

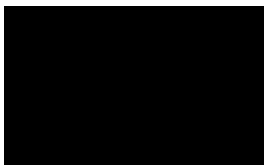
Arboricultural Impact Assessment

Highover Farm, Highover Way, Hitchin, Herts SG4 0RQ

12th June 2025

Client: Gill-Hudson Homes Ltd

To accompany a full planning application for the change of use, conversion and extension of a former farmhouse and agricultural buildings, the construction of two new build structures and provision of parking and amenity space.



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DOCUMENT HISTORY

Revision	Layout Assessed	Author	Reviewer	Date
-	2208.PL.05	AMB	TC	12/06/2025

FILE REFERENCES:

This Report File Ref: 5521.Highover.JK.AIA

Arboricultural Impact Plan: 5521.Highover.JK.AIP

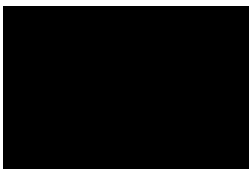
SUMMARY

It is my opinion that the proposed development is supportable from an arboricultural perspective and the effects of the retained trees on the liveability in the dwellings is acceptable.

The specific impacts of the proposal are:

- Some trees on this site should be removed as a result of their health or condition regardless of any development.
- The proposed development will require the loss of one Category C Horse Chestnut, which is growing close to one of the existing barns
- Three trees are proposed to be brought back into pollard management.
- Some facilitation pruning will be required.
- The retained trees must be protected before and during construction.
- A schedule of site monitoring and supervision will be required.

Signed:



A M Belson

RCArborA, DipArb RFS, Tech Cert (ArborA)

1 INTRODUCTION

1.1 The writer

Andrew Belson

RCArborA, DipArb RFS, Tech Cert (ArborA)

I am a Registered Consultant of the Arboricultural Association. (RC Licence No: RC202) and have worked as a consultant for over 20 years.

I hold the Arboricultural Association's Technician's Certificate and the Royal Forestry Society's Professional Diploma, which is a level 6 qualification equivalent to an Honours degree.

From a background in the Landscape and Treework industry, my experience encompasses roles as an Arboricultural Officer for a Borough Council and as a specialist contractor for a Unitary Authority, specifically handling insurance claims involving trees. I have also conducted a Tree Preservation Order Review for a Unitary Authority.

My clients include national and regional planners, architects, developers, and statutory undertakers, non-governmental organizations, local authorities, and individual householders.

I also undertake health & safety inspections; mortgage, insurance and homeowner assessments; Tree Preservation Order and Conservation Area-related work; and provide general legal and practical advice, including representation at Committee and for the purposes of Appeal.

1.2 Instructions

- 1.2.1 This assessment was commissioned by the Applicant because trees are a material consideration and this report is required to support a planning application.
- 1.2.2 The first instruction was to survey the trees on or adjoining the site in line with the recommendations of BS5837: 2012 and to provide a plan of arboricultural constraints in the first instance to inform design.
- 1.2.3 The second instruction was to draw a plan showing the tree constraints overlaid to the submitted planning drawing so that the impact could be assessed, and to write an Arboricultural Impact Assessment report to accompany the application.

1.3 Project context

- 1.3.1 The Client received pre-planning advice that an Arboricultural Impact Assessment and Arboricultural Method Statement is required to support the planning application.
- 1.3.2 I surveyed the trees on or adjoining the site on 22nd August 2024 and at that stage, this data was used to inform advance tree works.
- 1.3.3 Following the site management, the tree constraints were used to inform the design. The results of the survey of the retained trees can be found at Appendix B.
- 1.3.4 An Arboricultural Method Statement and Tree Protection Plan has been produced and accompanies this assessment.
- 1.3.5 On 6th September 2024, a 5 Day Notice (Ref: 24/01990/5DN) was submitted for the felling of two Lime trees (T1076 and T1084), both subject to TPO/057 (see Section 2.2 below). The works were supported by evidence of structural failure and decay, including signs of infection with *Kretzschmaria deusta*. The Local Planning Authority raised no objection and advised the planting of two native replacements within the site.

1.4 Source data

- 1.4.1 The data that have been used to inform this impact assessment comprises:

SOURCE	ANY ISSUES	CONCLUSION
TOPOGRAPHICAL SURVEY: HIGHHITC/200 PLAN	None	I consider that the survey drawing is sufficient for the purposes of producing the plans associated with this report.
BS5837 TREE SURVEY	None	I consider that the survey has been carried out in accordance with BS5837.
PROPOSED SITE PLAN: 2208.PL.05	None	This drawing was adequate for the purposes of the AIA.
ENGINEERING SPECIFICATIONS	n/a	At this stage of the application no engineering details are known

- 1.4.2 Note: This assessment is specific to the drawings listed above and cannot be generalised.

1.5 Compliance with BS5837:2012

- 1.5.1 This is an assessment of the elements recommended by BS5837: 2012 'Trees in relation to design, demolition and construction'.
- 1.5.2 Evidence of a tree survey conducted to BS5837:2012, including tree categorisation (BS5837 section 4.4 and 4.5) can be found in Appendix A (explanatory notes) and Appendix B (Survey Data Table).
- 1.5.3 An Arboricultural Impact Plan showing the trees and their RPAs overlaid to the proposed layout, indicating trees for retention and removal. (BS5837 section 4.5 and 4.6) can be found in Appendix C.
- 1.5.4 Consideration of any relevant policy, legislation or statutory protection affecting the site. (BS5837 section 5.2.3) (see section 3)
- 1.5.5 Throughout the report there is evidence of my assessment of the implication of the proposal and its acceptability based upon:
- The relationship between the trees and the proposed layout.
 - Indicated tree losses (BS5837 section 5.2.3 and 5.4.3)
 - The potential impact of RPA incursions (BS5837 section 5.3.1 and 5.3.2)
 - Factors which may affect the reasonable enjoyment of the proposed structures such as shading, screening and privacy (BS5837 section 5.3.4)
 - Future growth and/or pressures for removal or pruning (BS5837 section 5.3.4)
 - Factors that may affect foundation design (BS5837 Annex A)
 - Foreseeable issues with the planned demolition/construction of the proposed layout such as working space and access. (BS5837 section 5.4.2)

