ISEBROOK SCHOOL,
EASTLEIGH ROAD, KETTERING

ARBORICULTURAL METHOD
STATEMENT

A Report to: Darnton B3

Report No: RT-MME-124559-02

Date: February 2017

MIDDLEMARCH ENVIRONMENTAL

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REPORT VERIFICATION

This study has been undertaken in accordance with British Standard 5837:2012 “Trees in relation to design, demolition and construction - Recommendations”.

<table>
<thead>
<tr>
<th>Report Version</th>
<th>Date</th>
<th>Completed by:</th>
<th>Checked by:</th>
<th>Approved by:</th>
</tr>
</thead>
<tbody>
<tr>
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<td>23/02/2017</td>
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<td>Edmund Lusk HND PTI (Principal Arboricultural Consultant)</td>
<td>Dr Philip Fermor CEnv, MCIEEM (Managing Director)</td>
</tr>
</tbody>
</table>

DISCLAIMER

The contents of this report are the responsibility of Middlemarch Environmental Ltd. It should be noted that, whilst every effort is made to meet the client’s brief, no site investigation can ensure complete assessment or prediction of the natural environment.

Middlemarch Environmental Ltd accepts no responsibility or liability for any use that is made of this document other than by the client for the purposes for which it was originally commissioned and prepared.

VALIDITY OF DATA

The findings of this study are based upon the data provided by the client (listed within Table 1.1, Section 1.1). If the development proposals change then this report will require updating to ensure that all aspects are covered within this document and the trees are adequately protected during the development.
NON-TECHNICAL SUMMARY

Middlemarch Environmental Ltd was commissioned to compile an Arboricultural Method Statement in respect of the proposed development of land off Eastleigh Road in Kettering.

The proposed development of the site is the construction of a new teaching and creative block and a new multi-use games area (MUGA), as well as associated works including the excavation of a new service trench.

This document has been prepared to provide the information necessary in order to avoid pre-commencement conditions for the proposed development.

Section 2 of this report details the specific measures to be adopted to ensure the protection of retained trees during the proposed development.

The site contractor must ensure that they read and understand all of the information within Section 2 prior to commencement of any onsite works.

It should be noted that, as detailed in Section 2.17, a pre-commencement site meeting should be arranged between the contractor, Project Arboriculturist and any other interested party. Additionally, the proposed excavation works within the RPAs of retained trees along the eastern site boundary should be completed under the supervision of the Project Arboriculturist:

The Project Arboriculturist for the development is:

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1. INTRODUCTION

1.1 PROJECT INTRODUCTION

In February 2017, Darnton B3 commissioned Middlemarch Environmental Ltd to compile an Arboricultural Method Statement in respect of the proposed development of land at and adjacent to Isebrook School on Eastleigh Road in Kettering, Northamptonshire.

Middlemarch Environmental Ltd has previously carried out a Preliminary Ecological Appraisal and a Pre-Development Arboricultural Survey for Northamptonshire County Council at this site. The findings of these surveys are detailed in Report Numbers RT-MME-123105-01 and RT-MME-123105-02 respectively.

Middlemarch Environmental has also previously prepared an Arboricultural Impact Assessment for Darnton B3 with respect to this site, the findings of which are detailed in Report Number RT-MME-124559-01.

The proposed development of the site is the construction of a new teaching and creative block and a new multi-use games area (MUGA), as well as associated works including the excavation of a new service trench.

Table 1.1 details those drawings and documents, in addition to the Middlemarch Environmental Ltd Report referred to above, that have been considered during the preparation of this document.

<table>
<thead>
<tr>
<th>Author</th>
<th>Document</th>
<th>Drawing Number</th>
<th>Date</th>
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<tbody>
<tr>
<td>ESP Service Consultants</td>
<td>Mechanical Services Incoming Utilities</td>
<td>9700/M/211 Rev T2</td>
<td>Aug 2016</td>
</tr>
<tr>
<td>ESP Service Consultants</td>
<td>Mechanical Services External Sprinkler Proposals</td>
<td>9700/M/212 Rev T2</td>
<td>Aug 2016</td>
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<tr>
<td>JPP Consulting</td>
<td>Proposed Drainage Layout</td>
<td>U8170AA_E000 T3</td>
<td>Dec 2016</td>
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<td>Darnton B3 Architects</td>
<td>Site Location Plan</td>
<td>91428_S_XX_DR_A_181</td>
<td>Jan 2017</td>
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<td>Darnton B3 Architects</td>
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<td>91428_S_XX_DR_A_185</td>
<td>Jan 2017</td>
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<tr>
<td>JPP Consulting</td>
<td>Proposed External Works Layout</td>
<td>U8170AA_E010 T2</td>
<td>Jan 2017</td>
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</table>

Table 1.1: Drawings and Documents Considered
1.2 **SITE DESCRIPTION**

The site under consideration is an irregular shaped parcel of land, approximately 2.3 ha in size, which is located adjacent to Eastleigh Road in Kettering at Ordnance Survey Grid Reference SP 8810 7741.

