

Arboricultural Impact Assessment and Tree Protection Plan

for trees on land at

Harvest Lane, Charlton Horethorne



On behalf of

Hopkins Estates Ltd

The Tythings Commercial Centre
Southgate Road
Wincanton
BA9 9RZ

Inspected and prepared by

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SUMMARY

This arboricultural impact assessment report supports a full planning application, submitted by Hopkins Estates Ltd for a new development which includes residential housing as well as two commercial buildings on land at Harvest Lane in Charlton Horethorne. Three self-build plots in this development are also included as an outline application.

Arboricultural advice was taken early in the planning process with the aim of incorporating the best trees on the site. To construct the proposed development, four trees must be removed, including two C-grade trees and two trees in poor condition (Category-U). Three hedges will also need to be removed and two further hedges will need to be partially removed, these are all C-grade arboricultural features.

The trees that will need to be removed are small and generally set back from the road and so their loss will not have a significant impact on the character or appearance of the local area. Nevertheless, new tree planting to compensate for the loss of these trees is included as part of the proposed scheme.

During construction, temporary fencing will be used to protect retained trees situated near works areas. For effective tree protection, fencing must be installed before any heavy plant machinery is used on the site and must remain in place until the construction works have been completed.

Supervision by a suitably qualified arboriculturist will be required in the event of any unforeseen construction activity within the root protection area of retained trees at or near the development site. It is advised to inform the project arboriculturist and the local authority's arboricultural officer of necessary works near trees as soon as they become apparent.

There will be a pre-commencement meeting between the site manager and the project arboriculturist where the site manager will be made aware of the tree protection measures that will be required during construction.

This report details how trees are to be protected during construction works. The site manager must be provided with a copy of this report and it will be their responsibility to impart the information herein to all construction staff.

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1 INTRODUCTION

1.1 Background

1.1.1 Hopkins Estates Ltd proposes a new development on land at Harvest Lane in Charlton Horethorne, Somerset. This land is hereafter referred to as the 'site'. This would involve constructing a new mixed use housing development; these proposals are hereafter referred to as the 'proposed development'.

1.1.2 The following documents have been reviewed to inform this report:

- Topographical Survey - Gartell & Son Ltd - Drawing # 23.5.19
- Site layout Plan - Orme - Drawing # 1742/005
- Illustrative Landscape Masterplan - Greenhalgh - 170-801
- Landscape Proposals - Greenhalgh - 170-G103

1.1.3 An initial tree constraints plan was produced in April 2020 and this has informed the design of the proposed site layout.

1.1.4 A check of the South Somerset Council online mapping system confirms that none of the trees at the site are protected by a tree preservation order (TPO), and nor is the site situated within a Conservation Area.

1.2 The assignment

1.2.1 Instructed by Grass Roots Planning Ltd, Bosky Trees Ltd conducted a site visit, surveyed the trees that might be affected by the proposed development and specified suitable tree protection measures in the event of a successful planning application. The information compiled in this report is in accordance with the British Standard *BS5837:2012 – Trees in relation to design, demolition and construction – Recommendations*¹.

1.2.2 This report includes the following to accompany a planning application for the proposed development:

- A tree survey plan based on the topographical survey provided, with any additional trees indicatively plotted.
- An arboricultural impact assessment of the proposed development, identifying trees that will be lost, as well as trees that can be retained and protected during development works.
- A tree protection plan, including information on the location of tree protection fencing and ground protection measures.
- Recommendations for remedial works for retained trees to be undertaken before site clearance and construction.

¹ British Standards Institution (2012). *BS5837 Trees in relation to design, demolition and construction – Recommendations*. BSI: London.

- Method statements for works near trees.

1.3 Limitations

- 1.3.1 The assessment and works recommendations relate to conditions found at the time of inspection. Any significant alteration to the site that may affect present trees, or have implications for planning (including level changes, hydrological changes, storms, extreme climatic events or site works) will necessitate re-assessment of the trees.
- 1.3.2 Note that this survey 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 works recommendations. A full assessment of the risks posed by trees would be informed by consideration of site use together with hazards present within a tree. Changes in site use are likely to occur during, and result from, the proposed development. Given these factors, regular tree risk assessments are advised.
- 1.3.3 This report does not consider tree-related building subsidence. If shrinkable clay soils are present on site, then guidance given in the National House Building Council (NHBC) Standards, chapter 4.2² should be used to avert the risk of future subsidence of new buildings.
- 1.3.4 No detailed assessment of the potential conflict between future site use and the shade cast by trees has been undertaken within this report.

2 TREE SURVEY INFORMATION

2.1 Details of the site visit

- 2.1.1 I visited the site and carried out tree survey on 7th April 2020. The survey was not constrained by weather conditions and considered all trees on and around the site.
- 2.1.2 The proposed development site is currently open pasture surrounded by field boundary hedges. Mature trees are located along the northern perimeter of the site and there are remnants of a former hedgerow in the centre of the site.

