

**ARBORICULTURAL METHOD STATEMENT  
to BS 5837:2012**

**at  
22 Hawthorne Way  
Shafton  
Barnsley  
South Yorkshire  
S72 8PS**

**Client:**  
Tina Briggs

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S72 8PS

**Client Telephone:**  
01226 712028

**JCA Ref:**  
12538-A/AJB

**JCA** Limited

**Arboricultural Consultants**

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## 1. Introduction

### 1.1 Purpose of the Method Statement

- 1.1.1 This Method Statement has been prepared to ensure good practice in the protection of retained trees during the proposed development at **22 Hawthorne Way, Shafton**.

### 1.2 Terms of Reference

- 1.2.1 We are instructed by **Tina Briggs** to prepare a Method Statement for the proposed development, based on our arboricultural report dated 6<sup>th</sup> of January 2016 (JCA Ref: **12538/AJB**). The arboricultural survey and report conforms to the most recent specifications outlined in BS 5837: 2012 *Trees in relation to design, demolition and construction - Recommendations*.
- 1.2.2 It is proposed to erect a double garage extension onto the existing double garage located to the western flank of the two storey detached dwelling.
- 1.2.3 Prior to the construction of the proposed extension, it is proposed to dismantle the existing boundary wall, fence and footpath. A new fence and paved footpath shall then be erected and installed in an alternative location.
- 1.2.4 The Tree Protection Plan at **Appendix 3** is a tracing of a scanned image that was traced using CAD. Whilst this plan should be treated as indicative, it presents a fair representation of the elements of the proposals. This includes an indication of the proposed double garage, the wall and fence to be dismantled and the location of the new fence-line and paved footpath.

### 1.3 Status of the Method Statement

- 1.3.1 This Method Statement and the timescale of the construction detailed within should be included as part of the specification and schedule of works issued to the building contractor, and can form part of the contract.
- 1.3.2 This Method Statement should be available on site for inspection by the local authority, contractors and other relevant persons.

## 2. Tree Works Prior, During and Post Construction

### 2.1 Tree Works Prior to Construction

- 2.1.1 Prior to any construction activity, the first operation on site will be the undertaking of the necessary arboricultural works, as described at **Appendix 1**.
- 2.1.2 The tree works include:
- The removal of a small amount of deadwood within the crown of **T1**, for arboricultural reasons.
  - The facilitation pruning of **T1**, to facilitate erection of the scaffolding required for the construction of the proposed double garage extension.

### 2.2 Tree Works During Construction

- 2.2.1 In this case, no tree works are envisaged to be required during the construction phase.
- 2.2.2 Damage to trees during the construction phase should be entirely prevented by the erection of the new fence which is to be erected at the location shown on the attached plan prior to the onset of the construction of the proposed garage. This will effectively create a Construction Exclusion Zone.
- 2.2.3 If any trees on site are damaged, this must be immediately reported to JCA to agree on appropriate remedial action. Contact numbers for all parties can be found at **Section 7**.

### 2.3 Recommendations For Tree Works

- 2.4.1 All work must be to BS 3998: 2010 - *Recommendations for tree work* and carried out by qualified, experienced and, ideally, Arboricultural Association approved contractors who must be adequately insured.
- 2.4.2 Any defects seen by a contractor or the client that were not apparent to the consultant must be brought to the attention of JCA immediately.
- 2.4.3 No liability can be accepted by JCA in respect of the trees unless the recommendations of this Method Statement are carried out under our supervision.

### 3. Protective Barrier and Ground Protection

#### 3.1 Protective Barrier Prior to Construction

- 3.2.1 We are informed that a new fence-line is to be erected in the location identified on the Tree Protection Plan at **Appendix 3**. In order to create a Construction Exclusion Zone (CEZ) and to enclose as much of the root protection areas of **T1** and **T2**, it is recommended that this fence is installed prior to the onset of the construction of the garage extension. The enclosed area beyond the fence-line will then be considered a restricted area; no pedestrians, vehicles, storage of materials, equipment or machinery are allowed within the CEZ.
- 3.2.2 The remaining area which is not enclosed (shown in blue on the attached plan) and therefore **not** a construction exclusion zone must be treated sensitively in order to avoid damage to tree roots via the means of ground compaction and soil contamination.
- 3.2.3 In this instance, machinery is not expected to pass over unprotected rooting zone; however, light pedestrian passage with wheelbarrows etc will form the footfall over these areas. In this instance, due to the nature of the site, its constricted working space and the light footfall of pedestrian traffic, ground protection measures are not deemed practicable in the instance.
- 3.2.4 Care must also be taken to prevent contamination from chemical spillages, including petrol, diesel and oils. Cement mixers and toxic materials are **not** permitted within the exposed root protection area shown in blue on the attached plan.

