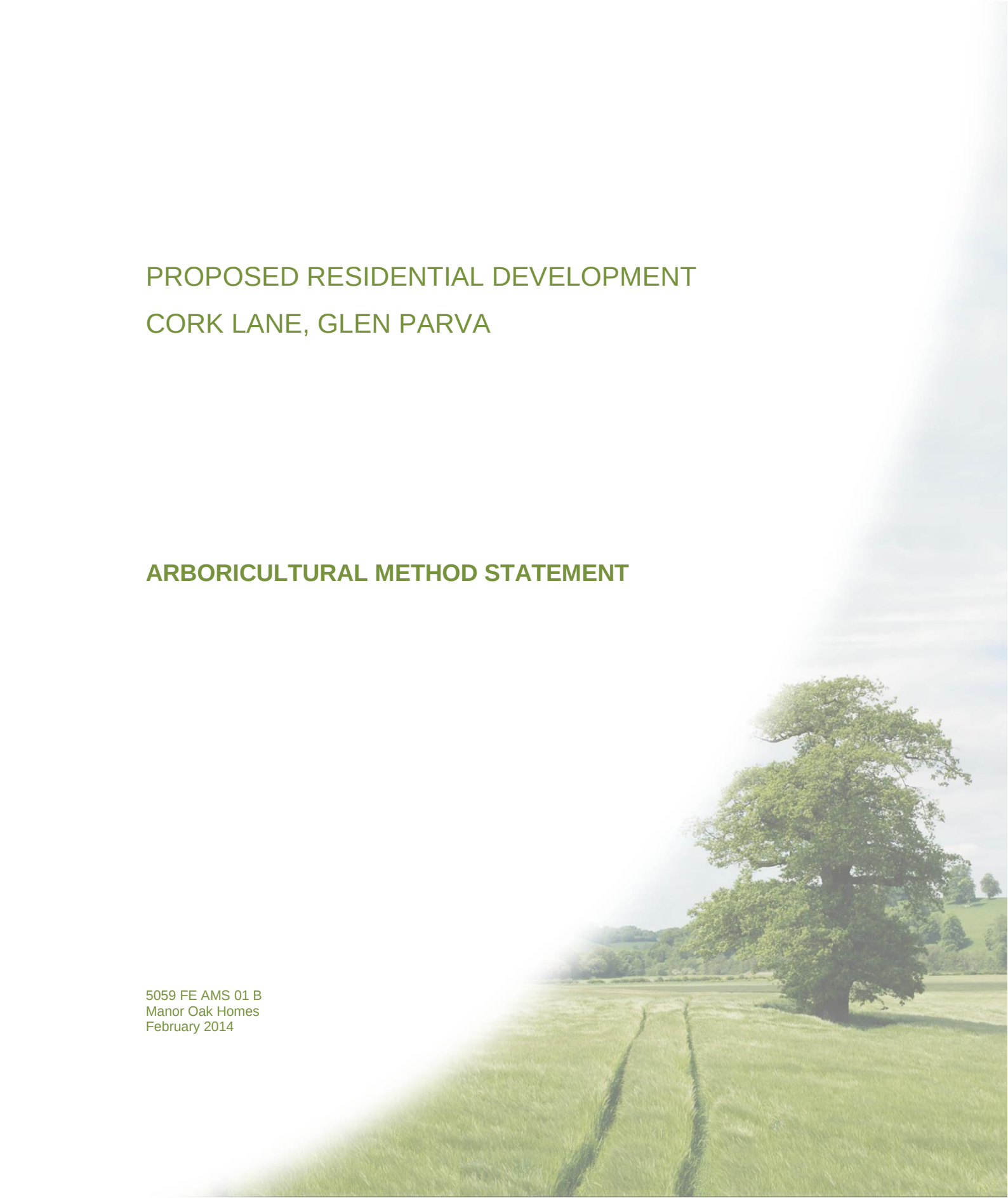
PROPOSED RESIDENTIAL DEVELOPMENT
CORK LANE, GLEN PARVA

ARBORICULTURAL METHOD STATEMENT



5059 FE AMS 01 B
Manor Oak Homes
February 2014

First Environment Ltd.

The Studios Sugarswell Business Park Shenington

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CONTENTS

1 Executive Summary

1.1 Following instructions received in August 2013, this statement has sought to inform a planning application for construction of a residential development on land adjacent to Cork Lane, Glen Parva. The site and proposed development have been assessed in accordance with the relevant British Standard, BS 5837:2012 'Trees in Relation to Design, Demolition and Construction'.

1.2 A total of 25no. individual trees, 2no. hedges and 4no. groups were recorded during the survey. The schedule provided in Appendix B provides a detailed record of each of these components. Appendix C provides a graphical representation of the survey data.

1.3 In order to implement the development it will be necessary to advocate the implement the development it will be necessary to advocate the removal of 4no. category 'C' trees and 3no. category 'U' trees and the partial clearance of 3no. category 'C' groups (G1, G3 & G4).

2 Scope

2.1 Following instructions received in August 2013, this statement has sought to inform a planning application for construction of a residential development on land adjacent to Cork Lane, Glen Parva. The site has been addressed in accordance with the relevant British Standard, BS 5837:2012 ‘Trees in Relation to Design, Demolition and Construction’.

2.2 This report provides an informed overview of the existing tree cover, a summary of any implications arising from the proposed scheme and comments regarding the integration of existing trees into the proposed setting.

2.3 The following information in no way constitutes a health and safety survey or report. Where concerns for tree health and safety exist the necessary and appropriate tree inspections should be undertaken.

3 Survey and Explanation of Grading Categories (BS 5837:2012)

3.1 Existing tree cover pertinent to the development has been surveyed in accordance with BS 5837:2012 'Trees in Relation Design, Demolition and Construction'. The survey was conducted in September 2013 during a period of full leaf in the growing cycle of deciduous broadleaved trees.

3.1.1 This type of survey is designed to identify those trees which are likely to be affected by development of the site and inform the decision making process whereby trees are deemed suitable for retention and integration into a proposed scheme or need to be removed.

3.1.2 Trees are surveyed on an individual basis unless they form a collective feature when they are considered as a group. Groups may be defined on the basis of aerodynamic, cultural or visual features. Individual trees of particular prominence or value within a group may still be assessed as individuals.

