

## **Hallington Mill**

Arboricultural Impact Assessment, Arboricultural Method Statement and Tree Protection Plan

May 2021



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Client details Mr. and Mrs. Wiggins

Project Hallington Mill

Location Hallington Mill, Newcastle-upon-Tyne, NE192LJ

Grid reference NY983743

Field survey date 21st February 2020

Author Darryl Birch BSc MArborA 24 May 2021

Reviewed Rebecca Tempest BA MA 31 May 2021

Version V1

Issued Darryl Birch 31 May 2021

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.

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## 1 Introduction

- D. BIRCH Consultancy Ltd. were commissioned by Mr. and Mrs. Wiggins to produce an Arboricultural Impact Assessment (AIA), Arboricultural Method Statement (AMS) and Tree Protection Plan (TPP) for a proposed development at Hallington Mill, Northumberland. The central Ordnance Survey grid reference for the site is NY983743. The location of the site is shown in Figure 1 of the Tree Constraints Assessment which compliments this report.
- 1.2 None of the trees within the property are protected by Tree Preservation Orders and the site is not within a Conservation Area.

#### Supporting documents and figures.

- 1.3 This report should be read in conjunction with the following report and associated plans:
- 1.4 D. Birch Consultancy Ltd.: 20202102 Hallington Mill TCA V2 FINAL

#### **Development proposals**

1.5 Current proposals include the demolition of an existing agricultural barn and construction of a large multipurpose building on the existing footprint and the conversion of a traditional stone barn into accommodation.

#### Scope of report

- 1.6 This report provides Arboricultural information and advice regarding any works within the site which could potentially impact on trees and to support a current planning application.
- 1.7 The TCA carried out in February 2020 assessed and categorised all of the trees within the site which could potentially be impacted upon by the proposed development and considered their quality and retention values using criteria as specified in BS5837:2012¹. A tree constraints plan is illustrated in Figure 2. of the D. Birch Consultancy Ltd. TCA report. Potentially vulnerable trees immediately adjacent to the site were assessed where considered appropriate.

#### 1.8 Figures:

- Figure 1. of this report is the tree protection plan which shows the mitigation and compensatory measures required to ensure that the crowns and roots of retained trees are adequately protected for the duration of the development.
- Figure 2. is a plan of the proposed development produced by John Elves Associates, the project Architect.
- 1.9 The purpose of the AMS (section 6 p.13) is to demonstrate how works will be undertaken at Hallington Mill to avoid unacceptable arboricultural impacts and provide an adequate level of protection for those trees that are to be retained. The method statement will inform the construction team and satisfy the requirements of Northumberland County Council Local Planning Authority (LPA).
- 1.10 The method statement merely considers the systems of work in relation to the health and safety of retained trees. It does not address the requirements of the Health and Safety Executive that should be considered by the parties involved.

#### Personnel

1.11 This report was written by Darryl Birch BSc. (Hons) MArborA. Darryl has worked as a professional Arboricultural Consultant for 13 years and has worked for over 30 years in

<sup>&</sup>lt;sup>1</sup> BS5837:2012 'Trees in relation to design, demolition and construction- recommendations'



various sectors of the arboricultural industry. He has previously carried out numerous arboricultural assessments at other sites in the UK.



### 2 Arboricultural Impact Assessment

#### Overview

2.1 This section focusses on the proposed development layout and how it relates to the trees on the site and trees outside the site but on the common boundary. Any tree and design conflicts are highlighted, and possible remedial action suggested if appropriate.

#### General considerations

- 2.2 The AIA has considered the following impacts that may occur as a consequence of the proposed works:
- 2.3 Damage to the roots and superstructure of non-target trees during the construction phase. This includes measures where applicable to prevent root compaction by human and vehicular traffic, contamination from hazardous chemicals and collateral damage to trees during other construction related operations.
- 2.4 Post development damage to retained trees through poor landscape management.

