



**BS:5837 TREE SURVEY -
ARBORICULTURAL IMPACT
ASSESSMENT**

GAA PITCH, KILBARRY

CORK COUNTY GAA BOARD

Doherty Environmental Consultants Ltd

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This report has been prepared by Doherty Environmental Consultants Ltd with all reasonable skill, care and diligence. Information report herein is based on the interpretation of data collected and has been accepted in good faith as being accurate and valid.

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SUMMARY

The trees and hedgerows within the footprint of and adjacent to the site at the old GAA grounds, Kilbarry Co. Cork were assessed independently.

The information contained within this report is in accordance with British Standard *BS 5837: 2012 Trees in relation to Design, Demolition and Construction – Recommendations* and provides information on the protection of the trees during the construction phase.

The report should be read in conjunction with the drawings provided indicating the tree locations and their protection zones.

The report will provide guidance in regard to constraints the trees may place on the development and arboricultural factors to be considered during the construction works of the proposed development.

The report contains an Arboricultural Impact Assessment and an Arboricultural Method Statement that details the protection needed for trees to be retained during the development phase.

98 trees, both individual and in groups were assessed as part of this report in accordance with BS 5837.

48 individual and groups of trees are to be removed due to direct conflict with the proposed development.

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1.0 INTRODUCTION

1.1 SCOPE OF THE REPORT

The report's purpose is to provide the appropriate guidance in regard to the arboricultural information needed for the design and construction of the site at the Gaa Pitch, Kilbarry, Co.Cork.

The report records the current condition of the trees found within the footprint of the entire site and categorises them in accordance with Section 4 of BS 5837 : 2012 “ *Trees in Relation to Design, Demolition and Construction - Recommendations*”.

The report will provide an Arboricultural Impact Assessment (AIA) in accordance with BS 5837, in order to evaluate the direct and indirect effects the proposed construction works will have on the trees and the impact the trees will have on the construction works.

The report will identify the Root Protection Area of all trees to be retained. Heras type mesh fencing will be erected at the extent of the retained tree's RPA.

Where trees will have to be removed due to the constraints of the development plan or as a result of the findings in the survey potential mitigation measures will also be proposed.

This report should be read in conjunction with the Tree Survey Data located in Appendix 2 and the attached Tree Constraints Plan Drawing and Tree Root Protection Plan.

It also gives re-assurance that the health and consideration of the trees is an integral part of the proposed upgrade.

As part of this report an Arboricultural Method Statement (AMS) and Tree Protection Plan (TPP) in accordance with BS 5837 will also be provided. The AMS and TPP will outline the methodologies and specifications needed for the implementation of any tree protection measures with important consideration been given to the root protection area. Any disturbance of the root protection area whether below ground or above ground during the development phase is likely to have a negative impact on the trees with the potential to making them unsafe structures and therefore unsuitable for retention post development. The Tree Protection Plan is based on the proposed design layout of the site and provides the relevant protection methods required to protect the trees selected for retention post development.

1.2 SITE DESCRIPTION & TREE ASSESSMENT

The proposed development site is located at the old GAA grounds and hurley factory on Old Whitechurch Rd., Kilbarry, Co. Cork. The site abounds the Old Whitechurch Rd. to the west, the City North Business Park to the south, the existing GAA grounds of Delany's GAA club to the east and the Glenamought river along the northern boundary. The site is dominated by open grassland, scrub habitat on the sloping northern boundary and individual and clusters of trees and hedgerows.

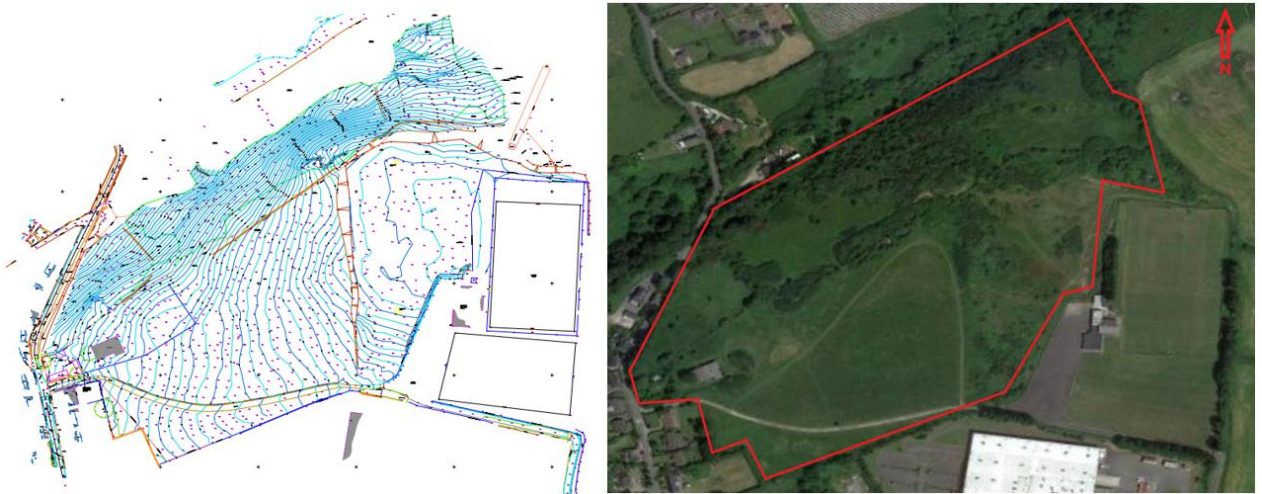


FIG 1 – Footprint of the site in topographic format and a visual representation from Google Maps.

The entire site requires consideration from an arboricultural perspective due to the presence of trees and hedgerows throughout the footprint of the site. There are a number of notable older ditch-line trees particularly along the western boundary and within the north-western section of the site. These trees are highlighted in more detail in Section 5 and within Appendix 2 of this report.

There are dense clusters of trees and shrub habitat on the steep sloping ground to the north of the site down to the Glenamought river. A section of this area will be highlighted within the report to provide guidance for the route of the drainage scheme for the proposed development. The guidance will indicate the route that causes the least amount of disturbance to the trees and vegetation along the sloping ground.

The tree survey and objective individual assessment resulted in the full range of retention categories, A – high, B – moderate, C – low and U – un-retainable as outlined in BS 5837.

Before any recommended works are undertaken the trees should be inspected for any signs or activity of protected species within the trees. Under the Wildlife (Amendment) Act 2000 it is an offence to destroy or disturb nesting birds. Also, under the Wildlife Act and the EU Habitats Directive it is an offence to recklessly kill, injure or capture bats, to disturb them

or destroy, obstruct or damage any bat roosts found. As some of the trees within the report have large cavities it may be prudent to conduct a bat survey prior to any works.

2.0 METHODOLOGY, LIMITATIONS & LEGISLATION

The inspection of these trees was carried out in early June 2022. The inspection was conducted from ground level only using visual tree assessment techniques (VTA) which only gives a snap-shot of what is visible not obscured or accessible on the day of the survey. The survey does not include any climbing inspections, internal investigations of the tree or inspections below ground level.

Only relevant factors that are apparent at the time of the survey are included in this report. Trees are living organisms whose health and condition can change rapidly so as such any recommendations made within this report are valid for a period of 12 months only. It is suggested that further monitoring be required if potential hazards are to be avoided.

Climbing plants such as ivy can obscure decays or structural defects present at the time of the survey. Where the ivy is so dense a thorough examination is not possible and it is recommended that it be severed at ground level and the tree re-inspected once the ivy has died back.

The fruiting bodies of some important wood decay fungi can only be seen at certain times of the year and may not be present at the time of this survey.

The tree survey was conducted in accordance with BS 5837:2012. All trees over 150mm in diameter at breast height were given a unique reference number using metal tags and had their positions plotted on the survey drawings. All individual trees and groups of trees were assessed in relation to their – species, age class, tree height, crown spread, stem diameter at 1.5m above ground, condition and management recommendations. The measurements for tree height and crown spread were taken to an accuracy of 0.5 m. The conditions of the trees both physiologically and structurally were assessed from being – good to fair to poor with additional information shown within the comments.

When categorizing a tree, as recommended in BS 5837:2012 – 4.5.5, the classification should begin by considering whether the tree falls within the scope of category U. If the tree does not fall into this category, it should be considered according to the criteria for inclusion in category A. Subsequently if trees do not meet the criteria, they should be considered in light of the criteria for inclusion in category B. If the criteria is not met, trees are placed in the low category C.

Definitions of the different categories as shown in the Cascade chart in 4.5 of BS 5837 are given below

- Category U – those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years
- Category A – trees of high quality with an estimated remaining life expectancy of at least 40 years
- Category B – trees of moderate quality with an estimated remaining life expectancy of at least 20 years
- Category C – trees of low quality with an estimated remaining life expectancy of between 10 and 20 years

The above categories can be further subdivided regarding the nature of their values or qualities–

- Sub-category 1 - Arboricultural qualities : the trees influence as a good example of its species, it's health and structure
- Sub-category 2 - Landscape qualities : the trees importance within and as landscape features
- Sub-category 3 - Cultural qualities : trees of an age that have a significant conservation and historical value

2.1 ROOT PROTECTION AREA (RPA)

The Root Protection Area (RPA) first appeared in the 2005 version of BS: 5837 and then within the updated version BS: 5837 - 2012. The BS describes the RPA as –

“layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the trees viability and where the protection of the roots and soil structure is treated as priority”

The Root Protection Area (RPA) is the area around an individual tree to be protected from disturbance during construction works. The RPA is shown as a radius in metres measured from the centre of the tree's stem. Protection of the roots and soil structure in the RPA should be treated as a priority.

For single stem trees the root protection area is calculated as a circle with a radius 12 times the stems diameter. A separate calculation should be used for trees with more than one stem. The calculated RPA for each tree is capped at 707 m² or a circle with a radius of 15m. These calculations are based on the formulas set out in Section 4.6 and Annex D of BS 5837.

The RPA is generally regarded as a compromise between carrying out development and retaining a tree. Trees with a large stem diameter at 1.5 m can produce an RPA that if protected would not allow for developments to progress. This is seen as the requirement for capping the RPA at a radius of 15m.

The RPA for each tree is plotted on the Tree Survey Drawings.

