Chapter 08

Landscape and Visual

Appendix 8.1

Arboricultural Impact Assessment

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DOCUMENT TRACKING & INFORMATION

Project Name	Arboricultural Impact Assessment (AIA)
Consulting Arborists	Daisy Todd- ISA Certified Arborist ®, Ben Mullen- City & Guilds Qualified Arborist & Michael Lawn ABC Level 3 Arborist.
Report Requested By:	Tim O'Sullivan Glynn, Senior Engineer, Bridges & Civil Structures, Ireland
Client	Cork County Council
Site Address	Little Island Train Station to Eastgate Business Park, crossing the N25 from OSI Centre Co-ordinates ITM: 51.907084N, -8.358132W to 51.906728N, -8.358068W.
Client Address	Arup, One Albert, Quay, Cork, T12 X8N6
Company Reference	*VT220083*
Arup Reference	*Job No. 285939-00*
Author	Daisy Todd
Reviewed by	Ben Mullen & Michael Lawn
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ABBREVIATIONS

DA	Development Application	RPA	Root Protection Area
DBH	Diameter at Breast Height	TMP	Tree Management Plan
CEZ	Construction Exclusion Zone	CMP	Construction Management Plan
ULE	Useful Life Expectancy	AA	Arboricultural Association
DRB	Diameter Root Base	BS	British Standard
PA	Planning Authority	ISA	International Society of Arboriculture
NTM	National Tree Map		

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1.0 INTRODUCTION

I. Heritage Tree Care Ltd. were engaged by Tim O'Sullivan Glynn of Bridges & Civil Structures, Ireland, on behalf Cork County Council to complete a BS5837:2012 Tree Survey Schedule, Arboricultural Impact Assessment (AIA), Tree Clearance Plan and Tree Constraints Plan for eight hundred and fifty (850) trees located within the tree survey area *(see Fig.2)*, on 2 sites (A & B), spanning from Little Island Train Station to Eastgate Business Park, Co. Cork.

II. The report has been requested as part of a project for a proposed pedestrian and cycle bridge connecting Little Island Train Station to Eastgate Business park. The proposed development *(ARUP Job No. 285939-00)* will be built adjacent to the existing carparks, located to the West of Little Island Train Station. It will cross the Irish Rail line and N25 National Primary Road South towards the Radisson Blu Hotel & Spa, following the boundary line of the visitor carpark, and finally connecting to the North end of Eastgate Business Park.

III. The project scope is intended to identify trees to be removed; provide information on those trees to be retained; and assess and record the potential impact and conflicts which may occur between the subject trees and the proposed development.

IV. This AIA is accompanied by a Tree Clearance Plan (Appendix D) showing the location of individual trees and tree groups to be removed to facilitate the proposed development; and a Tree Constraints Plan (Appendix E) showing the location of the individual trees and tree groups to be retained. The Tree Constraints plan aids development and outlines encroachment areas where construction must be prohibited; and by doing so promotes the safety of the area's trees- before, during and after any construction activities take place.

V. Observations and recommendations provided within this report are based upon information provided by the client, certified arborist site visits and guidance provided within BS5837:2012 Trees in Relation to Design, Demolition and Construction; and BS3998:2010 Tree Work- Recommendations *(BSI, 2010 & 2012)*

VI. Where tree work is specified, all recommended tree work is to be carried out in accordance to the above-mentioned standards, by an appropriately trained arborist practitioner, with an up-to-date record of training and membership recognised by the Arboricultural Association (AA) and/or the International Society of Arboriculture (ISA).

2.0 METHODOLOGY

2.1 Data Collection

I. Heritage Tree Care Ltd. undertook the tree survey data collection and associated verification from the 21st to the 25th of November 2022. The trees that are the subject of this report were identified by reviewing the N25 Pedestrian & Cycle Bridge Tree Survey Plan *(ID: LIPB-ARUP-ZZ-XX-DR-SU-0002) (see Fig.1)* alongside the N25 LIPCB- Tree Survey Extent plan, both supplied by ARUP on the 11th November 2022.

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II. This tree survey was not informed by a topographical survey, as such tree positions must be considered to be indicative only, and the relative distances of features must be measured out on the site.

III. Data collected on-site was analysed against the supplied development documentation by Daisy Todd (BA, MSc, ISA Certified Arborist and Lantra Awarded Professional Tree Inspector) and Ben Mullen (City & Guilds Qualified & Lantra Certified Arborist) of Heritage Tree Care Ltd. Following which relevant recommendations were formulated and collated into a report format.

IV. The subject trees were inspected from ground level. No foliage, soil or tissue sampling was conducted. No aerial or internal investigations were undertaken. Tree assessment and Qualitative Visual Tree Analysis has been carried out in accordance with The International Society of Arboriculture (ISA) TRAQ guidelines *(Smiley et al. 2017)* and the requirements of BS5837:2012 *(BSI, 2012)*.

V. Tree height and canopy width were assessed using long-range binoculars and measured using a Laser Tree Height Meter and have been provided to the nearest whole centimetre. Main stems were 'sounded' using a nylon hammer. Trees were numbered with aluminium identification tags, attached with aluminium nails at a 2m height from ground level. Trunk diameter at breast height (DBH) was measured with a 50m diameter tape and provided to the nearest millimetre. The RPA of each tree *(see section 4.3)* and RPA areas were calculated in accordance to BS5837:2012, and have been provided to the nearest ten centimetres *(BSI, 2012)*. The ages of the trees were calculated via circumferential measurement, with reference to species-dependent maturity rates. This information has been recorded in the BS5837 Tree Survey Schedule *(see Appendix C)*.

