

Gorse Ride South

Arboricultural Impact Assessment Report

Wokingham Borough Council

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Quality information

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1. Introduction

1.1 Background

AECOM has been instructed by Wokingham Borough Council (WBC) (The Applicant) to carry out an Arboricultural Impact Assessment of the development proposals at Gorse Ride South (hereafter referred to as 'the Site' and 'Proposed Development') in support of a planning application. This report identifies the likely direct and indirect impacts of the Proposed Development along with suitable mitigation measures, as appropriate. The Tree Protection Plan (included within Appendix D) identifies trees to be removed and how retained trees are to be successfully protected.

1.2 Trees and the Planning Process

The National Planning Policy Framework (NPPF) seeks to ensure that new development is sustainable and underlines the importance of Green Infrastructure, of which trees form an integral part. This encompasses a recognition of the importance of trees in relation to the management of air, soil and water quality along with other associated ecosystem services and climate change adaption. The NPPF also seeks to achieve the protection and enhancement of landscapes and a net gain in biodiversity. Finally it specifically identifies veteran and ancient trees and woodland as a highly valuable and irreplaceable habitat.

Local Planning Authorities (LPA) in the UK have a statutory duty to consider both the protection and planting of trees when considering planning applications. The potential impact of development on all trees (including those not protected by a Tree Preservation Order or other statutory designation) is therefore a material consideration.

'BS5837:2012 *Trees in relation to design demolition and construction – Recommendations (BS5837)*' provides a framework which sets out how trees should be considered in this context and also explicitly applies to development where planning consent is not required.

BS5837 recommends that a tree survey is undertaken to identify the quality and benefits of trees and the spatial constraints associated with them. This is then used to produce a Tree Constraints Plan showing the above and below ground constraints associated with trees. This drawing is used to inform the design process and to allow the retention of good quality trees where appropriate.

An Arboricultural Impact Assessment is then developed to identify the likely direct and indirect impacts of the Proposed Development, and a Tree Protection Plan is prepared to identify trees to be removed or retained and to illustrate how retained trees are to be protected. An Arboricultural Method Statement is often required as a condition of planning consent to detail how sensitive operations are to be achieved in close proximity to retained trees. These elements are the minimum normally required for a planning application and are intended to ensure both a sustainable and harmonious relationship between trees and new development

1.2.1 Local Policy Context

Wokingham Borough Council Core Strategy Development Plan (Adopted January 2010)

Policy CP7 (Biodiversity) recognises the importance for nature conservation and recognises that veteran trees and important features of the landscape should be protected. It states that:

'Development:

A) Which may harm county designated sites (Local Wildlife Sites in Berkshire), whether directly or indirectly, or

B) Which may harm habitats or, species of principle importance in England for nature conservation, veteran trees or features of the landscape that are of major importance for wild flora and fauna (including wildlife and river corridors), whether directly or indirectly will only be permitted if it has been clearly demonstrated that the need for the proposal outweighs the need to safeguard the nature conservation importance, that no alternative site that would result in less or no harm is available which will meet the need, and:

- i) Mitigation measures can be put in place to prevent damaging impacts; or*
- ii) Appropriate compensation measures to offset the scale and kind of losses are provided.'*

This policy therefore requires significant protection to be provided to important landscape features, and states that any Proposed Development should include suitable mitigation measures where important features are to be impacted upon.

1.3 Methodology

The tree survey has been based on the topographical survey plan provided (ref: 5700-3D-F) by Aworth Survey Consultants.

A small number of trees were not included on the topographical survey plan and have been plotted indicatively with reference to Site features and publically available aerial photography. Such trees have been marked with an '**' on the Tree Survey Schedule included as Appendix B. As such all positions for these trees must be considered to be indicative only and the relative distances of features must be measured out on Site as required.

The survey was otherwise conducted in accordance with the requirements of BS5837.

The initial fieldwork was undertaken on the 23rd and 24th January and 27th February 2019, during which dimensional data and observational information were collected. A diameter tape measure was used to measure stem diameters where feasible.

Where there was limited access to the base of trees their stem diameter has been estimated.

The fieldwork informing this report has comprised a preliminary, non-intrusive, visual survey undertaken from ground level with the specific intention of evaluating the quality and benefits of trees on Site.

Where further inspection is deemed appropriate to ascertain the condition of the tree or other arboreal features, this has been identified within the preliminary management recommendations. Average dimensions or dimensional ranges have occasionally been used, where appropriate, to best describe features.

A Tree Survey Plan showing the position of trees and the spatial constraints associated with them is included as Appendix A of this report, which corresponds with the Tree Survey Schedule presented in Appendix B.

The tree categorisation process recommended by BS5837:2012 is summarised in the table below and corresponds with the tree canopy outline shown on the tree constraint plan included as Appendix A and the information in the Tree Survey Schedule included as Appendix B.

Table 1: BS5837:2012 Tree Categorisation process

Category	Definition
A	High quality, minimum of 40+ years remaining contribution
B	Moderate quality, minimum of 20+ years remaining contribution
C	Low quality, minimum of 10+ years remaining contribution
U	Unsuitable for retention, <10 years remaining contribution
1	Arboricultural value
2	Landscape value
3	Conservation or cultural value

2. General Arboricultural Principles

2.1 General Principles

Trees are dynamic living organisms which provide essential benefits to society and the wider environment. Any Proposed Development with the potential to impact on trees must take into consideration the value of trees on Site; the impact of any proposed activity along with any potential future conflicts on the Site. Suitable measures to safeguard retained trees or mitigate the loss of trees (to be removed) will need to be fully considered and may be subject to a condition of planning consent.

Tree branches and roots frequently grow across site boundaries and off site trees can pose a significant constraint, and should be carefully considered when assessing the developable space within a site.

2.2 Below ground constraints

Below ground tree roots and the soil environment in which they grow need to be protected if the tree is to be retained. Trees grow in association with fungi and other soil organisms which are of key importance to tree health. Roots are essential for anchorage, the uptake of water and nutrients, and the storage of energy (carbohydrates) for the future growth and function of the tree.

Roots can be damaged by physical severance or wounding (e.g. following excavation of the soil) which can lead to the development of decay and a decline in vitality and/or instability. Raising the soil level can bury tree roots at a depth where suitable conditions for growth are less available. Toxic materials discharged into the soil (such as cement based aggregates, fuel and chemicals) can lead to root death and dysfunction. Soils can be compacted to levels inhospitable to tree growth with even a single pass of machinery, regular pedestrian traffic or the storage of plant and materials. Relieving compaction can be problematic and may require costly remedial works. Changes in drainage/water levels can also have significant long term impacts for tree health.

The effects of these incursions may take many years to manifest, with a resulting decline in amenity value and potentially the death or failure of the tree. It should be noted that older trees are particularly sensitive to damage and changes in conditions.

The Root Protection Area (RPA) is a notional area considered to be the minimum zone that must be protected to avoid any adverse impacts on retained trees. This area is deemed to be particularly important for tree stability, growth, function and health. However, roots may extend far greater distances, with the distribution of the root system relating directly to the availability of suitable conditions for growth (namely oxygen, water and nutrients). It is generally accepted that tree roots are predominantly located in the upper 1000mm of soil; however, roots may develop at deeper levels where conditions allow.

RPAs are calculated as per BS5837: 2012 Annex C, D and Section 4.6 in the BS 5837 2012 Document.

The RPA of the existing tree stock is an important material consideration when considering Site constraints and planning development activities. The RPA of significant trees on Site is shown on the Tree Survey Plans included as Appendix A.

The default position must be that all development, including any associated services should occur outside the RPAs of retained trees. Where this is unavoidable, it may be appropriate to use special measures to install structures, services or surfacing within RPAs which allow the protection of roots and the soil structure which are essential for tree growth and function.

Further steps to improve or increase the viable rooting area available to the tree may also be required to offset any negative impact as necessary.

2.3 Soils

On shrinkable clay soil, tree growth can lead to the differential movement of structures as moisture is removed from the soil during the growing season. Soils must be carefully assessed and any foundations must be installed following the recommendations of National House Building Council (NHBC) Standards *Chapter 4.2: Building Near Trees* (2018) to avoid potential future damage. Where trees which predate existing structures are to be removed, this can result in heave as the soils are re-wet.

The advice of a suitably qualified engineer must be obtained to inform any potential issue of heave. Specific advice in relation to this issue is beyond the scope of this report.

2.4 Above ground constraints

Tree stems and branches can restrict available space on Site. Damage or wounding (including excessive pruning) can significantly reduce the amenity contribution of the tree and may lead to the development of dysfunction and decay, with significant long term implications for tree health. The future impact of existing trees should be carefully considered, including individual species characteristics (such as potential future size, fruit fall, shade etc.) and how the tree will interact with any proposed development and future land use. Annual tree growth can lead to direct damage if stems/branches (or roots) come into physical contact with structures and this must also be taken into consideration.

2.5 Trees and Risk in the Context of Development

Tree owners/managers have a legal duty to prevent foreseeable harm. It is generally accepted that this duty can be fulfilled by undertaking proactive inspections of significant trees to identify obvious defects and by taking appropriate remedial action or gaining further advice as appropriate.

AECOM can provide surveys and advice in relation to tree risk management if required. Further guidance is available from the National Tree Safety Group¹.

The tree survey carried out as the basis of this report is primarily for planning purposes, focusing on the quality and benefits of the trees and is not specifically designed to assess the safety of trees on Site. However, when obvious issues have been identified recommendations have been included in the Tree Survey Schedule.

The Construction (Design and Management) Regulations (2015) states that developers and contractors have responsibilities for health and safety as a result of their actions. Should trees be left in an unstable or hazardous condition the Health and Safety Executive (HSE) could seek to prosecute those responsible along with the potential for further Civil claims for damages.

2.6 Trees and Wildlife

Full consideration must be given to the presence of species protected under the Wildlife and Countryside Act (1981 - as amended), the Countryside Rights of Way Act (2000) and the Habitat Regulations (2017). In particular the presence of bats and nesting birds. It is recommended that wherever possible, significant tree/hedge works take place outside of the typical bird nesting season of March to September.

2.7 Tree Works

Any tree surgery recommendations contained within this report are to be undertaken in accordance with BS3998: 2010 Tree work – Recommendations (BS3998) by suitably qualified and insured contractors. Significant pruning works are best undertaken when trees are dormant or outside periods of high functional activity to reduce the overall impact on energy available to the tree for growth and processes. In general the optimum period for works is between November to February and July to August (subject to the presence of protected species) when the tree is less active and better placed to respond to wounding and a reduction in leaf area.

3. Field Work Observations

3.1 The Site

The Site boundary is shown on the Overall Masterplan included within Appendix C (ref: GRS-ACF-00-00-DR-A-011050 by Ayre Chamberlain Gaunt) of this report.

The Site is located four miles south west of Wokingham Town centre in Wick Hill which is linked via Finchampstead Road to the east of the Site. It is situated in a small active residential estate in proximity to Gorse Ride South which encompasses Billing Avenue, Orbit Close, Dart Close, Firs Close and Vicarage Close. The Site is bordered by residential housing and a Veterinary Hospital to the south on Nine Mile Ride. It is connected to a further three residential estates via Gorse ride South to the west, north and north east (Kelsey Avenue, Whittle Close and Arnett Avenue).

¹ National Tree Safety Group (NTSG), 2011. Common sense risk management of trees. Forestry Commission.

3.2 The Trees

The tree survey identified 217 tree features with the potential to be impacted by future development proposals. The trees are predominantly semi mature to mature and in fair to good condition. Species present include; common oak (*Quercus robur*), silver birch (*Betula pendula*), Scots pine (*Pinus sylvestris*), sycamore (*Acer pseudoplatanus*), laburnum (*Laburnum anagyroides*), stags horn sumach (*Rhus typhina*), Lawson cypress (*Chamaecyparis lawsoniana*), rowan (*Sorbus aucuparia*), wild cherry (*Prunus avium*), bird cherry (*Prunus padus*), cherry plum (*Prunus cerasifera*), Leyland cypress (*X Cupressocyparis leylandii*), Norway maple (*Acer platanoides*), common ash (*Fraxinus excelsior*), Colorado white fir (*Abies concolor* 'Candicans') and beech (*Fagus sylvatica*).

There are two large areas of predominantly early mature to mature trees in the north and east of the Site. These areas consist of moderate to high value trees providing significant landscape and amenity value. The remainder of the Site is scattered with trees of varying quality which generally provide good landscape and amenity value.

Site photography can be found at Appendix E located to the rear of this report.

3.3 Statutory and Non Statutory Designations

AECOM checked Wokingham Borough Council's website² on the 16th January 2019. There were no Conservation Areas identified within or adjacent to the Site, however a group Tree Preservation Order (TPO) was found outside of the Site boundary to the south. This TPO covers T65 which is located beyond the Site boundary. Details of the TPO can be found below.



Figure 1 - Showing the TPO designation from Wokingham Borough Councils website.

Tree Preservation Orders 549/1992

TPO	Tree Preservation Orders
TPO NUMBER	549/1992
TREE REFERENCE NUMBER	G1
TREE SPECIES	16 x Scots Pine (<i>Pinus sylvestris</i>)
DATE TPO SERVED	11/3/1992
DATE TPO CONFIRMED	15/5/1992
FEATURE NAME	Group

² <https://wokingham.maps.arcgis.com/apps/webappviewer/index.html?id=19b3599d951e42dfaf32aa09568f5fcd>

Figure 2 – Showing details of the TPO from Wokingham Borough Councils website.

Magic map³ was checked on the 16th January 2019 for statutory and non-statutory designations relating to trees and none were found.

A felling licence may be required by the Forestry Commission to fell more than 5m³ in any calendar quarter (subject to relevant exceptions including trees in gardens, designated public open spaces or churchyards – this may cover many of the trees on Site, for the avoidance of doubt any exceptions must be agreed in advance with the Forestry Commission).

Full planning consent is an exemption from the need to apply for consent for works to trees protected by a Tree Preservation Order, the need to give notice of the intention to undertake works within a Conservation Area and the need to apply for a Felling Licence with the Forestry Commission (to fell more than 5m³ per calendar quarter). Prior to any tree works the status of trees to be removed or pruned must be verified with the LPA and the Forestry Commission as appropriate.

4. The Proposed Development

The Proposed Development is detailed on the Gorse Ride Overall Masterplan Plan included as Appendix C (ref: GRS-ACG-ZZ-00-DR-A-011050) by Ayre Chamberlain Gaunt.

'Detailed application for the redevelopment of the existing Gorse Ride South Estate, comprising the demolition of existing buildings and replacement with a new mixed-tenure residential scheme with associated access, parking, and private and public open spaces'.

5. Arboricultural Impact Assessment

5.1 Purpose

This impact assessment sets out the likely principal direct and indirect impacts of the Proposed Development on the trees on or immediately adjacent to the Site and suitable mitigation measures to allow for the successful retention of significant trees or to compensate for trees to be removed, where appropriate.

A brief summary of trees to be removed, tree works and incursions related to the Proposed Development are detailed within the table below.

Table 2: Summary of Removals, Incursions and Pruning to Facilitate the Proposed Development

Impact	Category A	Category B	Category C	Category U
Trees to be removed to facilitate the Proposed Development	T17, T18, T19, T49, T50, T94, T99 and T190.	T3, T10, T51, T52, T53, T55, T56, T66, T68, T69, T71, T72, T77, T78, T79, T80, T81, T82, T83, T85, T88, T90, T91, T93, T96, T97, T110, T111, T112, T113, T124, T125, T129, T148, T163, T164, T167, T168, T169, T171, T172, T184, T185, T189, T193, T194, T196, G209, G215, G216 and part of G212.	T54, T67, T70, T73, T74, T75, T76, T84, T86, T92, T95, T98, T108, T114, T115, T116, T117, T119, T120, T121, T126, T127, T128, T130, T149 T151, T165, T166, T170, T174, T175, T179, T180, T181, T182, T188, T191, T192, T195, T197, T198, G201, G206, G207, G208, G217	T58, T87, T118, T139, T155, T156 and T183.
Total	8 Individual trees.	47 Individual trees, 3 tree groups and 1 part group.	41 Individual trees and 5 tree groups.	7 Individual trees.
Trees which may require some incursion into their construction exclusion zone to allow the Proposed Development.	T13, T14, T15, T16, T20, T21, T22, T23, T24, T25, T42, T43, T44, T45, T47, T48, T65, T107, T145,	T1, T2, T5, T6, T11, T26, T27, T28, T29, T30, T31, T34, T35, T36, T37, T38, T39, T40, T41, T57, T59, T60, T61, T62,	T4, T7, T8, T9, T32, T33, T63, T64, T89, T132, T133, T137, T159, T160, G199, G200 and G203.	0

³ <https://magic.defra.gov.uk/MagicMap.aspx>

Impact	Category A	Category B	Category C	Category U
	T161, T177, T178, T187, G214.	T100, T101, T102, T109, T122, T123, T131, T134, T138, T144, T150, T152, T153, T157, T158, T162, T173, T176, T186, G202, G205, G210 and G211.		
Total	23 Individual trees and 1 tree group.	43 Individual trees and 4 tree groups.	14 Individual trees and 3 tree groups.	0
Trees to be pruned to facilitate the Proposed Development	T65, T161, T177 & G214	T173, G210	0	0
Total	3 Individual trees and 1 tree group.	1 Individual tree and 1 tree group.	0	0

5.2 Trees to be Removed

Ninety-six individual trees are to be removed to facilitate the Proposed Development; this includes eight trees classed as high quality (Category A), 47 trees classed as moderate quality (Category B) and the remaining 41 trees classified as low quality (Category C).

In addition, seven trees of very low quality (Category U) are also recommended for removal. These trees are not suitable for long term retention and their removal is justified regardless of the Proposed Development.

The Proposed Development will also require the removal of eight tree groups and part-of one group; this includes three tree groups and part-of one group classed as moderate quality (Category B). The remaining five tree groups are classed as low quality (Category C).

The majority of the trees to be removed are within the red line application boundary with the exception of trees T82 and T130 which are located to the south and east of the Site. T130 is likely to be the responsibility of Wokingham Borough Council, however T82 is located within the garden of a potentially privately-owned house/residence. Prior to any works the ownership of these trees must be established and the consent of the tree owner obtained in writing.

The loss of these trees is necessary to achieve the construction and landscaping proposals for the Site. Their retention is unavoidable due to a direct conflict with the Proposed Development and where pruning would have an unacceptable impact on the amenity of the tree, and/or would result in significant future pressure for tree removal.

Tree removals will be mitigated with a high quality scheme of new tree planting and associated landscaping works as shown in the Landscape General Arrangement Plan (Ref: GRS-UBU-00-00-DR-L-12-7000) by Ubu Design which will represent an opportunity to enhance the quality, benefits and resilience of trees on Site.

All of the remaining recorded trees can be retained and protected.

5.3 Tree Works

Tree removals and tree pruning works to facilitate the Proposed Development are detailed in the Tree Survey Schedule included as Appendix B. Trees T161, T177 and G214 are all located within the redline application boundary and are likely to require some limited pruning works to give clearance to the new residential properties, parking or roads. This level of pruning works will not have a significant negative impact on the health or amenity of these trees.

Two tree features T65 and G210 are located just beyond the redline application boundary located within private gardens and will also require some minor pruning works to give clearance to the new residential properties. Trees owned by third parties which overhang the Site boundary can be pruned back to the boundary line under established rights in common law (where no statutory tree protection is in force and where the works are specifically permitted via planning consent) however any arisings from the pruning works must be offered back to the tree owner. The works must not destroy or destabilise the tree and prior to any tree works to trees located in

third party ownership the extent of works, any access requirements and appropriate management of any arisings should be discussed with the adjacent land owner.

T65 is protected by a Tree Preservation Order (TPO) and must not be worked on without prior consent from Wokingham Borough Council, however receipt of full planning consent is an exception to the need to apply for permission to carry out works to a tree subject to TPO protection.

No additional works to retained trees are likely to be required. All tree work is to follow the principles of *BS3998: 2010 Treework – Recommendations* and must be carried out by suitably qualified and insured contractors. The Arboricultural Association provides a list of contractors who meet these requirements which can be found at www.trees.org.uk.

Should the requirement for additional tree works be identified, this will be discussed with an arboriculturist and no works will be undertaken without the consent of the Local Planning Authority (LPA).

5.4 Incursions within RPAs

There will be incursions into the RPAs of 82 individual trees and eight tree groups of varying quality. These incursions will consist of new car parking, roads, footways, services, new structures, fencing and play areas. Due to the alternative installation methodologies to protect soil structure and minimise any requirement for excavation and/or the low percentage of the overall RPA impacted, these incursions are not considered likely to have a negative impact on the physiological or structural condition of these trees. A detailed methodology for each incursion has been identified and included within the Outline Arboricultural Method Statement included as Appendix F.

5.5 The Future Impact of Retained Trees

The future impact of retained trees in conjunction with the Proposed Development and future use of the Site has been considered.

Retained trees will require periodic inspection to assess their structural condition and safety. Occasional removal of dead wood or other remedial works to address significant defects may be required in areas of frequent access. This is unlikely to be overly onerous and will be the responsibility of the tree owner. This will not represent a significant change from the current situation on Site due to its continued residential use.

A large number of the trees on the Site are broadleaved and will drop leaves, seeds and fruits in autumn, and will produce flowers in the spring. This can affect the use of adjacent land and can block gutters where tree branches overhang or are located close to roofs. The majority of retained trees (excluding T161, T177, G210 and G214) on Site will not overhang any proposed residential structures which will reduce the potential nuisance associated with this issue. Trees T161, T177, G210 and G214 require pruning to facilitate the development and to provide a clearance of new structures of at least 3m. This will establish a framework for any future maintenance which will be required on an ad hoc basis in the future. These trees are all early mature to mature and are therefore unlikely to increase very significantly in size and will grow more slowly than younger trees. The low level of ad hoc maintenance will not be overly onerous, will not result in significant future pressure to remove the trees and will not have a negative impact on the health or amenity value of the trees. Any other trees that develop canopies that develop in close proximity to structures in the future can also be pruned back on an ad hoc basis as required. This will also not have a negative impact on the health or amenity value of the trees and will not be overly onerous. Gutter guards or equivalent can be used to prevent leaf ingress into guttering if required.

Evergreen trees (which includes Scots pine, Lawson cypress, holly and Leyland cypress) will deposit leaves/needles, seed and other detritus throughout the year which can also be satisfactorily managed as above. One tree (T65) will require pruning to facilitate the development and to provide a minimum 3m clearance of new structures and this will establish a framework for future ad hoc maintenance. This tree is mature and is unlikely to increase significantly in size and is relatively slow growing, therefore maintenance pruning will not be overly onerous and will not have a negative impact on the health or amenity value of this tree.

Trees located to the south of structures are likely to cast the greatest degree of shade, this is likely to apply in particular to T1, T59, T61, T65, T89, T100, T101, T102, T109, T122, T123 and T186, G205. These trees are early mature to mature and are generally not expected to increase significantly in size in the future. The level of shade associated with these trees will impact on garden space and residential properties.

In some cases this impact will not represent a significant change from the existing status of the Site where a number of properties are subject to overhanging canopies and shade from trees at different stages of the day. Trees such as birch and pine (T1, T89, T100 and T109) will typically provide less significant shade as their canopies allow more light through or below. Shade and associated benefits related to the mitigation of climate related impacts are increasingly well recognised and a degree of shade is likely to be of benefit to residents.