The study area is located within a predominantly residential area that is dominated by a mix of agricultural fields, residential development and watercourses. Scattered trees border the site to the north, east and west.

At the time of the Arboricultural Survey (October 2016), the site was dominated by school buildings and hardstanding, with an area of amenity grassland to the south-east and scattered trees present throughout. The site is bound by roads to the north and south and by grouped trees to the east and west.

The location of the trees under consideration can be found on Middlemarch Environmental Ltd Drawing Number C124559-02-01.

1.3 **TREE RETENTION AND REMOVAL & PRE-DEVELOPMENT TREE WORKS**

A number of trees require removal to achieve the approved development. The trees to be removed are identified on the Tree Protection Plan Drawing Number C124559-02-01.

Additionally the trees to be removed to achieve the approved development of the site are identified in Table 1.2.

<table>
<thead>
<tr>
<th>Tree No.</th>
<th>Species</th>
<th>BS5837 Category</th>
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<tbody>
<tr>
<td>10</td>
<td>Lombardy Poplar</td>
<td>U</td>
</tr>
<tr>
<td>11</td>
<td>Lombardy Poplar</td>
<td>U</td>
</tr>
<tr>
<td>35</td>
<td>Rowan</td>
<td>U</td>
</tr>
<tr>
<td>H1</td>
<td>Leyland Cypress</td>
<td>C3</td>
</tr>
<tr>
<td>H3*</td>
<td>Mixed Species</td>
<td>C3</td>
</tr>
</tbody>
</table>

Key:

*: Partial removal of trees within hedgerow feature

**Table 1.2: Trees and Hedgerows to be Removed**

Overall three individual trees and one hedgerow are to be removed to achieve the approved development. The partial removal of a further hedgerow and some shrub bed clearance will also be required.

The specific working practices to be adopted during all tree works are specified in Section 2.20.
2. ARBORICULTURAL METHOD STATEMENT

2.1 INTRODUCTION

The following sections of this report detail the specific measures to be adopted to ensure the protection of retained trees during the proposed development.

The site contractor must ensure that they read and understand all of the following sections prior to commencement of any onsite works.

2.2 CONSTRUCTION EXCLUSION ZONE

The Construction Exclusion Zone is the area considered necessary to ensure that the tree roots and canopy are protected from damage during the construction processes. The extent of the exclusion zone is based upon guidance within BS5837:2012 ‘Trees in relation to design, demolition and construction – Recommendations’ in particular the diameter of the stem of each tree (when measured at a height of 1.5m from ground level) in combination with the canopy spread of the tree is considered.

The exclusion zones are to be defined on site throughout the course of the development by the use of protective barriers as described below.

The Construction Exclusion Zones are to be afforded protection at all times. No works that cause compaction of the soil or severance of tree roots, except where undertaken in accordance with the guidance provided within this document, will be undertaken within any exclusion zone.

2.3 PROTECTIVE BARRIERS

The protective barriers will be erected prior to the commencement of any site works e.g. before any materials or machinery are brought on site or the stripping of soil commences. Signs will be installed on the protective barriers to inform site staff of responsibilities and these will include the headings listed in Appendix 1.

The locations of the protective barriers to be installed are shown on the Tree Protection Plan; Drawing Number C124559-02-01.

The protective barriers are to be constructed in accordance with the specification detailed in BS5837:2012 (Figure 2; Appendix 2). Any variation to the specification of the protective barrier will be agreed with the Local Planning Authority Arboricultural Officer.

The Construction Contractor will inform the Project Arboriculturist when the protective barriers have been installed and the Project Arboriculturist will attend site to confirm that they have been installed in accordance with the Tree Protection Plan. The Local Planning Authority will be notified in writing once this inspection has been undertaken.

