

Cantia

Arboricultural Services

Arboricultural Impact Assessment and Method Statement (Amended)

CAS/2022/128

**For
Bloomfields Chartered Town Planners**

**Proposed Development Site
Northfield House, Wrotham Road, Meopham, Kent,
DA13 OAQ.**

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Gravesham Borough Council

1.0 Introduction

1.1 Instruction

1.1.1 Cantia Arboricultural Services were instructed to undertake a tree survey and provide arboricultural advice on the site known as Northfield House, Wrotham Road, Meopham, Kent, DA13 OAQ to accompany a planning application.

1.1.2 The site visit was carried out on Thursday 5th May 2022, between the hours of 1330-1520hrs (110 minutes) and weather conditions were noted as clear with visibility conducive of surveying.

1.2 Aim of Report

1.2.1 To survey in accordance with BS 5837: 2012 ‘Trees in Relation to Design, Demolition and Construction – Recommendations’ to plot and assess the quality of the existing trees located on site and within 15m of proposed development operations.

1.2.2 To assess the impact of the proposed development upon trees located on site and within the immediate vicinity. To provide advice on trees requiring removal and outline protective measures for trees marked for retention.

1.2.3 To provide a work specification as required by retained trees to accommodate the proposed development.

1.2.4 To provide recommendations and guidance on how trees and other vegetation may be successfully retained within the proposed development

1.3 Documentation & Disclosure

1.3.1 The following documentation has been made available

- Existing and Proposed Site Plans - Northfield House, Meopham.dwg.

2.0 Site & Tree Discussion

2.1 Site Description

- 2.1.1 The site consists of a two-storey detached house set in a plot of approx. 1,945 square metres. The property faces Westwards onto Wrotham Road with the gradient dropping away from the front of the house to the highway. Side vehicle access to the rear of the property currently exists to the North of the House where there is also an area of hard surfacing likely utilised for off road parking.



- 2.1.2 The rear garden is grassed with one large tree located centrally within the plot. The majority of remaining vegetation is located around the border / fenced areas. The gradient of the rear garden is generally level.



- 2.1.3 The property is bordered by the land of neighbouring properties to the North, East and West.

2.2 Access

- 2.2.1 Vehicle and plant access is unencumbered via Meopham Road and the existing side access to the property.

2.3 Proposal

- 2.3.1 The proposal is to demolish the existing property and construct 2 x detached houses in the same location with associated parking / amenity areas. To the rear of the property a single detached property will be constructed with a new access road constructed along the Southern boundary. Associated vehicle parking and amenity areas will also be created for this property.

2.4 Scope of Report / Limitations

- 2.4.1 This is a preliminary assessment from ground level and observations have been made solely from a visual perspective for the purposes of assessment in terms relevant to planning and development. No invasive or other detailed internal decay detection devices have been used in assessing internal conditions.
- 2.4.2 All individual trees within a 15m radius of the development that have a stem diameter over 75mm at 1.5m above ground level have been surveyed. Each tree is surveyed and allocated an identifying number. Then data is collected and individual trees measured with regards to their height, stem size, canopy size and potential to pose a material constraint to development. Subject trees are each allocated one of four grade categories (A, B, C or U) indicating their quality. Trees, groups and hedges have been graded upon individual merit in the context of their existing surroundings regardless of any proposed development of the site.
- 2.4.3 Any conclusions relate to conditions found at the time of inspection. Any alteration to the site that may affect the trees that are present or have a bearing on planning

implications (including level changes, hydrological changes, extreme climatic events or other site works) will necessitate a re-assessment of the trees and the site and render any previous advice/ findings invalid.

- 2.4.4 Trees are living organisms and even apparently healthy trees cannot be considered completely safe due to forces of nature and environmental fluctuations which dictate a natural failure rate of intact and healthy trees.
- 2.4.5 Where there are access restrictions data has been estimated. This is reflected in the survey schedule with a (#) symbol before measurement.
- 2.4.6 The survey was carried out with the assistance (where required) of the following inspection equipment-
- Binoculars – Inspection of upper sections of the tree
 - Sounding Mallet – Assessment of wood quality, decay extent
 - Steel Probe – To test resistance of wood and depth of cavities
 - Secateurs – Removal of basal growth & ivy to allow inspection
 - DBH (diameter) Tape – Measurement of stem diameter
 - Clinometer- To measure height of tree
 - Laser measure – Measurement of canopy dimensions & tree location

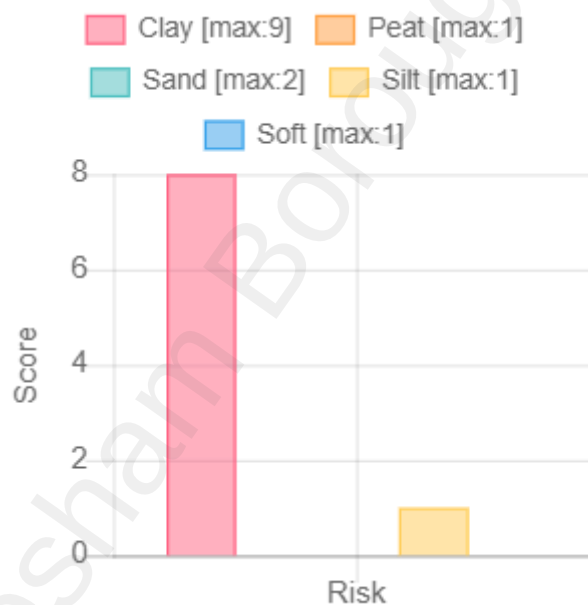
2.5 Tree Discussion

- 2.5.1 A total of fourteen individual trees and three groups of trees have been assessed in detail from ground level by visual means only. The Tree Survey Schedule, at Appendix 2, details the trees in respect of dimension and quality in accordance with the methodology set out in the British Standard 5837:2012. The following categories were recorded-

Category	Quantity	Identification Numbers
A	1	T01
B	3	T05, T11 & T12
C	13	G01-G03, T02-T04, T06-T10, T13 & T14

- 2.5.2 Trees categorised as A or B are viewed as a constraint to development. Should any proposed development require the removal of trees/groups (or parts of groups) within these categories then it is likely that local authorities would require mitigation in the form of a robust soft landscaping/planting plan. Trees classed as category C are generally not viewed as a constraint although plans to remove large numbers of these would likely still require mitigation. Trees classed as category U are trees in irreversible decline unlikely to be in situ for more than 10 years. These trees are therefore not considered a constraint and also have no RPA (Root Protection Area) plotted.
- 2.5.3 Where trees have been surveyed and plotted in groups, they typically contain specimens of varying age class and size. Please take note of survey schedule for indication of average height/size and maximum height/size within group. Where groups of trees have been surveyed and plotted, the largest DBHs' of the trees located along the groups edge have been noted and used to indicate the maximum RPA potential.