All tree works recommended as a result of the preliminary tree survey of the Site which considered trees in the context of the current use of the Site (these works are included as preliminary management recommendations in the Tree Schedule in Appendix B of this report) should be actioned within the recommended timescales.

5.6 Tree Protection

Retained trees are vulnerable to damage from construction activities which can include physical damage to stems and branches following impacts with plant, root severance following trenching, root death or dysfunction following impacts to soil structure (caused by the movement of people or machinery on unsurfaced ground) or via the spillage of materials toxic to tree health. The default position is that the RPA and Canopy spread of trees to be retained will form an effective Construction Exclusion Zone, secured with robust fencing where no access will be permitted. Where access is necessary within this area, special measures such as the use of ground protection and arboricultural supervision are generally required.

Further information on Tree Protection is included within sections 6.8 of the Outline Arboricultural Method Statement included as Appendix F

5.7 Site Organisation, Storage and Use of Materials, Plant and Machinery.

All construction site facilities including site huts, staff and contractor parking and areas for storage will be located outside of the RPA or crown spread of retained trees, including those not specifically covered in this report. Space is likely to be constrained on Site and will need to be carefully considered. The Construction Exclusion Zones identified on the Tree Protection Plan must be fully respected and their location and significance is to be highlighted to all site staff and contractors during the formal site briefing.

The use, mixing and washing of materials can lead to run off or inadvertent spillage into tree root zones. Many substances often used on construction sites can be toxic to tree roots (such as concrete, fuels, salts, builders sand and herbicides) and can result in the death of tree roots, beneficial soil organisms and can have a significant impact on the future physiological and structural condition of the tree.

The storage of materials and arising's can result in an effective raised soil level. This buries tree roots at depths where air and water are less available and can lead to the decline or death of the tree.

For these reasons the storage of materials and any washing, mixing or refuelling will take place in agreed allocated areas at least 5m from the edge of the RPA of retained trees.

Any slope effect must be taken into account and where there is a potential for run off, heavy duty polythene sheeting and sandbags must be in place as bunding to prevent toxic materials reaching RPAs.

Particular care is required where high sided vehicles, long reach machinery and plant with jibs, booms and counterweights are to operate with in proximity to retained trees. A banksman will be used where the movement of plant or long reach machinery occurs within 5m of any part of a retained tree to ensure no damage is sustained.

5.8 Tree Planting

Existing areas of unsurfaced ground must be protected during the demolition and construction phases if they are to be re-used for new plantings. Protection can be achieved using fit for purpose ground protection measures as set out in BS5837:2012 Section 6.2.3 or by creating a fenced exclusion zone. Where protection is not feasible, soil amelioration or replacement works will be required to ensure suitable growing conditions for new trees to fully establish.

Where new trees are to be planted, the minimum planting distances detailed in Annexe A, Table A.1 of BS5837:2012 must be adhered to, to prevent direct damage to services and structures from future tree growth.

New tree planting should be implemented in accordance with the guidance set out in BS8545: 2014 Trees: from nursery to establishment in the landscape – Recommendations.

5.9 Services

The Proposed Phase 1, 2 & 3 Infrastructure plan (GRS-ACM-00-XX-DR-U-201056) has been overlaid onto the Tree Constraints Plan and is shown on the Tree Protection Plan included as Appendix D.

Where existing services are to be made redundant within the RPA of a retained tree, the default position must be that they are decommissioned and left in situ. Where this is not feasible the following principles are to be observed:

Existing services shall be removed by winching out from an access/inspection chamber located outside of RPAs. It may be acceptable to fill redundant pipe work with an inert material or undertake pipe bursting where necessary within the RPA of retained trees. Particular care is required with any oil filled cabling which must be carefully managed to avoid any discharge of oil.

Excavation to install or remove services has the potential to result in unacceptable root severance which could result in instability, dysfunction or the death of trees. Repeated incursions are particularly damaging and must be avoided by bundling services wherever possible.

The default position will therefore be that all services are routed outside of the RPA of retained trees. The following general principles will apply and where services must be routed within the RPA of a retained tree this is detailed in the Outline Arboricultural Method Statement in Appendix F. The principles of the National Joint Utilities Group (NJUG) Volume 4 guidance must be adhered to.

All services must be bundled as far as possible and installed within RPAs using hand/compressed air excavation (e.g. for shallow service runs) or trenchless techniques such as impact moling (thrust boring) with all access pits and inspection chambers being located outside of the RPA. The route must run as far from the main stem of a retained tree as possible and must be at a minimum depth so that the upper 1m of the soil profile is undisturbed. The depth of the run may need to be adjusted to account for soil type and species variation and this must be determined subject to the advice of an arboriculturist.

This operation must take place as specified in the Outline Arboricultural Method Statement. Any water pipes must be constructed so as to be resistant to ingress by tree roots (both existing trees, and newly planted trees) which could include the use of root barriers where appropriate.

6. Conclusions

The Proposed Development will require the removal of ninety-six individual trees; this includes eight trees classed as high quality (Category A), forty seven trees classified as moderate quality (Category B) and the remaining forty-one trees classified as low quality (Category C).

In addition, seven trees of very low quality (Category U) are also recommended for removal. These trees are arguably not suitable for long term retention and their removal is justified regardless of the Proposed Development.

The Proposed Development will also require the removal of eight tree groups and part-of one group; this includes three tree groups and part-of one group classed as moderate quality (Category B), the remaining five tree groups are classed as low quality (Category C).

The majority of the trees to be removed are within the red line application boundary with the exception of trees T82 and T130 which are located to the south and east of the Site. T130 is likely to be the responsibility of Wokingham Borough Council, however T82 is located within the garden of a privately owned house. Prior to any works the ownership of these trees must be established and the consent of the tree owner obtained in writing.

Tree removals are required due to a direct conflict with the Proposed Development, to avoid inappropriate tree retention close to new structures where onerous ongoing tree management would be necessary or to achieve the landscaping objectives for the Site.

Three trees (T161, T177 and G214) are located within the redline application boundary and are likely to require some limited pruning works to give clearance to the new residential properties.

In addition, two tree features (T65 and G210) are located beyond the redline application boundary located within private gardens and will also require minor pruning works to give clearance to the new residential properties.

All tree pruning works should be completed prior to the commencement of construction activity to ensure that retained trees are not damaged. The level of pruning works identified will not have a significant negative impact on the health or amenity value of retained trees.

Tree loss will be mitigated with a robust and high quality scheme of new tree planting as detailed in the Landscape Graphic Plan (Ref: GRS-UBU-00-00-DR-L-12-7500) by Ubu Design which represents an opportunity to increase the quality, impact, diversity and resilience of the local tree stock.

An RPA incursion to facilitate the installation of new features or the demolition of existing features is required within the RPA of 82 individual trees and eight tree groups. These incursions are considered to be achievable without a significant negative impact on tree health or amenity provided the methodology set out in the Outline Arboricultural Method Statement is fully adhered to.

Soil structure for areas of new tree planting where the ground is currently unsurfaced will either be protected using ground protection or fenced exclusion zones; or the soil structure will be ameliorated or replaced following the completion of construction works on Site.

References

British Standards Institution (BSI), BS5837:2012. Trees in relation to design, demolition and construction – Recommendations. BSI

British Standards Institution (BSI), BS3998:2010. Tree work – Recommendations. BSI

British Standards Institution (BSI) BS8545: 2014 Trees: from the nursery to independence in the landscape - Recommendations

National House Building Council (NHBC) Standards, (2018). Chapter 4.2: Building Near Trees

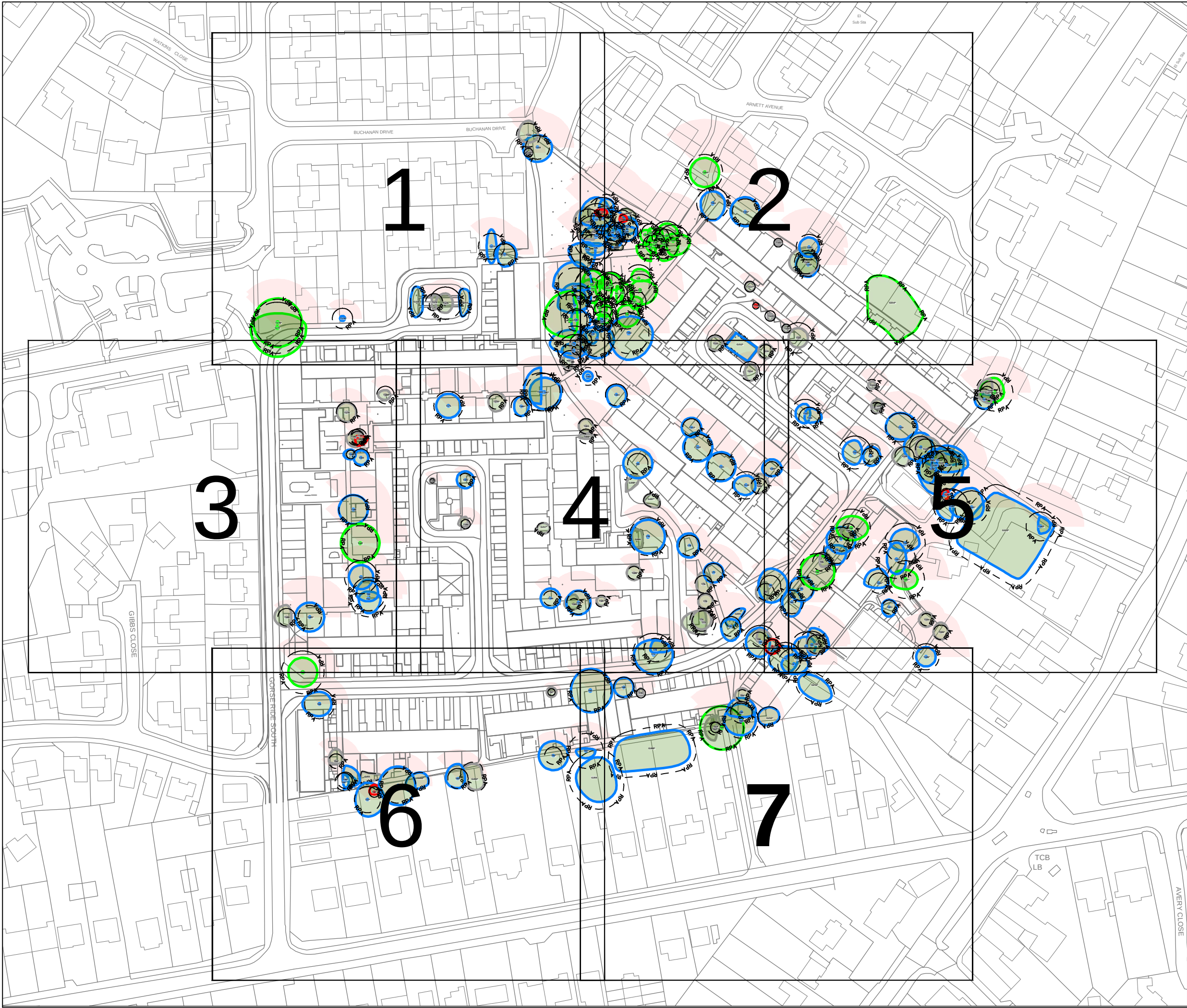
National Joint Utilities Group (NJUG) Volume 4, Issue 2, (2007). NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees.

National Tree Safety Group (NTSG), 2011. Common sense risk management of trees. Forestry Commission.

Department for Communities and Local Government (DCLG), 2018. National Planning Policy Framework (NPPF). DCLG

Wokingham Borough Council (WBC) Local Development Framework, Adopted January 2010, Core Strategy Development Plan

Appendix A Tree Constraints Plan



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NOTES

- TREE CATEGORIES AS DEFINED BY BS 5837:2012
- TREE LOCATIONS ARE BASED UPON THE TOPO SURVEY REF: 5700-3D-F.
- PLANS SHOULD BE READ IN CONJUNCTION WITH THE AECOM ARBORICULTURAL REPORT.
- THE ORIGINAL OF THIS DRAWING WAS PRODUCED IN COLOUR - A MONOCHROME COPY SHOULD NOT BE RELIED UPON.

KEY

A - CATEGORY TREES & GROUPS
(HIGH QUALITY & VALUE)

B - CATEGORY TREES & GROUPS
(MODERATE QUALITY & VALUE)

C - CATEGORY TREES & GROUPS
(LOW QUALITY & VALUE)

U - CATEGORY TREES & GROUPS
(UNSUITABLE FOR RETENTION)

ROOT PROTECTION AREAS
(AS DEFINED BY BS 5837:2012)

APPROXIMATE SHADING ARC



PROJECT NUMBER

60591598

SHEET TITLE

TREE CONSTRAINTS PLAN
(OVERVIEW)

SHEET NUMBER

60591598-ACM-00-XX-DR-ARB-000000

Rev

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U - CATEGORY TREES & GROUPS
(UNSUITABLE FOR RETENTION)

ROOT PROTECTION AREAS
(AS DEFINED BY BS 5837:2012)

APPROXIMATE SHADING ARC

N

0 5 10 15 20 25m

SCALE 1:500

The key plan shows a grid of 7 numbered areas. Area 1 is highlighted in red, indicating the location of the site within the project area.

PROJECT NUMBER

60591598

SHEET TITLE

TREE CONSTRAINTS PLAN
(SHEET 1 OF 7)

SHEET NUMBER

60591598-ACM-00-XX-DR-ARB-000001

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ROOT PROTECTION AREAS
(AS DEFINED BY BS 5837:2012)

APPROXIMATE SHADING ARC

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SCALE 1:500

KEY PLAN

PROJECT NUMBER

60591598

SHEET TITLE

TREE CONSTRAINTS PLAN
(SHEET 2 OF 7)

SHEET NUMBER

60591598-ACM-00-XX-DR-ARB-000002

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(UNSUITABLE FOR RETENTION)

ROOT PROTECTION AREAS

(AS DEFINED BY BS 5837:2012)

APPROXIMATE SHADING ARC

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SCALE 1:500

KEY PLAN

PROJECT NUMBER

60591598

SHEET TITLE

TREE CONSTRAINTS PLAN

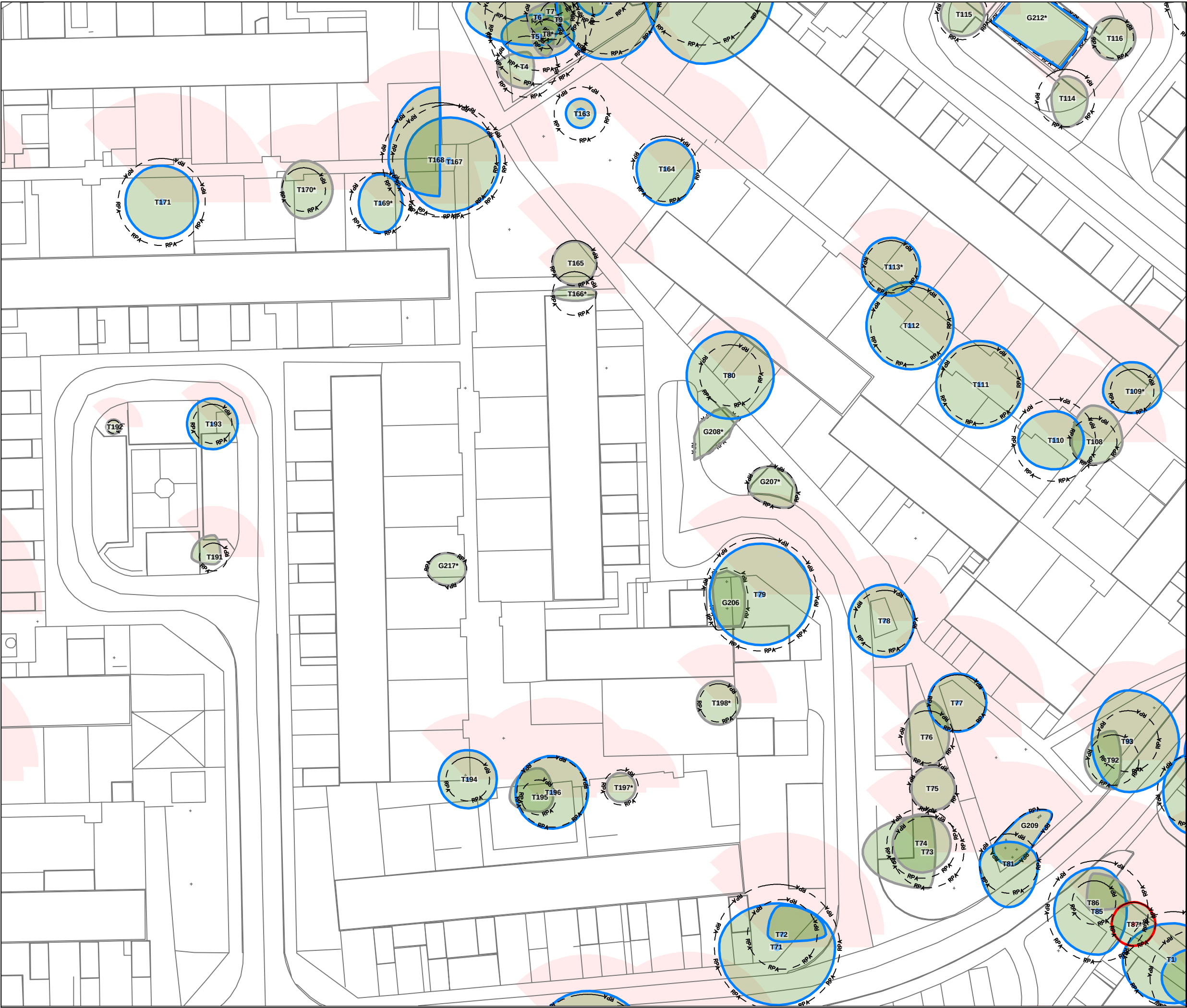
(SHEET 3 OF 7)

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ROOT PROTECTION AREAS
(AS DEFINED BY BS 5837:2012)

APPROXIMATE SHADING ARC

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SCALE 1:500

KEY PLAN

PROJECT NUMBER

60591598

SHEET TITLE

TREE CONSTRAINTS PLAN
(SHEET 4 OF 7)

SHEET NUMBER

60591598-ACM-00-XX-DR-ARB-000004

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ROOT PROTECTION AREAS
(AS DEFINED BY BS 5837:2012)

APPROXIMATE SHADING ARC

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SCALE 1:500

KEY PLAN

PROJECT NUMBER

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SHEET TITLE

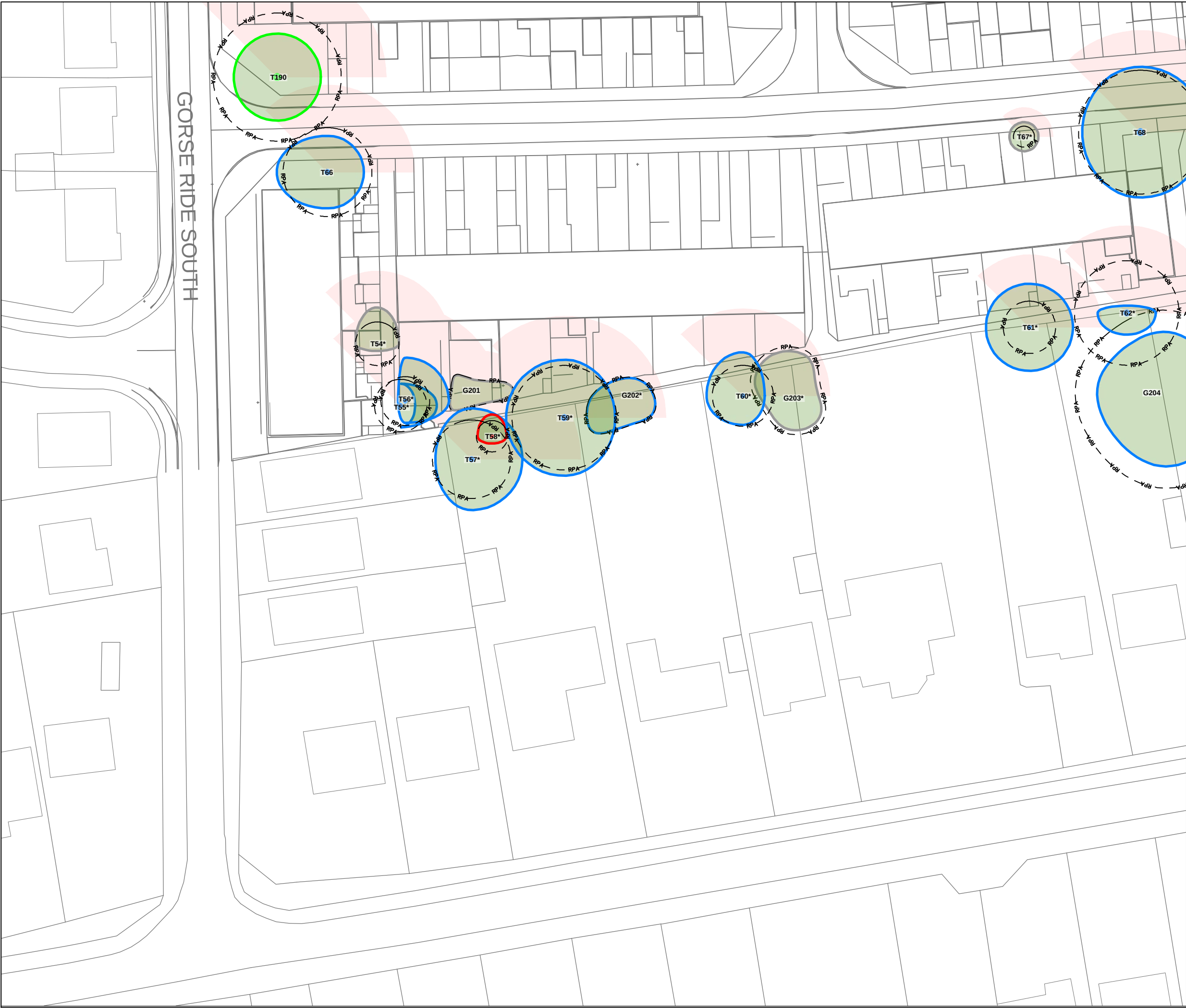
TREE CONSTRAINTS PLAN
(SHEET 5 OF 7)

SHEET NUMBER

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(LOW QUALITY & VALUE)

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(UNSUITABLE FOR RETENTION)

ROOT PROTECTION AREAS
(AS DEFINED BY BS 5837:2012)

APPROXIMATE SHADING ARC

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SCALE 1:500

KEY PLAN

PROJECT NUMBER

60591598

SHEET TITLE

TREE CONSTRAINTS PLAN
(SHEET 6 OF 7)

SHEET NUMBER

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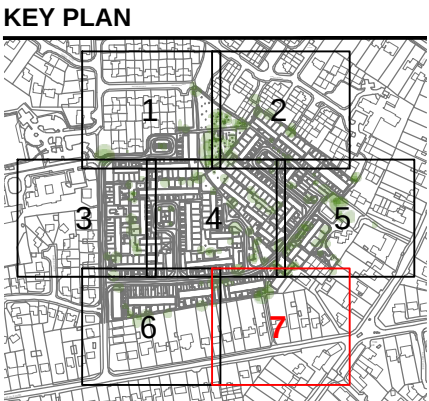
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APPROXIMATE SHADING ARC