3.1.3 For each surveyed tree/group the following information has been recorded:

i. TREE NO: Used to identify trees in the schedule and associated plans.

ii. HEIGHT: Height of tree in metres to centre of crown top or highest point.

iii. DBH: Diameter of the tree at 1.5m from ground level. Where multiple stems are present these are measured individually where practicable. This measurement is used to calculate the Root Protection Area (RPA) for each tree.

iv. CROWN SPREAD: Shown as compass points e.g. N, E, S, W. Dimensions are taken from centre of the main trunk.

v. CROWN CLEARANCE: Height of lowest branch.

vi. PHYSIOLOGY and STRUCTURE: Description of general form, including presence of physical defects, disease or decay and other appropriate details based on health, vitality and overall structural integrity.

vii. AGE CLASS: Young / Middle-aged / Mature / Over Mature / Veteran. Veteran trees are those deemed to be of significant biological, cultural or aesthetic value, usually beyond typical age range and often exhibiting significant structural defects.

3.1.4 Trees are categorised as per Table.1 of BS 5837:2012; these are divided between retention categories ‘A’ – ‘U’.

3.2 **Explanation of Categories**:

i. Category ‘U’: Those in such a condition that any existing value would be lost within 10 years or which should, in the current context, be removed for reasons of sound arboricultural management. If within ownership, category ‘U’ trees should not be considered as constraints within the planning process. However, it may be desirable to seek retention of a category ‘U’ specimen if it is considered to have significant ecological or conservation value. Category ‘U’ trees are identified by dark red canopy edges on the tree plans.

ii. Category ’A’: Those of high quality and value: in such a condition as to be able to make a substantial contribution (a minimum of 40 years is suggested). These are identified by light green RPAs on the tree plans.

iii. Category ’B’: Those of moderate quality and value: those in such a condition as to make a significant contribution (a minimum of 20 years is suggested). These are identified by dark blue RPAs on the tree plans.

iv. Category ‘C’: Those of low quality and/or value: currently in adequate condition to remain until new planting could be established (a minimum of 10 years is suggested), or young trees with a stem diameter below 150mm. These are identified by dark grey RPAs on the tree plans.

3.2.1 The following subcategories are applied. Trees may be allocated more than one subcategory, but this will not increase their overall value.

i. Mainly **arboricultura**l values (suffix 1)

A1: Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue).

B1: Trees that might be included in the category 'A', but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and major storm damage), such that they are unlikely to be suitable for retention in the long term; or trees lacking the special quality necessary to merit the category 'A' designation.

C1: Unremarkable trees of very limited merit or such condition that they do not qualify in higher categories.

ii. Mainly **landscape** values (suffix 2)

A2: Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features.

B2: Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality.

C2: Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefit.

iii. Mainly **cultural** values, including **conservation** (suffix 3)

A3: Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture).

B3: Trees with material conservation or other cultural value.

C3: Trees with no material conservation or other cultural value.

3.3 **Note:** as a general rule and irrespective of subcategories: Category 'A' trees are considered to be of the highest priority for retention; Category 'B' of moderate priority and those of Category 'C' standing of lower priority. Onsite Category 'U' trees are given the lowest priority for retention.

4 Opportunities and Constraints for Development

4.1 The proposed site is situated on land that is currently used as pasture, but was previously a landfill site. It bounded by Cork Lane to the east, a recent residential development and canal to the south, water meadows to the west and a public footpath with existing residential properties beyond to the north.

4.2 Due to the adjacent topography the site is visible in long distance views to the south and west. Views from the east are obscured by vegetation. Views from the north are also screened by existing boundary features.

4.3 A total of 25no. individual trees, 2no. hedges and 4no. groups were recorded during the survey. The schedule provided in Appendix B provides a detailed record of each of these components. Appendix C provides a graphical representation of the survey data.

4.3.1 2no. trees, Tree Nos. 8 & 9 Swedish Whitebeam *Sorbus intermedia* were assigned to category 'B', being of moderate quality and value. Both are street trees located on Cork Lane to the north of the site.

4.3.2 3no. trees, Tree Nos. 16, 19 & 20 Common Ash *Fraxinus excelsior* are considered to have significant structural defects and associated pathogens such that their early loss is expected. These are therefore category 'U' trees.

4.4 We are not aware of any statutory tree protection relating to the site or surround trees.

4.5 The vast majority of the trees are restricted to the site boundaries. These take the form of established boundary hedges with a scattering of associated standards. Central regions are open with only grazed turf.

4.5.1 The largest trees on the site are along the eastern boundary. They appear to have been used to screen the site from adjacent land and are associated with the remains of a hedge. However, many are in poor condition having been pollarded in the past and now host to decay fungi.

4.5.2 The southern boundary is largely open, with only a few areas of scrub towards the eastern end. This boundary is very steep, dropping sharply down to the recent residential development along Navigation Drive. Some recent planting is present on the boundary of the recent development, and an area of dense scrub abuts the canal.

4.5.3 The western boundary is defined by an established hedge. This does appear to have been maintained in the past, but now appears partially outgrown with several gaps

used by cattle to move between fields. There is also significant compaction in the lee of the feature where cattle have used it for shelter.

4.5.4 The northern boundary also has established hedges present. These appear irregularly maintained and are beginning to lose their structure as a result. They provide significant screens for adjacent residential properties and should be returned to regular maintenance to ensure retention of these benefits.

4.6 There is little opportunity to tie the site directly to the adjacent development to the south due to the significant height difference. However, the slope does provide an area that could be planted up as it is essentially unusable. Additional planting where the gradient eases could provide screening benefits and interest in long range views.

4.6.1 The majority of the established trees on the eastern boundary would need to be removed due to their poor condition and the revised context. However, the existing hedge is of indifferent quality and their removal would provide additional space for an improved landscape buffer with better quality trees.

4.6.2 The northern boundary would benefit from more regular cutting to increase density and some gapping up where it has already become sparse.

4.6.3 The western boundary provides an opportunity to blend the site into the adjacent fields and create a gradual change from urban to country setting. There are no large trees on or adjacent to this boundary and their introduction would provide screening and biodiversity benefits.

5 Tree Protection and Removals

5.1 New developments can be greatly enhanced by the presence of appropriate trees. The retention of suitable specimens can significantly aid the integration of new structures into an existing landscape and allow a degree of continuity for both people and wildlife alike. However, care must be taken to safeguard retained stock and minimise impacts, especially disturbance to the rooting environment.

