



**Brindle
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Arboricultural Impact Assessment

Welling United Football Club, Bexley, London

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1 Summary

1.1 Scope of report

- 1.1.1 Brindle & Green were commissioned by Woolwich Road Limited to undertake a BS 5837:2012 Tree Survey and Arboricultural Impact Assessment (AIA) at the Park View Road Football Stadium and 1-3 Park View Road, in Welling, London. This report summarises any potential arboricultural impacts and outlines a tree protection plan in relation to a full planning application for a new stadium and associated facilities for Welling United Football Club, along with 104 residential units and commercial space. Design proposals can be found in Appendix 4. The survey was carried out on the 19th of April 2023.
- 1.1.2 This report is concerned with trees that have the possibility to be impacted as a result of development proposals at the site. This includes trees within the site, as well as any outside the boundary that may be impacted by the development and any subsequent post development activity.
- 1.1.3 This report and accompanying tree survey schedule are produced in accordance with the guiding principles of British Standard BS 5837:2012 'Trees in Relation to Design, Demolition and Construction - Recommendations'.
- 1.1.4 This report and associated tree survey aim to inform tree mitigation and/or removal for potential development at the site; it is not a health and safety survey. Observations on tree form and condition, from which management recommendations are made, are based upon ground-level visual assessments only. It is important to note that trees are dynamic and often unpredictable; even apparently healthy trees may occasionally fail.

1.2 Desk study

- 1.2.1 Use of the London Borough of Bexley Council's website confirmed that the site was not located within a Conservation Area, nor were there any Tree Preservation Orders (TPOs) relevant to the site. This information is correct as of the 6th of November 2023.

1.3 Summary of conclusions

1.3.1 T2, T3, G4, and G5 have been recommended for removal to facilitate the proposed development. Considerable pruning works are required to T1 and G1 – G3 to facilitate the western boundary buildings. A tree protection plan, complete with removal recommendations and mitigation measures, has been proposed for the development. The proposed mitigation will be the use of alternative foundations. The tree protection plan can be found in Appendix 2.

Table 1: Arboricultural considerations relevant to the site

Arboricultural Considerations	Recommendations	Timing
Tree removal/site clearance	Removal of trees/groups of trees to facilitate the development, or due to poor condition.	Pre-commencement and undertaken either outside the breeding bird season (March to September) or during the breeding bird season under ecological supervision
Specialist foundations	Specialist foundations should be used where there is justification to build within the RPA of a retained tree.	During construction
Tree planting	Planting with a mix of native and ornamental species.	Post-construction

2 Introduction

2.1 Context

2.1.1 The purpose of this survey was to provide an assessment of trees which may be impacted by development proposals at the Park View Road Football Stadium and 1-3 Park View Road, in Welling, London. A tree survey schedule, compliant with the guiding principles of BS 5837:2012, is contained within this report.

2.1.2 Results and recommendations contained within this report have been prepared by an experienced arboriculturist and are therefore the view of Brindle & Green Limited. The survey is based on information provided by our client, the development proposals, and the results of the desk study and our survey of the site. This report pertains to this information only.

2.2 Purpose of the report

2.2.1 This AIA will evaluate the direct and indirect effects of the proposed development on the site's trees. It will consider the requirement for tree removal to facilitate the design and any potentially damaging activities to retained trees (British Standards Institution, 2012).

2.2.2 An AIA will typically address some, or all, of the following:

- The tree survey (including survey schedule and maps)
- Trees selected for retention
- Trees to be removed
- Facilitation pruning requirements
- Evaluation of the impact of proposed tree losses
- Mitigation measures to implement the design
- Tree protection plan

2.3 The site

2.3.1 The red line boundary is approximately 1.2 hectares in extent and comprises the football ground occupied by Welling United Football Club as well as 1-3 Park View Road. Due to the nature and current use of the site, the trees are predominantly located off-site, beyond the site boundaries. Danson Park is located immediately to the south of the ground, with a dense, high-quality woodland (W1) forming the key arboricultural feature relevant to the site, offering significant arboricultural and landscape value. A number of predominantly low-quality trees and groups of trees are located on- and off-site, along the western boundary, which offer limited screening value against the adjacent properties. The wider surroundings are predominantly urban, with residential development to the north, east and west. The site is located in Welling, in the London Borough of Bexley, approximately half a mile east of Welling town centre. The site is the subject of a full planning application for a new stadium and associated facilities for Welling United Football Club, along with 104 residential units and commercial space. Design proposals can be found in Appendix 4.

3 Methodology

3.1 Tree survey parameters

3.1.1 The tree survey was undertaken in accordance with the guiding principles of British Standard 5837:2012 'Trees in Relation to Design, Demolition and Construction – Recommendations.'

3.1.2 Individual trees, groups of trees, woodlands and hedgerows are surveyed. A group of trees constitutes a cohesive arboricultural feature, either aerodynamically, visually or culturally. Where groups or woodlands are surveyed, individual trees may still be assessed if they vary significantly in their attributes.

3.1.3 Information recorded in the survey includes:

- **Species** – listed by common name. In the case of groups, all woody species present will be recorded.
- **Tree Height** – estimated in metres. In the case of groups, the average group height is recorded.
- **Crown Height** – height to the lowest branch is estimated in metres for each cardinal direction. In the case of groups, the minimum crown height is recorded.
- **Stem Diameters** – diameters of single-stemmed trees on level ground are measured at 1.5 metres above ground to the nearest 10 millimetres. Other commonly encountered trees (i.e. multi-stemmed or those on sloping ground) are measured in accordance with Figure C.1, BS 5837:2012.
- **Crown Spread** – recorded in metres along each of the cardinal points. In the case of groups, the maximum peripheral spread is recorded.
- **Life Stage** – recorded as young, semi-mature, mature, veteran, ancient or dead and defined in Table 2.

Table 2: Definitions of tree life-stages, as recorded in the survey schedule

Tree life-stage	Definition
Young	A tree within its first third of life expectancy. Established, but with significant growth remaining to reach ultimate size.
Semi-mature	A tree within its second third of life expectancy. Reaching its ultimate potential height, with slowing growth rate but will still increase in stem diameter and crown spread.
Mature	A tree within its final third of life expectancy. Limited potential for any significant further increase in size, even when healthy. Reasonable remaining life expectancy.
Veteran	A tree with features of biological, cultural or aesthetic value that are characteristic of individuals surviving beyond the typical age range for the species concerned.
Ancient	A tree that has passed beyond maturity and is very old in comparison to other trees of the same species.
Dead	The tree is dead; age up till death is of no significance.

- **General Observations** – including physiological condition (good, fair, poor, decline, dead) and any preliminary management recommendations. In the case of groups, the category awarded is that typical of the group.
- **Life Expectancy** – estimated remaining contribution in years (<10, 10+, 20+, 40+).

3.1.4 Trees will then be categorised as per the criteria shown in Table 3, to ascertain the quality and value of the existing tree stock.

3.2 Root Protection Areas (RPAs)

3.2.1 The **Root Protection Areas** are calculated and recorded in the survey schedule. RPAs are expressed in both linear and square metres. The RPA comprises the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability. The RPA is where the protection of the roots and soil structure is treated as a priority; it is at this distance/around this area that the tree protective fencing should be erected around any trees to be retained.

3.2.2 The default position is that structures are located outside the RPAs of trees to be retained. However, development within RPAs might be proposed when technical solutions allow the tree to remain viable. Such specialist guidance is therefore provided herein, where necessary.

3.3 General information and tree survey limitations

3.3.1 Tree surveys will be plotted directly onto a topographical survey whenever possible. If a topographical survey has not been undertaken, a digital OS map of the site will be used.

3.3.2 Surveyed trees are plotted using a Trimble TDC600 handheld device, partnered with a Geode GPS receiver (GNS2 Multi-GNSS 1Hz Receiver). Normal error of up to 0.5m can be experienced using this device, however care is taken to use the most accurate reading possible.

3.3.3 Where offsite trees have the potential to be impacted by the development proposals, they will be included within the tree survey; all measurements for offsite trees will be estimated from the site. Whenever tree measurements are estimated, this is represented with a # in the survey schedule. Note, detailed visual inspections may not be possible for offsite trees, as potential features/defects may not be visible from the site.

3.4 Report lifespan

3.4.1 We expect the results and recommendations of this report to be accurate for 2 years; however, tree condition may change following extreme weather events, damage or other unforeseen circumstances.

Table 3: Cascade chart for tree quality assessment (BS 5837:2012)

Category and definition	Criteria (including sub-categories where appropriate)		
Trees unsuitable for retention			
<p>Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years</p>	<ul style="list-style-type: none"> - Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning). - Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline. - Trees infected with pathogens of significance to the health and/or safety for the trees nearby, or very low-quality trees suppressing adjacent trees of better quality. - <i>NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve.</i> 		
Trees to be considered for retention	1 Mainly arboricultural values	2 Mainly landscape values	3 Mainly cultural values, including conservation
<p>Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years</p>	<p>Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)</p>	<p>Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features</p>	<p>Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)</p>
<p>Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years</p>	<p>Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including</p>	<p>Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but</p>	<p>Trees with material conservation or other cultural value</p>

Category and definition	Criteria (including sub-categories where appropriate)		
	<p>unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation</p>	<p>situated so as to make little visual contribution to the wider locality</p>	
<p>Category C Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm</p>	<p>Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories</p>	<p>Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits</p>	<p>Trees with no material conservation or other cultural value</p>

4 Arboricultural Impact Assessment

4.1 Presence of Tree Preservation Orders (TPOs) or Conservation Areas

4.1.1 Use of the London Borough of Bexley Council's website confirmed that the site was not located within a Conservation Area, nor were there any TPOs relevant to the site. This information is correct as of the 6th of November 2023.

4.2 Potential for tree damage during development

4.2.1 Many development activities have the potential to damage trees, either directly or indirectly. Direct damage could include root severance, accidental damage to the crown or impact damage, whilst indirect damage predominantly involves soil compaction and the subsequent root loss.