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SCALE 1:500



PROJECT NUMBER

60591598

SHEET TITLE

TREE CONSTRAINTS PLAN
(SHEET 7 OF 7)

SHEET NUMBER

60591598-ACM-00-XX-DR-ARB-000007

Rev

B

Appendix B Tree Survey Schedule

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread (N)	Canopy Spread (S)	Canopy Spread (E)	Canopy Spread (W)	First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition Comments	Preliminary Management Comments	Works to Facilitate Proposed Development	Estimated Remaining Contribution	Category
T1	Scots Pine (Pinus sylvestris)	16	550	5	6	5	7	8.0/SW	5	Good	M	Good	Moderate deadwood.	Remove dead wood (< 3 months)		20+	B2
T2	Scots Pine (Pinus sylvestris)	18	550	4	4	6	5	12.0/W	6	Good	M	Good				20+	B2
T3	Scots Pine (Pinus sylvestris)	17	500	4	4	4	5	12.0/W	4	Good	M	Good	Ivy covered.	Sever ivy (< 12 months)	Fell	20+	B2
T4	Scots Pine (Pinus sylvestris)	11	350	2	3	1	4	8.0/NW	4	Fair	SM	Fair	Suppressed.			10+	C2
T5	Scots Pine (Pinus sylvestris)	17	550	3	3	5	5	11.0/N	11	Good	M	Good	Moderate deadwood.	Remove dead wood (< 3 months)		20+	B1,2
T6	Common Oak (Quercus robur)	18	620	6	4	3	10	2.0/N	4	Good	M	Good	Moderate deadwood.	Remove dead wood (< 3 months)		20+	B1,2
T7	Common Oak (Quercus robur)	12	300	5	1	3	1	n/a	1	Poor	SM	Fair	Ivy covered. Suppressed.	Sever ivy (< 6 months)		10+	C2
T8*	Common Oak (Quercus robur)	10	165	1	3	1	2	3.0/S	2.5	Fair	Y	Fair	Suppressed.			10+	C2
T9	Common Oak (Quercus robur)	13	190	2	4	2	4	4.0/S	2.5	Fair	SM	Good	Suppressed.			10+	C2
T10	Scots Pine (Pinus sylvestris)	18	410	1	4	2	3	16.0/W	16	Good	M	Good			Fell	20+	B1,2

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread (N)	Canopy Spread (S)	Canopy Spread (E)	Canopy Spread (W)	First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition Comments	Preliminary Management Comments	Works to Facilitate Proposed Development	Estimated Remaining Contribution	Category
T11	Red Oak (Quercus rubra)	18	600	5	8	7	7	3.0/E	4	Good	M	Good				20+	B1,2
T12*	Scots Pine (Pinus sylvestris)	18	335	1	4	1	3	15.0/SE	15	Good	M	Good				20+	B2
T13	Scots Pine (Pinus sylvestris)	18	405	2	2	2	3	16.0/W	16	Good	M	Good	Cat A as group.			40+	A2
T14	Scots Pine (Pinus sylvestris)	17	430	4	3	3	2	16.0/W	15	Good	M	Good	Cat A as group.			40+	A2
T15	Scots Pine (Pinus sylvestris)	18	390	3	2	3	2	16.0/W	15	Good	M	Good	Cat A as group.			40+	A2
T16	Scots Pine (Pinus sylvestris)	18	490	4	5	5	4	16.0/S	8	Good	M	Good	Cat A as group.			40+	A2
T17	Scots Pine (Pinus sylvestris)	18	390	2	3	3	2	16.0/S	16	Good	M	Good	Cat A as group.		Fell	40+	A2
T18	Scots Pine (Pinus sylvestris)	18	545	4	6	7	4	14.0/E	8	Good	M	Good	Cat A as group.		Fell	40+	A2
T19	Scots Pine (Pinus sylvestris)	18	480	4	1	5	3	15.0/E	9	Good	M	Good	Cat A as group.		Fell	40+	A2
T20	Scots Pine (Pinus sylvestris)	18	400	4	4	4	0.2	17.0/E	9	Good	M	Good	Cat A as group.			40+	A2
T21	Scots Pine (Pinus sylvestris)	18	365	3	4	2	0.2	17.0/S	16	Good	M	Good	Cat A as group.			40+	A2

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread (N)	Canopy Spread (S)	Canopy Spread (E)	Canopy Spread (W)	First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition Comments	Preliminary Management Comments	Works to Facilitate Proposed Development	Estimated Remaining Contribution	Category
T22	Scots Pine (Pinus sylvestris)	18	465	5	2	5	4	15.0/N	10	Good	M	Good	Cat A as group.			40+	A2
T23	Scots Pine (Pinus sylvestris)	18	495	4	5	2	5	16.0/S	16	Good	M	Good	Cat A as group.			40+	A2
T24	Scots Pine (Pinus sylvestris)	18	645	4	6	3	5	15.0/S	15	Good	M	Good	Cat A as group.			40+	A2
T25	Scots Pine (Pinus sylvestris)	18	565	6	1	5	4	13.0/N	5	Good	M	Good	Cat A as group. Moderate deadwood present.	Remove dead wood (< 3 months)		40+	A2
T26	Common Oak (Quercus robur)	17	380	4	5	6	2	4.0/SE	3	Good	EM	Good	Moderate deadwood present.	Remove dead wood (< 3 months)		20+	B2
T27	Common Oak (Quercus robur)	18	505	9	3	5	7	6.0/N	3	Good	M	Good	Moderate deadwood present.	Remove dead wood (< 3 months)		20+	B1,2
T28	Common Oak (Quercus robur)	18	430	6	5	5	2	6.0/E	2	Good	M	Good	Moderate deadwood present.	Remove dead wood (< 3 months)		20+	B1,2
T29	Common Oak (Quercus robur)	18	630	10	2	7	9	3.0/N	2	Good	M	Good	Moderate deadwood present.	Remove dead wood (< 3 months)		20+	B1,2
T30	Scots Pine (Pinus sylvestris)	18	505	2	3	4	4	15.0/W	15	Good	M	Good				20+	B1,2

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread (N)	Canopy Spread (S)	Canopy Spread (E)	Canopy Spread (W)	First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition Comments	Preliminary Management Comments	Works to Facilitate Proposed Development	Estimated Remaining Contribution	Category
T31	Common Oak (Quercus robur)	16	800	4	4	5	6	4.0/S	2.5	Fair	M	Fair	Ivy covered.	Sever ivy (< 6 months)		20+	B2
T32	Common Oak (Quercus robur)	9	570	4	3	0.2	7	4.0/W	2.5	Fair	M	Fair	Ivy covered.	Sever ivy (< 6 months)		10+	C2
T33	Common Oak (Quercus robur)	9	450	6	0.2	1	6	4.0/W	2.5	Fair	EM	Fair	Ivy covered.	Sever ivy (< 6 months)		10+	C2
T34	Common Oak (Quercus robur)	18	540	9	3	6	7	5.0/N	2	Good	M	Good				20+	B2
T35	Common Oak (Quercus robur)	16	420	4	6	9	4	4.0/E	2	Good	M	Good				20+	B2
T36	Scots Pine (Pinus sylvestris)	18	400	3	2	3	3	16.0/W	14	Good	M	Good				20+	B2
T37	Scots Pine (Pinus sylvestris)	18	450	4	3	4	4	15.0/E	10	Good	M	Good				20+	B1,2
T38	Scots Pine (Pinus sylvestris)	18	380	2	4	4	3	16.0/E	15	Good	M	Good	Bark wound on southern side from 0.3m up to 3.5m. Good wound wood.			20+	B2
T39	Scots Pine (Pinus sylvestris)	18	335	2	2	3	2	16.0/E	12	Good	EM	Good				20+	B2
T40	Scots Pine (Pinus sylvestris)	18	375	3	3	3	4	16.0/N	14	Good	EM	Good				20+	B2

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread (N)	Canopy Spread (S)	Canopy Spread (E)	Canopy Spread (W)	First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition	Comments	Preliminary Management Comments	Works to Facilitate Proposed Development	Estimated Remaining Contribution	Category
T41	Scots Pine (Pinus sylvestris)	18	420	1	4	3	4	16.0/S	15	Good	EM	Good					20+	B2
T42	Scots Pine (Pinus sylvestris)	18	400	2	3	3	2	17.0/W	15	Good	M	Good	Cat A as group.				40+	A2
T43	Scots Pine (Pinus sylvestris)	17	320	2	1	3	1	11.0/NE	8	Good	EM	Good	Cat A as group.				40+	A2
T44	Scots Pine (Pinus sylvestris)	18	430	1	6	0.1	6	15.0/SW	15	Good	M	Good	Cat A as group.				40+	A2
T45	Scots Pine (Pinus sylvestris)	18	370	2	3	1	3	17.0/W	16	Good	M	Good	Cat A as group.				40+	A2
T46	Scots Pine (Pinus sylvestris)	17	325	3	2	3	3	10.0/W	9	Good	M	Good	Cat A as group.				40+	A2
T47	Scots Pine (Pinus sylvestris)	18	300	3	1	1	2	14.0/N	11	Good	EM	Good	Cat A as group.				40+	A2
T48	Scots Pine (Pinus sylvestris)	18	500	5	2	5	4	15.0/N	14	Good	M	Good	Cat A as group.				40+	A2
T49	Scots Pine (Pinus sylvestris)	18	505	3	7	6	4	15.0/N	11	Good	M	Good	Cat A as group.			Fell	40+	A2
T50	Scots Pine (Pinus sylvestris)	18	555	3	6	7	3	9.0/SE	5	Good	M	Good	Cat A as group.			Fell	40+	A2
T51	Scots Pine (Pinus sylvestris)	14	620	3	6	5	4	9.0/S	6	Good	M	Good				Fell	20+	B1,2

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread (N)	Canopy Spread (S)	Canopy Spread (E)	Canopy Spread (W)	First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition Comments	Preliminary Management Comments	Works to Facilitate Proposed Development	Estimated Remaining Contribution	Category
T52	Scots Pine (Pinus sylvestris)	16	575	6	3	4	5	9.0/SW	7	Good	M	Good			Fell	20+	B1,2
T53	Scots Pine (Pinus sylvestris)	13	570	5	5	5	5	8.0/SW	4	Good	M	Good		Sever ivy (< 12 months)	Fell	20+	B1,2
T54*	Silver Birch (Betula pendula)	10	250	5	1	3	3	2.0/S	2	Fair	SM	Fair	No access to base		Fell	10+	C2
T55*	Silver Birch (Betula pendula)	13	300	3	3	2	-5	3.5/W	3	Good	EM	Fair	No access to base.		Fell	20+	B2
T56*	Silver Birch (Betula pendula)	13	280	6	3	6	1	4.0/S	4	Good	EM	Fair	No access to base.		Fell	20+	B2
T57*	Common Oak (Quercus robur)	15	#450	7	7	7	5	7.0/N	5	Good	EM	Good	Located beyond the Site boundary. No access to base			20+	B1,2
T58*	Silver Birch (Betula pendula)	8	#180	3	1	2	2	6.0/N	6	Poor	SM	Poor	Located beyond the Site boundary. Moderate die back within canopy. Suppressed.	Fell (< 12 months)	Fell	<10	U
T59*	Common Oak (Quercus robur)	14	#600	8	8	7	8	3.0/N	3	Fair	M	Fair	Located beyond the Site boundary. Large deadwood in canopy. Partially sparse canopy. No access to base.	Remove dead wood (< 3 months)		20+	B2
T60*	Beech (Fagus sylvatica)	12	#350	6	4	3	5	3.0/E	2	Good	SM	Good	Located beyond the Site boundary. No access to base.			20+	B2
T61*	Common Oak (Quercus robur)	10	#300	6	6	6	6	1.0/S	2	Good	EM	Fair	Located beyond the Site boundary. No access to base.			20+	B2

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread (N)	Canopy Spread (S)	Canopy Spread (E)	Canopy Spread (W)	First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition Comments	Preliminary Management Comments	Works to Facilitate Proposed Development	Estimated Remaining Contribution	Category
T62*	Common Oak (Quercus robur)	12	#600	1	3	4	4	3.0/S	3	Fair	EM	Fair	Located beyond the Site boundary. No access to base.			20+	B2
T63*	Sycamore (Acer pseudoplatanus)	8	#180	5	1	2	2	3.0/N	3	Fair	SM	Fair	Located beyond the Site boundary. No access to base			10+	C2
T64*	Sycamore (Acer pseudoplatanus)	12	#220	5	5	1	4	6.0/N	6	Fair	SM	Fair	Located beyond the Site boundary. No access to base. Suppressed.			10+	C2
T65*	Scots Pine (Pinus sylvestris)	18	#750	9	9	9	9	10.0/W	4	Good	M	Good	Located beyond the Site boundary. No access to base.		Prune back from proposed structure by 3m.	40+	A1,2
T66	Scots Pine (Pinus sylvestris)	12	510	5	5	5	7	3.0/W	1.6	Good	M	Good	Branches resting on roof.	Cut back to clear structure by 2m (< 12 months)	Fell	20+	B2
T67*	Stags Horn Sumach (Rhus typhina)	4	75,50,60,30,50,30	2	2	2	2	n/a	2	Good	EM	Fair			Fell	10+	C2
T68	Common Oak (Quercus robur)	14	710	9	9	9	8	3.0/S	5	Good	M	Good			Fell	20+	B1,2
T69	Silver Birch (Betula pendula)	13	350	4	4	4	4	3.0/N	2	Good	M	Good			Fell	20+	B2
T70	Laburnum (Laburnum anagyroides)	5	160	2	1	1	1	1.3/N	2.5	Fair	EM	Fair			Fell	10+	C2
T71	Scots Pine (Pinus sylvestris)	13	720	6	8	8	8	4.0/S	2	Good	M	Good	Typical lower and inner canopy deadwood (Moderate).	Remove dead wood (< 3 months)	Fell	20+	B2

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread (N)	Canopy Spread (S)	Canopy Spread (E)	Canopy Spread (W)	First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition Comments	Preliminary Management Comments	Works to Facilitate Proposed Development	Estimated Remaining Contribution	Category
T72	Scots Pine (Pinus sylvestris)	14	400	4	1	6	2	8.0/E	2	Good	EM	Good			Fell	20+	B2
T73	Silver Birch (Betula pendula)	12	230,250	5	5	1	9	6.0/W	6	Fair	EM	Fair	Asymmetrical canopy due to the previous presence of a tree to the south. Fairly sparse canopy.		Fell	10+	C2
T74	Common Oak (Quercus robur)	6	240,210	4	4	4	4	2.0/SW	1.5	Good	SM	Good	Good stem union at 0.3m.		Fell	10+	C2
T75	Scots Pine (Pinus sylvestris)	10	270	3	3	3	3	3.0/N	2	Good	SM	Good	Minor recent stem damage on north side at 1.2m.		Fell	10+	C2
T76	Silver Birch (Betula pendula)	13	300	5	4	3	3	5.0/N	2	Good	EM	Fair	Tight compression fork at 4m with upright form. Not suitable for long term retention consider removal.	Not suitable for long term retention consider removal. (< 12 months)	Fell	10+	C2
T77	Silver Birch (Betula pendula)	12	320	4	4	4	4	4.0/E	2	Good	SM	Good	Good future potential.		Fell	20+	B2
T78	Scots Pine (Pinus sylvestris)	9	350	5	5	4	5	2.0/W	2	Good	SM	Good	Good future potential.		Fell	20+	B2
T79	Silver Birch (Betula pendula)	14	650	7	7	7	7	5.0/N	2	Good	M	Fair	Ivy covered, obstructing survey.	Sever ivy (< 12 months)	Fell	20+	B1,2
T80	Wild Cherry (Prunus avium)	8	350	6	6	6	6	2.0/S		Good	M	Fair	Previous reduction to 7m with good regrowth.		Fell	20+	B2
T81	Silver Birch (Betula pendula)	14	340	3	6	4	4	4.0/W	2	Good	M	Fair	Two broken hanging branches in the west upper canopy.	Remove broken branches. (< 1 month)	Fell	20+	B2

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread (N)	Canopy Spread (S)	Canopy Spread (E)	Canopy Spread (W)	First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition Comments	Preliminary Management Comments	Works to Facilitate Proposed Development	Estimated Remaining Contribution	Category
T82*	Common Oak (Quercus robur)	18	#600	7	6	6	7	2.0/W	3	Fair	M	Good	Located beyond the Site boundary. No access to base. Large deadwood present.	Remove dead wood (< 3 months)	Fell	20+	B2
T83	Silver Birch (Betula pendula)	16	370	6	2	6	6	6.0/W	2.5	Good	M	Good			Fell	20+	B2
T84*	Bird Cherry (Prunus padus)	6	70,110,60,100,110,50,30	3	3	3	3		0.3	Good	EM	Fair			Fell	10+	C2
T85	Scots Pine (Pinus sylvestris)	16	580	6	6	4	6	7.0/NW	5	Good	M	Good	Small broken limb over front lawn at 9m.	Remove broken limb. (< 3 months)	Fell	20+	B2
T86	Silver Birch (Betula pendula)	11	250	4	1	5	1	3.0/E	3	Fair	EM	Fair	Supressed.		Fell	10+	C2
T87*	Silver Birch (Betula pendula)	11	250	3	3	3	3	1.6/S	2	Poor	EM	Fair	Moderate dieback in the upper canopy.	Fell (< 12 months)	Fell	<10	U2
T88	Common Oak (Quercus robur)	14	470	7	4	7	2	7.0/NW	5	Fair	EM	Fair	Supressed.		Fell	20+	B2
T89*	Silver Birch (Betula pendula)	14	#320	4	4	4	4	8.0/W	5	Fair	EM	Fair	No access to base. Previously reduced with small regrowth.			10+	C2
T90	Scots Pine (Pinus sylvestris)	16	400	5	6	4	4	9.0/N	8	Good	M	Good			Fell	20+	B2
T91	Common Oak (Quercus robur)	15	400	5	5	5	5	6.0/NE	4	Good	EM	Good			Fell	20+	B2

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T92	Common Oak (Quercus robur)	9	290	4	4	1	4	2.0/NE	0.2	Good	SM	Good				Fell	10+	C2
T93	Common Oak (Quercus robur)	11	350	7	7	7	5	3.0/NE	2	Good	EM	Good				Fell	20+	B2
T94	Common Oak (Quercus robur)	16	640	7	7	7	7	7.0/S	6	Good	M	Good				Fell	40+	A1,2
T95	Scots Pine (Pinus sylvestris)	14	320	4	2	4	1	7.0/N	4	Fair	EM	Fair	Supressed.			Fell	10+	C2
T96	Scots Pine (Pinus sylvestris)	15	460	2	6	4	5	7.0/S	4	Good	M	Good				Fell	20+	B2
T97	Silver Birch (Betula pendula)	16	410	5	6	6	6	6.0/W	8	Good	M	Good				Fell	20+	B2
T98	Silver Birch (Betula pendula)	15	240	1	4	1	3	7.0/S	3	Fair	EM	Fair	Supressed.			Fell	10+	C2
T99	Scots Pine (Pinus sylvestris)	16	660	5	5	7	6	6.0/NW	5	Good	M	Good				Fell	40+	A1,2
T100*	Common Oak (Quercus robur)	16	#700	6	3	6	6	7.0/S	8	Good	M	Good	No access to base. Previous heavy reduction.				20+	B2
T101*	Scots Pine (Pinus sylvestris)	16	#650	7	6	4	4	8.0/S	2.5	Good	M	Good	No access to base.	Sever ivy (<12 months)			20+	B2
T102*	Silver Birch (Betula pendula)	16	#350	6	2	4	6	5.0/W	3	Good	M	Good	No access to base.	Sever ivy (<12 months)			20+	B2

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T103	Wild Cherry (Prunus avium)	6	#240	3	4	3	3	2.0/W	2	Good	M	Good	Located beyond the Site boundary. Previous light pruning.			20+	B2
T104	Silver Birch (Betula pendula)	8	#210	3	3	3	3	2.0/W	2	Good	SM	Good	Located beyond the Site boundary.			10+	C2
T105*	Cherry Plum (Prunus cerasifera)	8	#250	4	3	3	3	4.0/W	3	Good	EM	Fair	Located beyond the Site boundary. No access to base.			10+	C2
T106*	Leyland Cypress (X Cupressocyparis leylandii)	18	#450	4	4	4	4	2.0/E	4	Good	M	Good	Located beyond the Site boundary. No access to base.			20+	B2
T107*	Scots Pine (Pinus sylvestris)	18	#650	4	4	5	6	3.0/W	3	Good	M	Good	Located beyond the Site boundary. No access to base.			40+	A1,2
T108	Silver Birch (Betula pendula)	10	270	5	3	4	3	4.0/NW	4	Fair	EM	Fair			Fell	10+	C2
T109*	Silver Birch (Betula pendula Youngii)	12	#250	4	3	4	4	4.0/E	2	Good	EM	Good	No access to base. Previous light pruning on eastern side.			20+	B2
T110	Scots Pine (Pinus sylvestris)	12	470	4	4	4	5	5.0/S	2.5	Good	M	Good			Fell	20+	B2
T111	Silver Birch (Betula pendula)	12	450	6	6	6	6	4.0/S	3	Good	M	Good			Fell	20+	B2
T112	Silver Birch (Betula pendula)	14	450	6	6	6	6	6.0/S	4	Good	M	Good			Fell	20+	B2
T113*	Leyland Cypress (X Cupressocyparis leylandii)	8	#300	4	4	4	4	3.0/N	2	Good	SM	Good	No access to base.		Fell	20+	B2

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread (N)	Canopy Spread (S)	Canopy Spread (E)	Canopy Spread (W)	First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition	Comments	Preliminary Management Comments	Works to Facilitate Proposed Development	Estimated Remaining Contribution	Category
T114	Norway Maple (Acer platanoides)	8	330	3	4	3	2	2.0/S	2	Good	EM	Good				Fell	10+	C2
T115	Norway Maple (Acer platanoides)	8	290	3	3	3	3	3.0/NE	2	Good	EM	Good				Fell	10+	C2
T116	Norway Maple (Acer platanoides)	7	230	3	3	3	3	2.0/SE	2	Good	EM	Good				Fell	10+	C2
T117*	Wild Cherry (Prunus avium)	6	#180	2	2	2	2	1.2/E	2	Fair	EM	Fair	No access to base.			Fell	10+	C2
T118	Tibetan Cherry (Prunus serrula)	3	110	0.5	0.5	0.5	0.5	1.5/N	1	Poor	SM	Poor	Previously heavily pruned back from car parking space.	Fell (<12 months)		Fell	<10	U2
T119	Tibetan Cherry (Prunus serrula)	4	180	1	2	1	1	1.5/N	1.8	Fair	EM	Fair				Fell	10+	C2
T120*	Tibetan Cherry (Prunus serrula)	4	150	1.5	1.5	1.5	1.5	1.8/W	1.8	Fair	EM	Fair				Fell	10+	C2
T121	Goat Willow (Salix caprea)	9	215,240,190,215,130,290	4	4	4	4	3.0/S	4	Good	EM	Fair	Previously pollarded at 2m.			Fell	10+	C2
T122	Scots Pine (Pinus sylvestris)	8	490	4	4	2	4	3.0/SW	2.5	Good	EM	Good					20+	B2
T123	Scots Pine (Pinus sylvestris)	8.5	365	4	2	5	2	3.0/SW	2.5	Good	EM	Good					20+	B2
T124	Scots Pine (Pinus sylvestris)	11	565	5	5	3	5	2.0/SW	2	Good	EM	Good				Fell	20+	B2