VI. The plan of the proposed development *(Sketch Title: N25 LIPCB- Tree Survey Extents)* was provided to Heritage Tree Care Ltd. in November 2022 *(see Fig.1)*. A National Tree Map (NTM) was purchased from Bluesky Ireland, customarily used by Heritage Tree Care Ltd. with PT Mapper Pro. However, the NTM proved inaccurate; as such Heritage Tree Care Ltd. mapped the locations of the individual trees and tree groups, within the tree survey area, using Google Map's labelling system, with increased location accuracy aided by a PocketGIS Geographical Information System. The trees to be retained and trees to be removed have been clearly mapped in the accompanying Tree Clearance and Tree Constraints plans *(see Appendices D & E)*.

VII. Trees of similar condition, species, location and/or size have been formed into tree groups. There are forty one (41) groups within the tree survey area, all of which are clearly delineated in the Tree Constraints and Tree Clearance Plans *(see Appendices D & E)*. As per standard procedure, only 1 tree out of each group has been numbered with an aluminium tree tag. However in groups G36, G38 and G39, all individual trees have been tagged, due to their close proximity to the proposed pedestrian and cycle bridge. It is intended that the individual tagging of these trees will facilitate the future monitoring procedures recommended in the BS5837 Tree Survey Schedule *(see Appendix C)*.

VIII. One (1) individual tree and eleven (11) tree groups were not tagged due to restricted/limited access to the subject trees; either from water-logged conditions or high fence lines.

IX. Tree retention values have been determined based upon the trees' health, structure, dimensions, age class, life expectancy, location and environmental amenity/ significance in accordance with BS5837:2012 *(BSI, 2012)*. These attributes have been reviewed collectively and used to categorise a tree value in a development context *(see Section 3.6)*.

3.0 OBSERVATIONS

3.1 The Proposed Development

I. The proposed development is a pedestrian and cycle bridge connecting Little Island train station to Eastgate business park. The Northern end of the bridge will adjoin to Island Corporate Park road, to the West of Little Island train station carpark. From this entrance, the bridge runs parallel to the N25 road and Irish rail line, before crossing them from point (ITM 51.907084N, -8.358132W) to point (ITM 51.906728N, -8.358068W). The bridge then turns South East at a negative angle over a stream and around the boundaries of Radisson Blu Hotel & Spa visitor carpark, then finally into Eastgate Business Park, adjoining the Eastgate road *(see Fig.1).*

II. The proposed development has been reviewed in the context of the Planning and Development Acts 2000-2020 *(eISB 2000)*; The National Planning Framework for Project Ireland 2040 *(The Department of Housing Planning and Local Government, 2018)* and the Cork County Development Plan 2022-2028 (Vols.1-6) *(CCC, 2015).*