#### Arboricultural Impacts.

- 2.5 According to the current plans, the new building will be shifted to the north of the existing building footprint. External service areas will be installed adjacent to the western elevation of the new building and subterranean services will run away from the building to the northeast.
- 2.6 Renovation of the existing stone barn will not impact on the existing trees.
- 2.7 The roots and crowns of trees T4 and T6, and trees T7, T12 and T13 could potentially be impacted upon during the demolition of the agricultural barn and the installation of the new foundations and service runs. Trees within group G1 will not be impacted by the proposed works if adequately isolated and protected.
- 2.8 Trees T1, T3 and T5 will be removed as specified with the TCA. This is a general management prescription to improve the health of the stand of trees being retained and to boost their safe life expectancy. Minor crown pruning works of trees T4 and T6 will be carried out prior to the commencement of works as specified below.
- 2.9 To prevent long term damage to the retained trees, precautionary measures as specified within the AMS will be implemented during the pre-construction and construction phases.
- 2.10 Potential impacts to the trees if uncontrolled could include root severance during the demolition of the existing building and construction of foundations and service runs, root compaction through the incorrect placement of site materials and the movement of site plant.
- 2.11 Potential impacts and proposed mitigation measures are shown in Table 1. below. Detailed measures to mitigate for the impacts on retained trees within the site are contained within the TPP (Figure 1.) and the AMS (pp. 13 23)



| Table 1. P                 | otential impact                                 | s and proposed mitigation meas   | ures  |
|----------------------------|---|--|---|
| Tree ID                    | British<br>Standard<br>category of<br>retention | Impacts  | Mitigation measures (further detail is contained within the AMS).   |
| Trees:<br>T1, T3<br>and T5 | 2 x U<br>1 x C1                                 | No impacts from the proposed development.  All of the trees have supressed growth forms and significant health issues as described within the TCA. The trees are located adjacent to public areas and potential targets such as a children's play apparatus and are within falling distance of the new build infrastructure. | The trees will be felled, and the stumps retained.  Three native species nursery standard trees will be planted within the landholding to compensate for the loss of the trees. It is recommended that tree species in keeping with the adjacent riparian woodland are planted.   |
| Tree T4.                   | A1  | Impacts from the proposed development if uncontrolled.  As described within the TCA, the tree, most likely from a lapsed hedgerow, is exhibiting features that would suggest it has outgrown the parameters of its original position. Failure of the tree could result in the damage to new build infrastructure.            | The aim of the proposed crown management is to retain the tree as a key landscape feature of the site.  To limit the risk of failure within the next 5 years, the tree will undergo a process of retrenchment pruning. In addition to the removal of trees as above, this management technique will extend the safe life expectancy of the tree and encourage vigorous growth in the lower crown.  The crown of the tree will be reduced over the course of 5 years through cycles of tip pruning.  This will be carried out by an experienced arboricultural contractor.  Pruning would ideally be carried out at the end of winter, to maximise the potential for re-growth and limit the potential for infection by harmful pathogens. |
| Tree T6.                   | A1  | Impacts from the proposed development if uncontrolled.  As described within the TCA, there are significant structural defects within the tree that could lead to failure in the short term, particularly under extreme weather conditions.  Failure of the tree could result in damage to the new                            | The aim of the proposed crown management is to retain the tree as a key landscape feature of the site.  Failure of the union is highly likely in the short term; potentially <5 years.  The crown of the tree will be reduced and shaped to approximately 8m above ground level. The tree will be periodically managed to promote vigorous growth within the new crown. A nutrient rich mulch will be added to the soil on the  |



|                             |                  | build and new build infrastructure.   | southern elevation to promote root growth on the downslope side.   |
|-----------------------------|------------------|---|--|
|                             |                  |   | Pruning would ideally be carried out at<br>the end of winter, to maximise the<br>potential for re-growth and limit the<br>potential for infection by harmful<br>pathogens. |
| Trees<br>T7, T12<br>and T13 | 2 x B1<br>1 x C1 | Impacts from the proposed development if uncontrolled.  The trees are young and in relatively good condition. | Install tree protection measures as described within the AMS and illustrated within the TPP  |

#### Damage to trees during the demolition and construction phases; general considerations.

There is a high potential for damage to trees within the site if not adequately protected. Impacts can include root severance, crown damage, spillage, soil/ root compaction and physical damage to tree stems through site boundary creep.