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread (N)	Canopy Spread (S)	Canopy Spread (E)	Canopy Spread (W)	First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition	Comments	Preliminary Management Comments	Works to Facilitate Proposed Development	Estimated Remaining Contribution	Category
T125	Silver Birch (Betula pendula)	8	280	4	4	4	3	2.0/W	0.5	Good	SM	Good				Fell	20+	B2
T126	Colorado White Fir (Abies concolor 'cadicans')	7	200	1.5	1.5	1.5	1.5	2.0/S	1.5	Good	SM	Good				Fell	10+	C1,2
T127*	Sycamore (Acer pseudoplatanus)	7	110,130	2	2	2	2	2.0/S	2	Fair	SM	Fair	Suppressed by adjacent oak. Unsuitable for long term retention.	Consider removal.		Fell	10+	C2
T128*	Common Oak (Quercus robur)	7	130	3	0.5	2	3	0.5/W	0.5	Good	Y	Good				Fell	10+	C2
T129	Silver Birch (Betula pendula)	15	495	6	5	7	6	4.0/N	2.5	Good	M	Good	Sucker growth at base.	Remove sucker growth at base. (< 12 months)		Fell	20+	B2
T130	Silver Birch (Betula pendula)	15	#330	4	4	2	5	4.0/W	2	Good	EM	Fair	Located beyond the Site boundary.			Fell	10+	C2
T131	Common Oak (Quercus robur)	14	#380	6	6	5	7	4.0/NW	3	Good	EM	Good	Located beyond the Site boundary.				20+	B2
T132*	Rowan (Sorbus aucuparia)	10	# 200,185	5	5	6	4	2.5/S	1.7	Fair	M	Fair	Located beyond the Site boundary. Tight compression fork with upright form and with some natural bracing. Consider removal to allow T90 more space to grow.				10+	C2
T133*	Holly (Ilex aquifolium)	9	# 130,120,130,90,150,140,80,70,60,60	4	5	3	4	n/a	0	Good	EM	Good	Located beyond the Site boundary. No access to base.				10+	C2
T134*	Scots Pine (Pinus sylvestris)	17	#520	5	2	11	5	13.0/SE	13	Good	M	Good	Located beyond the Site boundary. Two stems from 4m with good union.				20+	B2
T135*	Common Oak (Quercus robur)	18	#665	5	12	11	8	4.0/E	1	Good	M	Good	Located beyond the Site boundary.				20+	B2

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T136*	Common Oak (Quercus robur)	14	#295	4	6	2	5	4.0/S	1.7	Good	EM	Good	Located beyond the Site boundary. Partially suppressed by adjacent oak. Ivy covered.	Sever ivy (< 12 months)		20+	B2
T137*	Common Oak (Quercus robur)	10	#185	4	1	2	2	4.0/N	1	Fair	SM	Good	Located beyond the Site boundary. Supressed.			10+	C2
T138*	Common Oak (Quercus robur)	17	#490	8	3	9	6	6.0/S	7	Good	M	Good	Located beyond the Site boundary. Partially suppressed by pine.			20+	B2
T139*	Silver Birch (Betula pendula)	13	#205	2	2	1	2	0.3/N	2	Fair	SM	Fair	Located beyond the Site boundary. Several lower canopy stem wounds on north side with reasonable wound wood. Basal wound on south west side with some internal decay. Poor wound wood.	Remove due to low future potential. (< 6 months)	Fell	<10	U2
T140*	Common Oak (Quercus robur)	15	#595	5	6	1	6	4.0/S	2	Good	EM	Fair	Located beyond the Site boundary. Stem diameter measured at 0.4m. Ivy covered. Three stems from 1.2m with tight unions of fair quality and upright form.			20+	B2
T141*	Common Oak (Quercus robur)	18	#570	8	5	5	9	7.0/N	3	Fair	M	Poor	Located beyond the Site boundary. Sparse canopy. Very tight compression fork at 7m with large pointed reaction wound on north east and south west side of the union. Active increment strip line running down the north eastern side of the union. Cable bracing located at 11m.	Unless the bracing is already under a 3 yearly inspection regime by the tree owner, recommend climbing inspection of cable bracing. (< 3 months)		20+	B2
T142*	Silver Birch (Betula pendula)	8	#140	1	4	2	3	3.0/N	2	Fair	SM	Fair	Located beyond the Site boundary.			10+	C2
T143*	Common Oak (Quercus robur)	18	# 285,185,220	4	3	4	1	4.0/N	1.5	Fair	EM	Fair	Located beyond the Site boundary. Three stems from base with good unions. Two smaller stems have large dead tops potentially due to suppression.	Remove dead wood (< 1 month)		20+	B2

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread (N)	Canopy Spread (S)	Canopy Spread (E)	Canopy Spread (W)	First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition Comments	Preliminary Management Comments	Works to Facilitate Proposed Development	Estimated Remaining Contribution	Category
T144	Silver Birch (Betula pendula)	14	#350	2	4	4	4	3.0/S	2	Good	M	Good	Located beyond the Site boundary.			20+	B2
T145*	Scots Pine (Pinus sylvestris)	15	#640	6	4	4	6	7.0/W	2	Good	M	Good	Located beyond the Site boundary.			40+	A1,2
T146*	Silver Birch (Betula pendula)	14	#330	5	5	1	5	4.0/S	4	Good	EM	Good	Located beyond the Site boundary.			10+	C2
T147*	Scots Pine (Pinus sylvestris)	4.5	#225	0.5	3	3	5	2.5/N	2	Fair	SM	Fair	Located beyond the Site boundary. Poor form due to suppression.			10+	C2
T148*	Silver Birch (Betula pendula)	16	#400	5	5	4	5	5.0/S	2	Good	M	Good	Located beyond the Site boundary.		Fell	20+	B2
T149*	Ash (Fraxinus excelsior)	14	#400	6	5	5	7	2.5/S	2.5	Fair	EM	Fair	Located beyond the Site boundary. No access to base. Suppressed. Asymmetrical form.		Fell	10+	C2
T150*	Hornbeam (Carpinus betulus)	16	#440	4	4	4	4	3.0/S	3	Good	M	Good	Located beyond the Site boundary.			20+	B2
T151*	Leyland Cypress (X Cupressocyparis leylandii)	6	#150	1	1	1	1	0.1/S	0.1	Good	SM	Good	Located beyond the Site boundary. No access to base.		Fell	10+	C2
T152*	Common Oak (Quercus robur)	16	#440	6	6	6	6	2.0/W	2	Good	EM	Good	Located beyond the Site boundary.			20+	B2
T153	Silver Birch (Betula pendula)	9	#550	5	7	5	5	9.0/N	3	Good	M	Fair	Located beyond the Site boundary. Large wound on western side of main stem at 3m, likely due to branch tear out. Wound wood formation and occluding of wound present.			20+	B2
T154*	Common Alder (Alnus glutinosa)	22	#620	6	6	6	6	6.0/S	3	Good	M	Good	Located beyond the Site boundary.			40+	A1,2

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread (N)	Canopy Spread (S)	Canopy Spread (E)	Canopy Spread (W)	First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition Comments	Preliminary Management Comments	Works to Facilitate Proposed Development	Estimated Remaining Contribution	Category
T155	Scots Pine (Pinus sylvestris)	19	500	1	2	2	3	9.0/S	9	Dead	M	Fair	Recent death of tree.	Fell (< 3 months)	Fell	<10	U2
T156	Scots Pine (Pinus sylvestris)	18	320	2	1	2	1	15.0/N	12	Fair	EM	Poor	Large wound at 12m on southern side of main stem extending upwards 2-3m. Woodpecker hole at base of wound.	Fell (< 1 month)	Fell	<10	U2
T157	Common Oak (Quercus robur)	18	610	3	8	3	8	2.0/N	2	Good	EM	Good				20+	B1,2
T158	Silver Birch (Betula pendula)	15	410	5	6	6	6	3.0/N	1.8	Good	M	Good				20+	B2
T159	Silver Birch (Betula pendula)	12	210,180,215	6	3	4	4	3.0/S	0.3	Fair	EM	Poor	Not suitable for long term retention. Consider removal.			10+	C2
T160*	Silver Birch (Betula pendula)	7	150	2.5	1	1	1	0.5/N	0.5	Good	SM	Fair	Situated within 1m of building. Not suitable for long term retention. Consider removal.	Not suitable for long term retention. Consider removal. (When funds allow)		10+	C2
T161	Common Oak (Quercus robur)	20	870	12	7	3	11	4.0/N	3	Good	M	Good		Remove dead wood (< 3 months)		40+	A1,2
T162	Common Oak (Quercus robur)	17	700	7	11	10	8	8.0/S	4	Good	M	Good		Sever ivy (< 12 months)		20+	B1,2
T163	Common Oak (Quercus robur)	9	1340	2	2	2	2	7.0/N	n/a	Fair	M	Fair	A previous significant structural defect has resulted in the tree being monolithed at 9m.		Fell	20+	B2

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread (N)	Canopy Spread (S)	Canopy Spread (E)	Canopy Spread (W)	First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition Comments	Preliminary Management Comments	Works to Facilitate Proposed Development	Estimated Remaining Contribution	Category
T164	Silver Birch (Betula pendula)	14	375	4	5	4	4	4.0/S	1	Good	EM	Good			Fell	20+	B2
T165	Scots Pine (Pinus sylvestris)	11	260	3	3	3	3	0.3/SE	1.8	Good	SM	Fair	Raised soil level 1m around base of stem.	Remove lowest branch on the south east side. (< 6 months) Restore original soil level by hand around base of tree. (< 12 months)	Fell	10+	C2
T166*	Elder (Sambucus nigra)	7	#250	1	1	3	3	1.5/E	4	Fair	M	Fair	No access to base.		Fell	10+	C2
T167	Silver Birch (Betula pendula)	15	645	6	7	7	6	3.0/S	2	Good	M	Good			Fell	20+	B2
T168	Scots Pine (Pinus sylvestris)	15	655	10	5	0.1	7	6.0/NW	1	Good	M	Good			Fell	20+	B2
T169*	Silver Birch (Betula pendula)	14	#350	4	4	3	3	8.0/S	2	Good		Good	No access to base.		Fell	20+	B2
T170*	Ash (Fraxinus excelsior)	9	#250	4	4	4	3	2.0/E	2.5	Good	SM	Good	No access to base.		Fell	10+	C2
T171	Common Oak (Quercus robur)	15	#500	5	5	5	5	7.0/S	4	Fair	M	Good	No access to base. Previously pollarded at 13m.		Fell	20+	B2
T172	Ash (Fraxinus excelsior)	12	370	5	5	5	3	3.0/S	2	Good	EM	Good			Fell	20+	B2
T173*	Common Oak (Quercus robur)	12	#450	7	7	2	2	2.0/W	3	Good	EM	Good	Located beyond the Site boundary. No access to base.		Crown lift to ensure a 3.5m clearance of the proposed car parking bays. Reduce	20+	B2

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread (N)	Canopy Spread (S)	Canopy Spread (E)	Canopy Spread (W)	First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition Comments	Preliminary Management Comments	Works to Facilitate Proposed Development	Estimated Remaining Contribution	Category
															southern and northern canopy by 2m to rebalance following removal of adjacent tree.		
T174	False acacia (Robinia pseudoacacia)	8	160,190	3	3	3	1	2.0/E	4	Fair	SM	Poor	Compression fork at base. Not suitable for long term retention. Consider removal.	Not suitable for long term retention. Consider removal. (< 6 months)	Fell	10+	C2
T175	False acacia (Robinia pseudoacacia)	10	370,190	4	4	3	4	2.0/SW	4	Fair	EM	Poor	Major deadwood in crown.	Remove deadwood. (< 3 months)	Fell	10+	C2
T176*	Lawson Cypress 'Elwoodii' (Chamaecyparis lawsoniana 'Elwoodii')	8	#350	1	1	1	1	n/a	0.1	Good	M	Good	Located beyond the Site boundary.			20+	B2
T177	Common Oak (Quercus robur)	18	#880	6	12	12	11	3.0/E	2.5	Good	M	Good	Located beyond the Site boundary.		Prune back from proposed structure by up to 3m. Crown lift to clear road by 5.2m	40+	A1,2
T178*	Common Oak (Quercus robur)	18	#805	10	10	10	10	2.0/N	2	Good	M	Good	Located beyond the Site boundary.			40+	A1,2
T179	Silver Birch (Betula pendula)	10	350	4	4	4	4	4.0/N	3	Fair	EM	Fair	Prolific ivy obstructing survey.	Sever ivy (< 6 months) Re-inspect tree. (< 12 months)	Fell	10+	C2
T180*	Rowan (Sorbus aucuparia)	8	#300	2	2	2	3	3.0/N	3	Good	M	Good	No access to base.		Fell	10+	C2
T181	Silver Birch (Betula pendula)	9	270	3	2	2	3	4.0/W	2	Good	M	Good			Fell	<10	C2

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread (N)	Canopy Spread (S)	Canopy Spread (E)	Canopy Spread (W)	First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition Comments	Preliminary Management Comments	Works to Facilitate Proposed Development	Estimated Remaining Contribution	Category
T182	Silver Birch (Betula pendula)	10	270	2	4	3	4	3.0/E	2	Good	M	Fair	Minor damage to bark on main stem at 1m.		Fell	10+	C2
T183	Silver Birch (Betula pendula)	9	240	1	3	4	1	6.0/S	3	Poor	EM	Poor	Fungal brackets on main stem at 9m, suspected to be Fomitopsis betulina.	Fell (< 3 months)	Fell	<10	U2
T184	Silver Birch (Betula pendula)	12	#300	3	3	3	3	6.0/E	5	Good	M	Good	No access to base.		Fell	20+	B2
T185*	Euonymus sp (Euonymus sp)	7	#150	2	2	2	3	2.0/N	3	Good	M	Good	No access to base.		Fell	20+	B2
T186	Common Oak (Quercus robur)	16	500	6	6	6	6	5.0/W	4	Good	M	Good	Previous heavy reduction has resulted in epicormic growth throughout canopy. No access to base.			20+	B2
T187	Common Oak (Quercus robur)	20	#600	8	8	8	8	6.0/E	6	Good	M	Good	No access to base.			40+	A1,2
T188	Common Oak (Quercus robur)	7	300	5	4	2	5	2.0/N	2	Fair	SM	Fair			Fell	10+	C2
T189*	Sycamore (Acer pseudoplatanus)	17	#400	6	6	6	6	3.5/W	2.5	Good	M	Good	No access to base.		Fell	20+	B2
T190	Scots Pine (Pinus sylvestris)	15	735	6	6	6	6	3.0/N	2	Good	M	Good	Large hanging dead limb at 1m on southern side over footway.	Remove dead wood (Asap)	Fell	40+	A1,2
T191	Wild Cherry (Prunus avium)	7	160	3	1	1	3	3.0/NW	3	Good	SM	Fair			Fell	10+	C2
T192	Wild Cherry (Prunus avium)	4	75	1	1	1	1	n/a	1.5	Fair	Y	Fair	Poor form.		Fell	10+	C2

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread (N)	Canopy Spread (S)	Canopy Spread (E)	Canopy Spread (W)	First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition	Comments	Preliminary Management Comments	Works to Facilitate Proposed Development	Estimated Remaining Contribution	Category
T193	Wild Cherry (Prunus avium)	6	225	3.5	3.5	3.5	3.5	n/a	3	Good	M	Good				Fell	20+	B2
T194	Bird Cherry (Prunus padus)	9	#250	4	4	4	4	2.0/S	3	Good	M	Good	No access to base.			Fell	20+	B2
T195	Hazel (Corylus avellana)	8	#200	4	2	2	4	n/a	2.5	Good	SM	Fair	No access to base.			Fell	10+	C2
T196	Silver Birch (Betula pendula)	13	#400	5	5	5	5	5.0/S	4	Good	EM	Good	No access to base.			Fell	20+	B2
T197*	Lawson Cypress (Chamaecyparis lawsoniana)	8	#200	2	2	2	2	n/a	n/a	Good	EM	Good	No access to base.			Fell	10+	C2
T198*	Laburnum (Laburnum anagyroides)	8	#220	3	3	3	3	3.0/N	3	Good	EM	Good	No access to base.			Fell	10+	C2
G199*	Holly (Ilex aquifolium), Elder (Sambucus nigra)	7	235	4	4	4	4	n/a	n/a	Good - Fair	EM	Good - Fair					10+	C2
G200	Holly (Ilex aquifolium)	7	120	3	3	3	3	n/a	n/a	Fair	SM	Fair					10+	C2
G201	Rowan (Sorbus aucuparia), Sycamore (Acer pseudoplatanus), Leyland Cypress (X Cupressocyparis leylandii), Wild Cherry (Prunus avium)	8	#150	3	3	3	3	n/a	n/a	Good - Fair	SM	Good - Fair	No access to base			Fell	10+	C2
G202*	Silver Birch (Betula pendula)	12	#300	4	4	4	4	n/a	n/a	Good	EM	Good	No access to base				20+	B2

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread (N)	Canopy Spread (S)	Canopy Spread (E)	Canopy Spread (W)	First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition Comments	Preliminary Management Comments	Works to Facilitate Proposed Development	Estimated Remaining Contribution	Category
G203*	Lawson Cypress (Chamaecyparis lawsoniana), Beech (Fagus sylvatica), Hawthorn (Crataegus monogyna), Silver Birch (Betula pendula)	12	#300	3	3	3	3	n/a	n/a	Good - Fair	EM	Good - Fair	Located beyond the Site boundary. No access to base.			10+	C2
G204	Common Oak (Quercus robur), Golden leylandii (X Cupressocyparis leylandii Castlewella)	15	#500	3	3	3	3	n/a	n/a	Good - Fair		Good - Fair	No access to base. Leyland has been previously topped.			20+	B2
G205*	Lawson Cypress (Chamaecyparis lawsoniana), Silver Birch (Betula pendula)	15	#450	3	3	3	3	n/a	n/a	Good - Fair	EM-M	Good - Fair	Located beyond the Site boundary. No access to base.			20+	B1,2
G206	Lawson Cypress (Chamaecyparis lawsoniana), Birch (Betula sp)	8	200	2	2	2	2	n/a	n/a	Good	SM-EM	Fair	Lower 5m of hedge is maintained.		Fell	10+	C2
G207*	Wild Cherry (Prunus avium)	20	120	2	2	2	2	n/a	n/a	Good	SM	Fair			Fell	10+	C2
G208*	Rowan (Sorbus aucuparia)	5	140	2	2	2	2	n/a	n/a	Fair	SM	Fair			Fell	10+	C2
G209	Silver Birch (Betula pendula)	13	265	4	4	4	4	n/a	n/a	Good - Fair	Y-EM	Good - Fair			Fell	20+	B2
G210*	Silver Birch (Betula pendula), Common Oak (Quercus robur)	16	#600	7	7	7	7	n/a	n/a	Good - Fair	EM-M	Good - Fair	Located beyond the Site boundary. No access to bases.		Prune back from proposed structure by up to 3m.	20+	B2
G211*	Common Oak (Quercus robur), Scots Pine (Pinus sylvestris), Cherry Plum (Prunus cerasifera)	16	#600	6	6	6	6	n/a	n/a	Good - Fair	SM-M	Good - Fair	Located beyond the Site boundary. No access to base.			20+	B2
G212*	Wild Cherry (Prunus avium)	8	350	4	4	4	4	n/a	n/a	Good	SM-EM	Good			Fell in part as shown on the Tree Removals Plan	20+	B2

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread (N)	Canopy Spread (S)	Canopy Spread (E)	Canopy Spread (W)	First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition Comments	Preliminary Management Comments	Works to Facilitate Proposed Development	Estimated Remaining Contribution	Category
G213*	Common Oak (Quercus robur), Scots Pine (Pinus sylvestris)	18	#700	5	5	5	5	n/a	n/a	Good - Fair	EM-M	Good - Fair	Located beyond the Site boundary. Predominantly oak with a single pine in the south east.	Sever ivy (< 3 months) Remove dead wood (< 12 months)		20+	B1,2
G214*	Common Oak (Quercus robur), Silver Birch (Betula pendula), Scots Pine (Pinus sylvestris)	20	#600	7	7	7	7	n/a	n/a	Good	M	Good	Located beyond the Site boundary. No access to base.		Prune back from proposed structure by 3.5m.	40+	A1,2
G215	Norway Maple (Acer platanoides)	10	#210	3	3	3	3	n/a	n/a	Good	SM	Good	No access to base.		Fell	20+	B2
G216	Norway Maple (Acer platanoides)	10	#210	3	3	3	3	n/a	n/a	Good - Fair	SM	Good - Fair	No access to base.		Fell	20+	B2
G217*	Lawson Cypress 'Elwoodii' (Chamaecyparis lawsoniana 'Elwoodii')	7	#200	3	3	3	3	n/a	n/a	Good	EM	Good	No access to base.		Fell	10+	C2

Key to Abbreviations Used in the Survey

Ref No	Specific identification number given to each tree or group. T=Tree/H=Hedge/G=Group.	
Species	Common name followed by botanical name shown in <i>italics</i>	
RPA	Root Protection Area (As defined by BS5837)	
Stem diameter	Diameter of main stem, measured in millimetres at 1.5 m above ground level. (MS = Multi-stem tree measured in accordance with BS5837 Annexe C)	Av / Average: indicates an average representative measured dimension for the group or feature
Spread	The width and breadth of the crown. Estimated on the four compass points in metres.	
Crown clearance	The estimated height (in metres) above ground level of the lowest significant branch attachments.	
#	Estimated dimensions	
*	Indicates estimated position of tree (not indicated on topographical survey).	
Category	Categorisation of the quality and benefits of trees on Site as per Table 1 and 2 of BS5837:2012. 1=Arboricultural quality/value 2=Landscape quality/value 3=Cultural quality/value (including conservation)	
	A=High quality/value 40yrs+ (light green). B=Moderate quality/value 20yrs+ (mid blue) C=Low quality/value min 10yrs/stem diameter less than 150mm (grey). U=Unsuitable for retention (dark red).	
Life stage	Young (Y): Newly planted tree 0-10 years. Semi-Mature (SM): Tree in the first third of its normal life expectancy for the species (significant potential for future growth in size). Early Mature (EM): Tree in the second third of its normal life expectancy for the species (some potential for future growth in size) Mature (M): Tree in the final third of its normal life expectancy for the species (having typically reached its approximate ultimate size). Over Mature (OM): Tree beyond the normal life expectancy for the species. Veteran (V): Tree which is of interest biologically, aesthetically or culturally because of its condition, size or age.	
Structural condition	Good: No significant structural defects Fair: Structural defects which can be resolved via remedial works. Poor: Structural defects which cannot be resolved via remedial works. Dead: Dead.	
Physiological condition	Good: Normal vitality including leaf size, bud growth, density of crown and wound wood development. Fair: Lower than normal vitality, reduced bud development, reduced crown density, reduced response to wounds. Poor: Low vitality, low development and distribution of buds, discoloured leaves, low crown density, little extension growth for the species. Dead: Dead Fair/Good = Indicates an intermediate condition Fair – Good = Indicates a range of conditions (e.g. within a group)	
Preliminary management recommendations	Works identified during the tree survey as part of sound arboricultural management, based on the current context of the Site (where relevant reference has been made to tree management based on the potential future context of the site).	

