

# Arboricultural Impact Assessment & Method Statement

RIBA Stages 3, 4, 5 & 6

Martello Lakes, Dymchurch Road, Hythe

A Report To: Vistry Homes Ltd  
Report Number: RT-MME-160235-03  
Date: December 23



## Report Verification

Report Version	Date	Completed by:	Checked & Approved by:
<b>Final</b>	01/08/2023	Luke Webb BSc (Hons) MArborA Senior Arboricultural Consultant	Duncan Smith BSc (Hons) MArborA Arboricultural Manager
<b>Revision A</b>	05/12/2023	Luke Webb BSc (Hons) MArborA Senior Arboricultural Consultant	Duncan Smith BSc (Hons) MArborA Arboricultural Manager

## Declaration of Compliance

This study has been undertaken in accordance with British Standard 5837:2012 '*Trees in Relation to Design, Demolition and Construction – Recommendations*'.

## Disclaimer

Middlemarch 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. 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.

## Validity of Data

The findings of this study are valid for a period of 12 months from the date of survey. If works have not commenced by this date, an updated site visit should be carried out by a suitably qualified and experienced arboriculturist to assess any changes to the trees, groups, and hedgerows on site and to inform a review of the conclusions and recommendations made.

It should be noted that trees are dynamic living organisms that are subject to natural changes as they age or are influenced by changes in their environment. As such following any significant meteorological event or changes in the growing environment of the trees they should be re-assessed by a suitably qualified and experienced arboriculturist.

This Arboricultural Method Statement has been produced following a review of a fixed approved development layout for the site, based on data provided by the client. The methods of work described herein will be a requirement of all relevant contractors associated with the development proposals.

## On Site Monitoring Regime & Contact Details

All operations detailed within this AMS will be monitored by the Principal Contractor. The Principal Contractor will ensure that specifications within this document are followed (this will be built into the contract specification) and that the Project Arboriculturist will be contacted for advice in relation to works near to retained trees, if required.

The Project Arboriculturist for the site is:

Name: Luke Webb

Position: Senior Arboriculturist

Mobile: 07485 903 868

Email: [luke.webb@middlemarch.eco](mailto:luke.webb@middlemarch.eco)

Action	Project Arboriculturist Attendance Required
Pre-commencement site meeting / toolbox talk / induction	✗
Audit timetable	✓
<b>RIBA Stage 5 - Enabling Works (Demolition)</b>	
Tree Surgery	✗
Site set up and logistics	✗
Establishment of Demolition Exclusion Zone	✗
Topsoil Stripping / Subsoil Regrading	✗
Demolition of Structures and Removal of Hard Surfaces	✗
<b>RIBA Stage 5 - Main Works (Construction)</b>	
Establishment of Construction Exclusion Zone	✓
Permanent and Temporary Ground Protection Measures	✗
Construction of Structures within the RPA / Construction Exclusion Zone	✗
Working space to construct new buildings within RPAs	✗
Installation of utilities within RPAs	✗
<b>RIBA Stage 6 – Handover and Close Out</b>	
Removal of tree protection measures	✓
Tree Safety Assessment for handover	✓

## Responsibilities

It is the responsibility of the Principal Contractor to ensure that the planning conditions attached to the planning consent are always adhered to and that a monitoring regime regarding tree protection is adopted on site.

The Principal 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 beyond the agreed scope within this Method Statement are required at any time, then permission must be sought from the Local Planning Authority prior to commencement. All tree surgery works must be carried out in accordance with BS3998.

The Principal Contractor will ensure the build sequence is appropriate to ensure that no damage occurs to retained trees during the construction processes. Protective measures will remain in position until completion of the construction phase of development and will only be removed to allow the commencement of soft landscaping works.

The protection measures and signs will always be maintained in position and checked daily by a designated person on site under the responsibility of the Principal Contractor.

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# 1. Introduction

## 1.1 Project Background

This joint Arboricultural Impact Assessment and Arboricultural Method Statement was commissioned by Vistry Homes Ltd to accompany a planning application for residential development at Martello Lakes. A survey of the trees on site and within influencing distance of the boundaries was undertaken on the 28<sup>th</sup> September 2022 as part of a Preliminary Arboricultural Assessment (PAA) to aid design and avoid unnecessary tree removal.

This Arboricultural Impact Assessment has been carried out in accordance with British Standard 5837:2012 '*Trees in Relation to Design, Demolition and Construction - Recommendations*'<sup>1</sup> (hereafter referred to as BS5837).

The purpose of this report is to:

- Review the relationship between the proposed development and the existing trees and hedgerows identified during the Preliminary Arboricultural Assessment.
- Provide a Tree Retention Plan to determine trees and hedgerows to be retained and removed in the context of the proposed development.
- Identify mitigation to offset any tree or hedgerow loss as part of the development proposals.
- Identify all areas where specific working methods are required to ensure protection of retained trees and hedgerows as part of an Arboricultural Method Statement.

This Arboricultural Method Statement has been compiled to adhere to the recommendations set out in BS5837 and to provide the information required for RIBA Stage 5 including:

- Audit schedule
- Specific tree protection measures
- Specific tree-friendly construction operations
- Tree pruning specification
- Arboricultural Clerk of Works (ACoW) supervision

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<sup>1</sup> British Standards Institution. (2012). *British Standard 5837:2012, Trees in relation to design, demolition, and construction – Recommendations*. British Standards Institution, London.

## 1.2 Site Description, Drawings and Appendices

<b>Attribute</b>	<b>Description</b>
<b>Location</b>	Martello Lakes, Dymchurch Road, Hythe
<b>National Grid Reference</b>	TR 12831 33157
<b>Topography</b>	Mixture of flat and undulating due to raised soil levels
<b>Tree Cover</b>	Mostly low and medium quality sporadic groups of trees with the site. Medium to low quality trees concentrated in groups around site boundaries
<b>Drawings attached</b>	Tree Survey Plan – C159009-01-01 Tree Retention Plan – C160235-02-01-RevA Tree Protection Plan – C160235-03-01-RevB
<b>Appendices</b>	Appendix A: Tree Schedule Appendix B: Tree Protection Fencing Sign

**Table 1.1: Summary of Site and Surroundings**

## 1.3 Development Proposals

The development of the site includes the construction of a variety of new residential homes and apartment complexes alongside associated infrastructure, utilities, soft and hard landscaping proposals to implement the project.