## **4. Construction Phase**

### **4.1 Demolition Works**

- 4.1.1 In this instance, only minor demolition works in the form of the removal of a wall and fence are required, this being within, or close to the root protection areas of both **T1** and **T2**.
- 4.1.2 If the mechanical extraction of these features is required as opposed to manual removal, the machinery must be located outside the rooting zones of both trees. Additionally, all spoil extracted by the removal of both trees must be stored outside the root protection areas.

### **4.2 Construction of New Buildings**

- 4.2.1 The proposed garage extension encroaches into the RPA of **T1** and **T2**. In order to minimise root damage to these trees, the extension must be constructed upon pile and beam foundations, or a similar foundation type, instead of the more traditional trench/strip foundation.
- 4.2.2 The rooting activity at the point where the piles are proposed should be investigated by hand excavation in the presence of an arboricultural consultant. Consultations should first be undertaken with a structural engineer to ensure that this method of construction is viable and to assess the minimum diameter piles that would suffice for the development.

### **4.3 Ground Level Changes**

- 4.3.1 No ground level changes are required within the root protection area of **T1** or **T2**.

### **4.4 Excavations and Services**

- 4.4.1 In this case the routing of the proposed utilities is situated outside the RPAs of retained trees. As such, no mitigation actions are considered necessary to avoid potential damage to tree roots.

## 4.5 Construction of Hard Surfaces

- 4.5.1 A hard surface, in the form of paved footpath which borders the garage extension is proposed within the RPA of **T1** and **T2**.
- 4.5.2 It is recommended that for **T1** and **T2** a no-dig method of construction is utilised.
- 4.5.3 The finished surface must be porous in order to allow air and water to reach the tree roots, whilst at the same time being able to withstand the load applied.
- 4.5.4 To lay hard surfaces within the RPAs of the retained trees without causing damage:
- No excavations will take place within the RPAs of the retained trees.
  - A cellular confinement system will be used.
  - The cellular confinement system will be filled with a no-fines granular material no less than 100mm deep for pedestrian footpaths.
  - The finished surface must be porous.
  - The edging will comprise of driven pegs or stakes.
- 4.5.5 Please refer to **Appendix 2** for an example of construction guidelines and a supporting diagram.

## 5. Post Construction Phase

### 5.1 Mycorrhizal Fungi Inoculation

- 5.1.1 As the proposed development will encroach into the RPA of **T1** and **T2**, possibly resulting in some root loss, the application of *Mycorrhizal fungi* will be undertaken to the soils around these trees after the construction phase is complete.
- 5.1.2 *Mycorrhizae* fungi form a symbiotic relationship with tree roots; a tree root associated with *Mycorrhiza* takes up nutrients more effectively than a non associated root. An application of *Mycorrhizae* will therefore be beneficial for these trees.

## 6. Timescale of Works

6.1.1 The timescale for arboricultural requirements are summarised below:

| Timescale      | Action                                                                                                                                                                                       | ✓ | Initial |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---------|
| <b>Stage 1</b> | All requirements listed in the planning consent are approved by the Local Authority planning office.                                                                                         |   |         |
| <b>Stage 2</b> | Undertake the tree works (as detailed at <b>Appendix 1</b> ).                                                                                                                                |   |         |
| <b>Stage 3</b> | Install the new fence-line in order to afford protection to <b>T1</b> and <b>T2</b> (as discussed in <b>Section</b> and as shown located on the Tree Protection Plan at <b>Appendix 3</b> ). |   |         |
| <b>Stage 4</b> | Dismantle the existing wall and fence ensuring no machinery is within root protection areas.                                                                                                 |   |         |
| <b>Stage 5</b> | Construct the garage extension using methods of excavation construction which minimise root damage, as discussed in <b>Section 4.2</b> .                                                     |   |         |
| <b>Stage 6</b> | Install the hard surface whilst undertaking suitable measures to avoid root damage and soil compaction, as detailed in <b>Section 4.5</b> and at <b>Appendix 2</b> .                         |   |         |
| <b>Stage 7</b> | <i>Mycorrhizal</i> inoculation to be applied to the root protection areas of <b>T1</b> and <b>T2</b> , as discussed in <b>Section 5</b> .                                                    |   |         |