- 2.5.4 Also noted on site were numerous small trees / woody shrubs and hedges too small to warrant inspection in accordance with BS5837 Trees in Relation to Design, Demolition and Construction 2012:Recommendations.
- 2.5.5 Searches carried out on Gravesham Councils interactive map revealed that the property does not fall within a Conservation Area.
- 2.5.6 Soil analysis provided by Terrasure/Airbus indicated a soil with high clay content (8/9). Therefore, there is a potential risk of indirect damage caused by soil shrinkage in periods of hot/dry weather. This information must be considered when designing foundations with a recommendation for either pile type foundations or a foundation depth in accordance with NHBC guidelines.



3.0 Arboricultural Impact Assessment on Retained Trees

3.1 Demolition

- 3.1.1 The demolition of an outbuilding located in the Northeastern corner of the plot will take place within the measured RPAs' of trees numbered T03 & T04 Elder. Therefore, demolition operations in these areas must be carried out as outlined in section P4.0 of the Arboricultural Method Statement.

3.2 Construction

- 3.2.1 The proposed foundations of the property to the rear of the plot will conflict with the measured RPA of tree numbered T01 Oak by 7.5 square metres (2% of total RPA). Therefore, in this instance pile foundations will be used to minimise impact upon the root zones. Typically, this could involve small piles with a pad or lintels set at or above ground level to support the structure and negate the requirement for excavation. These must be installed as outlined in section P5.0 of the Arboricultural Method Statement.
- 3.2.2 The proposed hard surfacing around the house to the rear of the plot will conflict with the measured RPA of tree numbered T01 Oak by 25 square metres (6.8% of total RPA). Therefore, in this area construction must be of a no-dig design. Typically, this could involve the use of a 3d cellular system to avoid the risk of soil compaction with a permeable final surface. These must be installed as outlined in section P6.0 of the Arboricultural Method Statement.

Tree Number / Species	Conflicts / Square Metres	Total Conflict / Percentage of RPA
T01 Oak	7.5 sqm (foundations) + 25 sqm (hard surfacing) = 32.5sqm	8.8%

- 3.2.3 The proposed new access road planned to run along the Southern boundary of the site will be within close proximity of group numbered G01 Mixed Species. The group is located in the neighbouring property and contains a mix of small trees/saplings and shrubs which were estimated as having DBHs' no more than 120mm. The access road will likely clip the side of this groups RPA. However, due to their small size and young age the road is unlikely to have a significant detrimental effect on their vitality or longevity. Therefore, in this instance a pre-emptive root pruning trench is appropriate. This must be excavated as outlined in section P7.2 of the Arboricultural Method Statement and where shown on the Tree Protection Plan CAS/2022/128.



- 3.2.4 The proposed new turning head to the rear of the plot has an added section to allow for a size as stipulated by Kent Fire & Rescue team to ensure they can accommodate emergency vehicles. This will create a conflict of 21 square metres (13% of total RPA) with the root protection area of tree numbered T05 Field Maple which is marked for retention. Therefore, this section of surfacing must be of a no-dig design. This must be installed as stipulated in section P6.0 of the Arboricultural Method Statement.
- 3.2.4 No service run plans have been provided. It is assumed that existing ducts and runs will be utilised and augmented within the design. Adequate space exists on site so that

any requirement for fresh runs can be located outside of the measured RPAs' of trees marked for retention.

3.3 Trees Requiring Removal

3.3.1 The proposal requires the removal of the following –

Tree Number / Species	Category	Comments
G02 Mixed Saplings	C	Removal required to accommodate proposal
G03 Ash Saplings	C	Removal required to accommodate proposal
Hedging	N/A	Hedges too small to warrant recording under BS5837

Removed trees and hedges are unremarkable specimens with limited visibility within the public realm.

3.4 Implications for Retained Trees

3.4.1 Tree numbered T05 Field Maple will require the pruning of the Southern section of its canopy (as marked on the Arboricultural Constraints Plan). This will see the removal of approx. 3.7m of lateral spread up to a height of approx. 5m, retaining approx. 4.3m. The tree may need future periodic lifting in this area to retain clearance.

3.4.2 Remaining trees marked for retention will require no additional pruning or intervention due to the proposed development.

4.0 Conclusions

- 4.1.1 The proposed development requires the removal of two Category C groups of small trees and saplings along with some hedging with DBHs' too small to warrant inspection in accordance with BS5837 Trees in Relation to Design, Demolition and Construction : 2012. The groups to be removed are small unremarkable specimens with limited visibility within the public realm and thus their removal will have a neutral impact upon the arboricultural and wider landscape contribution of the site.
- 4.1.2 Pile foundations will be required for the proposed construction to the East of the plot due to a small conflict with the measured RPA of a large Oak tree (T01) located in a neighbouring property along with the high clay content of the soil.
- 4.1.3 Specialised no-dig design will be required for an area of hard standing around the proposed construction located to the East of the plot due to a small conflict with the measured RPA of tree numbered T01 Oak.
- 4.1.4 Specialised no-dig design will be utilised to ensure adequate vehicle turning area for emergency services within the measured RPA of T05 Field Maple.
- 4.1.5 Root pruning will be employed where the new access road comes within close proximity of a group of small trees / saplings / shrubs.
- 4.1.6 So long as the precautionary and protective measures outlined within this report are strictly observed and adhered to then the proposed development will have neutral impact upon trees marked for retention.

Arboricultural Method Statement

1.0 Summary

- 1.1 This document outlines the principles that are approved and enforced by the local planning authority, including site specific instructions on the methods required to protect the existing tree stock agreed for retention. These methods are set out in a logical sequence of operations with location of protective measures shown on the accompanying Tree Protection plan CAS/2022/128.

2.0 Important Tree Information

- 2.1 As the majority of tree roots are found in the upper metre of soil, development works, including for example even shallow excavation, soil compaction and soil contamination, can be harmful to trees in close proximity. Trees differ in their tolerance of root loss or disturbance, according to their age, species and/or condition. All protection works within this document will be in accordance with BS 5837: 2012 'Trees in Relation to Design, Demolition and Construction – Recommendations'
- 2.2 An assessment of the site's tree stock has been undertaken and those trees to be retained are clearly shown on the Tree Protection Plan (TPP). A calculation has been made of the volume of soil required to ensure the survival of these and this is represented by the Root Protection Area (RPA) indicated by the magenta circles or squares around the retained tree on the plan.
- 2.3 The RPA has been used to inform the Construction Exclusion Zone (CEZ), the area to be protected during development by the use of barriers, ground protection and specialised construction techniques - outlined below:-

3.0 Sequenced Methods of Construction and Tree Protection

P1.0 Phase 1 - Pre-Contract Meeting

- P1.1 If stipulated by the local authority an onsite meeting will be held with all relevant parties including the developer, appointed arboricultural supervisor and Local Planning Authority (LPA) representative.