The long-term effects of this damage would only become apparent long after the development was completed and because of the size and maturity of the trees, could put the site properties at risk. It is therefore imperative that the mitigation measures as proposed in the AMS and TPP are implemented in full and that regular assessments of the health of the trees are carried out, post development.

Any works within the potential impact zone of the existing trees as illustrated within the TPP will be carried out under the supervision of the project Arboricultural Clerk of Works or Project Manager.



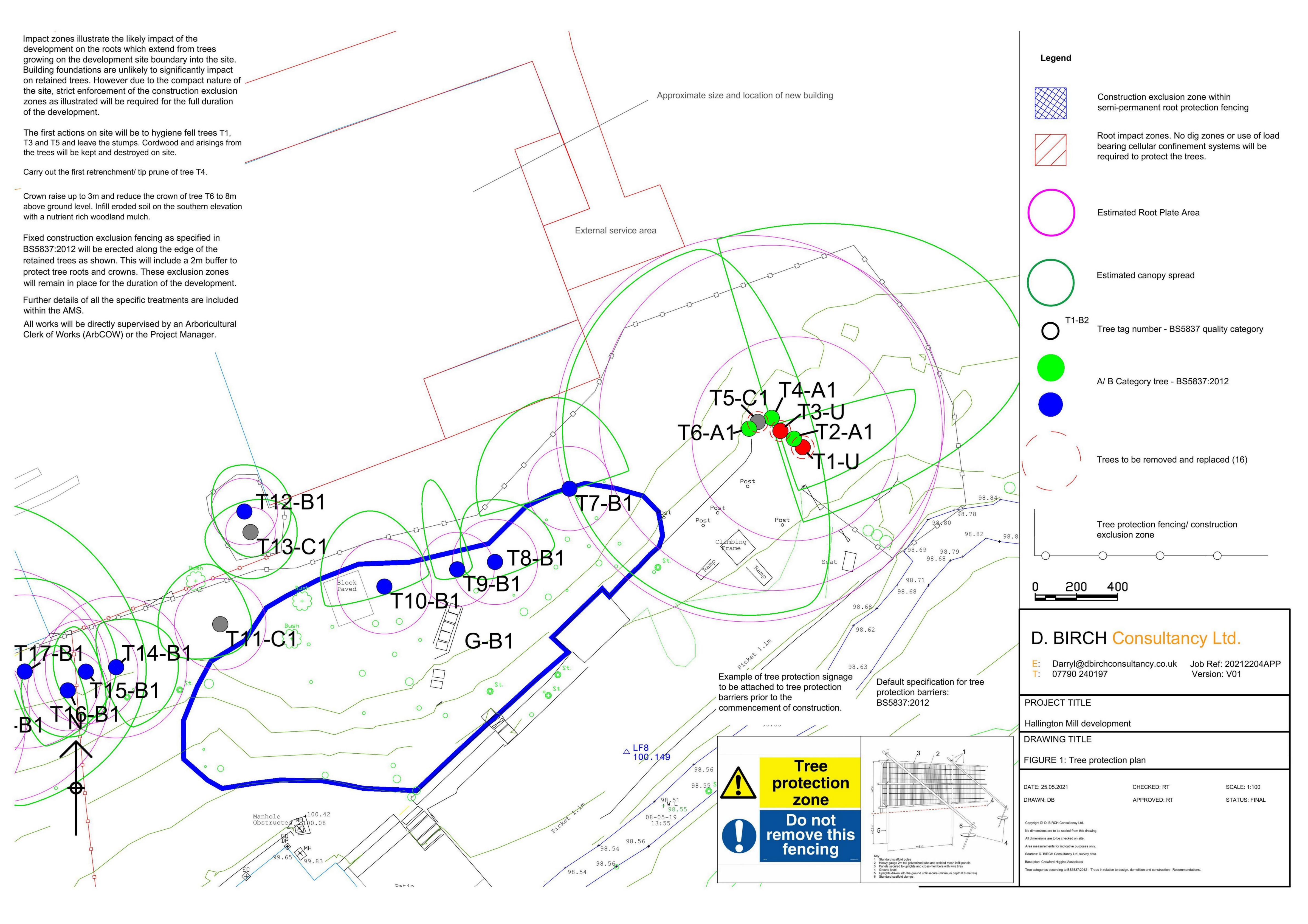
## 3 Summary and Conclusion

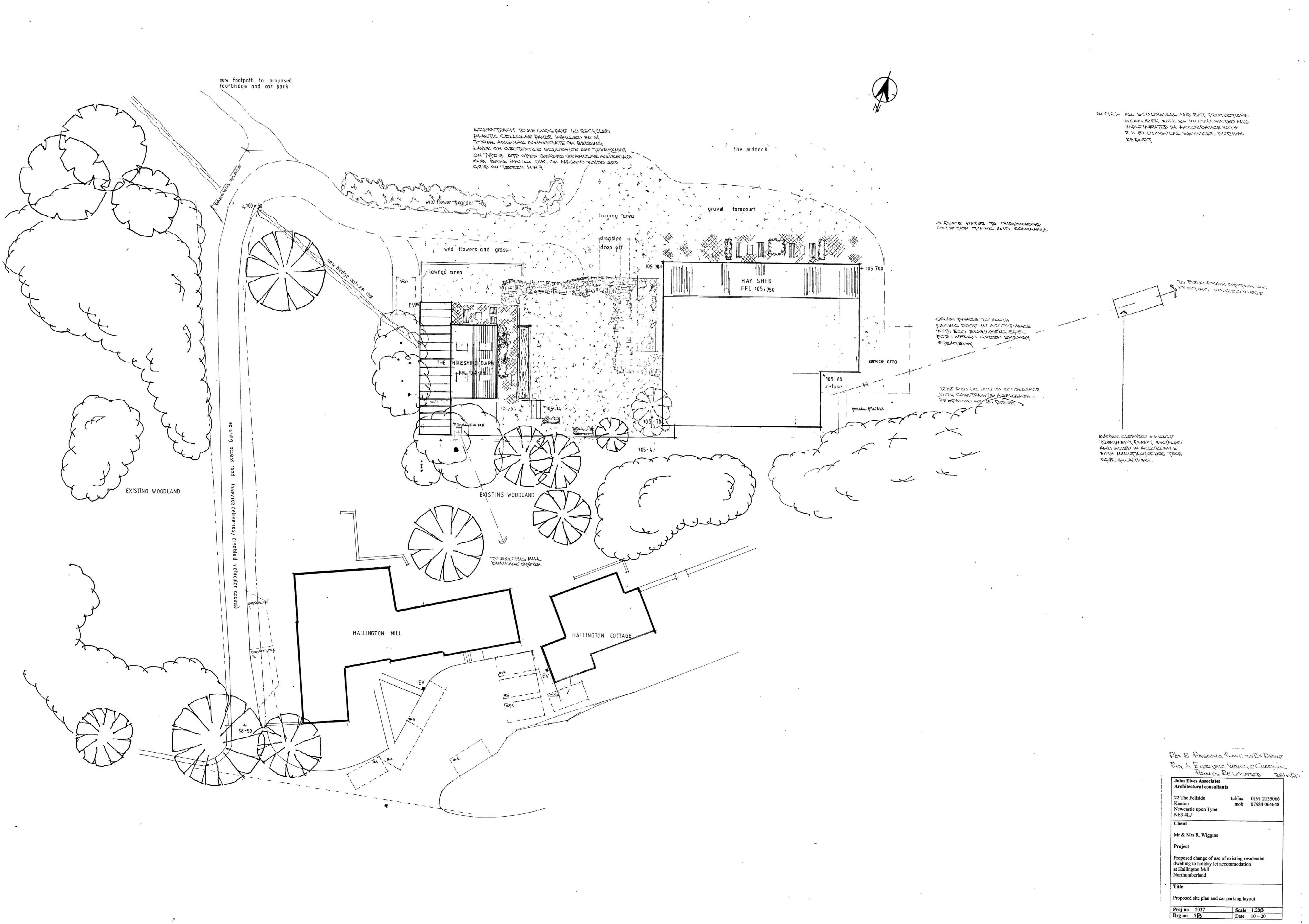
- 3.1 The first actions on site prior to any demolition or construction works will be tree management as described in Table 1. Pruning of beech should be carried out at the end of winter.
- 3.2 Three of the trees within the site will need to be removed as general management prescriptions.
- 3.3 Any excavations near to the tree impact zone will be carried out under supervision following ground investigation of the rooting environment.
- 3.4 Consideration will need to be given at the design stage of the future growth expansion of the trees and adjacent areas of hard standing/ foundations, as they grow towards senescence.
- 3.5 Semi-permanent fencing as specified in BS5837:2012 will be erected around the root protection areas of trees within group G1 and individually retained trees as illustrated on the Tree Protection Plan. These will be classified as Construction Exclusion Zones and would remain in place for the duration of the construction phase.
- 3.6 The development can be undertaken if mitigation to protect the trees as proposed is implemented and the AMS and TPP are adhered to in full.