Works to facilitate the development	Tree works identified as necessary to facilitate the Proposed Development following a desk top analysis of the proposals in relation to tree constraints.
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Appendix C Development Proposals

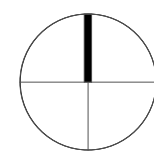
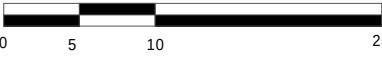


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A1

SCALE

1:500



NOTES:

DO NOT SCALE. USE FIGURED DIMENSIONS ONLY.

All dimensions to be checked on site.
Drawing to be read in conjunction with all relevant Architectural, Interiors, Structural, M&E, Drainage/ Public Health, Landscape and Civils drawings and specifications. Any discrepancies between consultant's drawings to be reported to the Architect before any work commences. The Contractor's attention is drawn to the Health & Safety matters identified in the Health & Safety plan as being potentially hazardous. These items should not be considered as a full and final list.

The Work Package Contractor's normal Health & Safety obligations still apply when undertaking constructional operations both on and off site.

Ayre Chamberlain Gaunt take no responsibility for the location of legal boundaries indicated on this drawing and advise a separate drawing to be completed by specialist surveyor in order to establish exact boundaries. DWG files provided for information only. Refer to PDF record.

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**AYRE
CHAMBERLAIN
GAUNT**

PROJECT

Gorse Ride South Regeneration
Gorse Ride South, Wokingham

DRAWING TITLE

Overall Master Plan

REV.	DATE	DESCRIPTION
P4	21/05/19	For Information
P5	24/05/19	Updated Phasing Boundary. For review and comment
P6	31/05/19	Updates for Coordination
P7	06/06/19	Updates for Coordination
P8	14/06/19	Updates for Coordination
P9	08/07/19	Updates for Coordination
P10	02/08/19	Updates for Coordination
P11	18/10/19	Updates for Coordination
P12	21/10/19	Updates for Coordination
P13	03/12/19	Updates for Coordination
P14	16/01/20	Updates for Coordination
P15	13/03/20	Stage 3 and Planning Issue

DRWN BY	CHKD BY	APPD. BY
MR	PA	OW

DRAWING NO.

project code - originator - volume - level - type - role - number

GRS-ACG-00-00-DR-A-011050

STAGE

RIBA stage

3

SUITABILITY

code

A2

description

APPROVED FOR PLANNING STAGE

Key

- Red Line Boundary (Based on accurate topographical information)
- Vehicular macadam to main access roads
- Permeable block paving to driveways, parking bays and adjoining roads
- Permeable aggregate paving
- Pedestrian macadam to public footpaths
- Pedestrian macadam to pavements
- Residential grassed areas
- Public amenity grassed areas
- Planting beds
- Bioorientation planting
- Wildflower meadow / Wetland planting
- Sensory Garden
- Informal Play Area
- Pond
- Reed Planting
- Concrete deck and boardwalk
- Textured Concrete to deck and boardwalk
- Hedging
- Swale lined with riverwashed pebbles
- Play and Trim Trail Areas
- Proposed Gas Governor Relocation

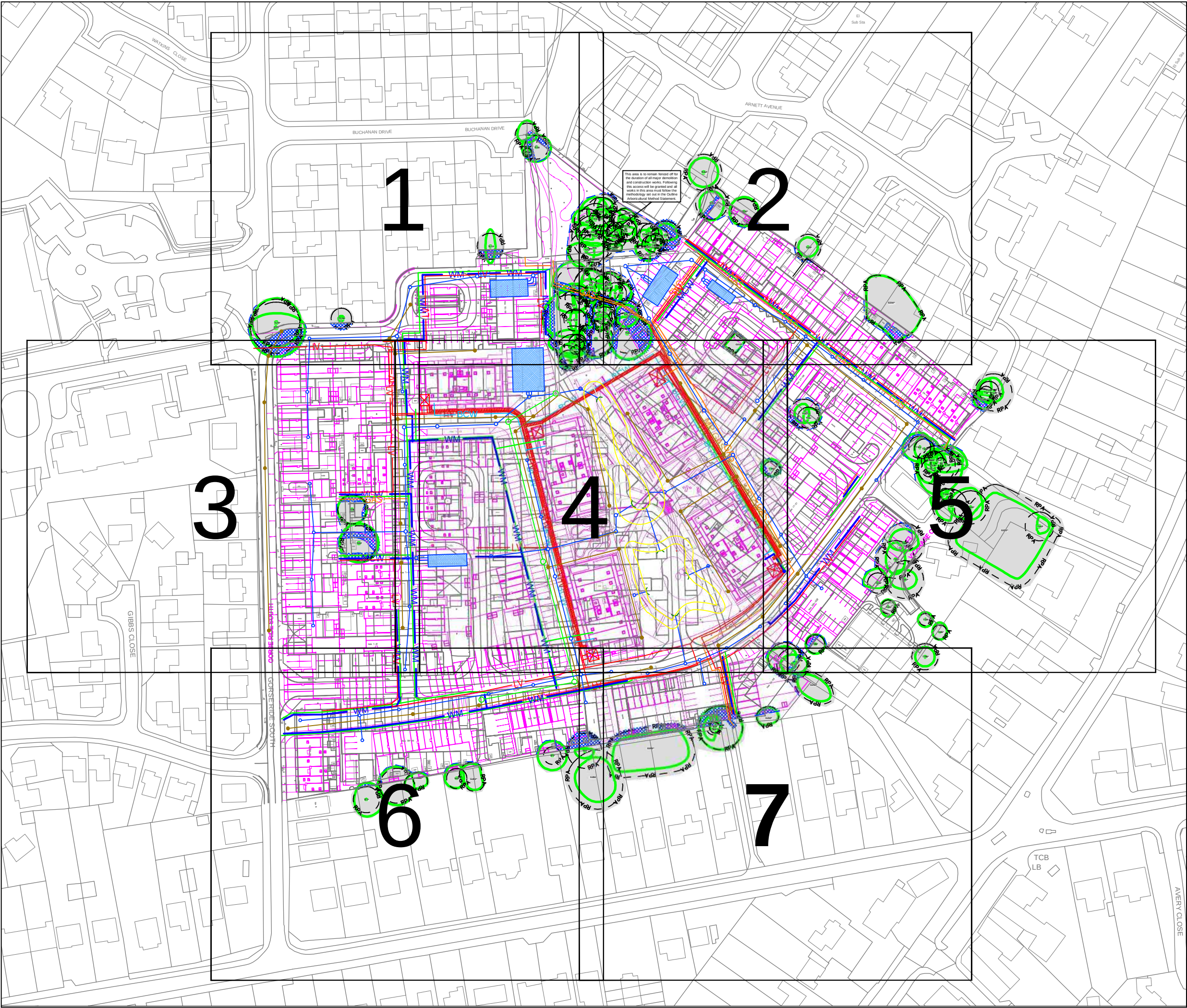
GORSE RIDE SOUTH

BUCHANAN DRIVE

St Mary & St John
Parish Centre

VICARAGE CL

Appendix D Tree Protection Plan



AECOM

PROJECT

Gorse Ride South

CLIENT

Wokingham Borough Council

CONSULTANT

AECOM

Midpoint, Alencon Link, Basingstoke, RG21 7PP

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NOTES

- TREE CATEGORIES AS DEFINED BY BS 5837:2012
- TREE LOCATIONS ARE BASED UPON THE TOPO SURVEY REF: 5700-3D-F.
- PLANS SHOULD BE READ IN CONJUNCTION WITH THE AECOM ARBORICULTURAL REPORT.
- THE ORIGINAL OF THIS DRAWING WAS PRODUCED IN COLOUR - A MONOCHROME COPY SHOULD NOT BE RELIED UPON.

KEY

EXISTING RETAINED TREE, GROUP OR HEDGE
(RED DASHED AREA INDICATES APPROXIMATE REQUIRED PRUNING / REMOVAL WORKS)

TREE PROTECTION FENCING AND CONSTRUCTION EXCLUSION ZONE (TRACKING OF PLANT, MATERIALS STORAGE, EXCAVATION AND ALL OTHER CONSTRUCTION ACTIVITIES ARE EXCLUDED WITHIN THESE AREAS FOR THE PURPOSES OF PROTECTING TREE HEALTH)

CONSTRUCTION WORKING ZONE (MANAGED CONSTRUCTION PROCESSES PERMITTED IN ACCORDANCE WITH THE PRINCIPLES SET OUT WITHIN THE ARBORICULTURAL IMPACT ASSESSMENT)

ROOT PROTECTION AREAS
(AS DEFINED BY BS 5837:2012)

PROPOSED LAYOUT
(AS BASED UPON DWG:
GRS-ACG-00-00-DR-A-011050-OverallMasterPlan-P15
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TREE PROTECTION PLAN
(OVERVIEW)

SHEET NUMBER

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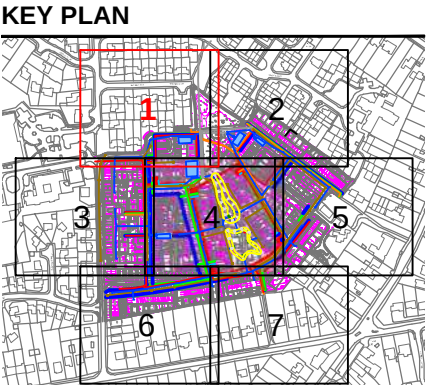
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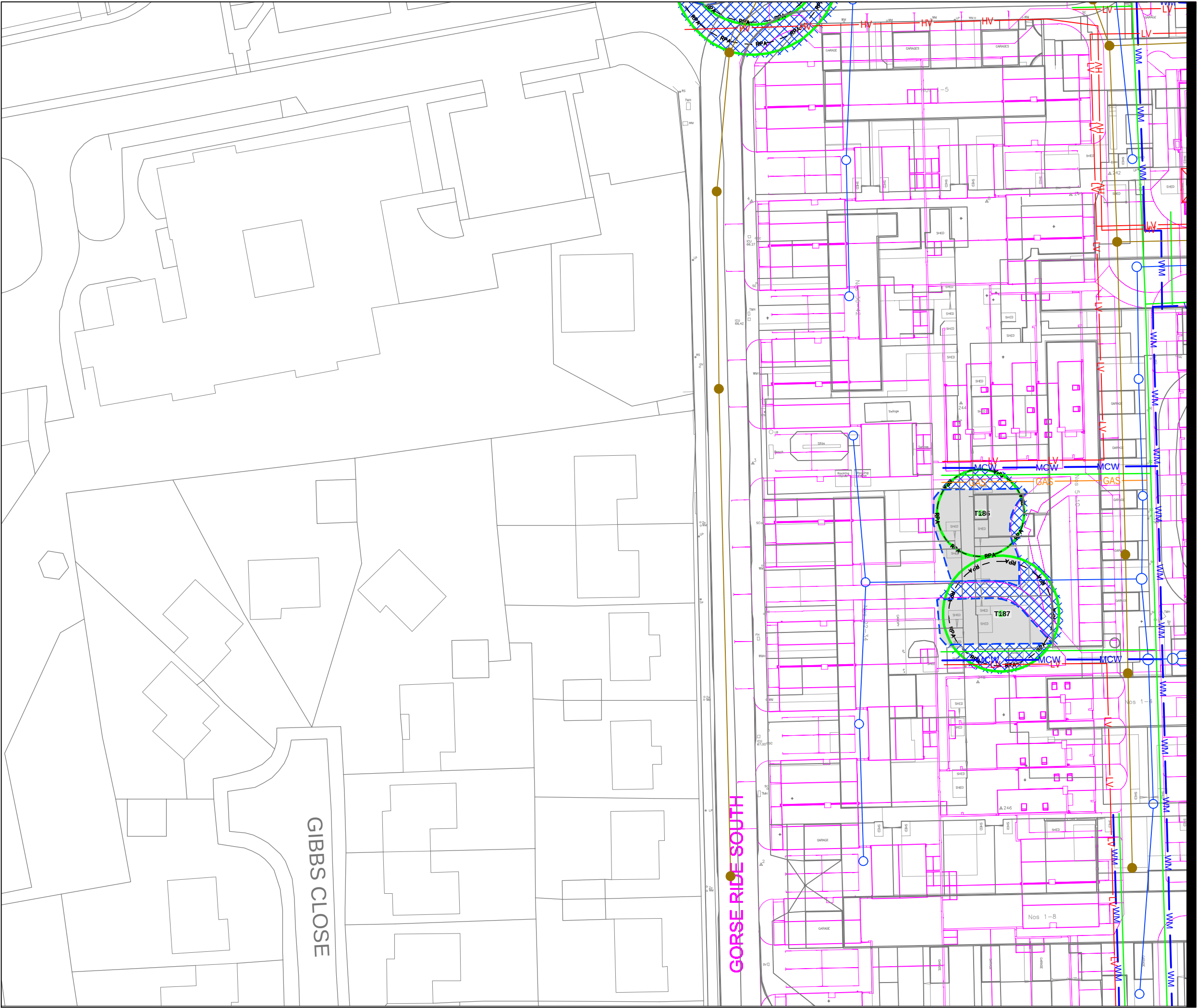
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TREE PROTECTION PLAN
(SHEET 1 OF 7)

SHEET NUMBER
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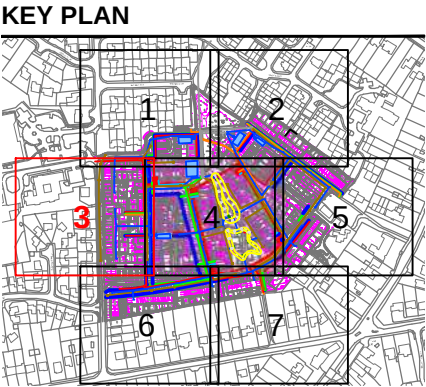
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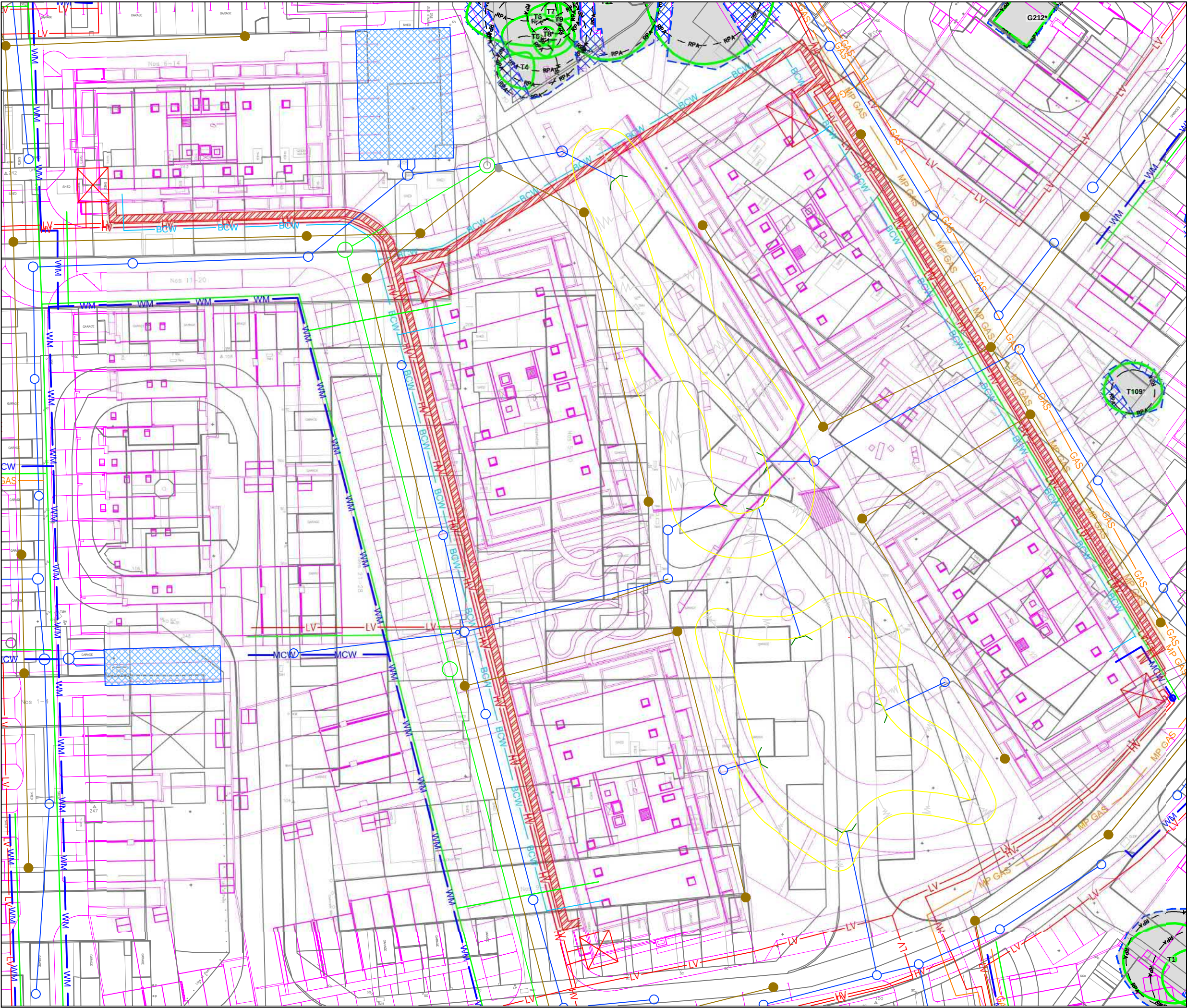
TREE PROTECTION PLAN
(SHEET 3 OF 7)

SHEET NUMBER

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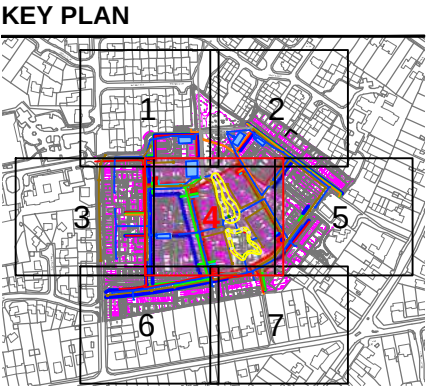
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TREE PROTECTION PLAN
(SHEET 4 OF 7)

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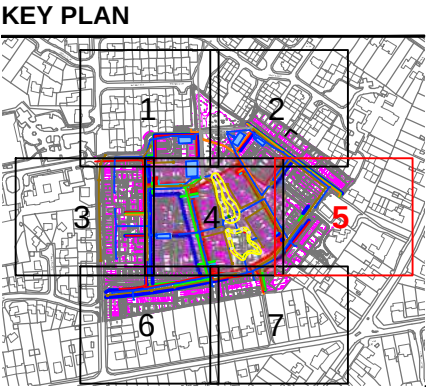
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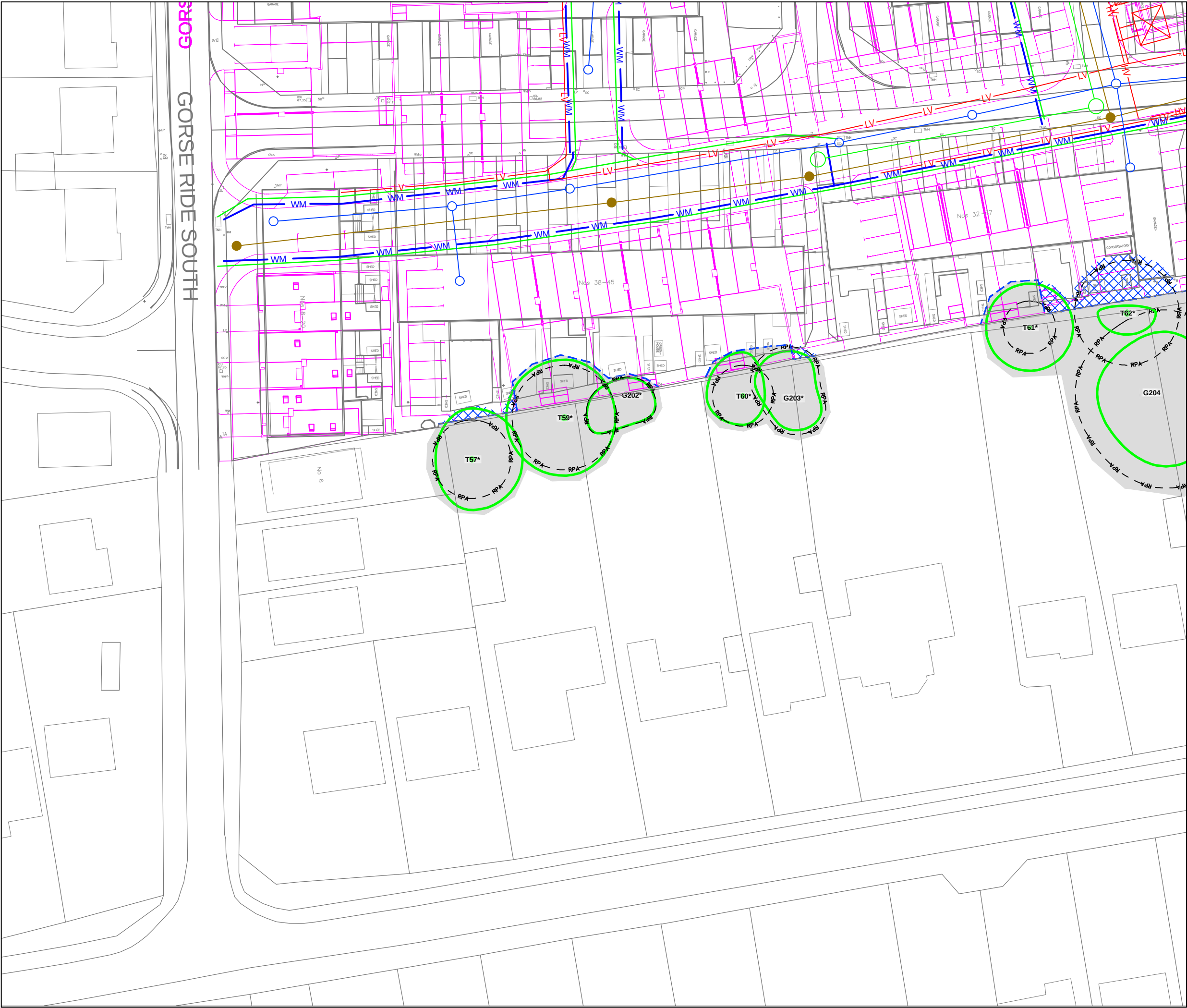
TREE PROTECTION PLAN
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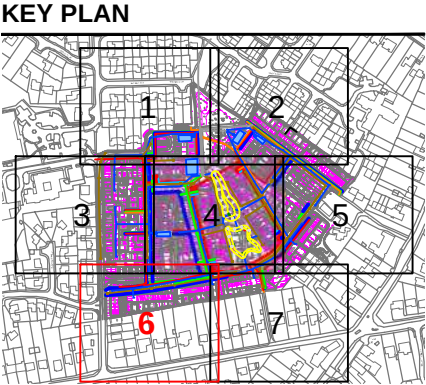
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TREE PROTECTION PLAN
(SHEET 6 OF 7)

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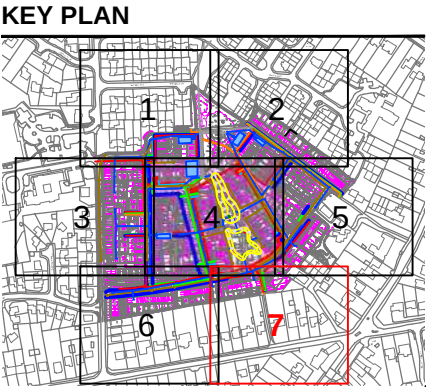
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TREE PROTECTION PLAN
(SHEET 7 OF 7)

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Appendix E Site Photography



Figure 3 – Showing T118 in poor condition due to previous heavy pruning.