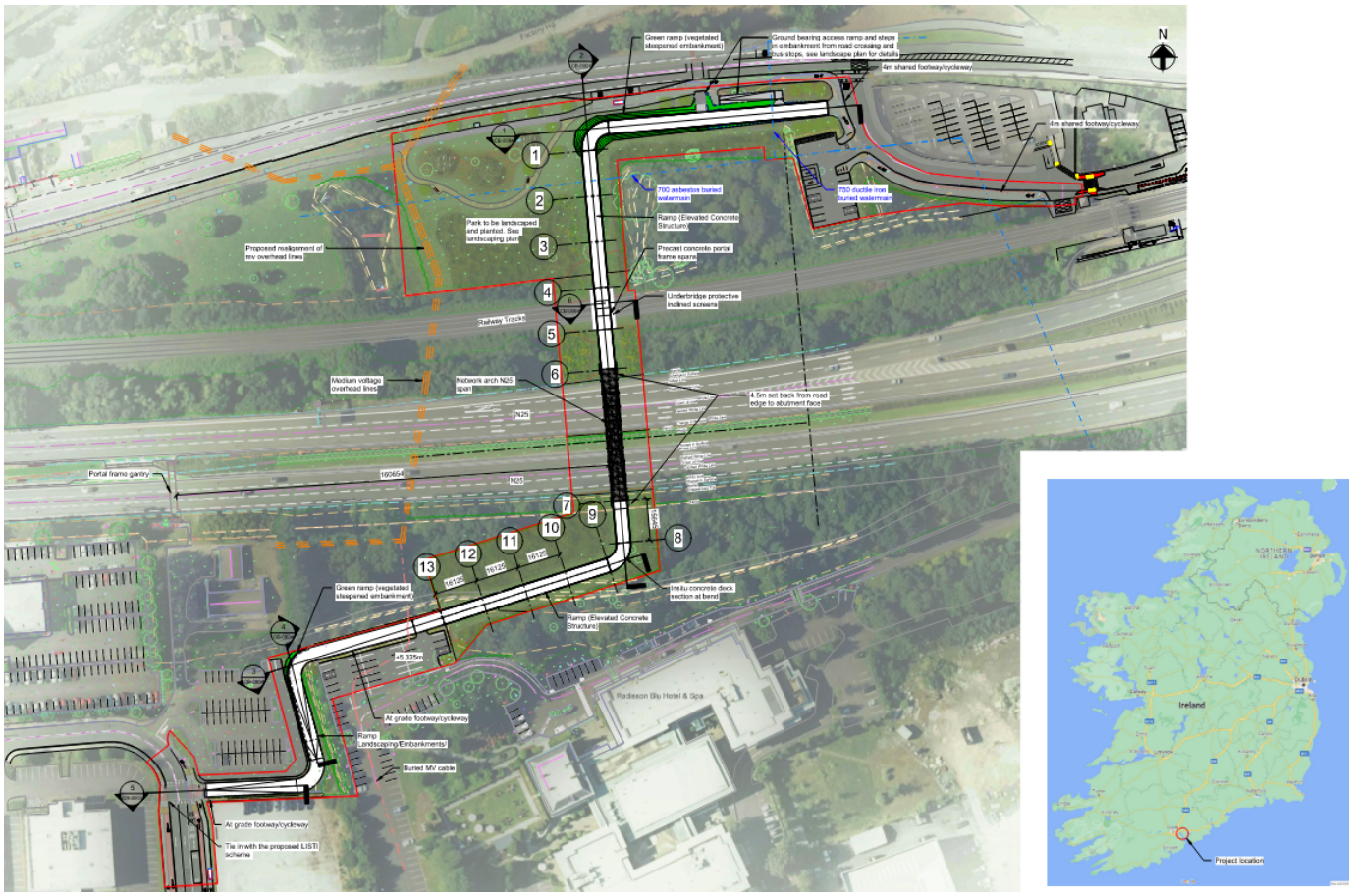

Fig. 1 Aerial image showing the RLB of the construction zone for the proposed pedestrian and cycle bridge connecting Little Island Train Station to Eastgate Business Park. All trees within these boundary lines are required to be removed to facilitate the development (ARUP Sketch Title: N25 LIPCB- Tree Survey Area Extents)

III. The provision of better pedestrian and cycling facilities will improve sustainable transport services and mobility around Cork City by providing safe access to transport links. This sustainable initiative is in-line with sustainable development goals (SDGs), outlined in the Johannesburg Plan of Implementation (JPOI) from the United Nation's 2002 World Summit, the 2012 United Nations Conference on Sustainable Development (Rio +20) and the 2016 High Level Advisory Group on Sustainable Transport (HLAG-ST) report *(UN, 2022)*.

IV. Information in regards to the specifications for the proposed development are limited. The proposed bridge will be 496.5m long, with a width of 6m, with an unknown elevation over the low-lying riverine ground, the N25 and the Irish rail line. No proposed underground service locations have been reviewed in the preparation of this report.

3.2 Site Details

I. To facilitate the easy comprehension of this report, the Site was been divided into 2 areas: The area to the North of the N25 road, shall hereafter be referred to as 'Site A' and the area to the South of the N25 road, shall hereafter be referred to 'Site B'.

3.2.1 Site A: Site Details

I. The Northern tree survey Site, Site A, is located to the West of Little Island Train Station, around Island Corporate Park. The perimeter measurement of the tree survey area of Site A is ~716m, with an area of ~4.09 acres *(see Fig. 2)*.

II. Site A consists of thirteen (13) individual parkland trees and twenty nine (29) tree groups.

III. Existing features on Site A include a large park green *(see Fig.1)* with concreted walking path and scattered park benches, two (2) protruding wetland areas, and a carpark for Island Corporate Park with a perimeter measurement of ~120m and an area of ~0.18 acres. Within the carpark are recycling bins, pedestrians and vehicles.

3.2.2 Site B: Site Details

I. The Southern tree survey Site, Site B, spans from the woodlands adjacent to the N25 road, South towards the Radisson Blu Hotel & Spa, following the boundary line of its carpark towards Eastgate Business park. The perimeter measurement of the tree survey area is ~491m, with an area of ~1.62 acres. The tree survey area measures 10-20m around the proposed development *(see Fig.2)*.

II. Site B consists of two (2) woodlands, eleven (11) decurrent parkland trees and one (1) hedgerow.

III. Existing features on Site B include a deep stream running West to East through the tree survey area. The stream's course follows the horizontal boundary lines between the two (2) woodlands *(see Fig.2)*. At higher elevation to the South of the stream, there is a carpark for the Radisson Blu Hotel & Spa, with a perimeter measurement within the tree survey area of ~229m and an area of ~0.47 acres. Within the carpark are pedestrians and vehicles.

