



Arborist Associates Ltd

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Ref: ECK07896679

17th December 2018

For the attention of Ms. Nora Shortall

JFOC Design & Planning
11A Greenmount House
Harolds Cross
Dublin 6W

Dear Ms. Shortall,

**Re: An Arboricultural Assessment of the Site Area for 'Phase 3 Earls Court',
Kill, Co. Kildare.**

I have assessed the revised proposed development layout drawings forwarded to me for the above site as requested and I am pleased to submit my report and drawings which gives details of my findings.

Recommendations and comments made in this report are subject to the knowledge and expertise of the qualified Arboriculturist that carried out the assessment and their understanding of the proposed development works.

If you require further information please do not hesitate to contact us, and we will do our best to be of assistance.

Yours sincerely,
For Arborist Associates Ltd.

Felim Sheridan

Felim Sheridan
F. Arbor. A, RFS Dip, Nat. Dip & NCH in Arboriculture.

Felim Sheridan's qualifications:

Fellow of the Arboricultural Association (F. Arbor. A), Professional diploma Arboriculture (RFS), National diploma Arboriculture (ND) and National certificate Horticulture (NCH).

Arborist Associates Ltd.

An Arboricultural Assessment of the Site Area for 'Phase 3 Earls Court', Kill, Co. Kildare.

Prepared for: JFOC Design & Planning

**Prepared by: Felim Sheridan F. Arbor. A, RFS Dip, Nat. Dip & NCH in
Arboriculture**

Date: 17th December 2018

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1.0 Instructions

1.1 I have been instructed by JFOC Architects (project architects) to prepare an arboricultural report on the tree and hedge vegetation within the site area for 'Phase 3' of Earls Court Development, Kill, Co. Kildare and to report on the following:

- A -** To assess the present condition of the tree vegetation within this site area. See condition tree assessment schedule within 'Appendix 2' of this report and drawing 'No.ECK001' which has been prepared as a constraints drawing for details.
- B -** To assess the impact of the proposed development layout on the tree vegetation located within the site area indicating those for removal and retention. See 'Section 5' of this report and drawing 'ECK002' for detail.
- C -** To show on this drawing (No.ECK002) the position of the line of protective fencing that is to be erected around the trees to be retained at the very start of the works and be maintained until all construction works are complete.

2.0 Report Limitations

2.1 The inspection of the tree vegetation on this site area was carried out in November 2017 and this information has been used within this review of the proposed development on this site area. The assessment of the trees was carried out from ground level only, is a preliminary report and does not include climbing inspections, internal investigations of the timber or below ground investigations. The assessment was based on what was visible at the time of the inspection and recommendations made are subject to the knowledge and expertise of the qualified Arboriculturist that carried out the above inspections.

2.2 This report only relates to factors apparent at the time of the inspection; as a result, further monitoring is imperative if potential problems/hazards are to be avoided. The recommendations within this report are valid for a 12 month period only, unless otherwise stated.

2.3 Before undertaking any work to these trees, it would be advisable to check whether any planning or tree preservation controls are in operation, if they are it will be necessary to obtain consent before undertaking any works (pruning or felling).

3.0 Survey Data Collection and Methodology

3.1 The Arboricultural data which is presented within the attached tree schedule (see appendix 2), has been recorded in line with BS 5837:2012. The tree survey was conducted by collecting and assessing the following information on all significant trees located on site and plotted on the land survey map provided.

- Tree Number (metal tags attached to each tree).
- Tree species both common and botanical.
- Dimensions (Trunk diameter, height, crown spread and crown clearance).
- Age Class
- Physiological Condition
- Structural Condition
- Preliminary Recommendations
- Estimated remaining contribution within their present environment
- Retention category/category grade

3.2 Each tree included within this assessment has been marked with a small aluminum tag with a reference number that relates to the main condition report.

3.3 The inspection of the trees involves a visual assessment from ground level only and does not include any invasive means of assessing the trees internally, their below ground parts or the aerial parts that are not visible from the ground. Good, fair and poor have been used to summarize the physiological and structural conditions of these trees with the comments giving more detail. Other items that may limit the assessment of a tree included lvy cover, scrub vegetation and/or basal suckers.

3.4 Their retention category has been assessed and categorized according to their quality and value within the existing context (BS-4.5), and not in conjunction with any proposed development plans. In making this assessment, particular consideration was given to;

Arboricultural Value: An assessment of the trees health, structural form, life expectancy, species and its physical contribution to or affects on other features located on site.

Landscape Value: An assessment of a trees locality including its contributions to other features as well as to the site as a whole.

Cultural Value: Additional contributions made such as conservation, historical or commemorative value.

3.5 The trees have been divided into one of the following categories, in accordance with the cascade chart illustrated in table 1 of BS 5837:2012. The classification process begins by determining whether the tree falls within the (U) category, if not then the process will continue by assuming that all trees are considered according to the criteria for inclusion in the high category (A). Trees that do not meet these strict criteria will then be considered in light of the criteria for inclusion

in the moderate category (B) and failing this, they will be allocated a low category (C).

The following summarizes each of the categories:

Category U – Those trees in such a condition that any existing value would be lost within 10 years.

These would be seen as trees that have little or no potential either due to their physiological and/or structural condition and their removal would be seen necessary either now or in the short-term as the most appropriate management option.

The category 'U' trees have been identified on our drawings (Nos. ECK001 & ECK002) with a 'Red' donut around their trunk positions. Due to the condition of these trees, they should not be considered a constraint on the design layout of the proposed development of this site area.

Category A - Trees of high quality/value with a minimum of 40 years life expectancy.

These would be seen as trees that have the potential to contribute to the tree cover of these grounds for the long-term and consists of trees of all age classes from semi-mature to mature.

The category 'A' trees have been identified on our drawings (Nos. ECK001 & ECK002) with a 'Green' donut around their trunk positions.

Category B – Trees of moderate quality/value with a minimum of 20 years life expectancy.

These would be seen as trees that have the potential to contribute to the tree cover of these grounds for the medium term and consists of trees of all age classes from semi-mature to mature.

The category 'B' trees have been identified on our drawings (Nos. ECK001 & ECK002) with a 'Blue' donut around their trunk positions.

Category C – Trees of low quality/value with a minimum of 10 years life expectancy

These trees would be seen as having the potential to provide tree cover for the short to medium term. As part of the future management, most of these would probably be removed for one

reason or another. This category consists of trees of all age classes from young to mature. These trees should not be seen as a considerable constraint on the development of these lands, but should be considered for retention where viable.

The category 'C' trees have been identified on our drawings (Nos. ECK001 & ECK002) with a 'Grey' donut around their trunk positions.

- 3.6 The trees have been plotted onto the attached drawing (Dwg No.ECK001) by a land survey company and their positions are assumed accurate. This drawing has been developed as a constraints drawing to aid the design team in the layout of the development and the tag numbers referred to in the condition tree report have been shown on this drawing along with their crown spreads and their retention category colour coded as recommended by BS 5837 2012. The constraint (Minimum Root Protection Area) for each tree has been shown with an 'Orange Circle' and all proposed development should be planned to be positioned outside those trees proposed for retention allowing for additional space for construction activities.

The Root Protection Area (RPA) is the minimum area around individual trees to be protected from disturbance during construction works; RPA is usually expressed as a radius in metres measured from the tree stem.

Any deviation in the RPA from the original circular plot takes account of the following factors whilst still providing adequate protection for the root system:

- a) The morphology and disposition of the roots, when influenced by past or existing site conditions (e.g. the presence of roads, structures, drainage ditches and underground apparatus);
- b) Topography and drainage;
- c) The soil type and structure;
- d) The likely tolerance of the tree to root disturbance or damage, based on factors such as species, age, condition and past management.

4.0 Summary of Survey Findings

- 4.1 The survey area is located on lands to the east of the existing Earls Court development and extends eastwards to the foot of 'Kill Hill'. It is adjoined along its northern boundary by a roadway and to the south by lands in agricultural use. The site area itself is managed in grass/grazing.
- 4.2 Hedgerows form the boundaries with the adjoining lands/properties and also the boundaries internally between the three fields that make up this site area. These are made up predominantly of Hawthorn, Elder, Blackthorn with some Euonymus, Privet and Holly with Bramble and Dogrose dominating the lower vegetation within these hedges and along with Blackthorn in places have

encroached out in places to create broader hedges. For the most part, the hedges have received some maintenance in recent years, in particular to trim their sides to help contain encroachment and this has helped in maintaining a good stock proof hedge structure although most have been re-enforced with fencing.