2.2 Data collection

- 2.2.1 Trees, tree groups and hedgerows were allocated a unique identifying number, used throughout this report. ID numbers are listed in the tree schedule and are used on the tree plans.
- 2.2.2 Trees were inspected at ground level using the visual tree assessment method.³ As described in table 1 of BS5837,⁴ each tree was placed into one of four retention categories: A, B, C or U.

² National House Building Council (2008). *NHBC Standards Chapter 4.2 - Building near trees*. NHBC: Milton Keynes.

³ Mattheck, C. and Breloer, H. (1995). *The body language of trees: a handbook for failure analysis*. Research for Amenity Trees 4. HMSO: London.

⁴ British Standards Institution (2012). *BS5837 Trees in relation to design, demolition and construction – Recommendations*. BSI: London.

Stem diameter was used to calculate the root protection area (RPA)⁵ required by each tree during construction. Information on each tree, tree group and hedgerow is given in Appendix 1.

2.2.3 A total of 29 individual trees, five groups of trees and eight hedges were surveyed (see table 1).

Table 1: Summary of the retentive worth of trees, groups and hedges included in the survey.

BS5837 Category	Quality	Number of trees	Number of groups	Number of hedges
A	High	-	-	-
B	Moderate	1	-	-
C	Low	25	5	8
U	Very poor	3	-	-
	Total	29	5	8

2.3 The tree plans

2.3.1 The tree removal plan (TR-1) shows the root protection areas required by each tree and identifies which trees are to be removed to enable the proposed development (this is provided as Appendix 3). The tree protection plan (TPP-1) shows where fencing and other protection measures are required to safeguard trees during construction. These plans are provided at the rear of the report (see Appendix 4).

3 ARBORICULTURAL IMPLICATIONS AND PROPOSED MITIGATION

3.1 Trees for removal

3.1.1 Four trees will need to be removed in order to construct the proposed development, these include two C-grade trees (T3 & T6) and two U-grade trees (T4 & T5).

3.1.2 Three hedges will also need to be removed (H2, H3 & H6) and two further hedges will need to be partially removed (H4 & H5). These are all C-grade arboricultural features.

3.2 New tree planting

3.2.1 The loss of trees will be compensated by an extensive programme of new tree planting, which will complement the new site layout. The proposed locations for these trees are shown in section 2.6 of the Landscape Proposals and on the Illustrative Landscape masterplan, both have been produced by Greenhalgh.

⁵ The root protection area (RPA) is a layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of roots and soil structure is treated as a priority.

3.3 New service runs

- 3.3.1 Typical 'open trench' installation of underground services near trees is likely to sever roots; this will harm the tree's physiological condition, provide an opportunity for fungal infection, and could leave them prone to windthrow. Therefore, new underground services will be located and designed to avoid retained trees' root protection areas.
- 3.3.2 If any additional underground services are required it will be necessary for suitable members of the project team, including an arboricultural consultant, to design their routes. An appropriate specification and method statement are required for their installation and guidance provided in Volume 4 of the National Joint Utilities Guidelines (NJUG4)⁶ must be followed.

3.4 Level changes and retaining walls

- 3.4.1 Level changes or slopes must comply with the constraints attached to the construction exclusion zones. This means that any soil grading must take place outside of the fenced areas identified on the tree protection plan.

3.5 Tree protection fencing

- 3.5.1 Temporary fencing and/or barriers must be used during construction to protect retained trees situated near works areas. The locations of such fencing/barriers is indicated on tree protection plan at the rear of the report (TPP-1). For effective tree protection, protective fencing must be installed before any heavy plant machinery is used on the site and must remain in place until completion of construction works (unless under arboricultural supervision). The fenced off areas will be designated as 'construction exclusion zones'.
- 3.5.2 A specification for suitable tree protection fencing is provided in Appendix 2.

3.6 General method statement for effective tree protection

- 3.6.1 Trees are vulnerable to root damage caused by ground disturbance, direct injury of the trunk or branches, environmental change, pests and diseases. Construction work often exerts pressures on existing trees. A tree that has taken many decades to reach maturity can be irreparably damaged in just a few minutes by unwitting or negligent actions.
- 3.6.2 The site manager must be informed of the tree protection requirements at the site and the guidance in this report. A pre-start meeting is strongly encouraged to ensure correct erection of temporary barriers forming construction exclusion zones to protect retained trees at the site (see also: Section 3.5).
- 3.6.3 Soil compaction can occur quickly by vehicles passing over an area of soil. Compaction may cause reduced infiltration rates of water, poor drainage, reduced availability of water and reduced air and oxygen supply to roots. This leads to reduced root growth and, as a result, the health of the tree is affected. To avoid soil compaction, no vehicles should enter the fenced-off areas during construction operations.

⁶ National Joint Utilities Group (2007). *Guidelines for the planning, installation, and maintenance of utility apparatus in the proximity to trees*. Volume 4 (NJUG4). National Joint Utilities Group: Eastleigh.

