



Land adj Corsham Road, Whitley

Arboricultural Report containing:

- Arboricultural constraints
- Arboricultural impact assessment (AIA)
- Tree protection
- Arboricultural method statement



On behalf of
Ashford Homes

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1.0 Instructions/Scope

- 1.1 Silverback Arboricultural Consultancy have been instructed to compile an arboricultural report containing tree survey, arboricultural impact assessment, tree protection plan and arboricultural method statement regarding trees within an area of land adjacent to Corsham Road, Whitley. This report is intended to accompany a planning application relating to the construction of four residential dwellings and associated works. This document has been produced to demonstrate that the implications of the proposed development, to the existing trees, has been fully considered during the detailed design process.
- 1.2 Recommendations for the safeguarding of trees in close proximity to development are set out in, BS5837:2012 Trees in relation to design, demolition and construction – Recommendations. We have therefore carried out the assessment of the trees in accordance with that document.
- 1.3 Specifically, this report and the accompanying information are supplied to:
- Identify the constraints that trees on and adjacent to the site present to the development of the site, to inform the site design process.
 - Present information regarding the above ground constraints (crown spreads) and below ground constraints (Root Protection Areas – RPAs), in a Tree Schedule and on a Tree Constraints Plan
 - Assess the impact of the proposed development on the trees on or adjacent to the site, and the impact that retained trees will have on the site post development.
 - Identify trees to be removed, trees to be retained and specify measures necessary to protect retained trees during the construction phases of the development.
 - Recommend necessary remedial tree works to be undertaken to trees that will be retained prior to commencement of the construction phases of the development.
 - Present information regarding the location of protective barriers or fencing and ground protection on a Tree Protection Plan
 - Identify special engineering, excavation or protection measures intended to minimise the impact on retained trees where the site design layout requires a breach of the Root Protection area, (RPA)

- Provide an Arboricultural Method Statement for the recommended works detailing measures which should be implemented to protect retained trees during the demolition and construction phases of the development.

1.4 This report is based on a ground level assessment of the trees. Except where stated, all dimensions are estimated. We were not presented with any information on the soil type and no soil samples have been taken. An arboricultural consultant visited the site on Thursday 29th November 2018. The weather was wet and overcast with good visibility.

1.5 Documents Provided

- Topographic survey dwg N^o 165/9670/1A
- Proposed site layout dwg N^o WTY-023 Rev C

2.0 Survey Methodology

2.1 The survey includes tree and shrubs with a stem diameter over 75mm at 1.5m height, located within the area shown on the plan included in this report.

2.2 All inspections were made from ground level with the use of binoculars, sounding hammer and metal probe where necessary, using the Visual Tree Assessment method (Mattheck & Breloer 1994). The presence and condition of bark and stem wounds, cavities, decay, fungal fruiting bodies and any structural defects that could affect the structural integrity of the trees have been noted.

2.3 Tree numbers have been noted on the plan. The following details were recorded for each tree and are included in the tree schedule sheets accompanying this report:

Number: an identity number for each tree, prefixed with a 'T' which cross references locations shown on the plan with the tree survey sheets. Where a number of trees, normally of the same species, are located close together and are similar in character and requirements, they have been treated as a Group under a single Number, prefixed with a 'G'

Species: common name and botanical name in *italics*

Tree Height: approximate height in metres (*potential height in brackets*)

Stem Diameter: diameter measured in millimetres, taken at 1.5m above ground. Where the tree is multi-stemmed the diameter is calculated in accordance with BS5837:2012.

(# estimated dimensions for off-site or inaccessible trees)

Crown spread: approximate spread in metres taken at the four main compass points N, S, E, W

Crown clearance: approximate height from ground to lowest part of canopy

Age class: Young, Semi-Mature, Early Mature, Mature, Over-Mature, Veteran

Structural condition: Good, Fair, Poor

Physiological condition: Good, Fair, Poor, Dead

Observations : observations noted during tree inspections

Preliminary recommendations; recommended action to ensure the health and safety of the tree.

Remaining contribution (years): <10, 10+, 20+, 40+

BS Cat- category grading in accordance with BS 5837:2012

A - trees of high quality with an estimated remaining life expectancy of at least 40 years.

B - trees of moderate quality with an estimated remaining life expectancy of at least 20 years.

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

U - trees in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.

BS Sub Cat - sub-category grading in accordance with BS 5837:2012

1- Mainly arboricultural qualities

2- Mainly landscape qualities.

3- Mainly cultural values including conservation.

RPA – Root Protection Area - measured in metres from the centre of the tree stem.

2.4 Presentation of the Data Collected

- Data collected regarding individual trees and groups of trees are presented in the Tree Schedule table in appendix 1 in accordance with BS5837:20012 Trees in Relation to Construction – Recommendations.
- The data significant to the proposed site layout is also presented on the Arboricultural Impact Assessment Plan (Drawing Number 210302-WH-AIA-Rev G-NB&AM (appendix 2).
- All other relevant data are presented within the main body of this report.
- Trees have been allocated an individual tree number. This tree number is used to identify individual trees and/or groups of trees throughout this report, within the Tree Schedule and on all plans presented in the appendices of this report.