4.2.2 Severing just one of a tree's major roots during careless excavation for construction can cause the loss of up to 20 per cent of the root system; this undermines the tree's ability to absorb water and leaves it unstable in high winds. In general, 80-90% of all tree roots are found in the top 600mm of soil, and almost 99% of the tree's total root length occurs within the topmost 1m of soil, with some variations depending on soil porosity. The potential nuisance that fine root systems create for the development of specific sites must be weighed against the importance that they play in soil stabilisation on sloping ground (acting in a similar way to geotextile matting).

4.2.3 The early provision of physical protection against damage and technical solutions are essential, to ensure the site's retained trees remain healthy and viable.

4.3 Potential incompatibilities between the layout and trees proposed for retention

Construction Exclusion Zones (CEZs)

4.3.1 Due to spatial constraints within the site, and the presence of existing boundary features along the western and southern boundaries, no Construction Exclusion Zones (CEZs) are to be established prior to the commencement of any works onsite.

Permanent ground protection

4.3.2 There is no requirement for permanent ground protection within this scheme.

Temporary ground protection

- 4.3.3 Temporary ground protection is not required in this instance as there is no requirement for access into the RPAs of retained trees for works. If proposals change and there is a requirement to work within the RPA of retained trees, suitable temporary ground protection should be installed to protect the soil structure surrounding the tree. The RPA will be left undisturbed and covered by a semi-permeable geotextile membrane, which will be finished with a compression-resistant layer, e.g., 100mm depth of woodchip topped with scaffold boards.

Specialist foundations

- 4.3.4 The current proposals show the proposed changing room and official room (M) being built within the notional RPA of G3, impacting approximately 50% of the RPA. As such, the building will require alternative, specialist foundations to prevent detrimental impacts to the health of the off-site trees. As per BS 5837:2012, the use of traditional strip foundations can result in extensive root loss and adversely impact the tree. Root damage can be minimised by using piled foundations (e.g. micro pile). Specifications of the specialist foundations will be provided by a structural engineer.
- 4.3.5 Under the British Standards recommendations, site investigation will be used to determine the optimal pile location while avoiding damage to roots that are important for the stability of the tree. Investigatory holes will be dug by means of hand tools or compressed air displacement. Once optimal pile locations have been determined, piles of the smallest practical pile diameter will be used. After the piles have been put into place, beams/rafts will be laid at or above ground level. A rainwater collection system can be designed which re-directs the runoff to the area beneath the foundations, therefore providing the water necessary for tree root survival and growth. It will be the responsibility of the structural engineer to determine whether the foundations will be entirely pile, or whether more than one foundation type will be used (provided pile foundations are used within the RPA of G3).
- 4.3.6 Current proposals also show various buildings being built within the RPAs of retained, off-site tree T1 and groups G1 and G2 on the western boundary. The proposed buildings will extend beyond the footprints of the existing buildings, to the western boundary of the site, within areas currently comprised of hard surfacing. The buildings will impact approximately 60% of the RPA

of T1, 7% of which is currently occupied by a building and the rest by hard surfacing. The buildings will also impact approximately 34% and 40% of the notional RPAs of G1 and G2 respectively, all currently covered by hard surfacing. Due to the extensive presence of hard surfacing within the RPAs of T1, G1, and G2, major rooting material is not expected to be impacted and alternative foundations have not been recommended.

- 4.3.7 Current proposals also show the relocation of the existing southern spectator standing area approximately 4-5m south, to the southern site boundary, extending into the derelict area shown in Appendix 5. The proposed standing area shows a maximum overlap of approximately 18% of the notional RPAs of the dominant trees plotted within W1, in close proximity to the site. The relocation of the standing area is expected to be low-impact, retaining the minor level change between the site and the woodland (W1) as well as the existing boundary feature. As such, alternative, specialist foundations have not been recommended. Facilitative pruning works are not expected to the dominant trees within W1 due to the current crown clearance between the trees and the existing stand, however, crown reduction works may be required to sapling/young growth on the woodland edge, growing immediately behind the existing boundary feature.

4.4 The working and access space needed for construction

- 4.4.1 Construction vehicles and personnel will access the site using the existing access from Park View Road, to the north.

4.5 Trees proposed for removal

- 4.5.1 The following trees and groups are recommended for removal to facilitate the development: T2, T3, G4, and G5.
- 4.5.2 T2, a Category C plum, is recommended for removal to facilitate the construction of the proposed officials room (W). T2 grows immediately at the base of a brick boundary wall, in an area of uneven terrain and fly tipping, with limited future potential.
- 4.5.3 T3, a Category C sycamore, is recommended for removal to facilitate the construction of the proposed west stand and unallocated building. T3 grows in a corridor of uneven terrain between the existing stands and Danson Park to the south. T3 exhibits two large (0.5-1m in length), partially occluded wounds to the northern face of the stem with inrolled woundwood and decay.

- 4.5.4 G4, a low-quality group of limited value, consisting of plum and one common horse chestnut, is recommended for removal to facilitate the construction of the proposed west stand, and first aid, physiotherapy room, core, and general storage. G4 grows on-site atop a raised mound of uneven terrain, beyond the pitch-side fencing within the site, making the group largely inaccessible and visually obscured.
- 4.5.5 G5, a Category B group of one mature and two semi-mature sycamore, is recommended for removal to facilitate the construction of the proposed west stand, general storage, and public WCs. G5 grows on-site, beyond the pitch-side corrugated metal fencing, between the football pitch and the adjacent residential gardens.
- 4.5.6 T1, G1, G2, and G3, each require significant pruning works to facilitate the proposed buildings in close proximity to the western boundary, as detailed in Section 4.9. These trees are located off-site, beyond the site boundary, and have thus not been recommended for removal.

4.6 New planting

- 4.6.1 Whilst the potential for new planting is limited due to the spatial constraints and nature of the development, a robust landscape strategy has been developed by Create Design + Architecture. The landscape strategy seeks to maximise tree planting and help offset proposed removals within the limited space, utilising street tree planting as well as green roofs (including tree planting). Replanting should use high quality stock of mix of native and ornamental species to provide ecological, landscape and aesthetic value to the scheme. Stock selection should be discussed with a qualified arboricultural consultant to ensure appropriate trees are selected for the space available; careful consideration must be given to the ultimate height and crown spread, form, fruiting habit and maintenance implications of the chosen species.

4.7 Proximity of trees to structures – shading, seasonal nuisance and future pressures

- 4.7.1 Considerable shading is expected from the adjacent woodland (W1) within Danson Park. However, due to the current and proposed use of the site, shading is not expected to pose a major issue. A shading plan for all trees surveyed can be seen in Appendix 2.

4.8 Installation of services

- 4.8.1 Any underground services already existing on site will be utilised where possible to avoid further disturbance of RPAs. Service trenches should be laid at the greatest distance from the trees as possible. Section 7.7 of BS 5837:2012's guidance on services suggests re-routing into an RPA should be avoided when at all possible. If plans were to change and services were to infringe on Root Protection Areas, effort should be taken to lay them using trenchless 'no dig' methods in order to avoid cutting major roots. Modifications to the alignment should also be made to avoid adverse effects on tree growth and soil stability. Services near existing trees and potential new planting should be ducted when possible, for future maintenance. Grouping services will also minimise future disturbance where applicable.

4.9 Facilitative pruning works and further management recommendations

- 4.9.1 Considerable pruning works are required to western boundary trees and groups of trees T1, G1, G2, and G3 to facilitate the proposed buildings in close proximity to the boundary.
- 4.9.2 Crown lifting works are recommended to T1, raising the height of the northern crown to 8m, and the eastern and southern crown to 9m, to facilitate the proposed reception/club office to the north (roof height 7.5m) and the buildings to the east/south (roof height 8.69m).
- 4.9.3 Crown reduction works are recommended to reduce the eastern extents of G1, G2, and G3 back to the western boundary. G1 is to be reduced by a maximum of 2m, whilst G2 and G3 are to be reduced by a maximum of 3m. The off-site trees within G2 have previously undergone harsh topping works, with the remaining crown in sparse, poor condition.
- 4.9.4 Minor crown reduction works may be required to sapling/young growth on the edge of W1, in close proximity to the existing boundary feature, to facilitate the relocation of the southern standing area.
- 4.9.5 Any appointed contractor must carry out tree works according to BS 3998:2010 'Recommendations for Tree Work'.

5 Conclusion

- 5.1.1 T2, T3, G4, and G5 are recommended for removal due to conflict with the proposed development. All other trees identified within this report are located off-site and must be retained. G3 should be protected as outlined via alternative, specialist foundations. Considerable pruning works are required to T1 and G1 – G3 to facilitate the western boundary buildings.
- 5.1.2 Tree removal will take place outside of the breeding bird season (March-September) to prevent disturbance. Alternatively, this may be completed under ecological supervision/ reasonable avoidance measures.
- 5.1.3 All of the trees and groups of trees proposed for removal, with the exception of the Category B group G5, are Category C and of limited value and quality. The proposed development will have a minimal impact on the Category A, high-quality woodland W1, ensuring that the development retains a harmonious relationship with the woodland. Opportunities for new planting are limited due to the spatial constraints of the site, but the proposed landscaping scheme seeks to maximise new planting to help offset proposed removals.

Appendix 1 – Tree Survey Schedule

Tree ID	Common Name	Maturity	Height and direction of first significant branch (m)	Height (m)	No. of Stems	Calculated Stem Diameter (mm)	Radius of Nominal Circle (m)	RPA ^(m2)	Crown Spread (m)				Crown Height (m)				Crown	Stem	Basal Area	BS 5837 Category	Life Expectancy	Phys Condition	Comment
									N	E	S	W	N	E	S	W							
T1#	Lawson Cypress	Semi-mature	N/A	12	1	325	3.9	47.8	4	4	3.5	3.5	5	5	5	3.5	Fair	Fair	N/A	C2	10 to 20 yrs	Fair	Located behind closed board boundary fencing on the western boundary. Pruning of minor limbs overhanging site to provide clearance. Upper crown overhangs main building. Visual assessment of the stem and base limited by fencing. Estimated to be one stem at 1.5m, appears to fork behind fencing. Growing amongst other cypress, dominant corner individual.
T2#	Plum	Semi-mature	NE 2	6	1	165	2.0	12.3	1	3.5	2	2.5	3	1.5	2	2	Fair	Fair	Fair	C1	10 to 20 yrs	Fair	Growing immediately at edge of brick boundary wall, behind pitch-side fencing, in an area of fly tipping and uneven terrain. Crown skew due to adjacent cypress competition. Negligible overhang of erected pitch-side boundary. Generally unremarkable.
T3#	Sycamore	Mature	NW 4	14	1	460	5.5	95.7	4	4.5	5	5	3	5	4	4.5	Fair	Poor	Fair	C1,2	10 to 20 yrs	Fair	Growing between football ground and Danson Park, in a corridor of land. Small amount of deadwood and wounding in the crown. Two large partially occluded wounds to the northern extent of the stem with inrolled woundwood and decay. Both approximately 0.5-1m in length. Moderate to major pruning of growth at the base, east.