P2.0 Phase 2 - Execute Agreed Tree Works

Tree Number	Proposed Works	Reason
G02 & G03	Removal	Removal required to accommodate proposal
T05	Pruning of Southern section of canopy	Pruning required to accommodate emergency vehicle turning area

- P2.1 All tree work is to conform to BS 3998:2010 and to current arboricultural best practice. Tree works are to be undertaken by a professional and specialist arboricultural contractor, who carries the appropriate experience and insurance cover and following formal approval from the LPA

P3.0 Phase 3 - Tree Protection Barriers and ground protection

- P3.1 In order to protect the tree stems from significant construction activity, protection barriers will be erected. See Plan for fencing location. Fencing should be of a reasonable standard and suitable for the purpose of preventing machinery entering the protected zones see example given below in appendix 1.
- P3.2 BS5837 Trees in Relation to Design, Demolition and Construction (2012) requires that the root protection area be calculated for each tree marked for retention on the development. The root protection area is the minimum area in m² which should be left undisturbed around each retained tree, including the delivery of machinery, materials, plant or equipment to the site or any adjacent land. The protective

measures will remain in situ until final completion or a time agreed by the LPA and Contractor.

- P3.3 Tree protection fencing will be required to be installed as shown on the Tree Protection Plan CAS/2022/128. Fit for its purpose fencing must be installed after any required tree works and prior to any construction operations on site. Once the barriers have been properly erected in position, they are to be considered as sacrosanct and are not to be removed or altered in any way without prior approval from the LPA.
- P3.4 Clear notices as shown below are to be fixed to the outside of the fencing with words such as ‘Tree Protection Zone – Do not remove this fencing’. All operatives and other relevant personnel are to be informed of the role of the exclusion barriers and their importance. Protective fencing should remain in situ throughout the entire construction process. The site manager should be aware that it is his responsibility to maintain protective measures adequately and these should be casually inspected at regular intervals with written records of inspection.



- P3.5 Where stipulated on the Tree Protection Plan ground protection should be laid. The gross weight of predicted traffic in the area should be calculated and ground protection laid as stipulated below –

- *For pedestrian access, a single thickness of scaffold boards placed on a driven scaffold frame, so as to form a suspended walkway or on a compressive- resistant layer such as, e.g. woodchip 100mm min, laid onto a geotextile membrane will be sufficient.*
- *For pedestrian operated machinery up to a gross weight of 2t inter linked ground protection boards places on top of a compression- resistant layer, as above, will be required.*
- *For machinery greater than 2t and engineered specification will be required.*

P3.6 If there is a requirement to move or carry out operations inside the area of protective fencing then ground protection should be laid over any exposed ground prior to movement or works commencing. This should be laid in accordance with section P3.5 of the Arboricultural Method Statement.

P3.7 When there is a requirement to carry out work in an area covered with ground protection then only the immediate area of work should have the protection rolled/scraped back. Once the task in hand is completed then ground protection should be instantly re-instated.

P3.8 Adequate room is available for the locating of compounds and material storage within the site boundaries and outside of any measured RPA.

P4.0 Phase 4 – Demolition Works within Root Protection Areas.

P4.1 When demolishing a structure (including underground structures) within what would otherwise be the RPA, barriers should be erected, and ground protection installed, to protect the underlying soil to the edge of the existing structure prior to the commencement of operations.

P4.2 Where trees stand adjacent to structures to be removed, the demolition must be undertaken inwards within the footprint of the existing building (often referred to as “top down, pull back”).

P4.3 The advice of an arboriculturist should be sought where underground structures present within the RPA are, or will become, redundant. In general it is preferable to leave such structures in situ, as their removal could damage adjacent tree roots.

P4.4 All plant and vehicles engaged in demolition works should either operate outside the RPA, or run on the ground protection. Where such ground protection is required, it should be installed prior to commencement of operations.

P5.0 Phase 5 – Installation of Pile Foundations

P5.1 Designs for foundations that would minimize adverse impact on trees should include particular attention to existing levels, proposed finished levels and cross-sectional details.

P5.2 Where Pile foundations are selected then an investigation will be required to determine their optimal location whilst avoiding damage to roots important for the stability of the tree, by means of hand tools or compressed air soil displacement, to a minimum depth of 600 mm.

P5.3 Piles to be installed near to trees must be of the smallest practical pile diameter as this reduces the possibility of striking major tree roots and reduces the size of the rig required to sink the piles.

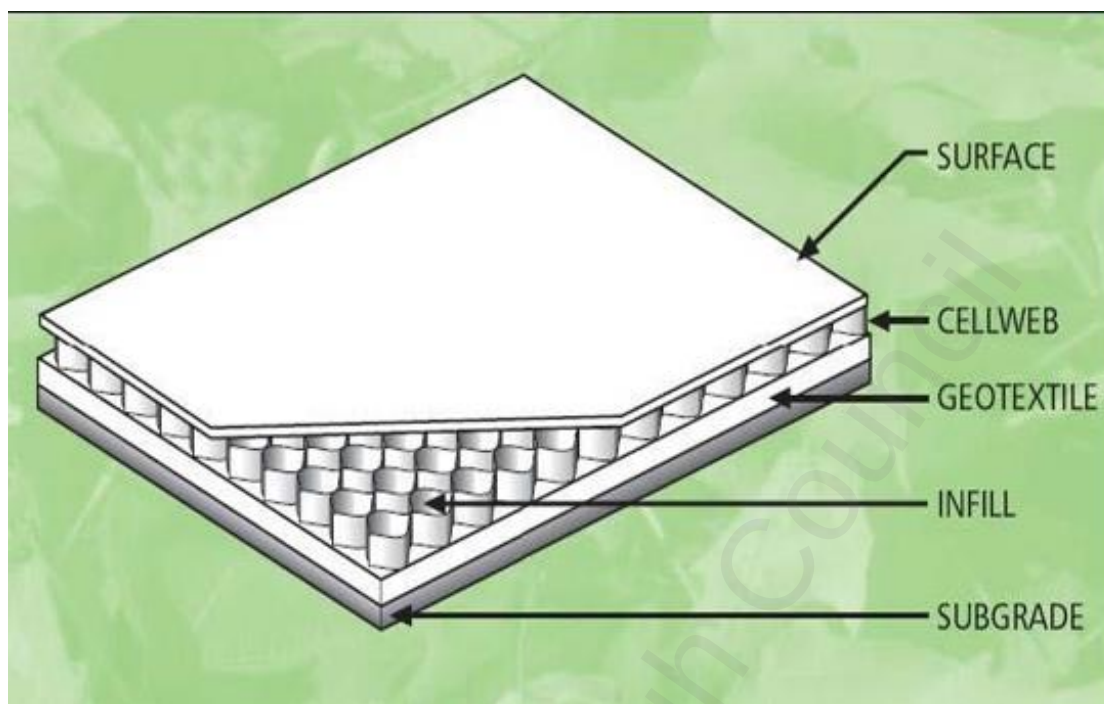
P5.4 Pile holes must be lined with an impermeable sleeve to reduce risk of leeching into the root zone of the trees.