3.0 Report Limitations

- 3.1 Trees are living, dynamic organisms that can be affected by external conditions. It is therefore not possible to state with any certainty that a tree is safe.
- 3.2 No internal decay devices, or other invasive tools to assess tree condition, were used. No soil excavation or root inspection was undertaken.
- 3.3 This report has not considered the effect that trees or vegetation may have on the structural integrity of adjacent buildings or structures.
- 3.4 The survey contained within this report is not a tree safety inspection. It has been carried out in order to inform the planning process. Where clear and obvious hazards have been observed, these have been addressed in the recommendations contained within the tree schedule sheets (appendix 1). A full assessment of the levels of risk posed by trees would be informed by considering site use together with hazards present within the aerial parts of a tree(s). Changes in site use are likely to occur during, and result from, the proposed development. In the light of these changes, regular tree risk assessments are advised.
- 3.5 Tree condition can change rapidly, the recommendations contained within this report are based on the condition of the tree at the time they were inspected. Any amendments to the design or position of the proposed development will invalidate this report.
- 3.6 While this appraisal is not a tree risk assessment it nonetheless takes into account observed structural defects of the inspected trees in order to inform conclusions with regard to their retentive worth.

4.0 Legal duty

- 4.1 It is the responsibility of the tree owner to ensure that their tree(s) is in a safe and stable condition, including the effects of root activity, through duty of care in the *Occupiers Liability Act (1957 & 1984)*.

- 4.2 The Wildlife and Countryside Act, 1981 makes it an offence to disturb a nesting bird or recklessly endanger a bat or its roost. Professional advice should be sought, where relevant, before undertaking any recommended works.
- 4.3 We were not made aware of any Tree Preservation Orders or other statutory constraints covering the trees on the site.

5.0 Tree and Site Assessment (to be read in conjunction with the survey schedule sheets)

- 5.1 The proposed development is for the construction of 4 residential dwellings and associated works. The area proposed for development currently comprises open pastureland with a drainage ditch extending through the middle.
- 5.2 Twenty trees, one group of trees and one hedgerow were surveyed. Of the trees surveyed two trees were categorized **A**, one tree was categorized **B**, two trees were categorized **U**, the remaining trees were categorized **C**. The trees were assessed and categorized in accordance with the Cascading Chart of Tree Quality Assessment contained within BS5837:2012.

6.0 Arboricultural Constraints

- 6.1 Trees have a widely spreading, shallow root system. In most cases, the majority of tree roots are situated within the top 600 mm of soil although some roots may extend down to 2m. Small feeder roots can also be expected to extend beyond the outer edge of the canopy. Roots can therefore be easily damaged by construction activity
- 6.2 Constraints on the design of the development are presented in the tree schedule sheets (appendix 1) and the Arboricultural Impact Assessment Plan (appendix 2). These constraints are also considered in the main body of the report below and recommended remedial works and mitigating measures.
- 6.3 The Arboricultural Impact Assessment Plan (AIA), (appendix 2), shows the Root Protection Areas (RPAs) for the individual trees identified in the tree schedule tables. This represents the minimum area in m² which ideally, should be left undisturbed around each tree were it to be retained. The AIA also shows a representation of the crown spread of each tree measured in four cardinal directions. The RPA has been calculated in accordance with Section 4.6 of BS5837:2012 Trees in relation to design, demolition and construction – Recommendations.

6.4 Trees Identified for Retention and Removal.

It is proposed to remove a small section of H01 to facilitate the proposed development. T01 and T18 will be removed in accordance with good arboricultural practice. The remaining trees will be retained and protected throughout the proposed development.

6.4.1 Mitigation

The loss of these trees will be mitigated by replacement tree planting as part of the landscaping scheme, to enhance the landscape and visual amenity of the site. The details and specification for the proposed landscaping will be agreed with the Local Planning Authority.

6.4.2 Trees Outside Site Boundary

There are no trees outside of the site boundary, which are affected within the current proposals

7.0 Arboricultural Impact Assessment

- 7.1 A section of the proposed access road encroaches into the fringes of the calculated Root Protection Area (RPA) of T02. Any excavation or soil compaction in this area could potentially lead to root severance or damage. This could subsequently lead to a reduction in the trees ability to take up water and nutrients, which may lead to a deterioration in the tree's health.

Where new hard surfacing is to be installed within the calculated Root Protection Areas of T02, construction will be in accordance with Arboricultural Practice Note (APN) 12 'Through the Trees to Development' using a Cellular Confinement System such as 'Cellweb'

- 7.2 Any encroachment into the Root Protection Area (RPA) of retained trees could lead to ground compaction resulting in root damage.

Protective fencing, in accordance with BS5837:2012 will be erected to prevent any unauthorised access into the Root Protection Area (RPA) during the development works.

- 7.3 Storage and mixing of construction materials could lead to soil compaction or ground contamination through spillage.

All storage and mixing of materials will be undertaken outside the Root Protection Area (RPA) of the retained trees. If considered necessary, due to ground levels, a suitable water proof ground covering with bunds at the edges to prevent leakage will be laid over the storage, mixing area.

- 7.4 Overhanging and low branches could potentially be damaged during the erection of scaffolding or during the delivery of materials to site.

In most cases the protective fencing will enclose the branch spreads of the retained trees preventing any potential damage to the tree canopies. Where this is not the case there is sufficient clearance under the tree canopies for there to be no issues

- 7.5 Service runs in association with the proposed project have been planned outside of any Root Protection Area of retained trees.

Should this change, installation of drainage or services runs will be in accordance with Section 7.7 (Underground and above-ground utility apparatus) of BS5837:2012.