## 4 Figures

- 4.1 Figure 1: Tree Protection Plan
- 4.2 Figure 2: Proposed development plan







## 5 Bibliography and references

- 5.1 Barrell, J. (2018). 'Manual for managing trees on development sites.'
- 5.2 BS5837:2012. 'Trees in relation to design, demolition and construction Recommendations'
- 5.3 BS3998:2010. 'Recommendations for tree work'.
- 5.4 BS8545:2014 'Trees: from nursery to independence in the landscape Recommendations'.
- 5.5 D. Birch Consultancy Ltd. 20202102 Hallington Mill TCA\_V2 FINAL





# Arboricultural Method Statement Hallington Mill

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## 6 Arboricultural Method Statement

#### Protected trees and the law.

- 6.1 The law on Tree Preservation Orders (TPO's) is in Part VIII of the Town and Country Planning Act 1990 as amended and in the Town and Country Planning (Tree Preservation) (England) Regulations 2012 which came into force on 6 April 2012. Section 192 of the Planning Act 2008 made further amendments to the 1990 Act which allowed for the transfer of provisions from within existing Tree Preservation Orders to regulations. Part 6 of the Localism Act 2011 amended section 210 of the Town and Country Planning Act 1990 concerning time limits for proceedings regarding non-compliance with Tree preservation order regulations.
- 6.2 TPOs allow for trees to be protected either as individuals, groups, areas or woodlands. The orders have the effect of preventing the cutting down, topping, lopping, uprooting, wilful damage or wilful destruction of trees, except in certain circumstances, other than with consent of the local authority.
- None of the trees within the site are protected by a Tree Preservation Order and the site is not within a conservation area.



#### Abstract

- 6.4 Current proposals include the demolition of an existing agricultural barn and construction of a large multipurpose building on the existing footprint and the conversion of a traditional stone barn into accommodation.
- 6.5 Field assessment has shown that there could potentially be impacts on existing trees as a consequence of the proposed development.
- 6.6 Protective barriers are required throughout the demolition and the construction process to protect the retained trees on site.

