees of low arboricultural value (Category C) trees are denoted by a 'Grey' tree canopy outline as illustrated on the TCP. They include younger / smaller stature specimens that provide a limited contribution to visual amenity, or those with undesirable characterises / defects for the species.
- 2.11 Tree considered unsuitable for retention irrespective of the new development, or where their earlier loss cannot be remediated (Category U), are denoted by a 'Red' tree canopy outline on the TCP. This includes swathes of defunct hedgerow trees, predominantly comprising dead or dying elm trees, which are in a cycle of dying regenerating as a result of Dutch elm disease (DED).
- 2.12 There are no trees of high arboricultural value (Category A), nor any of veteran or ancient status in terms of age class present on or within influence of the proposed development site. Tree T7 is the nearest high value tree to the application site, which is located east of the proposed access location along the northern boundary. Category A trees are denoted by a 'Green' canopy outline on the TCP.
- 2.13 The majority of trees along the northern edge of the proposed development site are low in value, forming a defunct hedgerow of dead / dying elm trees and small stature shrubs. There is limited cohesivity and apparent opportunities to enhance the tree cover through new planting and improved long-term management.



Figure 2. Group G1 comprising a defunct section of vegetation and trees, with dead / dying elm succumbed to DED.



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2.14 A single larger sycamore is present to the north of the proposed development area (tree T1). This has been afforded moderate value classification as being a higher canopy tree that contributes, to a moderate degree, to the tree cover along Clifton Road. Notwithstanding this, the tree exhibits an undesirable stem union structure, and remains as unremarkable example of the species.



Figure 3. Tree T1 (moderate value sycamore), with lower value trees T2 and T3 to left of image.

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2.15 A mature beech (tree T6) and higher value oaks (T7 and T8) are located at the northern boundary to the east of the proposed access point. The beech has been classified as low value due to the presence of dieback in the canopy, a large stem cavity and loss of its central leading stem.



**Figure 4.** From right to left, trees T6 (low value beech – note loss of upper canopy), T7 (high value English oak) and T8 (moderate value English oak - slightly stunted from dominant T7). These trees are located away from the development area along the northern boundary.





2.16 Only low value trees are located internally within the proposed development area, which includes a failed mature lime (T4) and self-set vegetation and small stature trees, including further dead elms trees (G2 and G3).



**Figure 5.** Tree T4 located in internally within the site. The tree has previously failed at 3m leaving a remnant main stem with new growth forming a dense canopy, from poorly attached unions.



2.17 Off-site trees located adjacent to the boundary includes a group of ash and sycamore of moderate value (G10) and a large single sycamore tree (T19). The trees are located at the boundary of an adjoining residential garden, with a track present between the trees and the site. The tips of their canopies overhang marginally into the site.



**Figure 6.** Group G10 located off-site at boundary of residential garden, with maintained H1 located at the site's boundary.

#### **Tree-related Designations**

2.18 Following a desktop search of available mapping conducted on 19<sup>th</sup> November 2020, tree-related designations pertinent to trees and new development is provided in the **Table 1** below.

Designation Type	TG Tree Reference Number(s)							
Tree Preservation Order <sup>5</sup>	nknown – confirmation has been requested from CDC.							
Conservation Area <sup>6</sup>	All trees surveyed (over 75mm in stem diameter) – Deddington Conservation Area							
Ancient Woodland <sup>7</sup>	None							
Woodland Habitat <sup>8</sup>	G8 – located to the south of the wider site, designation as 'Deciduous Woodland' under the Priority Habitat Inventory.							

#### Table 1. Tree-related Designations.

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<sup>&</sup>lt;sup>5</sup> A Tree Preservation Order is an order made by a local planning authority in England to protect specific trees, groups of trees or woodlands in the interests of amenity. An Order prohibits the any works and damage to trees (with some exceptions) without the local planning authority's written consent. More information can be found online <u>https://www.gov.uk/guidance/tree-preservation-orders-and-trees-in-conservation-areas#tree-preservation-orders--general</u>

<sup>&</sup>lt;sup>6</sup> Trees in a conservation area that are not protected by an Order are protected by the provisions in section 211 of the Town and Country Planning Act 1990. These provisions require people to notify the local planning authority, using a 'section 211 notice', 6 weeks before carrying out certain work on such trees, unless an exception applies. More information can be found online <a href="https://www.gov.uk/guidance/tree-preservation-orders-and-trees-in-conservation-areas#tree-preservation-orders--general">https://www.gov.uk/guidance/tree-preservation-orders-and-trees-in-conservation-areas#tree-preservation-orders--general</a>

<sup>&</sup>lt;sup>7</sup> Ancient woods are areas of woodland that have persisted since 1600 in England and Wales, and 1750 in Scotland. The Magic Maps website

 <sup>&</sup>lt;a href="https://magic.defra.gov.uk/MagicMap.aspx">https://magic.defra.gov.uk/MagicMap.aspx</a> has been used to search for ancient woodland on or adjacent to a site.
 <sup>8</sup> Spatial data of woodlands identified under the Priority Habitat Inventory (England) Published by Natural England. The Magic Maps website <a href="https://magic.defra.gov.uk/MagicMap.aspx">https://magic.defra.gov.uk/MagicMap.aspx</a> has been used to search for woodland on or adjacent to a site.

# **Section 3: Arboricultural Impact Assessment**

3.1. The baseline tree constraints as detailed previously formed part of the overall design phase of the proposed development layout with respect to minimising impact of arboricultural features of value. An arboricultural impact assessment has been completed based on a composite overlay of the proposed site plan and the TCP. The overlay is illustrated on the Tree Retention and Removal Plan (TRRP) and Preliminary Tree Protection Plan (PTPP) located at the rear of this report (**See Plan 2 and 3**).

# Proposed Tree Works to Facilitate Development

3.2. The TRRP (See Plan 2) identifies existing trees to be retained, removed, or pruned to facilitate the development and associated enhancement to the northern boundary. Further details are provided in Table 2 below.