Group ID	Species	BS 5837 Category	Description
G1	Lawson Cypress, Common Elder	C1	Group of young cypress growing off-site behind the western boundary fencing. Competition with T1. Minimal overhang into the site. One larger individual (potentially growth from base of T1 but unable to determine behind fencing) exhibits heavy lean south-west and is in contact with fencing. Average stem diameter 75mm, larger individual approximately 150-200mm. Pruning to larger individual over fencing. Crown clearance 5m over walkway. Average height 6m. Larger individual 9m. Young elder present.
G2	Lawson Cypress	C2	Cypress treeline growing behind the site boundary fencing. Approximately 12 individuals, young and semi-mature. All of the cypress appear to have been previously topped at approximately 5m. Minor overhang of the main building. Crown clearance approximately 4m with some minor growth at 2.5m, minimal overhang. Visual assessment of the base of the group limited by boundary fencing. Minor pruning over the site boundary. Predominantly single-stemmed with an average diameter of 200-250mm. Low quality and poor condition due to topping. Minimal on site crown to central individuals. Average height approx 7-8m.
G3	Lawson Cypress	C2	Unremarkable group of young to semi-mature cypress, inaccessible behind boundary wall. Beyond erected boundary fencing within the site. Average stem approximately 150-200mm. Average height 7-8m. No overhang beyond erected fencing. Fair condition.
G4	Common Horse Chestnut, Plum	C1	Low-quality group of young plum and one young horse chestnut. Unremarkable. Growing on raised mound beyond erected pitch-side fencing within the site. Average height 4m. Average stem approximately 100mm. Largely inaccessible, limited visual assessment.
G5	Sycamore	B2	Growing in a parcel of land beyond corrugated metal fencing at pitch-side, between the pitch and the adjacent residential gardens. One mature and two semi-mature. Height approximately 15-16m. Crown skew due to competition. Crown clearance 4.5-5m over fencing. Two multi-stemmed individuals, one single-stemmed (semi-mature). The mature sycamore is the dominant feature of the group. Provide considerable landscape value.
G6	Lawson Cypress	C2	Semi-mature cypress treeline growing within the adjacent club grounds. Average stem diameter approximately 200mm. Average height 10m. Minor overhang into site. Growing within 1m of boundary wall between grounds. Separate from Danson Park. Should pose no constraints.

Group ID	Species	BS 5837 Category	Description
W1	Field Maple, Common Holly, Common Oak, Holm Oak, <i>Salix</i> sp., Common Ash, Common Horse Chestnut, <i>Prunus</i> sp., Field Elm	A1,2	<p>High quality woodland within the grounds of Danson Park, growing beyond the football grounds. The trees within the woodland are on the far side of the corridor of land between the football ground and Danson Park, behind a second concrete wall. Sapling and young field maple and common holly are growing in close proximity to the concrete wall, with an average stem diameter of 75mm. The dominant, mature trees in the woodland are set back an average of 4-5m from the concrete wall. Other prominent trees within the woodland are set further into the park, or beyond the informal tracks running through the park. The concrete boundary wall appears to act as a retaining feature, facilitating a level change of approximately 0.5m between the park and the corridor of land in the football ground. The woodland acts as a significant screening feature between Danson Park and Welling United Football Club. Average height of dominant features approx 18-20m with some smaller individuals. Considerable crown clearance of 5-6m from the football grounds. Willow to the far eastern extent has minor overhang above football grounds. The dominant edge trees in the woodland are in good to fair condition, showing no major defects. Heavy ivy is present to two oak. Westernmost oak is leaning towards the boundary, with bending in the upper stem towards the boundary - crown skewed due to competition with adjacent oak. One felled mature tree with stump remaining. Moderate pruning to multiple individuals, primarily over the informal track to provide access. Heaviest pruning has occurred to the horse chestnut to the east. Willow shows heavy crown skew north east away from the holm oak in close proximity - crown skewed towards football grounds. Heavy pruning to the lower crown of the holm oak, to provide access along informal track. Ash of stem diameter 275mm grows 1.8m from the concrete wall, with overhang - clearance of 4m. High-quality woodland with significant value.</p>

Appendix 2 – Tree Maps & Tree Protection Plan

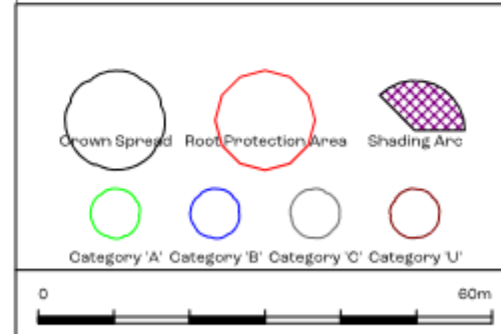
Project Reference/Name:
BG23.162 Welling United Football Club








Client:
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Drawing Title:
Location & Quality

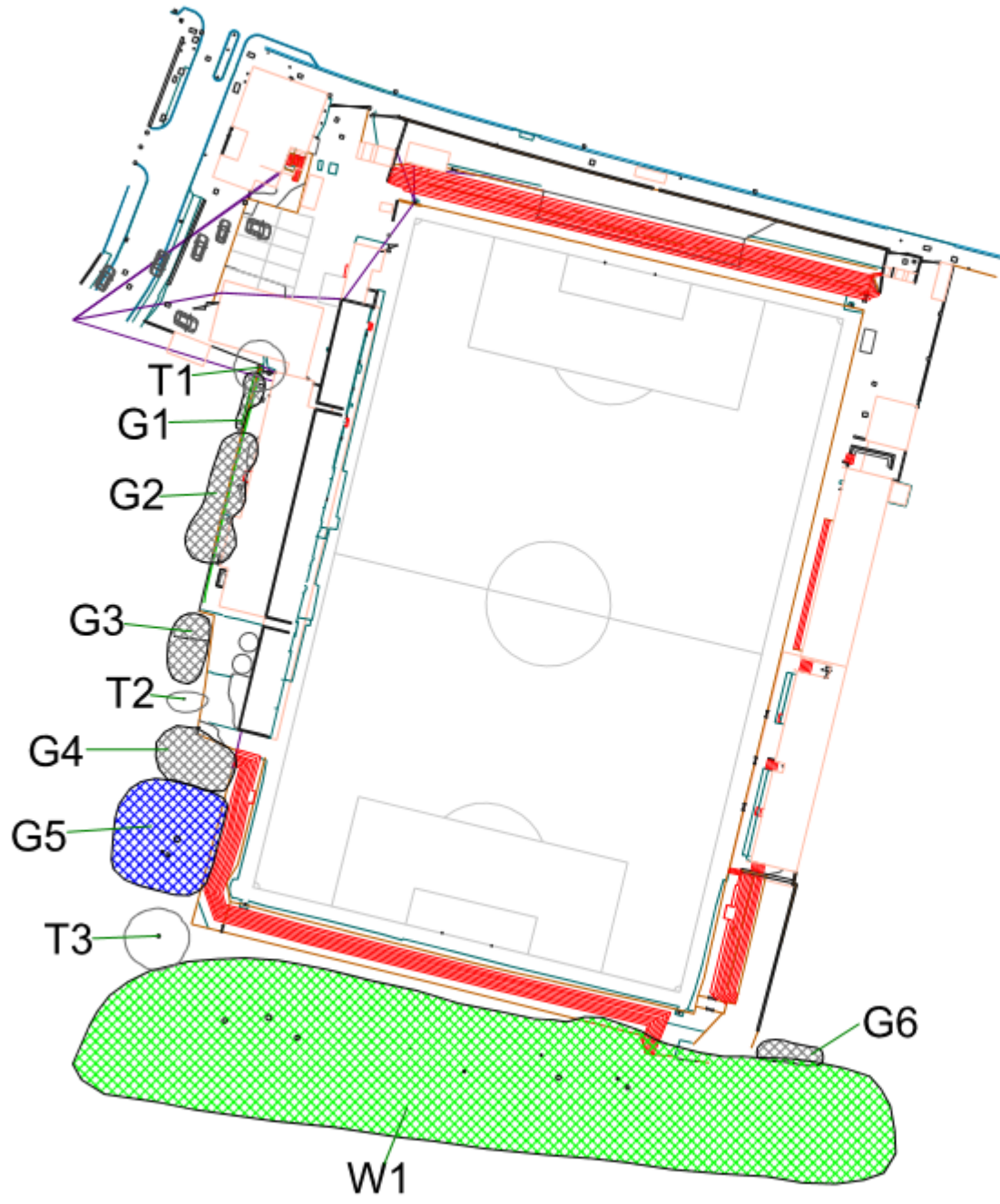
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- Legend:**
-  Construction Exclusion Zone Fencing
 -  Permanent Ground Protection
 -  Temporary Ground Protection
 -  Specialist Foundations
 -  Trees Proposed for Removal



 Crown Spread
  Root Protection Area
  Shading Arc
 Category 'A'
  Category 'B'
  Category 'C'
  Category 'U'

0 60m



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Client:

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Drawing Title:

Location & Quality (Demolition Plans Overlaid)

Drawn By:

