

Independent Tree Surveys Ltd

Tree Survey & Planning Report
Aderrig Phase 3
Residential Development
Adamstown SDZ
Dublin

October 2022

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1.0 Introduction

It is planned to develop land as part of phase three of the Aderrig development project in Adamstown, Co. Dublin. The site contains a number of hedges and trees and so this report has been prepared to provide an arboricultural assessment of the trees and hedges to input into the design and layout of the project and to form part of the planning package for the project.

2.0 Instruction

To carry out a Tree Survey and prepare an Arboricultural Impact Assessment, Method Statement and Tree Protection Plan in accordance with BS5837: *Trees in relation to design, demolition and construction (2012)* of the significant trees and hedges on the development lands at Aderrig Phase 3, Adamstown, Co. Dublin.

3.0 Report Limitations

- The inspection has been carried out from ground level using visual observation methods only.
- Trees are living organisms whose health and condition can change rapidly. Trees should be checked on a regular basis, preferably once a year. The conclusions and recommendations of this report are valid for one year.
- The fruiting bodies of some important species of decay fungi only emerge at certain times of the year and may not have been visible during this inspection.
- There is no such thing as a 100% safe tree in all conditions, since even perfectly healthy trees may fall or suffer branch break.
- Climbing plants such as Ivy can obscure structural defects and some symptoms
 of disease, where such plants prevent a thorough examination it is
 recommended that the climber be cut at ground level and the tree reinspected when it has died back.
- Where trees were inaccessible due to undergrowth, topography etc. assessment of tree condition and tree stem/crown dimensions were made based on what parts of the trees were visible to the surveyor and should be regarded as preliminary.

Report Prepared by

John Morgan BSc (Hons) Tech Cert (Arbor A) M Abor A (Membership number PR407)

October 5th 2022

4.0 Survey Methodology

The hedgerows and trees in and along the boundary of the site were assessed from ground level using Visual Tree Assessment (VTA) techniques and relevant observations and findings were recorded in compliance with the industry standard document BS5837: Trees in relation to design, demolition and construction (2012). Ground conditions and dense undergrowth made full and thorough examination and assessment of some of the trees impractical. The findings of the field survey are based upon what visual information the surveyor was able to identify on-site.

4.1 Survey Key

Tree Numbers

The hedges and trees were allocated numbers (prefix H for hedges and T for trees). These numbers identify the trees and hedges in the survey schedule and on the supporting survey drawings.

Tree Species

Common and botanical names of the tree species were recorded.

Tree Crown Dimensions

Tree height (Ht), crown clearance (Cl) and crown-spread (NESW cardinal points) measurements are in metres and are estimated.

Stem Diameter (Dbh)

Measurements are in millimetres and taken at 1.5m from ground level, multiple stems (St) are recorded as a function of the BS:5837 RPA formulae described below. Where tree stems could not be directly accessed; the stem diameters were estimated.

Tree age classes

Age classes were recorded as:

Υ	Young	Recently planted (with 5 years or so)
SM	Semi-Mature	Well established young tree
EM	Early Mature	Established tree not yet fully grown
M	Mature	Full or near full grown tree
LM	Late Mature	Older specimen in full maturity
OM	Over Mature	Reached full maturity now declining through natural
		causes
Vet	Veteran	Notable due to large size, old age, ecological importance

Tree Physiological and Structural condition

Tree condition was graded as

Good: No obvious defects visible, vigour and form of tree good.

Fair: Tree in average condition for its age and the environment.

Poor: Tree shows signs of ill health/structural defect

Bad: Tree in seriously bad health/major structural problem

Work Recommendations

Preliminary management recommendations are made where necessary and pertain to current site conditions unless otherwise stated.

Estimated Remaining Contribution (ERC)

The approximate number of years that a tree should continue to live and contribute amenity, conservation or landscape value to the site under current site conditions.

4.2 Tree Retention Category (Cat) (BS5837: 2012 Trees in relation to design, demolition and construction – Recommendations)

The tree retention category system grades a tree's suitability for retention within a development:

- A Indicates a tree of high quality and value. These are trees that are particularly good examples of their species, which also provide landscape value. These trees are in such a condition as to be able to make a substantial contribution. (A minimum of 40 years is suggested)
- Indicates a tree of moderate quality and value. Trees that might be included in the high category, but are downgraded because of impaired condition. These trees are in such a condition as to make a significant contribution. (A minimum of 20 years is suggested)
- Indicates a tree of low quality and value trees with an estimated remaining life expectancy of at least 10 years, or younger trees with a stem diameter of below 150mm and/or <10m in height.
- U Trees that are in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.

