Land at Tiddlywink, Yatton Keynell, Chippenham

Arboricultural Report containing:

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



On behalf of
Gareth Bicknell

Prepared by:
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Arboricultural Consultant
December 2023

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1.0 Instructions/Scope

Silverback Arboricultural Consultancy have been instructed to compile an arboricultural report containing tree survey, tree constraints plan and arboricultural impact assessment regarding trees growing adjacent to an area of land at Tiddleywink, Yatton Keynell, Chippenham. This report is intended to accompany a planning application relating to the erection of agricultural building and construction additional hardstanding. 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.

1.1 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.

1.2 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.
- 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)

1.3 This report was compiled by Chris Wright *M.Arbor.A.* a professional member of the Arboricultural Association and Certified Lantra Professional Tree Inspector with over 30 years' experience in the industry.

1.4 The 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 surveyed the site on Thursday 7th December 2023. The weather was overcast with good visibility.

1.5 Documents Provided

- Existing site plan dwg Nº A0
- Proposed site layout dwg Nº B0

2.0 Survey Methodology

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.

2.1 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 1995). 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.

2.2 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 several 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

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 – **R**oot **P**rotection **A**rea - measured in metres from the centre of the tree stem

2.3 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 BS5837:2012 Trees in Relation to Construction – Recommendations.
- The data significant to the proposed site layout is also presented on the Tree Constraints Plan (Drawing Number 231214-TW-TCP-SD (appendix 2) and Arboricultural Impact Assessment Plan (Drawing Number 231214-TW-AIA-SD (appendix 3).
- 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

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.

3.1 No internal decay devices, or other invasive tools to assess tree condition, were used. No soil excavation or root inspection was undertaken.

3.2 This report has not considered the effect that trees or vegetation may have on the structural integrity of adjacent buildings or structures.

3.3 The survey contained within this report is not a tree safety inspection. It has been carried out 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.

3.4 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.

3.5 While this appraisal is not a tree risk assessment it nonetheless considers observed structural defects of the inspected trees to inform conclusions regarding their retentive worth.

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4.0 Legal duty

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).*

4.1 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.

4.2 Searches of Wiltshire Council online mapping system showed there are no 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)

The proposed development is for the erection of a new agricultural building and construction additional hardstanding. The area proposed for development currently comprises existing agricultural building and unused land.

5.1 The trees addressed in this report are a linear group of mature, multi stemmed Field maple *(Acer campestre)* growing on a raised bund adjacent to a 1m deep drainage ditch which runs along the western boundary of the site. It is assumed the bund is made up of the soil excavated form from the drainage ditch when it was originally dug. There is an existing wire fence running along the eastern edge of the drainage ditch.

5.2 The trees are growing along the top of the bund forming a single canopy, it is assumed they were planted as a screen/hedge. The drainage ditch is approximately 1m deep directly to the east of the trees. It is considered fair to assume that the difference in ground levels and the ditch will have prevented any root extension growth, to the east, into the site.

5.3 The group of trees were assessed and categorized C2 in accordance with the Cascading Chart of Tree Quality Assessment contained within BS5837:2012.

6.0 Arboricultural Constraints

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.

6.1 Constraints on the design of the development are presented in the Tree Schedule Sheets (appendix 1) Tree Constraints Plan (appendix 2) and the Arboricultural Impact Assessment Plan (appendix 3). These constraints are also considered in the main body of the report below and recommended remedial works and mitigating measures.

6.2 The Tree Constraints Plan (TCP), (appendix 2), shows the Root Protection Areas (RPAs) for the individual trees identified in the tree schedule tables. This represents the minimum area in m^2 which ideally, should be left undisturbed around each tree were it to be retained. Underground structures, services and other topographical feature, such as different ground levels, can influence root spread and potentially restrict extension growth.

6.3 The TCP/ 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 retain and protected all existing trees throughout the proposed development.

6.4.1 **Trees Outside Site Boundary**

It is unclear whether the trees are situated on the site or the neighbouring land.

7.0 Arboricultural Impact Assessment

7.1 The position of the new agricultural building and hard standing is outside the calculated Root Protection Area (RPA) of the trees. 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. **The existing wire fence and drainage ditch will prevent any possible encroachment into the Root Protection Area (RPA) of the trees during the proposed works. It is therefore considered that no further tree protection measures are necessary.**

7.2 Storage and mixing of construction materials could lead to soil compaction of 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 waterproof ground covering with bunds at the edges to prevent leakage will be laid over the storage, mixing area.

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

There is sufficient clearance between the trees and the proposed building to facilitate the proposed works.

7.4 Drainage and service routes in association with the proposed development, have been planned outside the calculated Root Protection Area of any trees proposed for retained.

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.

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

There are no shading issues associated with the proposed development.

7.6 **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**.**

When necessary, the trees will be pruned back to maintain clearance along the building.

