Brindle &Green

Arboricultural Impact Assessment

Land off Westfield Court, Mirfield

Report Reference: BG24.183

July 2024

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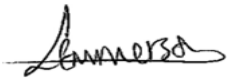
Prepared by	Laura Emmerson MArborA Senior Arboricultural Consultant		10/07/2024
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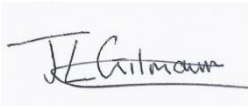
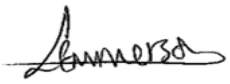
2nd Check by	Joe Gilmour MArborA Associate Director		12/07/2024
Issued by (PDF)	Laura Emmerson MArborA Senior Arboricultural Consultant		12/07/2024
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Revision Details

Revision	Approved	Revision Details
REV1		

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1 Summary

1.1 Scope of report

1.1.1 Brindle & Green were commissioned by Dragonfly Consulting to undertake a BS 5837:2012 Tree Survey and Arboricultural Impact Assessment (AIA) on an area of land off Westfield Court, Mirfield, West Yorkshire (hereafter referred to as 'the Site'). This report summarises any potential arboricultural impacts and outlines a tree protection plan in relation to a full application for the development of a detached residential dwelling, complete with a garage, parking and landscaping. Design proposals can be found in Appendix 4. The survey was carried out on the 19th April 2024.

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 Offsite trees T5-13 and the groups G2 and G3 are protected by Kirklees Council Tree Preservation Order (TPO No. 23, 1992). A copy of this TPO has been included in Appendix 6. The site is not located within a Conservation Area.

1.3 Summary of conclusions

1.3.1 No tree removal is required to facilitate the development. A tree protection plan with mitigation measures has been proposed for the development. **The proposed mitigation will be the use of Construction Exclusion Zones and temporary ground protection. Arboricultural site supervision will be required for installation of a new boundary fence within the RPA of TPO tree T9.** 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
Construction Exclusion Zone (CEZ)	CEZs should be installed to protect retained trees (including RPAs), where required.	Pre-construction
Site supervision	Supervision by the project arboriculturist may be required when activities are required within the RPAs of retained trees (i.e. removal of existing hard surfacing.	During construction
Ground protection	Ground protection (temporary and/or permanent) should be installed to protect the RPAs of retained trees, where required.	Pre-construction and/or during construction
Removal of CEZs and/or temporary ground protection	Removal of the installed tree protection measures after completion of construction onsite.	Post-construction after approval of project arboriculturist

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 Site. 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 320 m^2 in extent and comprises land associated with a property on Westfield Court, Mirfield. The site is predominated by amenity grassland, with no

trees located within the redline; surveyed trees were located either within the client's ownership to the north-west of the redline (T1, T2, G2) or offsite to the south-west (T3-T8, T10-T13, G2, G3). However, one mature, Category B whitebeam, T9, straddled the boundary between the existing property and the neighbouring property to the south west. The site is located on the Westfield Court cul-de-sac in Mirfield, with residential development and agricultural land predominating the wider surroundings. The site is the subject of full application for the development of a detached residential dwelling, complete with a garage, parking and landscaping. 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			
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	– 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. – *NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve.*		
Trees to be considered for retention	**1 Mainly arboricultural values**	**2 Mainly landscape values**	**3 Mainly cultural values, including conservation**
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including	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	Trees with material conservation or other cultural value

Category and definition	Criteria (including sub-categories where appropriate)		
	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	situated so as to make little visual contribution to the wider locality	
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	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value

4 Arboricultural Impact Assessment

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

4.1.1 Offsite trees T5-13 and the groups G2 and G3 are protected by Kirklees Council Tree Preservation Order (TPO No. 23, 1992). A copy of this TPO has been included in Appendix 6. The site is not located within a Conservation Area.

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 Two Construction Exclusion Zones (CEZs) are to be established prior to the commencement of any works onsite.

- CEZ1 will protect trees T1-T3 and group G1. The CEZ location proposed provides a 1m clearance from proposed hard surfacing and 1.5m clearance from the garage, to provide

room for work; where the outer edges of the Root Protection Area (RPA) of T1 have been necessarily excluded from the CEZ, temporary ground protection will be installed.

- CEZ2 will protect any roots encroaching into the development area from the offsite, TPO trees T4-T11. The fencing will be installed to provide a 1.5m clearance from the proposed garage. Fencing installation must take note of the minor level change from north-west to south-east across the garden. Temporary ground protection will protect the excluded areas of the RPA of T4. Trees T12, T13 and G3 are considered a suitable distance from the development to negate the need for a CEZ.

  CEZ2 will remain in place for the duration of construction and installation of new hard surfacing; it will be removed only after completion of these works, to allow new landscaping works and installation of new boundary fencing.

4.3.2 CEZs are always to be afforded protection and will be protected by fencing. No equipment or machinery will be stored within CEZs, nor will vehicles or personnel enter these areas. Ground levels will not be changed within CEZs and existing vegetation will be left undisturbed. Regular checks of the tree protection fencing should be carried out by a suitably qualified arboricultural consultant. The indicative locations of the CEZs can be seen on the tree protection plan in Appendix 2; the precise fencing location may require minor adjustment onsite due to local site conditions, but is not expected to differ from that shown on the tree protection plan. In some instances, tree removal or facilitative pruning works will be required for fencing installation; tree protection fencing will be installed immediately after these tree works are completed.

Permanent ground protection

4.3.3 Plans show new hard surfacing car parking proposed within the RPA of T1. This hard surfacing is expected to cover <5% of the RPA, and is considered suitable with conventional methods of construction.

Temporary ground protection

4.3.4 As previously discussed, temporary ground protection will be installed in the notional RPAs of T1 and T4, where roots extend beyond the proposed CEZs. Temporary ground protection will be

installed to prevent soil compaction and installed pre-commencement of construction works, immediately after the installation of CEZ fencing.

4.3.5 As per BS 5837:2012, temporary ground protection must be capable of supporting the additional load within the RPA. For pedestrian movements only, the temporary ground protection will comprise a single thickness of scaffold boards placed onto a 100mm layer of woodchip, laid on a geotextile membrane. For pedestrian operated plant (up to 2 t), the ground protection will consist of interlinked ground-protection boards, laid on top of a compression resistant layer (as above, 100mm woodchip) on a geotextile membrane. Heavier plant (exceeding 2 tonnes) requires an alternative system to accommodate the load, which must be discussed with the project arboriculturist. Greater detail on the installation of temporary ground protection will be provided in a subsequent Arboricultural Method Statement (AMS). The required locations of temporary ground protection can be seen on the tree protection plan in Appendix 2.