#### Statement of purpose

- 6.7 The purpose of the AMS is to demonstrate how works will be undertaken at Hallington Mill to avoid unacceptable arboricultural impacts and provide an adequate level of protection for those trees that are to be retained. The method statement will inform the construction team and satisfy the requirements of Northumberland County Council Local Planning Authority (LPA).
- 6.8 The method statement merely considers the systems of work in relation to the health and safety of retained trees. It does not address the requirements of the Health and Safety Executive that should be considered by the parties involved.

#### Related documents and plans

- 6.9 British standards Institute BS5837:2012 'Trees in relation to design, demolition and construction Recommendations'.
- D. BIRCH Consultancy Ltd. 20202102 Hallington Mill TCA\_V2 FINAL
- 6.11 D. BIRCH Consultancy Ltd. Arboricultural Impact Assessment
- 6.12 D. BIRCH Consultancy Ltd. Tree Protection Plan
- 6.13 John Elves Associates: Site layouts.

#### **Arboricultural Impacts**

6.14 Details of the trees and their protection are discussed and detailed in the documents and illustrated on the plans listed above and should be read in conjunction with this method statement.



#### 7 Tree Protection

#### General site care

- 7.1 To ensure that the trees to be retained are afforded an adequate degree of protection during the works, the following general precautions will be observed:
- 7.2 A hard copy of this report must be permanently available on site during the construction phase to:
  - Illustrate to contractors the active advisory and supervisory role of the Arboricultural Consultant and the Project Manager during the demolition/ construction process.
  - Correctly identify protection measures for specific trees as numbered on site and as detailed within the Tree Protection Plan (Figure 1).
  - Ensure that any works prescribed within this plan are carried out correctly, systematically and within the timeframe specified.
  - Allow the construction contractors to use the document as a practical guide on how to effectively protect and minimise impacts on trees and soft landscaping.

#### **Demolition phase**

- 7.3 All demolition actions will be carried out to the north of the existing tree group and therefore will not impact on the roots and crowns.
- 7.4 Demolition will be supervised by the site Project Manager.

#### Construction Exclusion Zones

- 7.5 Construction Exclusion Zones (CEZs) are to be implemented to ensure that the trees to be retained are afforded an adequate degree of protection during the works. The following general precautions will be observed:
  - All trees which are being retained on site should be protected by barriers and/or ground protection measures. Correct locations for the positioning of root protection fencing are shown on the Tree Protection Plan (Figure 1). The extent of the CEZ is stated in metres as the Root Protection Area radius (which is approximately 12 times the diameter of the tree measured at 1.5m from ground level).
  - Vertical barriers should be erected, and ground protection installed before any materials
    or machinery are brought onto the site and before any demolition, stripping of soil or
    construction work commences.
  - No access will be permitted within the Construction Exclusion Zones unless approved by the appointed Arboricultural Consultant and by the LPA. Ground levels will not be changed within the Construction Exclusion Zones and existing vegetation and topsoil will be left undisturbed but may be treated with approved herbicides if complete removal is required.
  - No materials, equipment or debris will be stored within a Construction Exclusion Zone, and no chemicals or fuel will be allowed to spill where they may contaminate the rooting areas of retained trees. No fires will be lit within a Construction Exclusion Zone and below tree crowns.
  - All heavy plant machinery and delivery vehicles shall be excluded from the areas demarcated for protection on the Tree Protection Plan (Figure 1).