P5.5 If a piling mat is required, this must conform to the parameters for temporary ground protection given in section P3.5 of the Arboricultural Method Statement.

P6.0 Phase 6 – Installation of No-Dig Hard Surfacing

P6.1 The design should not require excavation into the soil, including through lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation.

- P6.2 The gross weight of proposed traffic for each area must be calculated and the design include a suitable three-dimensional cellular confinement system to alleviate risk of future soil compaction.
- P6.3 The sections below offer generic installation techniques relating to the construction of hard surfaces, for example, roads and paths, parking areas and bases for bicycle or bin stores not required to be to an adoptable standard and within the CEZ of retained trees. Manufacturers installation guidelines should be referenced and where required supersede the instructions below.
- P6.4 With reference to BS 5837 clause 11.8, where the construction of permanent hard surface is approved within the CEZ, a non-dig design should be used to avoid root loss caused by excavation.
- P6.5 The construction area is to be levelled by filling hollows and removing protrusions and hard landscaping. No soil excavation, other than the removal of a 'turf or vegetation layer' is to be carried out during this process and filling material should be of a porous nature to allow water and oxygen to reach the soil below. In the unlikely event that roots are required to be pruned, sharp cutting tools are to be used to ensure that minimum damage is caused. No roots, greater than a diameter of 25mm, are to be pruned without prior agreement with the appointed arboricultural supervisor or LPA representative.



- P6.6 A geo-textile membrane (Terram or similar) is then to be laid over the whole surface, including any retained hard surfaces. This is to be fixed firmly into position with ground pegs.
- P6.7 Where edging blocks or stone are to be used to retain the drive surface within the CEZ, the mix into which they are set will be laid directly onto the geo-textile membrane over the supporting base. No deeper excavations are to be made to accommodate the footing of the edging detail.
- P6.8 A geoweb material is then placed over the membrane and also fixed into position. An aggregate sub-base material is then introduced in to the geoweb. The depth of the sub-base aggregate should be the same depth as the geoweb and no less than 100mm. The aggregate should be a granular no fines material (typically 40-20mm). Not only will this material dissipate load and reduce soil compaction, it will permit easy passage of air (oxygen) to the rooting area of the tree below the surface.
- P6.9 The sub-base material is to be compressed into position ready for the final surface treatment. This surface can also be used as a temporary works access route prior to the laying of the final surface.

P6.10 Final surface details for residential purposes will be of a porous nature such as gravel, block paviors or small paving slabs and should be approved by the LPA. In the usual way these should be bedded into a lean mix that is also highly porous. Final surface treatment can be installed as part of the landscaping works.

P7.0 Phase 7 - Ground works

P7.1 Spoil, including soil and rubble surplus to requirements will be removed from site and not stored against any protective fencing.

P7.2 Where foundations require pre-emptive root pruning this should be excavated outside the line of foundation closest to the tree by hand or with the use of an air pick to a depth of 600mm. Roots discovered less than 25mm in diameter may be cut, roots greater than 25mm in diameter must only be cut after consultation with the project arboriculturalist and or the LPA. Once roots have been cut conventional excavation can be carried out.

P7.3 Service runs to be located outside any indicated RPA.

P8.0 Phase 8 - Dismantling Protection Barriers and Landscaping Works

P8.1 A minimum notice period of seven days will be given to the LPA prior to the dismantling of the protection barriers.

P8.2 All landscaping once the barriers have been removed will avoid soil re-grading and disturbance within the CEZ and no soil levels be altered after the protection barriers have been removed. All vehicles are strictly prohibited from entering any RPA once barriers are removed.

4.0 General Principles for Tree Protection

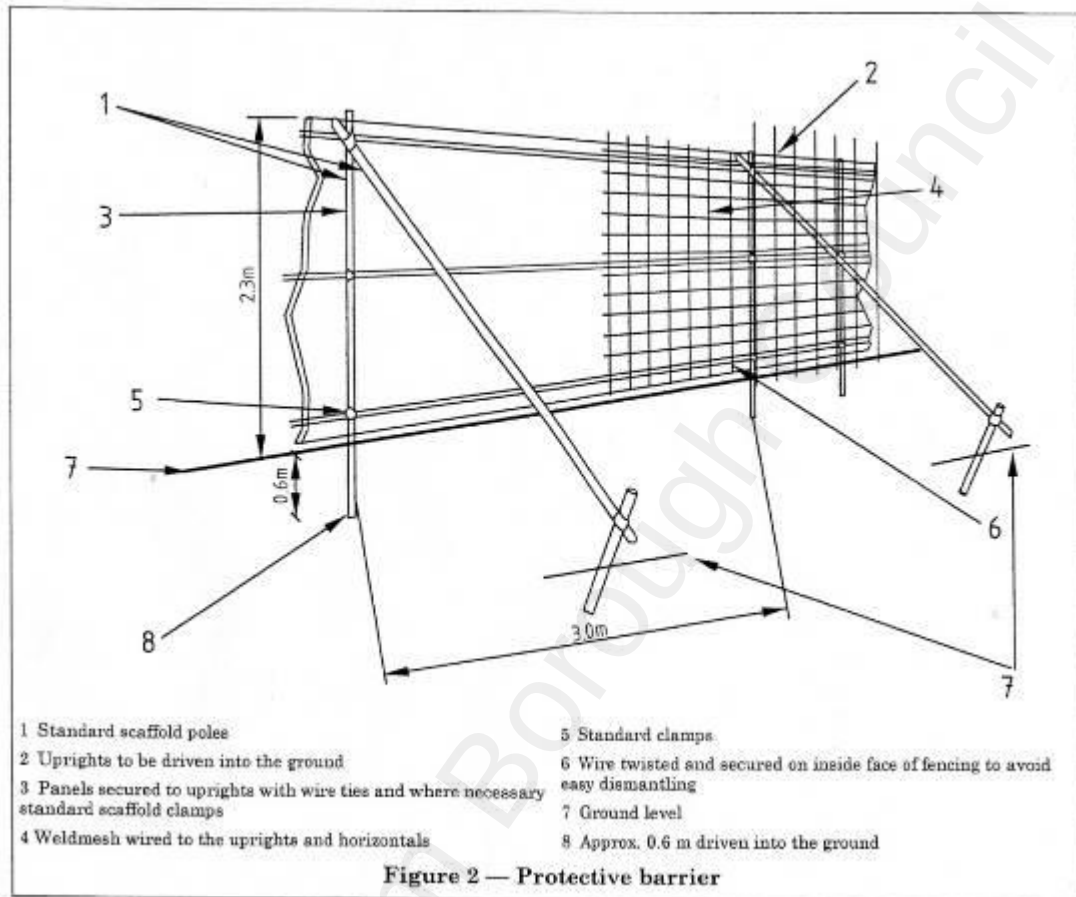
- 4.1 A copy of this AMS and the attached TPP is to be retained on site at all times and all personnel associated with the construction process will be made familiar with the principles within.
- 4.2 No fires are to be lit on site at any stage during the construction process.
- 4.3 A designated storage area is to be created away from retained trees. All materials for construction purposes are to be stored in this compound. Care must be taken to avoid the leakage or leaching of noxious materials into the soil.
- 4.4 No materials will be stored or left stacked in positions around the site other than within the storage compound area.