Specialist foundations

4.3.6 There is no requirement for specialist foundations, due to the absence of conflict between the proposed dwelling and the RPAs of retained trees.

Landscaping within RPAs

4.3.7 A new boundary fence will separate the new dwelling from the adjacent, existing dwelling. This fencing will occur within the notional RPA of T9, a Category B protected whitebeam, though the fencing has been adjusted to the greatest possible extent to minimise disturbance to the RPA. Fencing installation has the potential to damage tree roots, and should be conducted under arboricultural supervision. Roots under 25mm may be cleanly severed during excavation for fence posts, however, a degree of flexibility is required with the fence post locations, should larger roots be encountered. Despite the small level change present across the garden, the architects (Lonie Lozano Architecture Ltd) confirmed that level changes **will not** be proposed within the RPAs of offsite TPO trees. Fencing installation should occur under arboricultural supervision.

4.4 The working and access space needed for construction

4.4.1 Westfield Court will be used for access to the site. No tree removal is required to facilitate access. Details of a storage compound are not available at this stage, however, the site should be able to accommodate materials storage outside of CEZs and RPAs.

4.4.2 Access into exclusion zones is strictly prohibited without prior amendments to the mitigation proposed. Similarly, building materials must also be stored outside of the CEZs to avoid soil compaction or physical damage.

4.5 Trees proposed for removal

4.5.1 There are no trees required for removal to facilitate the development.

4.6 New planting

4.6.1 The site plan indicates additional screening, in the form of a hedgerow, along the new property boundary.

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

4.7.1 Considerable shading is expected to the new dwelling and associated garden, due to the proximity of offsite trees T4-T9. Architectural solutions which maximise the amount of natural light available, such as light tunnels, should be considered for incorporation into the design of this dwelling. 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 should 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 Facilitation pruning is not necessary to for the development.

5 Conclusion

5.1.1 Tree removal is not required to facilitate the development. **Trees identified within this report should be retained and protected as outlined via Construction Exclusion Zones and temporary ground protection, where necessary. Arboricultural supervision is required for fencing installation within the notional RPA of the protected tree T9.**

5.1.2 Due to the nature of the development, it is unlikely there will be any major impacts on retained trees if CEZs and temporary ground protection are implemented. Fencing should be placed prior to any construction works and can be removed after the works are completed. Appendix 3 provides details of the fencing requirements for Construction Exclusion Zones.

Appendix 1 – Tree Survey Schedule

Tree ID	Common Name	Maturity	TPO Ref.	Height and direction of first significant branch (m)	Height (m)	No. of Stems	Calculated Stem Diameter (mm)	Radius of Nominal Circle (m)	RPA(m^2)	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	Turkey Oak	Mature	N/A	E 5	13	1	588	7.1	156.4	8.5	6.5	2.5	6	4	2.5	7	7.5	Fair	Good	Good	B1,2	20 to 40 yrs	Fair	Crown skew. Offsite tree. Tension fork at 6m.
T2	Common Whitebeam	Young	N/A	SE 3.5	6.5	1	116	1.4	6.1	1	2	2.5	1	4.5	2.5	2.5	5	Fair	Fair	Poor	C1	10 to 20 yrs	Fair	Past level reduction in eastern RPA and severance of some structural roots. Crown skew due to competition. Physical damage to lower 1m of stem.
T3#	Norway Maple	Young	N/A	SW 3	8	1	130	1.6	7.6	1	1.5	1.5	1.5	4.5	3.5	3.5	3.5	Fair	Fair	N/A	C1	10 to 20 yrs	Fair	Young, low quality. Crown skew due to competition. Closed board palisade fence for all along the boundary off-site.
T4#	Norway Maple	Semi-mature	N/A	NE 3.5	14	1	275	3.3	34.2	5	5.5	3.5	3.5	4.5	2.5	5	4.5	Fair	Ivy	N/A	C2	10 to 20 yrs	Fair	Ivy to lower 4m of stem. Off-site and approx. 1.75m from the fence. Crown skew. Fair quality.
T5#	Sycamore	Semi-mature	TPO No.23 1992 A3	E 5	15	1	450	5.4	91.6	6	6	4.5	4	6.5	6	8.5	10	Fair	Good	N/A	B2	20 to 40 yrs	Fair	Off-site, approx 2m from fence. Landscape value.
T6#	Common Lime	Semi-mature	TPO No.23 1992 A3	SW 3.5	14	1	300	3.6	40.7	4.5	4.5	3	3.5	3.5	3.5	2.5	3	Fair	Fair	N/A	C2	10 to 20 yrs	Fair	Offsite, approx. 0.1-0.2m from the fence. Epicormic to the lower stem. Some minor twig and branch dieback in upper crown and two moderate deadwood branches.
T7#	Common Horse Chestnut	Mature	TPO No.23 1992 A3	NW 6	15	1	475	5.7	102.1	4.5	5	6	6	3.5	2.5	5.5	3.5	Good	Good	N/A	B1,2	20 to 40 yrs	Good	Offsite, approx. 4.5m from the fence. Appears to be in good condition.
T8#	Common Lime	Semi-mature	TPO No.23 1992 A3	SW 6.5	15	1	380	4.6	65.3	1	1.5	4.5	3.5	7.5	2.5	2.5	2.5	Fair	Fair	N/A	C1,2	10 to 20 yrs	Fair	Offsite, approx 4.5m from site boundary. Epicormic growth included in height measurements. Previous branch failures in crown with regrowth and signs of crown decline.
T9#	Common Whitebeam	Mature	TPO No.23 1992 A3	SW 8	15	1	550	6.6	136.8	4	5.5	4	4.5	5	5	7.5	8.5	Good	Fair	N/A	B2	20 to 40 yrs	Fair	Grows through boundary fence. Significant past pruning of lower limbs, resulting in single stemmed to 8m. Significant mature tree. Decay at former branch attachment to the north east at 4m (wet cavity) and soth east at 5.5m. Client voiced concerns of hollowing (squirrel nesting within stem), however sounding mallet test (from ground level) indicates sound wood.
T10#	Sycamore	Young	TPO No.23 1992 A3	W 5.5	9	1	200	2.4	18.1	0.5	1	1.5	2.5	5.5	6	6.5	6.5	Fair	Fair	N/A	C1	10 to 20 yrs	Fair	Offsite, in commonly owned POS. Low quality. Overshadowed, resulting in skewed crown. 5m from site boundary
T11#	Sycamore	Young	TPO No.23 1992 A3	W 4.5	10	1	150	1.8	10.2	3	3.5	2.5	3.5	5	5.5	5.5	6.5	Fair	Fair	N/A	C1	10 to 20 yrs	Fair	Offsite, in POS. Unremarkable.
T12#	Common Lime	Mature	TPO No.23 1992 A3	NW 8	16	1	475	5.7	102.1	2.5	2.5	4.5	5.5	3.5	3.5	3.5	2.5	Fair	Fair	N/A	B1	20 to 40 yrs	Fair	Off-site in POS, approx 4.5m from site boundary. Epicormic included in height measurements. Landscape value but appears to be in decline - significant major and moderate deadwood to upper crown, including some relatively weakly attached.
T13#	Sycamore	Semi-mature	TPO No.23 1992 A3	NW 5.5	15	1	350	4.2	55.4	6	5.5	4.5	3.5	5.5	5.5	8	7.5	Fair	Good	N/A	B2	20 to 40 yrs	Fair	Off-site in POS <1m from boundary. Removal of significant lower branch (approx 170mm), presumably to allow property fence installation - partial occlusion.