- 7.6 **Shading:-** Potential shading of buildings by retained trees can lead to pressure for the pruning or removal or remove of the trees. *BS5837: 2012 par 5.3* states that proposed buildings should be designed to take account of existing trees, their ultimate size and density of foliage, and the effect that these will have on the availability of light.

There are no potential shading issues associated with the proposed development.

- 7.7 **Future growth:-** Future extension growth of branches can result in the continuous whipping of branches against the fabric of a building or damage to the roof tiles. Structures should therefore be located with due consideration for a tree's ultimate growth.

The proposed layout has taken into account any potential future growth, siting the new dwellings at a sufficient distance from the retained trees for there to be no issues.

8.0 Tree Protection

The trees to be retained on site during and after development as listed in Section 6.4 will require both above and below ground protection. Above ground protection may involve remedial tree surgery works. These works, where applicable, are presented in the Tree Schedule Sheets (appendix 1) and are discussed in Section 8.1 below.

- 8.0.1 Below ground protection measures, based on the root protection areas (RPA), indicated in the Tree Constraints Plan (appendix 2), will involve the erection of tree protection barriers as discussed in Section 8.2. Where the proposed site layout encroaches into the RPAs of retained trees, measures are recommended to minimise the potential damage to the roots and the root

environment of the trees in question. The tree protection fencing is illustrated in Tree Protection Plan (Drawing Number 210309-WH-TPP-Rev F-NB&AM) (appendix 4)

- 8.0.2 The potential position of tree roots as indicated in the Arboricultural Impact Assessment Plan (appendix 3) and Tree Protection Plan (appendix 4) are only guidelines based on calculations shown in BS5837:2012 '*Trees in relation to design, demolition and construction – Recommendations*'.

8.1 Recommended Remedial Tree Surgery Works

Remedial tree work specifications are set out in the Tree Schedule table (appendix 1) and discussed in para 8.1.1 below. All works will be undertaken in accordance with BS3998:2010 Tree Work Recommendations and should be undertaken, by a suitably qualified and experienced Tree Surgery contractor.

- 8.1.1 It is intended to remove a small section of H01 to facilitate the proposed development. T01 and T18 will be removed in accordance with good arboricultural practice.

8.2 Tree Protection Fencing

The Tree Protection Plan (appendix 3) indicates the location of the proposed tree protection barriers where appropriate. These barriers will create a Construction Exclusions Zone (CEZ) around the retained trees.

- 8.2.1 The Construction Exclusion Zones will be erected in accordance with the recommendations in Section 6.2 of BS5837:2012. The specifications for the barriers are presented in Figure 2 from BS5837:2012 (appendix 4).
- 8.2.2 It is *essential* that tree protection fencing barriers are erected before any site preparation or construction work be commenced. (Remedial tree works however, should be undertaken before such fencing is erected – See Section 8.1). Once erected the protective fencing will be retained and maintained in position for the duration of the development.
- 8.2.3 Should any construction activity require the repositioning of the tree protection barriers, advice will be sought from Silverback Arboricultural Consultancy and approval requested from the Local Authority Tree Officer before any of the fencing is altered.

8.3 Damage Limitation-Special Measures

Areas are identified on the Tree Protection Plan (appendix 4) where special measures will be required to minimise the impact of the proposed site layout on the retained trees where the construction works breach the RPAs.

8.3.1 Where new hard surfacing is to be installed within the Root Protection Areas of trees T02, construction will be in accordance with Arboricultural Practice Note (APN) 12 'Through the Trees to Development' using a Cellular Confinement System such as 'Cellweb.'

8.3.2 In the event of any unforeseen circumstances the project arboriculturalist will be informed immediately and will advise on suitable precautionary measures.

8.4 Underground Service Installation

Service runs in association with the proposed project have been planned outside of any Root Protection Area of retained trees. Should this change, installation of drainage or services runs will be in accordance with Section 7.7 (Underground and above-ground utility apparatus) of BS5837:2012.

9.0 Arboricultural Method Statement

This section sets out the basis of the methodology for all works in relation to the proposed development in proximity to trees located within the site boundary.

9.0.1 Copies of the Arboricultural Method Statement document will be available for inspection on site and will form the basis of the management of all works relating to the trees on the site for the Site Agent/Manager following commencement of the project.

9.1 Programme of Works

- Arboricultural works
- Erection of protective barriers
- Installation of no-dig surfacing
- Construction of new development.

9.2 Arboricultural Works

The work recommendations presented in the Tree Schedule (appendix 1) and the recommendations discussed in Section 9.2.1 set out the proposed works to trees within the development site. These works will be carried out before commencement of other site operations including the erection of protective barriers.

- 9.2.1 The removal of a small section of H01 will be undertaken to facilitate the construction of the new development. The proposed tree works will be undertaken by a professional arboriculturalist in accordance with the recommendations contained in BS3998:2010. Tree work-recommendations.

9.3 Tree Protection Fencing

BS5837: 2012 recommends the erection of protective fencing around retained trees before development commences. The position of the fencing is calculated using the tree's diameter (DBH) measured at 1.5m up the stem. The area within the fencing is called the Root Protection Area (RPA).