2 CONSTRAINTS

2.1 Site context

Location

- 2.1.1 Highover Farm is located on the northeast outskirts of Hitchin at the northern end of Highover Way, which runs through a residential housing development to the south and east of the site.
- 2.1.1 The land to the north and west of the farm benefits from a consented outline planning application for a residential development (ref: 18/01154/OP – decided 12/10/2023))



Fig. 1 Location of site marked in red © Google Maps 2023

Overview

2.1.2 The site comprises an unoccupied farmhouse and agricultural buildings forming a courtyard.

Topography

2.1.3 The land falls to the west.

Soil and Geology

2.1.4 With reference to Figure 4.3, Volume 1 'Tree Root Damage to Buildings' (P G Biddle), some soils can have shrinkable characteristics (i.e., they are susceptible to volume changes in response to variations in moisture content).

2.1.5 Understanding the impact of trees on soil moisture content and considering the potential effects of changes in soil volume on foundations are critical for ensuring both the stability of the built environment and the preservation of retained trees. Chapter 4.2 of the National House Building Council Standards specifically addresses the requirements and considerations related to trees and shrinkable soils. It offers guidance to developers, engineers, and builders on how to assess the risks associated with trees and shrinkable soils in a development site and implement appropriate measures to mitigate these risks effectively.

2.1.6 The British Geological Survey of England and Wales identifies the bedrock geology at this location as Holywell Nodular Chalk Formation and New Pit Chalk Formation – Chalk with superficial deposits of Lowestoft Formation - Diamicton.

2.1.7 Diamicton gives rise to a clay soil, which can easily be damaged through compaction.

2.1.8 Chalk provides a fine-grained soil which is fairly resistant to compaction.

2.1.9 This data may not be accurate at a site level but it is considered adequate to inform the project at this stage and it provides a general context that has been used to inform an Arboricultural Method Statement which accompanies this application. An engineer may require more specific information to inform foundation design and engineer drainage, road construction and other built structures.

2.2 Statutory protection

- 2.2.1 This site does not lie within a Conservation Area; however, the threshing barn was designated a Grade II listed building in 2018 (List Entry Number: 1452743), under the Planning (Listed Buildings and Conservation Areas) Act 1990 (as amended). This designation gives the building statutory protection under the 1990 Act, meaning any alterations that affect its character require listed building consent. Accordingly, a separate application for Listed Building Consent has been submitted alongside the full planning application to cover any works that may affect its special architectural or historic interest.
- 2.2.2 Some of the trees on the site are included in North Hertfordshire District Council (land at Highover Farm, Grovelands Avenue, Hitchin) Tree Preservation Order 1983 (TPO/057). (see Fig. 2 below).