## 1.4 Documentation Provided

This statement is based upon the information provided by the client, in addition to information collected by Middlemarch during the Preliminary Arboricultural Assessment, as detailed below.

<b>Author</b>	<b>Document</b>	<b>Drawing Number</b>	<b>Date</b>
dha architecture	Phases 3 and 4, Presentation Planning Layout	082102-VIS-K-01 Rev A	29.11.2023
dha architecture	Phase 3 and 4 Landscape Base dwg	WIE19857	04.12.2023

**Table 1.2: Documentation Provided**

## 2. Survey Methodology

### 2.1 Survey Scope

To determine the status of the trees within the site, a full arboricultural survey has been undertaken, assessing the species and status of all trees present. This survey has been carried out in accordance with BS5837.

All individual trees with a stem diameter greater than 75 mm are shown on the Tree Survey Plan and have been assigned a unique reference number. Trees were visually assessed and a schedule prepared listing:

- Tree number
- Species
- Tree height
- Minimum crown clearance
- Stem diameter
- Crown spread
- Age class
- Vigour
- Structural condition

Measurements for tree height, minimum crown clearance and crown spread were taken to an accuracy of 0.5 m. Stem diameter measurements were recorded to the nearest 10 mm. Any specific observations were also noted. All observations and measurements are included in Appendix A Tree Schedule.

Trees were assessed and assigned one of the following categories:

**Category U:**

Trees in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.

**Category A:**

Trees of high quality with an estimated remaining life expectancy of at least 40 years.

**Category B:**

Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.

**Category C:**

Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm.

Categories A, B and C have further sub-categories with regards to the reasons for tree retention:

- Mainly arboricultural qualities.
- Mainly landscape qualities.
- Mainly cultural values, including conservation.

*N.B. Certain trees considered unsuitable to retain in their current context (Retention Category U) may possess existing or potential conservation value which make them desirable to preserve in the context of wildlife habitat (e.g. areas with limited public access).*

## 2.2 Root Protection Area (RPA)

To avoid damage to the roots or rooting environment of retained trees, the RPA has been calculated for each of the Category A, B and C trees in accordance with section 4.6 of BS5837. BS5837 recommends this as the minimum area around a tree that contains sufficient roots and rooting volume to maintain viable tree vigour and structure. Where groups of trees have been assessed, the Root Protection Area has been shown based on the maximum sized tree stem in each group and so may exceed the Root Protection Area required for some of the individual specimens within the group. Further detailed inspection of the individual trees forming a group may be required where development impacts upon individual trees forming the combined group.

Protection of the roots and soil structure within the RPA should be treated as a priority. These figures have been calculated utilising the formulas within Section 4.6 and Annex D of BS5837.

## 2.3 Tree Schedule

Appendix A details the individual trees, groups, hedgerows, and woodlands (where present) and includes the relevant information for each at the time of inspection. General observations of any structural and physiological condition and the presence of any decay or physical defects have also been included.

## 2.4 Assessment Limitations

This survey has been undertaken in accordance with BS5837 and trees with a stem diameter of less than 75mm and the specific location of species within a hedgerow have not been identified in accordance with the guidance. It may therefore be necessary during detailed design to undertake further assessment and accurate positioning of juvenile trees or woody species within hedgerows and tree groups to assist structural calculations for foundation design of structures in accordance with current building regulations and NHBC Chapter 4.2 *Building near Trees*<sup>2</sup>.

This survey is not a full or thorough assessment of the health and safety of the trees on or adjacent to the site; and therefore, it is recommended that detailed tree inspections are undertaken on a regular basis with the express purpose of complying with the landowner's duty of care to satisfy health and safety requirements.

For the purposes of this assessment, a hedgerow is described as a line of trees or shrubs with canopies less than 5m wide which is regularly managed through pruning. Where trees are present within a hedgerow that are significantly different in character from the remainder, these have been identified and recorded separately. A tree survey in accordance with BS5837 does not assess hedgerows against the Hedgerow Regulations 1997<sup>3</sup> or from an ecological perspective.

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<sup>2</sup> National House Building Council. (2022). *NHBC Standards 2022: Chapter 4.2 - Building Near Trees*. NHBC, Milton Keynes.

<sup>3</sup> Department of the Environment, Transport, and the Regions: London. (1997). *The Hedgerows Regulations 1997: A Guide to the Law and Good Practice*.

The exact position of individual trees or species included as part of a tree group, hedgerow or woodland should be checked and verified on site prior to any decisions for foundation design, tree operations or construction activity being undertaken.

## 2.5 Conditions of Tree Survey

The survey was completed by a suitably qualified and experienced Arboriculturist from ground level and from within the boundary of the site. Aerial tree inspections or the internal condition of the stem/s or branches was not undertaken at this stage. Evaluation of tree condition given within this assessment applies to the date of survey and cannot be assumed to remain unchanged. It may be necessary to review these within 12 months, in accordance with sound arboricultural practice.

All survey data is based on a topographical survey where possible, supplied by the client. Where topographical information has not identified tree positions or Ordnance Survey mapping has been utilised, trees and hedgerows have been positioned using GPS and aerial photography to provide approximate locations in relation to existing surrounding features. Further confirmation of tree and hedgerow locations through a topographical survey of the site is recommended to ensure future design accuracy.

## 2.6 Tree Survey Plan

The Tree Survey Plan identifies the existing trees including above and below ground constraints which should be considered during the design process.

## 2.7 Tree Retention Plan

The Tree Retention Plan identifies which trees and hedgerows are to be retained and incorporated as part of the site development and which are to be removed.

## 3. Statutory Protection

### 3.1 Tree Preservation Order and Conservation Area Protection

A desk-based study was undertaken to identify if any of the trees present within or near the site are affected by statutory constraints as detailed below.

Statutory Constraint	Present	Source	Details
	✓ ✗		
TPO	✓	Online	G4 (refer to drawing C159009-01-01)
Conservation Area	✗	Online	N/A
Ancient Woodland	✗	MAGIC	N/A

**Table 2.1: Summary of Statutory Constraints that Affect the Site**

Where a tree preservation order, conservation area or ancient woodland applies to trees within the assessment area, statutory constraints will apply to the development in respect of trees.

No works must be undertaken on the protected trees without prior permission from the Local Authority unless authorised as part of an approved planning application. Works include pruning, topping, lopping, uprooting or wilful damage or wilful destruction of these trees. Any proposed pruning works not currently approved will need to be fully specified and agreed within a future planning application.