5.0 Communication Details, Monitoring and Compliance

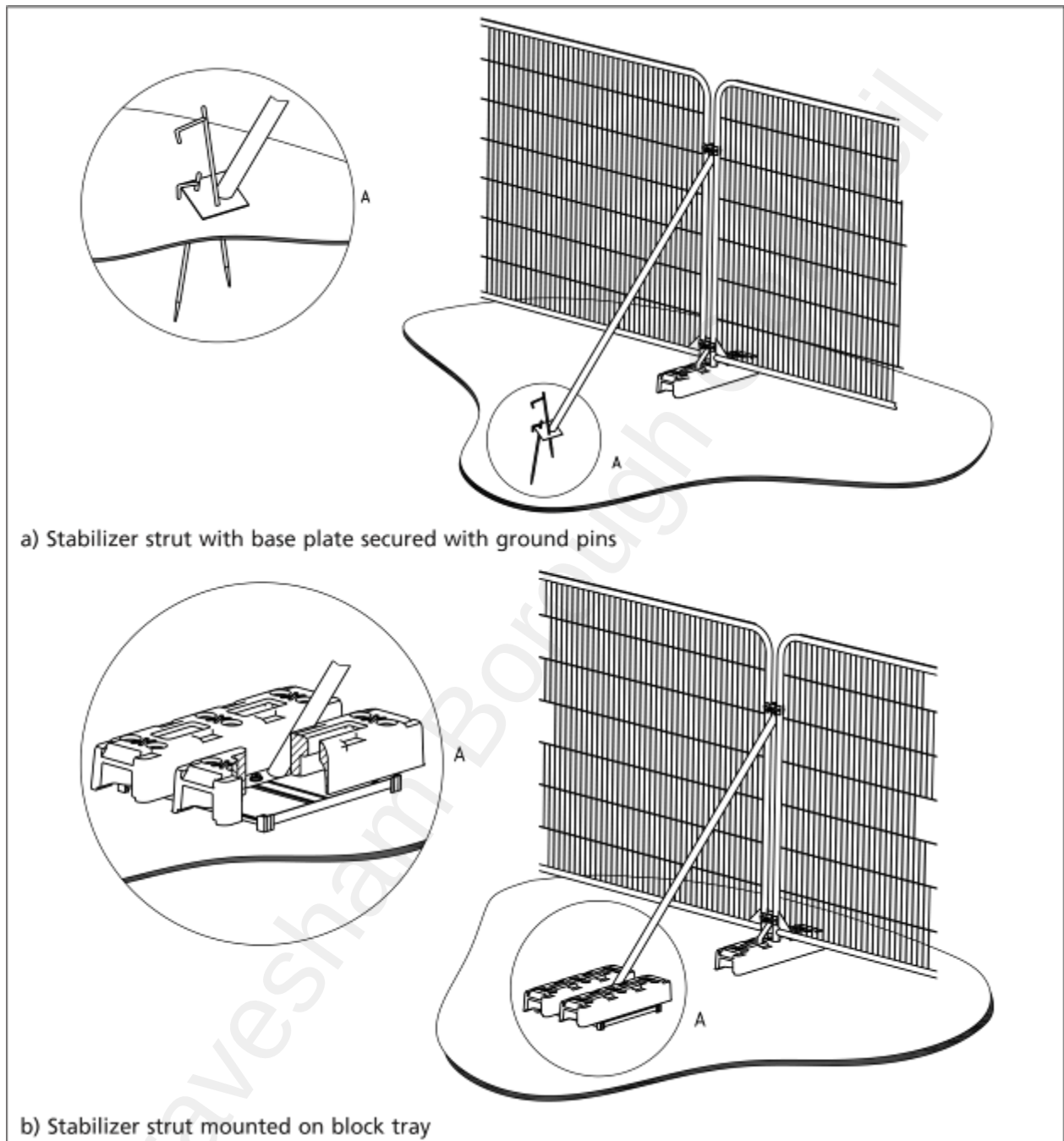
- 5.1 In order to ensure that the principles of tree protection set out in the statement are adhered to, it is important to set out communication details for key individuals and tasks that require monitoring. These details should be retained by all relevant parties and available on site at all times. Relevant parties will be advised of any changes in personnel or contractor during the development process.
- 5.2 Before construction begins written confirmation that the developer/contractor or its agents agree to comply in full with the principles set out within this Method Statement will be lodged with the LPA.

Appendix 1: Tree Protection Fencing

High Traffic Areas



Low Traffic Areas



Appendix 2 - Tree Schedule Explanatory Notes

Ref.no	Identifies trees, groups and hedges on the accompanying plan.
Species	Common names are provided to aid wider comprehension.
Height	Describes the approximate height of the tree measured in metres from ground level
Canopy Spread	Indicates the crown radius from the base of the tree in four compass directions, recorded to the nearest metre.
Ground Clearance	Height of crown clearance above adjacent ground in metres.
DBH (mm)	DBH is the diameter of the stem measured in cm at 1.5m from ground level for single stemmed trees or just above root flare for multi-stemmed trees. Stem Diameter may be estimated where access is restricted.
RPR (cm)	Root Protection Radius (RPR) is area required to be protected measured radially from the trunk centre.
RPA (m2)	Root Protection Area (RPA) is the minimum rooting area in m2 which should remain undisturbed around each tree.
Age Class	Age of the tree expressed as Y- Young, MA- Middle-Aged, EM- Early Mature, M- Mature or OM- Over-Mature
General Condition	Overall condition of tree expressed as :Good, Fair, Poor, Dead
Physiological and structural condition	May include general comments about growth characteristics, how it is affected by other trees and any previous surgery works. Also specific problems such as dead wood, pests, diseases, broken limbs. Etc
Estimated Remaining Years	Categorised in year bands of less than 10, 10+, 20+, 40+
BS Category	B.S. Cat refers to (BS 5837:2005 Table 1) and refers to tree/overall group quality and value; 'A' - High; 'B' - Moderate; 'C' - Low; 'U' - Remove.
Sub Category	Sub Cat refers to the retention criteria values where 1 is arboricultural, 2 is landscape and 3 is cultural including conservational, historic and commemorative

Appendix 3 – Tree Retention Category (as per cascade chart, Table 1, B.S. 5837:2012)

Tree Category	Description
A	Category A - Trees of high quality with an estimated remaining life expectancy of at least 40 years. 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).
B	Category B – Trees of moderate quality with an estimated remaining life expectancy of at least 20 years. 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.
C	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. 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.
U	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 are dead or are showing signs of significant, immediate, and irreversible overall decline.