Tree / Group Number	Description of Tree Works							
T1 (sycamore)	Pruning of southern side canopy by approximately 4m back towards tree to provide clearance over the garden of plot 7 and to allow sufficient working room around the tree to construct the dwelling house and garage.							
T2 (sycamore)	Removal under arboricultural management. The tree is currently heavily suppressed by trees T1 and T2.							
T4 (lime)	Removal of low value tree to facilitate the proposed new access from Clifton Road.							
T5 (ash)	Removal of low value tree to facilitate the proposed new access from Clifton Road.							
G1 (mixed species)	Removal of poor-quality vegetation for soft landscape enhancements at the northern boundary.							
G2 (mixed species)	Removal of low value vegetation to facilitate the main development area.							
G3 (mixed species)	Removal of poor-quality vegetation to facilitate the proposed access from Clifton Road and soft landscape enhancements.							
G4 (mixed species)	Removal of poor-quality vegetation for soft landscape enhancements at the northern boundary.							
T6 (beech)	Potential removal - further inspection advise ahead of development commencing on-site.							

Table 2. Proposed Tree Works to Facilitate Development

- 3.3. The proposed development requires the removal of low value tree cover only, which has been achieved by locating the access point to avoid moderate and higher value trees and provided a green buffer from the northern boundary. The replacement of poor-quality trees at northern site boundary with new soft landscaping will provide a much-improved green enclosure to the site whilst also benefitting the wider visual amenity context along Clifton Road.
- 3.4. The pruning works required to tree T1 are considered necessary to provide a suitable long-term relationship between the tree and the adjoining residential garden and dwelling. The crown of the tree will remain evenly balanced following the pruning works and the species tolerance to pruning is acknowledged. As an unremarkable example of the species, the pruning work is considered negligible in terms of visual amenity impact.



## **Proposed New Tree Planting**

3.5. A scheme of new soft landscaping is proposed as part of the development (prepared separately by Joanna Wall Landscapes) which includes for substantial new tree planting around the boundaries within the wider site. Given the limited tree losses required to facilitate the development, a net-gain in tree cover will be achieved alongside improvements to the appearance of the northern boundary.

## **Retained Trees and Construction Mitigation**

- 3.6. Trees to be retained will remain unaffected by the proposed development subject to the adoption of tree protection measures during the construction phase. The PTPP (**See Plan 3**) provides an initial strategy for the protection of trees to demonstrate how this will be achieved.
- 3.7. The proposed garage of plot 7 incurs marginally within the RPA of tree T1. The incursion amounts to 3.2% of the total RPA, falling beneath the 20% threshold for new surfacing within RPAs as guided by BS5837. To mitigate the impact of the garage construction within the RPA, it will be constructed using a reduced-dig method, such as a slab or cellular confinement system for the base / foundation. The remaining proposed built-form across the site is located outside the RPAs of retained trees.
- 3.8. The PTPP also includes details of the following in accordance with BS5837:
  - Potential location of tree protection fencing to safeguard the rooting environment of trees.
  - Potential location of ground protection around tree T1, in order to provide adequate space for scaffolding and working room within the RPA.
  - Reduced-dig area for the construction of the garage within the RPA of tree T1.
- 3.9. Given the absence of full construction management details at this stage, it is recommended that a detailed AMS is secured by way of a suitably worded planning condition in conjunction with a site set-up / Construction Management Plan. This will ensure that the protection measures work alongside the remaining items of construction management which can be agreed with CDC ahead of works commencing on-site.

#### Long-term Tree Management and Social Proximity

- 3.10. Trees to be retained will be not be located within private gardens to ensure that their long-term management remains favourable. New and existing soft landscaping will be privately management by a contractor on behalf of Blue Cedar Homes, including the maintenance existing and proposed new trees.
- 3.11. Trees to be retained in proximity to the development are T1, T3 and T6 which will add a sense of maturity to the scheme instantaneously. Tree T1 will be pruned to facilitate the construction stage and to provide openness across the garden space of Plot 7. The tree will require a degree of continued canopy maintenance to preserve amenity within the garden space.
- 3.12. Tree T6 is a large beech which is currently shown to be retained at the eastern side of the new access. Its removal is not required to facilitate development, however, the structural defects observed in the tree may deem it to be unsuitable for retention at the site's entrance. A detailed inspection of the tree, potentially requiring aerial access, should be undertaken ahead of development commencing on-site in order to determine any remedial works or removal of the tree.
- 3.13. The TRRP (See Plan 2) illustrates the extent of retained tree canopies and associated shading areas in relation to the development layout. The issue of potential seasonal tree nuisances, such overshading or leaf / fruit drop, is highly subjective and its impact is led by balanced professional judgement taking into account a variety of factors. In the case of this proposed development, there are no overbearing issues arising from trees being located in proximity to the development, other than a marginal degree of canopy overhang into



the gardens of plots 5, 6 and 7, together with some potential shading in gardens of plots 5 and 6. These factors are not considered dominating, in so far as raising future concerns and requests for future tree pruning works. It is also noted that the trees concerned are located off-site within neighbouring residential property.

