ARBORICULTURAL METHOD STATEMENT to BS 5837:2012 at Maple Corner Green Moor Sheffield South Yorkshire S35 7JA

Client: Wendy Campbell

Client Address: Maple Corner Green Moor Sheffield South Yorkshire S35 7JA

JCA Ref: 14180/AJB
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1. Introduction

1.1 Purpose of the Method Statement

1.1.1 This Arboricultural Method Statement has been prepared to ensure good practice in the protection of retained trees during the development at Maple Corner, Green Moor, Sheffield.

1.2 Terms of Reference

1.2.1 JCA Limited is instructed by Wendy Campbell to prepare an Arboricultural Method Statement for the proposed development. This arboricultural survey and report conform 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 construct a new detached garage in the location shown in brown shade on the plan at Appendix 3 and as shown on the PDF (Drawing Ref: 20171033 Amended Plan garage 19 3 18 (1)) provided by our client which can be found at Appendix 4.

1.3 Status of the Method Statement

1.3.1 This Arboricultural Method Statement 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 Arboricultural 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 crown lifting and thinning of T1, T2, T3 and T4 in order to facilitate the erection of the protective fencing, the construction of the proposed garage and for aesthetic and tree management purposes.

2.2 Tree Works During or Post-Construction

2.2.1 In this case, no tree works are envisaged to be required during or after the construction phase.

2.3 Recommendations For Tree Works

2.4.1 All work must be undertaken 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. The Protective Barrier Prior, During and Post Construction

3.1 Protective Barrier Prior to Construction

3.1.1 The installation of the temporary protective barrier will be the very first job to be undertaken on site following the completion of the tree works (Section 2.1). This barrier may comprise of protective fencing, ground protection, or a combination of both, as detailed below and in Section 3.2.

3.1.2 The protective fencing will be installed in accordance with BS 5837: 2012 and will comprise of weld mesh panel fencing, situated in rubber or concrete feet. Panels will be joined together using a minimum of two anti-tamper couplers, positioned so that they can only be removed from inside the barrier. The fencing will be supported at each joint (where two panels meet) with a stabiliser strut, attached to the fencing at one end and a block tray at the other. Please refer to Appendix 2 for protective fencing details.

3.1.3 Once the fencing is installed, waterproof signs with the sentence ‘Protected tree zone, no storage or operations within this area’ are to be placed at 3m intervals to ensure that all personnel are aware of the restrictions that apply to the cordoned off area. A prepared sign is available at Appendix 2.

3.1.4 Once installed, the appointed arboriculturalist will be invited on site to inspect the protective fencing and ground protection, ensuring that it is located in the correct position and that it has been constructed in accordance with this Method Statement. No other work, including soil stripping, excavation, or the bringing onto site of materials or machinery, shall commence until the barrier is installed and confirmed to be acceptable by the appointed arboriculturalist.

3.1.5 It is important that the protective fencing be checked by the LPA or an arboricultural consultant prior to any construction works being carried out on site. If the protective fencing is not correctly installed or if it does not comply with BS 5837: 2012, this could result in damage being caused to trees and consequently, a stop notice may be served by the LPA.

3.2 Ground Protection

3.2.1 Where it is not possible to enclose the entire RPA of a tree with protective fencing, it will be necessary to lay appropriate ground protection in the location shown in blue shade on the plan at Appendix 3, which, in combination with the fencing described in Section 3.1, will comprise the protective barrier.
3.2.2 The ground protection will be installed prior to construction and retained until the material completion of development. The purpose of the ground protection is to enable site traffic to pass over the RPAs of trees, whilst minimizing compaction and disturbance of the underlying soil which can lead to root asphyxiation and damage.

3.2.3 As only pedestrian traffic is required to pass over the RPA, a porous, thin geotextile membrane will be laid over the exposed area. A layer of sharp sand or woodchip, no less than 100mm in depth will be evenly spread over the geotextile and must not be compacted by mechanical means. Scaffold boards will then placed on top of this. This construction detail (which can be seen on the diagram at Appendix 3) will provide adequate ground protection for pedestrian use only. Vehicular/mechanical movement is not permitted over this type of ground protection.