Sub Categories

Tree categories may be further categorised using the following sub-categories (e.g. C1, C2 or C3) - 1 mainly Arboricultural qualities, 2 mainly landscape qualities, 3 mainly cultural values.

4.3 Root Protection Area

The Root Protection Area (RPA) is the minimum area around individual trees to be protected from disturbance during construction works; RPA is recorded as a radius in metres measured from the tree stem and is shown on the tree survey/constraints drawing as a circle with the tree stem in the centre.

For single stem trees, the root protection area (RPA) should be calculated as an area equivalent to a circle with a radius 12 times the stem diameter.

For trees with more than one stem, one of the two calculation methods below should be used.

The calculated RPA for each tree should be capped to 707 m2.

- a) For trees with two to five stems, the combined stem diameter should be calculated as follows:
- √ ((stem diameter 1)2 + (stem diameter 2)2 ... + (stem diameter 5)2)
- b) For trees with more than five stems, the combined stem diameter should be calculated as follows:
- √ ((mean stem diameter)2 × number of stems)

5.0 Findings

The trees were assessed during a site visit on the 11th and 12th of May 2022; the field data for the trees is contained in the accompanying Tree Survey Schedule. Approximate tree location, BS5837 category, RPA and approximate crown shape are shown on the Tree Survey Drawing 22028_TS.

Full details of the individual trees assessed on the site are listed in the Tree Survey Schedule in the appendices of the report. A total of 25 individual trees were assessed as part of the survey fieldwork; of these one was graded category A (high value), three category B tree (moderate value), nineteen trees category C trees (low value) and two trees were classed as category U (<10 years ULE). One tree group along hedge H2 was recorded (category U). Four sections of hedgerow were separately assessed and described.

The survey site covered the lands proposed for development to the northwest of Adamstown station. The land was evidently previously used for agriculture, but has been modified over recent years, with earthworks and spoil stockpiling on parts of the site. The tree stock is limited to trees growing within old farm hedges that extend across parts of the site and along the western boundary area. The dominant arboricultural feature is the long hedgerow (encompassing hedges labelled H1, H2 and H4) extending along the western boundary ditch. Parts of this hedge line contain some larger mature trees (Oak, Sycamore and Ash) that are locally prominent in the landscape. The southern section (hedge H1) has suffered from disease (Dutch Elm disease and Ash dieback disease), neglect and the impact of historic groundworks and is in relatively poor condition as a consequence, this part of the boundary also includes several openings as a result of previous/historic farming access routes. The central bulk of the hedge (hedge H2) includes a number of mature and early mature Ash trees, all of which are showing signs of infection by Ash dieback disease. The hedge also contains the high value Oak tree (T16) and visually prominent Sycamore (T2). The northern section of hedge (H4) has been left separated from H2 as the new Celbridge link road has required that a swath be cut through the hedge-line; this section includes several mature Oak trees of merit but has been impacted to some extent by adjacent ground works associated with neighbouring development projects.

6.0 Preliminary Management Recommendations

Preliminary management recommendations for the trees assessed are listed in the tree survey schedule in the appendices; these pertain to *current* site conditions unless otherwise stated. The broad recommendation is for the neglected and impaired hedges to be returned to a management cycle that will help re-invigorate and restore their health, condition, and functionality. Management operations should include:

- The felling of Elm trees affected by Dutch Elm disease, with younger suckering being left in place to regenerate.
- Selective coppicing and laying of many of the hedgerow Hawthorn, Elder, Blackthorn, Ash and Hazel bushes.
- Cutting back of scrub encroachment and Brambles etc. from the edges of the hedge.
- Infill planting of gaps with new planting; including a mix of native whips (Hazel, Hawthorn, and Holly).
- Removal of spoil to return adjacent ground levels to their original level.
- Protect the hedges from further damage by construction activity.
- Ongoing monitoring of the Ash trees to check the progress of Ash Dieback disease.