Group ID	Species	BS 5837 Category	Description
G1	Common Lime, Common Oak, Common Whitebeam, English Elm, Sycamore	B2	Beyond client ownership. Mixed broadleaves - mainly young and semi mature. Landscape value. Average stem 300mm, average height 13/14m.
G2	Common Oak, Horse Chestnut	B2	Two offsite, mature trees approx 4-5m from the site boundary. Stems plotted and estimate stem diameters taken for RPA. Height to 16m. Significant landscape value. Horse chestnut understood to be T24 in TPO No.23 1992, oak understood to be in TPO group A3.
G3	Horse Chestnut	B2	Off-site group in POS beyond scope of the site, two mature horse chestnut. Horse chestnut stems average 475-500mm. Height to 17m. Understood to be protected under TPO No.23 1992 A3.

Appendix 2 – Tree Maps & Tree Protection Plan

Brindle &Green

Project Reference/Name:
BG24.183 Land at Westfield Court, Mirfield

Client:
Dragonfly Consulting

Drawing Title:
Tree Constraints Plan

Drawn By:	*Date:*
LE	10/07/2024

Legend:

- Category A Groups
- Category B Groups
- Category C Groups
- Category U Groups

Crown Spread | Root Protection Area | Shading Arc

Category 'A' | Category 'B' | Category 'C' | Category 'U'

0 — 40m

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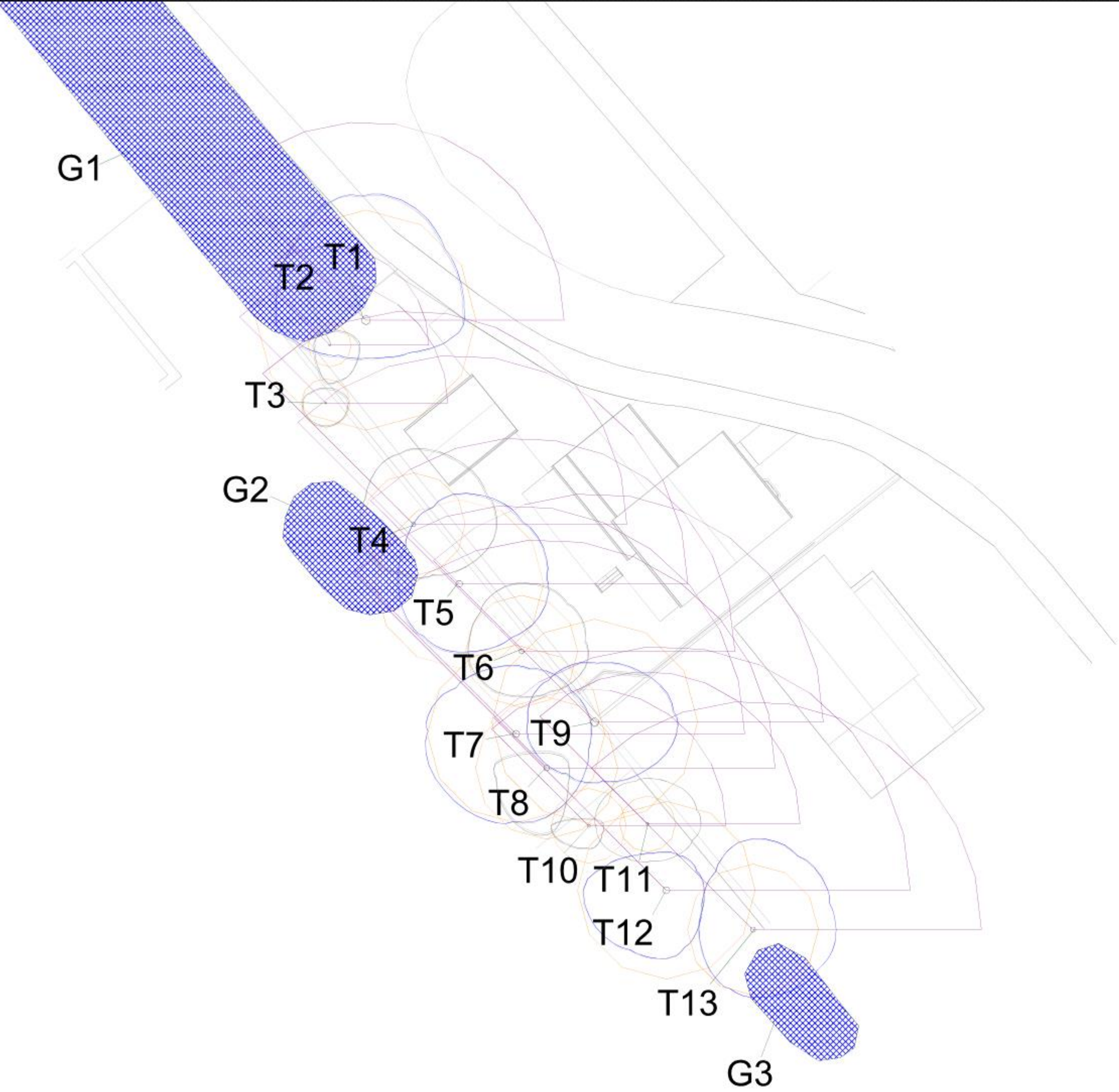
N