- 9.3.1 To allow access to the site and facilitate the construction it will not be possible to erect the protective fences at recommended distance contained with BS5837:2012. It is proposed to erect the protective fencing as indicated on the Tree Protection Plan (TPP) (appendix 4). This will create a Construction Exclusion Zone (CEZ)
- 9.3.2 The protective fencing will be constructed in accordance with BS5837:2012 'Trees in relation to design, demolition and construction – Recommendations'. This will consist of a vertical and horizontal scaffold framework well braced to resist impacts. Vertical tubes will be spaced at a maximum interval of 3m and driven securely into the ground. Weldmesh panels will then be securely fixed to the framework. (appendix 4)
- 9.3.3 Once erected the protective fencing will be retained and maintained in position for the duration of the development. If it is necessary to move the protective fencing advice will be sought from Silverback Arboricultural Consultancy and approval requested from the Wiltshire Council Tree Officer before any of the fencing is altered.

9.3.4 Weatherproof signage should be attached to the fencing indicating its function as illustrated (appendix 5).

9.3.5 In the CEZ (construction exclusion zone):

- There must be no alteration of ground levels, including soil stripping other than those detailed within this report.
- Any installation of drainage or services will be undertaken in accordance with Section 7.7 (Underground and above-ground utility apparatus) of BS5837:2012.
- Oil, bitumen, cement or other harmful materials must not be stored, mixed or discharged within 10m of any retained trees.
- Fires will not be lit beneath or within 10m upwind of tree canopies.

9.4 Construction of access road within RPA of T02

This will be constructed using a three dimensional ‘Cellular Confinement System’ (CCS), “Cellweb” to prevent any ground compaction or potential impact on the health of the tree roots. (appendix 6)

9.4.1 The position of the new access will be marked out, cleared of vegetation and a general level created using hand tools and clean sand where necessary. A geo textile membrane will then be laid across the surface.

9.4.2 The ‘Cellular Confinement System’ (CCS) will then be laid across the area. This will provide a load-bearing and permeable structure. The cellular design and perforated cell walls reduces the vertical load pressure on sub soils to tree roots and prevents damage.

9.4.3 Once the CCS is in place it will be backfilled with clean angular stone which will enable air and moisture to reach the roots and encourage healthy growth. A porous wearing course will then be applied, to a depth of 30-40mm as the finished surface. The edges of the driveway will be retained using tannalised wooden retaining boards staked into the ground tapering down to the existing ground level with top soil.

9.5 Supervision and Monitoring

It is recommended that the Arboricultural Consultant is employed to oversee operations relating to works close to or within RPAs and to issue a site inspection report of practical completion for the following operations:

- The erection of protective barriers around the retained trees in accordance with TPP (appendix 4)
- Installation of no-dig surfacing to form new access.

9.5.1 It is recommended that a record of site visits completed by the project arboriculturalist are maintained for inspection on site and copies are forwarded to the Local Planning Authority Tree Officer.

9.5.2 This development will be overseen Silverback Arboricultural Consultancy. If there are any alterations to the proposed working methodology necessary, works will be stopped until the arboricultural consultant has been notified and agreement reached with the Local Planning Authority Tree Officer.

10.0 Contact Details

10.1 Arboricultural Consultant

Chris Wright

Silverback Arboricultural Consultancy

E-mail: chris@silverbackarb.co.uk

10.2 Local Authority Tree Officer

David Wyatt

Arboricultural and Landscape Officer

Wiltshire Council

email: David.Wyatt@wiltshire.gov.uk

11.0 References

Mattheck, C. and Breloer, H. (1995). The Body Language of Trees: A handbook for failure analysis. Research for Amenity Trees **4**. HMSO, London.

British Standard 5837:2012 - Trees in relation to design, demolition and construction – Recommendations. British Standards Institution, London

British Standard 3998:2010 - Tree Work Recommendations. British Standards Institution, London

12.0 Appendices

- Tree schedule sheets
- Arboricultural impact assessment (AIA)
- Tree protection plan
- BS5837:2012 Trees in relation to construction: Recommendations Protective Fencing Detail
- Protective fencing sign
- Cellular Confinement System detail

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Silverback Arboricultural Consultancy