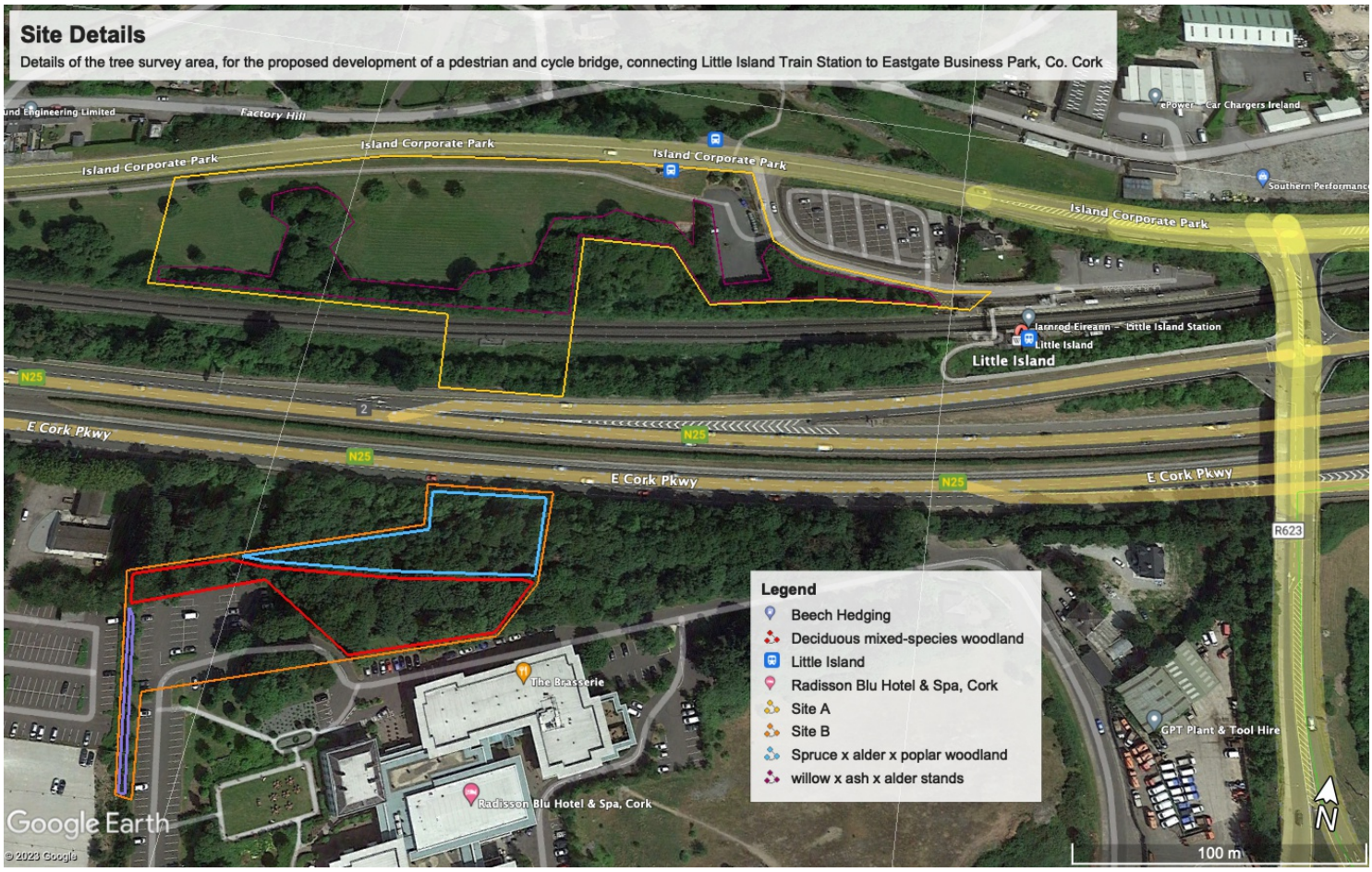

Fig. 2 Aerial image showing the tree survey area. Yellow lines delineate the boundaries of Site A; orange lines delineate the boundaries of Site B; the dark pink lines delineate the willow x ash x alder stands; the red lines delineate the area of the deciduous mixed-species woodland; the blue lines delineate the spruce x alder x poplar woodland; and the purple lines delineate the beech hedging (Google Earth Pro, 2022).

3.3 Statutory and Non-Statutory Designations

I. Heritage Tree Care Ltd. contacted Cork County Council in relation to statutory designations affecting the subject trees. There are no Tree Preservation Orders (TPO's) identified on the Site *(TCOI, 2011)* and the Site is not within an area designated by a Special Amenity Area Order *(CCC, 2015)*.

II. One veteran tree was identified during this survey, a sycamore opposite the Radisson Blu Hotel & Spa (numbered T578). Veteran trees are trees that are 'over-mature', trees that have surpassed maturity and are now 'veteran'. They are often of interest biologically and aesthetically. They are recognised by their impressive, unrestricted crown architecture, main stem girth, total size, and common presence of trunk hollows and/or cavities. Veteran trees are excellent examples of their species, and each requires a unique, specifically formulated care programme. *See Appendix C* for T578's recommended management strategy *(see fig.11)*.

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III. Heritage Tree Care Ltd. reviewed the National Survey of Native Woodlands 2003-2008 *(Perrin et al. 2008)*, and The Ancient and Long-established Woodland Inventory *(Perrin & Daly 2010)*. The Sites are not classified as Ancient Woodlands, as they have not had a continuous history of cover since before the period when planting and afforestation became common practice (~1600's). As such the Sites have limited cultural and conservation value *(Pryor et al. 2002)*.

3.4 Tree Works

I. Tree owners/managers, developers and contractors have responsibilities for health and safety as a result of their actions. They have a moral and legal 'duty of care' to prevent foreseeable harm. If remedial action is not carried out on trees, which are in an unstable/ hazardous condition, with obvious defects, those responsible could be subject to prosecution along with potential for further civil claims for damages.