The barriers will remain in place until completion of the development and then they will only be removed with the consent of the Local Planning Authority to permit completion of the scheme.

Other than works detailed within this method statement or approved in writing by the Local Planning Authority no works, including storage or dumping of materials, shall take place within the Construction Exclusion Zone as defined by the protective barrier.

2.4 GROUND PROTECTION

There are no areas on site where the installation of ground protection measures is considered necessary.

2.5 PRECAUTIONS IN RESPECT OF TEMPORARY WORKS

Temporary access to the exclusion zones will be required to permit excavation works for the proposed service trench, in proximity to two retained Sycamore trees (numbers 17 and 19) along the eastern site
boundary. Where this is the case only pedestrian access beyond the line of the protective fencing is to occur and the guidance contained within Section 2.14 is to be followed.

If further temporary access is required to the exclusion zone or the RPA of a retained tree then such access will only be gained after consultation with Project Arboriculturist and/or the Local Planning Authority (see Section 2.17 for contact details).

2.6 ACCESS DETAILS

Construction Vehicles
It is understood that construction traffic will access the site via the existing road network off Eastleigh Road and by a temporary construction access road to be installed off Barton Road along the southern site boundary. Tree protection barriers will be installed to protect nearby trees from potential impact damage and to prevent vehicles from accidentally encroaching onto areas of unprotected ground within the RPAs of retained trees.

Pedestrians
It is understood that pedestrian access to the site during construction will utilise the existing road and path network.

2.7 CONTRACTORS CAR PARKING

Contractor’s car parking is to be provided within the site in locations well away from the retained trees.

No car parking will be provided within the Construction Exclusion Zone.

Should the demand for car parking exceed the available area alternative offsite parking arrangements will be made.

2.8 SITE COMPOUND

The location of the site compound is shown on the Tree Protection Plan; Drawing Number C124559-02-01.

The site compound is outside of the Construction Exclusion Zone and its establishment will not cause harm to retained trees.

2.9 STORAGE SPACE

The locations of the site storage areas are shown on the Tree Protection Plan; Drawing Number C124559-02-01.

The site storage areas are outside of the Construction Exclusion Zone and their establishment will not cause harm to retained trees.

2.10 INFRASTRUCTURE REQUIREMENTS

Examination of the proposed plans and details of existing underground services shows that a proposed service trench for water pipework and electrical services will require works within or in close proximity to the Root Protection Areas (RPAs) of a number of retained trees along the eastern site boundary. In order to minimise the potential for harm to occur to root systems, it is understood that excavation works within the RPAs of retained trees are to be carried out by hand. In this respect, the use of airspades or similar hand held tools is recommended.

The following precautions are also to be taken to prevent harm occurring to retained trees as a result of service installation.
The below ground services within the site are to be at a minimum depth of 750 mm below existing ground level. Where the works are to occur within the RPAs of retained trees the protection of tree roots is imperative and as such traditional trenching will not be permitted.

To prevent severance of tree roots the use of trenchless insertion methods, such as micro-tunneling, for the installation of the new services is recommended. Where such an approach is adopted entry and retrieval pits must be sited outside the root protection area of any retained tree.

As an alternative to micro-tunneling a combination of manual excavation utilising tools such as a pneumatic airspade and vacuum soil excavation may be used to provide a trench for service installation, subject to the following provisions:

- The route of the proposed manually excavated trench shall be determined in discussion with the project arboriculturist and marked out on site.
- Ground protection mats shall be installed adjacent to the proposed trench route to permit access for the vacuum excavator and air compressor.
- Upon commencement of the works the aim will be to excavate the soil along the route of the proposed service trench to a minimum depth of 750 mm below ground level whilst retaining as many tree roots as feasible.
- Whilst roots smaller than 25 mm in diameter may be pruned back to permit access for the vacuum excavator nozzle such works shall only be completed under the direction of the Project Arboriculturist.
- All exposed roots must be wrapped or covered with damp hessian or similar material, as soon as possible, to prevent desiccation and to protect them from rapid temperature changes.
- Once the trench is completed the proposed service duct or pipe can be inserted into the trench below the network of retained tree roots.
- Prior to backfilling all root coverings shall be removed and retained roots shall, where possible, be surrounded with topsoil and compacted sharp sand, or other loose inert granular fill, before soil or other suitable material is replaced into the excavated area. The fill material shall be free of contaminants and other foreign objects potentially injurious to tree roots.
- All works will be supervised by the Project Arboriculturist (see Section 2.17 for contact details).
- Works will not occur where temperatures of less than +4 degrees Celsius are forecast.