1 : 500 *@ A3*



Brindle &Green

Project Reference/Name:
BG24.183 Land at Westfield Court, Mirfield

Client:
Dragonfly Consulting

Drawing Title:
Arboricultural Impacts Plan

Drawn By:	*Date:*
LE	11/07/2024

Legend:

- Category A Groups
- Category B Groups
- Category C Groups
- Category U Groups

Crown Spread | Root Protection Area | Shading Arc

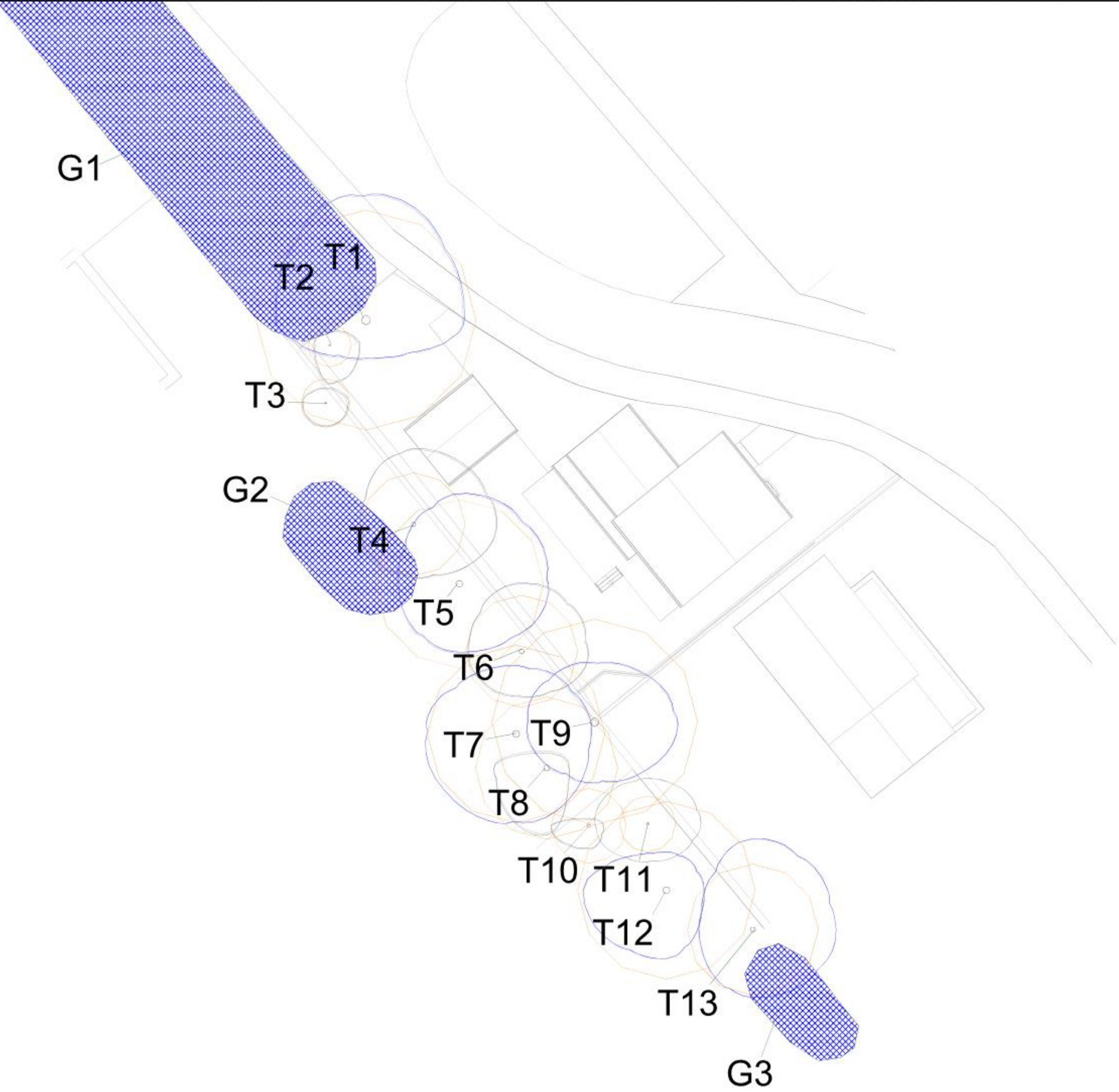
Category 'A' | Category 'B' | Category 'C' | Category 'U'

0 — 20m

Brindle & Green Limited
www.brindlegreen.co.uk
Tel: 0800 222 9105

N

1 : 250 *@ A3*



Brindle &Green

Project Reference/Name:
BG24.183 Land at Westfield Court, Mirfield

Client:
Dragonfly Consulting

Drawing Title:
Arboricultural Impacts Plan (No Shading)

Drawn By:	*Date:*
LE	11/07/2024

Legend:

- Category A Groups
- Category B Groups
- Category C Groups
- Category U Groups

Crown Spread | Root Protection Area | Shading Arc

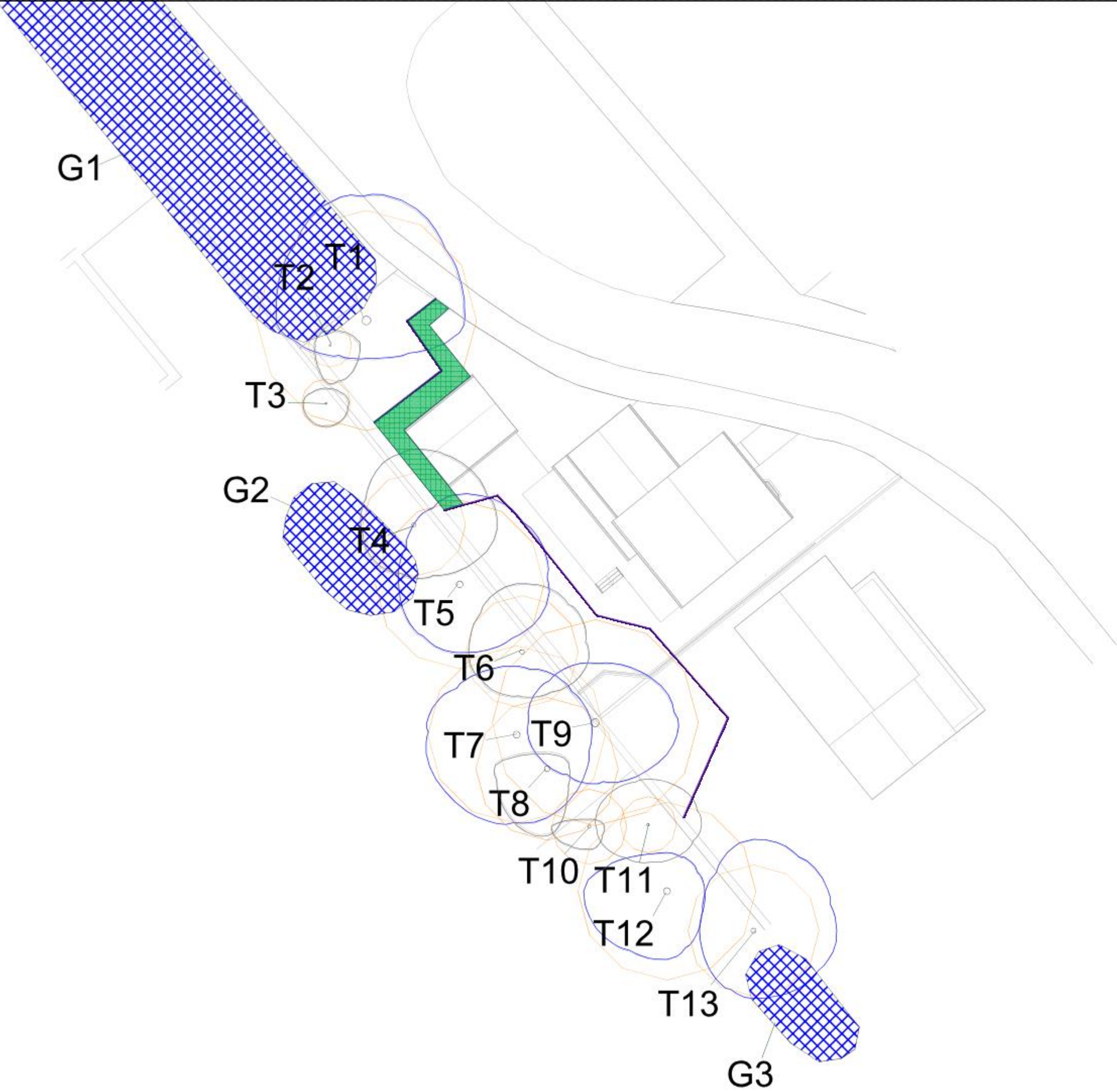
Category 'A' | Category 'B' | Category 'C' | Category 'U'

0 — 20m

Brindle & Green Limited
www.brindlegreen.co.uk
Tel: 0800 222 9105

N

1 : 250 *@ A3*



Brindle &Green

Project Reference/Name:
BG23.183 Land at Westfield Court, Mirfield

Client:
Dragonfly Consulting

Drawing Title:
Tree Protection Plan

Drawn By:	*Date:*
LE	10/07/2024

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 — 20m

Brindle & Green Limited
www.brindlegreen.co.uk
Tel: 0800 222 9105

N

1 : 250 *@ A3*

Appendix 3 – Tree Protection General Guidance

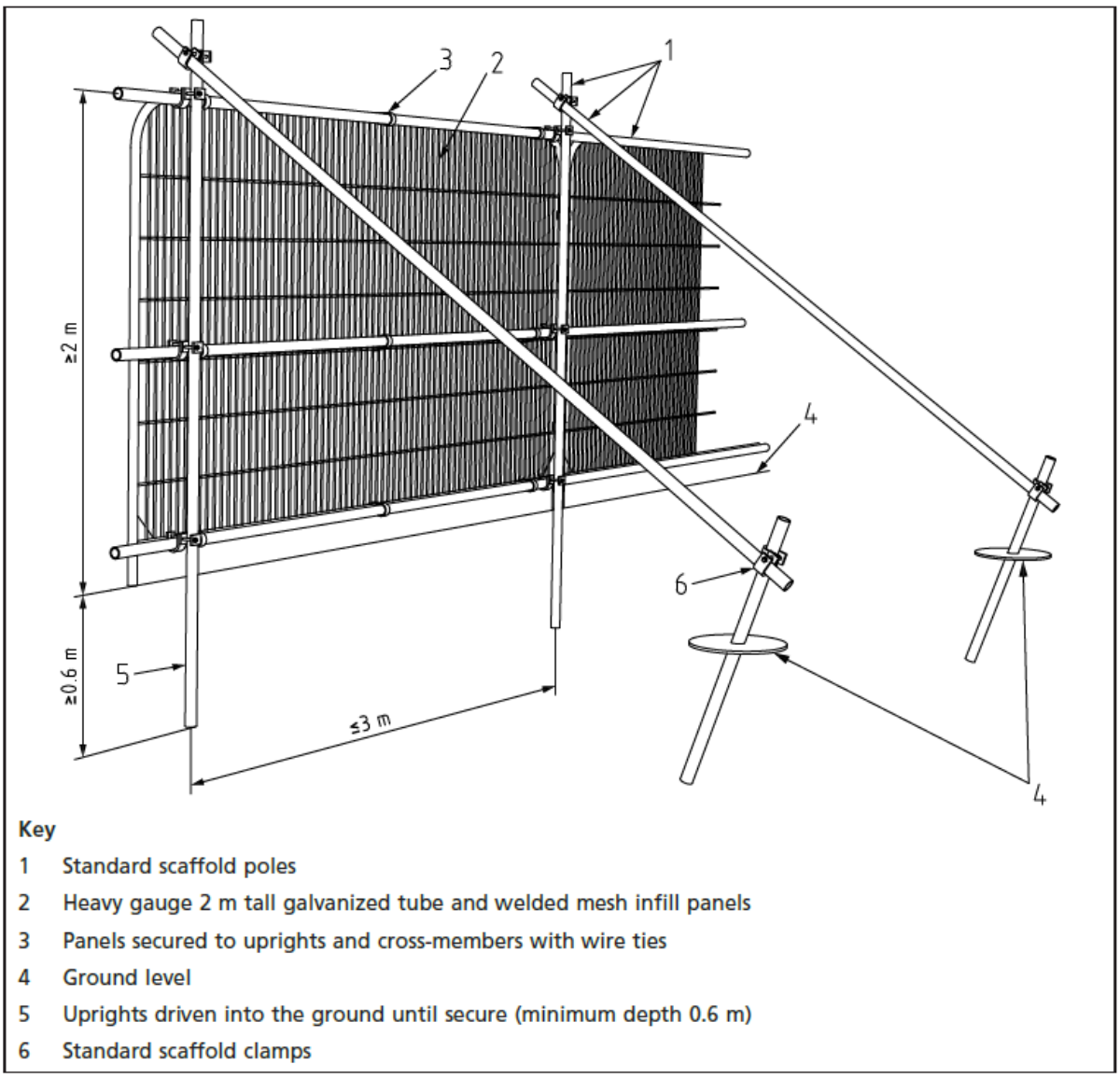
Tree protection specification – protective fencing

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 structs 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.



