



D. BIRCH Consultancy Ltd.

Arboriculture | Ecology | Biodiversity

Low Gables, Hexham

Tree report

October 2023

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| Client details | Mr. and Mrs. C. Dougall |
| Project | Low Gables copper beech tree |
| Location | 1 Low Gables, South Park, Hexham, NE46 1AH |
| Grid reference | NY939634 |
| Field survey date | 7 th October 2023 |

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|-----------------|--------------------------|-----------------|
| Author | Darryl Birch BSc MArborA | 10 October 2023 |
| Reviewed | Rebecca Tempest BA MA | 16 October 2023 |
| Version | V02 | |
| Issued | Darryl Birch | 18 October 2023 |

Any recommendation, opinion or finding stated in this report is based on circumstances and facts as they existed at the time that D. BIRCH Consultancy Ltd. performed the work. The content of this report has been provided in accordance with the provisions of the Arboricultural Association Code of Conduct and Ethics (V1 July 2018).

Nothing in this report constitutes legal opinion. If legal opinion is required, the advice of a qualified legal professional should be secured. Observations relating to the physiological and structural condition of trees have been made from an arboricultural point of view based on professional judgement at the time of survey.

D. BIRCH Consultancy Ltd. accepts no responsibility for injury that may occur as a result of incorrectly interpreting this report. Trees are living organisms whose health and condition can change rapidly as a result of environmental changes. All trees, even healthy ones, are at risk from unpredictable climatic and manmade events. The assessment of risk for these trees is based upon factors evident at the time of the inspection, the potential an individual tree has for survival, and the interpretation of those factors by the inspector. The health, condition and safety of these trees should be checked on a basis commensurate with the level of risk as specified in this report.

If works are not likely to start within 12 months of this report, it is recommended that an updating survey is undertaken to ascertain any changes which may have occurred to trees surveyed, where failure to carry out the prescribed works within the specified time frames has occurred.

*D. BIRCH Consultancy Ltd. is registered in England and Wales – Number: 12405663
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Contents

1 Introduction 5

2 Tree condition assessment: Methods 7

3 Results and recommendations for works..... 8

4 Figures 10

5 Plates 11

6 References and bibliography 14

1 Introduction

1.1 D. BIRCH Consultancy Ltd. were commissioned by Mr. and Mrs. Dougall, to carry out an inspection of a mature copper beech *Fagus sylvatica* f. *purpurea* tree within the grounds of Low gables, South Park, Hexham (the Site). The central Ordnance Survey grid reference for the Site is NY939634.

1.2 An application, reference 23/03573/PRUTPO, is in process to carry out minor pruning of the tree, which is protected by a Northumberland County Council Tree Preservation Order (TPO)

1.3 This inspection and report were commissioned to satisfy the two requirements as stated within feedback from Northumberland County Council received on the 23rd September 2023, which states that:

1. *The description of works on the application form must clearly identify the tree species and provide a full and clear specification of the proposed works.*
2. *A valid sketch plan identifying the location of the tree(s) is required to identify the tree to which the application is for.*

Scope of the report.

1.4 According to Chapter 3 of the Occupiers Liability Act 1984, the report recognises the duty of care held by a landlord to maintain existing trees within their landholding in a favourable and safe condition to prevent failure and injury to visitors and passers-by.

1.5 This and other current legislation states that the statutory duty of care requires that duty holders identify and control reasonably foreseeable risk¹. This includes having in place a system and procedure to identify and control reasonably foreseeable tree risk and the potential for failure.

1.6 This report provides a rapid professional assessment of the physiological and structural condition of the tree. In addition, the report provides a detailed specification for management of the tree as stated within the proposed application for works to a tree protected by a TPO.

1.7 Trees are dynamic, living organisms. Their condition can change rapidly as they grow and can be dramatically affected by unforeseen external conditions such as extreme weather events and attack by aggressive organisms. Subsequently this report is valid for a period of 12 months. This period may be reduced if significant changes occur to the trees or the ground conditions close to them.