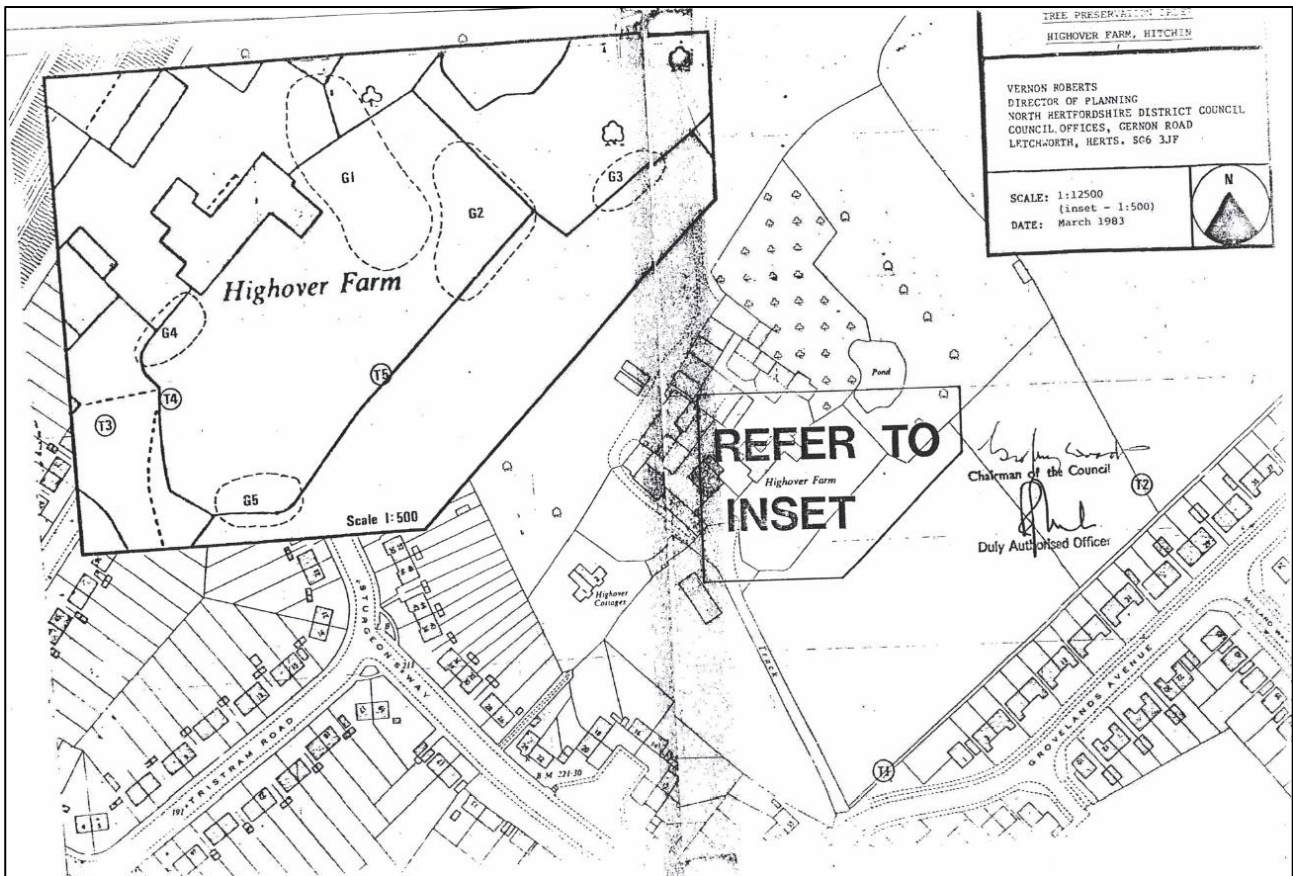


Fig. 2 Plan from North Hertfordshire District Council (land at Highover Farm, Grovelands Avenue, Hitchin) Tree Preservation Order 1983 (TPO/057)

- 2.2.3 On 6th September 2024, a 5 Day Notice (Ref: 24/01990/5DN) was submitted for the felling of two Lime trees (T1076 and T1084), both subject to TPO/057 (see Section 2.2 below). The works were supported by evidence of structural failure and decay, including signs of infection with *Kretzschmaria deusta*. The Local Planning Authority raised no objection and advised the planting of two native replacements within the site.
- 2.2.4 Full Planning Consent would allow those works described in the supporting documentation or necessary to implement the consented development to go ahead without the need for any application to the Local Planning Authority as a result of the Tree Preservation Order.

2.3 Arboricultural survey

- 2.3.1 The trees inspected are growing both within the site and on neighbouring land.
- 2.3.2 There is a mix of Category B and C trees across the site, with many of the trees included in the TPO being in average condition only. Clearly, as the TPO was made over 40 years ago, it should be expected that tree condition has changed.
- 2.3.3 The full table of survey data can be found in Appendix B.

2.4 Ecological considerations

- 2.4.1 Protected species such as nesting birds, bats, dormice, and reptiles play important roles in local ecosystems and are safeguarded by various laws and regulations.
- 2.4.2 The Project Ecologist has provided details of their ecological study. will need to ensure that appropriate advice regarding the protection of wildlife and other ecological matters is sought before any tree work proceeds on site.
- 2.4.3 Any contractors on site will assume responsibility under the Wildlife and Countryside Act 1981 (as amended), the Conservation of Habitat Regulations 2010 (as amended), and the Countryside Rights of Way Act 2000. They are required to take all reasonable measures to identify the presence of protected species such as nesting birds, bats, dormice, and reptiles in the work area and its surroundings.

3 NATIONAL AND LOCAL POLICY

3.1 Town and Country Planning Act 1990

- 3.1.1 Section 197 of the Town and Country Planning Act 1990 gives the local planning authority the duty to ensure that, whenever it is appropriate, planning permission for any development should include conditions that make adequate provision for the preservation or planting of trees. It also obligates the authority to make Tree Preservation Orders (dealt with in Section 198) when they are deemed necessary in connection with the granting of planning permission or to give effect to imposed Conditions.
- 3.1.2 In this case, a TPO has been made previously. There has been an opportunity for the LPA to modify the existing TPO or make a new TPO and this has not been necessary because the Applicant has demonstrated that they are prepared to work with the trees on site.

3.2 National Planning Policy Framework (NPPF)

- 3.2.1 The NPPF (updated in December 2024) contemplates the importance of trees in the context of development and sets out principles and requirements to inform planning decisions. In particular, Section 12: Achieving well-designed and beautiful places, Paragraph 136 states that “planning policies and decisions should ensure that ... existing trees are retained wherever possible.”
- 3.2.2 This application retains the majority of the trees remaining in site. There is good justification for the removal of the trees indicated.

3.3 Council Local Plan/ Policies

- 3.3.1 During the planning application process, North Hertfordshire District Council will evaluate whether the proposed development complies with the objectives and requirements set out in the North Hertfordshire Local Plan 2011-2031 (adopted November 2022). The following policies and guidance are relevant to this assessment:
- 3.3.2 Policy D1 Sustainable Design states that “Planning permission will be granted provided that development proposals b) Take all reasonable opportunities, consistent with the nature and scale of the scheme, to: iv. retain existing vegetation and propose appropriate new planting.” In addition, paragraph 4.83 states. “However, if there are reasons to allow proposals that outweigh any harmful effects, then appropriate mitigation or compensation will be required.”

- 3.3.3 Paragraph 9.7 sets out LPA expectations for the involvement of the arboriculturalist during the development and application process: “Existing vegetation should influence the layout and design of development. A vegetation condition survey should be undertaken to ascertain what plants within and adjoining the site, which would be affected by development, are worthy of retention and what protection measures should be put in place during construction. The British Standard BS5837: Trees in relation to design, demolition and construction – recommendations sets out guidance on tree retention, effect of trees on design considerations and means of protecting trees during construction.”
- 3.3.4 Policy NE4: Biodiversity and geological sites states that Planning permission will only be granted for development proposals that appropriately protect, enhance and manage biodiversity; in particular, they specify that d) “12 metres of complimentary habitat should be provided around wildlife sites (locally designated sites and above), trees and hedgerows. It may be necessary to exceed this distance for fragile habitats such as ancient woodland or to provide appropriate root protection for mature trees.”