8.0 Tree Protection

The existing wire fence and drainage ditch will prevent any possible encroachment into the Root Protection Area (RPA) of the trees during the proposed works. It is therefore considered that no further tree protection measures are necessary.

8.1 Recommended Remedial Tree Surgery Works

No remedial tree works are considered necessary to facilitate the proposed development.

8.2 Underground Drainage and Service Installation

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

8.3 **Supervision and Monitoring**

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.

9.0 Contact Details

9.1 **Arboricultural Consultant**

Chris Wright
Silverback Arboricultural Consultancy
E-mail: chris@silverbackarb.co.uk

9.2 **Local Authority Tree Officer**

Kate Tate
Arboricultural Officer
Wiltshire Council
email: Kate.Tate@wiltshire.gov.uk

10.0 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

11.0 Appendices

- Tree schedule sheet
- Tree constraints plan
- Arboricultural impact assessment (AIA)

Chris Wright. ***MArborA.***

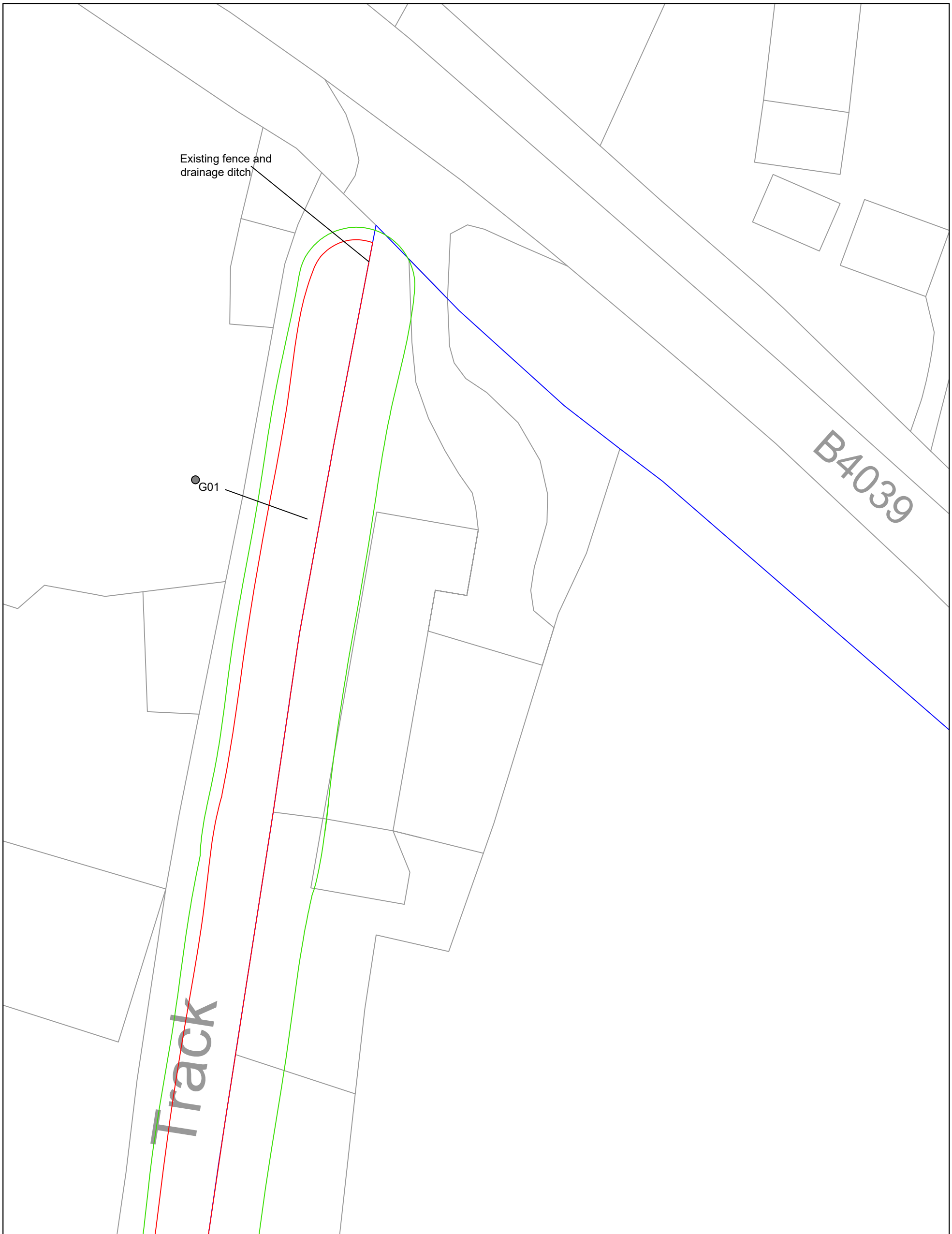
Principal Consultant

Silverback Arboricultural Consultancy

19th December 2023

Arboricultural Survey Land at Tiddleywink

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 Catergory	Root Protection Area Radius (m) Area m2
						N	E	S	W									
G01	Field Maple	*Acer campestre*	10	1	200	4	4	4	4	2	Mature	Fair	Fair	Group of 8 Field Maples growing on raised bund adjacent to drainage ditch to east 1m deep ditch east of trees Suppressed by neighbouring trees Ivy growing up main stem	No action required at the time of inspection.	20-40 Years	C2	Radius: 2.4m. Area: 18 sq m.