9th March 2021

Arboricultural Survey Land adj Corsham Road, Whitley

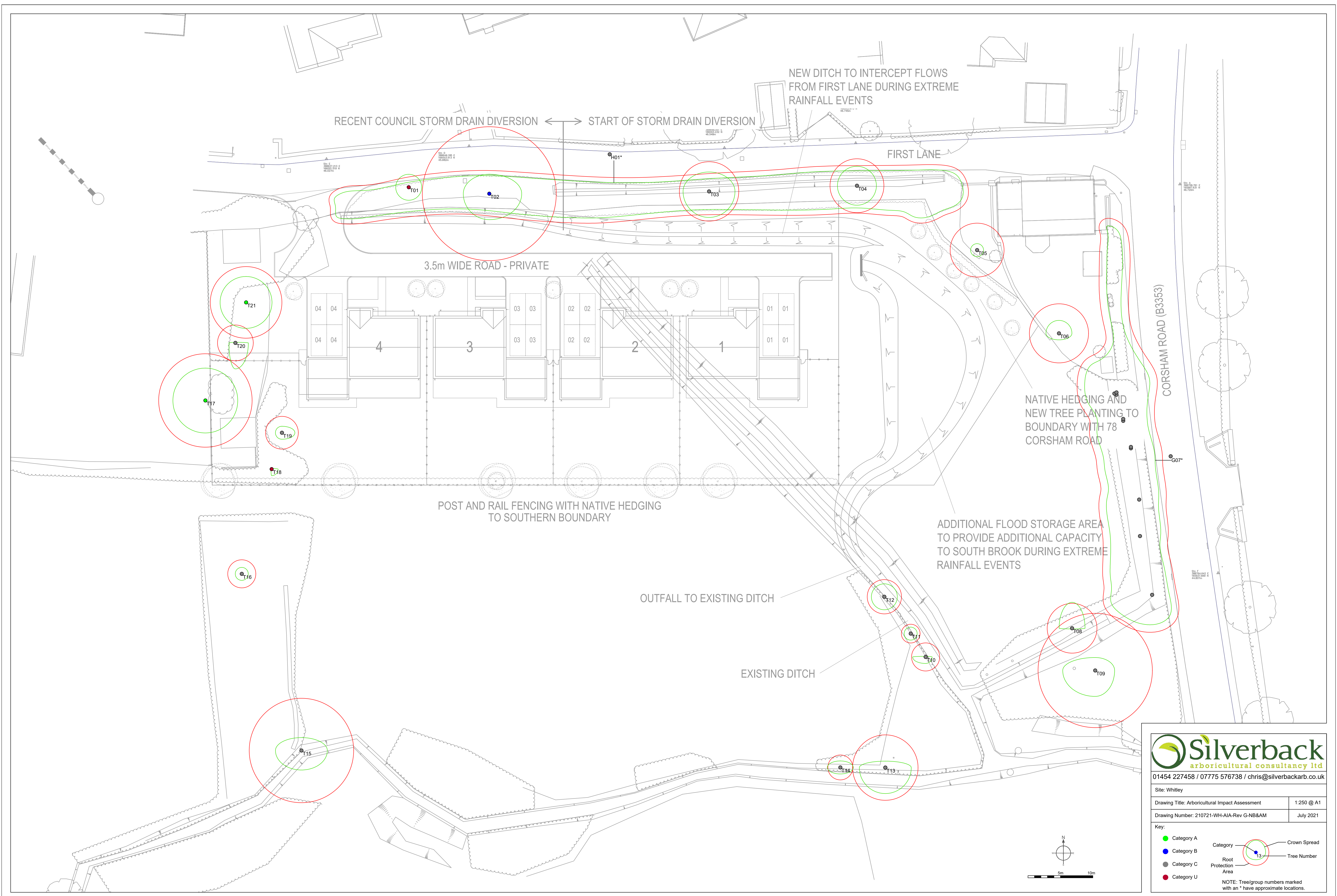
Tree Number	Common name	Botanical name	Height (m)	Number of stems	Calculated stem diameter (mm)	Crown Spread (m)				Crown Clearance (m)	Life Stage	Structural Condition	Physiological Condition	Observations	Preliminary Recommendations	Remaining contribution (yrs)	BS Category	Root Protection Area Radius (m) Area m2
						N	S	E	W									
H01	Hawthorn, Common	Crataegus monogyna	4	1	150	1	1	1	1	1	Mature	Fair	Good	Mixed species boundary hedge Predominantly Hawthorn with Elm	No action required at the time of inspection.	30+ Years	C2	Radius: 1.8m.
T01	Elm, English	Ulmus procera	5	1	#	2	2	2	2		Dead	Dead	Dead	Standing dead tree in hedgerow	No action required at the time of inspection.	<10 years	U	none - due to Retention Category of U.
T02	Chestnut, Horse	Aesculus hippocastanum	10	1	860	3	4	5	4	2	Mature	Fair	Fair	Growing in hedgerow Multi- stemmed from 1m Included bark at stem union Previously cut back from overhead cables north side Signs of bleeding canker infestation	No action required at the time of inspection.	30+ Years	B2	Radius: 10.3m. Area: 333 sq m.
T03	Ash, Common	Fraxinus excelsior	10	3	382	3	4	4	4	2	Mature	Fair	Fair	Multi- stemmed from base Included bark at stem union Prolific ivy throughout canopy Overhead cables through canopy	No action required at the time of inspection.	30+ Years	C2	Radius: 4.6m. Area: 66 sq m.
T04	Ash, Common	Fraxinus excelsior	10	3	346	3	3	3	3	2	Mature	Fair	Fair	Multi- stemmed from base Included bark at stem union Overhead cables through canopy	No action required at the time of inspection.	30+ Years	C2	Radius: 4.2m. Area: 55 sq m.
T05	Elder	Sambucus nigra	2	3	200	1	1	1	1	1.5	Mature	Fair	Fair	Multi- stemmed from .5m Prolific ivy throughout canopy	No action required at the time of inspection.	30+ Years	C2	Radius: 4.2m. Area: 55 sq m.
T06	Apple	Malus sp.	5	1	380	2	1	2	2	2	Mature	Fair	Fair	Growing in neighbouring land Previously crown reduced	No action required at the time of inspection.	30+ Years	C2	Radius: 4.6m. Area: 66 sq m.
G07	Ash, Common	Fraxinus excelsior	8	1	180	1	1	1	1	2	Early Mature	Fair	Good	Linear group growing along site boundary forming single canopy Suppressed by neighbouring trees Major deadwood in canopy Prolific ivy throughout canopy	No action required at the time of inspection.	30+ Years	C2	Radius: 2.2m. Area: 15 sq m.