- 4.3 Within these hedgerows, there are a number of trees that protrude up over these hedges and these include Ash, Oak and Sycamore ranging in age from semi mature to mature and some are of prominence within the treescape of this area.
- 4.4 Within this site area, 40 trees were tagged individually (0837-0876), three individual trees and six hedges were all numbered numerically. The following table gives a breakdown of their category grading allocation as per BS5837 2012:

Category Grade	No. of trees
Category U 3 trees	Tree Nos. 0853, 0858 & 0872
Category A 5 trees	Tree Nos. 0868, Tree 3, 0869, 0871 & 0873.
Category B 21 trees	Tree Nos. 0837, 0838, 0842, 0843, 0846, Tree 1, 0854, 0855, 0856, 0857, 0859, 0860, 0861, 0862, 0863, 0864, 0866, 0867, Tree 2, 0870 & 0876.
Category C 14 trees + 6 hedges	Tree Nos. 0839, 0840, 0841, 0844, 0845, 0847, 0848, 0849, 0850, 0851, 0852, 0865, 0874 & 0875. Hedge Nos. 1, 2, 3, 4, 5 & 6.
Total	43 trees + 6 hedges

5.0.0 Arboricultural Implication Study

5.1.0 Introduction

- 5.1.1 It is being proposed to develop this site area for a new residential development and it will also be necessary to allow for infrastructural works such as services.
- 5.1.2 This section of the document is designed to assess the impact of the proposed development layout on the tree vegetation within this site area and to look at the necessary measures that will need to be undertaken to help retain the trees shown for retention free from adverse impacts for the duration of the construction period.
- 5.1.3 On drawing No.ECK002, I have identified the tree vegetation to be removed to facilitate this proposed development and as part of management with 'Red Hatched' crown spreads and those to be retained to form part of the long-term tree cover on these grounds with a 'Green Hatched' crown spread. The protective fencing has been shown on this drawing using 'Orange Hatching' and this will need to be erected at the start of the works and be maintained in place until all works are completed. This fencing is to protect the root zone of the trees and to ensure their successful integration into the development of these grounds.
- 5.1.4 The comments made within this impact assessment study are based on my understanding of the proposed development layout and what is required to allow for its construction. Any errors or omissions in my understanding of this project should be brought to my attention by the project team.

5.2.0 Impact Assessment

5.2.1 The following table gives a breakdown of the tree and hedge vegetation that will need to be removed as part of management or to facilitate the proposed development:

Category Grade	No. of trees for removal
Category U 2 trees	Tree Nos. 0853 & 0858
Category A 0 tree	-
Category B 8 tree	Tree Nos. 0837, 0838, 0842, 0843, 0846, Tree No.1, 0854 & 0864.
Category C 10 trees	Tree Nos. 0839, 0840, 0841, 0845, 0847, 0848 & 0849,0850,0851,0852. Hedge Nos.1, 2, c.50 of Hedge No.3 & Hedge No.4.

So in summary, to facilitate the proposed development on these lands, 20 out of the 43 trees included within this site area along with three entire hedges (Nos.1, 2 & 4) and a short section of hedge No.3 at the northern end need to be removed.

The loss of this tree and hedge vegetation is to be mitigated against within the completed landscaped development with new tree, shrub and hedge planting. See landscape architects drawings and schedules for detail. Any negative impacts from the loss of the above tree and hedge vegetation will be mitigated against by this new planting within the completed landscaped development.

5.2.2 Tree retention

The remaining tree and hedge vegetation is to be retained and incorporated into the completed development. To incorporate this retained hedge vegetation into the completed landscaped development, it will be necessary to carry out some trimming to tidy up the hedges and allow for new boundary treatments which will consist of a fence type. Once tidied up and cleaned out, these boundary hedges are to be augmented with similar native tree and hedge species to help bulk them up.

The trees retained will require remedial tree surgery works carried out to deal with current physiological and structural issues and to promote safety to the end users of this completed development. These pruning works are relatively minor and will not impact significantly on the visual appearance of these trees. It will

include such works as removing deadwood and lightening end loading on heavy side limbs/branches to lessen the risk of damage in winds. A preliminary list of these works is given within the condition assessment report within 'Appendix 2'. Prior to these works being carried out, they will need to be reviewed on site by the project Arboriculturist and a final schedule of works drawn up for agreement which should not change significantly.

All tree works both felling and pruning will need to be carried out by a competent tree surgery firm to the recommendations of BS3998 2010.

- 5.2.3 **Services** – I have reviewed the proposed services for this site area and based on this and my understanding of these service drawings, the impact on the tree and hedge vegetation being retained is minimum. See project engineer's drawings for detail on the service routes.

The existing field drainage ditches will need to be piped and filled to incorporate these areas into the completed landscaped development particularly along hedge No.3 where there is a deep drainage ditch. These ditches need to be filled with a large clean stone and finished off with a layer of soil for seeding. Care will be needed during these works to ensure ground levels are not raised over the existing levels and that there are no other impacts on the tree and hedge vegetation.

Prior to the installation of any services to be routed near the trees or hedges to be retained, these are to be marked out on site for review by the project Arboriculturist and a detailed method statement is to be prepared by the installation contractor in conjunction with the project Arboriculturist on how these services are to be installed while providing protection to the tree vegetation shown for retention.

- 5.2.4 **Boundary Treatments** – It is my understanding that the boundary treatments along by the tree and hedge vegetation to be retained is of a fence type structure which will have minimal impact on the vegetation. In some places, it will be necessary to cut back the hedge vegetation particularly where it encroaches out into the site area to allow for the erection of these fences. See Landscape architects drawings for detail.

By using fence type structures for the boundary treatments, there will only be a need to excavate holes for the uprights within the root zone of the tree and hedge vegetation to be retained. The holes for the uprights will need to be dug manually with no machinery allowed inside the root protection areas. Work zones within the root protection areas for these trees will need to be protected during the construction of the boundary fences by boarding as per section 6.2.3 of BS 5837 2012.

- 5.2.5 **Landscaping** - This is being kept simple around the tree and hedge vegetation being retained. The existing ground levels within the 'RPA' of the trees are to be retained and incorporated into the finished landscaped areas. Where changes in

levels occur, these are to be either graded into the finished levels starting outside the 'RPA' or alternatively, retaining wall structures are to be used differentiating between the different levels.

All soft and hard landscaping within the 'RPA' of the tree and hedge vegetation to be retained is to be carried out manually and the soil levels are not to be lowered or raised resulting in root damage to the trees. All surfaces are to be porous to allow the free movement of air and moisture to the roots below.

Recommendations of 'Sections 8 of BS5837 2012' are to be adhered to during the landscaping within the RPA's of these trees.

5.3.0 Main items for consideration during the proposed development/ construction works are:

Item	Comments
Tree Pruning & Removal	<p>As part of the initiating works, the crowns of some of the trees are to be pruned to clean out dead/unstable growth, the pruning of individual limbs/branches or entire crowns to reduce size due to structural weaknesses or to improve their juxtaposition within the built environment. A preliminary list of these works is given within the condition tree assessment in 'Appendix 2' of this report and these are to be reviewed on site prior to being carried out.</p> <p>All tree felling and pruning work need to be carried out by qualified and experienced tree surgeons <i>before</i> any construction work commences; all tree work should be in accordance with <i>BS3998 (2010) Tree Work – Recommendations</i>.</p> <p>All trees for removal will need to be felled to stumps and all stumps in particular those which are located within the root zone of trees being retained are to be ground out using a mechanical stump grinder taking care not to cause root damage to the trees being retained.</p>
Tree Protection	<p>Protective fencing needs to be erected prior to the construction works commencing on site to enclose the root protection area around the trees to be retained as per drawing 'No.ECK002'. This is to be marked out on site by the project Arboriculturist and once erected; it is to remain in place for the duration of the project. See sample of Tree Protection in 'Appendix 1'.</p>
Construction	<p>Trees being retained will need to be protected from unnecessary damage during the construction process by effective construction-proof barriers that will define the limits for machinery drivers and other construction staff.</p>

Item	Comments
	<p>Ground protected by the fencing will be known as the 'Work Exclusion Zone' and sturdy protective fencing will need to be erected along the points identified in the Tree Protection Plan (Dwg No.ECK002) prior to any soil disturbance and excavation work starting on site. This is essential to prevent any root or branch damage to the retained trees. The British Standard BS5837: <i>Trees in relation to design, demolition and construction (2012)</i> specifies appropriate fencing, see 'Appendix 1' for details. All weather notices should be erected on the fences with words such as: "Tree Protection Fence — Keep Out".</p> <p>When the fencing has been erected, the construction work can commence. The fencing should be inspected on a regular basis during the duration of the construction process and shall remain in place until heavy building and landscaping work have finished and its removal is authorised by the project Arboriculturist.</p> <p>All construction works will need to be well planned in advance so as not to put pressure on the protective zone around the trees.</p> <p>All works will need to occur from outside the protective zones. If any works need to occur from within the root protection areas, for example for scaffolding, the ground within these areas required for these works will need to be protected by boarding to the recommendations of section 6.2.3 of BS5837 2012. See 'Appendix 1' for detail.</p> <p>Work Yards, Storage of Material, Staff Car parking, Site Huts</p> <p>This site is of sufficient size to facilitate these without a need to encroach into the RPA of the trees being retained. The areas where these are to occur, need to be identified on the work drawings prior to the construction work commencing.</p> <p>Where work space between the building lines and the protective fence lines is limited/ restricted, alternative work methods will need to be looked at so as to keep the work areas to their minimum and to reduce the extent of soil and root damage occurring to the trees proposed for retention. See section 6.2.3 of BS5837 2012 for detail on working within the RPA and ground protection.</p>
Services	<p>See engineer's drawings for detail on service routes.</p> <p>Prior to the installation of any services, these will need to be marked out on site for review by the project Arboriculturist and a</p>