1.8 This survey updates the survey of the tree carried out by Elaine Rigg in 2016.

Proposed works.

1.9 Details of the proposed works to the tree are contained within section 3: Results and Recommendations.

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- ¹ The Common Law 'duty of care'
 - The Duty under the Occupiers' Liability Act 1957 s.2 (2)
 - The Duty under the Occupier's Liability Act 1984 c.3 (3)
 - Section 1 of the Compensation Act 2006 (civil claims only)
 - The Health & Safety at Work Act 1974 - Sc2(1), 3(1) and 3(2)
 - The Management of the Health & Safety at Work Regulations 1999 (Regulation 3)

Personnel

- 1.10 This report was written by Darryl Birch BSc. (Hons) MArborA. Darryl has worked as professional Arboricultural Consultant for 10 years and has worked for over 30 years in various sectors of the arboricultural industry. He has previously carried out numerous arboricultural assessments at other sites in the UK.

2 Tree condition assessment: Methods

Site inspection

- 2.1 All observations were carried out from ground level using the Visual Tree Assessment Method.² No specialist decay detection equipment was used, just basic sounding and probing tools where necessary. This is an industry standard methodology for identifying structural defects in trees and evaluating their significance from visible signs through the application of biomechanical criteria.
- 2.2 No soil samples or investigations were carried out. Recommendations to undertake an aerial inspection or more detailed investigation of internal parts of a tree are given if required.
- 2.3 Baseline photographs were taken of the tree. These can be provided as an addendum if required for future reference.

Survey details

- 2.4 A Site visit was undertaken on the 7th October 2023 by Darryl Birch MArborA, Arboricultural Consultant at D. BIRCH Consultancy Ltd.
- 2.5 As previous records for the trees were not available, the rapid assessment to set a baseline comprised the following:
- A ground level assessment using the VTA method referred to above. A sounding mallet, probe and binoculars were used to aid the diagnosis, to inform further, more detailed, surveys if considered necessary.

Survey conditions and limitations

- 2.6 During the survey the temperature was 18°C and dry, with a light westerly breeze and 100% cloud cover.
- 2.7 There were no access restrictions within the site. All elevations of the tree could be seen and inspected from the ground.

² Mattheck, C., & Breloer, H. (2012). 'The Body Language of Trees: A Handbook for Failure Analysis.' TSO

3 Results and recommendations for works

Site information

- 3.1 Low Gables is located on the southeastern edge of Hexham. The mature copper beech tree is growing on the eastern edge of the property which shares a common boundary with two houses (numbers 43 and 45) and gardens along Bondgate Close.
- 3.2 The Site is within the Hexham Conservation Area.

Tree description and condition (Plates 1 – 6)

- 3.3 The tree is a fully mature copper beech which has reached its full potential. It has massive lateral limbs which extend in all directions, with associated layers of strengthening reaction wood at potential failure points. The tree has been pruned correctly (perpendicular cuts at growing points) within the last 20 years. The crown appears to be asymmetrical with a bias to the north through east to south. This is most likely as a consequence of its proximity to a lime tree which was formerly present on its western elevation, and felled under licence in 2003. A large limb was removed from the beech tree on the western side of the crown most likely at the same time that the lime was removed, as evidenced by the partially formed occlusion around the visible wound.
- 3.4 It is likely that the tree was planted at the same time as construction of Low Gables making it between 100 and 150 years old. The bungalows along Bondgate Close were constructed in the mid-20th Century, when little consideration was given to the long-term impacts on trees on construction sites.
- 3.5 The tree however, appears to be in relatively good health for its age and size, despite any historical impacts. It is likely that the majority of structural root growth is within the free soil of Low Gables to the west. The tree has been allowed to grow naturally and relatively unhindered within its position and appears to have adapted well to its local conditions. It has a dense crown, with shoot extension growth that is normal for a tree of its age.
- 3.6 No evidence of fungal infection (old and new fruiting bodies, staining), bacterial infection (exudate, gummosis, cankers) or other pathogens was seen during the inspection.
- 3.7 There are longitudinal reaction-wood torsional ribs present on the main stem up to the first major union. This is the tree adapting to constant wind pressure from prevailing winds as it has grown through its lifecycle. External strengthening of the bole and the main stem in this way could also be an indication of hollowing; a natural process as the tree transitions towards over maturity, although the bole appeared sound when struck with the Thorex mallet. With such old and large trees surrounded by targets; it is always advisable to carry out an advanced assessment of the condition of the bole using non-invasive decay detection equipment such as a PICUS tomograph.