### 3.2 Protected Species

#### Bats

Mature trees often contain cavities, hollows, peeling bark or woodpecker holes which provide potential roosting locations for bats. Bats and the places they use for shelter or protection (i.e. roosts) receive European protection under The Conservation of Habitats and Species Regulations 2017 (Habitats Regulations 2017)<sup>4</sup>. They receive further legal protection under the Wildlife and Countryside Act (WCA) 1981<sup>5</sup>, as amended. Consequently, causing damage to a bat roost constitutes an offence.

Generally, should the presence of a bat roost be suspected whilst completing works on any trees on site then an appropriately licensed bat worker should be consulted for advice.

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<sup>4</sup> HM Government – The National Archives (2017) [online] The Conservation of Habitats and Species Regulations 2017. Available at: <https://www.legislation.gov.uk/uksi/2017/1012/contents/made>

<sup>5</sup> HM Government – The National Archives 2017. *Wildlife and Countryside Act 1981*. [online] Available at: <http://www.legislation.gov.uk/ukpga/1981/69/contents>

*Birds*

Trees offer potential habitat for nesting birds which are protected under the Wildlife and Countryside Act (WCA) 1981, as amended. Some species (listed in Schedule 1 of the WCA) are protected by special penalties. This legislation makes it an offence to intentionally or recklessly damage or destroy an active bird nest or part thereof.

As the trees on, and adjacent, to the site provide potential habitat for nesting birds all tree work should ideally be completed outside the nesting bird season (Generally March to September).

If this is not possible then the vegetation should be subject to a nesting bird inspection by a suitably experienced ecologist prior to commencement of works. If any active nests are identified then the vegetation, and a defined buffer zone, will need to remain in place until the young have naturally fledged.

## 4. Results Summary

### 4.1 Preliminary Arboricultural Assessment

The assessment identified four groups of trees as detailed below and in Appendix A Tree Schedule.

<b>BS5837:2012 Category</b>	<b>Tree/ Group/ Hedgerow Reference</b>
<b>U</b>	
<b>A</b>	
<b>B</b>	G2, G4
<b>C</b>	G1, G3

**Table 4.1: Summary of Trees, Groups and Hedgerows in BS5837:2012 Categories**

The study area was situated to the west of the Martello Lakes development and adjacent to a local sewage treatment works, within the wider landscape of the Romney Marshes. It is accessible from the Dymchurch Road approximately 3km south-west of Hythe.

Throughout the survey it was noted that there were very few trees that were recorded within the larger outline planning permission red line boundary. It should also be noted that there were no trees observed within the reserved matters application boundary at this stage. The predominant land use was an active quarry which was mostly devoid of vegetation, only small sections of G2 were contained within the outline application boundary (refer to drawing C159009-01-01). Overall, the majority of trees assessed were located outside of the specified boundaries and scattered across the peripheries of the site but still presented a potential to provide either canopy or predicted root system encroachments onto the proposed site.

The Preliminary Arboricultural Assessment recorded that 50% of the surveyed tree population were profiled as Retention Category B. This included G2 which was located on the northern edge of the site, acting as a visible buffer provided screening from the adjacent sewage treatment works. Canopy cover was predominantly recorded as early mature *Populus* species including Aspen (*Populus tremula*) and White poplar (*Populus alba*) that measured up to 16m tall and 580mm in stem diameter at breast height (DBH). This group presented numerous defects, but it should be noted that dense bramble and vegetation restricted access to a large portion of the group which impeded a full inspection. The other prominent trees recorded as Retention Category B were a mixed species group (G4) of many mature specimens measuring up to 25m tall that provided visible landscape value to the surrounding area. Further desk study showed G4, situated near the site frontage to the south-east is part of a Tree Preservation Order (TPO-06/2011). Careful consideration should be given to prevent any impacts on these trees which also possess an ability to provide landscape and arboricultural value for at least another 20 years.

The remaining groups of trees identified during the survey were considered low retention value and designated Retention Category C. These trees were distributed outside of the proposed northern site boundary but were mostly concentrated along the eastern periphery of the site. The trees were categorised as low quality due to a combination of defects or their juvenility. Moreover, the remaining trees provided limited beneficial impact to the site with an estimated remaining contribution timescale of approximately ten to twenty years.

## 5. Arboricultural Impact Assessment

### 5.1 Introduction

This section of the report details the potential impacts that the proposed development may have upon the site's tree stock. The assessment has been based upon the documents detailed in Table 1.1 with reference to the results of the Preliminary Arboricultural Assessment.

### 5.2 Tree Retention and Removal

There are no trees to be removed as part of the proposed development. All trees, groups and hedgerows to be retained within the proposed development are identified on the Tree Retention Plan (refer to drawing C160235-02-01)

### 5.3 Works within Root Protection Areas (RPA)

No aspects of the proposed development will require works within the RPAs of retained trees.

It should be noted that the RPAs of the tree group G4 are in relatively close proximity to the proposed site works to the south, but because the works will be located outside the periphery of the RPAs the proposed works are, therefore, unlikely to cause significant harm.

Overall, the potential for significant impact upon the trees as a result of the proposed works is considered unlikely. Moreover, the proposed development will be located upon a raised platform which is situated at a higher ground level, which further reduces the risk of any potential RPA incursions.

### 5.4 Trees and Foundations

Any structures built on the site should comply with current building regulations and NHBC Chapter 4.2 - *Building near Trees* (2022)<sup>6</sup>. Foundation depths for buildings near or adjacent to trees should consider the potential size of the trees at maturity and their subsequent water demand. The soil types throughout the site should be fully investigated and appropriate measures taken. If trees are removed across the site, the potential for soil heave should be assessed and foundations designed accordingly.

This survey has been undertaken in accordance with BS5837 and further assessment in accordance with current building regulations will be required to inform foundation design.

### 5.5 Tree Pruning

Pruning of mature trees should only be undertaken where essential, to prevent open wounds that allow the ingress of decay and provide opportunity for fungal spores to infect the tree. Pruning works should ideally be undertaken during the winter months when the tree is dormant or during the summer months when the tree is fully active. Autumn pruning (when fungal spores are

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<sup>6</sup> National House Building Council. (2022). *NHBC Standards 2022: Chapter 4.2 - Building Near Trees*. NHBC, Milton Keynes.

abundant in the surrounding atmosphere) should be avoided if possible. Juvenile trees should be formatively pruned in their early years to reduce the presence of potential defects into maturity that would reduce their lifespan.