Item	Comments
	detail method statement will need be to be prepared by the installation contractor in conjunction with the project Arboriculturist on how these services are to be installed while providing protection to the tree vegetation shown for retention.
Boundary Treatments	<p>The boundaries along the tree vegetation being retained are to be of a fence type structure and it will be necessary to carry out some trimming of the hedge vegetation to facilitate the new fences.</p> <p>The works on the boundaries within this work exclusion zones will need to be carried out manually with no machinery allowed access and the ground required during the works will need to be protected from damage/compaction using ground protection supplied by scaffold planks or similar laid on a bed of wood chip.</p>
Landscaping	<p>The existing ground levels within the RPA of the tree vegetation are to be retained and incorporated into the finished landscaped development. Where changes in levels need to occur, these are to be either graded into the finished levels starting outside the RPA or alternatively, retaining wall structures are to be used differentiating between the different levels.</p> <p>All soft and hard landscaping within the RPA of the tree vegetation to be retained are to be carried out manually and the soil levels are not to be lowered or raised resulting in root damage. All surfaces are to be porous to allow the free movement of air and moisture to the roots below. Recommendations of sections 8 of BS5837 2012 are to be adhered to during the landscaping within the RPA's of the tree vegetation to be retained.</p>

5.4.0 Monitoring

- 5.4.1 Any construction works within close proximity to retained trees and hedge vegetation is advised to be undertaken in accordance with approved method statements prepared by the construction contractor under the direct supervision of a qualified consultant Arboriculturist. Therefore, during the construction works, a professionally qualified Arboriculturist is recommended to be retained by the principal contractor or site manager to monitor and advice on any works within the RPA of retained trees to ensure successful tree retention and planning compliance.
- 5.4.2 It is advised that tree protection fencing, any required special engineering and supervision works must be included in the main tender documents, including responsibility for the installation, cost and maintenance of tree protection measures throughout all construction phases.

- 5.4.3 Copies of the tree retention and protection plan (Dwg No. ECK002) a copy of BS 5837(2012) and NJUG 4 (2007) should all be kept available on site during the construction works and all works are to be in accordance with these documents.
- 5.4.4 On the completion of the construction works, all trees and hedge vegetation retained are to be reviewed by the project Arboriculturist and any necessary remedial tree surgery works required to promote the health of the trees and safety are to be implemented.

6.0 Arboricultural Method Statement/Tree Protection Strategy

- 6.1 The objective of this arboricultural method statement/tree protection strategy is to provide information for the main building contractor/site manager on how trees need to be protected during a construction project and so that they can prepare their own site specific detailed method statement for their works.

- 6.2 It is necessary for tree protective fencing to be erected and all other mitigation measures required to be put in place prior to the development works commencing on site and these are to enclose and protect the root zone of the tree vegetation proposed for retention. See drawing Dwg No.ECK002, for the position of the protective fencing and other mitigation measures.

- 6.3 The protection of the tree vegetation shown for retention within this proposed development is divided into three main sections starting with the preconstruction stage right through to post construction and the reassessment of the retained trees.

Stage 1

6.4.0 Pre-Construction Works

- 6.4.1 Prior to the main construction works commencing on site the following needs to be planned:
1. The developer or main contractor needs to appoint an Arboriculturist for the duration of the project. The Arboriculturist is to make regular site visits to ensure that the tree protection measures are in place and adhered to.
 2. The main contractors and all sub-contractors work force are to be briefed on the tree protection and ensure that these measures are to be kept in place throughout the construction period.
 3. All personnel are to adhere to the recommendations of the appointed Arboriculturist.
 4. Any issues in relation to the trees shown for retention must be discussed with the appointed project Arboriculturist and the necessary mitigation measures put in place without delay and prior to the works being carried out.

6.5.0 Site meeting

- 6.5.1 Prior to any works commencing on site, it is necessary that a meeting be arranged between the project manager, site foremen, the project Arboriculturist and local authority to identify and finalize the trees for removal and the line of the protective fencing.

6.6.0 Tree works

- 6.6.1 The developer or the main contractor is to appoint a tree surgery company competent of carrying out the remedial tree surgery works and tree felling that are required on this site. The tree surgery contractor is to produce a method statement detailing how he plans to undertake the works and informing the site foreman of the process so the necessary steps can be taken to ensure the works are carried out safely and efficiently. The works are to be carried out by appropriately trained personnel taking account of the recommendations of BS3998 2010.
- 6.6.2 **Tree removal** - Trees for removal are to be identified by the project Arboriculturist and the method of removing the stumps is to be carried out to the recommendations of the project Arboriculturist. The trees in the way of the development layout are to be removed in such a manner not to cause damage to those being retained. Where necessary to avoid damage to the trees to be retained, these are to be removed in sections by a tree surgeon (Arborist). Where necessary, the roots and stumps are to be dug out with a digger except where the stumps are located within the RPA (root protection area) of trees being retained. In this instance, the stumps are to be ground out with a mechanical

stump grinder taking care not to cause damage to the roots of trees being retained.

- 6.6.3 **Remedial tree surgery works** - The necessary remedial tree surgery works required to promote health and safety of the trees to be retained is to be carried out. A schedule of these works is to be produced by the project Arboriculturist taking into consideration the trees within their new built environment and prior to these works being carried out; they are to be agreed with the local authority.

6.7.0 **Erection of the protective fencing**

- 6.7.1 Once the trees have been removed, the line of the protective fencing that is required around the trees being retained **must be** erected as per Dwg. No. ECK002.
- 6.7.2 The fencing needs to be 2.3m high and constructed in accordance with figure 2 of BS 5837 2012 (see fencing detail on drawing No.ECK002 & Appendix 1) using vertical and horizontal scaffold bars well braced together with the verticals spaced out at a maximum of 3m centres. Onto this, weld mesh panels are to be securely fixed with wire or scaffold clamps.
- 6.7.3 Signs need to be attached to these fences warning people to 'keep out'. See detail within drawing No.ECK002 & Appendix 1.
- 6.7.4 Once the protective fence line is erected, then the main construction works can commence on site.
- 6.7.5 **Storage of Material, Work Yards and staff car parking** - These areas must be identified on the work drawings prior to the construction works starting. These must be positioned outside the root protection areas around the trees being retained.

Stage 2

6.8.0 The Construction Works Stage

- 6.8.1 **Protective fencing** - During the course of the works, special attention must be paid to ensure that these fences and all other tree protection measures are kept in place, in good order and remain upright, rigid and complete at all times. They must be checked daily by the main contractor/foreman and any damage noted must be fixed immediately.

If works need to take place inside the protective fence lines, then the project Arboriculturist must be informed in advance of the works taking place and the mitigation measures required to reduce impact on the tree vegetation agreed. These mitigation measures will include the supervisions of these works by the project Arboriculturist.

The protective fencing and all other protection measures are to remain in place throughout the construction works phase and must only be removed when all the works are complete and at this stage incorporated into the finished landscape.

- 6.8.2 **Excavations** - The excavation works are only to commence once the protective fence line and all other protection measures are in place.

The excavations in the vicinity of the tree vegetation being retained will need to be viewed on site once marked out with the project manager, site foreman and the project Arboriculturist in advance of excavation to determine the extent of the impact and the work space required to allow for the construction works to proceed and to assess what additional mitigation measures will be required to protect those trees to be retained. In certain areas, it may be necessary to use an alternative method of excavating to prevent encroachment into the RPA of the trees to be retained and this may include such methods as retaining walls or similar.

No roots are to be severed by the construction works without prior approval by the project Arboriculturist. Where roots are encountered, the project Arboriculturist is to assess these prior to cutting and these are to be pruned back to appropriate pruning points beyond the excavation line. Where roots cannot be cut; alternative methods of construction will need to be considered. The excavated face is then to be covered with soil or with Hessian sacking to prevent further drying out and the death of root material. Where the Hessian sacking is used, it will be necessary to keep this moist especially during dry periods.

- 6.8.3 **Working within the RPA** (*Root Protection Area*) – If it becomes necessary to carry out works within the RPA of a tree/trees, these must be discussed and agreed with the project Arboriculturist. All works must be carried out manually.

Root pruning is to be undertaken by an Arboriculturist using proprietary cutting tools such as a secateurs or hand pruning saw.

The ground within the RPA of the trees must be protected from damage as per the recommendations of **section 6.2.3** of BS5837 2012. See detail within appendix 1 on ground protection using boarding for pedestrian loading.

- 6.8.4 **Finished ground levels/Landscaping** - The existing ground levels within the RPA of trees must be retained and incorporated into the finished landscaped development. Where changes in levels occur, these are to be either graded into the finished levels starting outside the RPA or alternatively, retaining wall structures are to be used differentiating between the different levels.

All soft and hard landscaping within the RPA of the trees to be retained must be carried out manually and the soil levels must not be lowered or raised resulting in root damage to the trees. All surfaces are to be porous to allow the free movement of air and moisture to the roots below. Recommendations of sections 8 of BS5837 2012 must be adhered to during the landscaping within the RPA of the trees being retained.

6.9.0 Other items

- 6.9.1 The following is a list of additional activities **that are not allowed** within the RPA or within the vicinity of the trees being retained.

- 1 - Storage of equipment, fuel, construction material, or the stockpiling of soil or rubble.
- 2 - Burning rubbish
- 3 - The washing of machinery
- 4 - Attaching notice boards, cables or other services to any part of the tree.
- 5 - Using neighbouring trees as anchor points.
- 6 - Care is required when using machinery such as Tele-porters, cranes or other equipment close to trees so as not to damage the crown or any other parts.