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Site: Tiddlywinks

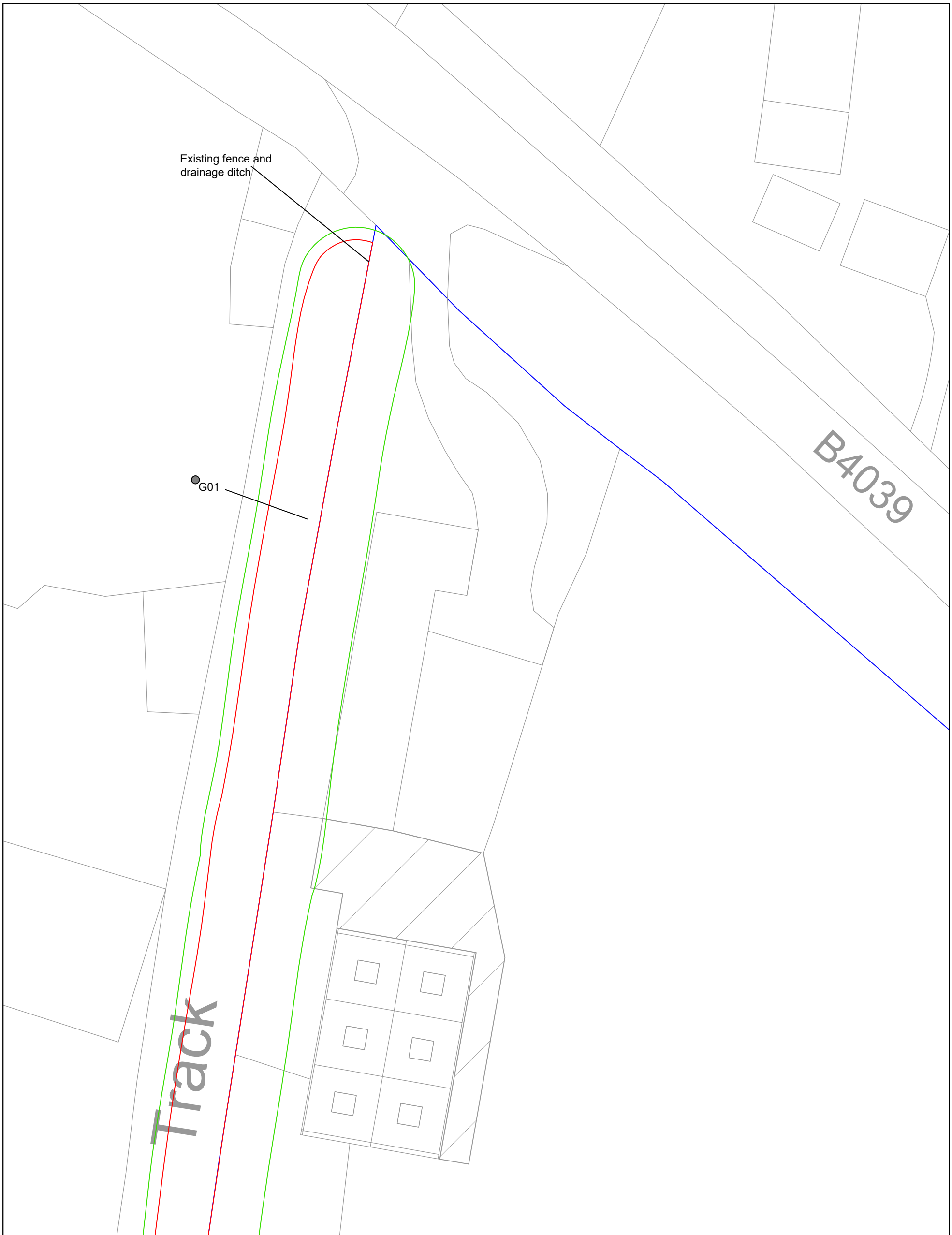
Drawing Title: Tree Constraints Plan	1:250 at A3
Drawing Number: 231219-TW-TCP-SD	December 2023

Key:

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

Category
13
Crown Spread
Tree Number
Root Protection Area

NOTE: All tree/group numbers have approximate locations.



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Site: Tiddlywinks	
Drawing Title: Arboricultural Impact Assessment	1:250 at A3
Drawing Number: 231219-TW-AIA-SD	December 2023

Key:

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

Category — 13 — Crown Spread
Root Protection Area
Tree Number

NOTE: All tree/group numbers have approximate locations.