Key

1 Standard scaffold poles
2 Heavy gauge 2 m tall galvanized tube and welded mesh infill panels
3 Panels secured to uprights and cross-members with wire ties
4 Ground level
5 Uprights driven into the ground until secure (minimum depth 0.6 m)
6 Standard scaffold clamps

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

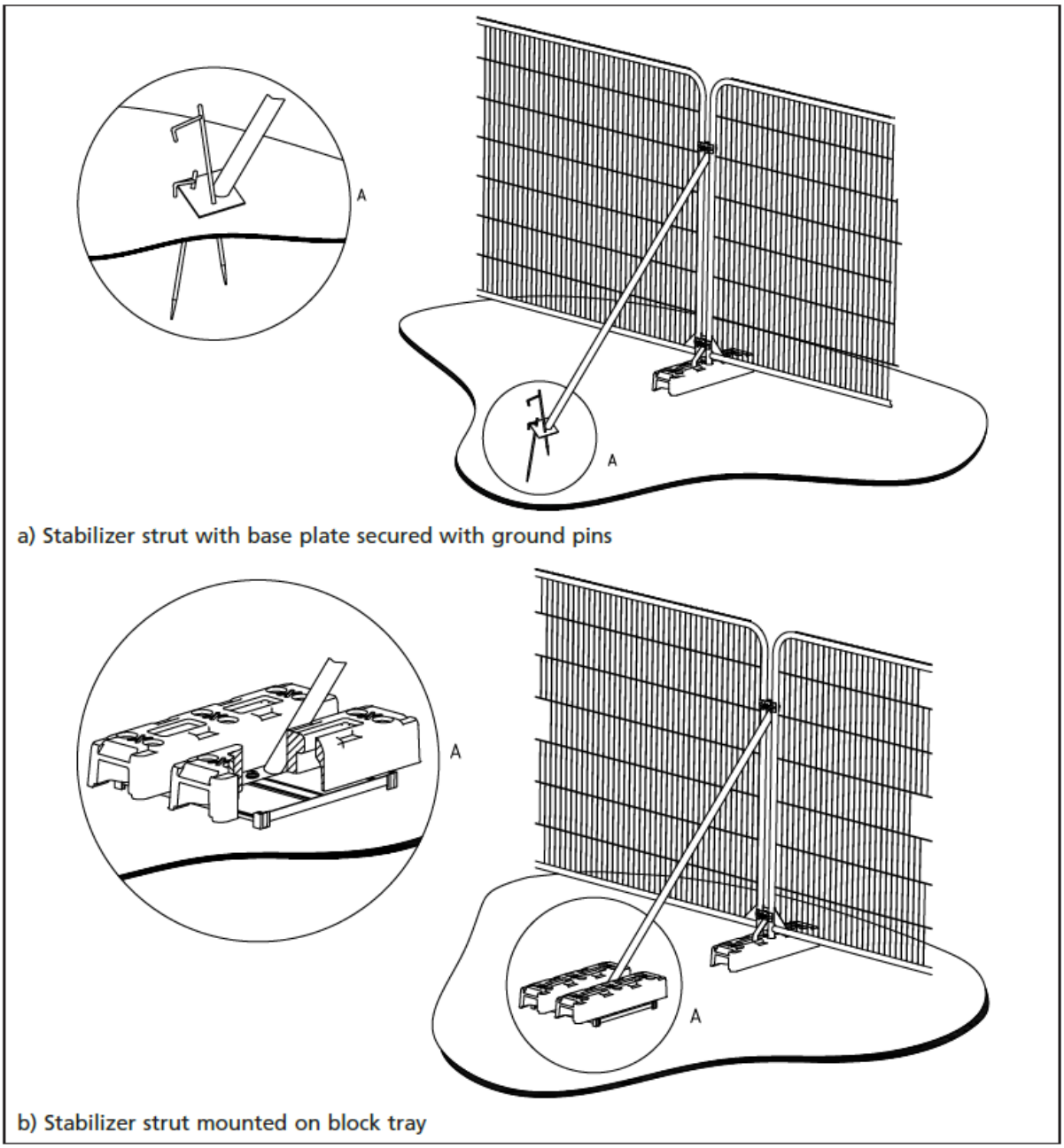


Figure 2: Alternative specification for tree protection fencing (Figure 3 in BS 5837:2012).

Figure 3: Tree protection fencing signage.