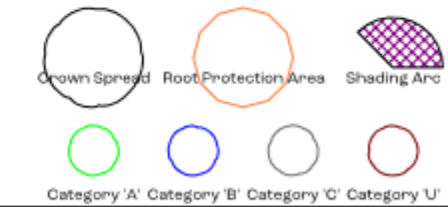
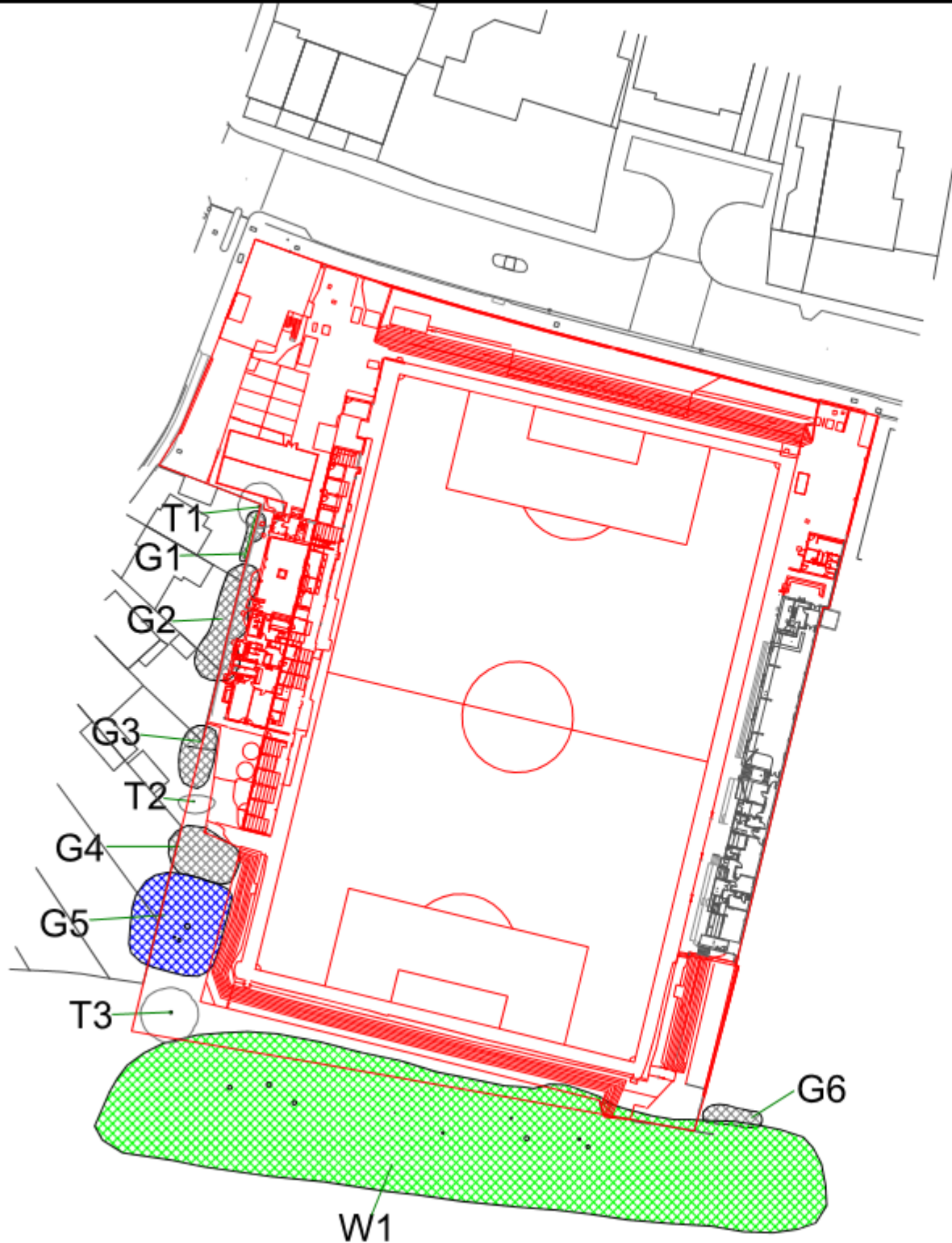
HR

Date:

15/11/2023

Legend:

-  Construction Exclusion Zone Fencing
-  Permanent Ground Protection
-  Temporary Ground Protection
-  Specialist Foundations
-  Trees Proposed for Removal



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Project Reference/Name:
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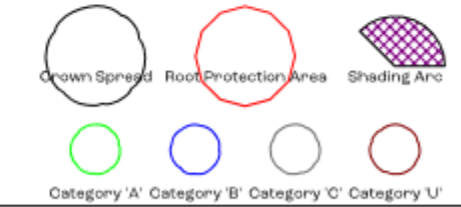
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Drawing Title:
Location & Quality (Plans Overlaid)

Drawn By: HR **Date:** 15/11/2023

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-  Permanent Ground Protection
-  Temporary Ground Protection
-  Specialist Foundations
-  Trees Proposed for Removal