All tree surgery work should be carried out by qualified and experienced tree surgeons.

All tree surgery work should be in accordance with BS3998 (2010) Tree Work – Recommendations.

7.0 Site Photographs



1. Southern end of Hedge H1 viewed from the north



2. Mature Sycamore tree T2 in Hedge H2



3. High value mature Oak tree (T16) in Hedge H2 – note poor quality Ash trees on either side

8.0 Arboricultural Impact of the New Development

It is planned to construct a new residential housing development and the associated infrastructure on the site, between the new Celbridge link road to the east and hedge-lines H1 and H2 to the west. The proposed layout will require that the remnant section of truncated farm hedge H3 (including the Ash tree labelled T5) will have to be removed. The Ash tree (T5) proposed for removal is a small emergent tree next to an old opening in the hedge; this tree is already showing signs of stress related to Ash dieback disease, which unfortunately is impacting younger trees most rapidly in Ireland. Although it is not a certainty, the likelihood of the tree dying from the disease is highly probable. Hedge H3 has been reduced in length during previous site works for the new Celbridge Link Road and contains no large or significant mature trees.

The project layout, including the road network, has been reviewed and amended to allow for the retention of the prominent hedgerows following the western boundary of the site (hedges H1, H2 and H4) including the mature trees growing within the hedges. The roads and buildings etc. have been kept back from the hedges, with a substantial buffer zone having been established between the trees and any significant works that could impact on the hedgerow plants. The buffer zone covers a strip of land to the east of the hedges; the zone varies in width, reflecting the likely root spread of the hedgerow trees. The buffer has been designed to ensure that the development will be kept a distance away from the tree stems that often exceeds the root protection area (RPA) radius as per BS5837: *Trees in relation to design, demolition and construction (2012)*.

The hedgerows along the western boundary of the site have been left relatively unmanaged for many years and have become overgrown and neglected, with many stems suffering from Dutch Elm disease and Ash dieback. The project plans include for a program of works designed to help restore and re-invigorate the hedges and to incorporate them into the long-term landscape plan for the site. The improved management of the hedges and constituent trees along with the new planting for the rest of the development should bring about a net improvement in the arboricultural value of the site, not withstanding the loss of hedge H3.

9.0 Arboricultural Method Statement

9.1 Tree Work Operations

Hedgerow H3 and tree T5 will be removed to facilitate the new layout. Most of the hedge can be safely removed by machine, with the western end being removed by professional tree work contractors so as to avoid unintended damage to trees and bushes making up H2. All woody materials arising from the hedge removal should be disposed of at a suitable green waste facility or recycled as mulch on the site.

The retained hedges will be subject to a series of management operations as recommended in section 6 Preliminary Management Recommendations. These works include coppicing, laying, infill planting, and scrub clearance and will form part of a longer-term hedge restoration and management process on the site. Most of these operations will be undertaken during the winter months, outside the bird nesting season (beginning of March to the end of August) and when the trees and bushes are dormant.

9.2 Tree Protection Measures

Sturdy tree protection fencing (see figure 1 below) or suitable site hoarding will be erected along the line shown on the Tree Protection Drawing 22028_TPP to prevent construction work encroaching into the root protection areas of the trees within hedges H1, H2 and H4 being retained. The tree protection measures will be put in place *before* groundworks or construction work commences and should remain in place until their removal or re-location is authorised by a qualified arborist.

The section of new pathway running inside the RPAs of trees T25 and T26 east of hedge H4 should be underlain by specialist root friendly engineering systems (such as *Geocell* or *Cellweb*) applied onto the top of the existing soil surface as per the manufacturers guidelines and in line with the Arboricultural Association *Guidance Note 12: The Use of Cellular Confinement Systems Near Trees (2020)*.

Where machinery has to encroach the RPAs of the trees to be retained for reasons unforeseen and unavoidable; suitable ground protection will be put in place to prevent any significant soil compaction or root damage near the trees; this should take the form of suitable strength ground protection mats or cellular confinement system capable of supporting the appropriate weight.

All site offices, materials storage, staff parking etc. will be located outside of the RPAs of the trees and hedges.