2.11 DEMOLITION, HARD SURFACE REMOVAL & REMOVAL OF STRUCTURES

There are no existing buildings, structures or hard surfaces present on site that require demolition or removal.

2.12 NEW HARD SURFACES

The construction of a new proposed road in the north of the site will require the installation of new hardstanding within the RPAs of a Purple Leaved Plum (tree number 2) and three Sycamores (tree numbers 3, 4 and 5) located in the north of the site. In order to prevent harm occurring to the roots of these trees it will be necessary to adopt a no-dig construction methodology where possible.

The location of the 'no dig' sections of hardstanding are illustrated on the Tree Protection Plan Drawing Number C124559-02-01. Where hardstanding is located within the RPAs of trees it will have a permeable surface treatment.

Methodology for No-dig Construction

1. Prior to works commencing, the areas of 'no dig' hardstanding will be marked out. No works will be conducted within the Construction Exclusion Zone marked out by the Tree Protection Barriers, as illustrated on the Tree Protection Plan, Drawing Number C124559-02-01, in Section 3 of this report.

2. The existing ground cover and vegetation present within the area will be carefully stripped / strimmed using hand held tools.
3. The exposed soil will be covered with a permeable geotextile membrane. The geotextile layer shall be laid with overlaps of 300 mm beyond the edge of the proposed construction and it shall be temporarily retained with pins, stakes or weights.

4. A cellular confinement system will then be installed and fixed in position in accordance with the manufacturer's recommendations. The cellular confinement system to be used should be specified by an engineer though the use of Geosynthetics 75 or 100 mm Cellweb, or similar, is typically appropriate for tree root protection in car parking or pedestrian areas.

5. The cellular confinement system will then be filled with the specified aggregate in accordance with the manufacturer's recommendations.

6. All plant movements involved in filling the cellular confinement system with aggregate shall be undertaken from outside the RPAs and crowns.

7. The infill aggregate will then be rolled or whacked to ensure cohesion with the cellular confinement system.

8. The desired finished surface shall then be installed. This will be permeable and gas porous.

2.13 SITE GRADIENTS

It is understood that, to prevent damage occurring to retained trees, no alterations of soil level will take place within the exclusion zones as defined by the protective barriers.

If site gradient alterations within the RPA of any retained tree are required then the Project Arboriculturist will be consulted for advice (see Section 2.17 for contact details).

2.14 CONSTRUCTION OF STRUCTURES WITHIN THE RPA/CONSTRUCTION EXCLUSION ZONE

To allow for level changes required for the construction of the proposed multi-use games area (MUGA), it will be necessary to install a gabion retaining wall. This in turn will require works within the RPA of an English Oak (tree number 33) located adjacent to the eastern site boundary.

It is recommended that the gabion wall be installed as load-bearing on the existing soil, without the need for foundation works. If excavation works are required, it is noted that these works are located predominantly at the periphery of the tree’s RPA and will affect approximately 11% of the tree’s overall RPA. As such, significant impacts to the long-term health of the tree are not anticipated.

Nonetheless, it is recommended that any excavation works required within the RPAs of retained trees be carried out by hand and under supervision of the Project Arboriculturist (Section 2.17).

2.15 SOFT LANDSCAPING

Any soft landscaping within the exclusion zone will be undertaken by hand. A 500 mm radius from any tree trunk will remain uncovered by turf or other planting to allow penetration of water and air into the soil.

2.16 USE OF HERBICIDES

Any herbicide used during the development works shall be systemic, spot applied, and mixed according to manufacturers’ recommendations.

2.17 ON SITE MONITORING REGIME & CONTACT DETAILS

All operations will be monitored by the main contractor. The main contractor will ensure that all works within this document are followed (this will be built into the contract specification).
If any issues arise in relation to the retained trees the Project Arboriculturist will be contacted for advice. The Project Arboriculturist for the development is:

Name: Dean Moore  
Position: Arboricultural Project Officer  
Company: Middlemarch Environmental Ltd  
Address: Triumph House, Birmingham Road, Coventry, CV5 9AZ  
Telephone: 01676 525 880  
Mobile: 07715 707 397

Induction and Personnel Awareness
Details of tree protection and methods of working around trees will be included within site inductions to new members of site staff.