2.2 STATUTORY LEGISLATION

The legislation in regard to the felling of trees is set out in Forestry Act 2014 along with the Forestry Regulations 2017. Trees can be felled without the need to submit a tree felling license application under Section 19 of the Forestry Act 2014 where it is –

- A tree in an urban area (an urban area is an area that comprised a city, town or borough as specified in Part 2 of Schedule 5 & Schedule 6 of the Local Government Act 2001)
- A tree within 30 m of a building – excluding any building built after the trees were planted
- Trees outside a forest – the removal of which is specified in a grant of planning permission

3.0 ARBORICULTURAL IMPACT ASSESSMENT

3.1 PROTECTION OF RETAINED TREES

Before any on-site works begin the protection measures outlined in detail in the Arboricultural Method Statement (AMS) should be adhered to. In general, this protection usually consists of a combination of barriers and ground protection. In general, the protection of all trees on-site must be able to accommodate all building works, ingress and egress roots outside the designated RPAs. Appropriate planning should be in place to accommodate the ingress and egress of plant machinery on-site so no trees selected for retention are impacted.

The majority of tree roots grow in the upper metre of soil and they may spread outwards in any direction. Any disturbance of the ground within the root spread of a tree can damage its roots and may severely injure the tree. Damage to roots will interrupt the supply of water and nutrients necessary to keep the tree alive and may cause decline in vigour, dieback or even death of the tree. Damage to roots can also de-stabilize the tree and pose an unacceptable threat to the safety of people.

When soil is compacted a combination of high soil bulk density and elevated soil strength can directly limit root growth. The large pores in well-structured soil are important for gas exchange, the process of respiration and diffusion and these are lost when soils are compacted to high bulk densities. Soil compaction also reduces the rate of water infiltration and the availability of water to the roots, it impairs root growth and the root systems ability to support a healthy crown. The compaction of soil within tree root areas (RPA) can ultimately lead to crown dieback and a decline in tree health

To avoid damage to tree roots existing ground levels should be retained within the RPA. Intrusion into soil within the RPA is generally not acceptable and topsoil within it should be retained in situ. Such excavations should be undertaken carefully using hand-held tools and preferably by using an air-spade – the use of compressed air to expose the tree's root system. It should be noted that it is not realistic to plan for large excavations using hand-held tools due to the demands that manual excavation places on the development project and limitations arising from health and safety considerations.

If roots are exposed, they should be wrapped or covered immediately to prevent desiccation and to protect them from rapid temperature changes. Any coverings or wrappings will be removed before backfilling commences, which should happen as soon as possible.

If a new hard surface is to be laid, it would be preferable to leave any existing sub-base in situ augmenting it where required and use cellular confinement systems.

Details of protection measures as recommended in Section 6.2 *Barriers and Ground Protection* of BS 5837 should be adhered to.

The on-site arborist should be responsible for checking and approving the position of all tree protection measures at the first site visit prior to the commencement of works.

3.2 CONSTRUCTION AND ACCESS REQUIRMENTS AND CONSTRAINTS

During the construction phase on the site there will be a necessity for the use of plant machinery around the site. Ingress and egress routes for all vehicles on the site have the potential to have a negative effect on the tree's health and their structural integrity. The use of lifting machinery can impact on the trees canopy and can cause structural damage to the tree's branches and stem. The constant movement of vehicles on the ground around the trees can cause compaction of the soil. Compaction will reduce soil pore space which can inhibit the tree's ability to access water and nutrients and can restrict root growth. Soil contamination from fuel and lubricants can also contaminate the roots as they access water and nutrients and subsequently have a negative effect on the tree.

Below ground constraints will include a layout design of the root protection area (RPA) which shows the minimum rooting area around the tree needed for its health and viability. The RPA is the area where the roots and the soil take priority and in accordance with BS 5837 no construction works can take place within it.

3.3 NEW PLANTING

To mitigate against the potential loss of any existing trees as part of the development it would be considered appropriate to replant as many trees as those lost if the space provides. This new planting schedule should be considered from the outset of the design and planning application phase. Any advice required for a new planting regime should be given by a landscape architect or otherwise competent person.

3.4 DEVELOPMENT OF RETAINED TREES

The majority of the trees assessed on this site have the potential to remain as part of the landscape for many years. On-going management of retained trees including a regular review and inspection system should be put in place. As trees are dynamic living organisms and their condition can change rapidly this report will only remain valid for a period of 12

months. If the landscape of the site is to be altered in the future a further assessment should be made on the impacts that proposed development would have on these trees.

A continuous monitoring approach to the health of these trees should be initiated to determine their health over the coming years. When replacing individual trees as they fail, the younger trees will need to compete with the established trees for light, moisture and nutrients. In order to successfully integrate these younger trees, the existing trees will need regular pruning to maintain enough direct light overhead.

4.0 ARBORICULTURAL METHOD STATEMENT AND TREE PROTECTION PLAN

4.1 TREE PROTECTION AREA AND SEQUENCE OF OPERATION

Prior to any construction works commencing on the proposed site, including any ground works, demolition, delivery of materials or the use of vehicular machinery a sequence of operations will be implemented. All operations will follow this sequence in a systematic way in order to ensure that any trees selected for retention are protected during the construction phase.

4.2 TREE WORKS

Trees that were identified for removal either as a result of the proposed development or as result of the survey conducted for this report will be shown in the Tree Protection Plan (TPP) and identified with a red outline. Any trees to be removed that are located within the RPA of trees to be retained will not be felled with the use of excavation machinery but will be done so according to best practice as recommended in BS 3998:2010 Tree Work Recommendations. All tree work operations recommended as part of this survey should be undertaken by suitably qualified tree surgeons with the appropriate insurance.

Where the stumps from trees that were felled are to be removed and are within the RPA of retained trees only the use of appropriate machinery, stump grinders, will be allowed within this restricted area. No excavation machinery will be allowed within the RPA of retained trees.

If tree works are to be undertaken within the bird nesting season, March – September, the trees in question will be assessed for the presence of any nests by a competent person before any works commence. If bird nests are present works will cease and an ecologist consulted before works can commence. As some of the trees within the report have large cavities it may be prudent to conduct a bat survey prior to any works.

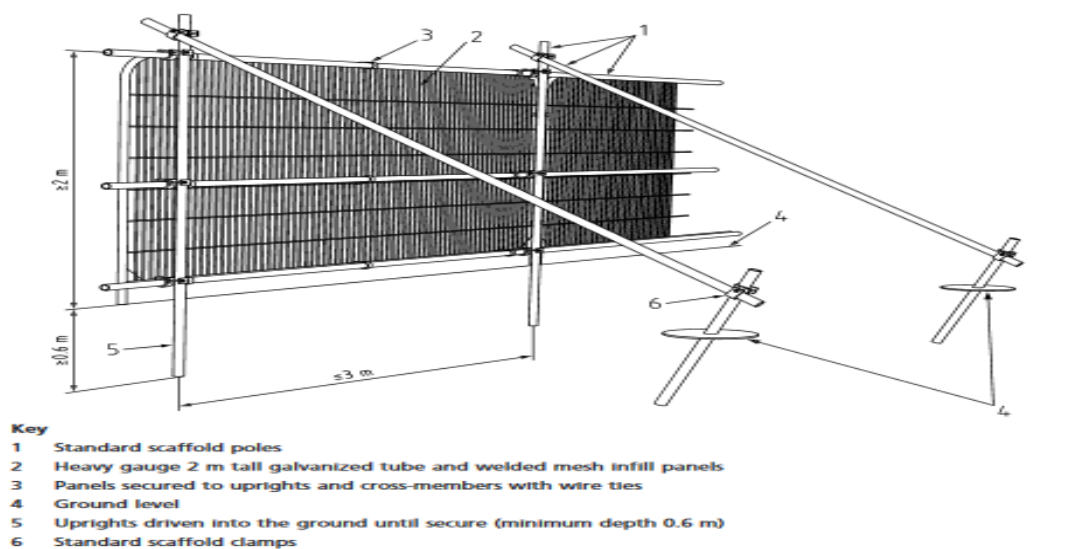
4.3 INSTALLATION OF PROTECTIVE BARRIERS

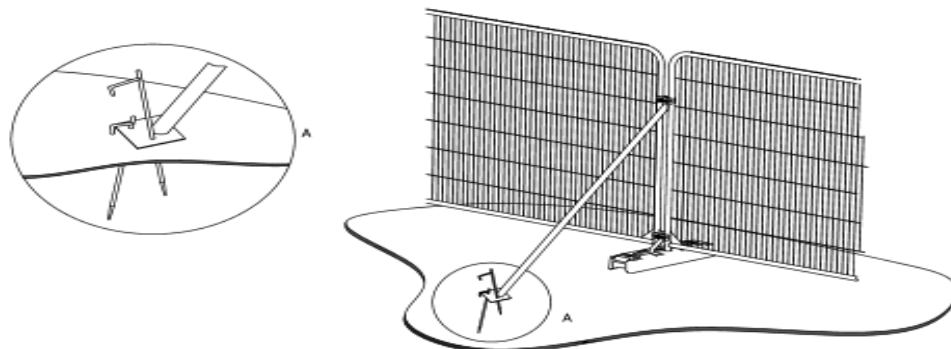
All protective barriers will be Heras type mesh fences, installed prior to the commencement of any works on the improvement scheme. The location of all tree protection barriers will be visible on the Tree Protection Plan (TPP). The installation of the protective barriers will be done as outlined in Section 6.2 Barriers and Ground Protection of BS 5837.

The tree protection barriers will remain in place for the duration of the construction works and should only be removed once the on-site arborist has signed off on its removal.

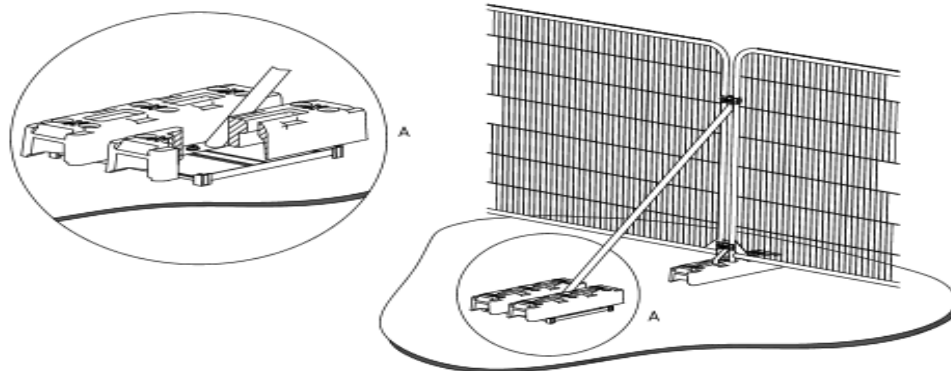
The appropriate tree protection signage should be attached to the protective fencing, either a visual representation of tree protection or for example – T.P.A. Tree Protection Area Restricted Access Keep Out – should be used

Below are illustrations as recommended in BS 5837. These illustrations provide a visual representation of possible options for the construction of the protective fencing.





a) Stabilizer strut with base plate secured with ground pins



4.4 INSTALLATION OF UNDERGROUND SERVICES

Where possible the location, direction and installation of the proposed drainage scheme will be designed so as not to enter the RPAs of retained trees. The RPAs of all trees assessed as part of this report are shown on the Tree Protection Plan (TPP). The protective fencing will be erected at the extent of these RPAs to protect the rooting systems.