5.1.1 Construction often entails extensive groundworks such as excavation, cutting, filling and compaction. These changes can not only directly damage roots but also affect the physical and chemical properties of the soil and so impair root growth or function.

5.1.2 Our assessment of the proposed development in relation to existing trees is illustrated in Appendix A. This shows those trees that it is necessary to remove in order to implement development and those that may be retained and integrated into the site, together with appropriate protection and any special construction considerations required.

5.1.3 Our assessment is informed by tree location, current size, future requirements, root morphology and the proposed rooting environment. The tolerance of the trees to disturbance based on species, age, condition and the presence of surrounding trees and built form is also considered.

5.1.4 The **Root Protection Area** is the minimum soil surface area (in m^2) that should be left undisturbed around each tree to maintain the tree's long-term viability. In First Environment drawings RPAs are illustrated in colour to indicate the extent of the constraint posed and show the category of the relevant tree or group:

- Category 'A' trees/groups: Green RPA
- Category 'B' trees/groups: Blue RPA
- Category 'C' trees/groups: Grey RPA
- Offsite Category 'U' trees/groups: Grey RPA

5.2 **Tree Works:** In order to implement the development it will be necessary to advocate the removal of 4no. category 'C' trees and 3no. category 'U' trees and the partial clearance of 2no. category 'C' groups (G1 & G4).

5.2.1 The proposed entrance will require the removal of category 'C' Tree No.25 and category 'U' Tree no.16, both Common Ash *Fraxinus excelsior* and short lengths of both category 'C' groups G1, G3 & G4.

5.2.2 Gaps will be created through Group Nos.G1 and G4 to allow for the creation of new pedestrian routes at suitable points. This will create only short gaps in the overall screen but significantly increase connectivity.

5.2.3 The southern side of category 'C' Group No.G4 will also need to be cut back or removed. This is due to the development encroaching on the boundary. This may be justified as long as the remaining sections are regularly maintained and replacement hedges are planted wherever possible.

5.2.4 The northern face of G3 will need to be cut back to provide room for the proposed cycle link.

5.3 **Protective Barriers:** To ensure retention of existing trees it will be necessary to protect the above ground structures and the underlying rooting environment from damage during construction. Such detriment commonly includes impact damage, root severance, soil compaction and soil contamination.

5.3.1 To provide adequate protection it is necessary to define a Construction Exclusion Zone around retained tree cover and protect its perimeter (as far as is practicable) from encroachment using fixed barriers, i.e. weldmesh panels on a scaffold framework as shown in BS 5837:2012 (refer to Figure. 1 below).

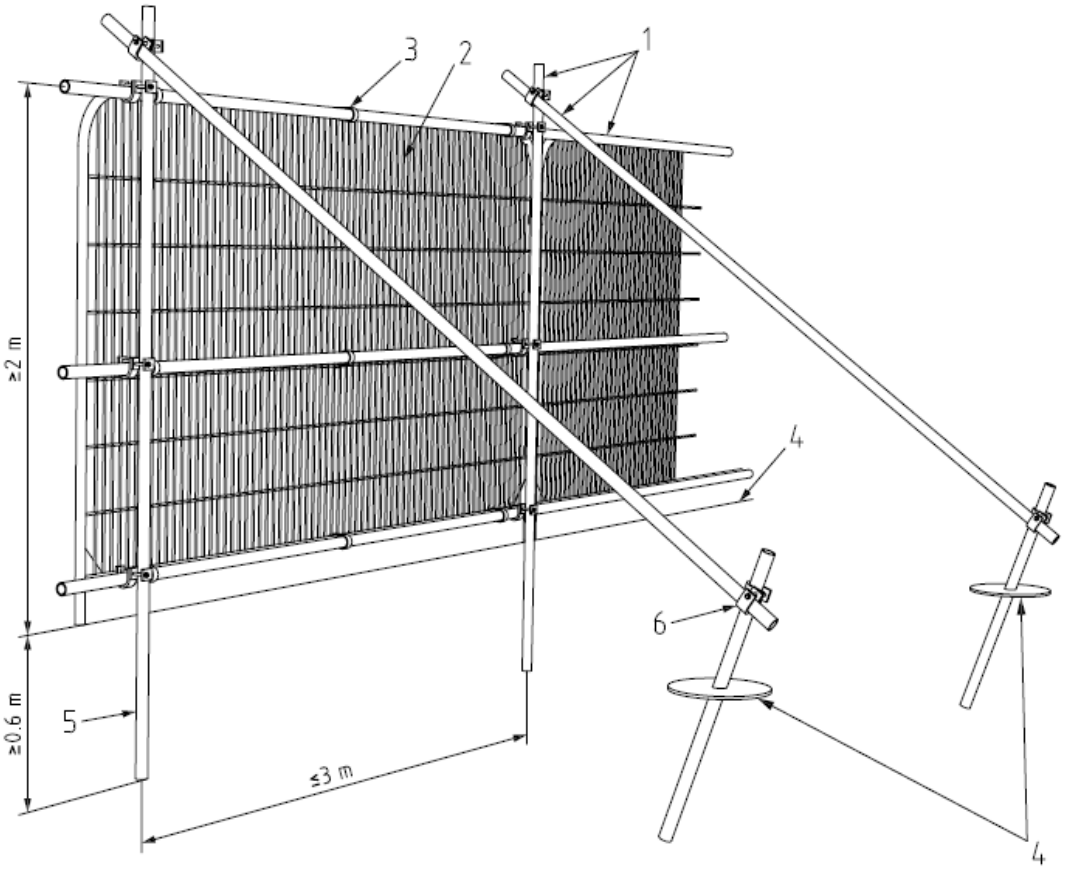
5.3.2 Barriers are to be erected before any materials or machinery is brought onto the site, before any stripping of soil commences and before construction begins. Once erected, the area tree-side of the barrier should be treated as sacrosanct and should not be disturbed, used for storage or altered.

5.3.3 Barrier locations are shown by a **bold blue line** in Appendix A. It is advised that an arboriculturist should spray mark the barrier in order to establish the correct position for the fencing contractor.

5.3.4 Special care should be taken to ensure that activities conducted outside the Tree Protection Fencing do not affect retained trees. This includes such measures as employing a banksman when moving outsize loads. Potentially hazardous materials should be stored downhill or at the maximum possible distance from retained trees, or

have a suitable protective barrier between the trees and storage area. Fires should be avoided wherever possible, or lit well away and downwind from retained trees.