A copy of this document and the related Tree Protection Plan will be kept on site and accessible to staff.

Monitoring/Audits
A pre-commencement site meeting will be arranged between the contractor, Project Arboriculturist and any other interested party. During this meeting all outstanding items will be finalised and these will be communicated to the Local Planning Authority.

An inspection audit will be undertaken by a suitably experienced Arboriculturist once the protective barriers have been installed. Feedback will be provided to the Local Planning Authority Arboricultural Officer on completion of this visit. Following on from this monthly audits of the tree protection will be undertaken.

Works Requiring Arboricultural Supervision
With regard to the proposed service trench adjacent to the eastern site boundary, excavation works required within the RPAs of retained trees will be completed under supervision of the Project Arboriculturist.

2.18 USE OF SUBCONTRACTORS
The main contractor will be responsible for ensuring sub-contractors do not carry out any process or operation that is likely to adversely impact upon any tree on site.

2.19 CONTINGENCY PLAN FOR SOIL CONTAMINATION
Water will be readily available on site and will be used to flush spilt materials through the soil and avoid contamination to tree roots. At the time of any spillage the main contractor will contact the Project Arboriculturist for advice.

2.20 REMEDIAL TREE WORKS AND TREE REMOVAL
All tree works are to be completed prior to commencement of construction works and installation of the protective barriers. The trees to be removed are detailed in Table 1.2.

All tree works are to be completed by suitably qualified and insured arboricultural consultant in accordance with BS3998:2010 'Tree Work – Recommendations'.

Where the removal of tree stumps is required and the works will be undertaken within 15 m of any retained tree then they will be ground out using a proprietary stump grinder and they will not be removed by winching or mechanical excavation.

2.21 RESPONSIBILITIES
It will be the responsibility of the main contractor to ensure that the planning conditions attached to the planning consent are adhered to at all times and that a monitoring regime in regards to tree protection is adopted on site.
The main contractor will be responsible for contacting the Local Planning Authority should any issues are raised related to the trees on site.

If pruning works to trees are required at any time then permission must be sought from the Local Planning Authority first and then the works must be carried out in accordance with BS3998:2010 ‘Recommendations for Tree Work’.

The main contractor will ensure the build sequence is appropriate to ensure that no damage occurs to the trees during the construction processes. Protective barriers will remain in position until completion of all construction works on the site.

The barriers and signs will be maintained in position at all times and checked on a regular basis by a designated person on site.

2.22 GENERAL PRECAUTIONS

No materials that are likely to have an adverse effect on tree health such as oil, bitumen or cement will be stored or discharged within 10 m of the trunk of any tree that is to be retained. No fires will be lit within 20 m of the trunk of any tree that is to be retained.
3. DRAWINGS

Drawing C124559-02-01 – Tree Protection Plan
REFERENCES AND BIBLIOGRAPHY


APPENDICES

APPENDIX 1: Headings for Protective Barrier Notices and Example Protection Sign
APPENDIX 2: Details of Protective Barrier
APPENDIX 1

Headings for Protective Barrier Notices
Root Protection Area (RPA) Model Notice

DON'T excavate within this area
DON'T use any form of mechanical plant with this area
DON'T store materials, plant or equipment within this area
DON'T move plant or vehicles within this area

DO contact the Local Authority Arboricultural Officer or owner of the tree if excavation within this area is unavoidable
DO protect any exposed roots uncovered within this area with dry sacking
DO backfill with a suitable inert granular and top soil material mix as soon as possible on completion of work

ANY WORK in this area requires a permit from the Local Authority Arboricultural Officer
PROTECTIVE FENCING. THIS FENCING MUST BE MAINTAINED IN ACCORDANCE WITH THE APPROVED PLANS AND DRAWINGS FOR THIS DEVELOPMENT.

TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY PLANNING CONDITIONS AND/OR ARE THE SUBJECTS OF A TREE PRESERVATION ORDER.

CONTRAVENTION OF A TREE PRESERVATION ORDER MAY LEAD TO CRIMINAL PROSECUTION

ANY INCURSION INTO THE PROTECTED AREA MUST BE WITH THE WRITTEN PERMISSION OF THE LOCAL PLANNING AUTHORITY

(TOWN & COUNTRY PLANNING ACT 1990)
APPENDIX 2

Details of Protective Barrier
Figure 2  Default specification for protective barrier

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