II. It is advised that the tree maintenance annotated in the BS5837 Tree Survey Schedule is carried out, not only for planning purposes, but to ensure the prolonged health and continued longevity of the subject trees to be retained *(see Appendix C)*.

III. In general the optimum period for significant pruning works is between November and February, and July to August, when trees are dormant or outside periods of high-functional activity. This reduces the overall impact on energy available to the tree for growth and processes, as the tree is better placed to respond to wounding and a reduction in leaf surface area *(Lilly, 2010)*.

IV. Tree work should, if possible, be carried out outside the typical bird nesting season of March to September. This report should be viewed alongside an ecology report, carried out by a qualified ecologist. Full consideration must be given to the presence of species protected under the Wildlife Act *(ISB 1976, as amended)* and other relevant legislation protecting wildlife and habitats, with special focus on the County Cork Protected Sites and Species document, the EC Natural Habitats Regulations *(EC, 1997)* and the Habitats Directive *(European Commission, 1992)*.

V. Any person who injures protected bird or animal species, of conservation concern and special conservation significance, or wilfully interferes with their breeding or resting places is guilty of an offence under Section 23 of the Wildlife Act *(ISB 1976)*.

VI. Any tree surgery recommendations contained in this report are to be undertaken in accordance with BS3998:2010 *(BSI, 2010)* by suitably qualified and insured contractors.

VII. It is important to note that where trees which predate existing structures are to be removed, resultant soil-heave can occur as they are re-wet. To avoid potential future damage, any foundations that could be influenced by trees must be installed following the recommendations of the National Building Council Standards Chapter 4.2: Building Near Trees *(NHBC, 2021)*. Further guidance is available from the National Tree Safety Group *(NTSG 2011)*.

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Table. 1 Summary of the subject trees, in the tree survey area on Sites A & B.

Species	Botanical Name	Native	Total No. trees on the Site	No. Trees to be removed to facilitate development	Category A	Category B	Category C	Category U
Norway maple	*Acer platanoides*	N	3	1	1	2	0	0
English oak	*Quercus robur*	Y	4	2	3	0	1	0
Ash	*Fraxinus excelsior*	Y	118	38	98	11	4	5
Silver birch	*Betula pendular*	Y	3	3	3	0	0	0
European beech	*Fagus sylvatica*	N	98	8	92	3	1	2
Sycamore	*Acer pseudoplatanus*	N	44	18	9	16	15	4
Common lime	*Tilia x europaea*	N	14	3	10	1	1	2
Hawthorn	*Crataegus*	Y	44	36	0	25	16	3
Alder	*Alnus*	Y	256	87	185	55	13	3
Grey willow	*Salix cinerea*	Y	177	24	33	131	9	4
Goat willow	*Salix caprea*	Y	15	11	0	2	6	7
European yew	*Taxus bachata*	Y	1		0	0	0	1
Scots Pine	*Pinus sylvestnis*	Y	1	1	0	1	0	0
Chilean myrtle	*Luma apiculata*	N	2	2	2	0	0	0
Field maple	*Acer campestre*	Y	1		1	0	0	0
Sitka Spruce	*Picea sitchensis*	N	34	22	0	19	5	10
Grey poplar	*Populous x canescens*	N	4	3	0	3	1	0
Hazel	*Corylus*	Y	14	14	0	14	0	0
Hornbeam	*Carpinus betulus*	N	1		0	1	0	0
Horse chestnut	*Aesculus hippocastanum*	N	2	1	0	1	1	0
European holly	*Ilex aquifolium*	Y	1		0	1	0	0
Wild cherry	*Prunus avium*	Y	10		0	0	10	0
Wych elm	*Ulmus glabra*	Y	2	1	0	0	0	2
Chinese Elm	*Ulmus parvifolia*	N	1	1	0	1	0	0
Holly	*Ilex aquifolium*	Y	1	1	0	1	0	0
		Total	**850**	**277**	**437**	**287**	**83**	**43**

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3.5 The Subject Trees

I. Eight hundred and fifty (850) trees were inspected and are the subject of this report. These have been sub-divided into two hundred and four (204) individual trees and forty one (41) tree groups. Complete attributes for trees to be retained can be found in Appendix C of this report.

II. There are twenty five (25) species of tree within in the tree survey area; 60% are native and 40% are non-native/introduced species *(see Table. 1).*

III. All significant trees, located in the tree survey area, on Sites A and B, have been included in this report. Pursuant with BS5837-2012 *(BSI, 2012)* all trees within this area, with a stem diameter of over 75mm have been assessed. Small trees/shrubs within the Sites may have been omitted from the report based on their species, current size and/or potential future size and contribution to local amenity.

IV. All trees on Sites A & B are considered to have been planted. This assumption is based on the trees' species type (not all native, many do not easily self-seed), current size, life stage/ age class (most are of similar height to their neighbouring trees, and are well-established and semi/mature), and location within the Sites (the trees are relatively evenly dispersed with semi-formulaic planting patterns).

3.5.1 Site A: Subject Trees

I. The open parkland area of Site A consists of 13 well-spaced decurrent deciduous trees *(see fig.3)*, planted at equidistance from each other around the park/green, providing good visual diversity and amenity for pedestrians in Island Corporate Park. The seven (7) different species of trees, range in age from juvenile to mature and have moderately low maturing height (between 8-12m).