Stage 3

6.10.0 Post Construction Works

6.10.1 This project is not to be considered complete until all retained trees have been re-examined by the project Arboriculturist and the remedial works necessary to ensure the health of the trees and the immediate safety of the end user of this development are implemented.

This report has been produced as part of a planning application for this site area and is for the sole use of the above named client and refers to only those trees identified within. Its use by any other person(s) in attempting to apply its contents for any other purpose renders the report invalid for that purpose.

Signed *Felim Sheridan*
Felim Sheridan
F. Arbor. A, RFS Dip, Nat. Dip & NCH in Arboriculture

Date 17th December 2018

Felim Sheridan's qualifications:

Fellow of the Arboricultural Association (F. Arbor. A), Professional diploma Arboriculture (RFS), National diploma Arboriculture (ND) and National certificate Horticulture (NCH).

Appendix 1

Sample of Temporary Tree Protection Fencing Detail and Ground Protection.

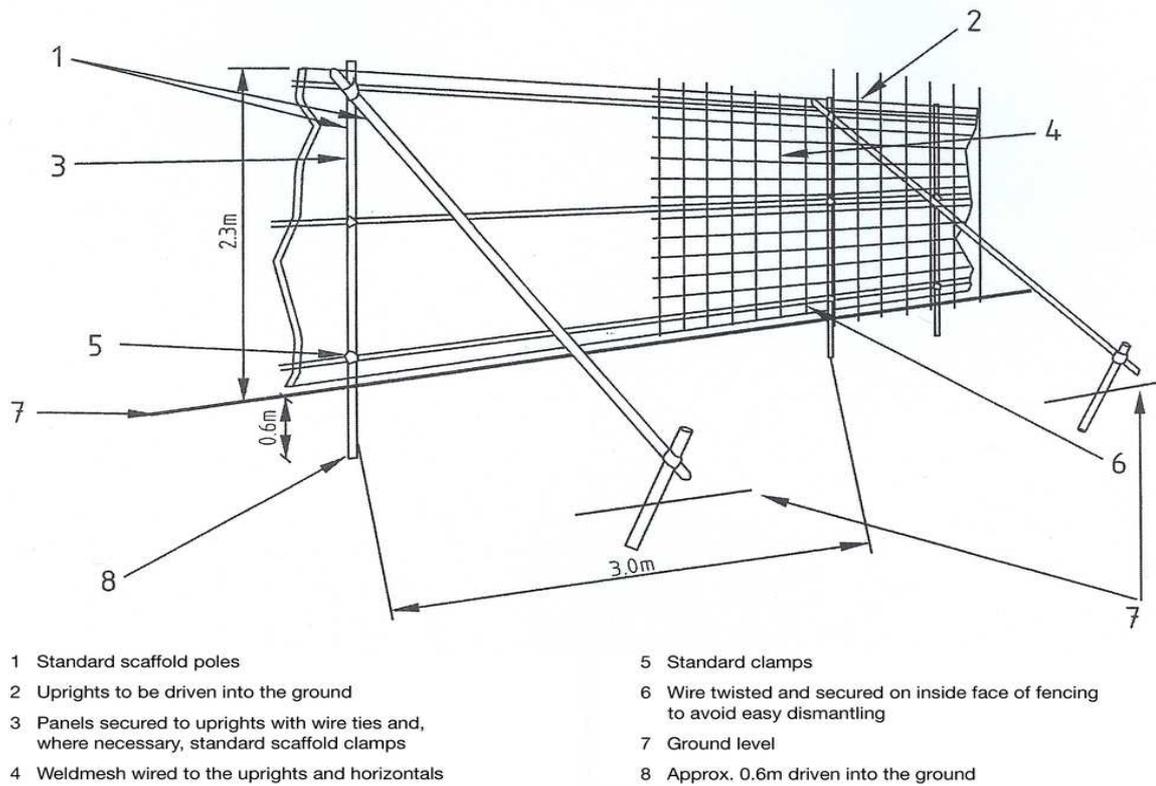


Figure 2. – Protective fencing for RPA

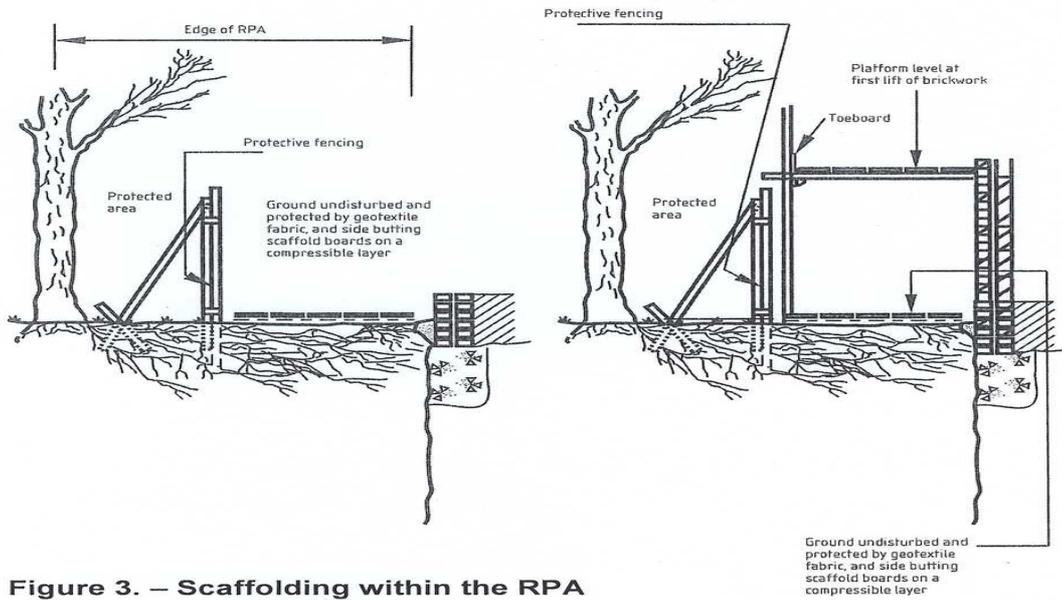


Figure 3. – Scaffolding within the RPA

Appendix 2

Condition Tree Assessment

Of the Trees on a Site Area for 'Phase 3 Earls Court' Development at Kill, Co. Kildare.

Date: 28th November 2017

**Arborist Associates Ltd. Arboricultural Assessment – Site Area for 'Phase 3 Earls Court', Kill,
Co. Kildare- December 2018**

Survey Notes

All codes referred to in this report are approximate and serve as a general guide only.

Reference to Numbers: The trees have metal tags attached and these correspond with the numbers in this report.

Reference to age class is as follows:

Young: A tree, which has been planted in the last 10 years.

Semi Mature A tree that is less than 1/3 the expected height of the species in question.

Early Mature: A tree, which is between a 1/3 and 2/3's the expected height of the species in question.

Mature: A tree that has reached the expected height of the species in question, but still increasing in size.

Over Mature: A tree at the end of its life cycle and the crown is starting to break up and decrease in size.

Reference to Physiological, Structural Condition and other comments:

Physiological Condition (Phy Con)

Good: A tree with no major defects, but possibly including some small defects.

Fair: A tree with some minor defects such as bark Wounds, isolated decay pockets or structure affected due to overcrowding.

Poor: A tree with more serious defects such as extensive deadwood, decay or effective to the point of being dangerous.

Structural condition and other comments –

This records noted visual defects and other information about the trees health and structure.

Estimated Remaining Contribution in years

This is based on an Arboricultural assessment of the tree and is estimated based of the findings noted at time. Trees still need to be reviewed on a regular basis, preferably annually.

Less than (<) 10 years remaining contribution

10 + years remaining contribution

20 + years remaining contribution

40 + years remaining contribution.

Category Grade (Cat Grade)

The purpose of the tree categorization method is to identify the quality and value of the existing tree stock, allowing informed decisions to be made concerning which trees should be removed or retained should development occur.

It is carried out in accordance with section 4.5 (Tree Categorization Method) of BS 5837 2012.

Summary

Main categories

Category U – Those trees in such a condition that any existing value would be lost within 10 Years. Most of these will be recommended for removal for reasons of sound Arboricultural practice.

Category A - Trees of high quality/value with a minimum of 40 years life expectancy.

Category B – Trees of moderate quality/value with a minimum of 20 year life expectancy.

Category C – Trees of low quality/value with a minimum of 10 years life expectancy

Sub categories

1 – Mainly Arboricultural Values

2 – Mainly Landscape values

3- Mainly Cultural and conservation value

Note: Whilst C category trees will usually not be retained where they would impose a significant constraint on development, young trees with a stem diameter of less than 150mm should be considered for relocation.

If a layout design places Category U trees in an inaccessible location such that concerns over public safety are reduced to an acceptable level, it may be preferable or possible to defer the recommendation to fell.

The terms ‘Group, woodland or tree line’ is intended to identify trees that form cohesive Arboricultural features either aerodynamically (e.g. trees that provide companion shelter), visually (e.g. avenues or screens) or culturally including for biodiversity (e.g. parkland or wood pasture), in respect to each of the three subcategories.

Reference to Crown spread, Height and Trunk Diameter:

This gives a guide to the area taken up by the tree.