BS5837 Survey Data



Ref.	Species	Measurements	General Observations	Category	Recommendations
G01	Elder (Sambucus nigra) Robinia (Robinia sp.) Holly (Ilex sp.) Hazel (Corylus avellana)	Height (m): 5.5 Stem Diam (mm): 120# Life Stage: Mature Rem. Contrib.: 20+ Years	Group of small trees & shrubs	C1 RPA Area: 37 sq m, plus a 1m buffer.	
G02	Ash (Fraxinus sp.) Hornbeam (Carpinus betulus) Field Maple (Acer campestre) Common Juniper (Juniperus communis)	Height (m): 5 Stem Diam (mm): 120 Life Stage: Early Mature Rem. Contrib.: 20+ Years		C2 RPA Area: 40 sq m, plus a 1m buffer.	
G03	Ash (Fraxinus sp.)	Height (m): 5 Rem. Contrib.: 10+ Years	Groupif approx 2- 3 small Ash	C2 RPA Area: 4 sq m, plus a 1m buffer.	

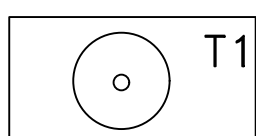
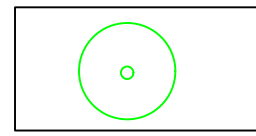
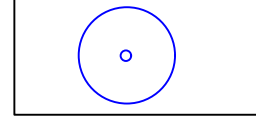
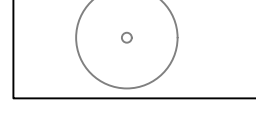
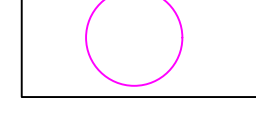
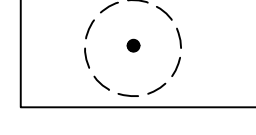
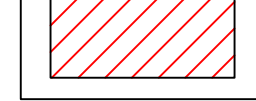
Ref.	Species	Measurements	General Observations	Category	Recommendations
T01	Pedunculate Oak (Quercus robur)	Height (m): 19 Stem Diam (mm): 900# Spread (m): 11#N, 11#E, 11S, 11#W Crown Clearance (m): 2 Lowest Branch (m): 2(SW) Life Stage: Mature Rem. Contrib.: 40+ Years	Tree has collapsed limb to South which is laying on outbuilding. Ivy cover noted on main stem	A1,2 RPA Radius: 10.8m. Area: 366 sq m.	
T02	Hazel (Corylus avellana)	Height (m): 4.5 Stem Diam (mm): 80 Spread (m): 2N, 1E, 2S, 2W Life Stage: Mature Rem. Contrib.: 10+ Years		C1 RPA Radius: 1.0m. Area: 3 sq m.	
T03	Elder (Sambucus nigra)	Height (m): 5.5 Stem Diam (mm): 100 Spread (m): 3N, 3E, 3S, 3W Life Stage: Mature Rem. Contrib.: 10+ Years		C1 RPA Radius: 1.2m. Area: 5 sq m.	
T04	Elder (Sambucus nigra)	Height (m): 6# Spread (m): 4N, 4E, 4S, 4W Life Stage: Mature Rem. Contrib.: 10+ Years		C1 RPA too small to calc.	
T05	Field Maple (Acer campestre)	Height (m): 15 Stem Diam (mm): 600 Spread (m): 7.5N, 7E, 8S, 6.5W Crown Clearance (m): 1.5 Lowest Branch (m): 2 Life Stage: Mature Rem. Contrib.: 30+ Years	Prolific ivy cover throughout canopy	B1 RPA Radius: 7.2m. Area: 163 sq m.	
T06	Lawson Cypress (Chamaecyparis lawsoniana)	Stem Diam (mm): 250# Spread (m): 2N, 2E, 2S, 2W Crown Clearance (m): 0 Life Stage: Mature Rem. Contrib.: 30+ Years		C1 RPA Radius: 3.0m. Area: 28 sq m.	