4.5 DURING CONSTRUCTION WORKS

The tree protection barriers will be maintained at all times for the duration of the construction works. Any interference with or damage to the tree protection barriers should be recorded and the on-site arborist informed.

The location of the tree protection barriers will be visible on the Tree Protection Plan (TPP) and a copy should be retained on-site for reference at all times.

No machinery will enter the RPA exclusion zones for the duration of the on-site works. No excavations will take place within the RPAs as outlined on the TPP. The ground levels within the RPAs will not be altered at any stage of the construction works.

All diesel, petrol, concrete and other materials hazardous to the health of the trees will be kept within the confines of the designated storage area for the duration of the construction works

No trees will be used to support cables, wires or signage.

All on-site personnel will be briefed on the RPAs of the retained trees and their measures and requirements during their initial site induction.

4.6 REMOVAL OF TREE PROTECTION BARRIERS

The tree protection barriers will be assessed and signed off by the on-site arborist prior to their removal. During the removal of the barriers care will be taken to avoid any unnecessary damage to the trees. If machinery is being used, they should remain on the hard surfaces and outside the RPAs during the dismantling operations.

4.7 LANDSCAPING

Post construction phase there is usually a need for landscaping works to take place. The removal of the tree protection barriers in order for the landscaping works to commence will allow access to previously restricted areas. The landscape contractor should have access to the TPP and adhere to the exclusion zones. The landscape contractor should have his own method statement detailing his proposed work. No rotovating should take place within the RPAs. The use of machinery should be restricted from entering the RPAs and there should be no alteration of the soil levels within the RPAs.

4.9 CONCLUSION

Successfully preventing ground compaction and damage to the tree's rooting system during the construction phase needs to be adhered to from the outset. If any part of the arboricultural method statement is deemed unfeasible or needs to be altered in some way the on-site arborist should be consulted before any works re-commence. All trees proposed for retention should be reassessed during and after completion of the construction phase. The trees may require remedial work to improve form and reduce risk. Trees that are structurally un-sound should be assessed and removed to remove the hazard. Trees should also be assessed if the ground levels in the vicinity of them or if other trees and structures nearby have been removed.

5.0 RESULTS

The tree survey was conducted in early June 2022. The survey was from ground level only. The survey assessed 98 individual and groups of trees. The majority of the 98 individual and groups of trees assessed were deemed to be trees of medium or low quality and are classified as category B or C trees.

The footprint of the development site is highlighted by the purple outline in Fig 2 below, and comprises predominantly of level arable land bordered and intersected with dense hedgerows and scrub consisting of Hawthorn, Blackthorn, Gorse, Elder and Bramble. The majority of the trees within the footprint of and adjacent to the site are self-seeded. The notable planted trees include the line of Poplar trees in the south/east corner of the site and the mature Beech T475.

The trees to the north of the design boundary but still within the footprint of the entire site were only assessed in order to provide guidance for the design of the drainage layout.



FIG 2 – Outline of development site and trees to left & proposed development to right

The information in Table 1 below gives a breakdown of the species and their categorisations recorded on site.

SPECIES	CATEGORY A	CATEGORY B	CATEGORY C	CATEGORY U
ALDER		2	1	
ASH		4	5	
BEECH		3		
BIRCH			1	
BLACKTHORN			1	
EUCALYPTUS			1	
ELDER			1	
HAWTHORN		17	12	
L. CYPRESS			2	
LIME			4	
MIXED SPECIES		3	12	
OAK		1		
POPLAR		4		
SYCAMORE		6	13	
WILLOW			4	

Table 1 – Tree species and their categorization

TREES TO BE REMOVED

Based on the design layout there will be 48 trees removed to facilitate works. There are 48 nr. trees proposed for removal due to them been in direct conflict with the proposed design layout. The majority of the trees proposed for removal are both category B and C trees. All trees to be removed are highlighted in Table 2 below. The 48 trees to be removed include -

TREES	CATEGORY A	CATEGORY B	CATEGORY C	CATEGORY U	TOTAL
TREES TO BE REMOVED DUE TO DIRECT CONFLICT WITH THE PROPOSED DESIGN		475, 490, 508, 510, 556, 557, 559, 561	476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 491, 492, 506, 507, 509, 514, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 558, 560, 562, 564, 568, 569, 570, 571, 572,		48

TABLE 2 – TREES TO BE REMOVED

The images in Fig 3 below highlight the section of the proposed development plan adjacent to the entrance road from Old Watercourse Rd. The red dots represent the trees T475 through to T492. The image indicates a direct conflict between the existing trees and the development. Of the trees highlighted in this image, T475 and T487 are the highest value trees that will be removed. T475 is a mature Beech tree that dominates the local landscape. T487 is a multi-stemmed Ash tree on the roadside boundary, there is evidence that the upper canopy of the Ash been affected by Ash Dieback.



FIG 3 – Trees T475 – T492 & T568 – T572 in red and Proposed Design Layout



FIG 4 – Image of T475 to left and Ash Dieback in canopy of T572 to right

The image in Fig 5 indicates the location of the attenuation tank for the proposed drainage layout. Trees T506, T507, T508, 509, T510 and the dense area of Blackthorn highlighted in T514 are all in direct conflict with the proposed drainage layout. The area is located to the north of the development boundary



FIG 5 – Trees in conflict with attenuation tank

Trees T545 through to T553 are all dense mixed species hedgerows located along the northern boundary of the development footprint. It is plausible to consider that at one stage this was one continuous hedgerow. There are live ESB lines above these hedgerows which may have had an impact on it being broken into distinct sections. As highlighted in Fig 6 all of these distinct areas are in direct conflict with the proposed design layout. T554 cannot be categorised as one of these distinct hedgerows and has been included to highlight the area of dense scrub ground colonized by Willow, Buddleja and Gorse

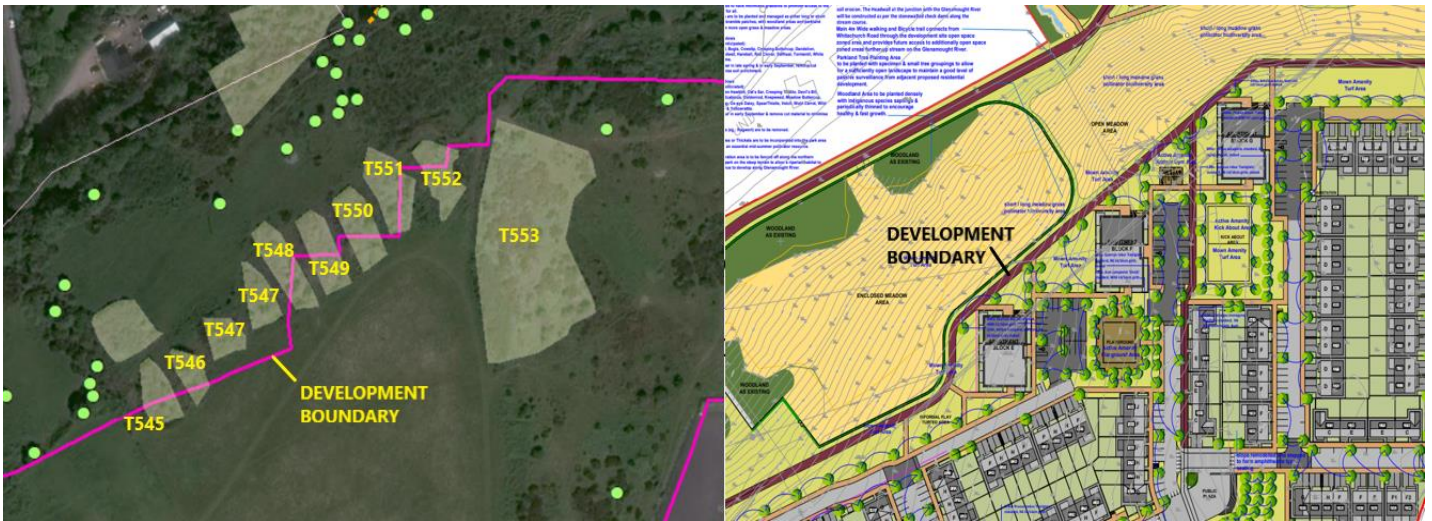


FIG 6 – Trees in conflict with design on northern boundary

T555 is a dense area of scrub ground colonized by Willow, Buddleja and Gorse. T556 through to T561 are all mature Poplar trees, except for T558 which is Lawson Cypress. All the Poplar trees are approximately 30-40 years old. The natural lifespan of Poplar trees is between 60-70 years. These species are prone to branch failure in high winds and are unsuitable for retention within a development setting. As highlighted in Fig 7 all the trees are in direct conflict with the proposed development design layout and recommended for removal.



FIG 7 – Trees to be removed from south/east corner of site

T564 is a mature Elder growing within the footprint of the site and in direct conflict with the proposed design layout and is to be removed.