Stem diameter (Stem Dia) is the diameter of the main trunk taken at a height of 1.5m and is recorded in millimeters (mm). Where a measurement is given in brackets, this is the calculated stem diameter for multiple stemmed trees as per BS5837 2012.

Arborist Associates Ltd. Arboricultural Assessment – Site Area for ‘Phase 3 Earls Court’, Kill,
Co. Kildare- December 2018

Height (Ht) records the overall height of the tree and is given in meters (m).

Branch Spread records the extent of the branches normally in a north (N), south (S), east (E) and west (W) direction from the base of the tree and is given in meters (m).

Clear crown height (C. Ht) records the distance between the ground and the first branch from the base of the tree and are given in meters (m).

Recommended Works

All tree works are to be performed to BS3998 and ANSI A300 pruning guidelines may also be referred to.

Pruning is defined as the selective removal of branches from the tree for specific results. All pruning is to be as specified in the schedule and all pruning cuts are to be made in accordance with 'natural target pruning' methods. All final cuts to be made outside the branch collar and at an angle equal but opposite to that of the branch bark ridge.

If during climbing works, a climber (tree surgeon) discovers any defects not noted in the Arborist report, he should inform and consult the Arborist in question. If it is a minor defect, it would be expected that the tree surgeon would deal with it as part of his contract. If it is deemed a serious problem, then there will be a need to consult with the client/owner and to carry out the agreed works at an additional cost. This problem may arise for example as a result of additional storm damage since the last inspection and it must be borne in mind that the survey is a visual inspection from ground level only and problems in the aerial part of the tree may not be visible from ground level or be hidden under Ivy.

Terms used in explaining this work:

Deadwooding

This is the removal of deadwood (>5cm) without attempting to remove it from the branch tips or green foliage areas as in conifers.

It is expected that major deadwood is removed from all trees that are climbed, even if it is not stated on the survey.

Crown Clean

This includes the removal of deadwood, diseased and dying wood, broken or split branches, epicormac growth, and basal suckers if requested and crossing or rubbing branches.

Crown Thinning (%)

This includes overhauling the crown and the thinning out of the crown in order to allow the wind to travel more freely through the crown and to reduce its wind sail. This mainly involves the removal of secondary branches in the inner crown. This is normally expressed as a percentage of the whole crown volume, which should be considered as an approximate guideline.

Reduction (m)

This includes overhauling the crown and the reduction (careful shortening) of the entire crown or an individual limb in length in all directions to leave a balance branch structure.

The finished pruning cuts should not exceed one-third the size of the branch or stem that it is located on. The reduction works are normally expressed as in meters (m) from the outer canopy edge of the crown or branch end and should be considered as an approximate guideline.

Lightening (m)

This technique is a combination of selective thinning together with moderate length reduction of a section or entire crown. The main objective is to reduce the end weight on potentially hazardous crown sections, individual limbs or individual branches. Crown appearance should not be altered greatly by this pruning.

Crown Raising

The removal of the lowest branches that effectively increase the height of the main crown above ground level.

Felling

Trees to be felled shall be cut as low as possible to ground level, unless otherwise specified.

Trees for felling should be dismantled (section- felled) wherever necessary using appropriate rigging techniques to avoid damage to adjacent trees/ structures and other potentially vulnerable landscape features.

Stumps

Generally, stumps of felled trees may be left cut level above ground level. Any stumps in areas of access shall be left at a height that does not present a trip hazard. Conifer stumps are to be treated with urea in accordance with the forestry commission guidelines.

Alternatively, if requested, the stumps are to be ground out using a mechanical stump grinder taking care not to cause damage to neighbouring trees.

Tree No.	Tree Species	Ht. (m)	Stem Dia. (mm)	Branch Spread (m)	C-Ht. (m)	Age Class	Phys. Con.	Structural Condition Other Comments	Preliminary Recommendation	Remain Contribute in years	Cat. Grade
								N-north S-south E-east W- west Phys.-physiological.	MS- multi-stemmed A- average		
		A condition assessment of the trees on lands for 'Phase 3' of the Earls Court Development at 'Kill' Co. Kildare.									
		The assessment starts down at the western end and works in an eastwards direction.									
Hedge No.1	Hawthorn <i>Crataegus monogyna</i> Blackthorn <i>Prunus spinosa</i> Holly <i>ilex aquifolium</i> Ash <i>Fraxinus excelsior</i> Sycamore <i>Acer pseudoplatanus</i> Euonymus <i>Euonymus europaeus</i>	It runs in an east-west direction along the northern boundary and is located on the field side (southern side) of a shallow drainage ditch. It is of a mature age class in fair/ good condition both structurally and physiologically. It is growing on a mound of soil and consists of Hawthorn and Blackthorn with some <i>Euonymus europaeus</i> , Hazel, Holly, Ash and Sycamore. It has been cut / trimmed in the past and this has helped to maintain its structure and stock proof quality. Tree planting using Lime has been added into this hedge in more recent years and some of them have been cut due to their close proximity to the overhead power lines. The undergrowth is being dominated by Bramble and Dogrose.							Continue present maintenance and trimming to contain its hedge structure and width.		C2
		The following trees are located within hedge No.1.									
0837	Ash <i>Fraxinus excelsior</i>	15	800	4N 6S 4E 6W	1.5	Mature	Fair	Fair It is a large tree with heavy Ivy cover on the main trunk extending up into its crown. It has received some trimming, particularly on lower branches on the roadside in order to raise up its crown. There is some evidence of stress/ decline and dieback throughout its crown.	Remove dead/ unstable growth and cut Ivy at ground level. Tidy up the area around its base to allow a more detailed assessment. Monitor its condition on a twelve monthly basis.	20+	B1

Tree No.	Tree Species	Ht. (m)	Stem Dia. (mm)	Branch Spread (m)	C-Ht. (m)	Age Class	Phys. Con.	Structural Condition Other Comments	Preliminary Recommendation	Remain Contribute in years	Cat. Grade
								N-north S-south E-east W- west Phys.-physiological.	MS- multi-stemmed A- average		
0838	Ash <i>Fraxinus excelsior</i>	14.5	600	3N 4S 4E 3W	2	Mature	Fair	Fair It is a large prominent tree with heavy Ivy cover on the main trunk extending up into its crown and is beginning to suppress its crown and increase its windsail. Minor stress/ decline is evident within its crown and it contains deadwood throughout. The lower branches have been pruned/ removed in the past in order to raise up its crown. The visual assessment has been limited due to the dense undergrowth.	Remove dead/ unstable growth from within its crown. Cut Ivy at ground level and remove to a height of c.2m on the main trunk to allow for a more detailed assessment.	20+	B1
0839	Beech <i>Fagus sylvatica</i>	8	330	2N 1S 3E 3W	1	Semi Mature	Fair/ Good	Fair Multiple-stemmed from c.1.5m up with an acute union formation between stems. It has the potential to form part of the future tree cover within this area.	Prune branch stubs back to proper pruning points. Tidy up the area around its base. It would benefit from some formative pruning to address structural issues.	20-40	C1
0840	Lime <i>Tilia sp.</i>	7	230	3N 1S 3E 3W	1	Semi Mature	Good	Fair/ Good It is reasonably well structured and has good potential to form part of the future tree cover. It is establishing over the height of the hedge. Ivy cover on the main trunk is beginning to extend up into its crown.	Cut Ivy at ground level at the present time.	40+	C1
0841	Ash <i>Fraxinus excelsior</i>	7	A80 X 4	2N 1S	1	Early Mature	Fair / Good	Fair Multiple-stemmed from base and has been cut	It would benefit from cutting in order to form part of the	20+	C1

Tree No.	Tree Species	Ht. (m)	Stem Dia. (mm)	Branch Spread (m)	C-Ht. (m)	Age Class	Phys. Con.	Structural Condition Other Comments	Preliminary Recommendation	Remain Contribute in years	Cat. Grade
								N-north S-south E-east W- west Phys.-physiological.	MS- multi-stemmed A- average		
			stems	2E 2W				into the hedge during past management. It has been allowed to grow up since to form part of the higher bulking.	bulking within this hedge.		
0842	Lime <i>Tilia sp.</i>	8	400	3N 2S 3E 3W	1	Semi Mature	Good	Fair/ Good It has been planted into the hedge and is establishing well with potential to form part of the future tree cover. Heavy Ivy cover on the main trunk is beginning to extend up into its crown. The lower branches have been cut back to stubs in order to raise up its crown.	Cut Ivy at ground level and tidy up the area around its base. Prune branch stubs back to proper target pruning points.	40+	B1
0843	Lime <i>Tilia sp.</i>	8.5	500	2N 2S 3E 3W	1	Semi Mature	Good	Good It is a good quality tree with potential to form part of the future tree cover. The lower branches have been cut back in order to raise up its crown with stubs remaining as a result. Light Ivy cover on the main trunk is beginning to extend up into its crown.	Prune branch stubs back to proper target pruning points. Tidy up the area around its base and cut Ivy at ground level.	40+	B1
Hedge No.2	Hawthorn <i>Crataegus monogyna</i> Elder <i>Sambucus nigra</i> Blackthorn <i>Prunus spinosa</i> <i>Prunus spinosa</i> Bramble	It runs at an angle to hedge No.1 in a north-east to south-west direction. It is of a mature age class in fair condition physiologically and in fair/ poor condition structurally. It is located on the northern side of a shallow old derelict drainage ditch. It forms a subdivision between two fields within the site area and consists of Hawthorn, Elder and Blackthorn with Bramble and Dogrose dominating the lower vegetation. It has not been maintained with regular cutting and has been allowed to grow up tall and as a result, some sections have fallen over due to being top-heavy. Some soil alterations/ disturbances have occurred on the north-side of this hedge and a roadway/ gravel track has been installed in tight to this hedge. It is growing on a shallow hedgerow mound with no defined boundary ditch. The sides have been trimmed						It would benefit from further cutting/ trimming to contain its height and width. Make safe all dead/ unstable growth.	C2		