Any new underground services such as water pipes etc. should be routed away from the root protection areas of the trees to be retained; where this is not possible for reasons unforeseen, the services will be installed using specialist methodology (such as *Airspade* excavation or Mole drilling) that ensures minimal impact on any tree roots.

The tree protection measures, and specialist work methods should be overseen by a qualified arborist; the arborist should also make regular visits to the site during the construction process to ensure compliance and be available to provide advice and guidance where necessary.

The retained trees should be assessed by a qualified arborist following the completion of the construction works. General recommendations for tree protection on-site are contained in the appendices below.

10.0 Appendices

Tree Protection on Construction Sites – General Recommendations

Tree Survey Schedule

Tree Survey Drawing 22028_TS (Tree Constraints Plan)

Tree Protection Plan Drawing 22028_TPP

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Type No.	Š.	Species	Age	Ĕ	uan	7	כ		n	S		r riiys	n o	בער בווא רסוום או מרומושו רסוומויוסו/ רסווויים ווא			•
				Ε	E					-	-		+			E	
I	м	Ulmus glabra (Wych Elm) Fraxinus excelsior (Ash) Sambucus nigra (Elder) Crataegus monogyna (Hawthorn)	Σ	м	300	1	0	1.5	1.5	1.5	1.5	5004 6000	,	Good. Good vitality. Section of hedge east of gateway that has been invigorated by hedge-cutting works in recent years. Short section to the east of gate left to grow unchecked.	No urgent works needed.	9. 9.	2
F	o	Fraxinus excelsior (Ash)	Σ	12	640	7	н	m ,	9	9	6 1	10 Fair	T = 7 2	Fair. Medium sized tree on west side of ditch. Thick lvy growth M restricts view of main branch unions. Unable to inspect stem due pr to undergrowth. Epicormic shoots consistent with Ash dieback disease (ADB) on branching throughout crown.	Monitor tree condition to check progress of ADB disease.	7.68	2
⊢	7	Fraxinus excelsior (Ash)	Σ	13	200	Н	н	2	4	4	5 1	10 Poor		Fair. Medium sized tree. Thick lvy growth on tree stem. Ivy restricts view of main branch unions. Unable to inspect stem due pi to undergrowth. Minor dieback in crown. Epicormic shoots on branching consistent with Ash dieback disease (ADB) throughout crown. Late bud break.	Monitor tree condition to check progress of ADB disease.	9	2
F	∞	Fraxinus excelsior (Ash)	Σ	15.5	200	н	7	'n	5.5	5	5 1	10 Poor		Fair. Medium sized tree. Thick Ivy growth restricts view of main N stem and branch unions. Unable to inspect stem due to pundergrowth. Minor dieback in crown. Epicormic shoots on branching consistent with Ash dieback disease (ADB) throughout crown.	Monitor tree condition to check progress of ADB disease.	9	2
ڻ ن	6	Fraxinus excelsior (Ash)	Σ	11	464	m	н	ĸ	т	2.5	2	<10 Poor		Fair/Poor. Linear group of Ash trees along ditch. Thick lvy growth on tree stems. Unable to inspect stem due to undergrowth. Multiple stems below 1.5m. Dieback in crowns and epicormic cshoots consistent with Ash dieback disease (ADB) on branching sithroughout crown.	Monitor tree condition to check progress of ADB disease. Coppice if tree condition declines significantly.	5.57	⊃
F	10 tag 27	Fraxinus excelsior (Ash)	Σ	16.5	849	7	7	_	9	o	8	10 Fair/	Fair/Poor F	Fair. Larger hedgerow tree. Thick Ivy growth on tree restricts view Monitor tree condition to check of main branch unions. Stem divides below 1.5m. Epicormic progress of ADB disease. shoots consistent with Ash dieback disease (ADB) on branching Cut Ivy around stem base. throughout crown.	Monitor tree condition to check progress of ADB disease. Cut Ivy around stem base.	10.19	2