4. **Construction Phase**

4.1 **Demolition Works**

4.1.1 No demolition works are required adjacent to retained trees.

4.2 **Ground Level Changes**

4.2.1 No ground level changes are permitted within the RPA of any tree to be retained on this site. As such no mitigation actions are considered necessary.

4.3 **Construction of Hard Surfaces**

4.3.1 No new hard surfaces are proposed within the RPA of retained trees. As such, no specialist mitigation actions are required.

4.4 **Construction of Proposed Garage**

4.4.1 The footprint of the proposed garage sits between T1 and T2 in the location shown in brown shade on the plan at Appendix 3. In order to prevent the kind of root severance that would be associated with traditional concrete strip foundations, we are informed by our client that a raft foundation is to be utilised, as can be seen on the plan at Appendix 4.

4.4.2 It should be noted that the garage is to be constructed with a soak-away in order to irrigate the roots of T1 and T2, it is recommended that this feature is installed following the completion of the garage and the removal of the protective barrier.
4.5 Excavations and Services

4.5.1 In this case the routing of the proposed utilities must be situated outside the RPAs of retained trees. As such, no mitigation actions are considered necessary to mitigate potential damage to tree roots.

4.5.2 Please note that a service access point within the garage footprint that is outside the RPA of T1 and T2 has been identified and notated on the plan at Appendix 3.

4.6 Location of the Site Compound

4.6.1 The site compound, typically including toilets, storage of materials and parking, must be located away from, and outside the RPA of retained trees.

4.6.2 Areas designated for the storage and/or mixing of chemicals, including petrol, diesel and oils must also be located away from, and outside the RPA of retained trees. Such areas should be constructed with consideration to, and contingencies for, the occurrence of spillages, preventing the leaching of chemicals into unprotected, open ground.

5. Post Construction Phase

5.1 Removal of the Protective Barrier

5.1.1 Once the construction of the proposed garage is completed and all heavy machinery has been removed from site, the protective barrier may be dismantled.

5.2 Post Construction Landscaping

5.2.1 The retained trees on site may be subject to some form of landscaping or seeding beneath their canopies after the development phase. At this stage the protective barrier will have been removed and the property may be occupied.

5.2.2 Landscaping works must be carried out in such a way as to avoid ground level changes or deep digging within RPAs.

5.2.3 Heavy machinery is not permitted in the vicinity of retained trees, unless otherwise stated in this method statement.

5.2.4 Herbicides should be appropriate for the purpose and should not be used in such a way as to damage any retained trees or vegetation.

5.2.5 If in doubt, regarding the impact of proposed landscape operations, please contact the appointed arboriculturalist.
6. **Timescale of Works**

6.1.1 The timescale for arboricultural requirements are summarised below:

<table>
<thead>
<tr>
<th>Timescale</th>
<th>Action</th>
<th>✓</th>
<th>Initial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 1</td>
<td>All requirements listed in the planning consent are approved by the Local Authority planning office.</td>
<td>✓</td>
<td>Initial</td>
</tr>
<tr>
<td>Stage 2</td>
<td>Undertake the tree works (as detailed at Appendix 1).</td>
<td>✓</td>
<td>Initial</td>
</tr>
<tr>
<td>Stage 3</td>
<td>Install the temporary protective fencing around the trees (as detailed at Appendix 2 and as shown on the Tree Protection Plan at Appendix 3).</td>
<td>✓</td>
<td>Initial</td>
</tr>
<tr>
<td>Stage 4</td>
<td>Install ground protection within the RPAs of those trees which are not fully protected by the fencing (as detailed in Section 3.2).</td>
<td>✓</td>
<td>Initial</td>
</tr>
<tr>
<td>Stage 5</td>
<td>Have the Local Planning Authority inspect the fencing and ground protection measures prior to any on site construction. Once inspected, the protective fencing and ground protection must not to be moved or breached.</td>
<td>✓</td>
<td>Initial</td>
</tr>
<tr>
<td>Stage 6</td>
<td>Undertake the construction of the garage using sensitive foundation types in order to avoid root damage and soil compaction (as detailed in Section 4 and at Appendix 3).</td>
<td>✓</td>
<td>Initial</td>
</tr>
<tr>
<td>Stage 7</td>
<td>Following the completion of the construction phase and when all site traffic and machinery has left, the protective fencing and ground protection can be removed.</td>
<td>✓</td>
<td>Initial</td>
</tr>
<tr>
<td>Stage 8</td>
<td>Install the garage soak-away.</td>
<td>✓</td>
<td>Initial</td>
</tr>
</tbody>
</table>