Figure 1: Recommended Tree Protection Fencing Specification for this Development (Source: BS 5837:2012)



Key: 1 Standard scaffold poles
2 Heavy gauge 2m galvanised tube and welded mash inset panels
3 Panels secured to uprights and cross-members with wire ties
4 Ground level
5 Uprights driven into ground until secure (min 0.6m)
6 Standard scaffold clamps

5.3.5 Regular checks should be undertaken to ensure that the tree protection fencing is of the correct specification, in the correct position and functioning appropriately. We also advise that all-weather notices are erected on the fencing to provide a point of contact for arboricultural advice and to deter any relocation, removal or detriment to its intended purpose. Figure .2 (below) provides an example of such signage.

5.3.6 Tree protection fencing will remain in place until all construction activities are complete unless permission for removal is obtained from the Local Authority.

Figure 2: Tree Protection Fencing Signage (Example)

5.4 **Note regarding fence posts.** Extra precautions should be taken if it is necessary to use concrete to install fence posts situated within the RPAs of retained trees. These include:

- Post holes should be excavated by hand;
- An impermeable membrane should be used to line the hole before filling with concrete;
- No concrete is to be mixed within the RPA;
- Excess/spilt concrete should be removed upon completion of works.

6 Conclusions

6.1 To inform proposals for a residential development on land adjacent to Cork Lane, Glen Parva, a survey of trees likely to be influenced during construction has been undertaken in accordance with BS 5837:2012.

6.1.1 A total of 25no. individual trees, 2no. hedges and 4no. groups were identified during the survey (refer to Appendix B and C). 2no. trees were identified as category 'B' specimens as individuals and 3no. as category 'U' individuals; all of the remaining trees and groups warrant category 'C' status.

6.1.2 Our assessment of the proposed development in relation to existing trees is illustrated in the form a Tree Protection Plan (refer to Appendix A).

6.2 Tree removals incurred by the proposed layout amount to:

- 4no. category 'C' trees;
- 3no. category 'U' trees;
- Partial clearance of category 'C' Group Nos.G1, G3 & G4.

6.2.1 It is our opinion that these trees should be removed either because they cannot be practicably retained, provided with adequate protection during construction or impede the implementation of an improved landscape design reflecting the proposed situation.

6.3 Installation of tree protection fencing consistent with BS 5837:2012 is specified to protect retained tree cover during construction. The positioning of the fencing is shown by a **bold blue line** in Appendix A.

6.4 It is our opinion that all of the retained tree cover can be integrated within the proposed context and is unlikely to incur foreseeable detriment during construction, dependent upon adherence to the recommendations and tree protection measures described above.

6.5 Order of works:

- Trees to be removed should be identified with spray-marker in advance of any tree works occurring on site (ideally with an appointed Site Agent and Tree Contractor in attendance);

- All tree works and removals should be undertaken prior to the erection of tree protection fencing;

- All tree protection fencing must be erected prior to the arrival of construction plant, temporary buildings or materials on site;

- All tree protection fencing should be monitored to ensure its function on a regular basis by an appointed arboriculturalist once works commence on site.

Point of Contact:

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Tel: 01295 477077

Further Reading and Supporting Material:

British Standards Institution Publication (2010), *BS 3998: Recommendations for Tree Work*, BSI, London

British Standards Institution Publication (2012), *BS 5837: Trees in Relation to Design, Demolition & Construction*, BSI, London

Roberts J., Jackson N. & Smith M. 2006, *Tree Roots in the Built Environment,* Research for Amenity Trees No.8, TSO, London

Appendices

Appendix A Tree Protection Plan (FE TPP 02)

0m 15m 30m 60m

Scale 1:1500 @ A3

N

W E

S

H2 G4 G4 G4 G4 G4 G4 22 23 24 G4 25 14 15 [16] [17] [6] G1 18 [19] G1 [20] G1 21 G2 G2 G2 G2 G2 H2 H2 H2 H2 H2 H1 H1 G3 G3 G3 G3 G3 G3

1E Tree Protection Fencing

Tree Categories and Root Protection Areas (RPAs)

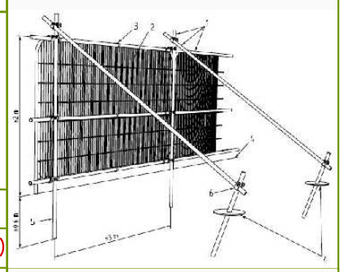
Surveyed trees have been assigned a category in accordance with Table 1 of BS 5837:2012 'Trees in Relation to Design, Demolition and Construction'. The category is indicated on First Environment plans by the colour of the Root Protection Area (RPA).The RPA delineates the minimum rooting area required to enable tree retention. The categories are as follows:

- Category 'A' - Tree of high quality and/or value - **Green RPA**
- Category 'B' - Tree of moderate quality and/or value - **Blue RPA**
- Category 'C' - Tree of low quality and/or value - **Grey RPA**
- Category 'U' - Tree of significantly reduced potential - no RPA unless in third party ownership, then **Grey RPA**.

KEY:

Tree Nos.:	⌀ 21	Tree Canopies:		Category 'U' Trees:	[20]
Category 'B' RPA:		Category 'C' RPA:		Trees to be Removed:	25
Tree Protection Fencing:					

Tree Protection Fencing



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

As shown in BS 5837:2012, Section 6, Figure 2.

Tree Protection Fencing to be erected where indicated by the bold blue lines on the adjacent plan, prior to the commencement of any demolition or construction work.
Fencing specification to be compliant with BS 5837:2012 (illustrated above) and should be fit for the purpose of excluding construction activity and any other unacceptable disturbance from within the Root Protection Areas of retained trees, i.e:

- A scaffold framework in accordance with Figure 2 above comprising of a vertical and horizontal framework, well braced to resist impacts, with vertical tubes driven into the ground spaced at maximum intervals of 3m. Onto this, welded mesh panels should be securely fixed with wire, scaffold clamps or cable ties. If required, fence bases or feet will be secured into the ground with upright scaffold tubes. Panels supported on unsecured rubber or concrete feet are not resistant to impact and should not be used.

Tree Removals Summary

Category A	Category B	Category C	Category U
0	0	4	3

Category C groups of trees G1, G3 & G4 will be partially removed.

Tree Removal Schedule

Tree No.	Category	Species	Tree No.	Category	Species
16	U	Ash	22-23	C_{12}	Ash
17	C_{12}	English Oak	25	C_{12}	Ash
19-20	U	Ash			

Category C groups of trees G1, G3 & G4 will be partially removed.