3.4 Conclusions

- 3.4.1 This proposal meets NPPF and North Hertfordshire District Council requirements by ensuring that the trees at this site have been a material consideration and providing evidence of a survey and implications assessment to BS5837.
- 3.4.2 There is also an Arboricultural Method Statement and Tree Protection Plan which accompanies this application describing how tree protection measures and construction techniques will be used to assure the protection and retention of the trees where possible.

4 CRITERIA

4.1 Protection of root system

4.1.1 Construction activities can cause damage to the root system of a tree in several ways:

- Physical damage Excavation for construction or the digging of trenches to install underground utilities can result in root damage such as the loss of bark, splits or complete severance.
- Changes in ground levels. Elevating soil levels can lead to root death through asphyxiation. Reducing soil levels can result in the loss of the beneficial humus layer and root loss.
- Soil compaction. Heavy machinery or vehicles operating near trees can lead to soil compaction. The degree to which this is significant will depend on the soil on the site but in principle, compaction reduces or removes pore spaces in the soil structure. This in turn can lead to root death through asphyxiation. During construction, ground can be protected from damage through the use of barriers or a suitable ground protection system.
- Soil contamination. construction materials, Materials such as fuel, chemicals, lime, cement, and waste water can cause root death, either through chemical action or asphyxiation. A site must be organized in such a way to prevent damage.
- Heat. Fires can not only damage the tree above ground but the heat can also cause root death. Fires should ideally be avoided on most sites but on larger sites, it may be practical to accommodate a fire, providing it is a suitable distance from retained trees.

4.1.2 In its simplest form, the Root Protection Area (RPA) is a circle which is drawn on plans to indicate an area that is adequate for a tree's normal needs such as anchorage, moisture and nutrient absorption. It is described in British Standard 5837 as a "layout design tool" and in most cases the radius of the circle is calculated by multiplying the diameter of the main stem of the tree by 12. The shape can be adjusted to account for the possible or absolute effect of sub-surface features on the rooting environment. The Arboricultural Impact Plan (see Appendix C) shows the Root Protection Area (RPA) as a magenta circle or polygon around each tree or group of trees.

4.1.3 Trees rely on their root systems to absorb water, nutrients, and provide stability. Severe root damage can lead to decline, poor growth, or even the eventual death of the tree. The degree of damage also depends on the health of the tree, its age, the species, and the overall site conditions. The results of damage can take several years to become evident.

- 4.1.4 BS5837 (paragraph 5.3.1) states that the RPA is the area where, if the trees are retained, ideally no excavation should take place; the soil level should not be raised or lowered; no materials should be stacked; there must be no contamination and no services should be routed. However, trees are remarkably resilient, and some root loss can typically be tolerated in a tree of normal health and vigour.
- 4.1.5 An incursion into a Root Protection Area can be superficial (as with a driveway constructed over the existing ground level for example) or may involve partial or complete root loss within the area. BS5837 contemplates the possibility that there may be justification for construction within the RPA and that technical solutions can be used to mitigate the effects of an incursion. The Project Arboriculturalist is charged with demonstrating that the tree can remain viable, that the area lost to encroachment can be compensated for elsewhere, and to propose mitigation methods.

4.2 Root Protection Area

- 4.2.1 In its simplest form, the Root Protection Area (RPA) is a circle which is drawn on plans to indicate an area that is adequate for a tree's normal needs such as anchorage, moisture and nutrient absorption. It is described in British Standard 5837 as a "layout design tool" and in most cases the radius of the circle is calculated by multiplying the diameter of the main stem of the tree by 12.
- 4.2.2 The RPA does not illustrate a tree's root system.
- 4.2.3 The shape of the RPA can be adjusted to account for the possible or absolute effect of sub-surface features on the rooting environment. The Arboricultural Impact Plan (see Appendix C) shows the Root Protection Area (RPA) as a magenta circle around each tree and on this site, I have taken account of buildings that will have affected the shape.

4.3 Protection of tree above ground

- 4.3.1 The Arboricultural Impact Plan (see Appendix C) shows the tree canopy as an indented green circle or dashed polygon which takes account of any variations in crown spread at the four cardinal points.
- 4.3.2 During construction, the aerial parts of the tree are at risk from potential physical damage due to contact with plant or vehicles. This can be avoided through effective site management, pruning to create sufficient space for the vehicles to pass under, or using protective barriers to create a safe distance between construction activities and tree canopies. The height of the lower crown above ground is shown in the Tree Survey Table (Appendix B).

5 IMPACT ANALYSIS

5.1 Site layout

5.1.1 The proposal is described as “Change of use of former agricultural buildings comprising statutorily listed threshing barn and non-listed (non-designated heritage asset) courtyard buildings, former farmhouse together with the addition of 2 new build dwellings and the adaption of pre-existing courtyard buildings to provide cycle and refuse storage, partial demolition of non-listed structure to facilitate access, provision of private and communal space and BNG area.”

5.1.2 Detailed implications of the proposed site layout are as-per the following table:

Tree reference	Species	Category	Impact	Justification	Mitigation
NT2	Norway Spruce	B1	Within formalized access road	Somewhat suppressed tree that can easily be replaced with a tree of higher ecological value	Replacement planting
1077	Horse Chestnut	C1/C2	The conversion of the barn to residential use for Unit 10 makes this tree incompatible for retention.	The tree is low category with poor foliage quality and density on upper crown. It is unlikely to be a long-term feature.	Replacement planting
1979	Horse Chestnut	U	Must be removed for Unit 11 amenity	This is a Category U tree, that is not worthy of retention	Replacement planting
1983	Horse Chestnut	C1/C2	Must be removed for Unit 11 amenity	This is a low Category tree, that is not worthy of retention	Replacement planting
1093 – 1094	Lime	C1/C2	Siting of car parking increases the need to re-pollard these trees	Established management regime	Re-pollard at previous pruning points.
1093 -1094	Lime	C1/C2	Driveways within root protection areas	Species highly tolerant of some disturbance. Surface can be provided with a moisture and air permeable structure.	Minimise excavation. Install surfacing under arboricultural supervision. Plan finished paved level to allow for surfacing construction.