II. These trees have suffered damage characteristic to trees located in public parks; including strimmer/ mower damage above the root collar and soil compaction. These trees have predominantly Moderate to High retention values (87%), with life expectancies of over 40 years.

III. Along the Southern fence-line of Site A between the park, the Irish Rail line, the N25 and around the carpark, are native groups of three (3) excurrent high canopy tree species with high maturing heights (>12m) *(see fig.4).* These alder *(Alnus)* x grey willow *(Salix cinerea)* x ash *(Fraxinus excelsior)* stands consist of around 398 trees, categorised in this report into 21 groups. In addition there are 6 groups of understory scrub species, including hazel *(Corylus)* and hawthorn *(Crataegus) (Perrin et al. 2008).*

IV. The stands are all of similar age and height. They are well-suited to, and tolerate readily the water-logged landscape and deep-water ditches in which they are planted. They play a visually important role as landscape screening features and contribute significantly to noise pollution reduction and the Site's ecological value to wildlife *(Rushforth, 1999 & IAPT, 2018).* These semi/mature stands have trees of high quality, with Moderate to High retention values (97%) and an estimated remaining life expectancy of at least 25 years.

V. The two (2) protruding water-logged wetland areas on Site A *(see Fig.2)* are surrounded/populated by alder and grey willow boscage *(see fig.5).* The grey willows have partially submerged trunks *(see fig.6)* sending up numerous vertical stems into the canopies. The field layers beneath the grey willow boscage were unable to be identified due to the submerged conditions, however characteristically dominant bramble and ivy were observable.

VI. Via visual observation alone, these AF2 classified alder-grey willow stands are growing on/around a wet hollows with base-rich, fertile mineratrophic and organic-rich gleys, that are waterlogged, regularly inundated or within permanently submerged ground *(Cross, 2008).*

3.5.2 Site B: Subject Trees

I. The Northern most woodland *(see Fig 2)*, on the low-bearing, water-logged 'marginal land' between the stream and the N25, is populated by seventy six (76) individual trees and 6 tree groups. This native and non-native woodland is predominantly Sitka spruce *(Picea sitchensis)*, alder and grey poplar *(Populous x canescens)*, with *under-storey* species of Goat willow *(Salix caprea)*, Chilean myrtle *(Luma apiculata)* and hawthorn.

II. The heavy shade-casting trees form a dense-canopied woodland, composed of blocks of similar size trees of varying age (from juvenile to mature) and condition *(see fig.9)*. The species present are commonly found near streams, rivers and wetlands and play important roles in the dynamics of the riverine system *(see fig.7)*. However despite their hydrological function, as a result of the shade the field layer is species-poor, dominated by ivy, broad leaved buckler-fern and hard fern *(Forest Service, 2008).*

III. Despite being planted, there appears to have been no woodland management in this area. Although woodlands are non-static entities that can usually be left without interference, the overall structure and composition of this woodland is poor; with 21% of the woodland classified as dead and/or hazardous (*Byrnes, 2007b.)* These trees have severe structural defects that are not remediable such that their failure is expected within 12 months *(see fig.8)*. Only 2 alders (T713 and T714) have been categorised as high quality trees.

IV. Along the inclining bank to the South of the lowland stream, there is a predominantly non-native/ introduced, deciduous woodland *(see Fig.2)*. This woodland is is composed of 93 semi/mature individual trees and 6 tree groups. It is populated by species including sycamore *(Acer pseudoplatanus)*, Common lime *(Tilia x europaea)* and European beech *(Fagus sylvatica)*, along with native ash *(Fraxinus excelsior)* and English oaks *(Quercus robur)*.

V. The 10 different species within this woodland have formed a robust, complex and biodiverse habitat (*Rushforth, 1999 & IAPT 2018).* Sixty five percent (65%) of the trees to be retained are of Moderate to High retention value, and are particularly good examples of their species, whilst being important components of the woodland group as whole.

VI. Soils composed of mineratrophic gleys, which are base-rich and highly fertile are characteristic of this type deciduous woodland. Although the trees on the Southern bank are under-pinned by a strong non-native element, the open character of the canopy means there appears to be well developed shrub and field layers. This woodland contributes excellent visual amenity and biodiversity to the area.

3.6 Tree Retention Values

I. In total two hundred and four (204) individual trees and forty one (41) tree groups were assessed during the course of this survey.

II. Forty six (46) individual trees and ten (10) tree groups (53% of the total trees on-site), were of a Category A (High) Retention Value. Category A trees are of high quality with an estimated useful life expectancy (ULE) of at least 40 years. They are typically trees that are particularly good examples of their species *(see fig.10)*; have particular visual importance as arboricultural and/or landscape features; or those of significant historical commemorative, or conservation value- for example Veteran trees *(see fig.11).*

III. Sixty six (66) individual trees and twenty three (23) tree groups (30% of the total trees on-site) were of a Category B (Moderate) Retention Value. Trees in this category are typically of medium size, have good structure, fair health and a ULE of more than 15 years.

IV. Forty two (42) individual trees and six (6) tree groups (11% of the total trees on-site) were of a Category C (Low) retention value. Trees in this category are of low quality, limited value or impaired condition, with an estimated remaining life expectancy of 5-15 years.