Stump Removal

Unless otherwise stated, all stumps of removed trees are to be removed by grinding. Stumps will be ground to a depth of c.350mm, or at the discretion of a suitably qualified contractor. No vehicle or machine over 0.5 tons is permitted within the RPAs of retained trees unless suitable measures to prevent ground compaction have been agreed with the appointed arboricultural consultant.

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Project/Client:

Glen Parva Manor Oak Homes

Based On: 7779 006C Proposed Masterplan

Title: Tree Protection Plan

Drawing No: FE TPP 02

Date: 17.02.14 | Drawn: MB | Checked: xx

Note: The original of this drawing was produced in colour - a monochrome copy should not be relied upon.

Appendix B Tree Schedule (FE TS 01)

LAND ADJACENT TO CORK LANE, GLEN PARVA

BS 5837:2012 TREE SCHEDULE

September 2012
Manor Oak Homes
5059.FE.TS.01

BS 5837:2012 Tree Schedule

First Environment Consultants Ltd

Each entry will contain the following information (dependent upon access):

1. **Tree No:** Allocated tree number (a Tree Preservation Order may be signified by a 'TPO' suffix);

2. **Species:** Common names are shown;

3. **Height:** Height of each tree/group in metres to centre of upper crown or highest point;

4. **Trunk Diameter:** Measured in millimetres at 1.5m from ground level; multiple stems are measured separately and the values combined; used to calculate the Root Protection Area (RPA); measurements for the same tree are separated by '–' (e.g. 120-140-100);

5. **Crown Spread:** Measured in metres at compass points (e.g. N, E, S, W); dimensions are taken from centre of trunk to edge of canopy; 'up to' crown spreads will be shown with a repeated number;

6. **Crown Clearance:** Height in metres to lowest branch foliage from ground level;

7. **Age Class:**
   - **Young** (**Y**) (less than 1/3 through typical life expectancy for species);
   - **Middle aged** (**MA**) (from 1/3 to 2/3 through typical life expectancy for species);
   - **Mature** (**M**) (over 2/3 through typical life expectancy for species);
   - **Over mature** (**OM**) (beyond typical life expectancy for species);
   - **Veteran** (**V**) (of biological, cultural or aesthetic value, usually appears beyond typical age range for species);
   - **Various** (**VAR**) (contains more than one of the above classes);

8. **Physiology:** Considered to be one of the following: **Average** (**A**) / **Below average** (**B**) / **Low** (**L**) / or **Dead** (**D**);

9. **Structure:** Considered to be one of the following: **Good** (**G**) / **Moderate** (**M**) / **Indifferent** (**I**) / **Poor** (**P**) / or **Hazardous** (**H**);

10. **Comments:** A description of general form, including presence of physical defects, disease or decay and other appropriate details based on vitality, context, potential and overall structural integrity;

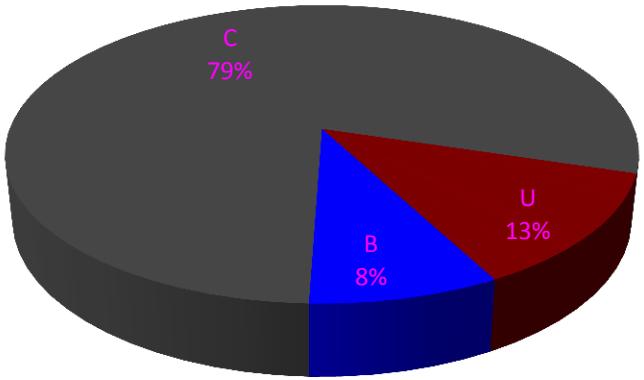
11. **BS 5837:2012 Category:** Each individual tree, group or collection is assigned a category as defined in Table 1 of BS5837:2012; (Note: a combined rating may be applied where individuals gain a higher category as part of a group or collection);
    - U: Trees recommended for removal; in such a condition that any existing contribution would be lost within 10 years; shown with a red canopy edge on First Environment plans;
    - A: Trees of high quality and value; likely to make a substantial contribution for at least 40 years; shown with a green RPA on First Environment plans;
    - B: Trees of moderate quality and value; likely to make a significant contribution for at least 20 years; shown with a blue RPA on First Environment plans;
    - C: Trees of low quality and value; could remain for at least 10 years until new planting has established; young trees with a stem diameter < 150mm; shown with a grey RPA on First Environment plans.

Note: This schedule does not constitute a health and safety survey. Appropriate additional inspections should be conducted for matters pertaining to health and safety or duty of care requirements.

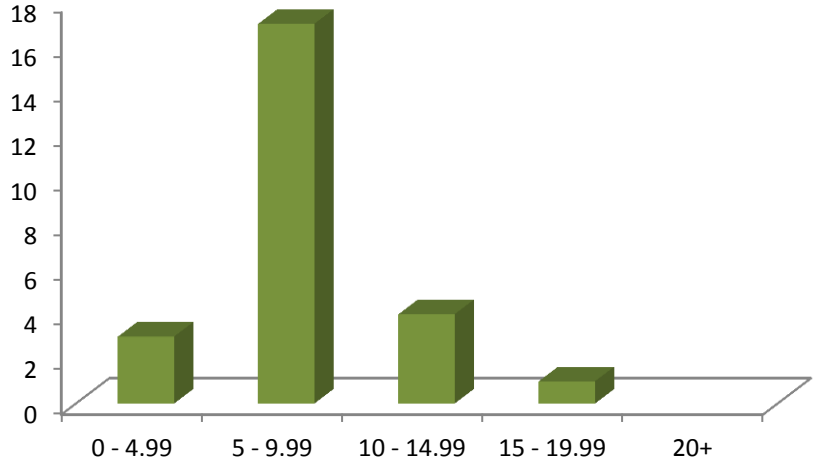
BS 5837:2012 Tree Schedule

Quick Reference Guide for Survey Data

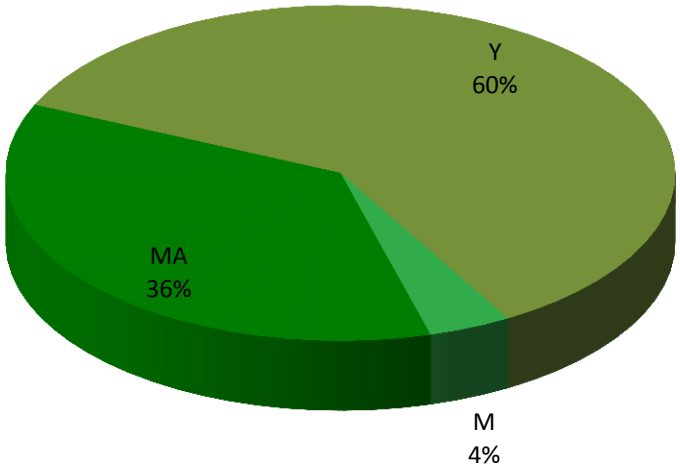
Individual Trees by Category:



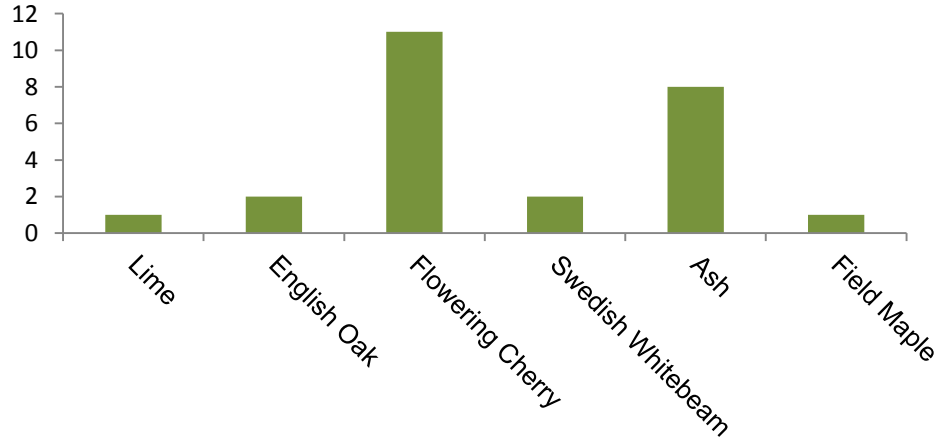
Individual Trees by Height:



Individual Trees by Age:



Individual Trees by Species:



Tree No.	Species	Height (m)	Trunk Diameter (mm)	CS N (m)	CS E (m)	CS S (m)	CS W (m)	Crown Clearance (m)	Physiological Condition	Structural Condition	Age Class	Comments	Category
1	Lime	6	185	2.5	2.5	2.5	2.5	1.75	A	A	Y	Single trunk; structure typical for species; establishing ornamental planting at its current height and size readily replaceable.	C1
2	English Oak	10	925	7	7	7	7	3.5	A	P	M	Single stout trunk; many impact injuries at base leading to callus growth and swelling of trunk bole up to a height of 3m; stout trunk form; forks at 2m into 2 stems; junction point appears sound; epicormic growth throughout scaffold and into upper canopy; crown significantly one sided, hangs over adjacent road; extremely poor structure and visual evidence of poor past management/pruning; unlikely to be of long term potential; no particular arboricultural quality.	C12
3	Flowering Cherry	5	200	1.75	1.75	1.75	1.75	2	BA	BA	Y	Single trunk with slight lean from base; old fungus at base-consistent in visual appearance with *Ganoderma adspersum;* second bracket above this again consistent with *Ganoderma adspersum* ; small street tree of no particular arboricultural cultural quality or value; readily replaceable.	C12
4	Flowering Cherry	4	75	0.5	0.5	0.5	0.5	1	A	A	Y	Collection of 3 recently planted Flowering Cherry trees; at current height and size of no particular arboricultural quality or value; readily replaceable.	C12
5													
6													
7	Flowering Cherry	6	195	3	3	3	3	2	BA	BA	Y	Single upright trunk; grows on grafted root stock, which is swollen at base; visual evidence of surface rooting on all sides up to 1.5m from trunk base; small fungus visible in old impact injury consistent in appearance with *Hypholoma fasciculare* ; established street tree of no particular arboricultural quality.	C1
8	Swedish Whitebeam	7.5	440	4.25	4.25	4.25	4.25	1	A	A	MA	Single upright trunk; structure above typical for species type; low level spreading crown in all directions; established ornamental tree with no clear visual indication of any pathogens or physiological defects; visible for some distance along the adjacent high way; as long as appropriate management maintained capable of making some future contribution.	B12
9	Swedish Whitebeam	5	465	4.5	4.5	4.5	4.5	1.25	A	A	MA	Single upright trunk; structure above typical for species type; low level spreading crown in all directions; established ornamental tree with no clear visual indication of any pathogens or physiological defects; visible for some distance along the adjacent high way; as long as appropriate management maintained capable of making some future contribution.	B12
10	Flowering Cherry	5.5 to 7.5	310-185	2.5	2.5	2.5	2.5	2	A	A	Y	Collection of 6 of ornamental plantings; all of slightly different cultivars; however all of indifferent structure; visible as a collection and individually for short distances along the adjacent highway; none of any in particular arboricultural quality or merit.	C12
11			200										
12			180										
13			210										
14			160										
15			190										