#### **Barriers**

- 7.6 Barriers should be fit for the purpose of excluding construction activity and appropriate to the degree and proximity of work taking place around the retained trees. Special attention should be paid to ensuring that barriers remain rigid and complete throughout the construction period.
- 7.7 Temporary barriers will be erected as indicated on the Tree Protection Plan (Figure 1). The specification for these barriers will be in accordance with BS5837:2012 'Trees in relation to design, demolition and construction Recommendations/ default barrier' as illustrated in Figure 2.
- 7.8 The barriers will comprise 2.0m mesh panels (Heras® type weldmesh panels are a simple, readily available option) attached to a scaffold framework.
- 7.9 Support scaffolds will be attached to the scaffold framework as necessary at an angle of 45 degrees on the side of the trees and anchored by further scaffold poles carefully firmed into the ground (to avoid damage to tree roots).

#### Excavations within the root protection area

- 7.10 No excavations within the root plate areas of retained trees is anticipated. However, any works within the proximity of the tree impact zone, such as the installation of service runs, will be carried out under the supervision of the ArbCoW or the Project Manager to prevent project creep.
- 7.11 If encountered, tree roots up to 30mm will be hygienically pruned and wrapped in an organic biodegradable material.
- 7.12 Spaces around the roots will be backfilled with a nutrient rich soil and finished off with a surface mulch.

#### **Foundations**

7.13 Detailed plans for the foundation of the new building were not available at the time of writing.



## 8 Sequencing of works

- 8.1 The systematic process set out in Table 1 will ensure that trees are adequately protected for the full duration of the construction period and continue to contribute to the habitat diversity of site long after the development has been completed. This will also reduce the risk of the trees being infected with an aggressive pathogen that would potentially compromise their long-term safe life expectancies.
- 8.2 Each action should be signed off by the site Project Manager on satisfactory completion of the task for auditing purposes.
- 8.3 A list of key project team contacts is included in Appendix 1.

Table 1. Phased sequence of works

| Project<br>Phase | Action   | Responsible party ad action   | Completed<br>(date) |
|------------------|--|---|---------------------|
| 1                | A pre-commencement meeting will take place on site attended by the client, the appointed Arboricultural Consultant the site Project Manager and the appointed contractors. The purpose of this meeting is to ensure that everyone fully understands the requirements of the arboricultural method statement, and to refine the methodology as necessary prior to any works commencing.   | It shall be the duty of<br>the client to notify the<br>Arboricultural<br>Consultant when each<br>element of the works is<br>ready for inspection. |                     |
| 2                | Prepare the ground: conduct tree removal and tree pruning works.  Hygiene fell trees T1, T3 and T5 and leave the stumps. Cordwood and arisings from the trees will be kept and destroyed on site.  First retrenchment/ tip prune of tree T4.  Crown raise up to 3m and crown reduction of tree T6 to 8m above ground level. Infill eroded soil on the southern elevation with a nutrient rich woodland mulch.  Arboricultural contractors to be briefed prior to commencement of works | This work is to be guided by the project Arboricultural Consultant.   |                     |
| 3                | Install protective barriers to demarcate Construction Exclusion Zones and root protection areas,  Contractors to be briefed prior to commencement of works   | This work is to be guided by the Project Manager. The barriers will be inspected to confirm their correct alignment and integrity.                |                     |



| Project<br>Phase | Action  | Responsible party ad action   | Completed<br>(date) |
|------------------|---|---|---------------------|
| 4                | Proceed with the demolition of the existing agricultural barn as per the proposed plan.   | Approved site contractor under the guidance of the Project Manager.   |                     |
| 5                | Following completion of all elements of the development, take down the protective barriers, and complete remedial soft landscaping works as required including tree planting. | Approved Site contractor under the guidance of the project Arboricultural Consultant.  Horticultural contractor |                     |
| 6                | Post development monitoring of tree condition and prescription of remedial management treatments if required, to prolong their safe life expectancy.                          | Project Arboricultural<br>Consultant.   |                     |

At the completion of each monitoring visit the appointed Arboricultural Consultant will circulate a short monitoring report to the client, site manager (construction contractor) and the local authority arboricultural officer to confirm that works are progressing satisfactorily.