FIG 8 – Trees within neighbouring properties

PROPOSED DRAINAGE SCHEME

The trees highlighted in Fig 9 were assessed only to provide guidance on the location of the drainage. The assessment and categorization of the trees allowed for an informed decision on the drainage route that will cause the least impact on the existing tree population in this area. The majority of the drainage pipe will be within the bedrock below ground. The recommended area where the drainage pipes are above ground are shown by the meandering orange line in Fig 9. This is the area with the least tree cover in this section and is dominated by Gorse and Willow as highlighted by the photograph in Fig 10

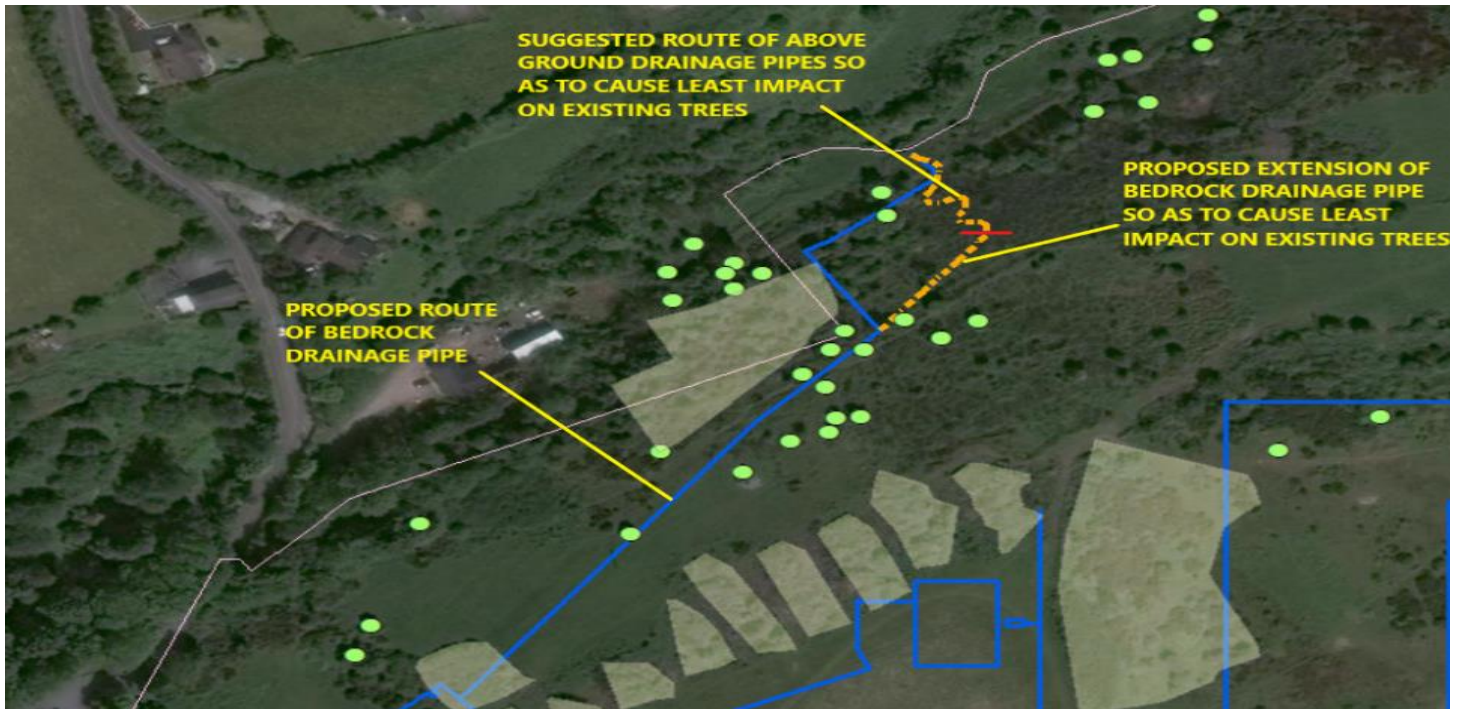


FIG 9 – Recommended route of drainage



FIG 10 – Photograph of recommended area taken from bottom of steep incline – note the lack of tree canopy

TREES TO BE RETAINED

The section highlighted in Fig 8 below is located in the south/west corner of the development footprint. T563 consists of linear planting of mixed species including Pine, Oak, Larch and Ash. The trees are planted over the boundary fence in the neighbouring property. Protective fencing will be erected at the extent of the RPA of these trees to ensure no unnecessary damage is caused to their root systems.

T565 is a mature Hawthorn hedgerow acting as a boundary between the site and the neighbouring property. The hedgerow has been maintained on the eastern side. Protective fencing will be erected at the extent of the RPA of the hedgerow to ensure no unnecessary damage is caused to its root systems.

T566 consists of a line of large Lawson Cypress trees. The trees are growing over the boundary wall within the neighbouring property to the west. During the site visit there was evidence of large branch failure with the fallen branches lying within the development footprint. The extended branches of L. Cypress trees are prone to branch failure in high winds and it is recommended that the property owner be engaged with, with a view to having the trees crown reduced or the trees removed and replanted with species more suited to the development area.

T567 is a very large Eucalyptus tree with the canopy heavily weighted and leaning to the east over the proposed development site where the creche is to located. It is the opinion of the author of this report that the tree cannot be retained at this height, especially over a creche, and every effort should be made with the property owner to maintain the tree at a lower height or remove it and replace it with a more suitable species



The older ditch-line trees of Sycamore and Ash along the western boundary site highlighted in Fig. 11 are all growing on a steep bank down to the Old Whitechurch Rd. All the trees along this boundary line are either on the boundary of the site or growing from the steep bank.

It is not known to the author of this report whether the trees are within the property of the development site or on Cork City Council land. It is not clear from the drawings provided whether the boundary stops at the top of the steep bank or at the bottom of the steep bank adjacent to the road.

Until the boundary has been clarified it is recommended to retain these trees. It should also be highlighted that the majority of the rooting systems of these trees will run parallel to the road along the steep bank and towards the east within the footprint of the development site. The tree protection plan will highlight the positioning of the protection fencing at the extent of the RPA of these trees.



FIG 11 – Trees T493 – T502, parallel to the Old Whitechurch Rd.

APPENDIX 1

SURVEY KEY

Heading.....	sheet reference corresponds with Tree Constraints Plan sheet numbers
Tree No.....	refers to numbered metal tag on each tree
Species	refers to common and botanical name
Age.....	referred to in generalised categories including -
Young.....	a tree planted within the last 10 years
Semi Mature...	a tree that has grown less than 1/3 its expected height
Early Mature...	a tree between 50% & 80% its expected height
Mature.....	a tree that has reached its expected height but still has potential to grow
Over Mature...	a tree at the end of its time and the crown is starting to break up and decrease in size
Ht.....	tree height in meters
Spread(S).....	tree canopy from north, east, south and west in meters
DBH.....	tree diameter at breast height in cm
RPA.....	root protection area as a radius from trees stem centre that is to be protected from disturbance during construction works. For a single stem the root protection area is calculated as an area that is 12 times the stem diameter. The RPA is plotted on the tree constraints plan in meters
Condition.....	condition of the tree both physical and structural
G – Good.....	a specimen of generally good form and health

F – Fair..... a specimen with defects but can be managed and retained

P – Poor..... a specimen through defect, decay or reduced vigour has a limited life

D – Dead..... a dead tree

Comments..... Additional description/commentary on each individual tree

Recommendations Management recommendations are noted, including remedial pruning works and re-inspections where necessary

Retention categories (RC)

The retention category is to identify the quality and value of an existing tree and make decisions whether trees should be retained or removed in accordance with BS 5837 section 4.5

Category U – trees with no expected value in the immediate future and recommended for removal based on arboricultural best practice

Category A – trees of high quality with a minimum 40 years life expectancy

Category B – trees of moderate quality with a minimum 20 years life expectancy

Category C – trees of low quality with a minimum 10 years life expectancy

Sub-category 1 - Arboricultural qualities : the trees influence as a good example of its species, it's health and structure

Sub-category 2 - Landscape qualities : the trees importance within and as landscape features

Sub-category 3 - Cultural qualities : trees of an age that have a significant conservation and historical value

Retained or Removed (R/R)

Trees to be retained or removed based on their location and proximity to the proposed construction works and whether they are in direct conflict with the proposed design layout.

APPENDIX 2

TREE DATA

TREE NO	SPECIES	AGE	HT	SPREAD N S E W	DBH	RPA	CONDITION PHYSIO/STRUCT	COMMENTS	RECOMMENDATIONS	RC	R / R
TREE DATA FOR OLD GAA GROUNDS KILBARRY											
475	<i>Fagus sylvatica</i> Beech	M	14	3 6 7 4	97	11.6	GOOD / FAIR	Large spreading canopy tree – good form and structure – growing from raised ground – attractive large landscape tree – large wound @ 2.5m from old branch failure well occluded	Crown raise to major branching unions Access extent of decay cavity Monitor	B 1,2	Removed
476	<i>Acer pseudoplatanus</i> Sycamore	E/M	6	3 3 3 3	N/A	N/A	FAIR / FAIR	Cluster of multiple individual small diameter stems growing within old stone walls	Unsuitable for retention post development – remove and replant with native species	C 2	Removed
477	<i>Fraxinus excelsior</i> Ash	M	14	4 4 3 3	38 33	5.0	FAIR / FAIR	Twin stem from base with bark inclusion evident – dense ivy throughout obscuring visibility – evidence of Ash Dieback within the top canopy	Unsuitable for retention post development – remove and replant with native species	C 1,2	Removed
478	<i>Acer pseudoplatanus</i> Sycamore	M	10	1 3 1 1	29	3.5	FAIR / FAIR	Small canopy tree – evidence of old stem failure - good ext growth on remaining stem	Unsuitable for retention post development – remove and replant with native species	C 2	Removed
479	<i>Acer pseudoplatanus</i> Sycamore	M	10	2 2 2 2	29	3.5	FAIR / FAIR	Small narrow canopy tree – evidence of old stem failure with decay present- good ext growth on remaining stem	Unsuitable for retention post development – remove and replant with native species	C 1,2	Removed

TREE NO	SPECIES	AGE	HT	SPREAD N S E W	DBH	RPA	CONDITION PHYSIO/STRUCT	COMMENTS	RECOMMENDATIONS	RC	R / R
TREE DATA FOR OLD GAA GROUNDS KILBARRY											
480	<i>Tilia x europaea</i> Common Lime	E/M	8	2 3 2 2	17.5 13 11	2.4	GOOD / FAIR	Multiple small diameter stems from base – largest stems taken for RPA – good ext growth – low arboricultural value	Unsuitable for retention post development – remove and replant with native species	C 2	Removed
481	<i>Tilia x europaea</i> Common Lime	E/M	8	2 3 2 2	16 2 x 9.5	2.1	GOOD / FAIR	Multiple small diameter stems from base – largest stems taken for RPA – good ext growth – low arboricultural value	Unsuitable for retention post development – remove and replant with native species	C 2	Removed
482	<i>Tilia x europaea</i> Common Lime	E/M	7	2 3 2 2	19	2.3	GOOD / FAIR	Multiple small diameter stems from base – largest stems taken for RPA – good ext growth – low arboricultural value	Unsuitable for retention post development – remove and replant with native species	C 2	Removed
483	<i>Tilia x europaea</i> Common Lime	E/M	7	2 3 2 2	2 x 17	2.5	GOOD / FAIR	Multiple small diameter stems from base – largest stems taken for RPA – good ext growth – low arboricultural value	Unsuitable for retention post development – remove and replant with native species	C 2	Removed
484	<i>Fraxinus excelsior</i> Ash	E/M	5	2 2 2 2	19	2.3	GOOD / FAIR	Multiple small diameter stems from base – largest stems taken for RPA – good ext growth – low arboricultural value – constantly ‘topped’ due to growing beneath ESB lines	Unsuitable for retention post development – remove and replant with native species	C 2	Removed