Work recommendations (Plates 7 – 9)

- 3.8 Any pruning of the tree will be carried out in the late winter to limit the likelihood of pathogen infection and just prior to when the tree will begin to flush.
- 3.1 All pruning works must be carried out according to British Standard BS 3998:2010 'Tree works recommendations' by an experienced and knowledgeable arboriculturist familiar with modern pruning practices.
- 3.2 The pruning works will be carried out under the direction and supervision of the project arboricultural consultant.
- 3.3 The crown will be raised up to 3m above ground level on the eastern elevation.

- 3.4 A section of the eastern crown overhanging number 43 will be end-pruned/ reduced to provide at least 3m clearance from the roof.
- 3.5 A section of the eastern crown overhanging number 45 will be end-pruned/reduced to provide at least 3m clearance from the roof.
- 3.6 Each pruning cut will be to an established growing point.

Site plans





- 3.7 A tree location/ reference plan can be found in Figure 1.

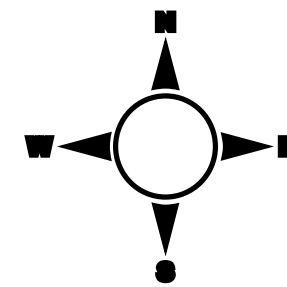
4 Figures

4.1 Figure 1: Tree location plan.



Key

-  Section to be crown lifted
-  Sections to be removed
-  Copper beech
-  Buildings









Scale: 1:300



| | |
|---------|---------------------------------|
| Site | Low Gables copper beech, Hexham |
| Drawing | Site location/ reference |
| Date | 10th October 2023 |
| Drawn | DB |
| Checked | RT |
| Version | V01 |
| Status | FINAL |

5 **Plates**

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|---|--|
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| <p>1. View of the western elevation of the tree (looking east).</p> | <p>2. Torsional loading and reaction wood on the main stem.</p> |
|  |  |
| <p>3. Reaction wood ribs on the bole.</p> | <p>4. Asymmetric crown.</p> |
|  |  |
| <p>5. View of the tree from the eastern elevation and proximity to number 43.</p> | <p>6. Proximity to number 45.</p> |



7. Dotted lines and polygons mark the sections of the crown that will be raised and removed away from the roofs of the neighbouring properties.



8. Section of the crown to be pruned back 3m from number 45.



9. Section of the crown to be pruned back 3m from number 43

6 References and bibliography

- 6.1 BS3998:2010: Tree work – Recommendations.
- 6.2 BS5837:2012: 'Trees in relation to design, demolition and construction – Recommendations'.
- 6.3 Lonsdale, M. (2010). *Principles of tree hazard assessment and management*. Forestry Commission – Research for amenity trees No. 7.
- 6.4 Mattheck, C., & Breloer, H. (2012). 'The Body Language of Trees: A Handbook for Failure Analysis.' TSO
- 6.5 Roberts, J., Jackson, N. & Smith, M. (2015). *Tree roots in the built environment*. Arboricultural Association – Research for amenity trees No. 8.
- 6.6 Roloff, A. (2017). *Urban tree management for the sustainable development of green cities*. Wiley/ Blackwell.
- 6.7 Shigo, A. (2008). *Modern Arboriculture*. Shigo and Trees associates LLC.
- 6.8 Strouts, R. G. & Winter, T.G. (2010). *Diagnosis of ill health in trees*. Forestry Commission – Research for amenity trees No. 2.