Tree reference	Species	Category	Impact	Justification	Mitigation
1093	Lime	C1/C2	Extension to Unit 12 occupies 5% of RPA	Species highly tolerant of some disturbance and incursion is modest.	Minimise excavation beyond what is required for foundation construction

5.2 Engineering, drainage and services

5.2.1 There is insufficient information available at this time for me to form an opinion about any specific potential impacts associated with engineering works that may be required on this site.

5.2.2 General principles will apply as follows:

- Foundations will be designed in accordance with NHBC Chapter 4.2 or in accordance with the Project Engineer's calculations.
- Subject to engineering constraints, trenching for the installations of piped services, cables and conduits will be located beyond the Root Protection Areas drawn. Where trenching in Root Protection Areas is unavoidable, the trench will be excavated under arboricultural supervision using a method that minimises root loss.

5.2.3 Services are not shown on the drawing but there appears to be room to accommodate all services and soakaways without affecting any trees.

5.2.4 There appears to be room to site any new soakaways required without affecting any trees.

5.3 Livability

Screening

- 5.3.1 Screening provides a means to create separation, privacy, and aesthetic enhancement in both residential and commercial contexts. It helps shield properties from unwanted views, reduces noise pollution, and can contribute to the overall visual character of the area.
- 5.3.2 The existing screening is mostly retained. Any loss of screening can be mitigated through replacement planting.

Shade

- 5.3.3 The shade footprint that may be cast by the trees has been shown as a grey hatch on the Arboricultural Impact Plan (see Appendix C). The shade area is based on a solar inclination of 45 degrees in line with the median suggested by BS5837: 2012 that covers the main daylight hours. This simplifies the actual shade area that may affect the site, but it is considered to be a good representation of the area in question.
- 5.3.4 Unit 11, 13 and 14 gardens will be more shaded than other Units on this site but I do not consider that the shade will lead to calls for trees to be removed or pruned in a way that would not comply with best practice. The Tree Preservation Order will provide a robust mechanism to control how the retained trees are managed.
- 5.3.5 When considering the effects of shade in planning decisions, the potential drawbacks must be weighed against the advantages. Some shading may be welcomed in the summer when solar gain can make room temperatures uncomfortable. Shade from trees can reduce heat buildup in urban areas and promote energy efficiency by lowering cooling demands for buildings.
- 5.3.6 It should also be noted that deciduous trees only cast shade for seven or eight months of the year, depending on species.

5.4 Future growth and pressure to prune

- 5.4.1 Future growth has been shown on the Arboricultural Impact Plan (see Appendix C) by way of a light green dashed line around retained trees with the potential to grow larger radially. This growth potential can lead to conflicts with structures; but generally, trees can tolerate the minor pruning required to maintain a satisfactory relationship between a tree and a building.
- 5.4.2 There is room for all the trees to grow to maturity without the need for any significant arboricultural intervention.

5.5 Tree Preservation Order

- 5.5.1 The TPO was made over 40 years ago. Tree condition is likely to change within this time scale. Not all the trees are now worthy of a TPO.

6 TREE REMOVALS AND WORKS

6.1 Tree removals

6.1.1 The proposed development will result in the loss of several trees; however, their size and distance from the road means their value is restricted to site and several are recommended for removal as a result of their health or condition.

6.1.2 Trees which are recommended for removal regardless of any proposed development are indicated on the Arboricultural Impact Plan (see Appendix C) by way of an orange dashed line and listed below:

REF.	SPECIES
1079	Horse Chestnut
1083	Horse Chestnut

6.1.3 Trees which are implicated for removal as a result of the proposed development are indicated on the Arboricultural Impact Plan (see Appendix C) by way of a red dashed line and listed below:

REF.	SPECIES
NT2	Norway Spruce
1077	Horse Chestnut

6.2 Pruning

6.2.1 Some facilitation pruning will be required.

6.2.2 Re-pollard Limes 1093 - 1095.

6.2.3 Beech 1089 has dead wood in its crown which should be removed.

6.2.4 Laterally reduce the southeastern crown of Lime 1078 by up to 2m to clear the building at Unit 11.

6.2.5 Laterally reduce the Northern crown of Beech 1089 by up to 2m to facilitate construction.

6.2.6 Laterally reduce the southeastern crown of Horse Chestnut 1097 by up to 2m to facilitate construction.

7 CONCLUSIONS

7.1 Design

- 7.1.1 The layout has been achieved through an informed design process.
- 7.1.2 The layout indicated respects the best trees on the site which can be retained to maturity without the need for any arboricultural intervention.

7.2 Protection

- 7.2.1 The order in which the works are implemented will need to be carefully considered in order to provide the most successful tree protection scheme.
- 7.2.2 A high standard of site management will be essential to avoid damage to retained trees.
- 7.2.3 The retention of an Arboricultural Clerk of Works is recommended to enable works near trees to progress without damaging retained trees.
- 7.2.4 Full details of a tree protection methodology have been provided in an Arboricultural Method Statement and Tree Protection Plan accompanying this application.

7.3 Demolition

- 7.3.1 Demolition of buildings and surfaces involves work close to the retained trees. Therefore, the methods of demolition must be controlled through site management, and the plant, equipment and staff involved.

7.4 Construction site management

- 7.4.1 Space will be at a premium for the receipt, storage and handling of materials and for the movement of plant and machinery. Therefore, in order to avoid accidental damage, a suitable tree protection scheme must be implemented before development begins.