TREE NO	SPECIES	AGE	HT	SPREAD N S E W	DBH	RPA	CONDITION PHYSIO/STRUCT	COMMENTS	RECOMMENDATIONS	RC	R / R
TREE DATA FOR OLD GAA GROUNDS KILBARRY											
485	<i>Crataegus monogyna</i> Hawthorn	M	4	2 3 3 1	17.5 2 x 11	2.3	GOOD / GOOD	Sparse spreading canopy – growing from base of old stone building	Unsuitable for retention post development – remove and replant with native species	C 2	Removed
486	<i>Crataegus monogyna</i> Hawthorn	M	4	3 1 2 2	16 14 13	2.5	GOOD / GOOD	3 individual stems from base – good form and structure – very dense canopy	Unsuitable for retention post development – remove and replant with native species	C 2	Removed
487	<i>Fraxinus excelsior</i> Ash	M	16	5 3 4 4	57 51 38	8.5	FAIR / GOOD	Large spreading canopy tree growing on boundary with road extending over road to west and site to east – 3 large stems from base with good unions – first signs of Ash Dieback in canopy	Prune extended branches to east if they extend beyond RPA protective fencing	C 2	Removed
488	Dense area of Hawthorn, Sycamore & Elder	E/M	3	4 4 4 4	N/A	N/A	GOOD / GOOD	Dense cluster of naturalised mixed species with very dense undergrowth	Unsuitable for retention post development – remove and replant with native species	C 2	Removed
489	<i>Crataegus monogyna</i> Hawthorn	M	4	2 3 2 3	7 x 30	2.5	GOOD / GOOD	Isolated individual tree – very dense undergrowth – multiple small diameter stems – constantly pruned to N due to ESB lines	Unsuitable for retention post development – remove and replant with native species	C 2	Removed

TREE NO	SPECIES	AGE	HT	SPREAD N S E W	DBH	RPA	CONDITION PHYSIO/STRUCT	COMMENTS	RECOMMENDATIONS	RC	R / R
TREE DATA FOR OLD GAA GROUNDS KILBARRY											
490	<i>Crataegus monogyna</i> Hawthorn	M	4	3 3 3 3	2 x 22	3.1	GOOD / GOOD	Twin stem from base – very dense canopy with dense undergrowth limiting access – good ext growth and form	Unsuitable for retention post development – remove and replant with native species	B 2	Removed
491	<i>Salix caprea</i> Goat Willow	M	9	3 3 3 3	5 x 16	3.6	GOOD / GOOD	Multiple small diameter stems from base – largest stems taken for RPA – good ext growth – low arboricultural value	Unsuitable for retention post development – remove and replant with native species	C 2	Removed
492	<i>Acer pseudoplatanus</i> Sycamore	M	16	3 3 2 1	2 x 19	2.7	GOOD / GOOD	Twin stem from base with bark inclusion – canopy merging with T491 to W – dense canopy with good ext growth	Unsuitable for retention post development – remove and replant with native species	C 2	Removed
493	<i>Fraxinus excelsior</i> Ash	M	9	1 3 1 3	31	3.7	FAIR / GOOD	Small canopy tree with evidence of Ash Dieback in canopy – tree growing on steep bank toward road on council land	No works	C 2	Retained
494	<i>Acer pseudoplatanus</i> Sycamore	M	13	2 5 5 4	48 35	5.9	GOOD / GOOD	Twin stem from base – large spreading canopy to east & west merging with T495 to N – growing from steep bank toward road on council land – dense undergrowth	Prune extended branches to east if they extend beyond RPA protective fencing	B 1,2	Retained

TREE NO	SPECIES	AGE	HT	SPREAD N S E W	DBH	RPA	CONDITION PHYSIO/STRUCT	COMMENTS	RECOMMENDATIONS	RC	R / R
TREE DATA FOR OLD GAA GROUNDS KILBARRY											
495	<i>Acer pseudoplatanus</i> Sycamore	M	14	1 3 4 5	57	6.8	GOOD / GOOD	Twin stem from 4m – extended canopy weighted over road – growing from steep bank toward road on council land – dense undergrowth	Prune extended branches to east if they extend beyond RPA protective fencing	B 1,2	Retained
496	<i>Acer pseudoplatanus</i> Sycamore	M	14	3 2 4 5	48 45	6.6	GOOD / GOOD	Large spreading canopy merging with T495 to S & T497 to N – extended canopy to east & west – growing from steep bank toward road on council land	Prune extended branches to east if they extend beyond RPA protective fencing	B 1,2	Retained
497	<i>Acer pseudoplatanus</i> Sycamore	M	14	3 3 4 4	38 22	4.4	GOOD / GOOD	Twin stem from 0.5m with bark inclusion – spreading canopy to east & west – growing from edge of steep bank toward road on council land	Prune extended branches to east if they extend beyond RPA protective fencing	B 1,2	Retained
498	<i>Crataegus monogyna</i> Hawthorn	M	4	2 3 1 3	19 16	2.5	GOOD / GOOD	Twin stem dense canopy merging with T499 to N – overgrown by T497 to S/W & T500 to N/W – part of line of Hawthorn on edge of steep boundary bank	No works - within RPA of larger trees	B 1,2	Retained
499	<i>Acer pseudoplatanus</i> Sycamore	M	4	2 2 2 2	17.5 2 x 9.5	2.2	GOOD / GOOD	Overgrown by T500 to west – good ext growth & form – part of line of Hawthorn on edge of steep boundary bank	No works - within RPA of T500	B 1,2	Retained

TREE NO	SPECIES	AGE	HT	SPREAD N S E W	DBH	RPA	CONDITION PHYSIO/STRUCT	COMMENTS	RECOMMENDATIONS	RC	R / R
TREE DATA FOR OLD GAA GROUNDS KILBARRY											
500	<i>Acer pseudoplatanus</i> Sycamore	M	16	2 5 5 5	45 41	6.1	GOOD / GOOD	Twin stem from base – dense ivy obscuring visibility – large spreading canopy with good ext growth – growing from steep bank toward road on council land	Prune extended branches to east if they extend beyond RPA protective fencing	B 1,2	Retained
501	<i>Fraxinus excelsior</i> Ash	M	16	3 1 5 3	38	4.6	GOOD / GOOD	Large spreading canopy merging with T500 to S & larger Sycamore to N – extended canopy to east & west – twin stem from 4m with dense ivy obscuring visibility – growing from steep bank toward road on council land – no evidence of Ash Dieback	Prune extended branches to east if they extend beyond RPA protective fencing	B 1,2	Retained
502	<i>Crataegus monogyna</i> Hawthorn	M	5	2 2 2 2	21 9	2.3	GOOD / GOOD	Overgrown by large Sycamore to S/W – good ext growth & form – part of line of Hawthorn on edge of steep boundary bank	No works - within RPA of larger trees	B 1,2	Retained
503	<i>Acer pseudoplatanus</i> Sycamore	E/M	6	3 3 3 3	20 17	2.5	GOOD / GOOD	Twin stem from 1m with bark inclusion – good form, structure & ext growth – dense canopy	No works – outside Red Line Boundary – maybe in conflict with drainage scheme	C 1,2	Retained
504	<i>Crataegus monogyna</i> Hawthorn	M	4	2 2 2 2	15	1.8	GOOD / GOOD	Attractive single stem isolated tree – good form, structure & ext growth	No works – outside Red Line Boundary – maybe in conflict with drainage scheme	B 1,2	Retained

TREE NO	SPECIES	AGE	HT	SPREAD N S E W	DBH	RPA	CONDITION PHYSIO/STRUCT	COMMENTS	RECOMMENDATIONS	RC	R / R
TREE DATA FOR OLD GAA GROUNDS KILBARRY											
505	<i>Crataegus monogyna</i> Hawthorn	M	4.5	2 2 2 2	2 x 19	2.7	GOOD / GOOD	Twin stem from base – isolated tree – good form, structure & ext growth	No works – outside Red Line Boundary – maybe in conflict with drainage scheme	B 1,2	Retained
506	Sycamore, Ash & Hawthorn	M	4	3 2 4 4	23	2.8	GOOD / POOR	3 individual species growing in a line along Red Line Boundary – merging canopies – constantly ‘topped’ as their growing beneath ESB lines	Remove – in direct conflict with attenuation tank	C 1,2	Removed
507	<i>Acer pseudoplatanus</i> Sycamore	M	12	4 3 2 4	35 2 x 29	5.4	GOOD / FAIR	Main stem with twin stem from 2m with bark inclusion – stem to W with good union – dense canopy – pruned to S in past due to ESB lines	Remove – in direct conflict with attenuation tank	C 1,2	Removed
508	<i>Fraxinus excelsior</i> Ash	M	8	3 3 3 3	41	4.9	GOOD / GOOD	Twin stem from 2m – dense ivy obscuring union – good form, structure & ext growth – no evidence of Ash Dieback	Remove – in direct conflict with attenuation tank	B 1,2	Removed
509	<i>Acer pseudoplatanus</i> Sycamore	E/M	4	2 2 1 1	16	1.9	GOOD / GOOD	Small canopy tree overgrown by T508 to S – good ext growth – low value	Remove – in direct conflict with attenuation tank	C 1,2	Removed

TREE NO	SPECIES	AGE	HT	SPREAD N S E W	DBH	RPA	CONDITION PHYSIO/STRUCT	COMMENTS	RECOMMENDATIONS	RC	R / R
TREE DATA FOR OLD GAA GROUNDS KILBARRY											
510	<i>Crataegus monogyna</i> Hawthorn	M	4	3 3 2 2	2 x 16 2 x 13	2.9	GOOD / GOOD	Multi stem dense canopy tree – good ext growth and form – dense ivy growing throughout	Remove – in direct conflict with attenuation tank	B 1,2	Removed
511	Sycamore	M	8	3 3 3 3	23	2.8	GOOD / GOOD	Very dense undergrowth – area inaccessible – DBH & RPA estimated – good ext growth	No works – outside Red Line Boundary – highlighted for guidance in relation to proposed drainage layout	C 1,2	Retained
512	<i>Crataegus monogyna</i> Hawthorn	M	5	2 2 2 2	5 x 13	2.9	GOOD / GOOD	Very dense narrow canopy tree – multiple stems from base – good ext growth throughout – dense undergrowth	No works – outside Red Line Boundary – highlighted for guidance in relation to proposed drainage layout	C 1,2	Retained
513	<i>Fagus sylvatica</i> Beech	M	18	5 5 5 5	3 x 50	8.7	GOOD / GOOD	3 large stems from base – large spreading canopy – at eastern extent of line of Beech trees forming large canopy area – highlighted to assist in plotting drainage layout	No works – outside Red Line Boundary – highlighted for guidance in relation to proposed drainage layout	B 1,2	Retained
514	<i>Prunus spinosa</i> Blackthorn	M	2.5	N/A	N/A	N/A	GOOD / GOOD	Dense area of blackthorn – highlighted on associated maps and drawings	No works – outside Red Line Boundary – highlighted for guidance in relation to proposed drainage layout	C 1,2	Retained
515	<i>Crataegus monogyna</i> Hawthorn	M	2.5	2 2 2 2	6 x 9.5	2.3	GOOD / GOOD	Attractive multi stem isolated tree – good form, structure & ext growth	No works – outside Red Line Boundary – highlighted for guidance in relation to proposed drainage layout	B 1,2	Retained