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

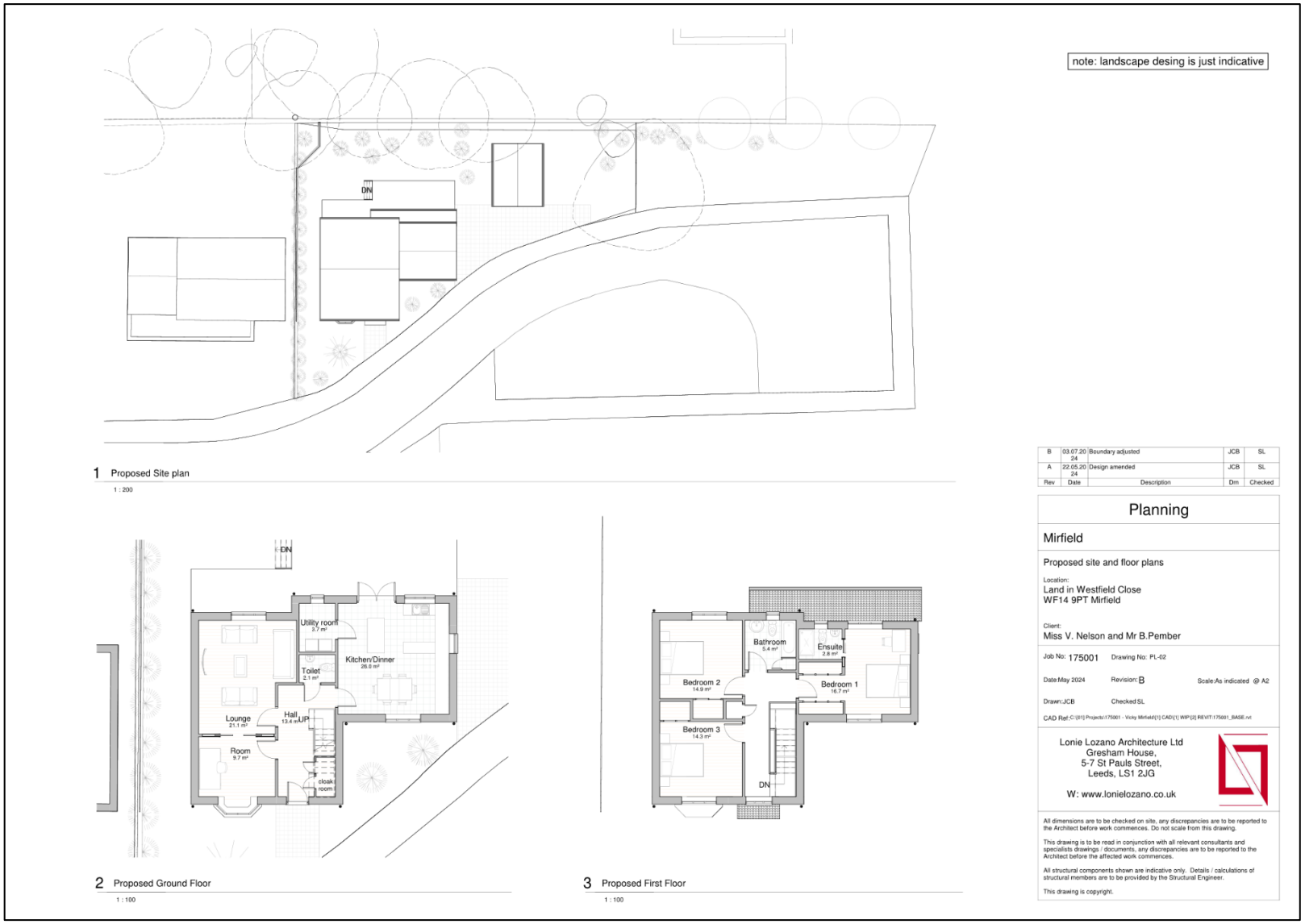
All nesting birds are protected under the Wildlife and Countryside Act 1981, which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy its nest whilst in use or being built, or take or destroy its eggs. In addition, for species listed on Schedule 1 of the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

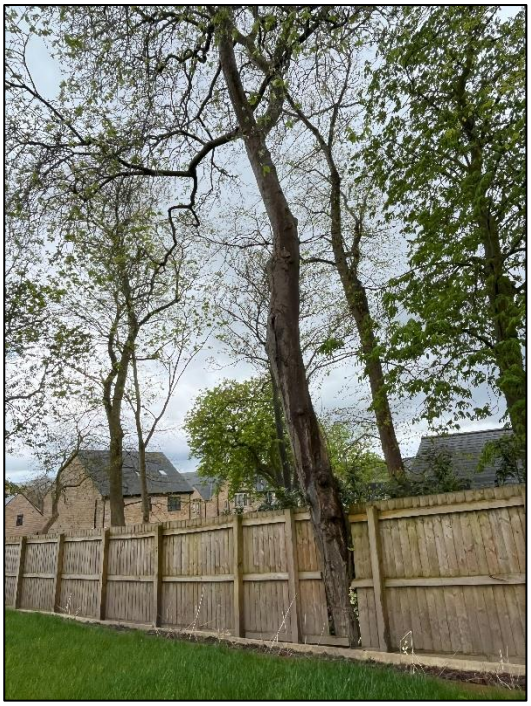
the clearance of vegetation between the months of March and September should be supervised by a suitably experienced ecologist.

Appendix 4 – Site Plans


note: landscape desing is just indicative
DN
1 Proposed Site plan
1 : 200
Utility room
3.7 m²
Kitchen/Dinner
26.8 m²
Toilet
2.1 m²
Hall
13.4 m²
UP
Lounge
21.1 m²
Room
9.7 m²
cloak room
2 Proposed Ground Floor
1 : 100
Bathroom
5.4 m²
Ensuite
2.8 m²
Bedroom 2
14.9 m²
Bedroom 1
16.7 m²
Bedroom 3
14.3 m²
DN
3 Proposed First Floor
1 : 100
B 03.07.24 Boundary adjusted JCB SL
A 22.05.24 Design amended JCB SL
Rev Date Description Drn Checked
Planning
Mirfield
Proposed site and floor plans
Location:
Land in Westfield Close
WF14 9PT Mirfield
Client:
Miss V. Nelson and Mr B.Pember
Job No: 175001
Drawing No: PL-02
Date:May 2024
Revision: B
Scale:As indicated @ A2
Drawn:JCB
Checked:SL
CAD Ref:C:\[01] Projects\175001 - Vicky Mirfield\[1] CAD\[1] WIP\[2] REVIT\175001_BASE.rvt
Lonie Lozano Architecture Ltd
Gresham House,
5-7 St Pauls Street,
Leeds, LS1 2JG
W: www.lonielozano.co.uk
All dimensions are to be checked on site, any discrepancies are to be reported to the Architect before work commences. Do not scale from this drawing.
This drawing is to be read in conjunction with all relevant consultants and specialists drawings / documents, any discrepancies are to be reported to the Architect before the affected work commences.
All structural components shown are indicative only. Details / calculations of structural members are to be provided by the Structural Engineer.
This drawing is copyright.

Appendix 5 – Site Photographs

Image	Description
	Photo taken from Westfield Court, shows T1-T3 and G1.
	Photo taken from Westfield Court and shows offsite, protected trees T5-T12.

Image	Description
	Mature, Category B, protected whitebeam T9.
	Photo shows trees beyond the development site, including T12-T13 and G3.

Appendix 6 – Tree Preservation Order

FIRST SCHEDULE

INDIVIDUAL TREES
(within black circle on the plan)

NO ON PLAN	SPECIES	LOCATION
T1	Sycamore	40m from the driveway entrance, to the eastern side of the road.
T2	Weeping Horse Chestnut	24.5m north west of T1.
T3	Horse Chestnut	25.5m west of T2.
T4	Lime	9m south east of T5.
T5	Lime	9m north west of T4.
T6	Horse Chestnut	7m south west of T7.
T7	Horse Chestnut	7m north west of T6.
T8	Weeping Ash	5.5m from north east corner of the building.
T9	Beech	Adjacent to the south east boundary and opposite the edge of the building.
T10	Sycamore	6m north west of T9.
T11	Sycamore	6m north west of T10.
T12	Sycamore	6m north west of T11.
T13	Sycamore	6m north west of T12.
T14	Beech	3.5m north west of T13.
T15	Sycamore	6m north west of T14.
T16	Sycamore	2m north west of T15.
T17	Sycamore	7.5m north west of T16.
T18	Beech	To the north of the eastern corner of the Assessment Centre.
T19	Lime	3m north east of T18.
T20	Lime	7m north east of T19.
T21	Norway Maple	7m north east of T20.
T22	Horse Chestnut	5m north east of T21.