# Conclusion

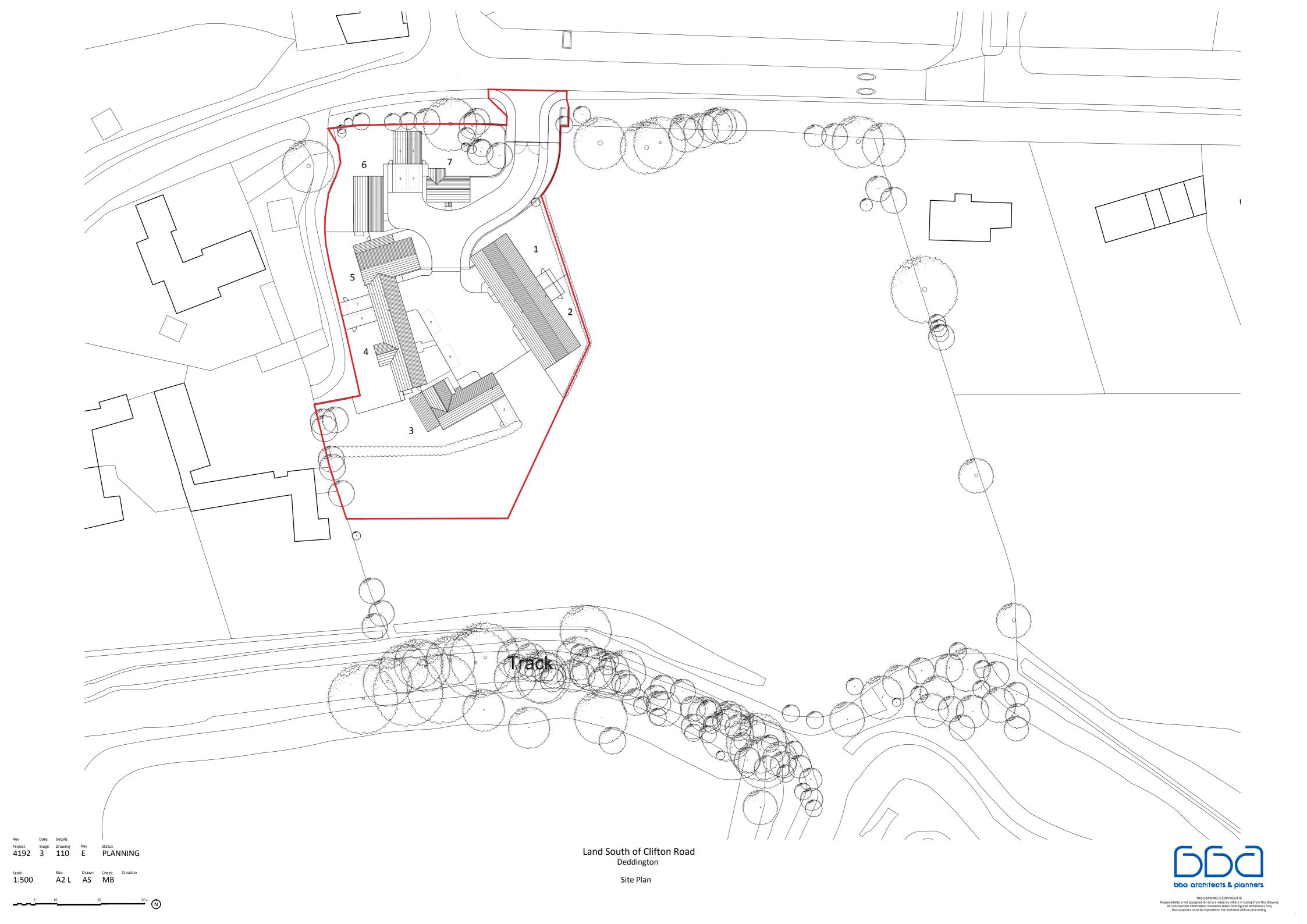
- 3.14. The proposed development requires the removal of a select few low value trees only, including trees that are dead / dying and require improved management irrespective of the proposals. The proposed soft-landscaping scheme will deliver arboricultural benefits via additional tree canopy cover throughout the wider site, and also through improved visual amenity via new tree planting on Clifton Road. The extent of new planting accords with local planning policy aspirations (Policy ESD 10) as it relates to providing additional trees through new development.
- 3.15. A single moderate value tree will need to be pruned and nearby construction around the tree sensitively managed. This can be addressed by way of detailed Arboricultural Method Statement building on the initial strategy for tree protection as detailed within this report. Should consent be granted, a condition securing the preparation and adoption of an Arboricultural Method Statement is therefore recommended.



Appendix 1: Proposed Site Plan

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Appendix 2: Planning Policy Context

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# **Appendix 2: Planning Policy Context**

A2.1. Under the Town and Country Planning Act 1990 (as amended) the requirement to consider trees as part of development is a material planning consideration and will be taken into account in the determination of planning applications. Applicable arboricultural planning policy that relates to the site is set out below at a National and Local level.

# National Planning Policy

- A2.2. The National Planning Policy Framework (NPPF) is a material consideration in planning decisions and outlines the Government's planning policies for England, setting out how these are expected to be applied. The consideration for existing trees and woodlands in the context of planning and new development is set out within Section 15 'Conservation and Enhancing the Natural Environment'.
- A2.3. Paragraph 170 provides a series of prerequisites to inform how planning policies and decisions should contribute to and enhance the natural and local environment. This includes "*protecting and enhancing valued landscapes*" and "*recognising the intrinsic character and beauty of the countryside*". The value of ecosystem services is also noted, including the "*economic and other benefits of the best and most versatile agricultural land, and of trees and woodland*".
- A2.4. Paragraph 170 also recognises the consideration for "*minimising impacts on and providing net gains for biodiversity*". This includes the need to establish cohesive ecological networks that are "*more resilient to current and future pressures*".
- A2.5. Paragraph 171 addresses the need to take a "strategic approach to maintaining and enhancing networks of habitats and green infrastructure" adding that plans should be made for the "enhancement of natural capital at the catchment or landscape scale across local authority boundaries".
- A2.6. Paragraph 174 includes ways in which biodiversity should be protected and enhanced, such as plans that "*identify, map and safeguard components of local wildlife-rich habitats*', as well as "*wildlife corridors and stepping stones that connect them*".
- A2.7. Paragraph 175 highlights a series of principles that local planning authorities should apply when determining planning applications, stating that "*if significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused*".
- A2.8. Paragraph 175 also adds that "development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensatory strategy exists".
- A2.9. At a national level, the consideration for trees is recognised in the context of their contribution to green infrastructure and biodiversity networks, and also in terms of their contribution in landscape terms to the local setting and character. Great weight is also applied to the importance of conserving existing aged trees, including ancient woodland and trees and trees considered to be 'veterans'. No ancient woodland, ancient trees or veteran trees were identified within influence of



the application site and therefore para 175 is not considered applicable to the application as it relates to these features.

# Local Planning Policy

A2.10. Policy ESD 10: 'Protection and Enhancement of Biodiversity and the Natural Environment' of CDC's Local Plan (2011-2031) states that, "the protection of trees will be encouraged, with an aim to increase the number of trees in the District".