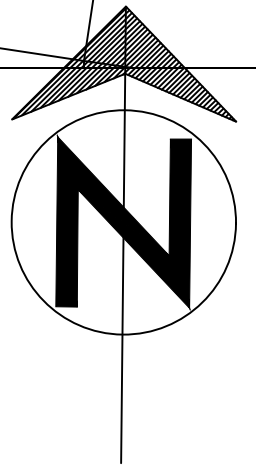
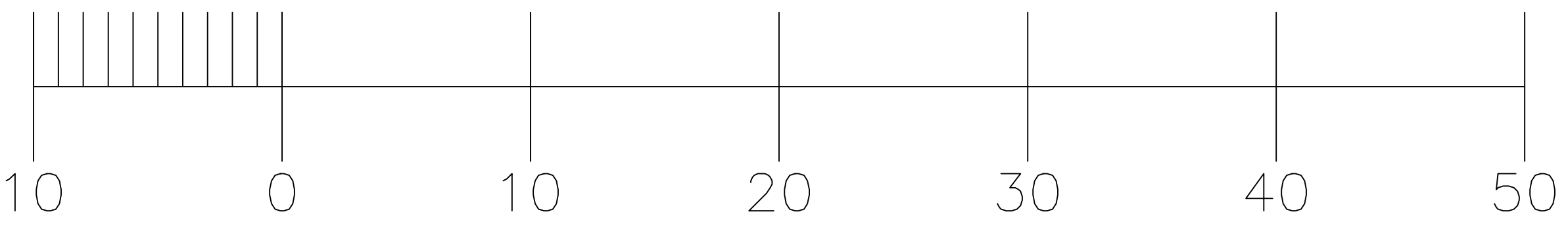
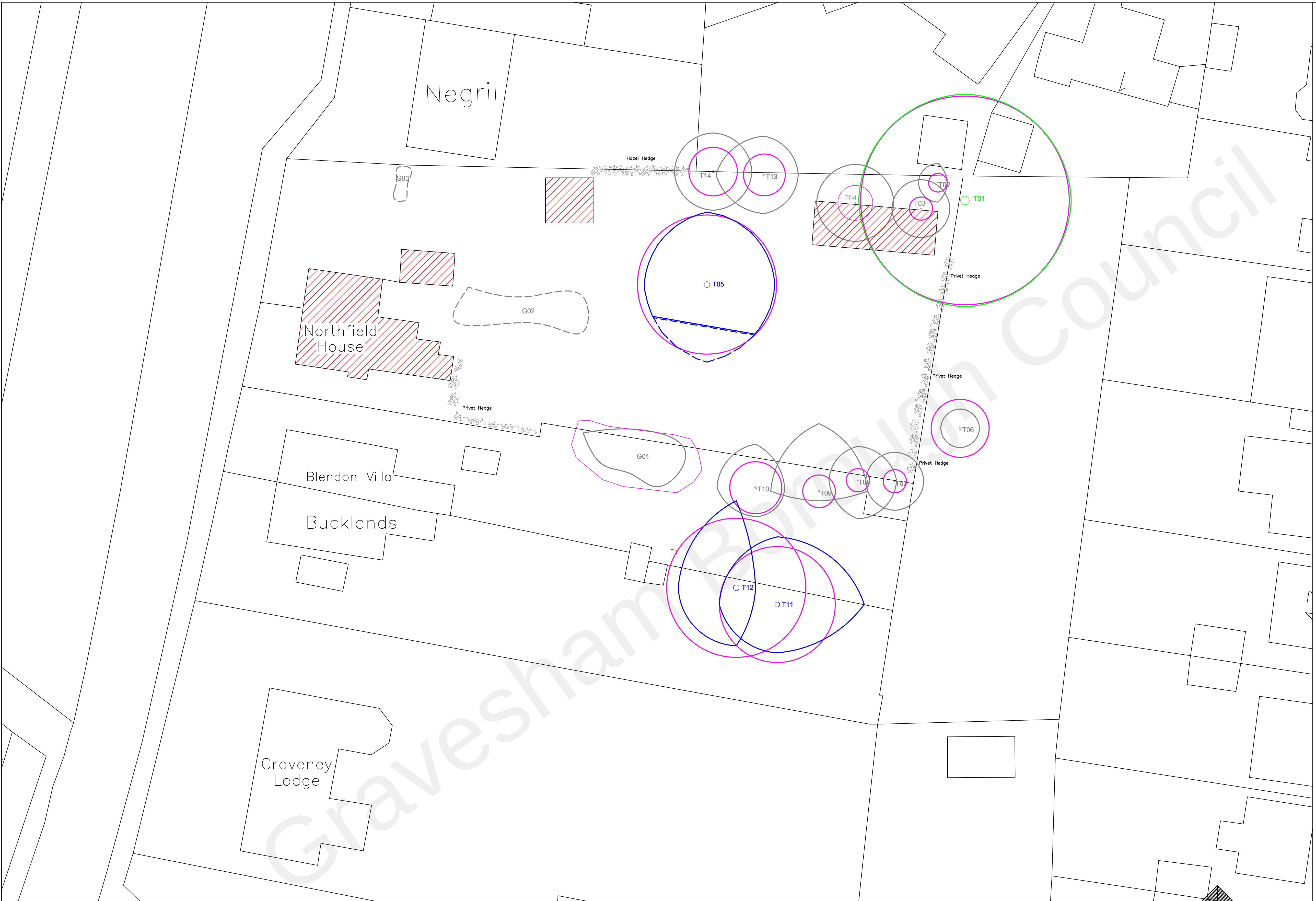
Ref.	Species	Measurements	General Observations	Category	Recommendations
T07	Ash (Fraxinus sp.)	Height (m): 9 Stem Diam (mm): 100 Spread (m): 3N, 3E, 3S, 3W Life Stage: Early Mature Rem. Contrib.: 20+ Years	Small self sown tree located between fence & shed	C1 RPA Radius: 1.2m. Area: 5 sq m.	
T08	Hazel (Corylus avellana)	Height (m): 6 Stem Diam (mm): 100# Spread (m): 3.5N, 4E, 4#S, 3W Crown Clearance (m): 1 Life Stage: Mature Rem. Contrib.: 20+ Years		C1 RPA Radius: 1.2m. Area: 5 sq m.	
T09	Apple (Malus sp.)	Height (m): 6 2 stems, diam(mm): 100, 100 Spread (m): 7#N, 5#E, 1#S, 5W Life Stage: Mature Rem. Contrib.: 20+ Years		C1 RPA Radius: 1.7m. Area: 9 sq m.	
T10	Apple (Malus sp.)	Height (m): 5 2 stems, diam(mm): 200, 100 Spread (m): 4.5#N, 3E, 3#S, 4W Life Stage: Mature Rem. Contrib.: 20+ Years		C1 RPA Radius: 2.7m. Area: 23 sq m.	
T11	Ash (Fraxinus sp.)	Height (m): 20# Stem Diam (mm): 500# Spread (m): 7#N, 9E, 5#S, 6#W Life Stage: Mature Rem. Contrib.: 20+ Years		B2 RPA Radius: 6.0m. Area: 113 sq m.	
T12	Ash (Fraxinus sp.)	Height (m): 19 Stem Diam (mm): 600# Spread (m): 9#N, 2#E, 6#S, 6#W Life Stage: Mature Rem. Contrib.: 20+ Years		B2 RPA Radius: 7.2m. Area: 163 sq m.	

Ref.	Species	Measurements	General Observations	Category	Recommendations
T13	Hawthorn (Crataegus sp.)	Height (m): 8.5 Stem Diam (mm): 180 Spread (m): 4#N, 3.5E, 4S, 5W Crown Clearance (m): 2 Lowest Branch (m): 2(S) Life Stage: Mature Rem. Contrib.: 20+ Years	Secondary stem to North is dead. Prolific ivy cover throughout canopy	C1 RPA Radius: 2.2m. Area: 15 sq m.	
T14	Hazel (Corylus avellana)	Height (m): 6 5 stems, diam(mm): 100, 120, 80, 80, 80 Spread (m): 4#N, 4E, 4S, 4W Crown Clearance (m): 2 Life Stage: Mature Rem. Contrib.: 20+ Years		C1 RPA Radius: 2.5m. Area: 20 sq m.	

Arboricultural Constraints Plan

KEY

-  T1 Existing Tree colour referenced in accordance with BS 5837 2012 as shown below
-  Green – Cat A Trees of high quality and value
-  Blue – Cat B Trees of moderate quality and value
-  Grey – Cat C Trees of low quality and value
-  Root Protection Area as calculated in accordance with BS 5837 2012
-  Existing tree to be removed colour in accordance with BS 5837 as shown below.
-  Existing Building to be Demolished.



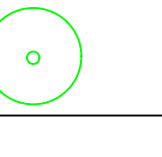
REV.	DATE	INITIALS		DETAILS	
CLIENT Bloomfields Chartered Town Planners			DWG. TITLE Arboricultural Constraints Plan		
SITE					
Northfield House, Wrotham Road, Meopham, Kent, DA13 0AQ					
DRAWN BY BJS	CHECKED BY BJS	SCALE 1:200 @ A1	DATE August 2022	DWG NO. CAS/2022/128	REV.

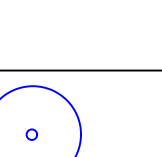
Please do not scale off this drawing. Tree locations not plotted to a topographical survey so locations cannot be confirmed, Dwg is to scale as indicated above.