All tree pruning works should be detailed as part of an Arboricultural Method Statement and completed in accordance with the current best practice guidance set out within BS3998:2010 “*Tree Work – Recommendations*”<sup>7</sup> by suitably competent, qualified, and insured arboricultural contractors. The extent of pruning should be identified to contractors in a pre-commencement site meeting as part of enabling works.

## 5.6 New Tree Planting

As part of the current development proposals, tree planting is yet to be demonstrated but will be addressed in a future landscape plan.

The purpose and function of the new tree planting should be carefully considered so that key objectives from a wildlife habitat and landscape perspective can also be achieved.

## 5.7 Shading

The shade from trees can be considered both a constraint and opportunity and therefore its effect upon the new development should be fully considered to ensure a harmonious and sustainable relationship can be achieved. Where residential development is proposed, the position and orientation of new buildings in relation to existing trees, primary living areas should receive the largest proportion of natural sunlight. BRE<sup>8</sup> guidelines recommend “*at least half of the garden or open space should receive at least two hours sunlight on March 21 (Spring Equinox)*”.

## 5.8 Summary of Impacts

The proposed development of the site is unlikely to significantly impact the visual amenity of the local area in regard to arboriculture as no trees require removal to facilitate the works.

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<sup>7</sup> British Standards Institution. (2010). *British Standard 3998:2010, Tree Work – Recommendations*. British Standards Institution, London.

<sup>8</sup> Littlefair P. (2011). *Site layout planning for daylight and sunlight: a guide to good practice* (BR 209). British Research Establishment, Watford.

## 6. Arboricultural Method Statement

### 6.1 Introduction

The following sections of this report detail the specific protection measures, working methodologies and pruning requirements to be adopted as part of the demolition and construction phases of the project.

The principal contractor must ensure that they read and understand all of the following sections prior to commencement of site occupation.

#### *Pre-commencement site meeting and site inductions*

A pre-commencement site meeting involving the Project Arboriculturist and Principal Contractor will be undertaken at the beginning of the Enabling Works Phase, Main Construction Phase, Post Construction Phase.

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 referred to by operatives working near retained trees.

#### *Monitoring/Audits*

An inspection audit will be implemented by the Project Arboriculturist once the protective measures have been installed and prior to site occupation to ensure they provide the level of protection required for retained trees. Feedback will be provided to the Local Planning Authority Arboricultural Officer on completion of this visit and monthly audits of the tree protection measures will be undertaken by the Project Arboriculturist to ensure they remain in position and fit for purpose.

#### *Use of Subcontractors*

The Principal Contractor will be responsible for ensuring sub-contractors do not carry out any process or operation that is likely to adversely impact upon any retained tree. If any issues arise in relation to the retained trees the Project Arboriculturist will be contacted for advice.

### 6.2 Enabling Works

#### Tree Work

All tree work should conform to BS3998:2010 and be completed prior to the installation of the tree protection measures and site occupation by demolition or construction contractors.

Tree/ Group/ Hedgerow Reference	Species	BS5837 Category	Retained	Comments
G4	Mixed	B	✓ ✗	Tying back (if possible) or minor pruning of lower branches to facilitate the erection of tree protection barriers as specified in the tree protection plan (C160235-03)

Table 3.1: Trees to be Removed or Pruned

Where specified it is recommended that the overhanging branches of trees are tied back to allow construction access beneath canopies if required. If necessary, this should be conducted under arboricultural supervision and once the works have been completed, branches must be untied, which may require arboricultural supervision.

All tree pruning works specified in Table 3.1 are considered to be of a minor extent. As such, it is unlikely they will have a significant impact upon the long-term health, or visual quality, of the trees. However, the extent of works required would be best determined during a pre-commencement site meeting.

#### Site Setup, Compound, Materials Storage and Vehicle Parking

At the time of writing, the location of the site compound had not been formally identified, however, sufficient space is present within the site to accommodate the compound outside of Construction Exclusion Zones and its establishment is unlikely to result in harm to retained trees.

#### Topsoil Stripping / Subsoil Regrading

Topsoil stripping and regrading of subsoils will not occur within the (Root Protection Area) RPA of any retained tree. Stored soil created from topsoil stripping will not be stored within any RPA or Construction Exclusion Zone.

If any regrading works are proposed within the RPAs of retained trees, these must be supervised by the Project Arboriculturist. No machinery must be located or stored within the RPAs of retained trees and all work must be carried out from the perimeter of RPA, working towards the trees where necessary in a precautionary manner. The spoil created from these works will not be stored within the RPA. Uncovered roots need to be assessed by the Project Arboriculturist. If deemed necessary, minor roots (<25 mm in diameter) uncovered by the works shall be pruned using clean, sterilised pruning saw or secateurs, leaving as small a pruning wound as possible. If a major root (>25 mm in diameter) is found, then works will be redesigned to accommodate any large roots found.

#### Demolition of Structures and Removal of Hard Surfaces

There are no structures or hard surfaces that require demolition or removal within the RPAs of retained trees and no impact upon the existing trees is therefore anticipated.

### 6.3 Main Works (Construction)

#### Construction Exclusion Zone

Protective barriers will be positioned to define the Construction Exclusion Zone (CEZ). Signs will be installed on the barriers to inform site contractors of the importance of the tree protection measures and no works that cause physical damage to retained trees, compaction of the soil or severance of tree roots will occur within any exclusion zone. The extent of the CEZ encompasses the Root Protection Area (RPA) and / or tree canopy, whichever is the greatest.

No works, including storage of construction materials shall take place within the Construction Exclusion Zone as defined by the protective barriers.

The proposed location of the protective barriers surrounding the CEZ is identified on the Tree Protection Plan attached (C160235-03-01). The barriers will remain in place until completion of the demolition phase and will be adjusted as required to form the Construction Exclusion Zone (CEZ) prior to the next phase.

#### Permanent and Temporary Ground Protection Measures

As no works are proposed within the RPAs of retained trees there will be no requirement for ground protection measures. If any plans change or an incursion on any CEZ or RPA is anticipated then the Project Arboriculturist must be consulted.

#### Installation of utilities within RPAs

The proposed development will not require the installation of new subterranean utilities within the Root Protection Areas of retained trees. If any subterranean utility installation is proposed in the future that could impact the RPAs of retained trees, then the Project Arboriculturist and LPA must be consulted.