## 9 Transgression and Conclusion

- 9.1 Failure to adhere to the requirements in this method statement may result in a stop notice being issued by the Local Authority. This will bring all operations on the site to a halt until the Local Authority permits resumption.
- 9.2 All items of transgression shall be reported to the Local Authority tree department to consider if action should be taken.
- 9.3 If the provisions of this arboricultural method statement are complied with in full, the proposed works will be able to proceed without detrimental impact to retained trees.



## 10 Bibliography

Barrell, J. (2018). 'Manual for managing trees on development sites'.

BS5837:2012. 'Trees in relation to design, demolition and construction – Recommendations'

BS3998:2010. 'Recommendations for tree work'.

BS 8548:2014. 'Trees from the nursery to independence.'

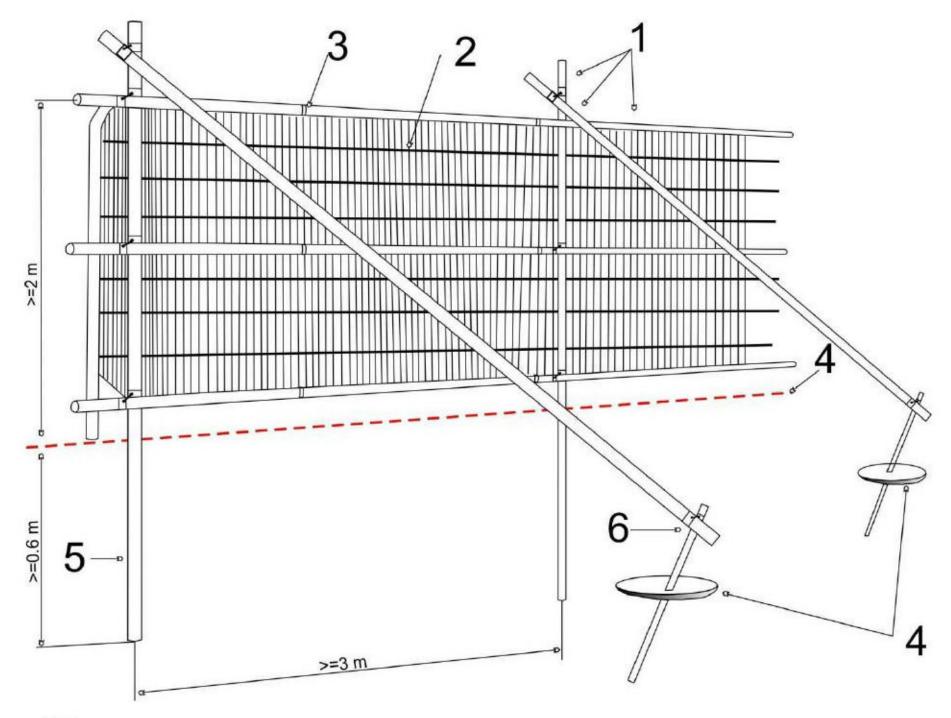


## 11 Figures

Figure 3: Default specification for protective barrier

Figure 2 - Default specification for protective barrier

'Heras' fencing bolted/wired to a supporting structure as illustrated is the most effective and robust method.



#### Key

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



Appendix 1 – Key contacts
Table A1. Key project contacts

| Site address                    | Hallington Mill, Newcastle-upon-Tyne, NE192LJ                       |  |
|---------------------------------|---|--|
| Project Manager                 | Robert Wiggins  |  |
| Developer                       | Mr. and Mrs. Wiggins  |  |
| Address                         | As above  |  |
| Contact name                    | TBC   |  |
| Arboricultural<br>Consultant    | Darryl Birch  |  |
| Address                         | Hobbit House, Richley Terrace, Ingoe, Newcastle-upon-Tyne, NE200SL. |  |
| Local Authority Tree<br>Officer | TBC   |  |
| Address                         | Northumberland County Council, County Hall, A197, Morpeth NE61 2EF  |  |
| Tel:                            |   |  |