Proposed Development Plan

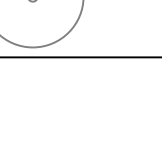
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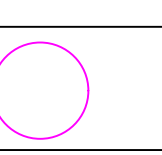
-  T1 Existing Tree colour referenced in accordance with BS 5837 2012 as shown below

 Green – Cat A Trees of high quality and value

 Blue – Cat B Trees of moderate quality and value

 Grey – Cat C Trees of low quality and value

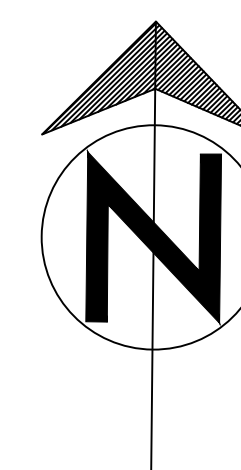
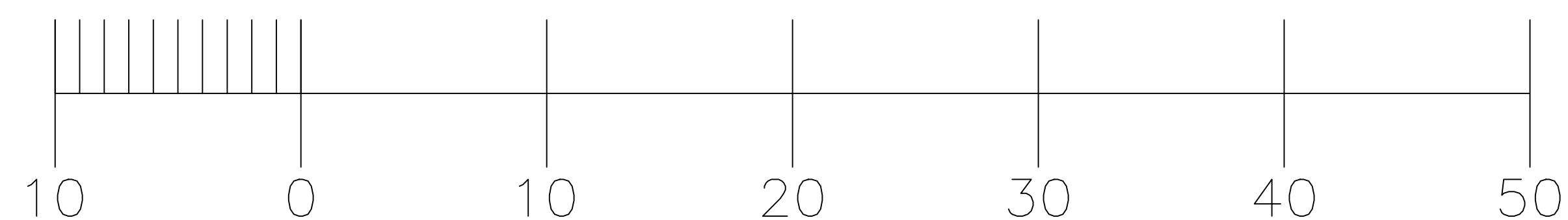
 Root Protection Area as calculated in accordance with BS 5837 2012

 Location of Propsoed New Constructions.

 Emergency Services turning area.

REV.	DATE	INITIALS	DETAILS						
CLIENT Bloomfields Chartered Town SITE Northfield House, Wrothom Road, Maphong, Kent, DA13 0AQ				DWG. TITLE Proposed Development Plan					
DRAWN BY BJS	CHECKED BY BJS	SCALE 1:200	DATE August 2022	DWG NO. CAS/2022/128				REV.	

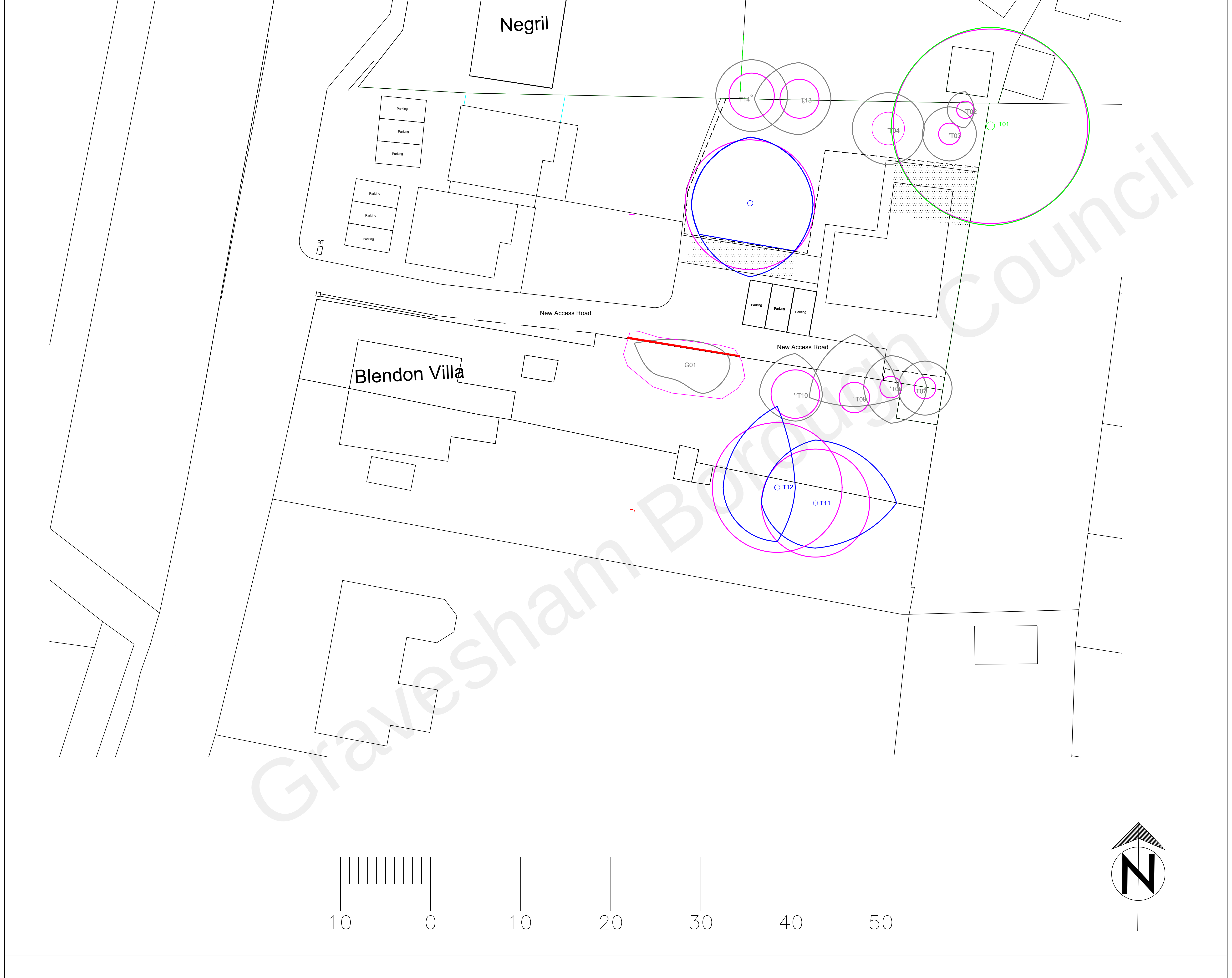
Please do not scale off this drawing. Tree locations not plotted to a topographical survey so locations cannot be confirmed, Dwg is to scale as indicated above.



Tree Protection Plan

KEY

- Existing Tree colour referenced in accordance with BS 5837 2012 as shown below
- Green – Cat A Trees of high quality and value
- Blue – Cat B Trees of moderate quality and value
- Grey – Cat C Trees of low quality and value
- Root Protection Area as calculated in accordance with BS 5837 2012
- Approximate line of protective fencing to be erected in accordance with BS5837 and to be maintained throughout entire development process.
- Location of Propsoed New Constructions.
- Location of Root Pruning Trench



REV.		DATE		INITIALS		DETAILS	
CLIENT Bloomfields Chartered Town Planners				DWG. TITLE Tree Protection Plan			
SITE Northfield House, Wrotham Road, Meopham, Kent, DA13 0AQ							
DRAWN BY BJS		CHECKED BY BJS		SCALE 1:200 @ A1		DATE August 2022	
				DWG NO. CAS/2022/128		REV.	

Please do not scale off this drawing. Tree locations not plotted to a topographical survey so locations cannot be confirmed, Dwg is to scale as indicated above.