V. Thirty six (36) individual trees and two (2) tree groups (6% of the total trees on-site), were of Category U (Very low) Retention Value and require removal due to their poor/dead/hazardous condition. These trees are arguably not suitable for long term retention, and cannot realistically be retained as viable trees in the context of the current land use for longer than 5 years. As per established arboricultural and silvicultural principles; the appropriate management/ removal of these Category U trees will promote the development of better specimens elsewhere on the Site *(see Appendix B for more information).*

3.7 Photographic Documentation

All photographs were taken at the time of the site inspection by Ben Mullen and have not been altered.

Fig.3 Example of Site A's decurrent deciduous parkland trees

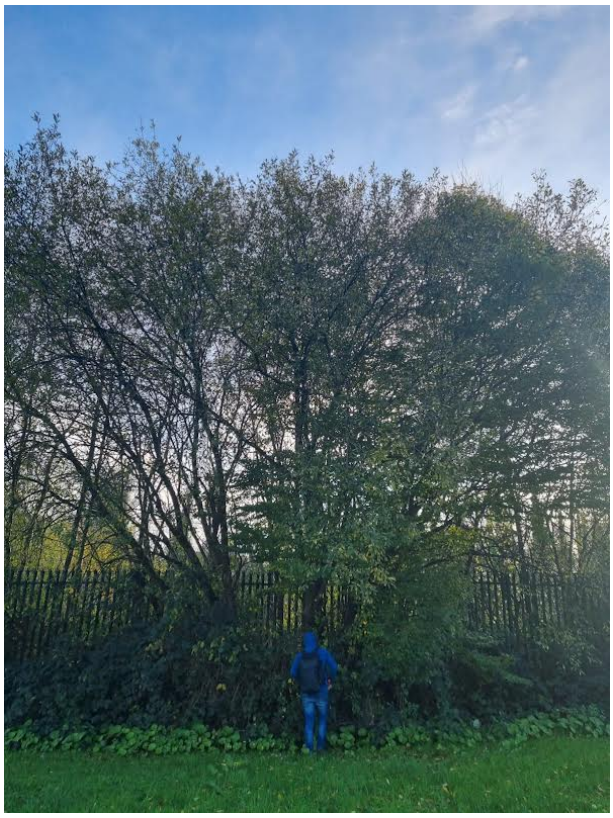

Fig.4 Example of Site A's alder x grey willow x ash stands

Fig.5 One of Site A's protruding wetland areas

Fig.6 Example of Site A's grey-willow boscage with partially submerged trunks

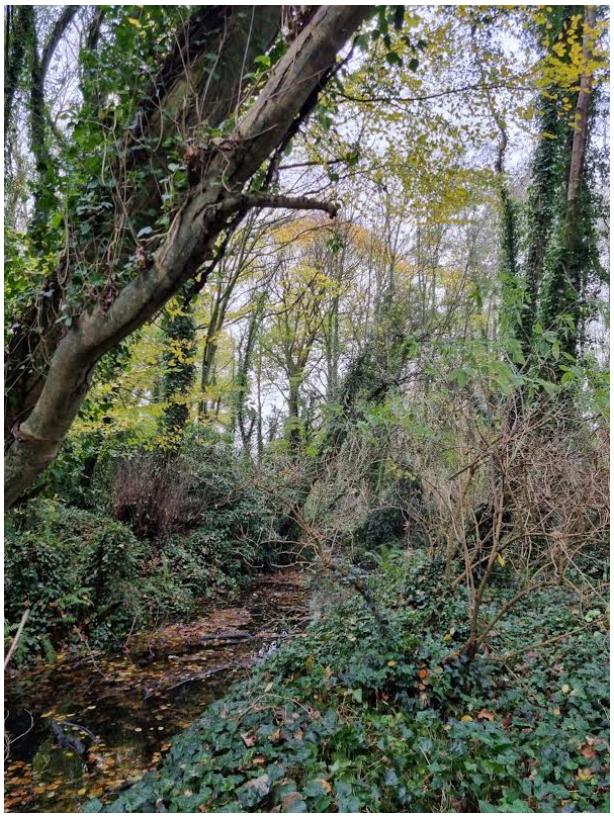

Fig.7 Site B's deep stream running East-West between the deciduous and spruce x ash x alder woodlands

Fig.8 Example of spruce x poplar x alder woodland with 21% of trees in dead/hazardous condition

Fig.9 Site B's dense-canopied spruce x poplar x alder woodland

Fig.10 Example of a Northerly phototropic kink in a main stem in Site 's deciduous woodland

Fig.11 Site B's veteran sycamore (T578) which requires specialised management programme

Fig.12 An example of a Category A high retention value mature beech in Site B's deciduous woodland

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4.0 ARBORICULTURAL IMPACT DISCUSSION

4.1 Trees to be Removed

I. A review of the proposed development has been undertaken in the context of tree retention and removal in relation to the subject trees. A brief summary of the trees to be removed, tree works and incursions related to the Proposed Development are detailed below.

II. One hundred and three (103) individual trees, five (5) part-groups (i.e sections of a tree group, *proportions specified on Appendix C*) and thirteen (13) tree groups have been selected for removal to facilitate the proposed development. It is recommended that as many trees as possible are retained in the part-groups; but it is understood that those close to the existing road and proposed development will have to be removed, due to their proximity.