7.5 Post construction

- 7.5.1 The detail of the landscape scheme and how it will be maintained can be secured by Condition of any Consent.

Appendices

Appendix A – Tree Survey Explanatory Notes

Identification

All significant trees within and adjoining the site were surveyed in accordance with British Standard 5837.

Most of the significant individual trees within the site were tagged with numbered aluminium tags, attached to the tree with two nails at around head height. Inaccessible or neighbouring trees have been designated the prefix 'NT' and numbered. Groups of trees were identified and designated a letter. Reference to the trees' locations can be made using the plans appended to this report.

Limitations

The tree survey was carried out for the purpose of informing the planning process. Relevant structural defects and aspects of tree condition are noted in the tree survey table in Appendix B; however, a full hazard assessment has not been carried out.

As trees and shrubs are living organisms whose health and condition can change rapidly, conclusions and recommendations are only valid for one year. The health, condition and safety of trees should be checked regularly, preferably annually.

It may have been necessary to estimate some measurements when assessing trees on neighbouring land. This will not generally affect the conclusions of this report.

No invasive investigations were carried out to assess the internal condition of the trees. Should this be required, it will be highlighted in the report.

The soil was not examined and no soil samples were taken. Should soil analysis be indicated, this will be recommended in the report.

Appendix B – Tree Survey Data

Key	
Age Class	Y = Young (Less than 1/3 of normal expected life) OM = Over-mature or in decline SM = Semi-mature (1/3 – 2/3 of normal expected life) V = Veteran M = Mature
Main Stem Diameter	Measured at 1.5 metres above ground or in accordance BS5837: 2012 Annex C and D
Height	Estimated or measured with clinometer where considered critical (m)
Crown spread	At cardinal points (m)
RPA (Radius)/(Area)	Distance in metres from centre of tree to achieve a circular Root Protection Area/ Root Protection Area in square metres.
Remaining Contribution	Estimated number of years the tree may contribute in a safe condition
Category	See table overleaf for definitions

Note: This survey is an assessment of the existing site and any recommendations are preliminary and do not reflect a particular layout or proposal

BS5837:2021 Cascade Chart for Tree Quality Assessment Trees to be considered for retention

Category and definition	Criteria (including subcategories where appropriate)			Identification on Plan
Trees unsuitable for retention				
Category U Trees 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	- 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 NOTE: Category U trees can have existing or potential conservation value which it might be desirable to preserve			
	1. Mainly arboricultural qualities	2. Mainly landscape qualities	3. Mainly cultural values, including conservation	
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	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)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	
Category B Trees of moderate quality 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 remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for detention 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 value	
Category C 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	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 only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	

ref.	Species	Age Class	Observations: Factors affecting the quality and value of the trees	Ø m/s (mm)	Height (m)	Lower crown height (m)	Ultimate height (m)	Crown Spread N (m)	Crown Spread S (m)	Crown Spread E (m)	Crown Spread W (m)	RPA radius (m)	RPA (m ²)	Remaining Contribution (yrs)	Category	Preliminary management recommendations
NT1	Horse Chestnut	SM	Tree on neighbouring property therefore not closely inspected. Moderate infection with Horse Chestnut Bleeding Canker.	550	10	0	10	4	6	6	6	6.6	136.87	10+	C1	No work required.
NT2	Norway Spruce	SM	Tree on neighbouring property therefore not closely inspected. Ivy on tree.	300	12	1	16	4	3	4	4	3.6	40.72	40+	B1	No work required.
NT3	Tree of Heaven	Y	Tree on neighbouring property therefore not closely inspected. Multi-stemmed form.	320	12	1	16	4	3.5	3	6	3.84	46.33	40+	B1	No work required.
Group A	Elm, Ash, Elder, Horse Chestnut, Myrobalan Plum	M	Lapsed hedge with natural generation and adventitious spread into site	250	6	0	6	2	2	2	2	3	28.28	40+	C2	Could be retained. No work required but could be managed as a hedge if desired
1069	Horse Chestnut	Y	No visible defects seen.	300	8	0.5	16	3.5	3.5	3.5	3.5	3.6	40.72	40+	B1	Could be retained with space. No work required.
1070	Pear	M	Ivy on tree.	640	8	0.5	16	5	4	6	4	7.68	185.32	40+	B1	Could be retained. Remove Ivy.
1073	Walnut	Y	Multi-stemmed form. No visible defects seen. Multiple stems at ground level.	250	10	2	18	3.5	3.5	3.5	3.5	3	28.28	40+	B1	Could be retained with space.
1361	Norway Maple	SM	Not worthy of retention. Major failure of main stem at 2m at included bark union	350	14	2	18	5	5	5	5	4.2	55.42	10+	C1	Fell and replace.

ref.	Species	Age Class	Observations: Factors affecting the quality and value of the trees	Ø m/s (mm)	Height (m)	Lower crown height (m)	Ultimate height (m)	Crown Spread N (m)	Crown Spread S (m)	Crown Spread E (m)	Crown Spread W (m)	RPA radius (m)	RPA (m ²)	Remaining Contribution (yrs)	Category	Preliminary management recommendations
NT5	Weeping Willow	SM	No visible defects seen. Unable to inspect stem due to undergrowth.	500	16	0	16	5	5	5	5	6	113.11	40+	B1	Could be retained with space.
Group F	Silver Birch, Cherry	M	Low vigour. Unlikely to be considered suitable for retention. Linear group of trees at edge of pond. Middle Tree dead	250	12	0	12	4	4	4	4	3	28.28	10+	C2	Fell and replace.
1075	Beech	Y	No visible defects seen.	250	10	1	18	4.5	4.5	4.5	4.5	3	28.28	40+	B1	Could be retained with space. No work required.
1077	Horse Chestnut	M	Low foliage density in upper down. Typical symptoms of HCBC but no bleeds discovered. Two major limbs shed in lower crown	950	19	0.5	19	9	9	9	9	11.4	408.33	20+	C1/C2	Could be retained with space. No work required.
1078	Lime	M	Branches encroaching upon building. Historic main stem failure at ground level resulting in one upright growth off stump and two stems against adjacent Lime	550	13	0	16	6	4	5	4	6.6	136.87	20+	C1	Could be retained with space. Prune clear of building. Remove horizontal Eastern stems back to upright off stump
1079	Horse Chestnut	M	Low vigour. Historic windthrow to South East. Tree is supported by adjacent Lime1080	600	12	0.5	12	1	8	4	3	7.2	162.88	<10	U	Fell and replace