TREE NO	SPECIES	AGE	HT	SPREAD N S E W	DBH	RPA	CONDITION PHYSIO/STRUCT	COMMENTS	RECOMMENDATIONS	RC	R / R
TREE DATA FOR OLD GAA GROUNDS KILBARRY											
516	<i>Crataegus monogyna</i> Hawthorn	M	4	3 3 3 3	25	3.0	GOOD / GOOD	Attractive older multi stem isolated tree – good form, structure & ext growth	No works – outside Red Line Boundary – highlighted for guidance in relation to proposed drainage layout	B 1,2	Retained
517	<i>Crataegus monogyna</i> Hawthorn Mixed species area	M	N/A	N/A	N/A	N/A	GOOD / GOOD	Area of very dense Blackthorn and older Hawthorn with individual species of mature Ash & Sycamore – area inaccessible to tag individual trees – dense canopy area	No works – outside Red Line Boundary – highlighted for guidance in relation to proposed drainage layout	B 1,2	Retained
518	<i>Crataegus monogyna</i> Hawthorn	M	4	2 2 2 2	3 x 13	2.3	FAIR / FAIR	Narrow canopy tree – deadwood and dieback throughout – multiple small diameter stems from base	No works – outside Red Line Boundary – highlighted for guidance in relation to proposed drainage layout	C 1,2	Retained
519	<i>Crataegus monogyna</i> Hawthorn	M	4	2 2 2 2	8 x 6	1.7	FAIR / FAIR	Narrow canopy tree – deadwood and dieback throughout – multiple small diameter stems from base	No works – outside Red Line Boundary – highlighted for guidance in relation to proposed drainage layout	C 1,2	Retained
520	<i>Crataegus monogyna</i> Hawthorn	M	4.5	3 3 3 3	3 x 13	2.3	GOOD / GOOD	Older multi stem tree – good form, structure & ext growth	No works – outside Red Line Boundary – highlighted for guidance in relation to proposed drainage layout	B 1,2	Retained

TREE NO	SPECIES	AGE	HT	SPREAD N S E W	DBH	RPA	CONDITION PHYSIO/STRUCT	COMMENTS	RECOMMENDATIONS	RC	R / R
TREE DATA FOR OLD GAA GROUNDS KILBARRY											
521	<i>Crataegus monogyna</i> Hawthorn	M	4	3 3 3 3	4 x 14	2.8	GOOD / GOOD	Attractive open spreading canopy tree – good form, structure & ext growth	No works – outside Red Line Boundary – highlighted for guidance in relation to proposed drainage layout	B 1,2	Retained
522	<i>Crataegus monogyna</i> Hawthorn	M	3	3 3 3 3	4 x 11	2.2	FAIR / GOOD	Small canopy tree – dense ivy throughout – multi stem from base	No works – outside Red Line Boundary – highlighted for guidance in relation to proposed drainage layout	C 1,2	Retained
523	<i>Crataegus monogyna</i> Hawthorn	M	5	3 3 3 3	22 2 x 16	3.2	GOOD / GOOD	Multi stem from base – very dense canopy – good form, structure & ext growth	No works – outside Red Line Boundary – highlighted for guidance in relation to proposed drainage layout	B 1,2	Retained
524	<i>Crataegus monogyna</i> Hawthorn	M	5	2 2 2 2	3 x 14	2.4	FAIR / GOOD	Small canopy tree – multi stem from base	No works – outside Red Line Boundary – highlighted for guidance in relation to proposed drainage layout	C 1,2	Retained
525	<i>Crataegus monogyna</i> Hawthorn	O/M	5	3 3 3 3	3 x 13	2.3	GOOD / GOOD	Older multi stem tree – good form, structure & ext growth – dense canopy	No works – outside Red Line Boundary – highlighted for guidance in relation to proposed drainage layout	B 1,2	Retained

TREE NO	SPECIES	AGE	HT	SPREAD N S E W	DBH	RPA	CONDITION PHYSIO/STRUCT	COMMENTS	RECOMMENDATIONS	RC	R / R
TREE DATA FOR OLD GAA GROUNDS KILBARRY											
526	<i>Quercus robur</i> Oak	E/M	9	3 3 3 3	25	3.0	GOOD / GOOD	Very dense undergrowth – base of tree inaccessible – RPA estimated – good ext growth and form visible	No works – outside Red Line Boundary – highlighted for guidance in relation to proposed drainage layout	B 1,2	Retained
527	<i>Alnus glutinosa</i> Alder	E/M	3	2 2 2 2	16	1.9	GOOD / GOOD	Attractive open spreading canopy tree – good form, structure & ext growth	No works – outside Red Line Boundary – highlighted for guidance in relation to proposed drainage layout	B 1,2	Retained
528	<i>Crataegus monogyna</i> Hawthorn	M	N/A	N/A	N/A	N/A	GOOD / GOOD	Dense area of mature Hawthorn trees Dense area of Gorse between these trees and T529 – approximately only 2/3 Willow, Hazel & a single Hawthorn would be affected if drainage was used in this area	No works – outside Red Line Boundary – highlighted for guidance in relation to proposed drainage layout	B 1,2	Retained
529	<i>Crataegus monogyna</i> Hawthorn	M	5	3 2 3 2	4 x 14	2.8	GOOD / GOOD	Very dense undergrowth – base of tree inaccessible – RPA estimated – good ext growth and form visible	No works – outside Red Line Boundary – highlighted for guidance in relation to proposed drainage layout	B 1,2	Retained
530	<i>Acer pseudoplatanus</i> Sycamore	M	13	4 3 3 3	5 x 22	4.9	GOOD / GOOD	Spreading canopy – multi stem from base – good ext growth	No works – outside Red Line Boundary – highlighted for guidance in relation to proposed drainage layout	C 1,2	Retained

TREE NO	SPECIES	AGE	HT	SPREAD N S E W	DBH	RPA	CONDITION PHYSIO/STRUCT	COMMENTS	RECOMMENDATIONS	RC	R / R
TREE DATA FOR OLD GAA GROUNDS KILBARRY											
531	<i>Alnus glutinosa</i> Alder	E/M	6	2 2 2 2	13	1.6	GOOD / GOOD	Cluster of 9 individual trees – all good form, structure and ext growth – tree furthest to east used to represent RPA	No works – outside Red Line Boundary – highlighted for guidance in relation to proposed drainage layout	C 1,2	Retained
532	<i>Fraxinus excelsior</i> Ash	M	14	4 2 4 3	43	5.2	GOOD / GOOD	Large spreading canopy – dense ivy from base – no evidence of Ash Dieback – good form, structure & ext growth – large mature Hawthorn @ base	No works – outside Red Line Boundary – highlighted for guidance in relation to proposed drainage layout	B 1,2	Retained
533	<i>Crataegus monogyna</i> Hawthorn	M	7	3 3 3 3	4 x 19	3.8	GOOD / GOOD	Older multi stem tree – good form, structure & ext growth – dense canopy	No works – outside Red Line Boundary – highlighted for guidance in relation to proposed drainage layout	B 1,2	Retained
534	<i>Crataegus monogyna</i> Hawthorn	M	7	3 3 3 3	4 x 17	3.5	GOOD / GOOD	Older multi stem tree – good form, structure & ext growth – dense canopy	No works – outside Red Line Boundary – highlighted for guidance in relation to proposed drainage layout	B 1,2	Retained
535	<i>Fagus sylvatica</i> Beech	M	12	3 1 3 3	41	4.9	GOOD / GOOD	Canopy spreading down the slope – good structure and ext growth	No works – outside Red Line Boundary – highlighted for guidance in relation to proposed drainage layout	B 1,2	Retained

TREE NO	SPECIES	AGE	HT	SPREAD N S E W	DBH	RPA	CONDITION PHYSIO/STRUCT	COMMENTS	RECOMMENDATIONS	RC	R / R
TREE DATA FOR OLD GAA GROUNDS KILBARRY											
536	<i>Fraxinus excelsior</i> Ash	M	17	3 4 5 2	45	5.4	GOOD / GOOD	Twin stem from 2m with good union – growing over boundary with neighbouring property to north west of site – good ext growth large canopy – no evidence of Ash Dieback	No works – outside Red Line Boundary – highlighted for guidance in relation to proposed drainage layout	B 1,2	Retained
537	<i>Alnus glutinosa</i> Alder <i>Crataegus monogyna</i> Hawthorn	M	14	2 2 4 3	38	4.6	GOOD / GOOD	Line of Alder & hawthorn trees growing over boundary wall – largest tree taken to represent RPA – all with good form & ext growth	No works – outside Red Line Boundary – highlighted for guidance in relation to proposed drainage layout	B 1,2	Retained
538	<i>Salix caprea</i> Goat Willow	E/M	4	3 3 3 3	8 x 8	2.3	GOOD / GOOD	Multi stem from base – dense canopy good form & ext growth – low arb value	Possible removal based on proposed drainage layout	C 1,2	Removed
539	<i>Salix caprea</i> Goat Willow	E/M	4	3 2 3 2	4 x 8	1.6	GOOD / GOOD	Multi stem from base – dense canopy good form & ext growth – low arb value – smaller shrub size	Possible removal based on proposed drainage layout	C 1,2	Removed
540	<i>Betula pendula</i> Birch	E/M	4	1 1 2 1	13	1.6	FAIR / FAIR	Small canopy tree – sparse canopy – out-competed – leaning & bendinf heavily to east	Possible removal based on proposed drainage layout	C 1,2	Removed