T23	Sycamore	North east of T22.
T24	Horse Chestnut	Adjacent to the south eastern corner of the older part of Westfield Assessment Centre building.
T25	Beech	South east of T24.
T26	Lime	South east of T25.

GROUPS OF TREES
(within a broken black line on the plan)

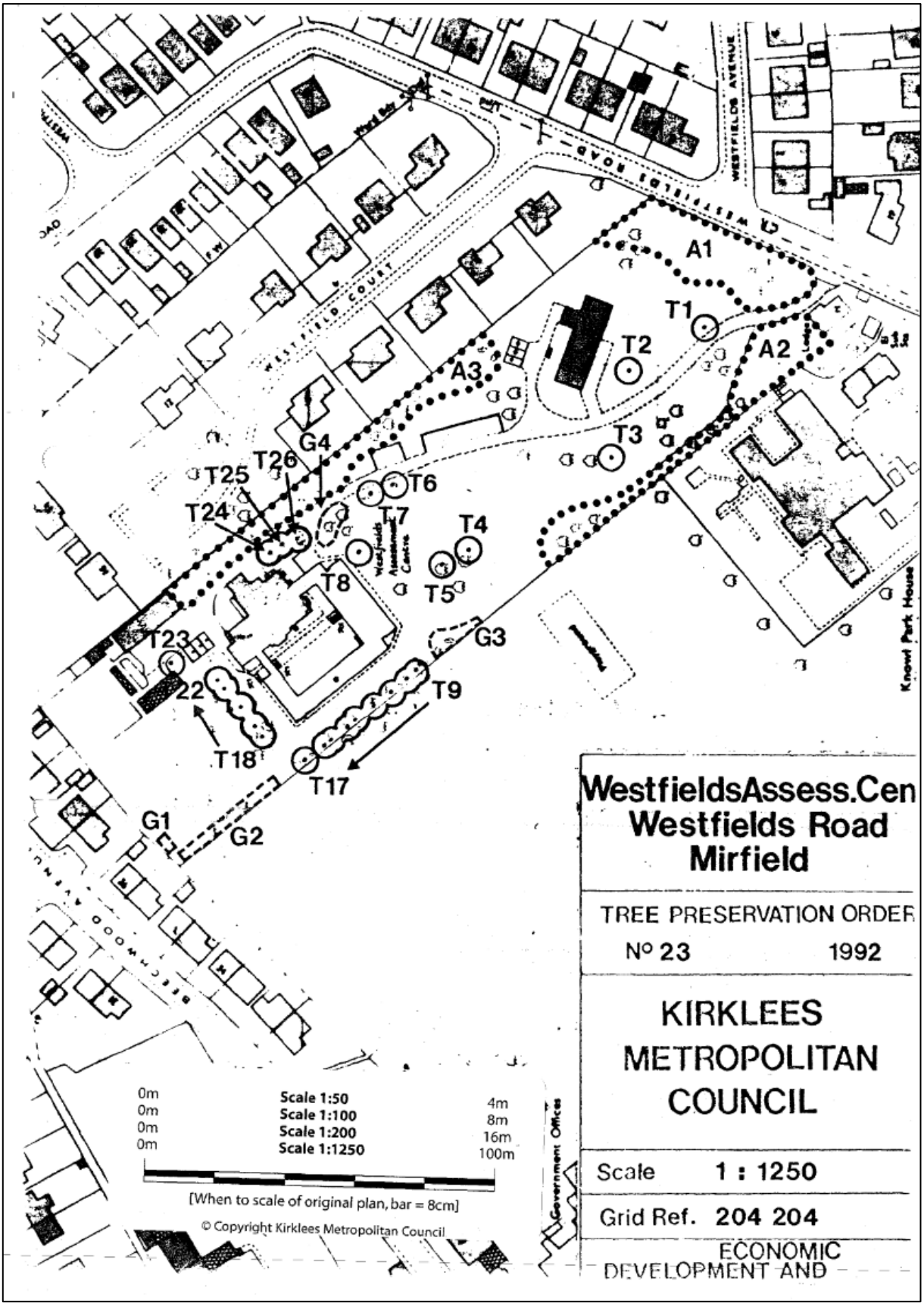
NO ON PLAN	DESCRIPTION	LOCATION
G1	2 Beech	Adjacent to the north western boundary near G2.
G2	1 Lime 2 Horse Chestnut 5 Sycamore	Adjacent to the western boundary, near G1.
G3	1 Hawthorn 1 Horse Chestnut 1 Lime 2 Sycamore	Adjacent to the western boundary, south east of T9.
G4	11 Holly 1 Weeping Beech	South of T26.

AREAS OF TREES
(within a black dotted line on the plan)

NO ON PLAN	DESCRIPTION	LOCATION
A1	Beech, Horse Chestnut, Lime, Oak, Whitebeam, Wild Cherry	Adjacent to the southern boundary.
A2	Beech, Horse Chestnut Lime, Oak, Sycamore, Weeping Ash.	Adjacent to the western boundary, west of T3.
A3	Lime, Sycamore, Beech, Horse Chestnut, Whitebeam, Oak, Ash.	Adjacent to the eastern boundary north of A1.

WOODLAND

None.


A1
A2
A3
T1
T2
T3
T4
T5
T6
T7
T8
T9
T17
T18
T22
T23
T24
T25
T26
G1
G2
G3
G4
WestfieldsAssess.Cen
Westfields Road
Mirfield
TREE PRESERVATION ORDER
Nº 23 1992
KIRKLEES
METROPOLITAN
COUNCIL
Scale 1 : 1250
Grid Ref. 204 204
ECONOMIC
DEVELOPMENT AND
Scale 1:50
Scale 1:100
Scale 1:200
Scale 1:1250
0m
0m
0m
0m
4m
8m
16m
100m
[When to scale of original plan, bar = 8cm]
© Copyright Kirklees Metropolitan Council
Government Offices
Knowl Park House

Appendix 7 – 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.