## 7. Relevant Contact Details

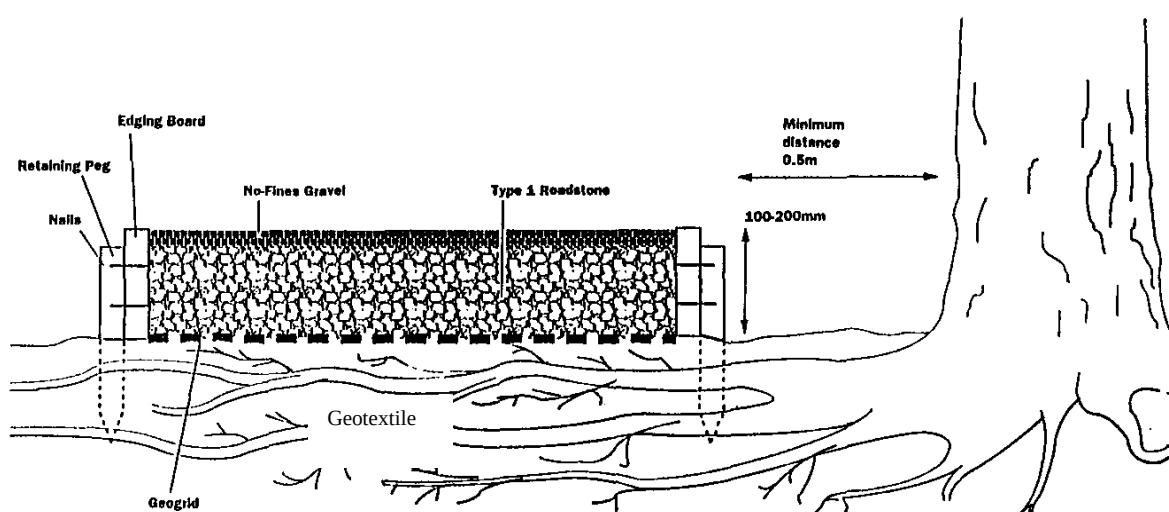
| Contact Name                             | Organisation/Detail                   | Contact Number  |
|------------------------------------------|---------------------------------------|-----------------|
| Andrew Bussey                            | JCA Limited                           | 01422 376335    |
| Ed Jowett (Local Authority Tree Officer) | Barnsley Metropolitan Borough Council | 01226 770770    |
| Tina Briggs                              | Client                                | 01226 712028    |
| Mark Berry                               | Architectural Services                | 01977 643922    |
| Site Manager                             | To be confirmed                       | To be confirmed |

# Appendices

| Tree Ref. | Age<br>Common Name<br><i>Botanical Name</i>              | Height (m) | Crown Height (m) | Height (m) and Direction of the Lowest Branch | Diameter (cm) | Crown Spread<br>N<br>W E<br>S | Observations                                                                                                                                                                                                                                                                                                                                                                                                          | Recommendations<br><br>Priority                                                                                                                                                                                                                    | Physiological Condition | Structural Condition | Amenity Value | NHBC Water Demand | Life Expectancy (yrs) | Retention Category |
|-----------|----------------------------------------------------------|------------|------------------|-----------------------------------------------|---------------|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|----------------------|---------------|-------------------|-----------------------|--------------------|
| T 1       | Mature<br><br>Sycamore<br><br><i>Acer pseudoplatanus</i> | 16         | 3.5              | 4.5<br><br>n/a                                | 69            | 6.6 6.2<br><br>7.5            | Single-stemmed and vertical with a balanced canopy. Occasional pruning wounds (one with the slight onset of decay). Minor deadwood is present in the crown and a small bark wound was noted on the main stem. No major visible defects.                                                                                                                                                                               | Remove the deadwood. <i>Prune back the north-western side of the canopy by a maximum of 1.5m by the removal of secondary branches only in order to allow for the erection of scaffolding adjacent to the proposed garage extension.</i><br><br>Low | GOOD                    | GOOD                 | MOD           | MOD               | ≥40                   | B 1                |
| T 2       | Mature<br>Common Lime<br><br><i>Tilia x europaea</i>     | 15         | 2                | 2.5<br><br>n/a                                | 94            | 6.3<br>7.2 7<br><br>5.5       | Multi-stemmed at 2.5m with a balanced crown. Occasional pruning wounds. A large vertical scar is present on the main stem, this has the slight onset of decay up to a height of 1.45m. Partially included bark was noted at the stem junction. The tree appears to have been topped in the past and has substantial re-growth which appears to be structurally sound where it has fused with the past pruning wounds. | Monitor annually.<br><br>Low                                                                                                                                                                                                                       | GOOD                    | FAIR                 | MOD           | MOD               | ≥20                   | B 1                |