TREE NO	SPECIES	AGE	HT	SPREAD N S E W	DBH	RPA	CONDITION PHYSIO/STRUCT	COMMENTS	RECOMMENDATIONS	RC	R / R
TREE DATA FOR OLD GAA GROUNDS KILBARRY											
541	<i>Crataegus monogyna</i> Hawthorn	M	4	3 3 3 3	3 x 19	3.3	FAIR / GOOD	Sparse canopy to west with deadwood and dieback – dense central canopy & to east - dense gorse understory – inaccessible RPA estimated	No works – outside Red Line Boundary – highlighted for guidance in relation to proposed drainage layout	C 1,2	Retained
542	<i>Crataegus monogyna</i> Hawthorn	M	3.5	2 2 2 2	8 x 6.3	1.8	FAIR / GOOD	Small canopy – multi stem from base dense gorse understory – inaccessible RPA estimated	No works – outside Red Line Boundary – highlighted for guidance in relation to proposed drainage layout	C 1,2	Retained
543	<i>Crataegus monogyna</i> Hawthorn	E/M	3	2 2 2 2	5 x 6.4	1.4	FAIR / GOOD	Small canopy tree – dieback in tips of canopy – dense gorse understory – inaccessible RPA estimated	No works – outside Red Line Boundary – highlighted for guidance in relation to proposed drainage layout	C 1,2	Retained
544	<i>Crataegus monogyna</i> Hawthorn	E/M	4	3 2 2 2	3 x 13	2.3	FAIR / POOR	Sparse canopy – deadwood & dieback throughout – dense gorse understory – inaccessible RPA estimated	No works – outside Red Line Boundary – highlighted for guidance in relation to proposed drainage layout	C 1,2	Retained
545	Mixed species Hedgerow	M	4	N/A	N/A	N/A	FAIR / FAIR	Dense area of blackthorn, gorse and bramble with single Hawthorn – part of older continuous hedgerow – beneath ESB lines	Unsuitable for retention post development – remove and replant with native species	C 1,2	Removed

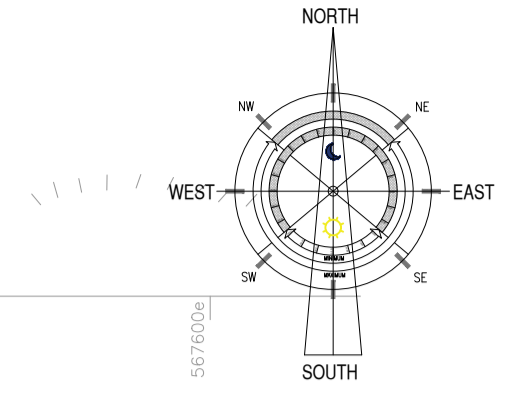
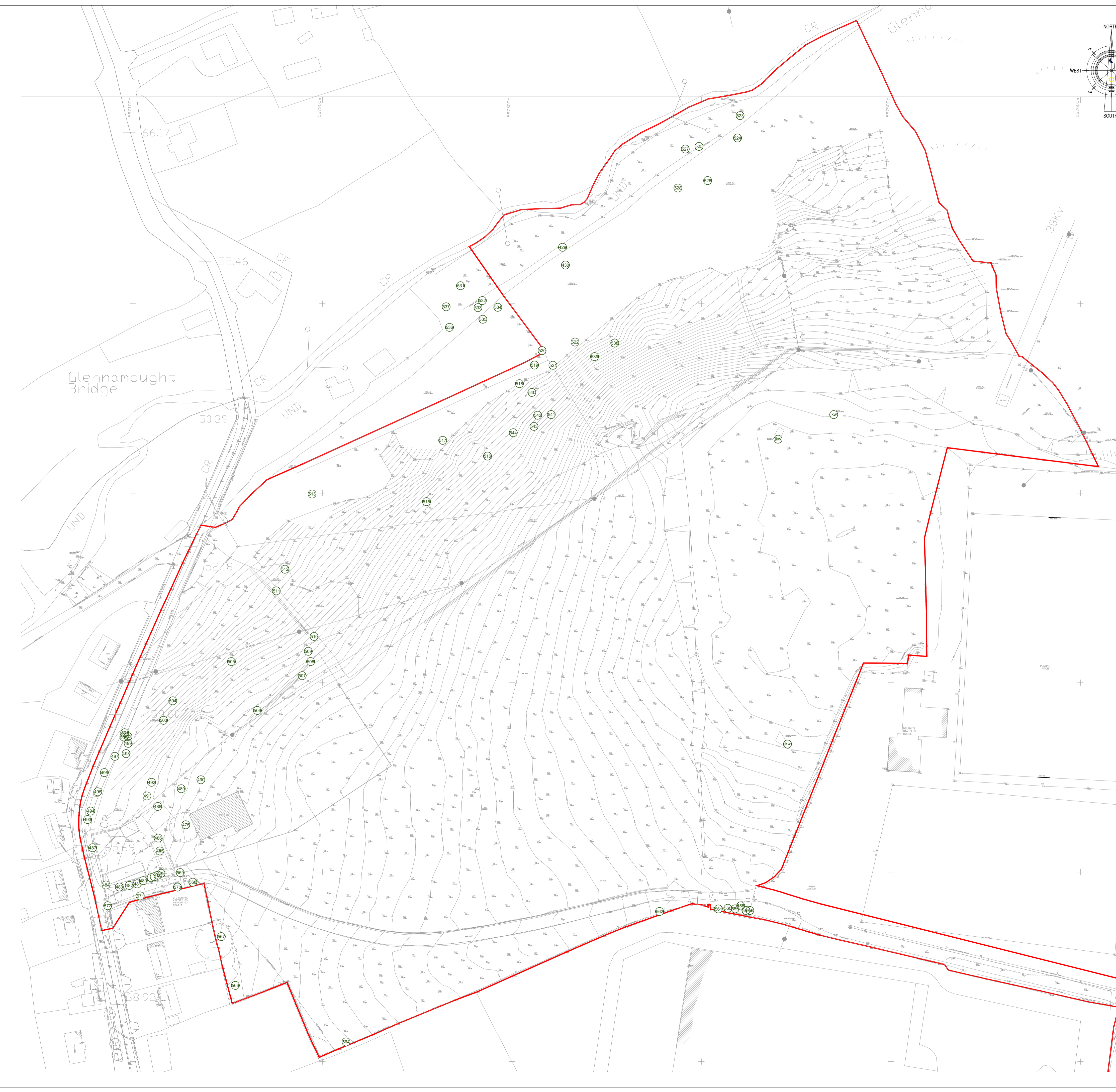
TREE NO	SPECIES	AGE	HT	SPREAD N S E W	DBH	RPA	CONDITION PHYSIO/STRUCT	COMMENTS	RECOMMENDATIONS	RC	R / R
TREE DATA FOR OLD GAA GROUNDS KILBARRY											
546	Mixed species Hedgerow	M	4	N/A	N/A	N/A	FAIR / GOOD	Dense area of blackthorn, gorse and bramble with single Ash – Ash Dieback evident – part of older continuous hedgerow – beneath ESB lines	Unsuitable for retention post development – remove and replant with native species	C 1,2	Removed
547	Mixed species Hedgerow	M	3.5	N/A	N/A	N/A	FAIR / GOOD	Dense area of blackthorn, gorse and bramble with single Hawthorn – part of older continuous hedgerow – beneath ESB lines	Unsuitable for retention post development – remove and replant with native species	C 1,2	Removed
548	Mixed species Hedgerow	M	3	N/A	N/A	N/A	FAIR / GOOD	Dense area of blackthorn, gorse and bramble with 2 Hawthorn – part of older continuous hedgerow – beneath ESB lines	Unsuitable for retention post development – remove and replant with native species	C 1,2	Removed
549	Mixed species Hedgerow	M	4	N/A	N/A	N/A	FAIR / GOOD	Dense area of blackthorn, gorse and bramble with Hawthorn & Elder – part of older continuous hedgerow – beneath ESB lines	Unsuitable for retention post development – remove and replant with native species	C 1,2	Removed
550	Mixed species Hedgerow	M	4	N/A	N/A	N/A	FAIR / GOOD	Dense area of blackthorn, gorse and bramble with Hawthorn & Elder – part of older continuous hedgerow – beneath ESB lines	Unsuitable for retention post development – remove and replant with native species	C 1,2	Removed
551	Mixed species Hedgerow	M	4	N/A	N/A	N/A	FAIR / GOOD	Dense area of blackthorn, gorse and bramble with Hawthorn & Elder – part of older continuous hedgerow – beneath ESB lines	Unsuitable for retention post development – remove and replant with native species	C 1,2	Removed

TREE NO	SPECIES	AGE	HT	SPREAD N S E W	DBH	RPA	CONDITION PHYSIO/STRUCT	COMMENTS	RECOMMENDATIONS	RC	R / R
TREE DATA FOR OLD GAA GROUNDS KILBARRY											
552	Mixed species Hedgerow	M	4	N/A	N/A	N/A	FAIR / GOOD	Dense area of blackthorn, gorse and bramble with Hawthorn & Elder – part of older continuous hedgerow – beneath ESB lines	Unsuitable for retention post development – remove and replant with native species	C 1,2	Removed
553	Mixed species Hedgerow	M	3.5	N/A	N/A	N/A	FAIR / GOOD	Dense area of blackthorn, gorse and bramble with single Hawthorn – part of older continuous hedgerow – beneath ESB lines	Unsuitable for retention post development – remove and replant with native species	C 1,2	Removed
554	Mixed species Hedgerow	M	3	N/A	N/A	N/A	FAIR / GOOD	Dense area of naturalised scrubland dominated by Willow, gorse and bramble	Unsuitable for retention post development – remove and replant with native species	C 1,2	Removed
555	Mixed species Hedgerow	M	4	N/A	N/A	N/A	FAIR / GOOD	Dense area of naturalised scrubland dominated by Willow, gorse and bramble	Unsuitable for retention post development – remove and replant with native species	C 1,2	Removed
556	<i>Populus spp</i> Poplar	M	14	3 2 2 2	43	5.2	GOOD / GOOD	Tall tree with dense canopy – prone to wind fracture of branches – merging with Poplar over boundary & T557 to west – good form & structure	Unsuitable for retention post development – remove and replant with native species	B 1,2	Removed
557	<i>Populus spp</i> Poplar	M	14	3 2 2 2	45	5.4	GOOD / GOOD	Tall tree with dense canopy – prone to wind fracture of branches – merging with T556 & T558 to west – good form & structure	Unsuitable for retention post development – remove and replant with native species	B 1,2	Removed