### 6.4 Post Construction Works

#### Removal of Protective Barriers

Protective barriers will be removed once all external main construction works have been completed to allow the completion of hard and soft landscaping. Barriers shall be removed carefully to ensure no damage to retained trees occurs.

#### Hard Landscaping

Hard landscaping works that have the potential to cause physical damage to retained trees, compaction of the soil or severance of tree roots shall not occur within the precautionary zones (RPA / canopy) unless under supervision of the Project Arboriculturist. Any hard landscaping works taking place within the precautionary zones surrounding retained trees should be completed in accordance with this AMS following advice from the Project Arboriculturist.

No unsupervised works or storage of hard landscaping construction materials shall occur within the Precautionary Zones (former CEZ).

#### Soft Landscaping

At this stage no soft landscaping that affects retained trees has been proposed, however, it should be noted that any soft landscaping within exclusion zones must be undertaken by hand and in accordance with BS8545<sup>9</sup>.

### 6.5 Handover and Close Out

#### Tree Safety Assessment

A tree safety assessment will be required prior to handing over the site to the client for final site use to ensure all retained trees are in good condition and any potential hazards are mitigated sufficiently. All retained trees should positively contribute to the new development and should be included as part of a management plan to ensure the long-term safety of site users.

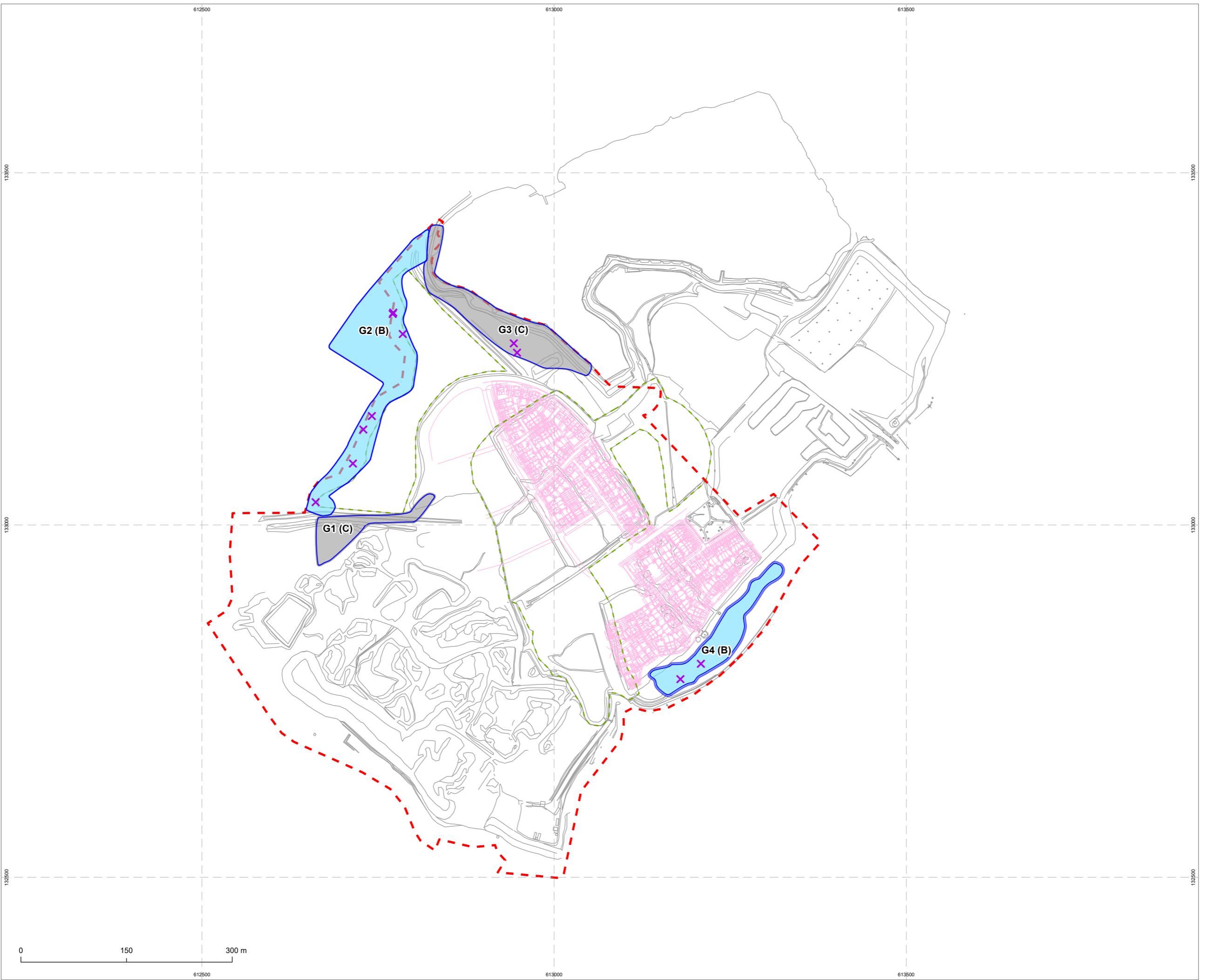
This BS5837:2012 survey is not a full or thorough assessment of the health and safety of the trees on or adjacent to the site; and therefore, it is recommended that detailed tree inspections are undertaken on a regular basis with the express purpose of complying with the landowner's duty of care to satisfy health and safety requirements.

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<sup>9</sup> British Standards Institution. (2014). *British Standard 8545:2014, Trees: from nursery to independence in the landscape – Recommendations*. British Standards Institution, London.