Figure 4 – Showing T68 from the north east looking south west.



Figure 5 – Showing T55 the dead Scots pine.



Figure 6 – Showing T66 from the north looking south.

Appendix F Outline Arboricultural Method Statement

F.1 Overview

This Outline Arboricultural Method Statement details the specification for tree protection measures and how sensitive operations are to be achieved in proximity to trees to be retained. It also addresses the general management of Site activities to ensure that retained trees are not inadvertently damaged.

This document may need to be amended to reflect more detailed or updated information as it becomes available. The final agreed version must be read in conjunction with the Tree Protection Plan and copies of both documents must be permanently available on Site for reference throughout the development. All Site personnel must be made fully aware of its contents and the implications for work they may be involved in. All elements of the agreed Method Statement must be adhered to in full, failure to do so could result in a failure to discharge planning conditions, damage to significant trees and enforcement action by Wokingham Borough Council. No changes may take place to the content or application of the Method Statement without the prior written approval of Wokingham Borough Council.

When planning permission is in place, some details (including changes in layout, services, materials, tree protection measures and the order of works) may be subject to change. No changes should be enacted without the prior written approval of Wokingham Borough Council. The Method Statement must be reviewed in advance of the commencement of development activity.

F.2 Pre-commencement Site meeting

Prior to the commencement of works on Site a meeting must take place including the Site Manager, Arboriculturist and Wokingham Borough Council Tree Officer. This meeting will allow a further discussion of the programme of works, tree protection measures, the locations of the areas for storage/site organisation and the agreement of any changes to the Method Statement which will then be formally updated and approved as required.

F.3 Order of operations

- 1 Pre-commencement Site meeting;
- 2 Preliminary tree works;
- 3 Site briefing for Site personnel;
- 4 Installation of protective fencing including re-measuring previously estimated stem diameters;
- 5 Demolition and enabling works;
- 6 Re-adjustment of protective fencing and ground protection as required;
- 7 Construction operations;
- 8 Re adjustment of protective fencing and ground protection as required;
- 9 Installation of services;
- 10 Re adjustment of protective fencing and ground protection as required;
- 11 Installation of new hard surfaces and hard landscaping;
- 12 Site signed-off on agreed completion of development works;
- 13 Dismantling of tree protection measures;
- 14 Soft landscaping works within the Root Protection Area (RPA) of retained trees;

F.4 Preliminary tree works

All approved tree works are to be completed by suitably qualified and insured contractors and must take place before protective fencing is installed and Site works commence. A list of contractors approved by the Arboricultural Association is available at www.trees.org.uk.

All tree works must be carried out in line with the principles of BS3998: 2010 Tree work – recommendations and be conducted in such a way that no damage is caused to any tree to be retained. The tree works contractor must avoid the production of ruts on unmade ground.

The Tree Survey Schedule identifies all preliminary tree works including trees to be felled or pruned to facilitate the development and is included as Appendix B.

If further additional tree works are deemed to be required during the development the advice of an Arboriculturist is to be obtained. No works are to take place without the consent of the tree owner.

Prior to the commencement of any tree works a thorough check for protected species (including nesting birds, bats and badgers) is to be undertaken. If evidence of any protected species is discovered the advice of a suitably qualified ecologist must be obtained. Tree works are to be undertaken outside of the typical nesting bird season (March to September) outside of this period any individual trees will be inspected for evidence of nesting birds by a suitably qualified person prior to works being carried out.

F.5 Site briefing

The Site Manager is responsible for ensuring that all personnel are made fully aware of the constraints posed by retained trees on Site and the measures in place to ensure they are protected, including having full on-Site access to the Arboricultural Method Statement and Tree Protection Plan (TPP). It is good practice for the Site Arboriculturist to be involved in the Site briefing to ensure all constraints and tree protection measures are clearly understood.

F.6 Site monitoring

An auditable system of Site monitoring shall be established to guide contractors on Site, ensure that tree protection measures are implemented and adhered to and to demonstrate to the Planning Authority that any Planning Conditions have been met satisfactorily.

This includes Site visits by the appointed Arboriculturist (as appointed by the developer) to confirm the correct installation of protective fencing, to oversee sensitive elements of works within the RPA of retained trees and to sign off the Site when works are complete before fencing can be dismantled.

The frequency of Site monitoring will be discussed with the Wokingham Borough Council Tree Officer and agreed in writing before works begin on Site (but is recommended to be every two-four weeks in addition to ad hoc monitoring of particularly sensitive operations near retained trees as required). A schedule of Site monitoring is included as Appendix G.

F.7 Tool box talk

A Tool Box Talk should be provided to Site workers to highlight the need for safe driving of plant and working within the defined corridor to ensure that accidents and resulting potential damage to trees not covered by tree protection measures are eliminated. A copy of the TPP should be used in the process of explaining to all personnel the requirements required to ensure retained trees are not damaged and copies of both the TPP and this Method Statement must be available in the Site office at all times.

F.8 Protective fencing

The default position as set out by BS 5837:2012 is that retained trees must be protected from construction operations with the erection of robust protective fencing positioned on the outer edge of the RPA or crown spread (whichever is greatest). All Site operations will be restricted to the area outside of tree protection fencing and this area will form a Construction Exclusion Zone (CEZ) unless agreed otherwise. Protection measures will be installed as set out in the Tree Protection Plan included as Appendix D of this report.

The area inside the fence and any additional tree protection measures will be sacrosanct and must not be removed or altered without the prior approval of the Wokingham Borough Council Tree Officer. Any damage to tree protection measures must be reported immediately.

Fencing shall be constructed with robust vertical and horizontal scaffold framework with weldmesh panels firmly attached in accordance with BS 5837:2012 Figure 2. Vertical support poles and bracing poles must be located with care to avoid underground utility services and will be sited to avoid the structural roots of retained trees.

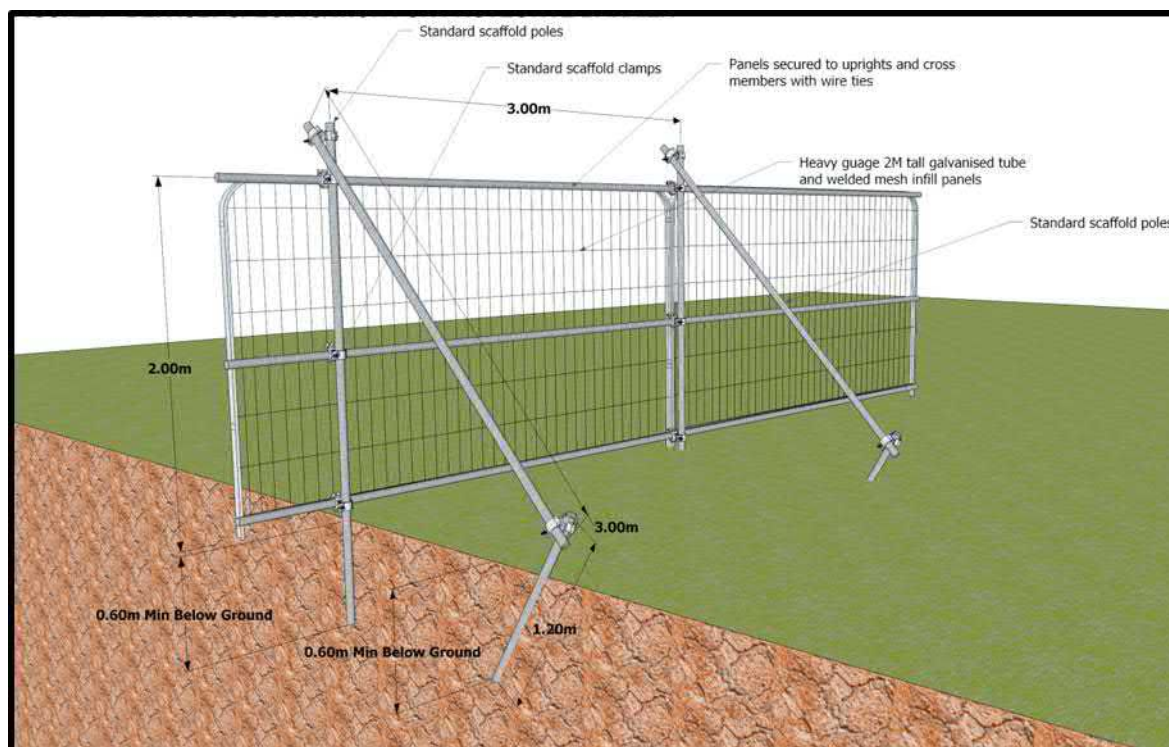


Figure 8 Default specification for tree protection barrier in accordance with BS5837:2012 figure 2.

Alternative equivalent robust and immovable fencing specification including Site hoarding will also be appropriate.

Suitable all-weather signage will be fixed to fencing to notify Site staff and visitors of the construction exclusion zone and its purpose (example included as Appendix I).

Failure to fully respect the positioning of barriers and tree protection measures may result in Wokingham Borough Council imposing a temporary stop notice or other enforcement action and is likely to require the use of a more onerous barrier specification and potentially expensive remedial works. Damage to trees protected by Tree Preservation Orders is a criminal offense with fines of up to £20,000 per tree or an unlimited fine in a crown court.

When entering and exiting the Site the fencing contractor must avoid the production of ruts on the unprotected surface of the ground.

Protective fencing and ground protection shall stay in place until all construction operations are completed and removal is agreed with the Site Arboriculturist and/or Wokingham Borough Council.

F.9 Ground Protection

In general tree protection fencing will ensure a construction exclusion zone is maintained for all RPAs. However, where works are required within an RPA on unsurfaced ground, ground protection is likely to be required.

When the tree protection fences are set back fit for purpose ground protection must be in place which is able to protect the structure of the soil from damage based on the heaviest anticipated load. This must be installed prior to the commencement of construction and be signed-off by the appointed Arboriculturist.

As set out in section 6.2.3.3 of BS5837:2012 the following ground protection measures will be appropriate:

- Suitable ground protection for pedestrian only access will comprise a single thickness of scaffold boards set on a compressible layer of 100mm of woodchip on a geotextile separation layer.
- Pedestrian operated plant up to two tonnes in weight would require the use of a proprietary ground protection system (such as Ground Guards, Eki mats, Eve Trakway or equivalent) set on a minimum depth of 150mm woodchip or sharp sand.
- Heavier loads will require ground protection to an engineering specification in conjunction with arboricultural advice.

As a guide the threshold beyond which root development is significantly affected is a bulk density ranging from 1.4g per cm³ for clay soils, to 1.75g per cm³ for sandy soils.

All existing hard surfacing within the RPA of any retained tree will act as suitable ground protection throughout the demolition phase and must be retained in situ unless otherwise approved by the Site Arboriculturist or the Wokingham Borough Council Tree Officer.

Tree protective measures shall stay in place until all construction operations are completed and removal is agreed with the Site Arboriculturist and/or the Wokingham Borough Council Tree Officer as appropriate.

F.10 Protective Fencing Amendments

Multiple incursions into the RPAs of retained trees have been identified to facilitate the development. This will require several careful adjustments to the position of the tree protection fencing throughout the development. All amendments to the position of the tree protection fence must be supervised by an Arboriculturist and can be included with the Site monitoring visits. Following the completion of each specific incursion work within an RPA, the fence must be immediately reinstated to its original position as shown on the Tree Protection Plans (Appendix D) unless formally approved by the Site Arboriculturist.

Trees requiring incursion works to facilitate the development have been identified within the table below:

Table 3: Showing the number of RPA incursions/fencing amendments required to retained trees

Number of incursions/fencing amendments required	Number of Trees
One RPA incursion/fencing amendment	T59, T60, T61, T89, T109, T144, T145, T152, T158, T159, T160, T176, G202, G203, G205, G210 and G212.
Total	12 Individual trees and 5 tree groups
Multiple RPA incursions/fencing amendments	T1, T2, T4, T5, T6, T7, T8, T9, T11, T13, T14, T15, T20, T21, T22, T23, T24, T25, T26, T27, T28, T29, T30, T31, T32, T33, T34, T35, T36, T37, T38, T39, T40, T41, T42, T43, T44, T45, T47, T48, T57, T62, T63, T64, T65, T100, T101, T102, T107, T122, T123, T131, T132, T133, T134, T137, T138, T150, T153, T157, T161, T162, T173, T177, T178, T186, T187, G199, G200 and G214.
Total	68 individual trees and 3 tree groups

F.11 Removal and replacement of existing hard surfacing within RPAs

Roads:

The existing hard surfacing within the RPA of T1, T2, T122, T123, T177 and T178 is to be retained in situ for as long as possible to protect the underlying structure of the soil (and any roots present) from damage. Removal is to take place following the completion of all major demolition and construction phases as this will serve as ground protection in these areas.

Existing heavily engineered surfaces such as roads are unlikely to have significant tree roots within the wearing course or sub base, however a careful working approach must be applied. Where an existing road or equivalent

surface is to be removed within an RPA (e.g. T176, T177 and T178), an excavator with a toothless bucket can be employed to carefully remove the wearing course and upper sub base only. Excavators must be positioned on existing intact hard surfacing, and must roll back removed materials onto existing hard surfaces at all times, working away from retained trees..

Following the removal of the wearing course and upper sub base, all plant and machinery must be excluded from the RPA. The lower sub base must be broken up using hand tools with pedestrian only access.

Where significant roots are identified close to the area of work (e.g. within 1m), where there is obvious root related distortion of the surface or where significant roots (greater than 25mm in diameter) are encountered during the works, all works (including the removal of wearing course and full sub base) must be carried out by hand under the supervision of the Site Arboriculturist. .

Footways:

Less heavily engineered surfaces within RPAs (such as footways) (which includes T4, T5, T6, T11, T13, T14, T15, T21, T23, T24, T25, T27, T28, T29, T36, T57, T59, T60, T61, T62, T65, T131, T132, T133, T134, T137, T138, T144, T145, T147, T150, T152, T153, T158, T159, T160, T161, T162, T173, T186, T187, G202, G203, G205 and G214) must be carefully broken up using hand tools and pneumatic breakers, under the supervision of the appointed Arboriculturist.

Surfaces are to be removed via a rolling backwards methodology away from RPAs of retained trees, to reduce any requirement to work on unsurfaced ground. Pedestrian contractors are to work on the existing hard surface as fully as possible. Pedestrian only access will be permitted onto any exposed sub base or unmade ground.

Where existing hard surfacing is to be replaced with new hard surfacing, the existing surface is to be retained and incorporated into the base of the new surface where feasible. Where this is not feasible, the wearing course is to be carefully removed and the sub base is to be retained intact, ameliorated as required and used as a base for the new surfacing.

Removal of Existing Hard Surfacing and Restoration to Soft Ground:

Where the sub base is to be removed and the area restored to soft ground (e.g. T1, T2, T59, T60, T61, T89, T109, T122, T123, G202, G203 and G205) the sub base is to be carefully broken out by hand via pedestrian only access. Materials must be removed using wheel barrows or via hand loading of long reach machinery positioned on adjacent hard surfacing or ground protection. The sub base is to be rolled back. Following removal any low points or hollows are to be filled with sharp sand or gravel and topsoil be applied to the required level. This area must then be completely fenced-off for the remainder of the development works.

Replacement Footways:

In a number of areas there are proposed footways replacing existing footways within RPAs (e.g. T4, T5, T6, T11, T13, T14, T15, T21, T23, T24, T25, T27, T28, T29, T36, T57, T59, T60, T61, T62, T65, T131, T132, T133, T134, T137, T138, T144, T145, T147, T150, T152, T153, T158, T159, T160, T161, T162, T173, T186, T187, G202, G203, G205 and G214). In these circumstances the sub base must be retained intact, ameliorated as required and utilised for the new surface. Levels are to be increased using inert granular fill by a maximum of 100mm. The sub base must be hand tamped only to prevent significant compaction of the underlying soil.

Exposed roots must be treated in accordance with the guidelines in Section 6.20 of this Outline Arboricultural Method Statement.

Following the removal of existing hard surfacing the unprotected ground within RPAs must be immediately protected with protective fencing and or ground protection (where access is required) as set out in Section 6.8 and 6.9 to ensure that the structure of the soil and tree roots are protected.

Pedestrian only access onto the exposed and retained sub base will be acceptable to allow the installation of replacement hard surfacing. The new surface should be laid as quickly as possible.

Any exposed roots greater than 25mm in diameter must be assessed by the Site Arboriculturist. If roots to be retained are exposed at ground level these should be covered with a thin layer of sharp sand and adjacent levels built up around it. This layer must not be significantly compacted and only hand tamped.

Replacement Road Surfacing:

Two areas of the Site have been identified that will require the removal and replacement of a hard-surfaced road which is located within the RPAs of T176, T177 and T178. The sub base in these areas must be retained intact, ameliorated as required and utilised for the new surface. Exposed roots are unlikely to be encountered due to the heavily engineered sub base of the existing surface. Where encountered any roots must be treated in accordance with the guidelines in Section 6.20 of this Outline Arboricultural Method Statement. The new surface must be rolled out working from existing intact hard surfaces only.

Surfacing operations are to be conducted solely from the existing footprint of the road. Access beyond the footprint will be restricted with Tree Protection Fencing.

Existing edging within the RPA of a retained tree (e.g. T176, T177 and T178) must be retained intact and used as the edging for the new surface.

Where the removal of existing edging is unavoidable within an RPA this will be removed carefully by hand under the supervision of an Arboriculturist.

Plant positioned outside of the RPA or on existing hard surfacing within the RPA may reach in to assist in lifting edging out of its position using slings but must not be used to excavate around the edging.

The methodology for the installation of new edging within an RPA is detailed in section 6.12 of this report.

F.12 Installation of new hard surfacing within RPAs

The Proposed Development will require the construction of new hard surfaced roads, parking and footways within the RPA of retained trees T1, T2, T4, T5, T6, T11, T13, T14, T15, T21, T23, T24, T25, T27, T28, T29, T36, T57, T62, T65, T122, T123, T131, T132, T133, T134, T137, T138, T144, T145, T147, T150, T152, T153, T158, T159, T160, T161, T162, T173, T177, T178, T186, T187, G203, and G214 and shall follow 'no dig' principles. The surface shall be engineer designed to meet the highest expected loads, including those used for the construction of the route.

A proprietary 3D cellular confinement system (or agreed equivalent proprietary raft or tile system) will be used to allow the hard surface to be installed without excavation within RPAs.

Work will preferably be carried out in dry conditions within the period of May to October when the ground is less liable to compaction.

Protective fencing will be located on the outer edge of RPAs as shown on the Tree Protection Plan until the main construction works have been completed. Fencing will then be set back to allow limited access into RPAs to facilitate the installation of the surface. Temporary ground protection of ground guards or scaffold boards laid on 100 mm of woodchip on a permeable geotextile layer must be in place on either side of the proposed hard surface (where both sides are within the RPA) to allow a maximum of 0.5m for pedestrian only access to facilitate the installation of the 3D cellular confinement system and new hard surface. Protective fencing will be in place immediately beyond this point.

Following the installation of the new hard surfacing, protective fencing must be reinstated at the other edge of the RPA where this is unsurfaced or to the immediate edge of any new hard surfacing where this now covers the full extent of the exposed RPA.

Existing ground vegetation shall be treated with an approved herbicide such as glyphosate 2-3 weeks before construction takes place. Killed vegetation can then be subject to a maximum 50 mm vegetative scrape which must take place by hand. Any arisings shall be removed (if left in situ they could cause anaerobic conditions as they break down which could be detrimental to tree roots).

Any hollows must be filled with inert granular material such as sharp sand or washed no fines gravel. Builder's sand must not be used as this contains salts which are toxic to tree roots.

Any rocks, stumps (if present) or other protruding objects within the footprint of the load bearing surface must be removed. Stumps must be ground out below ground level. All other objects must be removed by hand.

A robust geotextile membrane must be laid out across the proposed area for the load bearing surface within the RPA. Joints must overlap by approx. 300 mm and be stapled together. This must be capable of resisting puncture by the angular stone fill, and also able to filter pollutants to prevent or reduce contamination of the soil. The load bearing surface is only required within the RPAs.

It is essential to consider the final levels of the load bearing surface which will typically be 100 mm in thickness plus the final wearing course (dependent on its application).

The final surface must be resistant to future growth of tree roots and also must be positioned to give a minimum clearance of 500mm from the base of a retained tree. The resulting gap can be filled with inert granular fill if required. A three-dimensional load bearing surface which allows the lateral and horizontal movement of air and water (e.g. Cellweb or equivalent) must be fully expanded and stapled together. This is to be laid on top of the geotextile layer. This surface must be able to support the greatest expected load the surface is likely to experience (including any construction traffic).

The load bearing surface shall be 'rolled out', with construction operations beginning from outside the RPA or from existing hard standing and progressing forwards using the new load bearing surface. The load bearing surface must be filled with 4/20, 20/20 or 20/40 washed angular stone.

Edging is often not required to stabilise the load bearing surface and the edge of the surface. If edging is required (e.g. T176, T177 and T178) this must be installed without excavation. Methods of edging for different circumstances would include the use of treated wooden peg and boards or railway sleepers pinned in position.

Concrete kerb stones can be cast directly onto the web if required, however all uncured concrete must be fully contained with impermeable plastic sheeting and sandbags to prevent run off into the RPA of retained trees. The use, storage and mixing of concrete must comply with the provisions set out in section 5.7.

The load bearing surface must have an even transition with adjacent hard surfacing or structures. This must be achieved outside of the RPA of all retained trees. Where this is not possible, structural soil or a mixture of top soil and sharp sand can be employed to raise levels by up to 100mm. Where levels are to be raised in excess of this height the advice of an Arboriculturist must be obtained.

F.13 Demolition in proximity to retained trees

The demolition of a number of existing residential buildings will be required in proximity to T1, T2, T65, T89, T100, T101, T109, T122, T123, T153, T162, T186, T187 and G210. All demolition within or close to the RPA of retained trees must be inward into the existing footprint of the structure and working backwards away from retained trees.

All plant and machinery associated with the demolition process will be positioned outside of the RPA of retained trees and must operate under the guidance of a banksman where they must operate within 5m of any part of a retained tree.

Where light weight structures are to be demolished within the RPAs of trees (e.g. T65, T144, T145, T186 and G205) these will be demolished inwards into the existing footprint using hand tools only. Tree protection fencing is to be temporarily set back to facilitate this operation under the supervision of an Arboriculturist, who will also advise on the requirement and specification of any ground protection that might be required. All arisings must be moved outside of the RPA using wheel barrows or potentially using long reach machinery situated outside of the RPA and reaching in (with no parts bearing on unsurfaced ground within the RPA).