Arboricultural Survey Land adj Corsham Road, Whitley

Tree Number	Common name	Botanical name	Height (m)	Number of stems	Calculated stem diameter (mm)	Crown Spread (m)				Crown Clearance (m)	Life Stage	Structural Condition	Physiological Condition	Observations	Preliminary Recommendations	Remaining contribution (yrs)	BS Category	Root Protection Area Radius (m) Area m2
						N	S	E	W									
T08	Ash, Common	Fraxinus excelsior	8	1	320	4	0	2	2	1	Early Mature	Poor	Fair	Heavy lean to north Suppressed by neighbouring trees Asymmetric crown	No action required at the time of inspection.	20+ Years	C2	Radius: 3.8m. Area: 45 sq m.
T09	Willow, crack	Salix fragilis	12	3	734	2	4	3	5	2	Mature	Fair	Fair	Three stems from base Hung up snapped branch Asymmetric crown Major deadwood in canopy	No action required at the time of inspection.	20+ Years	C2	Radius: 8.8m. Area: 243 sq m.
T10	Plum	Prunus domestica	4	1	180	0	1	1	2	2	Early Mature	Fair	Fair	Growing in hedgerow Suppressed by neighbouring trees Asymmetric crown Prolific ivy throughout canopy	No action required at the time of inspection.	20+ Years	C2	Radius: 2.2m. Area: 15 sq m.
T11	Hazel	Corylus avellana	4	1	120	1	1	1	1	0	Mature	Fair	Good	Twin stemmed from base Previously coppiced Suppressed by neighbouring trees	No action required at the time of inspection.	20+ Years	C2	Radius: 1.4m. Area: 6 sq m.
T12	Hawthorn, Common	Crataegus monogyna	5	1	220	2	2	2	2	1	Mature	Fair	Poor	Prolific ivy throughout canopy Ivy growing up main stem	No action required at the time of inspection.	20+ Years	C2	Radius: 2.6m. Area: 21 sq m.
T13	Ash, Common	Fraxinus excelsior	10	1	420#	1	4	4	4	2	Mature	Fair	Fair	Cut back from overhead cables north side Ivy growing up main stem	No action required at the time of inspection.	30+ Years	C2	Radius: 5.0m. Area: 79 sq m.
T14	Hawthorn, Common	Crataegus monogyna	3	1	160	1	1	2	2	0	Mature	Fair	Fair	Growing on edge of drainage ditch to south Included bark at stem union Prolific ivy throughout canopy	No action required at the time of inspection.	20+ Years	C2	Radius: 1.9m. Area: 11 sq m.
T15	Ash, Common	Fraxinus excelsior	10	2	671	2	3	4	4	1	Mature	Fair	Good	Twin stemmed from base Southern canopy cut back from overhead cables Prolific ivy throughout canopy	No action required at the time of inspection.	30+ Years	C2	Radius: 8.1m. Area: 206 sq m.

Arboricultural Survey Land adj Corsham Road, Whitley

Tree Number	Common name	Botanical name	Height (m)	Number of stems	Calculated stem diameter (mm)	Crown Spread (m)				Crown Clearance (m)	Life Stage	Structural Condition	Physiological Condition	Observations	Preliminary Recommendations	Remaining contribution (yrs)	BS Category	Root Protection Area Radius (m) Area m2
						N	S	E	W									
T16	Elder	Sambucus nigra	3	1	180#	1	1	1	1	0	Mature	Fair	Fair	Growing within bramble's Suppressed by neighbouring trees	No action required at the time of inspection.	30+ Years	C2	Radius: 2.2m. Area: 15 sq m.
T17	Walnut, Common	Juglans regia	10	1	600#	5	5	5	5	2	Mature	Good	Good	Growing off site No significant defects visible at time of inspection Hung up snapped branch Major deadwood in canopy	No action required at the time of inspection.	40+ Years	A1,2	Radius: 7.2m. Area: 163 sq m.
T18	Elder	Sambucus nigra	3	1	120	0	1	1	0	1	Mature	Poor	Poor	Tree appears to be in terminal decline Suppressed by neighbouring trees Asymmetric crown	No action required at the time of inspection.	<10 years	U	none - due to Retention Category of U.
T19	Elder	Sambucus nigra	3	3	210	1	1	2	1	0	Mature	Poor	Fair	Multi- stemmed from base Included bark at stem union Suppressed by neighbouring trees Asymmetric crown	No action required at the time of inspection.	20+ Years	C2	Radius: 2.5m. Area: 20 sq m.
T20	Apple	Malus sp.	6	1	230	0	4	2	1	1	Mature	Poor	Fair	Heavy lean southeast Suppressed by neighbouring trees Asymmetric crown	No action required at the time of inspection.	20+ Years	C2	Radius: 2.8m. Area: 25 sq m.
T21	Walnut, Common	Juglans regia	9	1	460	4	4	4	4	1	Mature	Good	Good	No significant defects visible at time of inspection Hung up snapped branch Major deadwood in canopy	No action required at the time of inspection.	40+ Years	A1,2	Radius: 5.5m. Area: 95 sq m.