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Appendix 3: Tree Survey Methodology, Constraints, Mapping and Limitations



# Appendix 3: Tree Survey Methodology, Constraints, Mapping and Limitations

# Field Work

- A3.1 In accordance BS5837, the tree survey included all trees within / in influence of the site and the site boundaries that were over 75mm diameter at breast height (1.5m).
- A3.2 Measured topographical survey data (supplied by others) was used to inform tree locations their surrounding context. Any trees not identified on the topographical survey are prefixed with (\*) and their locations have been approximated using measurements during the tree survey and further informed by aerial photography where required.
- A3.3 The trees surveyed were visually inspected from ground level only. No invasive investigations or climbing inspections were necessary to confirm visual or audible signs of defect or debility and no tissue or soil samples were undertaken. For further clarification please refer to the tree survey explanatory notes in below.

## **Tree Numbers**

- 'T' prefixes have been used to identify individual trees and commence with 'T1'.
- 'G' prefixes have been used to identify groups of trees.
- 'H' prefixes have been used to identify hedgerows.
- 'W' prefixes have been used to identify woodlands.

## Species

A3.4 Species are listed by their common name, both in the schedule and in the report text.

## **Height and Stem Diameter**

A3.5 The stem diameter is measured at 1.5m above ground level and given in millimetres (mm). Tree heights are measured in metres (m) using a clinometer where access and land typography allowed. In instances where access to tree's stem and height measurements were not possible, the dimensions have been estimated by eye.

## **Crown Spread and Height of Crown Clearance**

- A3.6 Radial crown spread is measured in metres and is listed for each of the four cardinal points where access has been possible to obtain a measurement. Where access was not possible to measure the spread of the canopy, such distances have been estimated by eye or informed by aerial photography.
- A3.7 The measured canopy shapes have been plotted on the **Tree Constraints Plan** at the four cardinal points. For groups of trees, the extent of the canopy has been measured as an average across the group and plotted using the topographical survey mapping. In some instances, Tyler Grange will use aerial photography to inform the canopy spread of larger tree groups and woodlands where topographical data is limited for such features.
- A3.8 The distance between the ground level and the first significant branch or radial tree crown, whichever is the lower, has been measured in metres.

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# Age Class

A3.9 The age of each tree is defined as follows:

Young - within the first third of reaching full maturity;

Semi-Mature - within the second third of reaching full maturity;

Early-Mature - within the last third of reaching full maturity;

Mature - specimen at full maturity; and

**Veteran** – tree that, by recognised criteria, shows features of biological, cultural or aesthetic value that are characteristic of, but not exclusive to, individuals surviving beyond the typical age range for the species concerned.

## **Physiological and Structural Condition**

- A3.10 The physiological or structural condition of each tree is defined as either; good, fair, poor or dead. For each tree, where appropriate, notes on the structural integrity are provided on form, taper, forking habit, storm damage, decay, fungi, pests, etc.
- A3.11 An assessment of a tree's physiological condition is defined as:

**Good** – fully functioning biological system showing expectant vitality for the species i.e. normal bud growth, leaf size, crown density and wound closure.

**Fair** – fully functioning biological system showing below average vitality i.e. reduced bud growth, smaller leaf size, lower crown density and reduced wound closure.

**Poor** – a biological system with limited functionality showing clear physiological decline, disease or significantly below average vitality i.e. limited bud growth, small and chlorotic leaves, low crown density and limited wound closure.

**Dead** – tree observed to fully dead with no living parts.

A3.12 An assessment of a tree's structural condition is defined as:

Good – no significant structural defects.

Fair – structural defects which could be alleviated through remedial tree surgery or arboricultural management practices

**Poor** – structural defects which cannot be alleviated through tree surgery or arboricultural management practices.

## Tree Quality Gradings

A3.13 The value of trees has been assessed in accordance with the BS5837 Cascade Chart for Tree Quality Assessment (See **Appendix 4**). Grading subcategories (1, 2 and 3) reflect arboricultural, landscape and cultural values, respectively.



# **Root Protection Areas**

- A3.14 The **Tree Constraints Plan** shows the approximate extent of Root Protection Areas (RPAs). The RPAs have been plotted and calculated in accordance with the methodology set out in Appendices C and D of BS5837, using the tree stem diameter dimensions obtained during the site visit.
- A3.15 Plotted RPAs serve as a layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority.
- A3.16 Where pre-existing site conditions or other factors indicate that rooting may occur asymmetrically, a polygon of equivalent area should be produced. Modifications to the shape of the RPA should reflect a soundly based arboricultural assessment of likely root distribution observed on-site. Any deviation in the RPA from the original circular plot should take account of the following factors whilst still providing adequate protection for the root system:
  - a) the morphology and disposition of the roots, when influenced by past or existing site conditions (e.g. the presence of roads, structures and underground apparatus);
  - b) topography and drainage;
  - c) the soil type and structure; and
  - d) the likely tolerance of the tree to root disturbance or damage, based on factors such as species, age, condition and past management.
- A3.17 The plotted RPAs have therefore informed the design of the proposed development where possible. While developing within RPAs should be avoided, special working methods can be adopted to alleviate the RPA disturbance for cases where the development is considered necessary and unavoidable.

# **Tree Canopies and Shading**

- A3.18 The distribution of tree canopy cover on and within influence of the site is illustrated on the **TCP**. Canopies have been plotted at cardinal points for individual and groups of trees. The Tree Survey Schedule included at **Appendix 5** to the rear of this report lists the vertical clearance from site ground level to significant tree branching of individual trees. This measurement informs the impacts of accessibility and development beneath tree canopies.
- A3.19 The principal tree shadow constraints are shown on the **TCP** and have been plotted in accordance with BS5837 using the current height of surveyed trees. The indicative shade cast by existing surveyed trees signifies the area within which the amenity interests of shading, available daylight and the proximity of trees to any future site uses may be impacted upon should a tree be retained as part of development.
- A3.20 Where shading is unavoidable, the potential adverse impact of shadowing should also be reviewed on balance with the positive aspects of retaining a degree of canopy shade. BS5837:2012 (para. 5.3.4, a) NOTE 1) states that "shading can be desirable to reduce glare or excessive solar heating, or to provide comfort during hot weather. The combination of shading, wind speed/turbulence reduction and evapotranspiration effects of trees can be utilised in conjunction with the design of buildings and spaces to provide local microclimatic benefits".