C159009-01-01	
<b>Legend</b>	
<span style="background-color: blue; width: 10px; height: 10px; display: inline-block;"></span> Category B group	<span style="background-color: grey; width: 10px; height: 10px; display: inline-block;"></span> Category C group
<span style="color: blue;">—</span> Root Protection Area	<span style="color: red;">—</span> Survey area
<span style="color: purple;">×</span> Dead tree	<span style="color: green;">—</span> Former survey area
<b>NOTES</b> All dimensions to be verified on site. Do not scale this drawing, use figured dimensions only. All discrepancies to be clarified with Project Arboriculturist. Drawing to be read in conjunction with Preliminary Arboricultural Assessment and Tree Plan. The positions of trees and their current crown spread, root protection area and shade pattern (where appropriate) have been shown on the Tree Survey Plan. All survey data is based on a topographical survey where possible, supplied by the client. Where topographical information has not identified tree positions or Ordnance Survey mapping has been utilised, trees have been positioned using GPS and aerial photography to provide approximate locations in relation to existing surrounding features. Further confirmation of tree and hedgerow locations through a topographical survey of the site is recommended to ensure future design accuracy. The original of this drawing was produced in colour - a monochrome copy should not be relied upon. The exact position of individual trees or species included as part of a tree group, woodland or hedgerow should be checked and verified on site prior to any decisions for foundation design, tree operations or construction activity being undertaken. Further survey work would be required for calculating foundation depths in accordance with current Building Regulations requirements. Trees are living organisms that change over time, the condition of all trees illustrated herein are to be checked by the Project Arboriculturist should works commence 12 months after the date of this survey. <b>TREES INCLUDED DURING THE ASSESSMENT MAY BE SUBJECT TO STATUTORY CONSTRAINTS.</b> IT IS THEREFORE ADVISED THAT NO WORK SHOULD BE PERMITTED TO ANY TREES ILLUSTRATED HEREIN WITHOUT FIRST OBTAINING THE RELEVANT AUTHORISATION TO DO SO UNLESS AGREED AS PER THE APPROVED PLANS THROUGH PLANNING CONSENT. This drawing is the property of Middlemarch and is issued on the condition it is not reproduced, retained, or disclosed to any unauthorised person, either wholly or in part without written consent of Middlemarch. Middlemarch accepts no liability for third party use.	
<b>Project</b> Martello Lakes, Dymchurch Road, Hythe <b>Drawing</b> Tree Survey Plan <b>Client</b> Invicta Planning	
Drawing Number: C159009-01-01 Revision: 00 Scale @ A3: 1:5,000 Date: April 2023 Approved By: LW Drawn By: BD/KB	
 <b>MIDDLEMARCH</b> Triumph House, Birmingham Road, Allesley, Coventry CV5 9AZ T: 01676 525880 E: admin@middlemarch-environmental.com	
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C160235-02-01-RevA

## Legend

- █ Category B group
  - █ Category C group
  - Root protection area
  - ✗ Dead tree
  - Proposed development
  - — Survey area
  - · — Former survey area

**NOTES**  
All dimensions to be verified on site. Do not scale this drawing, use figured dimensions only. All discrepancies to be clarified with Project Arboriculturalist. Drawing to be read in conjunction with Preliminary Arboricultural Assessment and Tree Schedule.  
The positions of trees and their current crown spread, root protection area and shade pattern (where appropriate) have been shown on the Tree Survey Plan.  
All survey data is based on a topographical survey where possible, supplied by the client.  
Where topographical information has not identified tree positions or Ordnance Survey mapping has been utilised, trees have been positioned using GPS and aerial photography to provide approximate locations in relation to existing surrounding features. Further confirmation of tree and hedgerow locations through a topographical survey of the site is recommended to ensure future design accuracy.  
The original of this drawing was produced in colour - a monochrome copy should not be relied upon.  
The exact position of individual trees or species included as part of a tree group, woodland or hedgerow should be checked and verified on site prior to any decisions for foundation design, tree operations or construction activity being undertaken.  
Further survey work would be required for calculating foundation depths in accordance with current Building Regulations requirements.  
Trees are living organisms that change over time, the condition of all trees illustrated herein, are to be checked by the Project Arboriculturalist should works commence 12 months after the date of this survey.  
**TREES INCLUDED DURING THE ASSESSMENT MAY BE SUBJECT TO STATUTORY CONSTRAINTS. IT IS THEREFORE ADVISED THAT NO WORKS SHOULD BE UNDERTAKEN TO ANY TREES ILLUSTRATED HEREIN WITHOUT FIRST OBTAINING THE RELEVANT AUTHORISATION TO DO SO UNLESS AGREED AS PER THE APPROVED PLANS THROUGH PLANNING CONSENT.**  
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Project Matello Lakes Hythe Kent