Tree No.	Tree Species	Ht. (m)	Stem Dia. (mm)	Branch Spread (m)	C-Ht. (m)	Age Class	Phys. Con.	Structural Condition Other Comments	Preliminary Recommendation	Remain Contribute in years	Cat. Grade	
								N-north S-south E-east W- west Phys.-physiological.	MS- multi-stemmed A- average			
	<i>Rubus fruticosus</i> Dogrose <i>Rosa canina</i>	but it has been allowed to grow up tall in height.										
		The following trees are located within hedge No.2 and the assessment works from east to west.										
0844	Ash <i>Fraxinus excelsior</i>	8.5	500	2N 2S 3E 3W	1	Mature	Fair	Poor It consists of a group of stems growing from an old decaying stump and some stems have broken out in the past and it is structurally weak as a result. Ivy cover on the main trunk is beginning to extend up into its crown. Some stems may be prone to failure as they grow in size and will require management.	At present, cut ivy at ground level and tidy up the undergrowth.	10+	C1	
0845	Ash <i>Fraxinus excelsior</i>	11	200	3N 1S 3E 3W	1	Semi Mature	Fair / Good	Fair / Poor It is growing on the outer canopy edge of the larger neighbouring tree and this has affected its structure to some degree.	Retain as part of the bulking within this hedge at the present time.	20+	C1	
0846	Oak <i>Quercus robur</i>	18	1000	7N 7S 7E 5W	2	Mature	Fair	Fair It is a large prominent tree and it has suffered storm damage in the past leaving its crown slightly more open/ exposed. Heavy ivy cover on the main trunk is also extending up into its crown, increasing its windsail and leaving it more prone to wind damage. It may have suffered some impact damage during the installation of the gravel track on the north side and I suspect that the lower	Remove all dead/ unstable growth from within its crown and prune in any exposed side branches by c.1-2m to shape crown and to lessen the risk of further storm damage. Cut ivy at ground level.	20-40	B1	

Tree No.	Tree Species	Ht. (m)	Stem Dia. (mm)	Branch Spread (m)	C-Ht. (m)	Age Class	Phys. Con.	Structural Condition Other Comments	Preliminary Recommendation	Remain Contribute in years	Cat. Grade
								N-north S-south E-east W- west Phys.-physiological.	MS- multi-stemmed A- average		
								branches have also been broken off during these works.			
		<p>The following trees are growing up together within a group environment and provide support/shelter to one another.</p> <p>All of these trees are likely to have been impacted upon during the construction of the gravel track on the northern side and some of this impact is beginning to show within the health of some trees.</p>									
0847	Ash <i>Fraxinus excelsior</i>	13	500	4N 8S 7E 2W	1	Mature	Fair	Fair It forms part of the group canopy formation with an asymmetrical crown as a result. Heavy Ivy cover on the main trunk is extending up into its crown and is increasing its windsail. I suspect that it was initially multiple-stemmed from base and that some stems have been removed with decay pockets present at its base as a result.	Remove dead/ unstable growth from within its crown. Cut Ivy at ground level.	10-20	C1
0848	Ash <i>Fraxinus excelsior</i>	21	600	6N 0S 6E 3W	3	Mature	Fair	Fair It is a tall tree forming part of a group environment. Heavy Ivy cover on the lower trunk is beginning to extend up into its crown. It contains deadwood within its crown and is showing some signs of stress/ decline throughout possibly due to damage caused during the past construction works.	Remove dead/ unstable growth from within its crown and cut Ivy at ground level. Monitor its condition on a twelve monthly basis.	10-20	C1
0849	Ash <i>Fraxinus excelsior</i>	20	600	2N 7S 7E	1	Mature	Fair	Fair It is growing up with tree Nos. 0848 & 0850 and forms part of the one group canopy formation with	Remove dead/ unstable growth from within its crown. Cut Ivy at ground level.	10-20	C1

Tree No.	Tree Species	Ht. (m)	Stem Dia. (mm)	Branch Spread (m)	C-Ht. (m)	Age Class	Phys. Con.	Structural Condition Other Comments	Preliminary Recommendation	Remain Contribute in years	Cat. Grade
								N-north S-south E-east W- west Phys.-physiological.	MS- multi-stemmed A- average		
				7W				an asymmetrical crown as a result. It is sheltered within its present group environment. Some secondary stems have been removed from the lower trunk / base creating some decay pockets. Ivy cover on the main trunk is beginning to extend up into its crown. Its crown is showing some signs of stress/ decline with deadwood throughout.	Monitor its condition on a twelve monthly basis.		
0850	Ash <i>Fraxinus excelsior</i>	21	A450 2 x stems	6N 7S 3E 3W	1	Mature	Fair	Fair It is a large size, multiple-stemmed tree from base with an acute union formation between some stems. It is integral to the overall group canopy structure and its crown is showing minor signs of stress/ decline throughout that may be associated with previous impacts from past construction activities and the installation of the gravel track on the north-side. Ivy cover on the main trunk is beginning to extend up into its crown.	Remove dead/ unstable growth from within its crown. Cut Ivy at ground level. Monitor its condition on a twelve monthly basis.	10-20	C1
0851	Ash <i>Fraxinus excelsior</i>	16	A240 2 x Stems	4N 5S 3E 3W	1	Mature	Fair	Fair/ Poor It forms a twin-stemmed tree from base with a slightly acute union formation between stems. It is growing up within a group environment and is a tall, sheltered tree. Its crown is showing some minor signs of stress/ decline that may be associated with impacts from the past construction activities on the northern side.	Remove dead/ unstable growth from within its crown. Monitor its condition on a twelve monthly basis.	10-20	C1

Tree No.	Tree Species	Ht. (m)	Stem Dia. (mm)	Branch Spread (m)	C-Ht. (m)	Age Class	Phys. Con.	Structural Condition Other Comments	Preliminary Recommendation	Remain Contribute in years	Cat. Grade
								N-north S-south E-east W- west Phys.-physiological.	MS- multi-stemmed A- average		
0852	Ash <i>Fraxinus excelsior</i>	15	420	4N 2S 3E 2W	2	Mature	Fair	Fair It forms part of a group and is the end tree within this group with a slightly asymmetrical crown as a result. Ivy cover on the main trunk is beginning to extend up into its crown. Minor stress/ decline is evident within its crown, most likely due to impacts caused by the previous construction activities.	Remove dead/ unstable growth from within its crown. Cut Ivy at ground level. Monitor its condition on a twelve monthly basis.	10-20	C2
0853	Ash <i>Fraxinus excelsior</i>	8	600	2N 2S 2E 3W	1	Mature	Poor	Poor The top has either been removed or has broken out leaving a tall, decaying stump with some side growth. It is being heavily suppressed by Ivy.	Retain as part of the bulking within the hedge at the present time, but it will need management/ removal in the short-term.	<10	U
Hedge No.3	Hawthorn <i>Crataegus monogyna</i> Blackthorn <i>Prunus spinosa</i> Elder <i>Sambucus nigra</i> Privet <i>Ligustrum vulgare</i> Holly <i>ilex aquifolium</i> Bramble <i>Rubus</i>	It runs in a north-south direction and is located on the boundary between the field (site) and the adjoining rear gardens of the houses that back onto this boundary. It is of a mature age class in fair condition both physiologically and structurally. The main hedge line is located on the adjoining property side of the drainage ditch and is cordoned off from these rear gardens along most of its length by a panel fence. It consists of Hawthorn, Blackthorn, Elder, Privet and Holly with Bramble and Dogrose dominating the lower vegetation. Some of the adjoining properties have cut back this hedge in order to maintain and others have allowed it to grow up tall. Protruding up out of this hedge is a line of mature trees, predominately Ash, Sycamore and Oak and they are a prominent line of trees. The ownership of the trees within is not fully known and may be located outside the control of this site area.						The following trees are located within hedge No.3 and the assessment works from north to south.	Ownership of this hedge and the trees will need to be clarified prior to carrying out any works. It would benefit from general tidying works and making safe all large dead/ unstable growth. Trim in all encroaching hedge species.		C2