# Limitations

- A3.21 The comments made are based on observable factors present at the time of inspection. Although the health and stability of trees in their current context is an integral part of their suitability for retention, it must be understood that this report is not a tree risk assessment and should not be construed as such. While every attempt has been made to provide a realistic and accurate assessment of the trees' condition at the time of inspection, it may have not been appropriate, or possible, to view all parts or all sides of every tree to fulfil the assessment criteria of a risk assessment.
- A3.22 No tree can be considered entirely safe, given the possibility that exceptionally strong winds could damage or uproot even a mechanically 'perfect' specimen. It is therefore usually accepted that hazards are only recognisable from distinct defects or from other failure-prone characteristics of the tree or the site. An assessment of the potential influence of trees upon existing buildings or other structures resulting from the effects of trees upon shrinkable load-bearing soils or the effects of incremental root or branch growth, are specifically excluded from this report.

# **Un-assessable Risks**

- A3.23 Any alteration to the application site or development proposals could change the current circumstances and may invalidate this report and any recommendations made.
- A3.24 The Wildlife and Countryside Act (WCA) 1981 (as amended) makes it an offence to disturb nesting birds or recklessly endanger a bat or its roost. Bats are also a European protected species and are additionally protected under the Conservation (Habitats & c) Regulations 1994 and 2010 (as amended). The survey findings, constraints, opportunities and design or mitigation recommendations included within that report must be read alongside this document.
- A3.25 A lack of recommended work does not imply that a tree does not pose an unacceptable level of risk and likewise, it should not be implied that a tree will present an acceptable level of risk following the completion of any recommended work.



Appendix 4: BS 5837:2012 Cascade Chart for Tree Quality Assessment



# Appendix 4: BS 5837:2012 Cascade Chart for Tree Quality Assessment

Category and Definition	Criteria	Criteria										
Category U 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	collapse, including those that will for whatever reason, the loss of o Trees that are dead or are showi Trees infected with pathogens of low-quality trees suppressing adj ( <b>NOTE</b> : Category U trees can have to preserve)	. ,										
	Criteria - Subcategories	Identification on										
Category and Definition	1. Mainly Arboricultural	2. Mainly Landscape Values	3. Mainly Cultural Values,	Plan								
	Values		including Conservation	FIGII								



Category B <b>Trees of moderate quality</b> with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remedial 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.	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural benefits.	MID BLUE
Category C <b>Trees of low quality</b> with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories.	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or temporary/transient landscape benefit.	Trees with no material conservation or other cultural value.	GREY

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Appendix 5: Tree Survey Schedule (11867/TSS01a)

The Poplars, Land South of Clifton Road, Deddingto Arboricultural Impact Assessment



Tree Number	Common Species Name	Height (m)	Trunk Diameter (mm)	Crown Spread (m)				Height of Crown Clearance	Age Class	Physiological Condition	Structural Condition	BS5837 Category	Comments/Preliminary Management Recommendations	RPA Radius (m)	Root Protection
Number	Nume	()	()	Ν	Е	s	w	(m)		Condition	Condition			Ruulus (III)	Area (m2)
T1	Sycamore	12m	510, 350, 300, 300, 300, 300, 125	6.00	4.00	9.50	8.00	2.50	Mature	Good	Fair	B2	Established at field boundary on southern side of ditch, multi-stern from base, crown suppressed to the east by less dominant tree and understorey growth. Moderate value due to location / visibility along Clifton Road however structural form is not typically of a good quality example of the species.	10.4	340
T2	Sycamore	11m	270, 250, 200	6.00	1.00	5.00	3.50	2.50	Mature	Fair	Poor	C12	Established at field boundary to southern side of ditch, multi-stem from base with poor union, suppressed by T1, heavy ivy cladding around stem.		79
T3	Sycamore	9m	2 x 250	5.00	3.00	1.00	2.75	1.00	Early Mature	Fair	Fair	C12	Established at field boundary to southern side of ditch, multi-stem from base, suppressed to south by T2.	4.2	55
T4	Lime	10m	1100	5.00	4.50	4.50	6.00	0.50	Mature	Fair	Poor	C1	Established internally to south of site, large main stem failed historically at 3m, extensive decay and hollowing in remaining stem, 2 x Ganoderma fungal brackets around base at 1m, decay of butrous roots to south, new growth forming crown with good vitality noted in foliage.	13.2	547
T5	Ash	7m	270	4.00	3.50	4.00	2.75	2.00	Semi Mature	Good	Good	C12	Established at northern boundary on southern side of ditch, structure typical for species.	3.2	33
T6	Beech	17m	990	6.50	6.75	8.50	9.00	2.00	Mature	Fair	Poor	C12	Established within site at northern boundary, maintained straight stem, significant cavity at 3m to east with evidence of hollowing potentially resulting in structural weak point, large dead primary limbs in upper crown, sparse upper canopy with dieback, ivy clad stem. Recommend monitoring of condition due to proximity next to road.	11.9	443



Tree	Common Species		Trunk Diameter	Crown Spread (m)			1)	Height of Crown	Age Class	Physiological	Structural	BS5837	Comments/Preliminary Management	RPA	Root Protection
Number	Name	(m)	(mm)	N	Е	s	w	Clearance (m)	7.90 0.000	Condition	Condition	Category	Recommendations	Radius (m)	Area (m2)
Τ7	English Oak	15m	930	6.25	8.25	10.50	5.00	2.50	Mature	Fair	Fair	A12	Established within site at northern boundary, suppressed to the east by less dominant T8, slight lean to south west, previously crown lifted, age related deadwood throughout crown.	11.2	391
Т8	English Oak	12m	520	7.50	5.00	4.50	4.50	2.50	Mature	Fair	Fair	B2	Established within site at northern boundary, suppressed to west by more dominant T7, moderate ivy cladding around stem, slightly sparse crown with epicormic growth.	6.2	122
Т9	Ash	12m	300, 250	5.00	2.50	5.00	4.50	4.00	Early Mature	Fair	Fair	C12	Established within site at northern boundary, dense understorey (G5) suppressing lower canopy, poor union structure at base.	4.7	69
T10	Ash	6m	150, 150		3.	00		1.00	Semi Mature	Fair	Fair	C12	Established within site at northern boundary, dense understorey (G5) suppressing canopy throughout.	2.5	20
T11	Elder	7m	150, 150	3.00	1.00	1.00	3.00	2.00	Mature	Poor	Fair	C12	Established within site at northern boundary, in decline.	2.5	20
T12	Elder	7m	200, 100, 100	4.00	1.00	2.50	3.50	2.00	Mature	Poor	Poor	C12	Established within site at northern boundary, in decline.	2.9	26
T13	Beech	12m	960	8.00	6.75	7.50	7.00	2.00	Mature	Good	Fair	A12	Established within site at northern boundary, heavy ivy cladding around stem obstructing assessment, well distributed crown with good foliage density.	11.5	417
T14	Sycamore	11m	450	6.00	2.50	4.00	0.00	5.00	Mature	Fair	Fair	B2	Established within private residence at northern boundary, slight lean to north east, heavily suppressed by T12 to west and conifer to east.	5.4	92