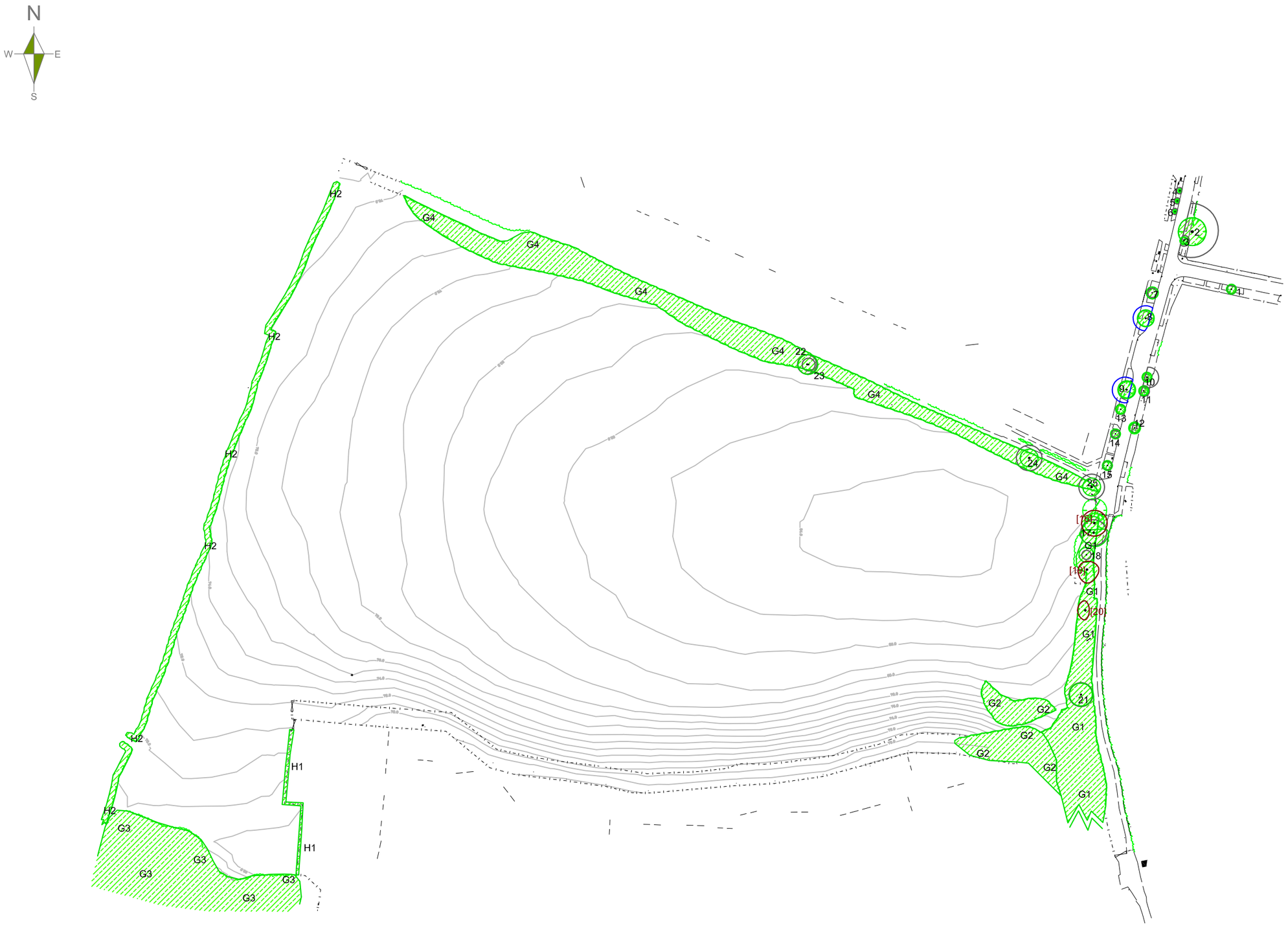
Tree No.	Species	Height (m)	Trunk Diameter (mm)	CS N (m)	CS E (m)	CS S (m)	CS W (m)	Crown Clearance (m)	Physiological Condition	Structural Condition	Age Class	Comments	Category
16	Ash	12	620	6.5	6.5	6.5	6.5	3	P	P	MA	Single upright trunk; forms multiple stems between 1.5 and 2.5m; main scaffold above contains significantly above average amount of deadwood throughout; below average leaf size; tree shows distinct visual indications of being stressed to some degree; fungal brackets evident within the main scaffold consistent in appearance with *Inonotus hispidus* ; significantly reduced potential and unlikely to have value in 10 years.	U
17	English Oak	14	545	1.5	7.5	7	7	2	A	P	MA	Established likely self-seeded tree; likely former hedgerow specimen; single trunk with significant quantities of barb wire absorbed into trunk on W side and in contact to E; several thick stems of Ivy extend up N/S/E sides of the tree and obscure majority of scaffold; crown break is at c.2m; scaffold to N has been entirely supressed by adjacent specimen which also has limb that grows into central regions of this tree; of extremely bad form; canopy has below average extension growth and some die back; leaf size slightly below average; overall tree of poor form and reduced vitality; due to presence of adjacent vegetation is likely to be clearly visible views across site to W and short distances of adjacent footpath.	C12
18	Ash	6	195	3.75	3.75	3.75	3.75	2	A	P	Y	Established likely self-seeded tree growing on bank, which appears to have originally been created from spoil; has barb wire absorbed into stem at c.1m and 1.5m on W side; forms dominant SE/sub-dominant NW stems at 1.75m; both of these stems initially grow slightly S due to competition when tree was younger from adjacent remainder or hedgerow; now overtops hedge but is still of poor form; canopy appears typical of species within this context; but unlikely of any potential.	C12
19	Ash	7.5	695	4.25	6	6.75	4.5	2	L	P	MA	Growing from edge of bank that appears to have been created by spoil; trunk partially obscured by thick Ivy stems particularly to W; remains of numerous fungal fruiting bodies consistent in appearance with Inonotus hispidus can be found on ground to W and S and on trunk; majority of scaffold entirely obscured by very dense Ivy; overall form suggests previous limb loss; significant die back in lowest limb to W; extension growth within crown appears below average although density is good; sheer number of fungal brackets and age range suggest a serious and well established pathogenic infection within trunk of specimen which is likely to result in its early loss.	U

Tree No.	Species	Height (m)	Trunk Diameter (mm)	CS N (m)	CS E (m)	CS S (m)	CS W (m)	Crown Clearance (m)	Physiological Condition	Structural Condition	Age Class	Comments	Category
20	Ash	10	575 over Ivy	4.75	2	4.75	4	3	A	P	MA	Established likely self-seeded tree growing adjacent to spoil heap; initially single trunk; forms dominant S/sub-dominant N stems at c.1.5m; very thick Ivy stem arising on NW quarter and only partially obscuring trunk but developing into a significant feature where it obscures the entire scaffold; highly atypical crown shape; likely that several limbs on E quarter have been lost; cannot be clearly seen but remains of several pieces of deadwood extend beyond the Ivy; likely majority of N stem is dead; crown that does form forms mainly from the S stem and has below average leaf size and extension growth; likely to be visible S for some distance along adjacent foot path and over other vegetation to E; largely obscured by other trees to N but will be visible across site to W; of poor form and likely significant reduced potential; could just make category C if Ivy were to be removed, but tree should not form a constraint for development.	U
21	Field Maple	15	505 over Ivy	5.75	5.75	5.75	5.75	2	A	I	MA	Established likely self-seeded specimen; single trunk growing from base of deposited spoil; likely tree was here first; significant Ivy stems arise on W quarter with Ivy obscuring central scaffold; trunk has an old wound extending from c.0.25 to 0.75m on E quarter; almost fully occluded therefore cannot inspect; forms multiple stems at c.2.5m with most dominant to S; canopy appears typical for species within this context; one of the more established trees on this length of the boundary; due to adjacent topography is unlikely to be individually prominent but will be visible for long distances to S; also from adjacent footpath to E and across site to W/N; established tree of some potential; should be retained for benefits it currently provides.	C12
22	Ash	8	170-300-210 over Ivy	5	5	5	5	2	A	P	Y	Pair of established likely self-seeded trees growing from within G4; T22 appears to have been coppiced in past but T23 has a single trunk; both heavily suppressed by adjacent specimens E-W in line and lifted/cut back from foot path from N and site to S; of not particular arboricultural quality but adds height to screen.	C12
23	Ash	7	270 over Ivy										
24	Ash	9	3 x 310	4.5	4.5	4.5	4.5	2	A	P	MA	Pair of established trees growing from within G4; both have multiple stems from at/near grown level suggesting they have been coppiced in past; canopies form primarily above adjacent hedgerow; scaffold obscured by dense Ivy; 2 trees of poor form and likely significant reduced potential; add height to screen provided by G4; likely to be visible for some distance from residential properties to N along road.	C12
25	Ash												