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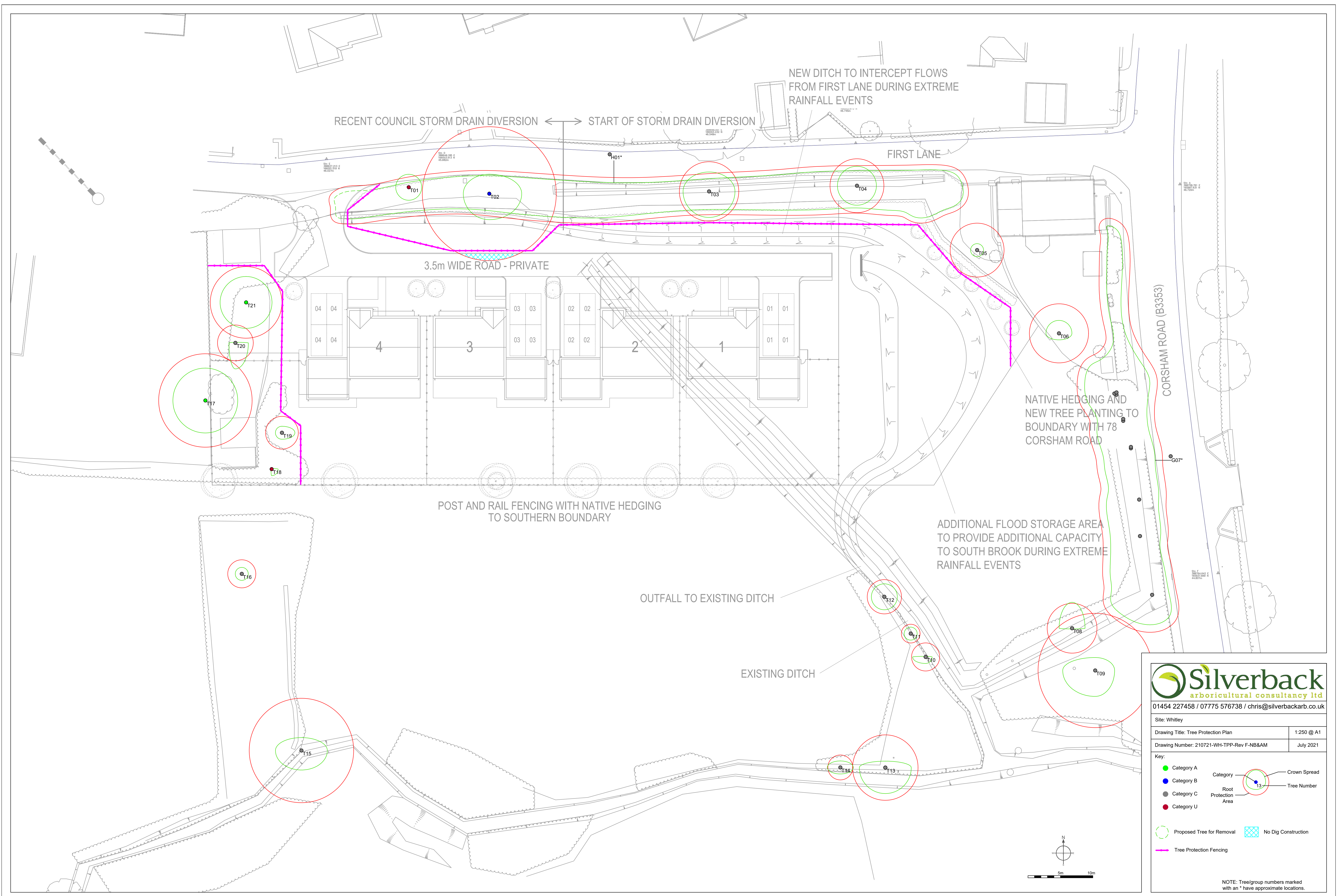
Site: Whitley

Drawing Title: Arboricultural Impact Assessment	1:250 @ A1
Drawing Number: 210721-WH-AIA-Rev G-NB&AM	July 2021

Key:

Category A	Category B	Category C	Category U
Category	Category	Category	Category
Crown Spread	Tree Number	Root Protection Area	

NOTE: Tree/group numbers marked with an * have approximate locations.



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Site: Whitley

Drawing Title: Tree Protection Plan 1:250 @ A1

Drawing Number: 210721-WH-TPP-Rev F-NB&AM July 2021

- Key:
- Category A
 - Category B
 - Category C
 - Category U
 - Category
 - Crown Spread
 - Tree Number
 - Root Protection Area

- Proposed Tree for Removal
- No Dig Construction
- Tree Protection Fencing

NOTE: Tree/group numbers marked with an * have approximate locations.