3.6.4 All construction staff should be made aware of the following restrictions applying to construction exclusion zones:

- 1) Excavation or raising of soil levels is prohibited within construction exclusion zones without written permission from the project arboriculturist.
- 2) Site offices and staff welfare facilities must be located outside of construction exclusion zones unless agreed with the local authority's arboricultural officer.
- 3) No materials of any kind should be stored within the construction exclusion zone.
- 4) No utility trenches should be routed through a construction exclusion zone without written permission from the local authority's arboricultural officer.
- 5) Care must be taken when planning site operations to ensure that wide or tall loads, or plants with booms, jibs and counterweights, can operate without coming into contact with retained trees. If necessary, branches may be tied out of the way.
- 6) Potential contaminants, such as fuel, oils and chemicals, must be stored on an impervious base within a bund able to contain at least 110% of the volume stored. Provision must also be made for any spillage or run-off to be contained away from the protected area.
- 7) Cement and concrete mixing must take place at least 10m from any trees, over a suitable hard surface to prevent soil contamination from spillage or washing out.
- 8) Avoid fires; however, if permitted by the site manager, they must not be lit where heat could affect foliage or branches (at least 15 m from the base of a tree is normally sufficient).

4 ARBORICULTURAL IMPACT ASSESSMENT

4.1 Evaluation of the proposed development's arboricultural impact

4.1.1 The trees that will need to be removed are small and generally set back from the road and as such they have relatively low visual amenity value and their loss will not have a significant impact on the character or appearance of the local area. Nevertheless, there will be new tree planting to compensate for the loss of these trees included as part of the proposed development.

4.1.2 Overall, provided that the tree protection measures detailed in this report are followed, I consider that the proposed development can be constructed without causing significant damage to any of the retained trees, and that the proposed new tree planting will be adequate to replace the trees that are to be lost. Therefore, I am satisfied that the proposed development will have an acceptable impact on local tree cover.

5 RECOMMENDATIONS

5.1 Tree work

- 5.1.1 All tree works necessary for the proposed development are listed in the schedule in Appendix 1.
- 5.1.2 All permitted and approved tree work must be undertaken in accordance with BS3998:2010 *Recommendations for tree work*,⁷ ideally at the beginning of the construction phase before protective fencing is erected. Only qualified and insured tree surgeons should be employed.

5.2 Legal restrictions to tree works

- 5.2.1 At present none of the trees at the site are protected. If this report is submitted to support a full planning application, and that application is subsequently approved, any tree works listed in the report may be carried out prior to the commencement of construction without the requirement for further permission from the planning authority. But if any arboricultural works are intended before planning permission has been approved then, before works start, the local planning authority should be contacted again to confirm if any of the trees have subsequently become protected since the previous check. Also, if trees are owned by a third-party, permission for any arboricultural management must be agreed with the owner in advance of the works. Please contact Bosky Trees if you would like these matters explained in more detail.
- 5.2.2 Works may be constrained between March and August because it is illegal to disturb an active bird's nest. Bat roosts are also protected, so tree works might be delayed if roosting bats are encountered. A tree surgeon or ecologist will advise on this matter.

5.3 Agenda for arboricultural supervision

- 5.3.1 There will be a pre-commencement site meeting between the project arboriculturist and the construction site manager. During this 'toolbox talk' the arboriculturist will explain how trees could potentially be damaged by construction works and discuss how such damage can be avoided, and the agreed methodology for the works will be fully explained. The toolbox talk will also provide an opportunity for the contractor to raise and issues with working methods or features that they think could potentially impact the retained trees. At this point the location and suitability of the tree protection fencing will be checked by the project arboriculturist. A record of this meeting will be produced by the arboriculturist and this will be supplied to the South Somerset Council tree officer.
- 5.3.2 When construction activity has been completed it will be necessary to carry out soft landscaping works within the construction exclusion zones. At this time a site visit from the project arboriculturist will be required to witness the tree protection fencing being removed, and during this visit the contractors will be briefed on how to carry out potentially damaging operations near trees. The supervising arboriculturist will make a record of this visit and make this available for the South Somerset Council tree officer.

⁷ British Standards Institution (2010). *BS3998 Recommendations for tree work*. BSI: London.

Table 2: Agenda for arboricultural supervision.

Item no.	Phase	Works description
1	Pre-commencement	Tree protection put in place.
2	Pre-commencement	Toolbox talk from project arboriculturist.
3	Pre-commencement	Certificate of tree protection fencing compliance submitted.
4	End	Tree protection measures removed and subsequent landscaping operations discussed. Certificate of tree protection compliance issued by the project arboriculturist.

5.3.3 Supervision by a suitably qualified arboriculturist will also be required if any unforeseen construction activity is to take place within the root protection area of any trees retained on or near the site. The project arboriculturist and the local authority's arboricultural officer should be informed of necessary works near trees as soon as they become apparent.