7. **Relevant Contact Details**

<table>
<thead>
<tr>
<th>Contact Name</th>
<th>Organisation/Detail</th>
<th>Contact Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andrew Bussey</td>
<td>Arboricultural Consultant</td>
<td>01422 376335</td>
</tr>
<tr>
<td>Ed Jowett</td>
<td>Tree Officer</td>
<td>01226 770770</td>
</tr>
<tr>
<td>TBC</td>
<td>Site Manager</td>
<td>TBC</td>
</tr>
<tr>
<td></td>
<td>TBC</td>
<td>TBC</td>
</tr>
</tbody>
</table>
Appendices
## Appendix 1

### Tree Works Schedule

<table>
<thead>
<tr>
<th>Tree Ref.</th>
<th>Age Common Name</th>
<th>Botanical Name</th>
<th>Height (m)</th>
<th>Crown Height (m)</th>
<th>Diameter (cm)</th>
<th>Crown Spread N</th>
<th>W</th>
<th>E</th>
<th>S</th>
<th>Observations</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>T 1</td>
<td>Early-mature</td>
<td>Acer pseudoplatanus</td>
<td>10</td>
<td>1.8</td>
<td>n/a</td>
<td>4.1</td>
<td>5</td>
<td>6.3</td>
<td>n/a</td>
<td>Overhanging the footpath, road and telecom's cable. Twin-stemmed at 1.8m with a balanced crown. Occasional pruning wounds. No major visible defects.</td>
<td>Crown lift to 3.8m in order to allow for the erection of the protective barrier and to facilitate the proposed garage. Crown thin by 15% for tree management and aesthetic purposes.</td>
</tr>
<tr>
<td>T 2</td>
<td>Early-mature</td>
<td>Acer pseudoplatanus</td>
<td>10</td>
<td>2.5</td>
<td>n/a</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>5.5</td>
<td>Overhanging the footpath, road and telecom's cable. Single-stemmed and vertical with a balanced crown. Occasional pruning wounds. No major visible defects.</td>
<td>Crown lift to 3.8m in order to allow for the erection of the protective barrier and to facilitate the proposed garage. Crown thin by 15% for tree management and aesthetic purposes.</td>
</tr>
<tr>
<td>T 3</td>
<td>Early-mature</td>
<td>Acer pseudoplatanus</td>
<td>12</td>
<td>3.5</td>
<td>n/a</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>Overhanging the footpath, road and telecom's cable. Single-stemmed and vertical with a balanced crown. Occasional pruning wounds. No major visible defects.</td>
<td>Crown lift to 3m and crown thin by 15% for tree management and aesthetic purposes.</td>
</tr>
<tr>
<td>T 4</td>
<td>Early-mature</td>
<td>Acer pseudoplatanus</td>
<td>11</td>
<td>3</td>
<td>S</td>
<td>5.5</td>
<td>5</td>
<td>5</td>
<td>5.5</td>
<td>Overhanging the footpath, road and telecom's cable. Single-stemmed and vertical with a balanced crown. Occasional pruning wounds. No major visible defects.</td>
<td>Crown lift to 3m and crown thin by 15% for tree management and aesthetic purposes.</td>
</tr>
</tbody>
</table>