Tree No.	Tree Species	Ht. (m)	Stem Dia. (mm)	Branch Spread (m)	C-Ht. (m)	Age Class	Phys. Con.	Structural Condition Other Comments	Preliminary Recommendation	Remain Contribute in years	Cat. Grade
								N-north S-south E-east W- west Phys.-physiological.	MS- multi-stemmed A- average		
	<i>fruticosus</i> Dogrose <i>Rosa canina</i>	Some of these trees are located on the far side of the hedgerow line and access to tag them and to assess them in detail is difficult and they have been numbered numerically as a result.									
Tree No.1	Ash <i>Fraxinus excelsior</i>	15	500	1N 4S 5E 5W	1	Mature	Fair/ Good	Fair It is located on the adjoining landside of the boundary hedge. Heavy Ivy cover on the main trunk is extending up into its crown and the visual assessment has been limited to the site side only.	Cut Ivy at ground level and tidy up the area around its base to allow for a more detailed assessment.	20+	B1
0854	Ash <i>Fraxinus excelsior</i>	15	550	6N 4S 5E 5W	3	Mature	Fair	Fair It forms part of an open group with heavy Ivy cover on the main trunk extending up into its crown increasing its windsail. The visual assessment from the site side does not show up any structural issues.	Remove dead/ unstable growth from within its crown. Cut Ivy at ground level and tidy up the area around its base to allow a more detailed assessment of its base and lower trunk.	20+	B1
0855	Ash <i>Fraxinus excelsior</i>	23	700	7N 9S 7E 7W	3	Mature	Fair	Fair It is a large size tree and it contains some naturally suppressed deadwood throughout its crown. Some lower branches have been pruned/ removed in the past in order to raise up its crown. It is located on the adjoining landside of the hedgerow bank and the visual assessment has been limited to the site side only.	Remove dead/ unstable growth and prune in any heavy, exposed side limbs/ branches by c.1-2m. Tidy up the area around its base to allow a more detailed assessment.	20+	B1
0856	Sycamore <i>Acer pseudoplatanus</i>	19	A550 X3	8N 5S 8E	1	Mature	Fair/ Good	Fair It has a large broad spreading crown with a number of large size secondary scaffold limbs	Cut Ivy at ground level and tidy up the area around its base to allow a more detailed	20+	B1

Tree No.	Tree Species	Ht. (m)	Stem Dia. (mm)	Branch Spread (m)	C-Ht. (m)	Age Class	Phys. Con.	Structural Condition Other Comments	Preliminary Recommendation	Remain Contribute in years	Cat. Grade
								N-north S-south E-east W- west Phys.-physiological.	MS- multi-stemmed A- average		
				6W				developing from its base and lower trunk. It contains some naturally suppressed deadwood throughout its crown. The lower branches, in particular those extending towards the adjoining property have been cut back with stubs remaining. It contains deadwood in crown. The visual assessment from the site side only does not show up any structural issues.	assessment. Remove dead/ unstable growth from within its crown.		
0857	Ash <i>Fraxinus excelsior</i>	23	A600 2 X stems	9N 6S 6E 6W	2	Mature	Fair	Fair It forms a twin-stemmed tree from near base with an acute union formation between stems with included bark present creating a structural weakness. It contains some heavy scaffold limbs/ branches and deadwood throughout its crown along with a broken branch. The lower crown overhangs the neighbouring shed.	Remove all dead/ unstable growth and reduce end weight on heavy side branches by c.1-2m to lessen the risk of branch breakage and to reduce pressure on the weak union.	20+	B1
0858	Ash <i>Fraxinus excelsior</i>	17	600	5N 4S 7E 7W	2	Mature	Fair	Poor It forms a central tree within this tree line. Heavy Ivy cover on the main trunk is extending up into its crown. It contains some heavy side branches and the lower side branches have been cut/ pruned in the past in order to raise up its crown. There is an area of basal decay present and this will have a knock on affect on its stability, however this is difficult to assess due to the undergrowth.	I would recommend its removal as part of management.	<10	U

Tree No.	Tree Species	Ht. (m)	Stem Dia. (mm)	Branch Spread (m)	C-Ht. (m)	Age Class	Phys. Con.	Structural Condition Other Comments	Preliminary Recommendation	Remain Contribute in years	Cat. Grade
								N-north S-south E-east W- west Phys.-physiological.	MS- multi-stemmed A- average		
0859	Ash <i>Fraxinus excelsior</i>	21	650	5N 5S 4E 7W	3	Mature	Fair	Fair It is growing up within a group environment. Heavy Ivy cover on the main trunk is extending up into its crown and is increasing its windsail. The visual assessment from the site side shows no structural issues.	Remove dead unstable growth from within its crown. Cut Ivy at ground level and tidy up the undergrowth to allow a more detailed assessment of it base and lower trunk.	20+	B1
0860	Ash <i>Fraxinus excelsior</i>	13	500	7N 5S 4E 5W	2	Mature	Fair	Fair Heavy Ivy cover on the main trunk and dense undergrowth has limited the visual assessment of its base and lower trunk to some degree.	Remove dead/ unstable growth from within its crown. Cut Ivy at ground level and tidy up the area around its base to allow a more detailed assessment.	20+	B1
0861	Ash <i>Fraxinus excelsior</i>	16	800	6N 3S 7E 7W	2	Mature	Fair	Fair It is growing within an open group with heavy Ivy cover on the main trunk extending up into its crown, increasing its windsail and this has also limited its visual assessment to some degree.	Remove dead/ unstable growth from within its crown and lighten back any heavy side branches by c. 1-2m, in particular those extending into the rear gardens. Cut Ivy at ground level and tidy up the area around its base to allow a more detailed assessment of it base and lower trunk.	20+	B1
0862	Ash <i>Fraxinus</i>	20	1200	6N	1	Mature	Fair	Fair	Its crown would also benefit	20+	B1

Tree No.	Tree Species	Ht. (m)	Stem Dia. (mm)	Branch Spread (m)	C-Ht. (m)	Age Class	Phys. Con.	Structural Condition Other Comments	Preliminary Recommendation	Remain Contribute in years	Cat. Grade
								N-north S-south E-east W- west Phys.-physiological.	MS- multi-stemmed A- average		
	<i>excelsior</i>			5S 7E 6W				It is a large size tree and it is being heavily suppressed by Ivy which is increasing the windsail of its crown and has also limited the visual assessment to some degree. It subdivides into multiple-stems from low down with an acute union formation between some stems; however the visual assessment has been restricted due to limited access. It has suffered storm damage within its crown.	from the removal of dead/ unstable growth. Prune in heavy exposed side branches to lessen the risk of further branch breakage. Cut Ivy at ground level and remove to a height of c.2m. Tidy up the area around its base to allow a more detailed assessment. It may require some additional pruning based on a more detailed assessment.		
0863	Ash <i>Fraxinus excelsior</i>	19	650	5N 6S 3E 4W	3	Mature	Fair	Fair It is a large tree located at the end of this tree line with a slightly asymmetrical crown. Heavy Ivy cover on the main trunk is extending up into its crown and is increasing its windsail and leaving it more prone to wind damage. It has suffered storm damage in the past. The visual assessment has been limited due to its location on the hedge line. It contains some heavy scaffold limbs within its crown.	Remove dead/ unstable growth from within its crown and reduce end loading on heavy side branches by c.1-2m in order to improve the shape/ balance of its crown and to lessen the risk of branch breakage. Cut Ivy at ground level in order to improve the windsail of its crown and remove to a height of c.2m and tidy up the area	20+	B1

Tree No.	Tree Species	Ht. (m)	Stem Dia. (mm)	Branch Spread (m)	C-Ht. (m)	Age Class	Phys. Con.	Structural Condition Other Comments	Preliminary Recommendation	Remain Contribute in years	Cat. Grade
								N-north S-south E-east W- west Phys.-physiological.	MS- multi-stemmed A- average		
									around its base to allow a more detailed assessment.		
Hedge No.4	Hawthorn <i>Crataegus monogyna</i> Blackthorn <i>Prunus spinosa</i> Elder <i>Sambucus nigra</i> Holly <i>ilex aquifolium</i> Bramble <i>Rubus fruticosus</i> Dogrose <i>Rosa canina</i>	<p>It runs at ninety degrees to hedge No.3 and runs in an east to west direction and forms the boundary between two fields within the site area.</p> <p>It is of a mature age class in fair condition both physiologically and structurally. It consists of predominately Hawthorn and Blackthorn with Elder with Bramble and Holly dominating the lower vegetation and encroaching out in some places. The bulk of this hedge has been cut in the past helping to maintain a good stock proof quality. There is a gap within the central position leading from one field to another.</p> <p>The following trees are located within hedge No.4 at the western end.</p>							It would benefit from further general maintenance.		C2
0864	Ash <i>Fraxinus excelsior</i>	15	980	7N 8S 8E 8W	2	Mature	Fair / Good	Fair It is a large tree with a broad spreading crown. Heavy Ivy cover on the main trunk is extending up into its crown and it has a dense undergrowth of Bramble. It contains heavy side branches throughout its crown.	Remove dead/ unstable growth from within its crown and prune in heavy exposed side branches by c.1-2m to lessen the risk of branch breakage. Remove Ivy to a height of c.2m. Tidy up the area around its base to allow a more detailed	20+	B1