Tree No.	Species	Height (m)	Trunk Diameter (mm)	CS N (m)	CS E (m)	CS S (m)	CS W (m)	Crown Clearance (m)	Physiological Condition	Structural Condition	Age Class	Comments	Category
H1	Various	2.5	80	1.5	1.5	1.5	1.5	0	A	I	Y	Collection of Hawthorn, Blackthorn, Holly, Rose, Hazel; establishing recently planted hedge on far side of boundary fence between proposed site and recent development; establishing feature; likely to be of long term potential if appropriately managed/maintained; currently only providing low level screening benefits between open space & drainage attenuation feature to E and proposed site to W.	C12
H2	Hawthorn, Blackthorn	7	5 x 185	4.75	4.75	4.75	4.75	0	A	I	MA	Established boundary hedgerow growing along W boundary of site; does not appear to be subject to regular maintenance; large number of tracks have been worn by livestock both through hedge and underneath canopies on E site likely for shelter in bad weather; entire area is heavily compacted; feature has began to grow out into field with self-seeded Rose and Hawthorn being most prominent; currently forms a dense low level screen on boundary; likely to be clearly visible across site to E for residential properties to SE and longer distances to W; likely to benefit from more frequent management and gapping up; height should be reduced to c.3m; faces cut back to c.2.5m from trunks to asset renovation of hedgerow and aid future management; receives category B for a combination for its long range visibility and suitability within setting.	B12
G1	Various	7	3 x 125	3	3	3	3	0	A	I	MA	Likely to once have been an established field boundary hedge; has not been regularly been maintained in the recent past leading to loss of value; species include Hawthorn, Blackthorn with some self-seeded/invasive Ash and Rose; due to lack of maintenance has lost density in lower regions and has become fragmented by access ways and loss of some specimens therefore of low quality; could be significantly improved but would require gapping up; currently provides low level screening benefits between footpath to E and site to W; but is unlikely to be visually significant for long distances in any direction.	C12
G2	Various	5	4 x 50	2.75	2.75	2.75	2.75	0	A	I	Y	Collection of established likely self-seeded trees; forming small pocket of scrub within site and extending up to boundaries to S; species include Field Maple, Hawthorn; with significant quantities of Bramble and Rose particularly in S section of collection; would provide some screening benefits to new residential developments to S; only likely to be of visual significant to S/SW from that development; although can be seen from within site to N and adjacent foot path to E/SE.	C12
G3	Various	8	225	4.5	4.5	4.5	4.5	0	A	I	MA	Species include Bastard Service, Hawthorn, Blackthorn, Rose; established block of vegetation just inside S site boundary growing of tall bank between site and canal; all trees show significant mutual suppression; otherwise typical of species in this context; currently provides dense low level screening benefits; if appropriately managed/ maintained is capable of making a significant future contribution.	C12

Tree No.	Species	Height (m)	Trunk Diameter (mm)	CS N (m)	CS E (m)	CS S (m)	CS W (m)	Crown Clearance (m)	Physiological Condition	Structural Condition	Age Class	Comments	Category
G4	Various	4	2 x 180	3.75	3.75	3.75	3.75	0	A	I	MA	Collection of established specimens growing along N boundary; appears to be mix of established hedgerow and self-seeded specimens extending into field; grows between public foot path/vehicle access to N and site to S; due to lack of regular maintenance and unclear boundary lines appears to extend varyingly into the site; species is predominantly Hawthorn to W end with more Blackthorn apparent through central and E sections; also contains Ash and Apple; heavily mutually supressed feature which would benefit from regular maintenance regime to assist in retaining low level density to maximise screening benefits - particularly within thicker W end there is significant amounts of compaction and disturbance below canopies, which appears to be a mixture of human and live stock; overall of quite poor form for a hedgerow/boundary feature but does provide a dense low level screen; due to adjacent topography is unlikely to be significant in long distance views but will undoubtedly be visible from some points; however provides significant short range screening benefits and should be retained in any proposed development; however would benefit from significant/hard flail cutting on S face.	C12

Appendix C Tree Location Plan (FE TL 01)



Tree Categories and Root Protection Areas (RPAs)

Surveyed trees have been assigned a category in accordance with Table 1 of BS 5837:2012 'Trees in Relation to Design, Demolition and Construction'. The category is indicated on First Environment plans by the colour of the Root Protection Area (RPA).The RPA delineates the minimum rooting area required to enable tree retention. The categories are as follows:

- Category 'A' - Tree of high quality and/or value - **Green RPA**
- Category 'B' - Tree of moderate quality and/or value - **Blue RPA**
- Category 'C' - Tree of low quality and/or value - **Grey RPA**
- Category 'U' - Tree of significantly reduced potential - no RPA unless in third party ownership, then **Grey RPA**.

KEY:

Tree Nos.:	21	Tree Canopies:		Category 'U' Trees:	[20]
Category 'B' RPA:		Category 'C' RPA:			

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Project/Client:

Glen Parva
Manor Oak Homes

Based On: Topo

Title: Tree Location Plan

Drawing No: FE TL 01

Date: 01.10.13 | Drawn: MB | Checked: xx

Note: The original of this drawing was produced in colour - a monochrome copy should not be relied upon.