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11 Fraxinus excelsior EM 14 tag 29 (Ash)	nus excelsior EM	17	_	400	н	1.5	7	4.5	4.	4.5	10 Po	Poor	Fair. Low vitality. Medium sized tree. Excessive Ivy growth in crown. Epicormic shoots consistent with Ash dieback disease prog (ADB) on branching throughout crown.	Monitor tree condition to check progress of ADB disease. Cut Ivy around stem base.	4.8	2	
12 Fraxinus excelsior M 15 tag 28 (Ash)	nus excelsior M	15		515	ю	2	4	4	2	9	10 Po	Poor	Fair/Poor. Medium sized tree. Wood decay in old wound at stem base. Epicormic shoots Epicormic shoots consistent with Ash dieback disease (ADB) on branching throughout crown. Bacterial canker present on branches. Slow bud break.	Monitor tree condition to check progress of ADB disease.	6.18	2	
13 Fraxinus excelsior M 15 tag 30 (Ash)	nus excelsior M	15		400	П	1.5	4	r.	ν. (i)	m	<10 Po	Poor	Fair. Thick Ivy growth on tree stem. Dieback in crown. Excessive Moo Ivy growth in crown. Epicormic shoots consistent with Ash dieback disease (ADB) on branching throughout crown. Slow bud break.	Monitor tree condition to check progress of ADB disease.	4.8	Π	
14 Fraxinus excelsior EM 16 tag 31 (Ash)	nus excelsior EM	16		400	1	e e	е	m	3	4	10 Po	Poor	Fair. Thick Ivy growth on tree stem. Narrow crown. Epicormic shoots consistent with Ash dieback disease (ADB) on branching projetroughout crown. Slow bud break.	Monitor tree condition to check progress of ADB disease.	4.8	7	
15 Fraxinus excelsior M 18 tag 32 (Ash)	nus excelsior M	18		781	2	4	φ	9	9	7	10 Po	Poor	Fair/Poor. Thick Ivy growth on tree stem. Stem divides below 1.5m. Wood decay in old wound to lower stem. Epicormic shoots proconsistent with Ash dieback disease (ADB) on branching throughout crown. Stump of third stem left at 1m.	Monitor tree condition to check progress of ADB disease.	9.37	72	
16 Quercus robur M 16 tag 34 (Common Oak)	Σ	16		800	П	т	9	6	∞	8	40+ 60	poog	Good. Larger Oak tree growing on edge of ditch. Good vitality, No with dense crown of healthy foliage. Spreading form with multiple stems above 1.5m. Minor deadwood in crown. No obvious basal decay or significant defects seen.	No urgent works needed.	9.6	A2	
17 Fraxinus excelsior EM 17 tag 35 (Ash)	Σ	17		350	П	4	4	4	۶ ۳	4	10 Po	Poor	Fair. Upright form. Thick Ivy growth on tree stem. Ivy restricts Monitor tree condition to view of main branch unions. Epicormic shoots consistent with Ash progress of ADB disease. dieback disease (ADB) on branching throughout crown. Very slow bud break.	Monitor tree condition to check progress of ADB disease.	4.2	23	
18 Fraxinus excelsior EM 14 (Ash)	nus excelsior EM	17	-	350	1	2	r.	S	7	4	10 Po	Poor	Fair/Poor. Poor shape & form. Recent storm damage. Excessive Cut Iv lvy growth in crown. Beins back. Moni	Cut Ivy around stem base. Reinspect tree when Ivy has died back. Monitor tree condition.	4.2	2	

Tree Protection on Construction Sites - General Recommendations

Trees being retained should 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. Ground protected by the fencing will be known as the Construction Exclusion Zone (CEZ). Sturdy protective fencing will be erected along the points identified in the Tree Protection Plan **prior** to any soil disturbance and excavation work starting; this is essential to prevent any root or branch damage to the retained trees. The British Standard BS5837: *Trees in relation to design, demolition and construction (2012)* specifies appropriate fencing; see figure 1 below.



Figure 1. Protective fence specification

For light access works within the CEZ the installation of suitable ground protection in the form of scaffold boards, woodchip mulch or specialist ground protection mats/plates may be acceptable.

All weather notices will be erected on the fence with words such as: "Tree Protection Fence — Keep Out". When the fencing has been erected, the construction work can commence. The fencing will be inspected on a regular basis during the duration of the construction process and shall remain in place until heavy building and landscaping work has finished and its removal is authorised by a qualified arborist.

Trench digging or other excavation works for services etc. will not be permitted in the CEZ unless approved and supervised by a qualified arborist using methods outlined in BS5837: *Trees in relation to design, demolition and construction (2012)*.