Tree Number	Common Species Name	Height (m)	Trunk Diameter (mm)			wn Spread (m) E S W		Height of Crown Clearance	Age Class	Physiological Condition	Structural Condition	BS5837 Category	Comments/Preliminary Management Recommendations	RPA Radius (m)	Root Protection Area (m2)	
T15	Elm	5m	120	N	E	2.00	S	w	<b>(m)</b> 1.00	Early Mature	Poor	Poor	C12	Self set small stature tree, in decline.	1.4	7
T16	English Oak	13m	950			11.25	5		5.00	Mature	Good	Good	A12	Established off site at eastern boundary in rear garden, actively managed, good example of species at maturity.	11.4	408
T17	Sycamore	13m	6 x 300			6.75	i		3.75	Mature	Fair	Fair	B2	Established off site at eastern boundary in rear garden, multi stem from base, structure typical for species.	8.8	243
T18	Ash	8m	3 x 300			5.00	)		2.00	Early Mature	Fair	Fair	B2	Established off site at eastern boundary, multi stem from base, structure typical for species.	6.2	121
T19	Sycamore	15m	800			8.00	)		4.00	Mature	Good	Good	B2	Established off site at north western corner of site within residential front garden, actively managed, good example of species at maturity,	9.6	289
G1	Elm, Hazel, Sycamore	5m	175 max.			2.00	)		1.00	Young to Semi Mature	Poor to Fair	Poor to Fair	U	Naturalised defunct group of understorey vegetation and a number of dead / dying elm standards.	N/A	N/A
G2	Elder, Goat Willow, Sycamore.	5m	75 max.			1.50	I		1.50	Young to Semi Mature	Fair to Good	Fair to Good	C12	Naturalised group of self-set, small stature trees established at northern boundary.	.9	N/A
G3	Elder, Elm	5m	3 x 125 max, 150 av.			2.00			1.00	Young to Mature	Poor to Fair	Poor to Fair	C1/U	Naturalised group of small stature trees & shrubs established at northern boundary, including dead Elm and dense Elder.	1.8	N/A



Tree Number	Common Species Name	Height (m)	Trunk Diameter (mm)	с	Crown Spread (m)			Height of Crown Clearance	Age Class	Physiological Condition	Structural Condition	BS5837 Category	Comments/Preliminary Management Recommendations	RPA Radius (m)	Root Protection
Number	Name	(11)	(mm)	N	Е	s	w	(m)		Condition	Condition	Calegory	Recommendations	Radius (III)	Area (m2)
G4	Elm	5m	120 av.		3.50	)		2.00	Young	Poor to Fair	Poor to Fair	U	Naturalised group of Elm at northern boundary, declining standards.	N/A	N/A
G5	Elder, Elm	7m	220, 150, 75 max, 150 av.		3.50	)		2.50	Early Mature to Mature	Poor to Fair	Poor to Fair	C12	Naturalised group of small stature trees established at northern boundary, predominantly Elm with dead Elder.	3.3	N/A
G6	Lombardy Poplar	22m	450 max.		2.50	)		6.00	Mature	Fair	Fair	B2	Established off site at eastern boundary in residential rear garden, structure typical for species.	5.4	N/A
G7	Elder, Hawthorn, Plum	4m	200 max.		2.00	)		0.00	Young to Mature	Fair	Fair	C12	Small stature trees and shrubs established off site at eastern boundary.	2.4	N/A
G8	Ash, Beech, Hawthorn, Horse Chestnut, Hybrid Black Poplar, Oak, Rowan, Scots Pine, Sycamore	20m av.	800 max.		8.50	)		2.00	Young to Mature	Fair to Good	Fair to Good	A12	Cohesive tree line established at southern boundary, south of footpath, with one Sycamore established north of footpath. High value as a collective feature with individuals of lower value, higher value specimens to east.	9.6	N/A
G9	Elder, Hazel, Sycamore	6m av.	250 max.		3 av			2.00	Early Mature to Mature	Poor to Fair	Poor to Fair	C12	Scattered small stature trees established at western boundary, Elder in decline.	3.0	N/A
G10	Ash, Sycamore	15m	350 av.		7.00	)		6.00	Early Mature	Good	Good	B12	Established group off site at western boundary, crown spreads into site boundary line by 2m.	4.2	N/A
H1	Elder, Leyland Cypress	3m	75 max.		1.00	)		1.00	Early Mature	Fair	Fair	C12	Ornamental hedgerow established at western boundary within residential rear garden, maintained and topped.	.9	N/A