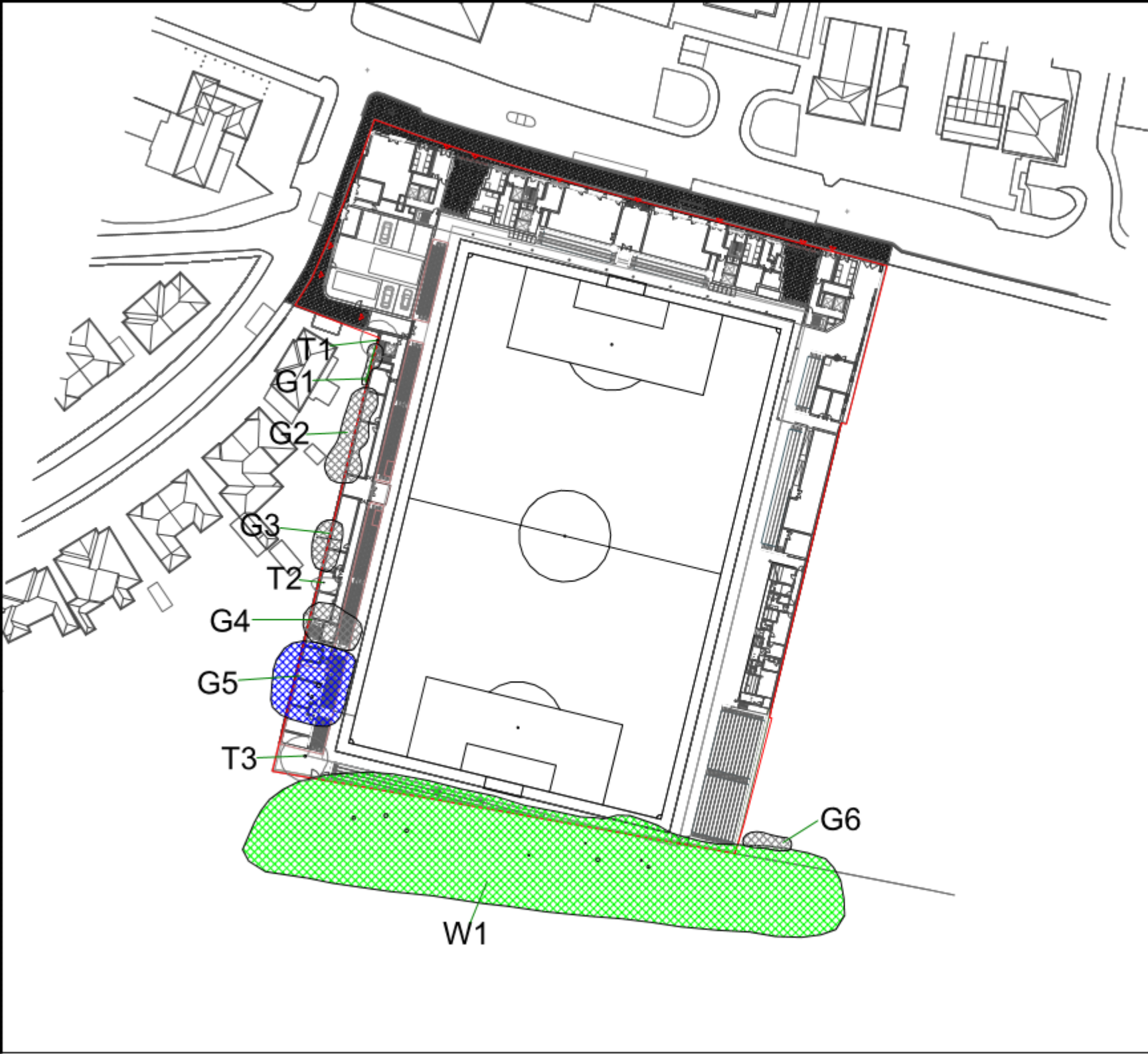


0 60m

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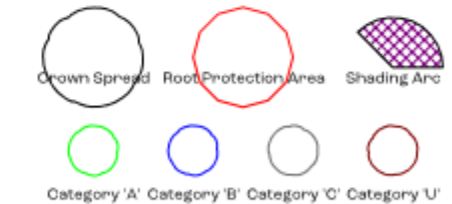
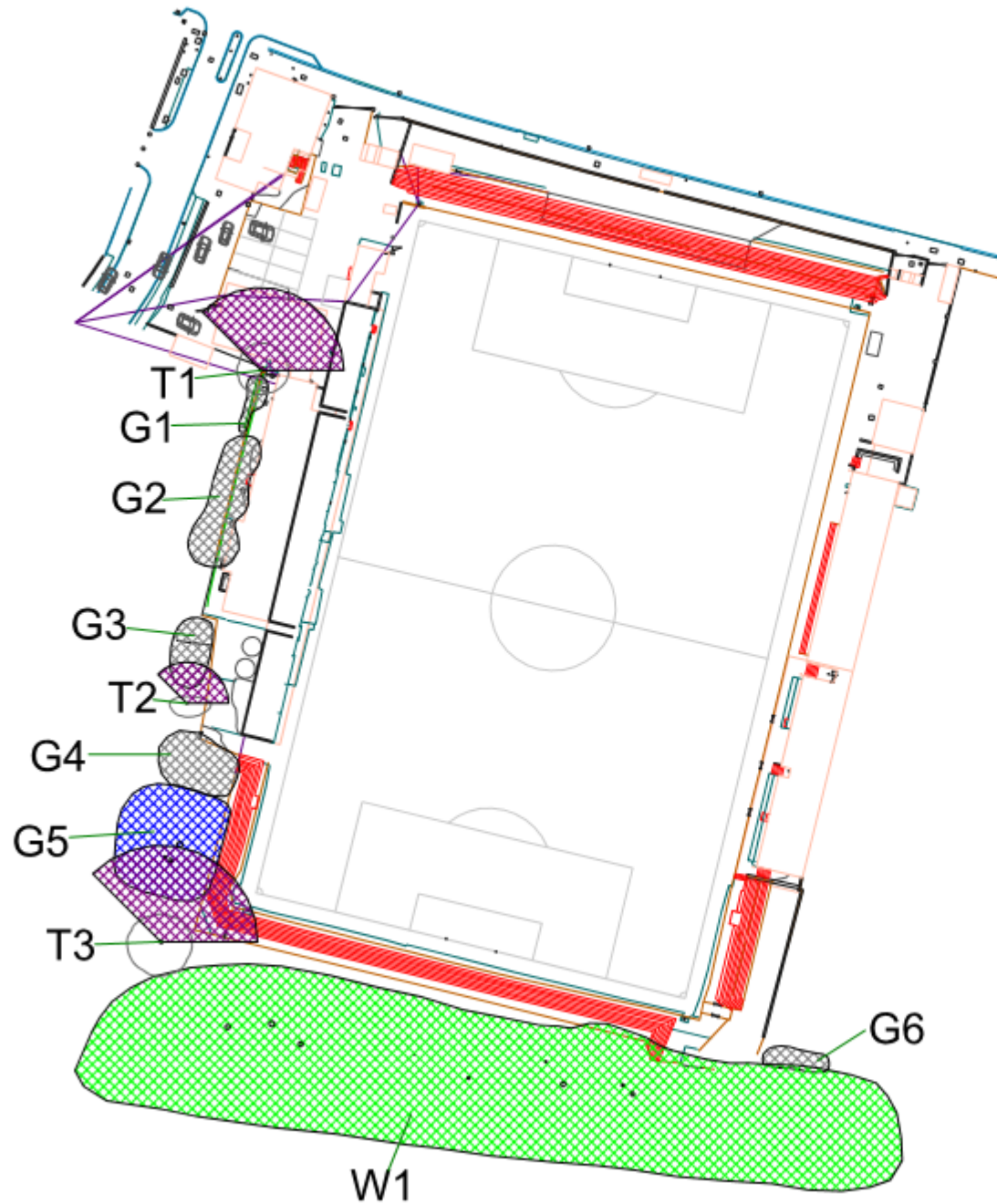
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Drawing Title:
Shading

Drawn By: HR **Date:** 15/11/2023

Legend:

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-  Permanent Ground Protection
-  Temporary Ground Protection
-  Specialist Foundations
-  Trees Proposed for Removal



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Project Reference/Name:

BG23.162 Welling United Football Club

Client:

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Drawing Title:

Shading (Demolition Plans Overlaid)

Drawn By:

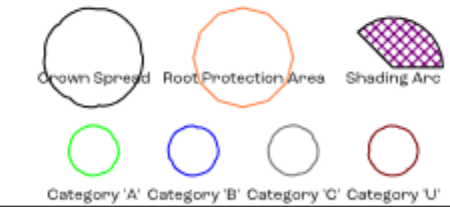
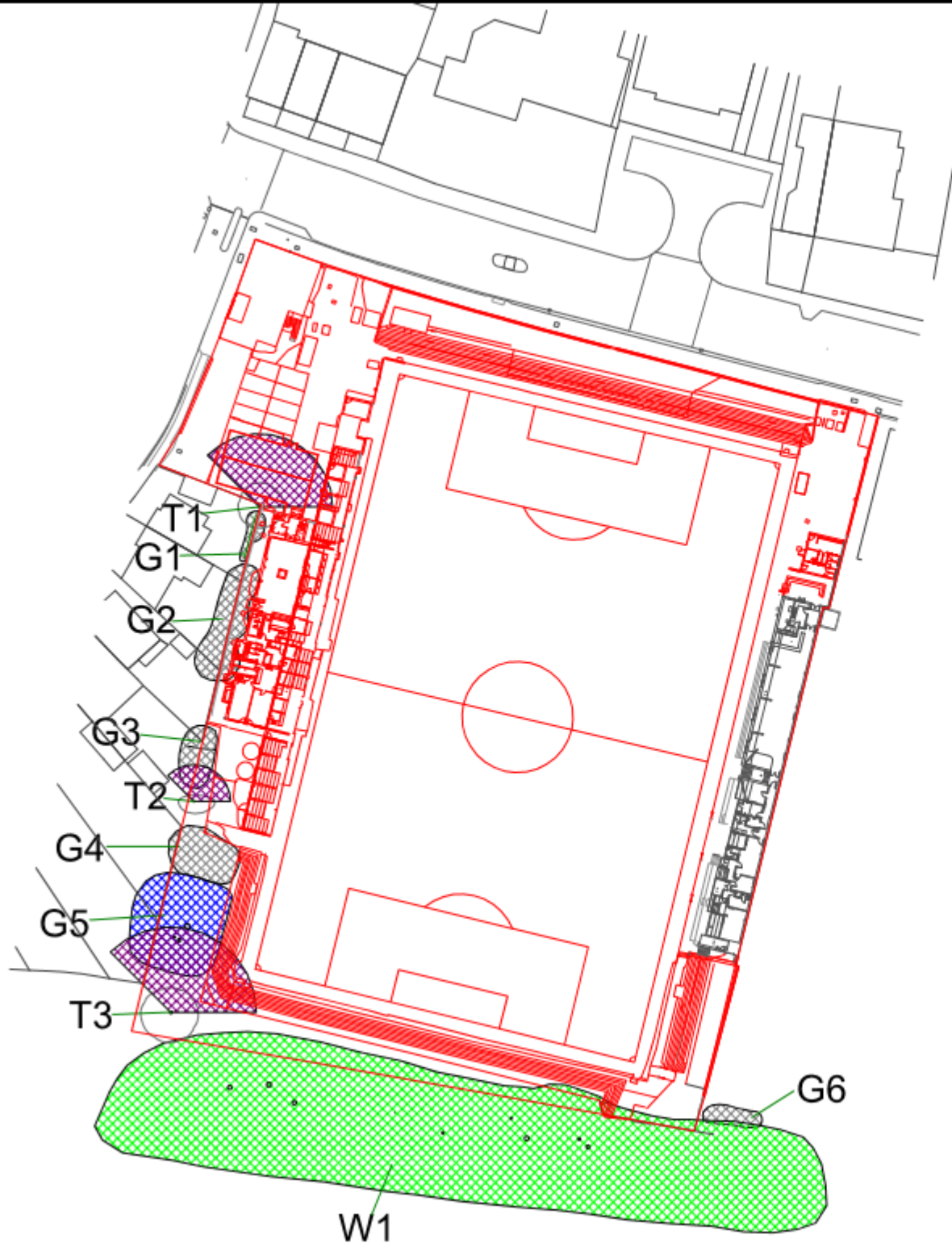
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Date:

15/11/2023

Legend:

-  Construction Exclusion Zone Fencing
-  Permanent Ground Protection
-  Temporary Ground Protection
-  Specialist Foundations
-  Trees Proposed for Removal



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Project Reference/Name:
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Client:
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Drawing Title:
Shading (Plans Overlaid)


Drawn By: HR **Date:** 15/11/2023

Legend:

-  Construction Exclusion Zone Fencing
-  Permanent Ground Protection
-  Temporary Ground Protection
-  Specialist Foundations
-  Trees Proposed for Removal

 Crown Spread
  Root Protection Area
  Shading Arc
 Category 'A'
  Category 'B'
  Category 'C'
  Category 'U'

0 60m



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Drawing Title:

Root Protection Area (RPA)

Drawn By:

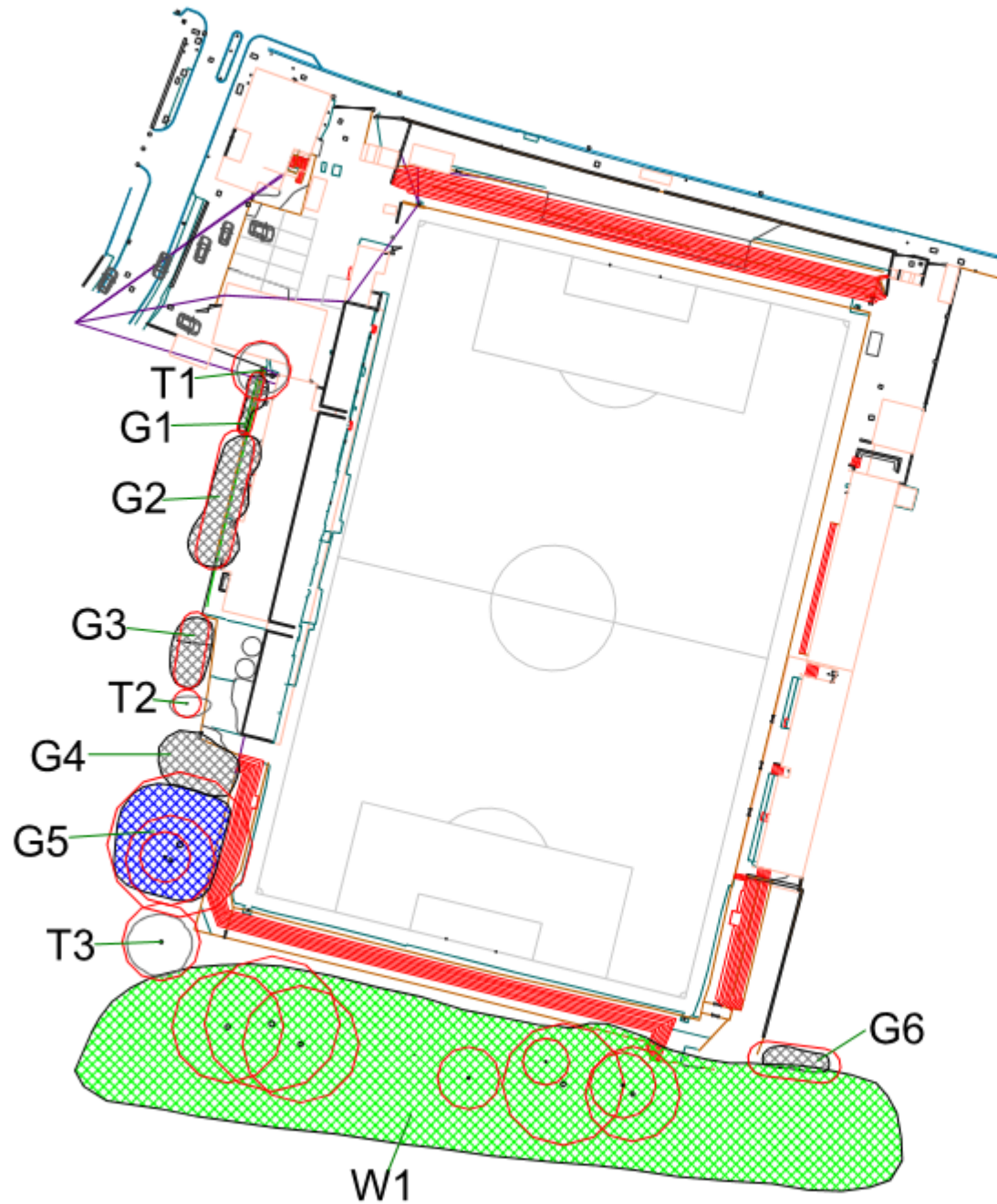
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Date:

15/11/2023

Legend:

-  Construction Exclusion Zone Fencing
-  Permanent Ground Protection
-  Temporary Ground Protection
-  Specialist Foundations
-  Trees Proposed for Removal



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Drawing Title:

RPA (Demolition Plans Overlaid)

Drawn By:

HR

Date:

15/11/2023

Legend:

-  Construction Exclusion Zone Fencing
-  Permanent Ground Protection
-  Temporary Ground Protection
-  Specialist Foundations
-  Trees Proposed for Removal

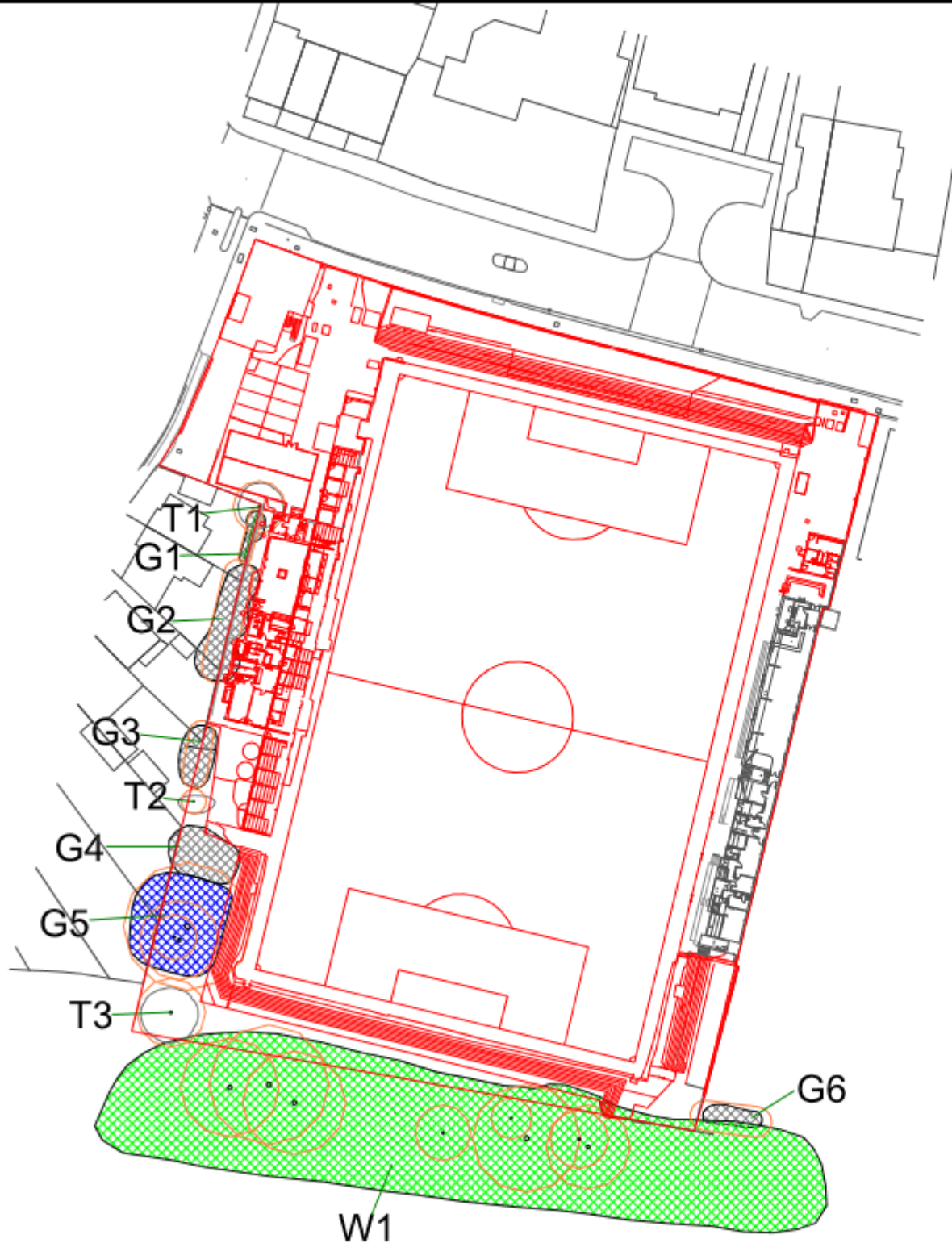
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-  Root Protection Area
-  Shading Arc
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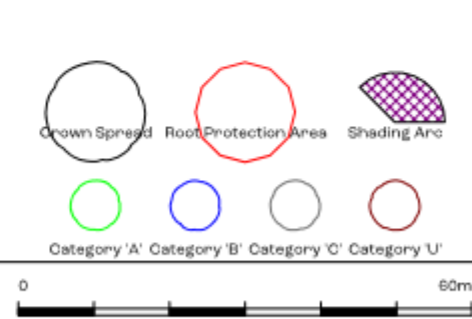
Client:
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Drawing Title:
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Drawn By: HR **Date:** 15/11/2023

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-  Specialist Foundations
-  Trees Proposed for Removal



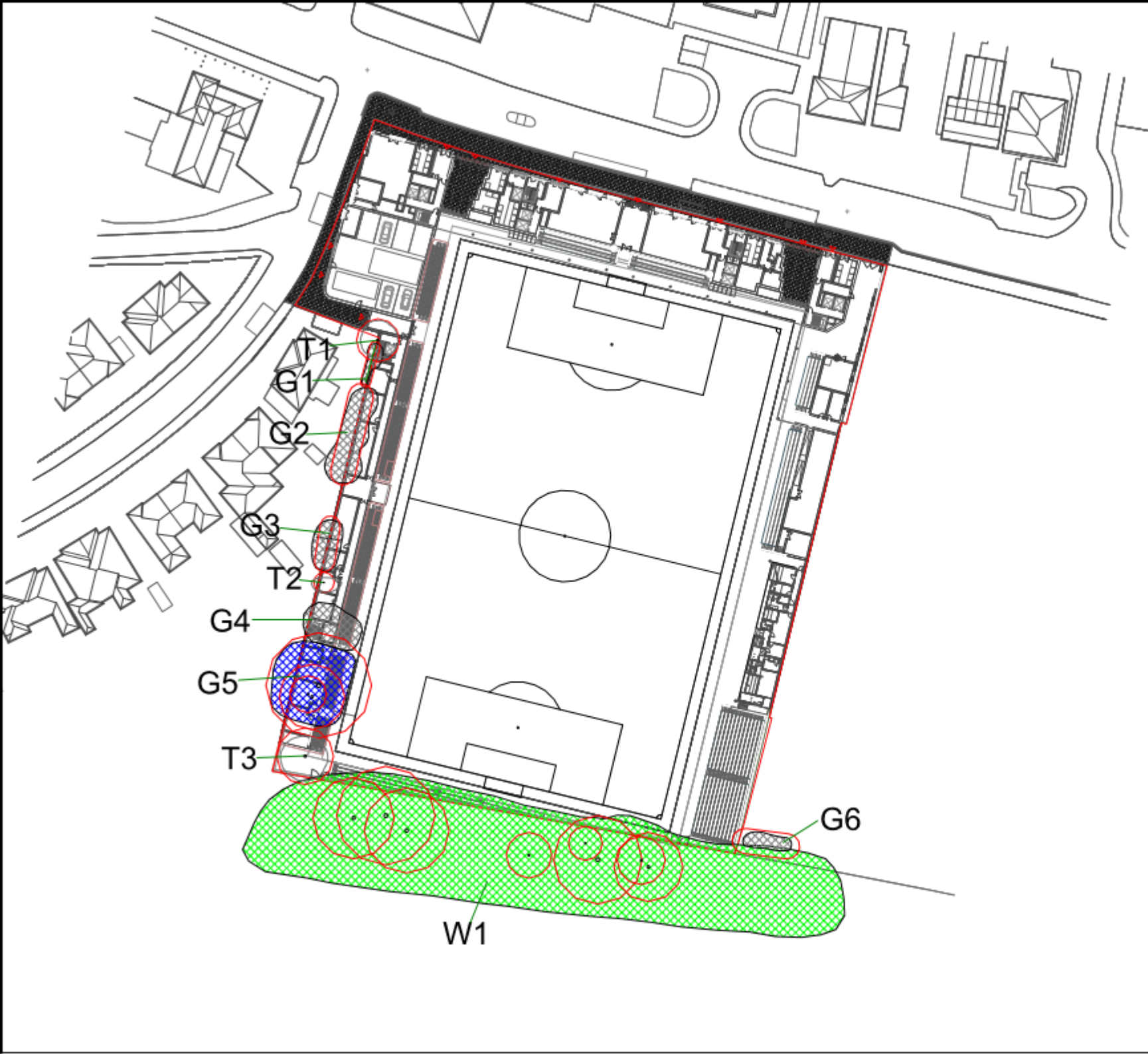
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  Shading Arc
 Category 'A'
  Category 'B'
  Category 'C'
  Category 'U'

0 60m

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Client:
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Drawing Title:
Tree Protection Plan

Drawn By: HR **Date:** 24/11/2023


Legend:

-  Construction Exclusion Zone Fencing
-  Permanent Ground Protection
-  Temporary Ground Protection
-  Specialist Foundations
-  Trees Proposed for Removal

-  Crown Spread
-  Root Protection Area
-  Shading Arc
-  Category 'A'
-  Category 'B'
-  Category 'C'
-  Category 'U'



0 80m



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Appendix 3 – Tree Protection General Guidance

Tree protection specification – protective fencing

The protective fencing used must be fit for the purpose of excluding construction activity.