ref.	Species	Age Class	Observations: Factors affecting the quality and value of the trees	Ø m/s (mm)	Height (m)	Lower crown height (m)	Ultimate height (m)	Crown Spread N (m)	Crown Spread S (m)	Crown Spread E (m)	Crown Spread W (m)	RPA radius (m)	RPA (m ²)	Remaining Contribution (yrs)	Category	Preliminary management recommendations
1080	Lime	M	No visible defects seen	600	19	0	19	4	4	5	3	7.2	162.88	20+	B1/B2	Could be retained No work required
1081	Horse Chestnut	M	Moderate infection with Horse Chestnut Bleeding Canker. Dieback in crown.	950	16	1	16	7	7	7	7	11.4	408.33	<10	C1/C2	Could be retained in the short-term.
1082	Weeping Willow	SM	No visible defects seen.	500	16	0	16	6	6	6	6	6	113.11	40+	B1	Could be retained with space.
1083	Lime	M	Unlikely to be considered suitable for retention. Leaning East. Decaying cavity at base of main stem north side. Recent main stem failure from 5m. Low quality plant	500	14	0	14	4	2	5	2	6	113.11	10+	C1/C2	Fell and replace.
1085	Ash	Y	No visible defects seen.	350	12	0	18	5	5	5	5	4.2	55.42	40+	B1	Could be retained with space.
NT6	Hawthorn	SM	No visible defects seen.	250	8	0	12	3	3	3	3	3	28.28	40+	B1	Could be retained. No work required.
1086	Holly	SM	No visible defects seen. Ivy on tree.	250	8	0	12	3.5	3.5	3.5	3.5	3	28.28	40+	B1/B2	Could be retained. No work required.
1087	Holly	M	No visible defects seen. Ivy on tree. Dieback in crown.	495	10	0	12	4	4	4	4	5.94	110.86	40+	B1/B2	Could be retained. No work required.
1088	Swedish Whitebeam	M	No visible defects seen. Ivy on tree.	300	10	0	12	4	4	4	4	3.6	40.72	40+	B1/B2	Could be retained. No work required.

ref.	Species	Age Class	Observations: Factors affecting the quality and value of the trees	Ø m/s (mm)	Height (m)	Lower crown height (m)	Ultimate height (m)	Crown Spread N (m)	Crown Spread S (m)	Crown Spread E (m)	Crown Spread W (m)	RPA radius (m)	RPA (m ²)	Remaining Contribution (yrs)	Category	Preliminary management recommendations
1089	Beech	M	No visible defects seen. Scattered minor dead wood throughout crown.	670	16	0	18	6	7	7	7	8.04	203.1	40+	B1/B2	Could be retained with space. Remove dead wood greater than 25mm in diameter.
1090	Walnut	Y	Suppressed. Multiple stems at ground level. Leaning North.	250	12	2	18	5	0	3	4	3	28.28	40+	B1/B2	Could be retained with space.
1093	Lime	M	Early signs of decay at old wounds. Scattered minor dead wood throughout crown. Branches encroaching upon building. Previously pollarded	500	14	0	14	5	5	5	5	6	113.11	10+	C1/C2	Remove dead wood greater than 25mm in diameter. Repollard at old pruning points.
1094	Lime	M	Early signs of decay at old wounds. Scattered minor dead wood throughout crown. Previously pollarded	450	14	0	14	5	5	5	5	5.4	91.62	20+	C1/C2	Remove dead wood greater than 25mm in diameter.
1095	Lime	M	Early signs of decay at old wounds. Scattered minor dead wood throughout crown. Previously pollarded	450	14	0	14	5	5	5	5	5.4	91.62	20+	C1/C2	Remove dead wood greater than 25mm in diameter.
1097	Horse Chestnut	M	Low vigour. Moderate infection with Horse Chestnut Bleeding Canker. Dieback in crown. Decay in main stem caused by <i>Polyporus squamosus</i>	1000	15	1.5	15	7	6	6	6	12	452.45	<10	C1	Could be retained in the short-term.

ref.	Species	Age Class	Observations: Factors affecting the quality and value of the trees	Ø m/s (mm)	Height (m)	Lower crown height (m)	Ultimate height (m)	Crown Spread N (m)	Crown Spread S (m)	Crown Spread E (m)	Crown Spread W (m)	RPA radius (m)	RPA (m ²)	Remaining Contribution (yrs)	Category	Preliminary management recommendations
Group G	Lawson's Cypress	M	No visible defects seen.	200	8	0	18	1.5	1.5	1.5	1.5	2.4	18.1	40+	C2	Could be retained. No work required.
Group H	Wild Cherry, Cherry Laurel, Walnut, Elm, Beech, Silver Birch, Lawson's Cypress, Laburnum	SM	No visible defects seen. General tree cover. Mix of planting and natural generation	250	12	0	18	3	3	3	3	3	28.28	40+	C2	Could be retained. No work required.
Group K	Ash, Horse Chestnut, False Acacia	SM	No visible defects seen. Unable to inspect stem due to undergrowth.	350	11	0	18	4	4	4	4	4.2	55.42	40+	B2	Fell and replace.
Group M	Hawthorn, Elder, Cherry	M	No visible defects seen. Lapsed hedge. Reasonable screen	250	8	0	14	3	3	3	3	3	28.28	40+	C2	Could be retained. No work required.
1359	Horse Chestnut	Y	No visible defects seen. Ivy on tree.	300	12	2	16	4	4	4	4	3.6	40.72	40+	C1	Could be retained with space.
1360	Ash	Y	Dead.	250	12	2	12	2	2	2	2	3	28.28	<10	U	Fell and replace.