### Observations

- **Physiological Condition:**
  - **Good:**
  - **Good:**
  - **Moderate:**
  - **Moderate:**
  - **Moderate:**
  - **Good:**
  - **Good:**
  - **Good:**
  - **Moderate:**
  - **Good:**
  - **Good:**
  - **Moderate:**
  - **Moderate:**
  - **Moderate:**
  - **Good:**
  - **Good:**
  - **Good:**
  - **Moderate:**
  - **Moderate:**
  - **Moderate:**

- **Retention Category:**
  - **1:**
  - **1:**
  - **1:**
  - **1:**
  - **2:**
  - **2:**
  - **2:**
  - **2:**
  - **2:**

### Recommendations

- **Height (m):**
  - **10:**
  - **10:**
  - **12:**
  - **11:**

- **Crown Lift:**
  - **To 3.8m:**
  - **To 3m:**
  - **To 3m:**
  - **To 3m:**

- **Crown Thin:**
  - **15%:**
  - **15%:**
  - **15%:**
  - **15%:**

- **Notes:**
  - **in order to allow for the erection of the protective barrier and to facilitate the proposed garage. Crown thin by 15% for tree management and aesthetic purposes.**
  - **in order to allow for the erection of the protective barrier and to facilitate the proposed garage. Crown thin by 15% for tree management and aesthetic purposes.**
  - **in order to allow for the erection of the protective barrier and to facilitate the proposed garage. Crown thin by 15% for tree management and aesthetic purposes.**
  - **in order to allow for the erection of the protective barrier and to facilitate the proposed garage. Crown thin by 15% for tree management and aesthetic purposes.**

- **JCA Limited 2018**
Appendix 2: Protective Barrier

A2.1 An example of the above-ground stabilisation system to be used around T1 and T2.

inset diagram showing stabilizer strut mounted on block tray
TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY STRICT PLANNING CONDITIONS

ANY DAMAGE CAUSED TO THESE TREES MAY RESULT IN CRIMINAL PROSECUTION

REstricted area:

• THE PROTECTIVE FENCE MUST NOT BE MOVED OR BREACHED

• NO PERSON, MACHINERY, VEHICLE OR PLANT IS PERMITTED WITHIN THE TREE PROTECTION ZONE

• NO MATERIALS SHALL BE STORED WITHIN THE TREE PROTECTION ZONE

• NO EXCAVATIONS ARE PERMITTED WITHIN THE TREE PROTECTION ZONE

• NO SPOIL IS TO BE DEPOSITED WITHIN THE TREE PROTECTION ZONE

• NO FIRES ARE TO BE LIT WITHIN THE TREE PROTECTION ZONE

REPORT TREE DAMAGE TO JCA LIMITED ON
01422 376 335
Appendix 3: Tree Protection Plan

ADDRESS: Maple Corner, Green Moor, Sheffield, South Yorkshire, S35 7JA.
JCA REF: 14180/AJB.
PAPER SIZE: A3
SCALE: 1:200

TREE TO BE RETAINED
STEM OF TREE TO BE RETAINED
ROOT PROTECTION AREA (RPA)
PROTECTIVE FENCE LINE (CEZ)
PROPOSED GARAGE LOCATION WHERE SENSITIVE FOUNDATION TYPES ARE TO BE UTILISED

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

Arboricultural & Forestry Consultants

The root protection area (RPA) indicates the likely rooting zone of a tree.

TREE PROTECTION MEASURES

Where it is not possible to enclose the RPA with protective fencing, ground protection measures will need to be laid along the periphery of the RPA to prevent root severance and soil compaction.

Area of construction activity

Protective fencing

An example of the walkway acting as ground protection within the RFA of T1 and T2

An example of the above-ground stabilising system to be used around T1 and T2

Extent of RPA

A stabilizer strut mounted on a block tray

An example of the above-ground stabilising system to be used around T1 and T2

THE LOCATION OF ALL TREES WERE PLOTTED ON SITE BY THE SURVEYOR USING AN ELECTRONIC DISTOMETER. TREE LOCATIONS MUST THEREFORE BE TREATED AS INDICATIVE ONLY.