Any footings are either to be retained in situ or must be carefully broken out by hand (using a pneumatic breaker) where they are located within an RPA. Subject to the size, nature and relative position of the footing in relation to nearby trees it may be acceptable to utilise an excavator with a breaker attachment (positioned outside of the RPA or on existing hard surfacing or ground protection) to break up footings and a grab to remove sections of concrete under arboricultural supervision.

F.14 Construction within RPAs

New Above Ground Structures:

A minimum above ground clearance of 2m is required between new structures and retained trees to facilitate standard scaffolding and other general construction requirements.

The majority of retained trees on Site are positioned away from new structures, with the exception of trees features' T65, T177, G210 and G214. The canopies of these trees currently overlaps the proposed structures and clearance pruning will be required prior to the commencement of the Site works and is detailed in the Tree Survey Schedule (Appendix B). In these areas a minimum of 3m clearance will be provided which will also set a framework for the future management of the trees in relation to the new development.

New Below Ground Structures:

The footprint and foundations of new residential housing will also require a small RPA incursion into tree features' G210 and G214. These incursions relate to the extreme outer RPA of these trees only. The upper 1m of the excavation for the footing will be carried out by hand and any roots encountered will be carefully severed back to the face of the excavation under the supervision of an arboriculturist. The excavation will be lined with a robust impermeable liner to contain any uncured concrete and to prevent leaching into the surrounding RPA. These incursions will not have a significant negative impact on the physiological or structural condition of these trees. Tree protection fencing will be installed immediately outside a 2m working access zone around the footprint of the new structure to facilitate construction. This will be limited to pedestrian only access and will be protected with ground protection.

In addition a number of new garden sheds are proposed on the Landscape General Arrangement Plan (ref: GRS-UBU-00-00-DR-L-12-7000) by Ubu design which will require an RPA incursion into T1, T2, T59, T60, T61, T89, T102, T101, T100, T122, T123, T152, G202, G205 and G214. Simple amendments to the positioning of these sheds would avoid all RPA incursions. However, where RPA incursions are unavoidable the shed must be positioned as far from the tree stem as possible and must be constructed on a three dimensional load bearing surface such as Cellweb, ArborRaft or equivalent.

Alternative approaches to shed base construction could include on a floating concrete raft. This would require a 50mm vegetative scrape which must be carried out by hand. A 100mm layer of sharp sand (not builder's sand which is toxic to tree roots) must then be put down, levelled and lightly hand tamped only. A concrete raft can then be laid on top of the sand (with all uncured concrete carefully contained with shuttering and an impermeable liner) and the shed constructed. No excavation is to occur within the RPA of any retained tree and the fencing amendments are to be supervised by an Arboriculturist who can also determine the positions of ground protection as appropriate.

F.15 Installation of scaffolding within RPAs

Scaffolding is required to facilitate construction operations within the RPA of T65, T177, G210 and G214. The trees are to be pruned back as set out in the Tree Survey Schedule in Appendix B to provide a 2m clearance of the proposed structure and in these areas standard width scaffolding will be appropriate. If additional pruning is required the advice of an arboriculturist must be obtained and the prior consent of the LPA must be in place.

Scaffolding is to be installed on the existing hard surface and/or fit for purpose ground protection in accordance with section 6.9 of this Outline Arboricultural Method Statement.

The specification for ground protection will be scaffold boards or equivalent set on a compressible layer of 100mm of woodchip on a geotextile separation layer which will be restricted to pedestrian only access. If access is required for heavier loading an alternative specification for ground protection must be agreed with an arboriculturist and approved by the LPA.

A toe board must be in place at the edge of each scaffold platform to prevent materials inadvertently falling into the adjacent RPA.

F.16 Installation of boundary fencing or walls within RPAs

The default position is that new fencing and walls be positioned outside RPAs and where this is not feasible as far from tree stems as possible. A 1.8m brick wall is proposed to border most of the residential gardens. This incurs into a number of RPAs including; T1, T2, T59, T60, T61, T62, T65, T89, T100, T101, T102, T115, T122, T123, T144, T145, T150, T152, T153, T173, G202, G203, G205, G210, G211 and G214.

Prior to the installation of fencing or walls within RPAs the tree protection fencing must be amended under supervision of the Arboriculturist to allow a small 2m wide access route within the RPA of a retained tree.

Where feasible, the brick wall should be replaced for a wooden fence where it incurs RPAs to reduce any impact to the soil structure and tree roots. The installation of a wooden fence should utilise any existing fence post holes where possible to reduce the risk of root interception. All footings within an RPA must be excavated by hand only under the supervision of an Arboriculturist. The pit must be lined and any uncured concrete must be fully contained with impermeable sheeting. Replacement fencing should be positioned at least 1m from any retained tree stem; this will avoid any future interactions with tree stems by taking into account the future growth potential of each tree.

If a brick wall is required within an RPA it must be constructed by hand under the supervision of an Arboriculturist. Alternative foundations to standard strip footings must be utilised to avoid root severance. Where significant roots are encountered they must be bridged using pad foundations and a ground level beam.

F.17 Movement of Vehicles and People and the Movement and Operation of Machinery

Due to the spatial constraints on Site, construction works and in particular the use of machinery must be carefully co-ordinated to avoid damage to retained trees. A banksman must be in place for any operations which occur within 5m of any part of a retained tree. Protective fencing will be in place to ensure tree canopies and root systems are fully protected during the main construction works.

Amendments to tree protection fencing will be required throughout the development. These will be supervised by the Site Arboriculturist who will also determine the requirement and specification for ground protection needed for various stages of work within RPAs.

The location of all Site huts, construction facilities and the storage and mixing of all materials is to take place outside of the RPA of all retained trees. Any slope must be taken into account to prevent run off leaching into an RPA. Uncured cement must be carefully controlled with shuttering and impermeable polythene liners.

F.18 Installation of services within RPAs

The default position is that all services be located outside of the RPA of retained trees. Wherever possible the proposed new services are to be repositioned outside of the RPA or, where this is not feasible, as far as possible from retained trees. The positioning of the services on the Tree Protection Plan are indicative and will be up to the decision of the on Site contractor for their final position. Ten RPA incursions have been identified on the Tree Protection Plans which includes: T14, T15, T16, T21, T24, T25, T27, T28, T29, T65, T162, T177, T186 and T187.

Unavoidable utility installation within an RPA must follow the principles set out in the National Joint Utilities Group (NJUG) Vol 4: Guidelines for the planning, installation, and maintenance of utility apparatus in proximity to trees (Issue 2) and Section 7.7 and Table 3 of BS5837.

The general principle is that where services cannot be routed outside of RPAs they must be installed using trenchless techniques, (e.g. directional drilling or impact moling etc) with all access and retrieval pits located outside of RPAs. Shallow surface runs can be installed via trenches excavated by hand (potentially using compressed air and soil vacuums). Services would need to be threaded beneath significant roots, which must be retained and kept intact. This approach might be feasible for the installation of the HV cable through the RPA of T177 however is unlikely to be feasible where multiple services are proposed to be bundled together.

Storm sewer man holes must be located outside of RPAs when possible and where this is not feasible positioned as far from tree stems as possible (e.g. T177). All excavation within an RPA must be undertaken by hand within an RPA. Any exposed roots greater than 25mm in diameter must be assessed by an Arboriculturist who must supervise the works and advise on the management of exposed roots.

The final installation process must be developed in conjunction with arboricultural advice and this section of the AMS may need to be further updated to reflect any agreed amendments.

Table 4: Summarising the services to be installed close to trees and which trees will be affected

Service to be installed	Trees affected
Utility strip (including Low voltage electricity, High voltage electricity, Water, Gas, MP Gas and communication services)	T14, T15, T16, T21, T24, T25 T27, T28, T29, T65, T162, T177, T186 and T187

F.19 Use of trenchless techniques:

The preferred installation method within an RPA will be trenchless techniques, such as directional drilling.

Insertion and retrieval pits must be located outside of the RPA of retained trees. The depth of the run must be at least 1m below ground level and should be located as far from the tree stem as possible.

The mole must be lubricated with water only.

Installation must follow the principles set out in the National Joint Utilities Group (NJUG) Vol 4: Guidelines for the planning, installation, and maintenance of utility apparatus in proximity to trees (issue 2), and Table 3 and Section 7.7 of BS583:2012 Trees in relation to design, demolition and construction - Recommendations.

Replacement pipes must be installed via pipe bursting, re lining or equivalent trenchless techniques where they are located within the RPA of a retained tree. Pipe bursting or relining equipment must be positioned outside of the RPA at all times.

F.20 Hand digging

Where trenchless techniques aren't feasible, hand digging can be implemented as an alternative method.

Where these must enter the RPA of a retained tree, the excavation will be located as far from the stem of the tree as possible and must be carried out by hand (ideally using compressed air such as an Air Spade or soil vacuum) under the supervision of an arboriculturist. All significant roots must be retained and worked around.

Protective fencing will be set back to facilitate localized access to facilitate this work (following the prior approval of the LPA) and to allow a maximum working space of 1m on either side of the trench location. Pedestrian only access will be permitted and ground protection measures as set out in Section 6.9 will be employed with fencing positioned immediately adjacent to restrict any further access into RPAs.

Excavation will be supervised by an arboriculturist who will be on hand to advise on the management of any roots encountered and to ensure the approved tree protection methodology is fully adhered to. Roots smaller than 25mm in diameter can be cut with a clean sharp tool where they pose an obstruction.

Should significant roots (larger than 25mm diameter or large clumps of smaller roots) be encountered these will be retained and wrapped in dampened hessian to prevent drying out and pipes will be routed around them where ever possible. If significant roots are encountered which cannot be feasibly worked around and retained the arboriculturist will liaise with the LPA to agree appropriate action.

Pipes must be constructed to resist future incursion by tree roots.

All spoil/ arisings from excavation will be placed onto ground protection boards to prevent compaction, ground level changes and to assist in removal or reinstatement. Backfill is to utilise the excavated parent material where feasible, applied to restore the soil profile to its original structure (i.e. top soil will be installed last) and must be lightly hand tamped only

Following service installation within RPAs, ground protection will be removed and the original position of protective fencing will be reinstated.

Services shall be installed following the principles set out in the National Joint Utilities Group (NJUG) Vol 4: Guidelines for the planning, installation, and maintenance of utility apparatus in proximity to trees (issue 2).

F.21 Removal of existing services

Generally the majority of retained trees are located away from existing services that are being decommissioned. However there are eighteen individual trees and one tree group where existing services do run beneath their RPA's; this includes T30, T31, T41, T44, T45, T46, T47, T48, T65, T131, T132, T133, T134, T137, T138, T157, T177, T178 and G200. The default position is that existing services within RPA's should be decommissioned and left in situ. Where this is not feasible the following principles are to be observed. Redundant cabling is to be winched out from an existing inspection chamber. Where cables are oil filled this must be carefully risk assessed in advance of winching. Where there is a significant risk of oil spillage the cabling must be retained in situ or an alternative methodology developed.

Redundant pipe work will be sealed off and will not be removed via excavation within the RPA of a retained tree. Redundant pipe work can be filled with an inert material or if confirmed to be fully water tight may be filled with foamed concrete applied from an access point located outside the RPA of all retained trees.

F.22 General principles for the management of tree roots

Where agreed excavation by hand tools or compressed air takes place within a root protection area the following principles will apply:

- Individual or small groups of roots less than 25 mm in diameter will be retained where possible but can be severed with a sharp tool such as secateurs or pruning saws to leave a clean cut end (ideally 100mm back from the face of the excavation to account for future regrowth) where they pose an obstruction.
- Where roots are encountered which are larger than 25 mm in diameter or where significant groups of smaller roots are found, the advice of the site arboriculturist must be sought to decide an appropriate course of action (following consultation with the LPA where appropriate).
- Roots must only be exposed for the minimum period possible. In the interim period any exposed roots (including the face of any excavation within an RPA) must be completely covered with dampened hessian sacking (which may require ongoing re wetting) to avoid drying out and exposure to light. Backfill for excavations should ideally utilise the parent material and must not be significantly compacted.

F.23 Landscaping

All soft landscaping operations which impinge on RPAs must be carried out by hand and be achieved without any mechanical cultivation of the soil, including rotovation. The default position is that no alterations in ground level are to take place within RPAs. Where fill material is essential, this must not exceed 100mm in depth and must be achieved using inert granular fill, such as a sandy loam or sharp sand and/or good quality topsoil.

F.24 Dismantling of tree protection measures

All protective fencing and ground protection must remain in place until all significant site works have been completed and written approval has been obtained from the LPA.

F.25 Contact details

(To be confirmed).

Site Manager: To be confirmed

Site Arboriculturist: To be confirmed

Local Authority Tree Officer: To be confirmed

Appendix G Outline Schedule of Site Monitoring

Pre Commencement:

Pre commencement Site meeting with the Site Manager, appointed arboriculturist and Wokingham Borough Council Tree Officer, to agree final positions for tree protection measure, location for Site facilities and discuss any additional requirements.

General:

Site monitoring every two to four weeks (to be decided by the Tree Officer) during the initial stages of the development, then reduced during later stages of the project, to ensure tree protection measures are in place and fully implemented.

Installation of tree protection measures:

Site monitoring to approve correct installation or adjustment of tree protection measures, including fencing and ground protection.

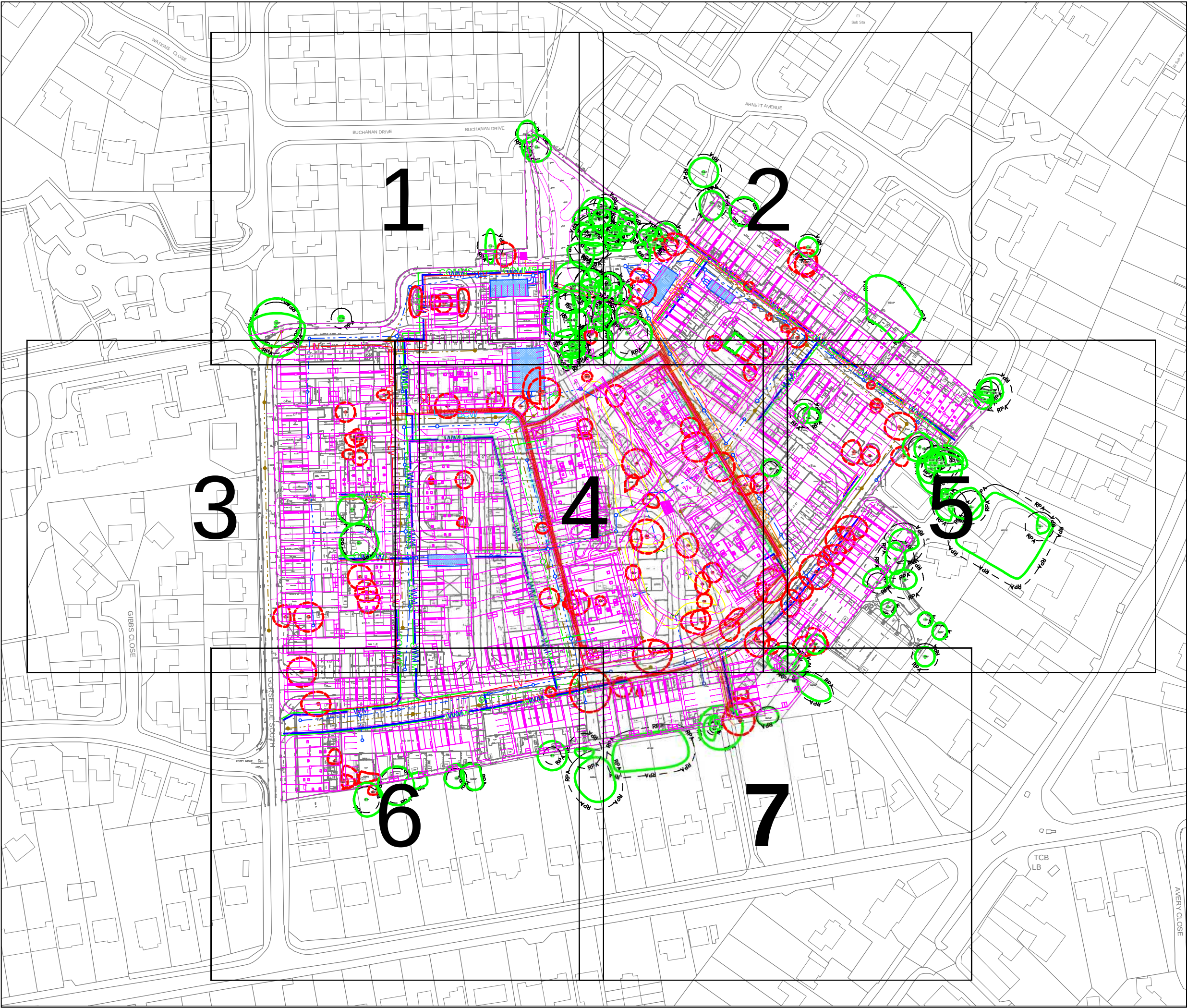
Site monitoring to oversee works within RPAs:

- Adjustment of tree protection measures
- Demolition works
- Removal of existing hard surfaces, edging, floor slabs and foundations
- Installation of new hard surfacing.
- Installation of new structures.
- Installation of new services and drainage
- Installation of new fencing/walls and shed foundations

Completion:

Site monitoring to agree the removal of tree protection measures following completion.

Appendix H Tree Removal Plan



AECOM

PROJECT

Gorse Ride South

CLIENT

Wokingham Borough Council

CONSULTANT

AECOM
Midpoint, Alencon Link, Basingstoke, RG21 7PP
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www.aecom.com

NOTES

- TREE CATEGORIES AS DEFINED BY BS 5837:2012
- TREE LOCATIONS ARE BASED UPON THE TOPO SURVEY REF: S700-3D-F.
- PLANS SHOULD BE READ IN CONJUNCTION WITH THE AECOM ARBORICULTURAL REPORT.
- THE ORIGINAL OF THIS DRAWING WAS PRODUCED IN COLOUR - A MONOCHROME COPY SHOULD NOT BE RELIED UPON.

KEY

EXISTING RETAINED TREE, GROUP OR HEDGE
(RED DASHED AREA INDICATES APPROXIMATE
REQUIRED PRUNING / REMOVAL WORKS)

EXISTING TREE, GROUP OR HEDGE TO BE REMOVED

ROOT PROTECTION AREAS
(AS DEFINED BY BS 5837:2012)

PROPOSED LAYOUT
(AS BASED UPON DWG:
GRS-ACG-00-00-DR-A-011050-OverallMasterPlan-P15
& GRS-ACM-00-XX-DR-U-201056)



ISSUE/REVISION		
C	23-03-2020	Updated with masterplan P15
B	04-03-2020	Updated with new layouts
A	31-07-19	Updated layout and protection
I/R	DATE	DESCRIPTION

PROJECT NUMBER

60591598

SHEET TITLE

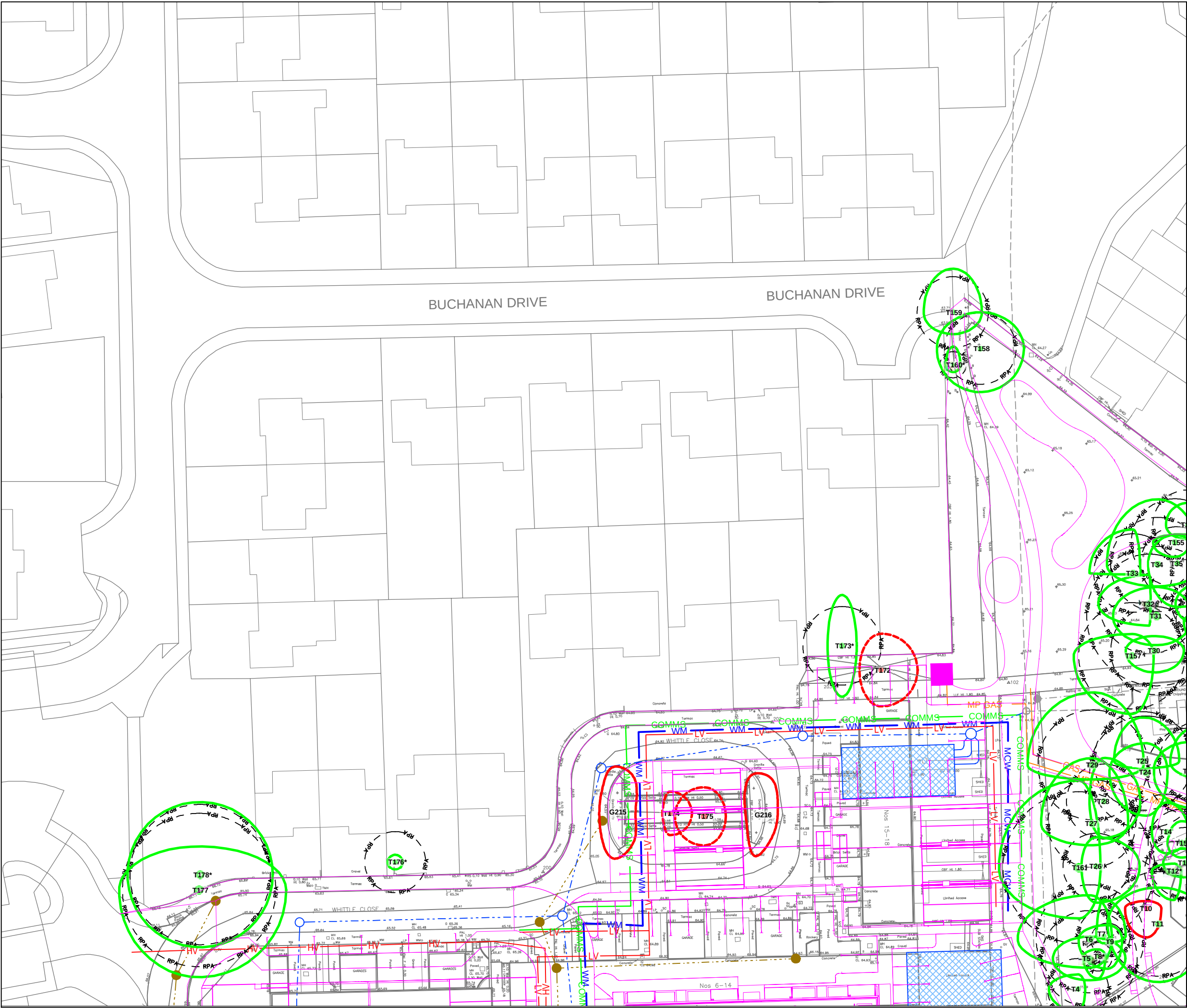
TREE REMOVALS PLAN
(OVERVIEW)

SHEET NUMBER

60591598-ACM-00-XX-DR-ARB-000010

Rev

C



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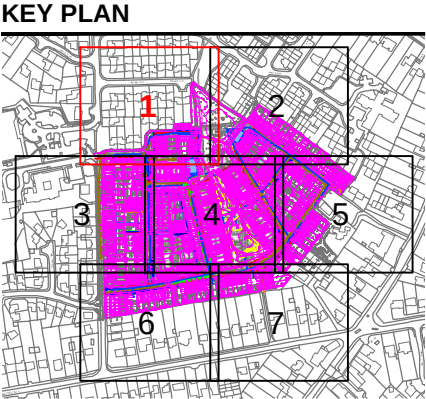
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(AS DEFINED BY BS 5837:2012)