Tree No.	Tree Species	Ht. (m)	Stem Dia. (mm)	Branch Spread (m)	C-Ht. (m)	Age Class	Phys. Con.	Structural Condition Other Comments	Preliminary Recommendation	Remain Contribute in years	Cat. Grade
								N-north S-south E-east W- west Phys.-physiological.	MS- multi-stemmed A- average assessment.		
Hedge No.5	Hawthorn <i>Crataegus monogyna</i> Blackthorn <i>Prunus spinosa</i> Elder <i>Sambucus nigra</i> Bramble <i>Rubus fruticosus</i> Dogrose <i>Rosa canina</i>	<p>It runs in an east to west direction along the southern boundary of the site area and forms the boundary between two fields.</p> <p>It consists of Hawthorn, Blackthorn and Elder with Bramble and Dogrose dominating the lower vegetation and encroaching out onto the surrounding lands. It is mostly located on the northern side (site side) of a shallow drainage ditch. It has been allowed to grow unmanaged for some time with scrub species, in particular Bramble encroaching out in some places creating a broader hedge. It contains some Ash trees protruding up over the hedge height. Some soil alterations/ disturbances have occurred on the western side of this hedge line during the previous development works and this may have a knock on effect on it and the trees within.</p> <p>The following trees are located within hedge No.5 working from west to east.</p>						<p>It would benefit from general trimming / management.</p> <p>Trim in all encroaching hedge species.</p> <p>Make safe any large size dead/ unstable growth.</p>		C2	
0865	Ash <i>Fraxinus excelsior</i>	9	650	7N 7S 8E 7W	2	Mature	Fair/ Poor	<p>Fair/ Poor</p> <p>It is located outside the site area. It has an area of basal decay present and this extends down into a buttress root on the southern side and may have an impact on its stability. It forms part of the group canopy formation with a neighbouring tree outside the site area. It contains some heavy side branches and has suffered storm damage in the past.</p>	<p>Management is located outside the control of this site area.</p> <p>It would benefit from the removal of dead/ unstable growth and reducing in heavy side branches, in particular those extending in over the site area by up to c.2m.</p> <p>Cut Ivy at ground level and tidy up the area around its base to</p>	10+	C1

Tree No.	Tree Species	Ht. (m)	Stem Dia. (mm)	Branch Spread (m)	C-Ht. (m)	Age Class	Phys. Con.	Structural Condition Other Comments	Preliminary Recommendation	Remain Contribute in years	Cat. Grade
								N-north S-south E-east W- west Phys.-physiological.	MS- multi-stemmed A- average		
									allow a more detailed assessment.		
0866	Ash <i>Fraxinus excelsior</i>	10	400	4N 4S 4E 4W	3	Early Mature	Fair/ Good	Fair/ Good It is growing up through the hedge line with heavy Ivy cover on the main trunk beginning to extend up into its crown.	Tidy up the undergrowth and cut Ivy at ground level.	20-40	A1
0867	Ash <i>Fraxinus excelsior</i>	11	650	4N 5S 4E 5W	2	Mature	Fair/ Good	Fair It is being heavily suppressed by Ivy and is growing on the hedgerow bank. A lot of borrowing has occurred around its base. The lower branches have been cut back in the past in order to raise up its crown.	Remove large size dead/ unstable growth. Cut Ivy at ground level in order to improve the windsail of its crown.	20+	A1
Tree No.2	Ash <i>Fraxinus excelsior</i>	12	460	7N 6S 7E 4W	1	Early Mature	Fair	Fair It is located on the adjoining landside of the boundary fence within the drainage ditch and is establishing well. It has a secondary stem developing from 1.8m with an acute union formation between stems with included bark present. It has suffered storm damage throughout its crown.	Management is located outside the control of the site area.	20+	A1
0868	Ash <i>Fraxinus excelsior</i>	8	180	3N 3S 4E 2W	2	Semi Mature	Good	Good It is establishing well and is beginning to grow over the height of the hedge. It has good potential to form part of the future tree cover.	Requires no work at the present time.	40+	B1
Tree No.3	Ash <i>Fraxinus</i>	13	440	6N	2	Early	Fair/	Fair/ Good	Management is located	40+	B1

Tree No.	Tree Species	Ht. (m)	Stem Dia. (mm)	Branch Spread (m)	C-Ht. (m)	Age Class	Phys. Con.	Structural Condition Other Comments	Preliminary Recommendation	Remain Contribute in years	Cat. Grade
								N-north S-south E-east W- west Phys.-physiological.	MS- multi-stemmed A- average		
	<i>excelsior</i>			5S 6E 5W		Mature	Good	It is located on the adjoining landside of the boundary hedge within the drainage ditch and it has established well. Heavy Ivy cover on the main trunk is extending up into its crown and is increasing its windsail.	outside the control of the site area. It would benefit from the cutting of Ivy at ground level.		
0869	Ash <i>Fraxinus excelsior</i>	8	22	3N 3S 4E 2W	1	Semi Mature	Good	Good It is establishing well and is a good quality replacement tree. It has good potential.	Requires no work at the present time.	40+	A1
0870	Ash <i>Fraxinus excelsior</i>	8	A180 X2	2N 2S 3E 5W	1	Semi Mature	Fair / Good	Fair/ It forms a twin-stemmed tree from base with a slightly acute union formation between stems and this may have an impact on its long-term potential. It is beginning to establish over the hedge height.	Requires no work at the present time.	20+	B1
0871	Ash <i>Fraxinus excelsior</i>	15	430	5N 5S 5E 5W	3	Early Mature	Good	Fair/ Good It is establishing well with good potential for the future. The lower trunk has been damaged by the fencing wire. Ivy cover on the main trunk is beginning to extend up into its crown with included bark present. It has good potential for the future.	Cut Ivy at ground level and cut/ remove wire attached to the lower trunk without causing further damage.	40+	A1
0872	Ash <i>Fraxinus excelsior</i>	10	800	7N 5S 5E 5W	3	Mature	Fair	Fair/ Poor It is located in the eastern corner with heavy Ivy cover on the main trunk suppressing its crown and increasing its windsail. Extensive basal decay is present and this may have an impact on its	At present, cut Ivy at ground level. Retain and monitor its condition on a twelve monthly basis.	<10	U

Tree No.	Tree Species	Ht. (m)	Stem Dia. (mm)	Branch Spread (m)	C-Ht. (m)	Age Class	Phys. Con.	Structural Condition Other Comments	Preliminary Recommendation	Remain Contribute in years	Cat. Grade
								N-north S-south E-east W- west Phys.-physiological.	MS- multi-stemmed A- average		
								stability.	It may need to be removed depending on the usage of this area.		
Hedge No.6	Hawthorn <i>Crataegus monogyna</i> Blackthorn <i>Prunus spinosa</i> Elder <i>Sambucus nigra</i> Holly <i>ilex aquifolium</i> Bramble <i>Rubus fruticosus</i> Dogrose <i>Rosa canina</i>	<p>It runs at ninety degrees to hedge No.5 and extends along the eastern boundary of the site area. It forms the boundary between the site area and the adjoining field to the east and there is no defined boundary drainage ditch. It is of a mature age class in fair condition both physiologically and structurally. It is a continuous hedge made up of Hawthorn, Blackthorn, Elder and Holly with Bramble and Dogrose dominating the lower vegetation. It is located on a hedgerow bank and has received some trimming of its sides, in particular and on the site side in order to contain encroachment out onto the field. It has been allowed to grow more unmanaged/wild on the adjoining landside and is now developing into a scrub area. It has been allowed to grow up tall with some sections being suppressed by Ivy and are now prone to storm damage which is already evident.</p> <p>The following trees are located within hedge No.5. The assessment works from south to north.</p>						<p>Carry out general tidying works and trim in encroaching hedge species to contain its hedge width. Cut Ivy at ground level on hedge sections where it is heavy and suppressing the crown.</p>		C2	
0873	Ash <i>Fraxinus excelsior</i>	17	700	5N 6S 6E 5W	3	Early Mature/ Mature	Fair/ Good	Fair/ Good It is beginning to be suppressed by Ivy. It has good potential.	Cut Ivy at ground level.	40+	A1
0874	Ash <i>Fraxinus excelsior</i>	11	A110 X 2	2N 2S 2E 2W	1	Semi Mature	Good	Fair / Poor It forms a twin-stemmed tree from base and some stems intertwine with one another and this is likely to create a structurally weak tree in the long-term.	Retain as part of the hedge bulking at the present time.	20+	C1

Tree No.	Tree Species	Ht. (m)	Stem Dia. (mm)	Branch Spread (m)	C-Ht. (m)	Age Class	Phys. Con.	Structural Condition Other Comments	Preliminary Recommendation	Remain Contribute in years	Cat. Grade
								N-north S-south E-east W- west Phys.-physiological.	MS- multi-stemmed A- average		
The following two trees are located at the northern end of this hedge line No.6.											
0875	Oak <i>Quercus robur</i>	20	630	8N 5S 5E 5W	2	Mature	Fair/ Poor	Fair/ Poor It leans off the hedgerow bank out over the site area and it forms part of the group canopy formation with tree No. 0876. There is a linear strip of dead bark from ground level extending up into its crown creating a structural weakness. Its crown is showing signs of sparseness with decline and dieback evident.	Remove dead/ unstable growth and prune in heavy exposed side branches on the south side to help improve the balance of its crown. Its condition is likely to continue to deteriorate. Monitor its condition on a twelve monthly basis.	10+	C1
0876	Sycamore <i>Acer pseudoplatanus</i>	19	580	5N 5S 4E 4W	3	Mature	Fair/ Good	Fair It forms part of an open group with tree No. 0875 with a reasonably symmetrical crown. It is located close to the overhead power lines. Ivy cover on the main trunk is beginning to extend up into its crown and it is suckering from base.	Requires no work at the present time. Ivy will require management in the short-medium term. It may require some pruning in the future to maintain clearance with the overhead utility lines.	20+	B1