The default fencing specification should be as per Figure 1 and comprise of a vertical and horizontal scaffold framework. The fencing must be a minimum of 2m tall and well braced to resist impacts. Upright scaffold poles must be driven into the ground by a minimum of 0.6m and spaced at maximum intervals of 3m. Onto this framework, welded mesh infill panels will be secured to the uprights and cross-members with wire ties. The fence should be supported on the inner side by bracing poles. Care must be taken when locating the bracing poles to avoid contact with structural roots.

When the site circumstances prevent the use of driven poles (e.g. due to existing hard surfacing), the fencing specification should be as per Figure 2. This will consist of 2m tall welded mesh panels (e.g. Heras) on rubber or concrete feet, with the mesh panels held together with a minimum of two anti-tamper couplers. Distance between the fence couplers should be at least 1m and uniform across the fencing. Stabiliser struts on the inner side of the fence should be attached to a base plate secured with ground pins (Figure 2a) or mounted onto a block tray (Figure 2b).

Tree protective fencing must have all-weather notices attached at regular intervals, such as those in Figure 3 and Figure 4. The notices must include wording such as 'CONSTRUCTION EXCLUSION ZONE – NO ACCESS' or 'TREE PROTECTION AREA – KEEP OUT'. The tree protective fencing must remain *in situ* and intact until completion of construction; they may be removed after agreement with the project arboriculturist and their removal discharged to the Local Planning Authority.

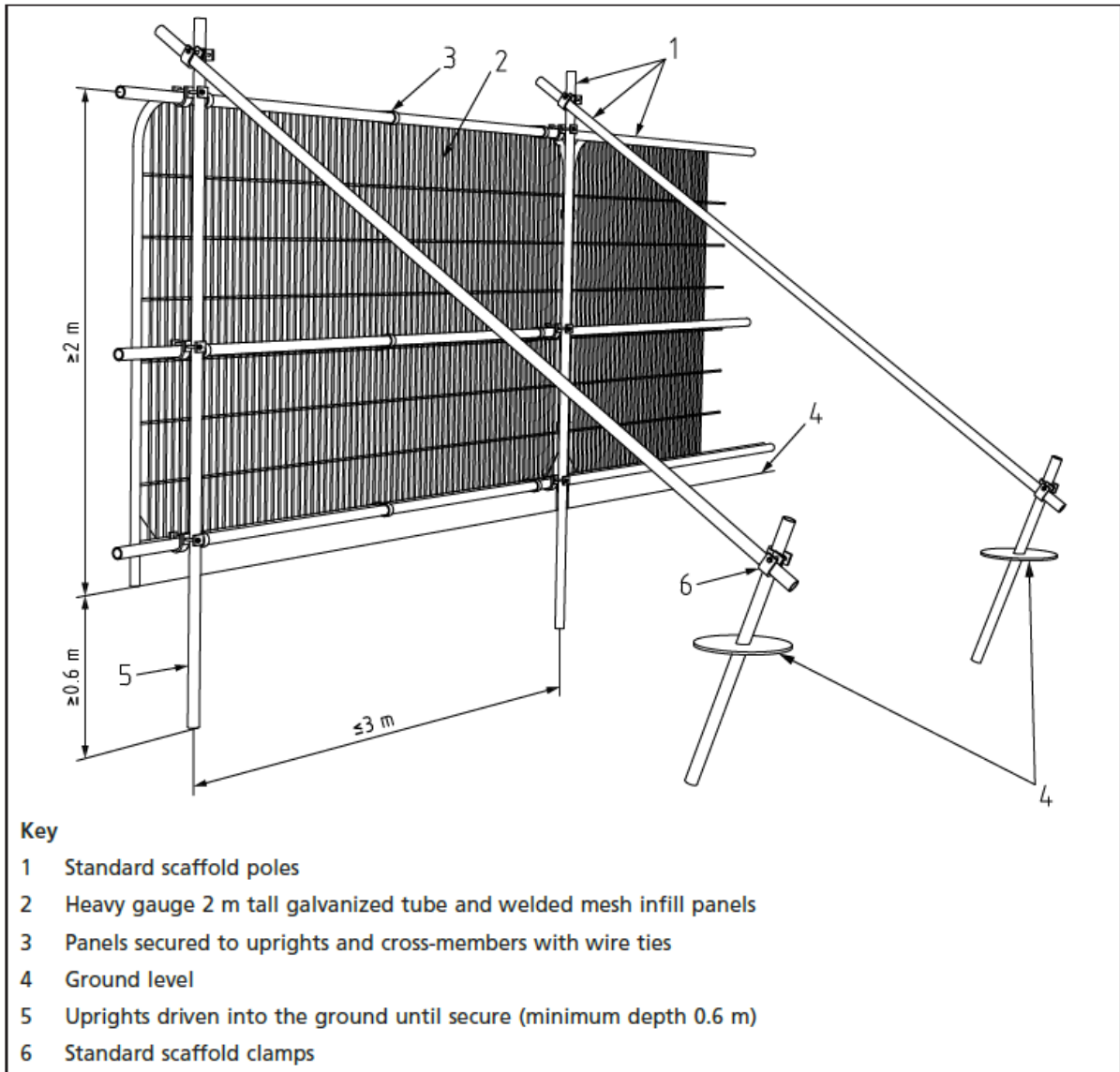


Figure 1: Default specification for tree protection fencing (Figure 2 in BS 5837:2012)

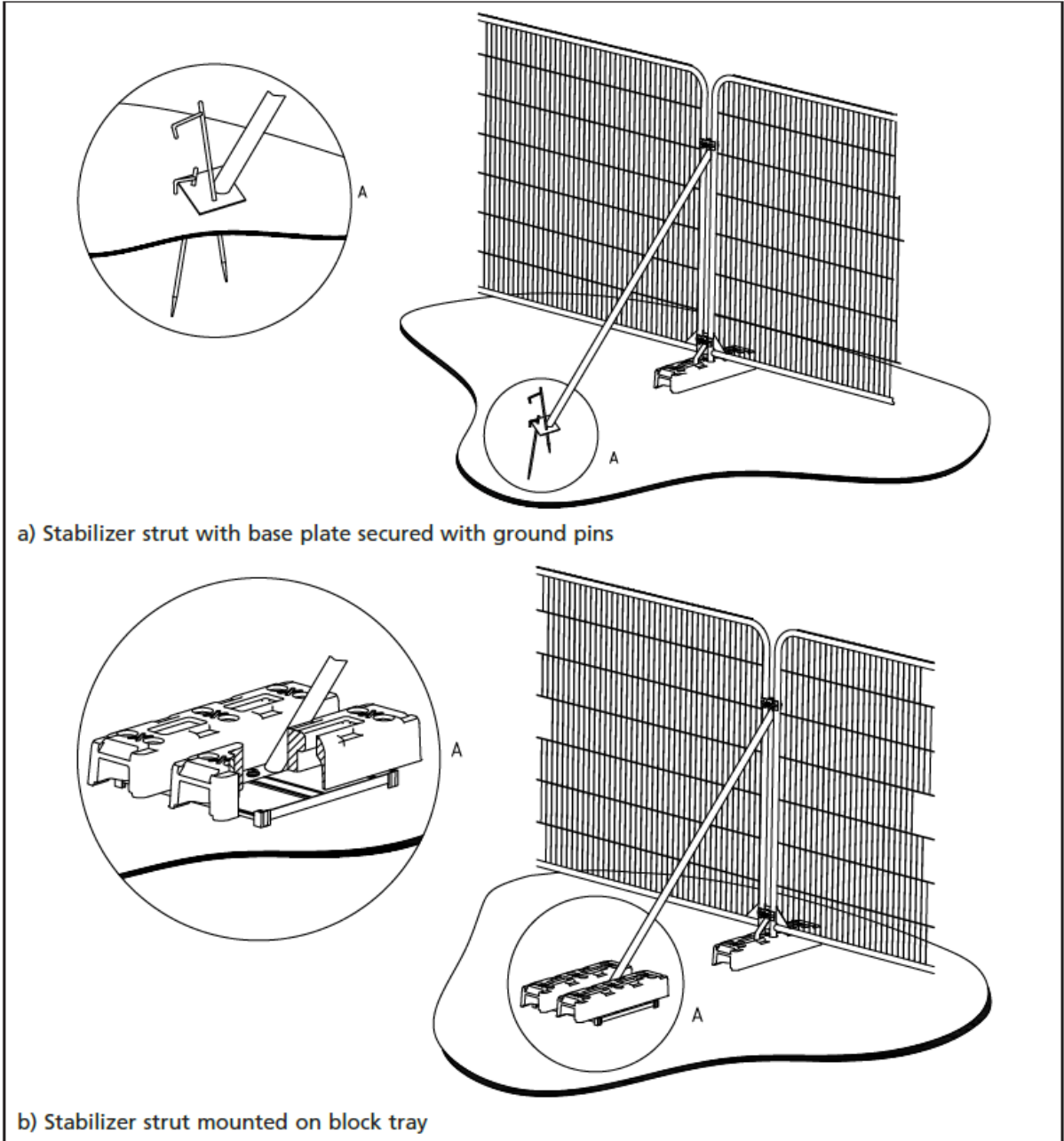


Figure 2: Alternative specification for tree protection fencing (Figure 3 in BS 5837:2012).