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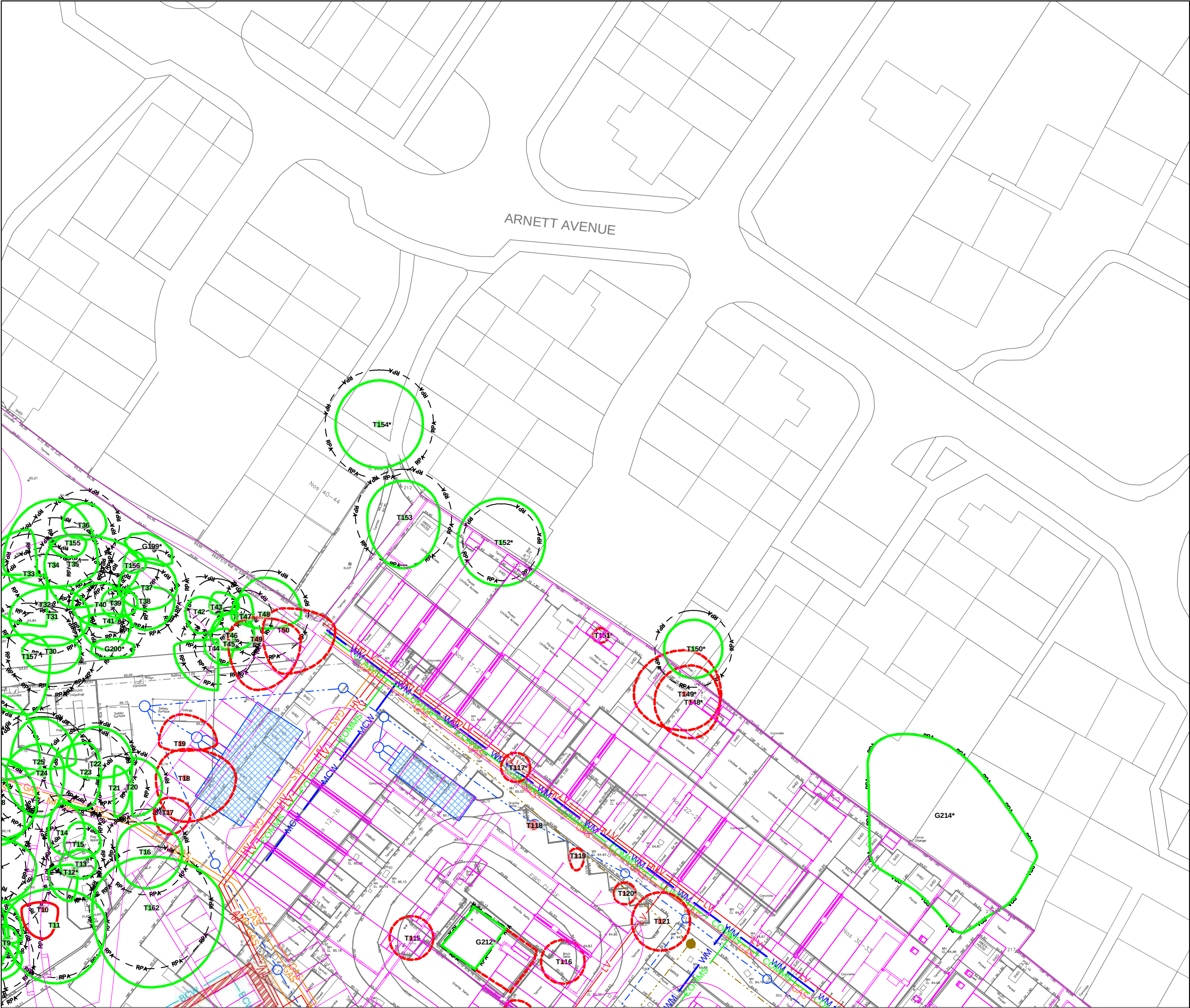
TREE REMOVALS PLAN
(SHEET 1 OF 7)

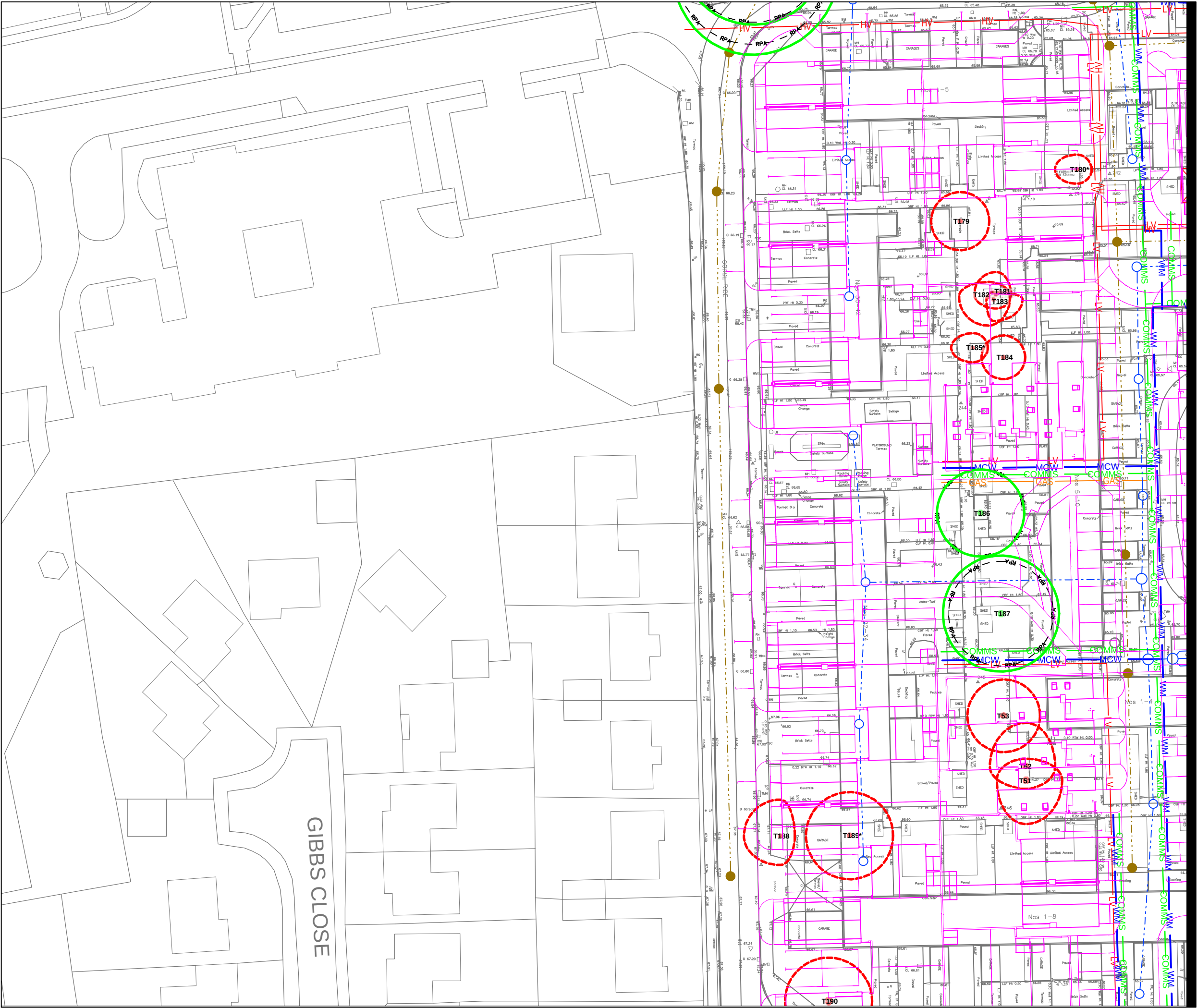
SHEET NUMBER

60591598-ACM-00-XX-DR-ARB-000011

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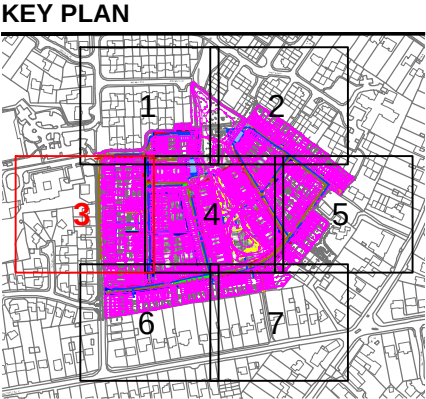
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ISSUE/REVISION		
C	23-03-2020	Updated with masterplan P15
B	04-03-2020	Updated with new layouts
A	31-07-19	Updated layout and protection
I/R	DATE	DESCRIPTION

PROJECT NUMBER

60591598

SHEET TITLE

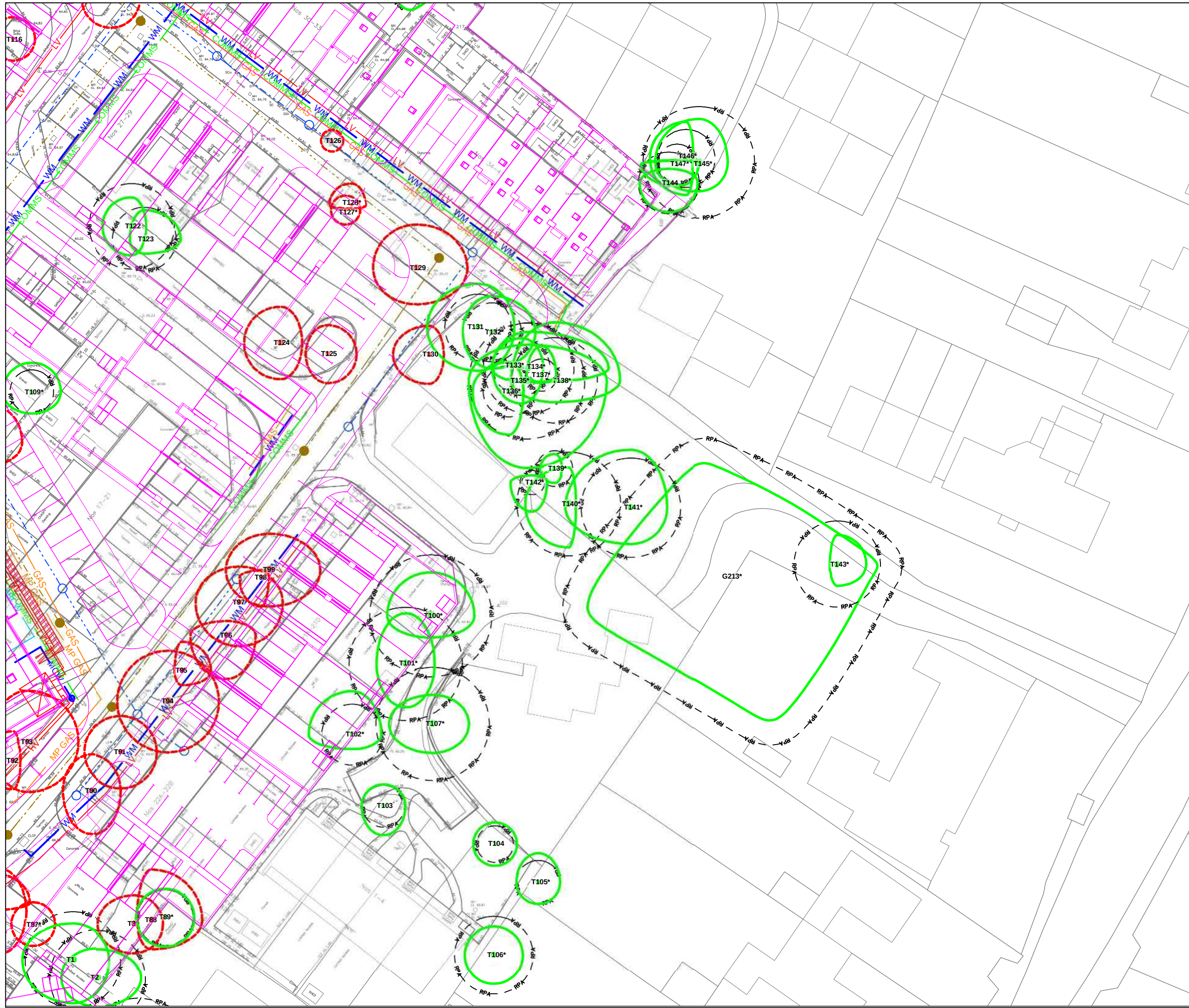
TREE REMOVALS PLAN
(SHEET 3 OF 7)

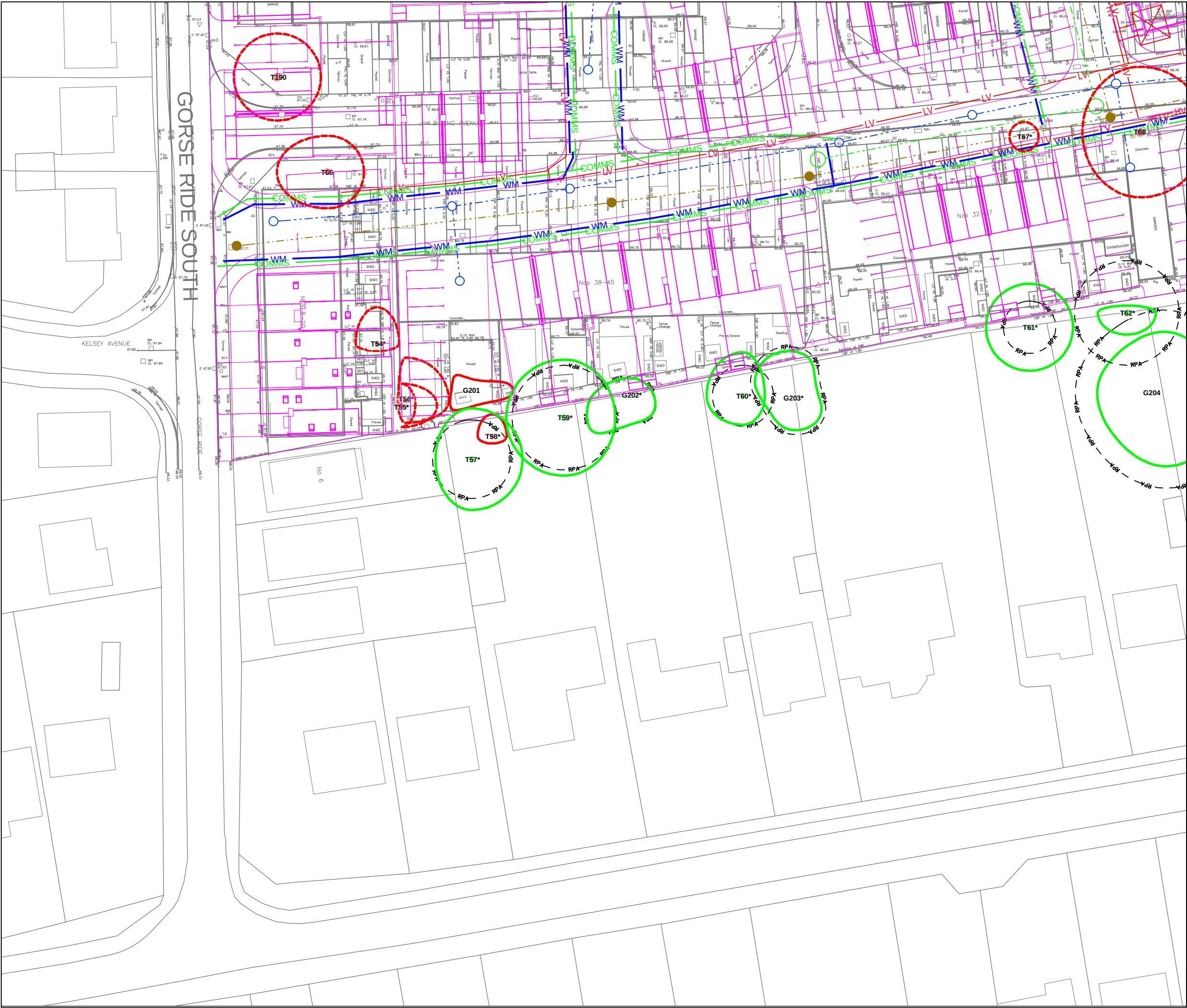
SHEET NUMBER

60591598-ACM-00-XX-DR-ARB-000013

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AECOM

PROJECT

Gorse Ride South

CLIENT

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NOTES

- TREE CATEGORIES AS DEFINED BY BS 5837:2012
- TREE LOCATIONS ARE BASED UPON THE TOPO SURVEY REF: 5700-3D-F.
- PLANS SHOULD BE READ IN CONJUNCTION WITH THE AECOM ARBORICULTURAL REPORT.
- THE ORIGINAL OF THIS DRAWING WAS PRODUCED IN COLOUR - A MONOCHROME COPY SHOULD NOT BE RELIED UPON.

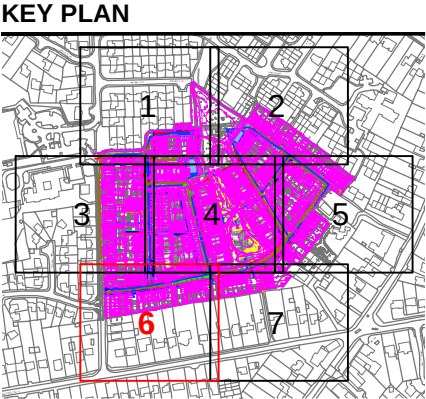
KEY

EXISTING RETAINED TREE, GROUP OR HEDGE
(RED DASHED AREA INDICATES APPROXIMATE REQUIRED PRUNING / REMOVAL WORKS)

EXISTING TREE, GROUP OR HEDGE TO BE REMOVED

ROOT PROTECTION AREAS
(AS DEFINED BY BS 5837:2012)

PROPOSED LAYOUT
(AS BASED UPON DWG:
GRS-ACG-00-00-DR-A-011050-OverallMasterPlan-P15
& GRS-ACM-00-XX-DR-U-201056)



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SHEET TITLE

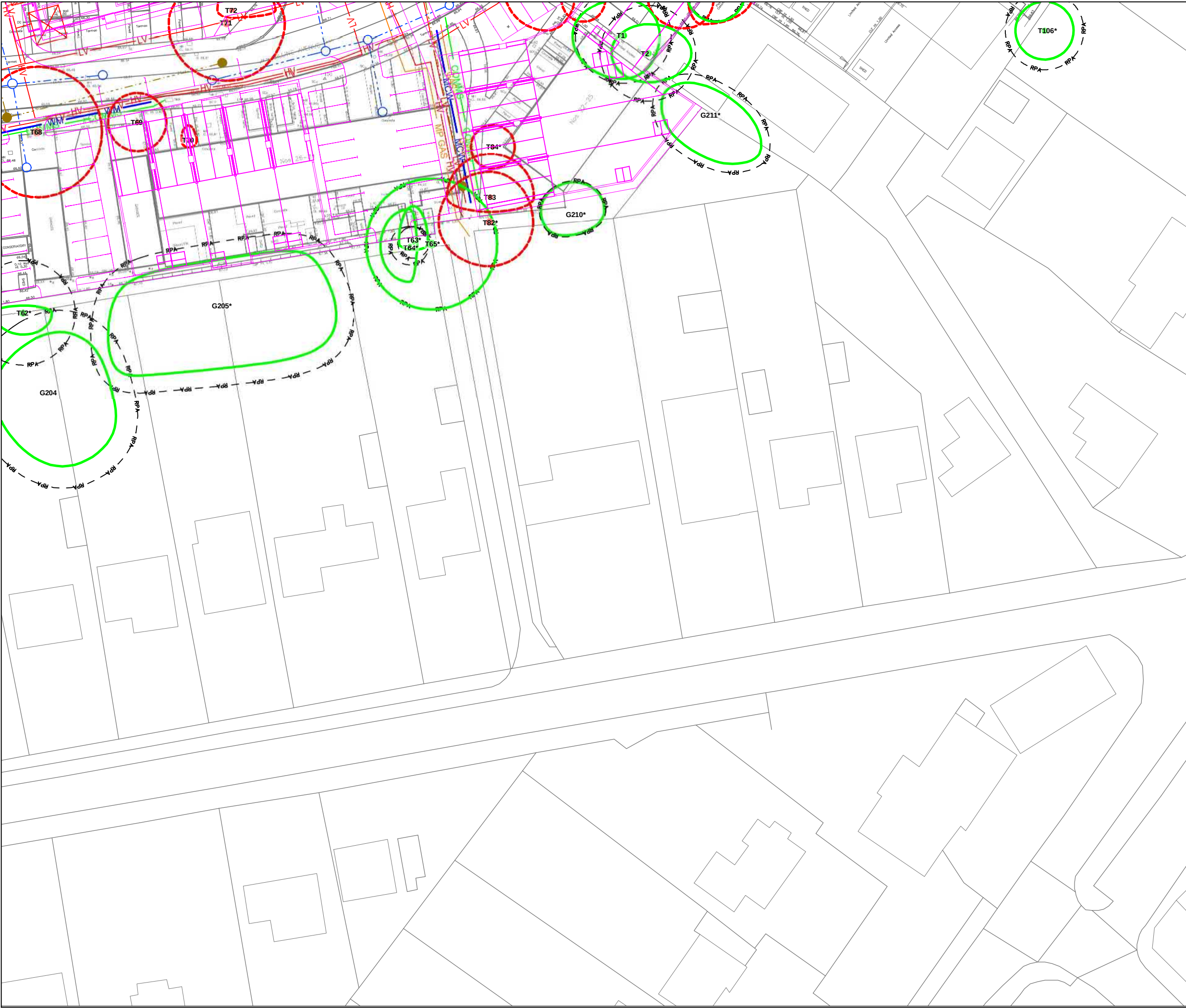
TREE REMOVALS PLAN
(SHEET 6 OF 7)

SHEET NUMBER

60591598-ACM-00-XX-DR-ARB-000016

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NOTES

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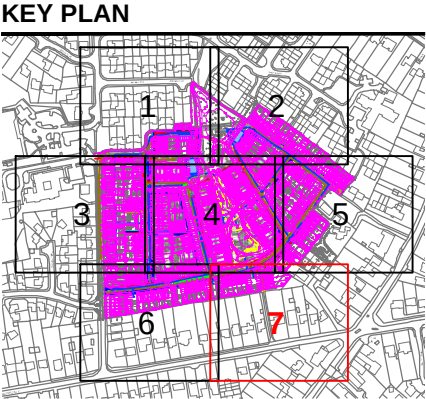
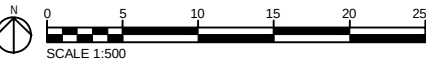
KEY

EXISTING RETAINED TREE, GROUP OR HEDGE
(RED DASHED AREA INDICATES APPROXIMATE
REQUIRED PRUNING / REMOVAL WORKS)

EXISTING TREE, GROUP OR HEDGE TO BE REMOVED

ROOT PROTECTION AREAS
(AS DEFINED BY BS 5837:2012)

PROPOSED LAYOUT
(AS BASED UPON DWG:
GRS-ACG-00-00-DR-A-011050-OverallMasterPlan-P15
& GRS-ACM-00-XX-DR-U-201056)



ISSUE/REVISION		
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SHEET TITLE

TREE REMOVALS PLAN
(SHEET 7 OF 7)

SHEET NUMBER

60591598-ACM-00-XX-DR-ARB-000017

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Appendix I Tree Protection Signage (Example)



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