DRAWING EXTRACTED FROM THE PLAN FOUND AT APPENDIX 4 OF THIS ARBORICULTURAL METHOD STATEMENT

SUGGESTED SERVICE ACCESS POINT

GARAGE TO BE FOUNDED ON RAFT FOUNDATIONS TO PREVENT ROOT SEVERANCE AND SOIL COMPACTION

T3 & T4 ARE LOCATED AWAY FROM CONSTRUCTION ACTIVITY, AS SUCH; NO PROTECTION MEASURES ARE REQUIRED

T3, T2 & T1 ARE LOCATED NEAR CONSTRUCTION ACTIVITY, AS SUCH; PROTECTIVE MEASURES ARE REQUIRED.

THE RAFT FOUNDATION FOR THE GARAGE WILL BE LOCATED 1.5M AWAY FROM THE OUTER LIMITS OF THE RPA TO PREVENT ROOT SEVERANCE. THE ROOT PROTECTION MEASURES WILL BE REMOVED AFTER THE COMPLETION OF CONSTRUCTION TO PERMIT THE REcovery OF TREE GROWTH.

IT IS IMPORTANT THAT THE PROTECTIVE BARRIER IS CHECKED BY THE LPA OR THE ARBORICULTURAL CONSULTANT PRIOR TO ANY CONSTRUCTION ACTIVITY BEGAN. IF THE PROTECTIVE BARRIER IS INADEQUATE OR NOT FITTED CORRECTLY, THE JCA MAY SERVE A STOP NOTICE WITH THE TREE PROTECTION MEASURES TO BE COMPLETED. THE JCA MAY SERVE A STOP NOTICE WHERE THE COMPLETION OF CONSTRUCTION ACTIVITIES ENSURES THE PROTECTION MEASURES ARE NOT MAINTAINED.

THE PLAN MUST BE PRINTED IN COLOUR AND READ IN CONJUNCTION WITH THE JCA REPORT (JCA REF: 14180/AJB).
AMENDED GARAGE DETAILS FOR

MAPLE CORNER
GREEN MOOR ROAD
GREEN MOOR
S35 7JA

DATE 19/5/2018
PLANNING APPLICATION No 2017/1033

REAR

SIDE

FRONT

PLAN

ESTIMATED SUR-LEVEL

RAIN WATER DISPERSION:
PEA GRAVEL SOAK AWAY TO KEEP ROOTS HYDRATED

SCALE 1:50
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.

26th October 2018

For and on behalf of JCA Ltd

Registered Office:

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Fax. 01422 376232
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www.jcaac.com

Report printed on recycled paper
ARBORICULTURAL SERVICES

 Guidance for Architects and Developers
 - British Standard 5837 Tree Surveys
 - Arboricultural Implication Assessments (AIA)
 - Arboricultural Method Statements (AMS)

 Advice for Engineers, Loss Adjusters and Insurers
 - Tree Surveys for Subsidence
 - Heave Assessment
 - Tree Root Identification

 Advice for Local Authorities and Social Housing
 - Tree Safety Surveys
 - Specialist Decay Detection
 - Landscape and Orchard Design

 Tree Advice for the Legal Profession
 - Subsidence Litigation
 - Personal Injury and Accident Investigation
 - Expert Witness, Planning Inquiries and Appeals

 Veteran Tree Management
 - Ancient Woodland Management
 - Veteran Tree Management

 Tree Health and Pest and Disease Management
 - Pest and Disease Surveys
 - Tree Health Checks
 - Disease Mitigation and Control

ECOLOGICAL SERVICES

 Ecological Pre-Planning Services
 - Phase 1 Habitat Surveys
 - Great Crested Newt eDNA Sampling
 - Protected Species: Bat, Wintering and Nesting Bird, Badger, Amphibian, Otter, Water Vole, White-Clawed Crayfish, Dormice and Reptile Surveys.
 - Preparation for Environmental Impact Assessment (EIA)
 - Invasive Species Surveys
 - Code for Sustainable Homes

 Ecological Post-Planning Services
 - Biodiversity Enhancement Plans
 - Protected Species Mitigation
 - Ecological Management (Bat and Bird box installation and inspection)

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