TREE PROTECTION AREA KEEP OUT!

(Town & Country Planning Act 1990)

**Trees enclosed by this fence are protected by
planning conditions and/or are the subjects of
a Tree Preservation Order.**

**Contravention of a Tree Preservation Order
may lead to criminal prosecution.**

**Any incursion into the protected area must be
with the written permission of the local
planning authority.**



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Figure 3: Tree protection fencing signage.



PROTECTIVE FENCING

Fencing must be maintained in accordance with the approved plans and drawings for this development



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Figure 4: Tree protection fencing signage.

Other considerations – statutory controls and wildlife

Statutory controls

Trees may be statutorily protected due to their location within a Conservation Area, or by a Tree Preservation Order (TPO). Brindle & Green Ltd have undertaken TPO and Conservation Area searches to inform this report, using Local Planning Authority online mapping services or by confirming directly with the LPA. The protection status of trees may change between the issuing of reports and the commencement of works onsite; therefore, it is strongly recommended that tree protection status is checked directly with the LPA prior to the commencement of any tree work onsite. Separate works applications to protected trees are not required provided that the works are specified in this report, that this report is submitted to the LPA as part of the planning application and that planning consent is granted.

Bats

Several British bat species will roost in trees. All bats in the United Kingdom and their habitats are fully protected under the Wildlife and Countryside Act 1981 (as amended), and the Conservation of Habitats and Species Regulations 2017 (as amended). It is an offence to damage or destroy any bat roost, intentionally or recklessly obstruct a bat roost, deliberately, intentionally or recklessly disturb a bat or intentionally kill, injure or take any bat.

Breeding birds

All nesting birds are protected under the Wildlife and Countryside Act 1981, which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy its nest whilst in use or being built, or take or destroy its eggs. In addition, for species listed on Schedule 1 of the Wildlife and Countryside Act 1981 it is an offence to intentionally or recklessly cause disturbance at, on or near an 'active' nest.

Vegetation clearance, including tree and hedgerow removal, during the period March to August can be damaging to active bird nests during the main breeding season. Vegetation clearance on site should ideally take place in the months September to February, outside of the main bird breeding season.

Any vegetation clearance proposed between the months of March and September should be subjected to a search for active birds' nests 24 hours prior to commencement of works. This should confirm whether all or some clearance is achievable. In addition to a pre-works check,

the clearance of vegetation between the months of March and September should be supervised by a suitably experienced ecologist.

Appendix 4 – Site Plans



0 Ground Floor Plan 1:500

Revision Description Drawn Checked Date

CREATE

DESIGN + ARCHITECTURE

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+44 207 021 0267 info@createdesign.org www.createdesign.org

WELLING UNITED FC
DA16 1SY
Client
LITA HOMES & WELLING UNITED FC

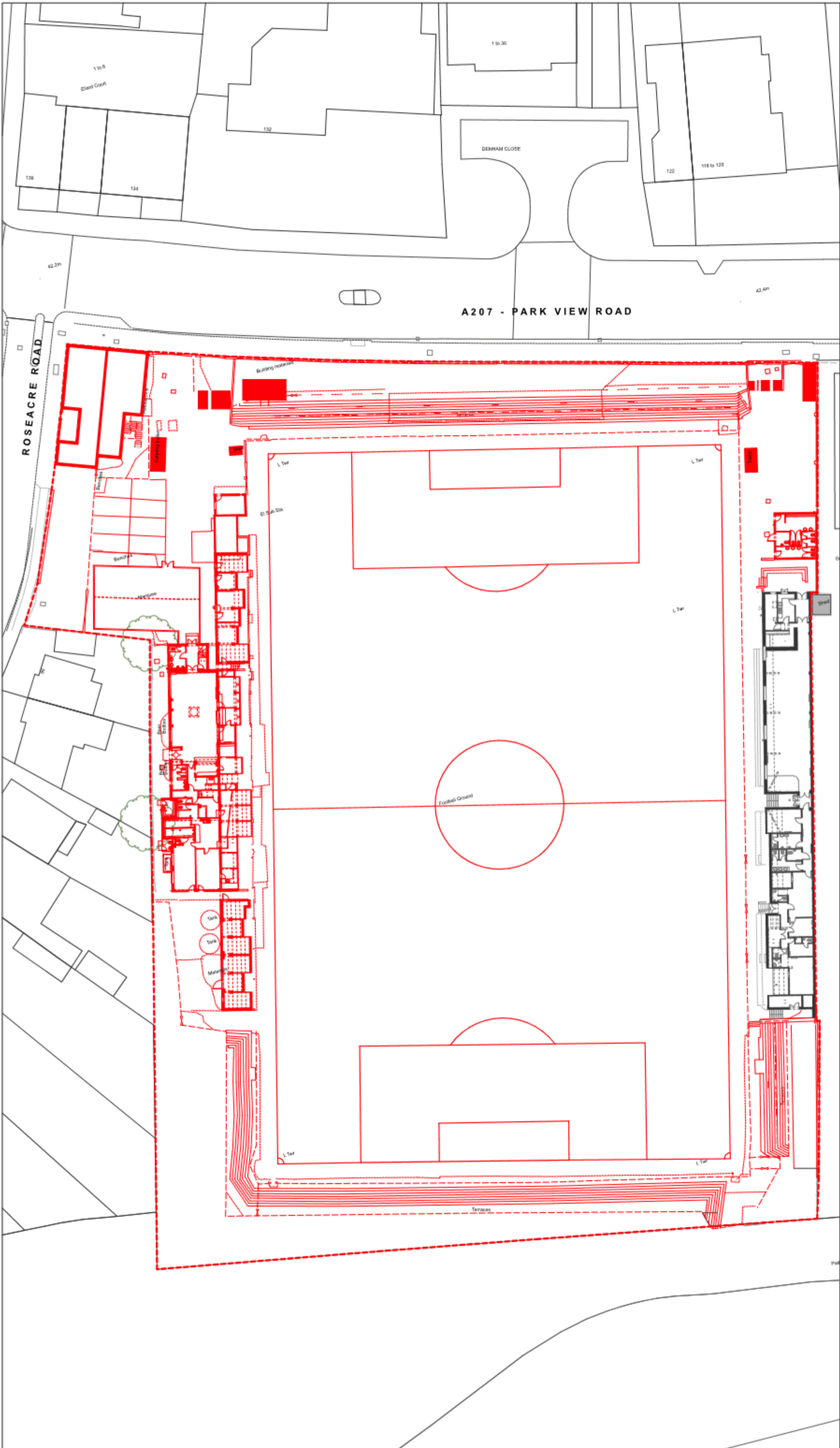
CONCEPT
PROPOSED PLANS
SITE PLAN

CDA Ref: 694 Scale(s): 1:500 Original Paper Size: A1

Project	Originator	Volume	Level	Type	Role	Class	Number
694	CDA	ZZ	ZZ	DR	A	05	0111

Revision: Revision Description

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Rev	Description	Drawn	Checked	Date

CREATE
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 +44 207 921 9297 info@createarchitecture.com www.createarchitecture.com

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 DA16 15V
 Client
 LITA HOMES & WELLING UNITED FC

CONCEPT
 DEMOLITION
DEMOLITION GROUND FLOOR PLAN

CDA Ref	Scale(s)	Original Paper Size
694		A3

Project	Originator	Volume	Level	Type	Role	Class	Number
694	CDA	ZZ	00	DR	A	02	0100

Revision	Revision Description

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Appendix 5 – Site Photographs

Image	Description
T1 and G1	
 A photograph showing a dense line of trees and shrubs behind a wooden fence. The trees are tall and green, with some bare branches visible in the foreground. The sky is overcast and grey.	<p>T1 and G1, located off-site, immediately behind the western boundary fencing.</p>
G2	
 A photograph showing a line of trees behind a wooden fence. The trees are tall and green, but many of the upper branches are bare and skeletal, indicating harsh topping. A brick building is visible on the left side of the fence.	<p>G2, located off-site behind the western boundary fencing. The photograph clearly demonstrates the harsh topping undertaken to trees in G2.</p>

Image	Description
T2, G2, and G3	
	<p>G2, located right, G3, located in the centre, and T2, located left. T2 is located on-site, whilst G2 and G3 are off-site behind boundary fencing.</p>
G5, T3, and W1	
	<p>The south-western corner of the site, showing G5 centre right, and both T3 and W1 to the left.</p>

Image	Description
W1	
	<p>A photograph of the existing football grounds, looking south, with W1 in the background beyond the south stand.</p>
Disused southern area	
	<p>The disused area, located between the south stand wall (left) and the boundary wall at the woodland edge (right).</p>

Appendix 6 – General References

British Standards Institution, 1989. *BS 4428:1989 - Code of practice for general landscape operations (excluding hard surfaces)*. BSI Standards Limited.

British Standards Institution, 2010. *BS 3998:2010 - Tree work - Recommendations*. BSI Standards Limited.

British Standards Institution, 2012. *BS 5837:2012 - Trees in relation to design, demolition and construction*. BSI Standards Limited.

Mattheck, C., Bethge, K. & Weber, K., 2015. *The Body Language of Trees (Encyclopaedia of Visual Tree Assessment)*. Karlsruhe: Karlsruhe Institute of Technology - Campus North, a merger of Forschungszentrum Karlsruhe GmbH.

Roberts, J., Jackson, N. & Smith, M., 2018. *Tree Roots in the Built Environment*. 3 ed. London: The Stationery Office.

Rose, B., 2020. *The Use of Cellular Confinement Systems Near Trees: A Guide to Good Practice*, UK: Arboricultural Association.