Care will be taken when planning site operations to ensure that wide or tall loads or plant with booms, jibs and counterweights can operate without coming into contact with retained trees. Such contact can result in serious damage to them and might make their safe retention impossible.

Materials, which can contaminate the soil, e.g. concrete mixings, diesel oil and vehicle washings, will not be discharged within 10 m of a tree stem.

Notice boards, wires and such like will not be attached to any trees. Site offices, materials storage and contractor parking will all be outside the CEZ.

RPA Cat	2	+	36 (7)	_																				
			laying and 5. ms should be stump and the	ms should be stump and the	ms should be stump and the	stump and the		to regenerate.	der should be	ed or part cut	ncourage new		nixed hedgerow	undertaken	e; this may	ion of fresh		of the hedge-	of the hedge- anting spots.	of the hedge- anting spots. k the spoil to	of the hedge- anting spots. k the spoil to	of the hedge- anting spots. k the spoil to els.	eck cox	ec c
			Restore hedge with a mix of	coppicing, hedge laying and	new infill planting.	The dead Elm stems should be	coppiced back to stump and the	suckering allowed to regenerate.	Hawthorn and Elder should be	selectively coppiced or part cut	and laid over to en	growth.	New planting of mixed hedgerow	whips should be undertaken	where practicable; this may	require the additio		topsoil into parts of the hedge-	topsoil into parts of the hedge line to provide planting spots.	topsoil into parts of the hedge line to provide planting spots. Carefully pull back the spoil to	topsoil into parts of line to provide plant Carefully pull back t pre-dumping levels.	topsoil into parts o line to provide plan Carefully pull back pre-dumping level	topsoil into parts of the hedge- line to provide planting spots. Carefully pull back the spoil to pre-dumping levels. Monitor tree condition to check progress of ADB disease.	toposil into parts or line to provide plan Carefully pull back pre-dumping level Monitor tree cond progress of ADB di
			Fair/Poor. Old farm hedgerow suffering from disease, root	damage and lack of regular management. The hedge is	predominantly a mix of Hawthorn and Wych Elm, with small	numbers of Ash, Sycamore and Hazel. The Elm trees have	sustained very high mortality from Dutch Elm disease, with most	standing dead; this has left the main body of the hedge made up	primarily of mature Hawthorn bushes, with younger Elm	suckering in the understorey, amongst dense Brambles and Ivy.	The southern 20-30m of hedge is in better condition, being made and laid over to encourage new	up mostly of Hawthorn and Blackthorn; this southern section has	been separated from the bulk of the hedge by a 10-15m wide	historic access track being run through the hedge.	The land to the east of the hedge-line has been subject to	groundworks in the past, with ground levels having been built up require the addition of fresh		significantly alongside the hedge.	significantly alongside the hedge. There appears to have been little in the way of hedgerow	significantly alongside the hedge. There appears to have been little in the way of hedgerow management operations undertaken for many years and the	significantly alongside the hedge. There appears to have been little in the way of hedgerow management operations undertaken for many years and the hedge has become degraded and patchy.	significantly alongside the hedge. There appears to have been little in the way of hedgerow management operations undertaken for many years and the hedge has become degraded and patchy.	significantly alongside the hedge. There appears to have been little in the way of hedgerow management operations undertaken for many years and the hedge has become degraded and patchy. Fair. Emergent Ash growing in hedgerow. Average shape/form. Suckers around stem base. Epicormic shoots consistent with Ash	significantly alongside the hedge. There appears to have been little in the way of hedgerow management operations undertaken for many years and the hedge has become degraded and patchy. Fair. Emergent Ash growing in hedgerow. Average shape/form. Suckers around stem base. Epicormic shoots consistent with Ash dieback disease (ADB) on branching throughout crown. Bacterial
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			Acer	pseudoplatanus	(Sycamore)	Crataegus	monogyna	(Hawthorn)	Fraxinus excelsior	(Ash)	Sambucus nigra	(Elder)	Prunus spinosa	(Blackthorn)	Ulmus glabra	,	(Wvch Elm)	(Wych Elm)	(Wych Elm) Euonymus	(Wych Elm) Euonymus europaeus (Spindle)	(Wych Elm) Euonymus europaeus (Spindle) Corylus avellana	(Wych Elm) Euonymus europaeus (Spindle) Corylus avellana (Hazel)	(Wych Elm) Euonymus europaeus (Spindle) Corylus avellana (Hazel) Fraxinus excelsior (Ash)	(Wych Elm) Euonymus europaeus (Spindle) Corylus avellana (Hazel) Fraxinus excelsior (Ash)
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RPA		3.6	11.4	4.2	4.8	6.79
Preliminary Recommendations		Cut back dense Blackthorn suckering alongside the hedge. Coppice and lay Hawthorn and other hedgerow bushes selectively where appropriate. Infill gaps with new planting of hedgerow whips (Hawthorn, Hazel, Holly). Monitor condition of Ash trees for progress of ADB.	Cut Ivy around stem base. Review extent of stem decay and crown reduce tree accordingly.	Monitor tree condition.	Fell tree.	Monitor tree condition. Cut Ivy around stem base. Clear undergrowth to allow proper view of tree base.
ERC Phys Cond Structural Condition/Comments		Fair. Section of mature farm hedgerow along western edge of site between the ESB sub-station to the south and new Celbridge link road to the north. Mixed tree species established along the sides of a dry ditch. Mature Hawthorn bushes make up most of a dry ditch. Mature Hawthorn bushes make up most of understorey, with emergent Ash, Sycamore and Oak trees being the prominent canopy trees. The Ash trees are all showing signs of infection by Ash dieback disease (ADB), with some trees being more badly affected than others when inspected. None of the Ash trees were seen to have been killed by the disease yet. Some dead Elm stems from Dutch been killed by the disease yet. Some dead Elm stems from Dutch Elm disease. The prominent Sycamore (T2) has developed basal decay following bark damage from animal gnawing, the most significant individual tree is the mature Oak (T16) which is of high landscape and conservation value. Southern section and northern end of the hedge has suffered from some adjacent groundworks; the section containing most of the larger trees seems to remain relatively unaffected by such activity.	Fair/Poor. Larger hedgerow tree covered by thick lvy growth which restricts the view of the main stem and branch unions. Wood decay established in extensive old bark wounding to lower stem and stem base; the actual extent of basal decay unclear due to thick lvy/undergrowth. Excessive lvy growth in crown.	Fair. Growing in hedgerow. Medium sized tree. Thick Ivy growth on tree stem. Ivy restricts view of main branch unions. Epicormic shoots on branching throughout crown.	Bad. Tree standing dead in hedge.	Fair. Medium sized tree at end of hedge. Thick Ivy growth restricts view of main branch unions. Unable to inspect stem due to undergrowth. Epicormic shoots consistent with Ash dieback disease (ADB) on branching throughout crown.
Phys Cond		Fair	Fair	Fair	Dead	Fair/Poor
ERC		10+	10+	10+	<10	10
>		m	∞	4		2
ш		m	7	4		2
s		m	7	2		2
z		е	6.5	r.		2
ბ		0	0.5	0.5		0
St	_	1	-	1	0	2 9
Oph	E	300	950	350	400	995
	Ε	ω	16	11.5	6	10
Age		Σ	Σ	Ε	EM	EM
Species		Fraxinus excelsior (Ash) Crataegus monogyna (Hawthorn) Sambucus nigra (Elder) Ulmus glabra (Wych Elm) Acer pseudoplatanus (Sycamore) Prunus spinosa (Blackthorn) Quercus robur (Common Oak)	Acer pseudoplatanus (Sycamore)	Fraxinus excelsior (Ash)	Ulmus glabra (Wych Elm)	Fraxinus excelsior (Ash)
Type No.		2	5	m	4	S
Туре		<u></u>	-	⊢	-	⊢