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# Plans

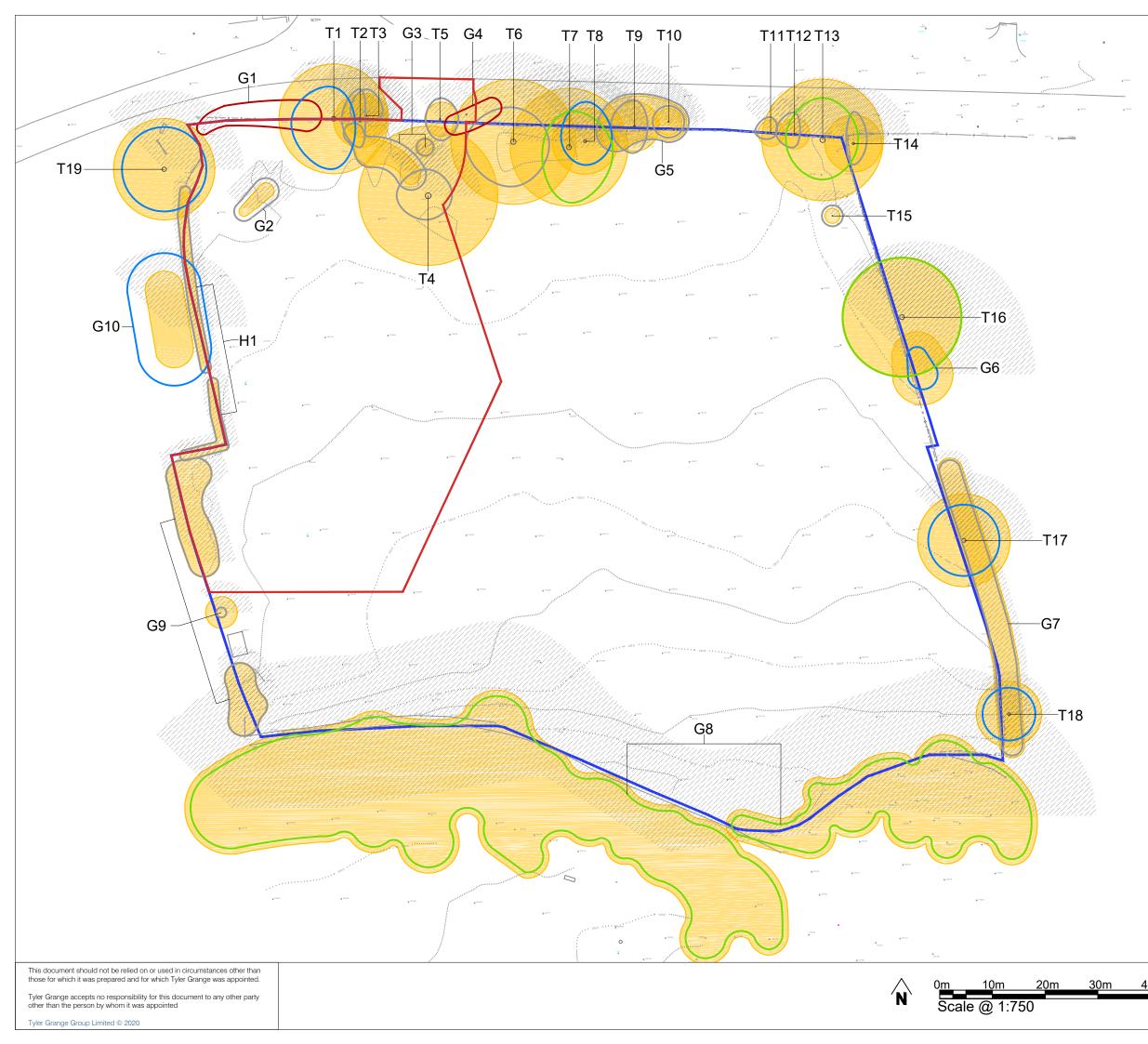
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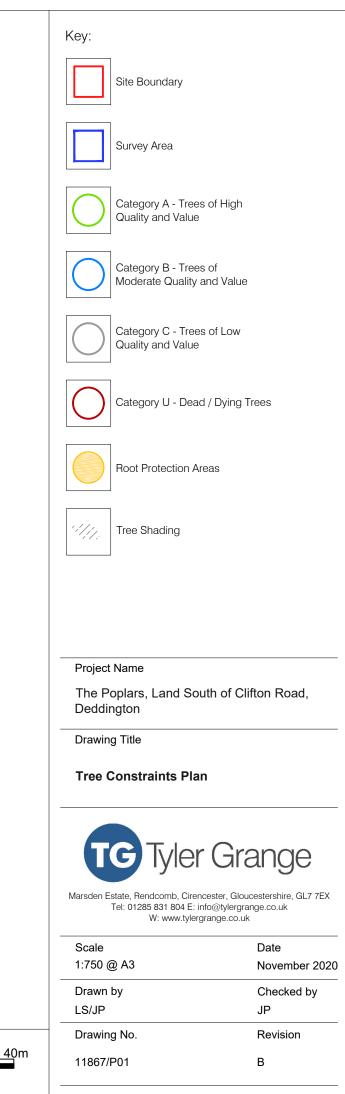
11867/P02a: Tree Retention and Removal Plan