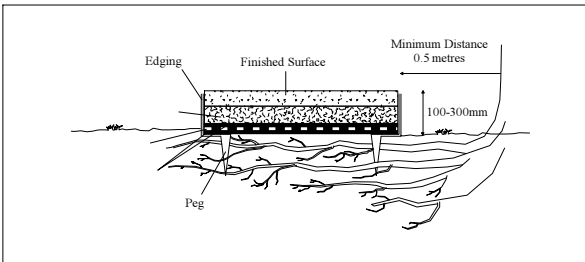
## Appendix 2: Permanent Hard Surfaces

- A2.1 This Appendix outlines the options available for constructing No-Dig hard surfaces within the RPA of a tree. The design of such a construction needs to be sensitive to the requirements of tree roots, substantial enough to withstand the expected levels of traffic and practicable in terms of ease of fabrication.
- A2.2 We are not qualified to recommend any particular construction method in terms of durability or structural integrity and any proposed construction should be approved by a qualified structural engineer prior to implementation. However, with regards to trees, we make the following comments:
- Severance of roots and soil compaction should be avoided. However, if it is necessary to sever roots or if they are severed accidentally we must be informed so that we are able to assess and recommend accordingly.
  - Air and water must be able to diffuse into the soil beneath the engineered surface. Toxic substances which could leach into the ground must be avoided, as should substances which affect the pH value of the soil, for example limestone.
- A2.3 **The No-Dig Method:** This involves construction of a surface with no excavation, soil stripping or site grading (see **Figure 1**). All construction takes place above ground level. Preparation is as follows:
- A2.4 Ground vegetation is killed using a suitable herbicide. Care must be taken to select a herbicide which does not damage the tree roots within the treated area. Once the vegetation has died, the dead organic matter should be removed. This helps prevent the future build up of anaerobic conditions or settlement due to decomposition.