RPA Cat	E	5.4 C2	4.8 C2	5.4 C2	4.2 C2	3.6 C2	5.57 C2	5.4 B2
Preliminary Recommendations R		ë	Monitor tree condition to check progress of ADB disease.	Monitor tree condition to check progress of ADB disease.	Monitor tree condition to check progress of ADB disease.	Cut back dense Blackthorn suckering alongside the hedge. Coppice and lay Hawthorn and other hedgerow bushes selectively where appropriate. Infill gaps with new planting of hedgerow whips (Hawthorn, Hazel, Holly). Monitor condition of Ash trees for progress of ADB.	Monitor tree condition to check progress of ADB disease.	Clear undergrowth to allow proper view of tree base. Inspect
ERC Phys Cond Structural Condition/Comments		Fair. Medium sized tree. Thick luy growth on tree stem. Ivy Cut luy around stem ba: restricts view of main branch unions. Dieback in crown. Excessive Iny growth in crown. Epicormic shoots consistent with Ash dieback disease (ADB) on branching throughout crown.	Fair. Thick Ivy growth on tree stem. Ivy restricts view of main branch unions. Dieback in crown. Epicormic shoots consistent with Ash dieback disease (ADB) on branching throughout crown.	Fair. Medium sized tree. Average shape/form. Epicormic shoots consistent with Ash dieback disease (ADB) on branching throughout crown.	Fair. Smaller sized tree left isolated at end of hedge. Epicormic shoots consistent with Ash dieback disease (ADB) on branching throughout crown.	Fair. Section of hedge running along old dry ditch north of new Celbridge link-road, formerly connected with hedge H2. Evidence of considerable activity in recent times causing soil compaction, excavation etc. to east of hedge likely to impact on tree health and condition. Thick lvy and dense undergrowth and suckering around trees. Hedge includes some higher value Oak trees worthy of retention/protection. No recent hedgerow management.	Fair. Multi-stem coppice stool in hedge. Unable to inspect stool base due to undergrowth. Epicormic shoots consistent with Ash dieback disease (ADB) on branching throughout crown.	Fair. Fair vitality. Smaller sized Oak tree in hedge. Thick Ivy and undergrowth impeded view of tree base.
Phys Cond S		Poor	Poor	Poor	Poor		Poor	Fair
ERC		10	10	10	10	10+ Fair	10	20+
>		S	5.5	4.5	r.	2	4.5	4
ш		S.	4	4.5	e e	2	4.5	4
s		4.5	4.5	5.5	e e	2	_Σ	е
z		4.5	4	5.5	4	2	4.5	2
ъ		m	е	m	m	0	2	е
Ş		1	1	н	1	1	∞	1
Dbh	E	450	400	450	350	300	464	450
Ξ	Ε	15	11	10	6	o	∞	∞
Age		Σ	Σ	Ē	E E	Σ	NS S	EM
Species		Fraxinus excelsior (Ash)	Fraxinus excelsior (Ash)	Fraxinus excelsior (Ash)	Fraxinus excelsior (Ash)	Fraxinus excelsior (Ash) Crataegus monogyna (Hawthorn) Prunus spinosa (Blackthorn) Quercus robur (Common Oak) Corylus avellana	Fraxinus excelsior (Ash)	Quercus robur (Common Oak)
No.		19 tag 38	20 tag 41	21 tag 44	22 tag 46	4	23	24 tag 52
Type No.		-	⊢	-		I	F	-