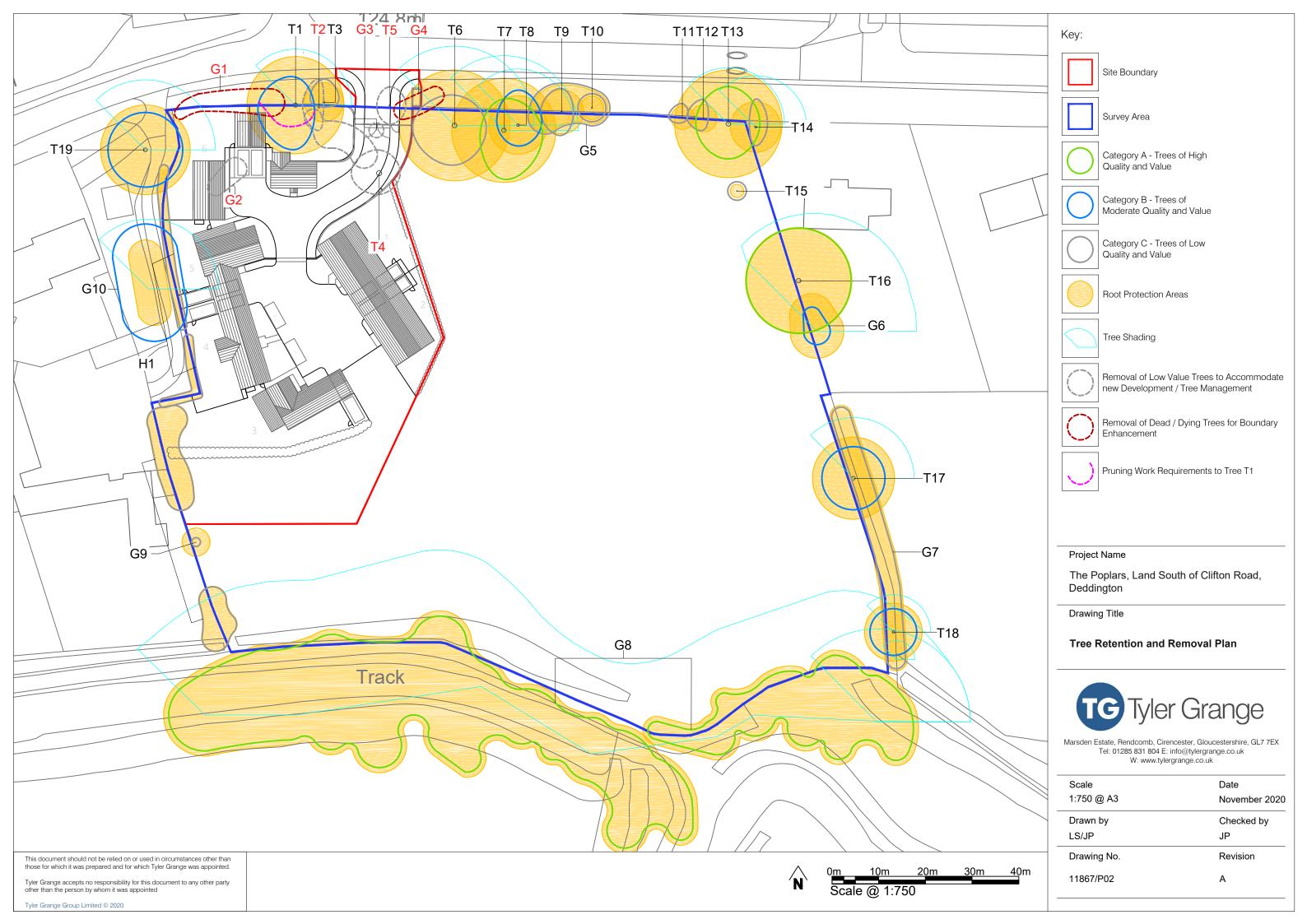
11867/P03a: Preliminary Tree Protection Plan

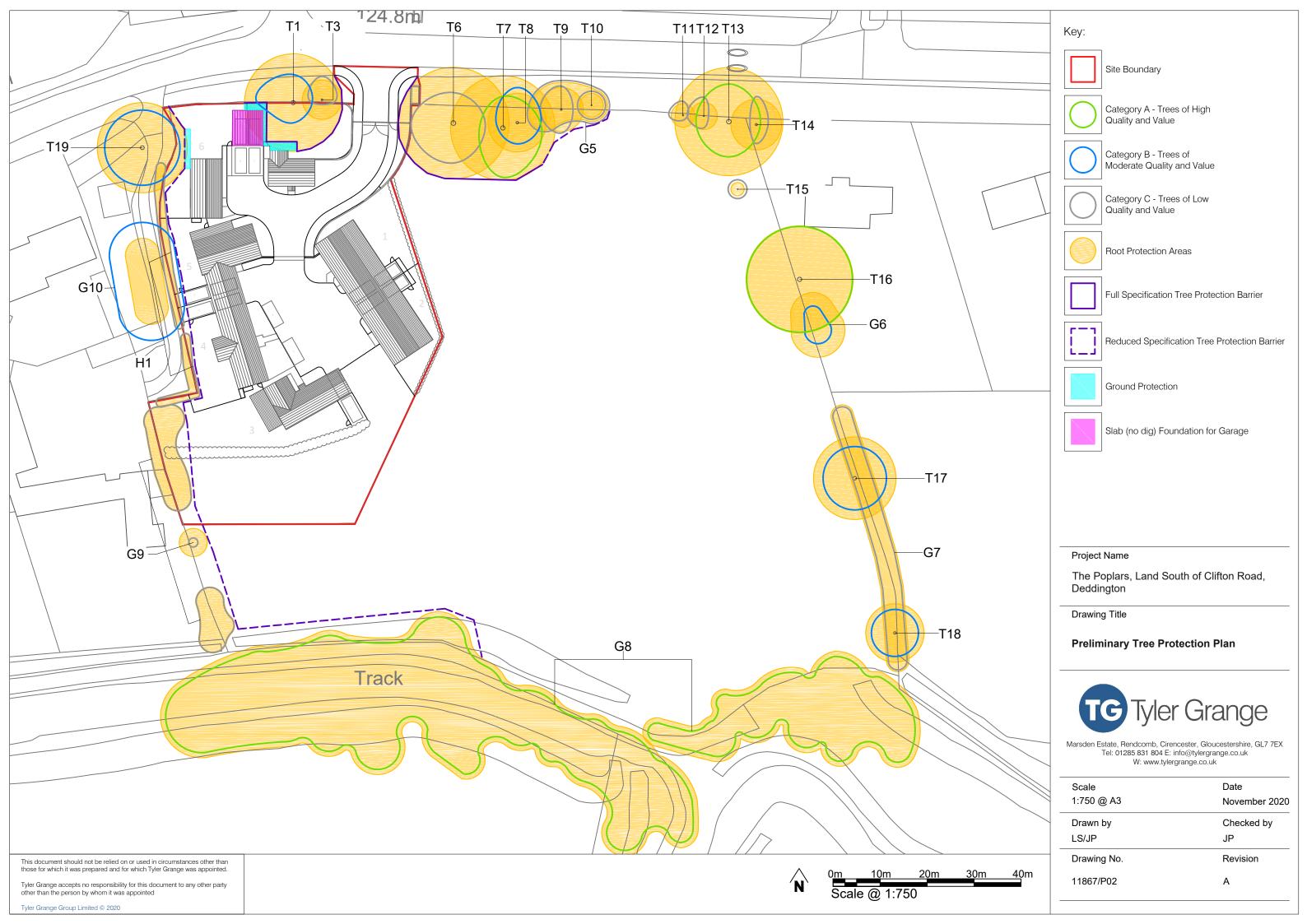
The Poplars, Land South of Clifton Road, Deddington Arboricultural Impact Assessment













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