TREE NO	SPECIES	AGE	HT	SPREAD N S E W	DBH	RPA	CONDITION PHYSIO/STRUCT	COMMENTS	RECOMMENDATIONS	RC	R / R
TREE DATA FOR OLD GAA GROUNDS KILBARRY											
558	<i>Chamaecyparis lawsoniana</i> Lawson Cypress	M	9	5 1 3 3	61	7.3	FAIR / GOOD	Dense canopy to north & east – extended branches to north – heavily weighted and prone to branch failure	Unsuitable for retention post development – remove and replant with native species	C 1,2	Removed
559	<i>Populus spp</i> Poplar	M	14	3 2 2 2	42	5.0	GOOD / GOOD	Tall tree with dense canopy – prone to wind fracture of branches – merging with T557 & overgrowing T560 to west – good form & structure	Unsuitable for retention post development – remove and replant with native species	B 1,2	Removed
560	<i>Populus spp</i> Poplar	M	12	3 2 1 1	43	5.2	GOOD / GOOD	Smaller tree with dense canopy – prone to wind fracture of branches – overgrown by T559 & T561 – good form & structure	Unsuitable for retention post development – remove and replant with native species	C 1,2	Removed
561	<i>Populus spp</i> Poplar	M	4	3 3 2 2	45	5.4	GOOD / GOOD	Tall tree with dense canopy – prone to wind fracture of branches – good form & structure – multiple co-dominant leaders	Unsuitable for retention post development – remove and replant with native species	B 1,2	Removed
562	<i>Salix caprea</i> Goat Willow	M	14	3 3 3 3	8 x 6.4	1.8	GOOD / GOOD	Multiple small diameter stems – very dense canopy – low value	Unsuitable for retention post development – remove and replant with native species	C 1,2	Removed
563	Mixed species	M	14	N/A	38	4.6	GOOD / GOOD	Mixture of planted Oak, Pine, Larch, Elm & Ash growing over western boundary fence – largest used to represent RPA	Care taken when working near RPA of neighbouring trees – erect protective fencing as advised	B 1,2	Retained

TREE NO	SPECIES	AGE	HT	SPREAD N S E W	DBH	RPA	CONDITION PHYSIO/STRUCT	COMMENTS	RECOMMENDATIONS	RC	R / R
TREE DATA FOR OLD GAA GROUNDS KILBARRY											
564	<i>Sambucus nigra</i> Elder	M	4	4 2 4 4	3 x 13	2.2	FAIR / GOOD	Dense cluster of Elder – broken and dead branches throughout – growing on boundary ditch	Unsuitable for retention post development – remove and replant with native species	C 1,2	Removed
565	Hawthorn Hedgerow	M	3	N/A	3 x 16	2.8	GOOD / GOOD	Dense hedgerow on boundary between site and property to west – well maintained on neighbouring side – largest stems used to represent RPA	Care taken when working near RPA of neighbouring trees – erect protective fencing as advised	B 1,2	Retained
566	<i>Chamaecyparis lawsoniana</i> Lawson Cypress	M	16	N/A	48 35	5.9	GOOD / FAIR	Row of large trees growing in neighbouring property to west – largest stems used to represent RPA – large broken branches after falling within site	Correspond with property owner with a view to maintaining the trees at a lower safer height	C 1,2	Retained
567	<i>Eucalyptus globulus</i> Tasmanian Blue Gum	M	18	5 3 7 3	3 x 38	6.6	GOOD / GOOD	Very large spreading canopy tree – leaning & heavily weighted to east over site boundary – 3 large stems from base.	Correspond with property owner with a view to maintaining the trees at a lower safer height	C 1,2	Retained
568	<i>Acer pseudoplatanus</i> Sycamore	E/M	6	3 3 3 3	23	2.8	GOOD / GOOD	2 individual trees – larger used for RPA – merging canopies – good ext growth	Unsuitable for retention post development – remove and replant with native species	C 1,2	Removed

TREE NO	SPECIES	AGE	HT	SPREAD N S E W	DBH	RPA	CONDITION PHYSIO/STRUCT	COMMENTS	RECOMMENDATIONS	RC	R / R
TREE DATA FOR OLD GAA GROUNDS KILBARRY											
569	<i>Acer pseudoplatanus</i> Sycamore	E/M	6	2 2 2 2	3 x 14	2.4	GOOD / FAIR	Multi stem from 0.5m with bark inclusion – good ext growth – low value	Unsuitable for retention post development – remove and replant with native species	C 1,2	Removed
570	<i>Acer pseudoplatanus</i> Sycamore	E/M	6	2 2 2 3	14 3 x 8	2.0	GOOD / FAIR	Tree coppiced in the past – multiple re-growths with dense canopy – low value	Unsuitable for retention post development – remove and replant with native species	C 1,2	Removed
571	<i>Acer pseudoplatanus</i> Sycamore	E/M	6	2 2 3 3	13 2 x 9.5	1.9	GOOD / FAIR	Growing on site entrance side of boundary with property to south – canopy leaning & overhanging house – low value	Unsuitable for retention post development – remove and replant with native species	C 1,2	Removed
572	<i>Fraxinus excelsior</i> Ash	E/M	4	2 2 2 2	18	2.2	GOOD / GOOD	Small canopy tree growing at corner of entrance and road	Unsuitable for retention post development – remove and replant with native species	C 1,2	Removed



Tree Survey Data Points

FID	Tree No	Species	Root Dimen	Crown Dime	BS Categor
0	475	beech	11.6	N-3 S-6 E-7 W-4	B
1	476	sycamore cluster	n/a	3 3 3 3	C
2	477	ash	5.0	4 4 3 3	C
3	478	sycamore	3.5	1 3 1 1	C
4	479	sycamore	3.5	2 2 2 2	C
5	480	lime	2.4	2 3 2 2	C
6	484	ash	2.3	2 2 2 2	C
7	483	lime	2.5	2 3 2 2	C
8	482	lime	2.3	2 3 2 2	C
9	481	lime	2.1	2 3 2 2	C
10	485	hawthorn	2.5	3 1 2 2	B
11	486	hawthorn	2.3	2 3 3 1	B
12	487	ash	8.5	5 3 4 4	C
13	488	mixed species cluster	n/a	4 4 4 4	C
14	489	hawthorn	2.5	3 3 3 3	C
15	490	hawthorn	3.1	3 3 3 3	B
16	491	willow	3.6	3 3 3 3	C
17	492	sycamore	2.7	3 3 2 1	
18	494	sycamore	5.9	2 5 5 4	B
19	495	sycamore	6.8	1 3 4 5	B
20	496	sycamore	6.6	3 2 4 5	B
21	497	sycamore	4.4	3 3 4 4	B
22	498	hawthorn	2.5	2 3 3 3	B
23	499	hawthorn	2.2	2 2 2 2	C
24	500	ash	6.1	2 5 5 5	B
25	501	ash	4.6	3 5 1 3	B
26	502	hawthorn	2.3	2 2 2 2	B
27	503	sycamore	2.6	3 3 3 3	C
28	504	hawthorn	1.8	2 2 2 2	B
29	506	ash, hawthorn, sycamore	n/a	3 2 4 4	C
30	507	sycamore	5.4	4 3 2 4	C
31	508	ash	4.9	3 3 3 3	B
32	505	hawthorn	2.7	2 2 2 2	C
33	509	sycamore	1.9	2 2 1 1	C
34	510	hawthorn	2.9	3 3 2 2	B
35	511	sycamore, hawthorn	2.8	3 3 3 3	C
36	512	hawthorn	2.9	2 2 2 2	B
37	513	beech	8.7	5 6 5 5	B
38	516	hawthorn	3.0	3 3 3 3	B
39	515	hawthorn	2.3	2 2 2 2	B
40	517 no tag	hawthorn cluster	3.0	3 2 3 2	B
41	518	hawthorn	2.3	2 2 2 2	B
42	519	hawthorn	1.7	2 2 2 2	C
43	520	hawthorn	2.3	3 3 3 3	B
44	521	hawthorn	2.8	3 3 3 3	B
45	522	hawthorn, sycamore	2.2	3 3 3 3	C
46	523	hawthorn	2.2	3 3 3 3	C
47	524 no tag	hawthorn	2.4	2 2 2 2	B
48	525	hawthorn	4.4	3 3 3 3	B
49	526	oak	4.0	3 2 3 3	B
50	527	alder	1.9	2 2 2 2	B
51	528	dense cluster hawthorn	n/a	n/a	B
52	531	cluster of alder trees	1.6	2 2 2 2	C
53	532	ash	5.2	4 2 4 3	B
54	533	hawthorn	3.8	3 3 3 3	B
55	534	hawthorn	3.5	3 3 3 3	B
56	535	beech	4.9	3 3 1 2	B
57	536	ash	5.4	3 4 5 2	B
58	537	alder & hawthorn	4.6	3 3 3 3	B
59	538 no tag	willow	2.3	3 3 3 3	C
60	539 no tag	willow	1.6	3 2 3 2	C
61	540 no tag	birch	1.6	1 1 2 1	C
62	541	hawthorn	3.3	3 3 3 3	B
63	542 no tag	hawthorn	1.8	2 2 2 2	C
64	543 no tag	hawthorn	1.4	2 2 2 2	C
65	544	hawthorn	2.3	3 2 2 2	C
66	429	hawthorn	3.0	3 2 3 2	B
67	430	sycamore	4.9	4 4 4 4	C
68	JKW No Tag	J. knotweed			
69	JKW No Tag	J. knotweed			
70	JKW No Tag	J. knotweed			
71	561	poplar	5.4	3 3 2 2	B
72	560	poplar	5.2	3 2 1 1	
73	559	poplar	5.0	3 2 2 2	B
74	558	chamecyparis	7.3	5 1 3 3	B
75	557	poplar	5.4	3 2 2 2	B
76	556	poplar	5.2	3 3 2 2	B
77	562	willow	1.8	3 3 3 3	C
78	564	elder	2.2	4 2 4 4	C
79	568	sycamore	2.8	3 3 3 3	C
80	569	sycamore	2.4	2 2 2 2	C
81	570	sycamore	2.0	2 2 2 2	C
82	493	ash	3.7	2 2 2 2	C
83	566	chamecyparis	5.9	N/A	C
84	567	eucalyptus	6.6	5 3 7 3	B
85	571	sycamore	1.9	2 2 3 3	C
86	572	ash	2.2	2 2 2 2	C

Tree Point & Number Tag 475

1	ISSUED FOR PLANNING APPLICATION	28.08.22	SD
Rev	DETAIL	DATE	BY

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Stage Abbreviations:
 SD: Survey, SK: Sketch, PP: Programming, PA: Planning Application, F: Further Information, AP: Approval, RC: Response To Conditions, TC: Tender, EC: E-Plan, LC: Consent L-Usage, CO: Construction, AB: As Built

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CLIENT:
CORK COUNTY GAA BOARD

JOB TITLE:
RESIDENTIAL DEVELOPMENT AT KILBARRY, CORK

DWG TITLE:
SITE LAYOUT TOPOGRAPHIC AND TREE SURVEY

Drawn By:	Checked By:	Job No:	Working Number:	Revision:	Scale:
SD	KMCD	19012	0000	1	PA
Scale:	1:1000@A1				