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		85	82
RPA Cat	Ε	10.8	12
Preliminary Recommendations		as died tion nt	Cut Ivy around stem base. Reinspect tree when Ivy has died back. Improve growing conditions with decompaction work and mulching. Prevent further root damage.
ERC Phys Cond Structural Condition/Comments		Fair. Oak tree in hedge of average shape/form. Some recent root damage likely from excavation and nearby soil compaction. Thick Reinspect tree when Ivy has died lay growth restricts view of main stem and branch unions. Minor back. Improve growing conditions with decompaction work and mulching. Prevent further root damage.	Fair. Oak tree in hedge. Some recent root damage likely from Cut lvy around stem base. excavation and nearby soil compaction. Thick lvy growth restricts Reinspect tree when lvy has died view of main stem and branch unions. Minor deadwood in crown. back. Improve growing conditions with decompaction work and mulching. Prevent further root damage.
Phys Cond			
ERC		20+ Fair	20+ Fair
>		6.5	7
ш		7.5	7
s		7	S.
z		6.5	5
ъ		2.5	7
h St	_	1	0
Dph	E	006	1000
Ħ	Ε	11.5	11
Age		Σ	Σ
Species		Quercus robur (Common Oak)	Quercus robur (Common Oak)
Type No.		25 tag 53	26 tag 54
2			