True Retention Plan

## Fee Retention Plan

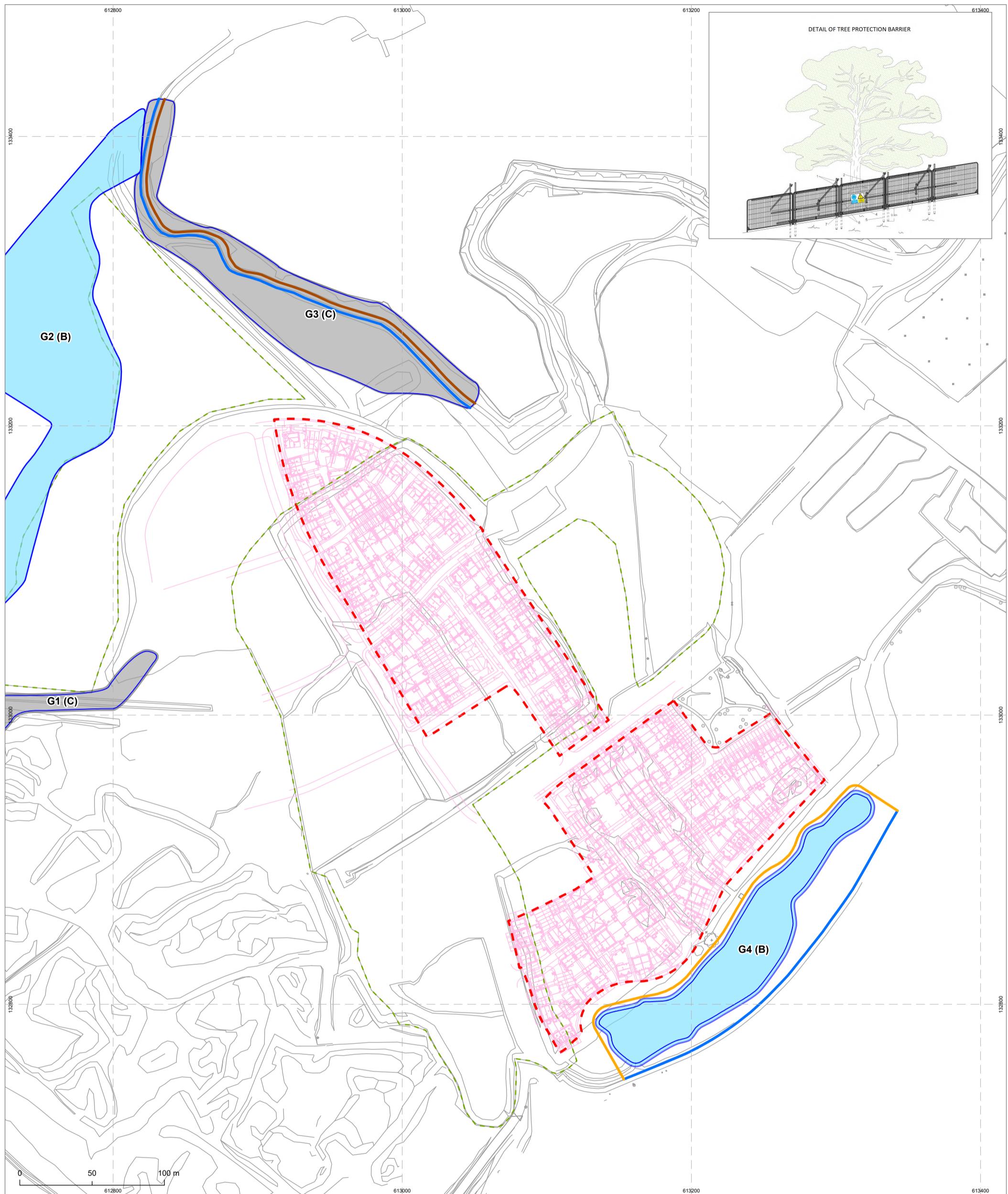
Vistry Homes Ltd

C160235-02-01-RevA	Rev A
Scale @ A3 1:5,000	Date December 2023
Approved By:	Drawn By:

 MIDDLEMARCH

  
Triumph House, Birmingham Road, Allesley, Coventry CV5 9AZ  
T:01676 525880  
E:[admin@middlemarch-environmental.com](mailto:admin@middlemarch-environmental.com)

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#### Legend

- Existing fenceline to be utilised as tree protection barrier
- Existing site access road
- Proposed location of BS5837 compliant tree protection barrier
- Category B group
- Category C group
- Root protection area
- Proposed development
- Development boundary
- Former survey area

All dimensions to be verified on site. Do not scale this drawing, use figured dimensions only. All discrepancies to be clarified with Project Arboriculturist. Drawing to be read in conjunction with Preliminary Arboricultural Assessment and Tree Schedule.  
The positions of trees and their current crown spread, root protection area and shade pattern (where appropriate) have been shown on the Tree Survey Plan.  
All survey data is based on a topographical survey where possible, supplied by the client.  
Where topographical information has not identified tree positions or Ordnance Survey mapping has been used, trees have been positioned on GPS and photo points to provide approximate locations in relation to existing surrounding features. Further collection of tree and hedgerow locations through a topographical survey of the site is recommended to ensure future design accuracy.  
The original of this drawing was produced in colour - a monochrome copy is not recommended.  
The exact position of individual trees or species included as part of a tree group, woodland or hedgerow should be checked and verified on site prior to any decisions for foundation design, tree operations or construction activity being undertaken.  
Topographic survey work will be required for calculating foundation depths in accordance with relevant Building Regulations requirements.  
Trees are living organisms that change over time, the condition of all trees illustrated herein, are to be checked by the Project Arboriculturist should works commence 12 months after the date of this survey.  
TREES INCLUDED DURING THE ASSESSMENT MAY BE SUBJECT TO STATUTORY CONSTRAINTS. IT IS THEREFORE ADVISED THAT NO WORK IS ALLOWED TO BE PERMITTED ON ANY TREE WHICH IS NOT HEREIN WITHOUT FIRST OBTAINING THE RELEVANT AUTHORISATION THROUGH PLANNING CONSENT.  
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Project  
**Matello Lakes, Hythe, Kent**

Drawing  
**Tree Protection Plan**

Client  
**Vistry Homes Ltd**

Drawing Number <b>C160235-03-01-RevB</b>	Revision <b>Rev B</b>
Scale @ A3 <b>1:2,500</b>	Date <b>December 2023</b>
Approved By <b>LW</b>	Drawn By <b>KB/CD</b>

**MIDDLEMARCH**  
Triumph House, Birmingham Road, Allesley, Coventry CV5 9AZ  
T:01676 525880  
E:admin@middlemarch-environmental.com

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C160235-03-01-RevB

## Appendix A - Tree Schedule

Measurements	Age Class	Overall Condition	Root Protection Area (RPA)
Height - measured from ground level at base of stem/s (m).	YNG: Juvenile trees that have been recently planted.	G - Good: Trees with only a few minor defects and in good overall health needing little, if any attention.	<ul style="list-style-type: none"> <li>The RPA column gives the required area (<math>m^2</math>).</li> <li>The RPA Radius column gives the radius (m) of an equivalent circle.</li> <li>The RPA is calculated using the formulae described in paragraph 4.6.1 of British Standard 5837: 2012 and is indicative of the required rooting area in order for a tree to be retained.</li> </ul>
Stem Dia. - Diameter measured (mm) in accordance with Annex C of the BS5837.	SM: Semi-mature, trees upto 1/3 life expectancy.	F - Fair: Trees with minor, but rectifiable, defects or in the early stages of stress from which it may recover.	
Crown - crown spread estimated radially from the main stem (m).	EM: Early mature, trees 1/3 – 2/3 life expectancy.	P - Poor: Trees with major structural and/or physiological defects such that it is unlikely the tree will recover in the long term.	
Abbreviations Est - Estimated stem diameter Avg - Average stem diameter Max - Maximum stem diameter	M: Mature trees, upto 2/3 life expectancy.	D - Dead: Trees no longer alive. This could also apply to trees that are dying and unlikely to recover.	<p>In the assessment, of the BS category, particular consideration has been given to the following</p> <ul style="list-style-type: none"> <li>The health, vigour and condition of each tree</li> <li>The presence of any structural defects in each tree and its future life expectancy</li> <li>The size and form of each tree and its suitability within the context of a proposed development</li> <li>The location of each tree relative to existing site features e.g. its screening value or landscape features</li> <li>Age class</li> <li>Life expectancy</li> </ul>
	OM: Over mature, declining or moribund trees of low vigour.	V: Veteran, tree possessing certain attributes relating to veteran trees.	