Appendix C – Arboricultural Impact Plan

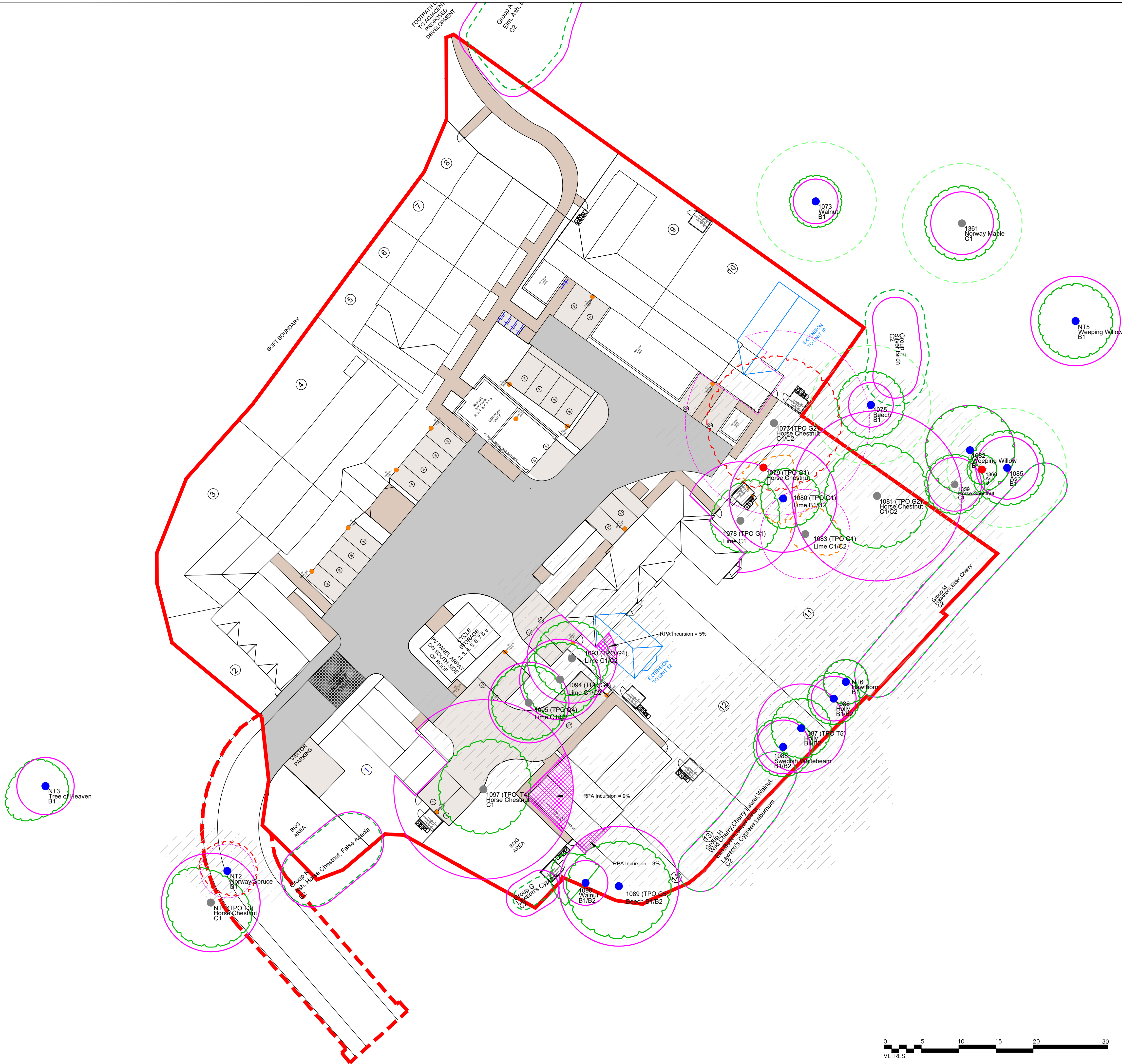
A plan at 1:250 follows to be printed in colour on A1.

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NOTES Based on survey drawing HIGHHITC/200 PLAN and proposed site layout Z208.PL.05

The original of this drawing was produced in colour - a monochrome copy should not be relied upon.

- KEY
- GRADE A TREES
 - GRADE B TREES
 - GRADE C TREES
 - GRADE U TREES
 - ROOT PROTECTION AREA
 - CANOPY OUTLINE - INDIVIDUAL TREE
 - CANOPY OUTLINE - GROUPS
 - CANOPY OUTLINE - FUTURE POTENTIAL
 - TREES TO BE REMOVED
 - ROOT PROTECTION AREA OF TREES TO BE REMOVED
 - TREES NOT SUITABLE FOR RETENTION
 - INDICATIVE SHADE AREA
 - ROOT PROTECTION AREA INCURSION



Rev	Description	Date	
Purpose of Issue			
Planning			
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Project			
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Drawing Title			
ARBORICULTURAL IMPACT PLAN			
Drawn	Checked	Reviewed	Date
AMB	--	--	12/06/2025
Job No.	Scale	Sheet Size	Revision
5521	1:250	A1	
Drawing Number			
5521.Highover.JK.AIP			