**BS 5837:2012 – TREES IN RELATION TO DESIGN, DEMOLITION AND
CONSTRUCTION – RECOMMENDATIONS**

EXAMPLES OF ABOVE-GROUND STABILIZING SYSTEMS

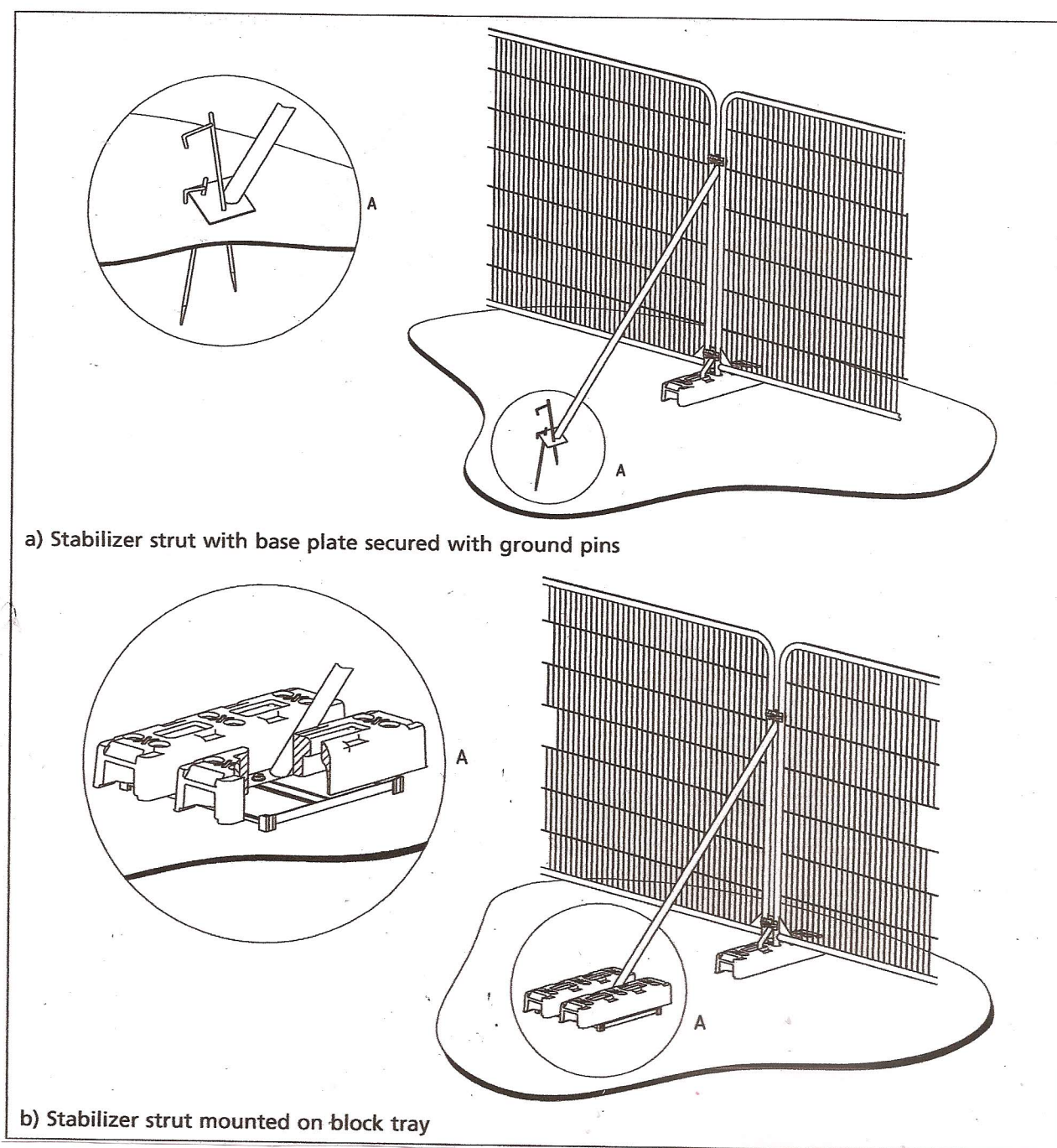


Figure 3 Examples of above-ground stabilizing systems



**PROTECTIVE FENCING. THIS
FENCING MUST BE
MAINTAINED IN ACCORDANCE
WITH THE APPROVED PLANS
AND DRAWINGS FOR THIS
DEVELOPMENT.**



**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**

Cellweb® TRP

Tree Root Protection

Cellweb® TRP is a 3D cellular confinement tree root protection system. The system provides a 'no dig' solution for the construction of new hard surfaces within root protection areas (RPAs). Cellweb® TRP has been designed and independently tested to comply with recommendations made in Arboricultural Practice Note 12 and BS 5837 2012 – Trees in relation to design, demolition and construction.



Cellweb® TRP Key Functions

Cellweb® is a 'no dig' solution which is constructed directly on the existing ground surface. This eliminates the requirement for excavation, preventing root severance.

Cellweb® is a completely porous system allowing continued water permeation and gas exchange between the rooting environment and atmosphere.

Cellweb® spreads point loads, minimising increases in soil compaction within the rooting environment. This maintains an open graded soil structure allowing continued root growth, water, gas and nutrient migration.

The Cellweb® TRP system comprises the following three components

Treetex™ Geotextile. Following minimal ground preparation the Treetex™ is laid onto the existing ground and top soil. This acts as a separation layer, separating the system above from the soil and rooting environment below. Treetex™ performs as a hydrocarbon pollution control measure in accordance with BS5837, holding 1.7lt of oil per square meter.

Cellweb® 3D Cellular Confinement. The Cellweb® is installed on top of the Treetex™ layer. This is fixed to the ground using ten steel J pins per panel. The panels can be cut to the required shape and adjoining panels can be connected using heavy duty staples or cell ties.

4-20mm Clean Angular Stone. The expanded Cellweb® is infilled with a 4-20mm clean angular stone. The confined angular stone locks together to produce a rigid stone mattress, while maintaining air pockets for continued water permeation and gas exchange. The low fines content of the stone prevents the Treetex™ layer from becoming blocked over time.

Which depth of Cellweb® TRP?

The Cellweb® System is provided in four different depths; 200mm, 150mm, 100mm and 75mm. The depth required is determined by the proposed traffic loadings and the site ground conditions. Geosynthetics in house engineering department can provide a free site specific technical recommendation. For free technical and engineering support please contact Geosynthetics Ltd 01455 617139 or the full installation guide can be found on our website www.geosyn.co.uk.

Indicative Cellweb with overfill