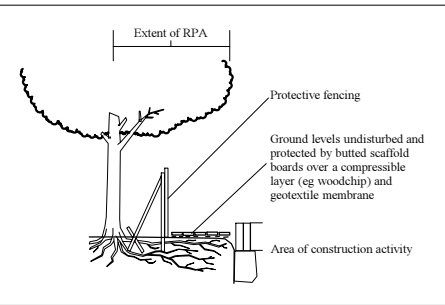


**Figure 1.** A light duty path constructed using the *No Dig Method*.

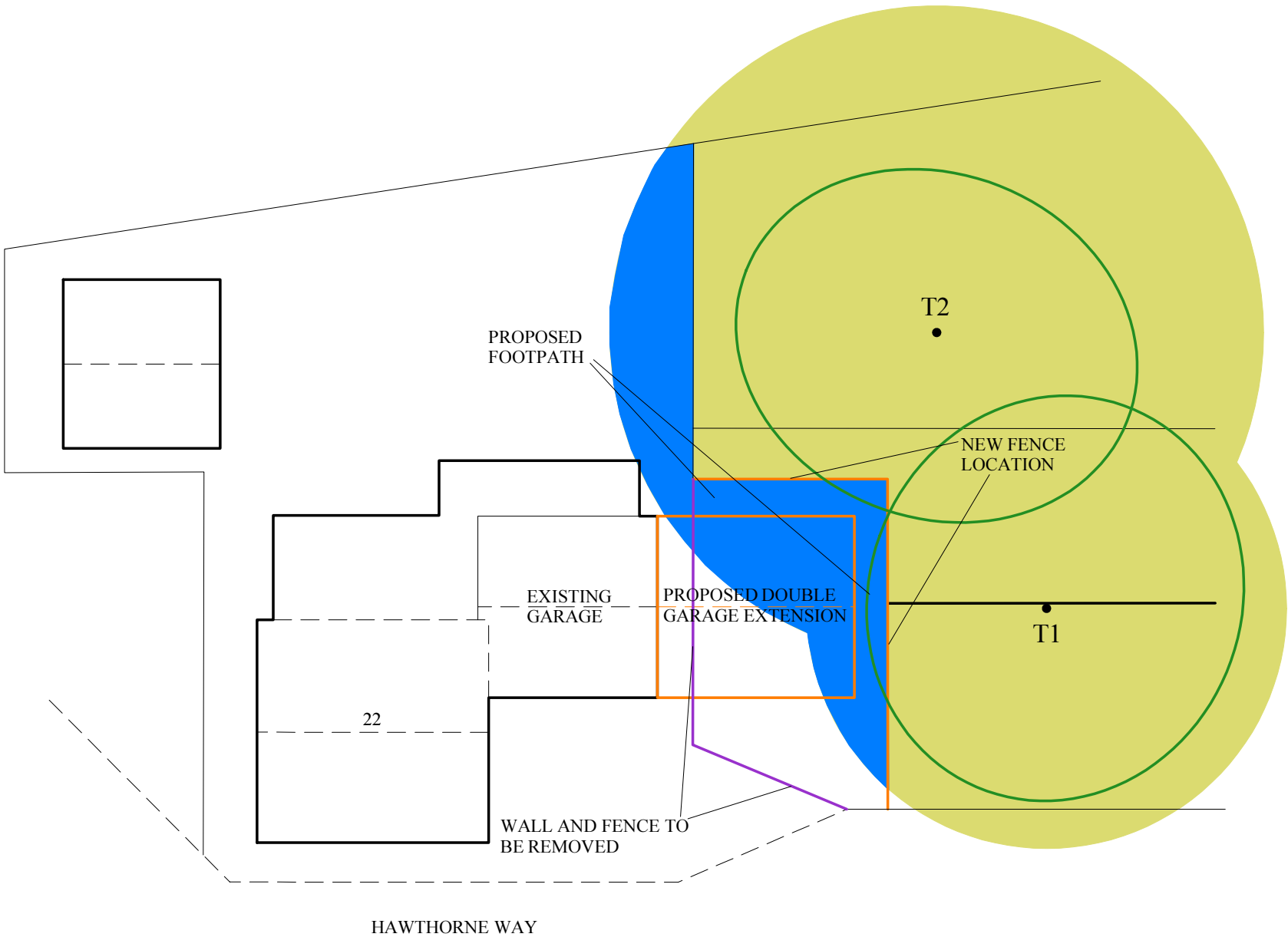
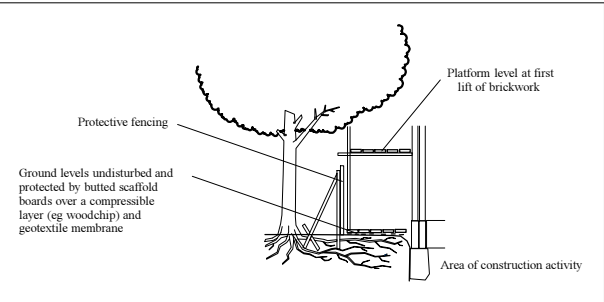
An example of a 'no dig' hard surface construction



An example of a walkway within the RPA



An example of scaffolding within the RPA



### Appendix 3: Tree Protection Plan

ADDRESS: 22 Hawthorne Way, Shafton,  
Barnsley, South Yorkshire, S72 8PS.  
JCA REF: 12538-A/AJB.

SCALE: 1:200 PAPER SIZE : A3

SURVEYED BY: AJB DRAWN BY: AJB APPROVED BY: EW

|  |                                                                                                                                                                                                                                                                |
|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | TREE TO BE RETAINED                                                                                                                                                                                                                                            |
|  | STEM OF TREE TO BE RETAINED                                                                                                                                                                                                                                    |
|  | ROOT PROTECTION AREA (RPA)                                                                                                                                                                                                                                     |
|  | AREA OF RPA NOT PROTECTED BY FENCING. NO MATERIALS SHOULD BE STORED HERE. GROUND COMPACTION MUST BE AVOIDED. SPECIAL SURFACES /CONSTRUCTION TECHNIQUES MUST BE CONSIDERED WHEN WORKING/CONSTRUCTING WITHIN THESE AREAS AND ONLY HAND EXCAVATIONS ARE PERMITTED |
|  | PROPOSED NEW DEVELOPMENT                                                                                                                                                                                                                                       |
|  | WALL AND FENCELINE TO BE DISMANTLED AND REMOVED                                                                                                                                                                                                                |

NB: THIS DRAWING HAS BEEN SCANNED TO CAD FORMAT AND SHOULD THEREFORE BE TREATED AS INDICATIVE. IT SHOULD NOT BE SCALED OR DRAWN FROM AND SHOULD NOT BE USED FOR ARCHITECTURAL PURPOSES

I hope that this report provides all the necessary information, but should any further advice be needed please do not hesitate to contact the author.

Signed



.....

Andrew Bussey.

7<sup>th</sup> January 2016

For and on behalf of **JCA Ltd**

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Photo front cover: Sluice at Bowers Mill

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