### Structural Condition

The following has been considered when inspecting structural condition:

- The presence of fungal fruiting bodies around the base of the tree or on the stem, as they could possibly indicate the presence of possible internal decay.
- Soil cracks and any heaving of the soil around the base.
- Any abrupt bends in branches and limbs resulting from past pruning.
- Tight or weak 'V' shaped forks and co-dominant stems.
- Hazard beam formations and other such biomechanical related defects (as described by Claus Mattheck, Body Language of Trees HMSO Research for Amenity Trees No. 4 1994).
- Cavities as a result of limb losses or past pruning.
- Broken branches or storm damage.
- Canker formations.
- Loose or flaking bark.
- Damage to roots.
- Basal, stem or branch / limb cavities.
- Crown die-back or abnormal foliage size and colour.
- Any changes to the timing of normal leaf flush and leaf fall patterns.

### Quality Assessment of Retention Category

Category U - Trees in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.

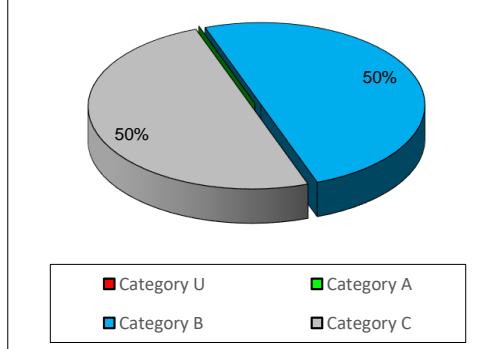
Category A - Trees of high quality with an estimated remaining life expectancy of at least 40 years.

Category B - Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.

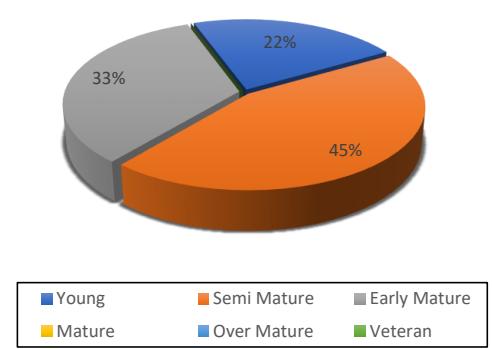
Category C - Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm.

Sub-categories: (i) - Mainly arboricultural value  
(ii) - Mainly landscape value  
(iii) - Mainly cultural or conservation value

**BS5837 category: Groups of trees**



**Age distribution of tree stock**



### Appendix A - Summary

	Individual Trees	Totals	Tree Groups	Totals
Category U		0		0
Category A		0		0
Category B		0	G2, G4	2
Category C		0	G1, G3	2
	Total	0		Total
				4

	Hedgerows	Totals	Woodlands	Totals
Category U		0		0
Category A		0		0
Category B		0		0
Category C		0		0
	Total	0		Total
				0

Tree No	Species	Height (m)	Crown Clearance (m)	No. of Stems	Stem Dia. (mm)	Crown Radius				Age Class	Structure	Vigour	RPA (m)	RPA Radius (m)	Cat	Comments
						N	E	S	W							
G1	Goat willow Blackthorn Hawthorn	7.0	0.5	-	250	4.0	4.0	4.0	4.0	Y SM	F	G,F	28	3.0	C 2	Conjoined canopy Group is located off site but overhangs the study area Group is sparse in areas Included unions observed Limited inspection due to dense vegetation Minor deadwood in the crowns Self seeded trees present Limited inspection due to safety concerns Estimated dimensions Stunted trees present
G2	Aspen Grey poplar Hawthorn White poplar Blackthorn English oak Ash Goat willow Crack willow Silver birch	16.0	0.5	-	580	7.0	7.0	7.0	7.0	Y SM EM	G,F	G,F,P	163	7.2	B 2	Branch socket cavities Conjoined canopy Group is located off site but overhangs the study area Included unions observed Large hanging branches in the crowns Limited inspection due to dense vegetation Minor deadwood in the crowns Major deadwood in the crowns Provides screening Self seeded trees present Small hanging branches in the crowns Storm damage observed Tear wounds observed Typical crown forms Numerous collapsing stems within group Canopy cover is predominantly White Poplar and Aspen Planted shelter belt forms screening from neighbouring sewage works Dense bramble and vegetation restricts access to a large proportion of the group Some parts of the group are on the other side of boundary fence

Tree No	Species	Height (m)	Crown Clearance (m)	No. of Stems	Stem Dia. (mm)	Crown Radius				Age Class	Structure	Vigour	RPA (m)	RPA Radius (m)	Cat	Comments
						N	E	S	W							
G3	Blackthorn Elder Hawthorn	6.0	0.5	-	300	4.0	4.0	4.0	4.0	SM EM M	F	G,F,P	41	3.6	C 2	Dead and dying trees present Group is located off site but overhangs the study area Group is sparse in areas Included unions observed Limited inspection due to dense vegetation Limited inspection due to access Minor deadwood in the crowns Major deadwood in the crowns Storm damage observed Typical crown forms Sporadic trees adjacent to stream together form a linear group Trees with stunted growth present Dense reeds and riverbank impede access for thorough inspection Estimated dimensions Access road runs through group Barrier fence restricts access to half of group
G4	Hybrid black poplar White poplar Hawthorn Austrian pine Western red cedar Sycamore Field maple Grey poplar	25.0	0.5	-	720	11.0	11.0	11.0	11.0	SM EM M	F,P	G,F	238	8.7	B 1,2	Branch socket cavities Conjoined canopy Dead and dying trees present Group is located off site but overhangs the study area Included unions observed Large hanging branches in the crowns Limited inspection due to access Limited inspection due to dense vegetation Limited inspection due to safety concerns Minor deadwood in the crowns Major deadwood in the crowns Provides screening Self seeded trees present Small hanging branches in the crowns Tear wounds observed Branch stubs observed Extensive storm damage observed Consider conducting a Tree Safety Assessment for these trees Large area of soil movement and banking to North-West of tree line Mature outgrown shelter belt



**PROTECTIVE FENCING. THIS  
FENCING MUST BE  
MAINTAINED IN ACCORDANCE  
WITH THE APPROVED PLANS  
AND DRAWINGS FOR THIS  
DEVELOPMENT.**



**TREE PROTECTION AREA  
KEEP OUT !**

**(TOWN & COUNTRY PLANNING ACT 1990)**  
**TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY  
PLANNING CONDITIONS AND/OR ARE THE SUBJECTS OF A  
TREE PRESERVATION ORDER.**  
**CONTRAVICTION 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**