III. The total number of trees to be removed on-site is two hundred and seventy seven (277). This totals 32% of the total trees on-site. This includes thirteen (13) individual trees, and four (4) part-groups of high retention value (Category A); thirty six (36) individual trees, one (1) part-group and eight (8) full tree groups of moderate retention value (Category B); and thirty three (33) individual trees and four (4) full tree groups of low retention value (Category C). In addition twenty one (21) individual trees and one full tree group of very low retention value (Category U) are being removed to facilitate the proposed development- however these trees would be removed regardless of the Proposed Development.

IV. Tree removals are listed in the BS5837 Tree Survey Schedule included in Appendix C. Tree removals assume a reasonable worst case and in practice some trees may be feasible to retain subject to investigation by a suitably qualified arboriculturist.

V. Following site-clearance, where a large number of trees in close proximity to one another have been removed; an arboriculturist must carry out a site walkover immediately to determine the stability and suitability of retained trees which may/ or may not have been impacted by a loss of companion shelter.

VI. All further tree removals or pruning activities should be discussed with the tree owner/ manager and appropriate Planning Authority (PA).

VII. It is *vital* that work priority and timescales be applied to the work recommendations, after planning has been approved. This is in keeping with professional best standards and statute law in regards to negligence surrounding our professional duty of care. *Another assessment of the trees to be retained on-site, after planning has been approved, will be required in order to apply an accurate work priority schedule.*

4.2 Proposed Pruning

I. Of the trees to be retained, forty six (46) individual trees and three (3) tree groups require pruning or some level of tree maintenance. All proposed tree work are listed in the BS5837 Tree Survey Schedule in Appendix C.

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II. It is anticipated that over the course of construction, pruning will be required to more retained trees than specified here. Extra pruning may be required in response to site-changes (grade change, soil profile, wind-funnelling etc.) to further facilitate development or to mitigate risk to persons on-site. Additional tree work identified should be discussed with the Project Arborist. No works should be undertaken without prior consent from the PA.

III. 'Facilitation pruning' is the pruning of a tree, to reduce or raise its crown (according to good practice) to allow vehicular access for site works. This will have to be carried out on multiple trees on both Sites, but it is yet unknown in what manner and direction the site will be accessed.

IV. No information in regards to road layout, landscape general arrangement, drainage, structures, earthworks, lighting and compounds has been reviewed to inform this assessment. As-and-when new information becomes available; prior to any facilitation pruning being carried out; a suitably qualified arboriculturist must identify and determine the stability and suitability of crown-lifting/reducing the appropriate subject trees.

V. The pruning practices recommended include: crown reduction, used to weight reduce the size of a tree; deadwood removal or 'crown cleaning', used to remove dead, diseased, broken or weakly attached branches; crown thinning, used to prune selective branches to increase light penetration and air movement through the crown; and crown lifting, used to ensure a clear height of 2-2.5m where new areas of access are proposed *(Lilly, 2010).*

VI. Reduction pruning should focus on the removal of smaller diameter branches where feasible, and remove no greater than 25% of the total crown. Branches no greater than 50cm diameter are to be removed unless specifically approved on-site by the Project Arborist.

VII. It has been recommended that seven (7) trees should have organic wood-chip mulch applied around their base. This is a prevalent recommendation for parkland trees, as mulching provides essential nutrients; adds organic matter to soil, inhibits weed growth and soil compaction. Organic mulch also helps soil retain water, by reducing groundwater evaporation, preventing the ground from becoming water-logged.

VIII. Eight (8) trees require cobra-bracing. Cobra-bracing offers a flexible, dynamic support system that does not damage trees. It is the exercise of strapping vulnerable limbs to stronger limbs, to provide support and reduce the risk of failure; ultimately mitigating risks to neighbouring targets and ensuring the tree's continued longevity.

IX. The ivy severance recommended in Appendix C should be carried out selectively. Severing Ivy will help it die-off, making it easily removable from the host tree. Ivy severance will aid further inspection, create a 'tidy' appearance suitable for a newly managed area, and minimise the retained tree's competition for light, water and nutrients. Not all Ivy should be removed from the site however- it is a preferred habitat for many wildlife species, including birds, butterflies and insects *(Perrin et al. 2008).*

X. Of the trees to be retained, three (3) have uncorrected leans/kinks due to phototropic competitive growth *(see fig.10).* It is thought that the removal of neighbouring trees to facilitate the proposed development, will force an alteration in the growth habit of these trees, and as such the majority of them have been recommended for re-assessment in the future *(Matteck 2015).*

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XI. In addition, three (3) of the trees to be retained have been recommended to be re-assessed, either in the Spring (so the condition of the tree can be more accurately ascertained), or after the proposed tree removal has been carried out.

XII. Eleven (11) trees have been recommended for bi-annual monitoring, due to their condition and proximity to targets, both proposed or already existing. The tree owner/ manager will be responsible for organising the periodic inspection of the retained tree; with the aim of assessing and addressing pruning requirements. Remedial works will to ensure the continued structural stability and safety of all trees on the Site.

XIII. All tree work is to be carried out in accordance to British Standard BS 3998: 2010 Tree Work – Recommendations *(BSI, 2010)*, by a suitably qualified and insured arborist. The level of pruning carried out should not have a significant negative impact on the health or amenity of the subject tree. No climbing spikes are to be used if climbing inspections and recommended pruning are to be carried out on live trees, except in the instance of emergency.

Table.2 *Summary of removals and pruning for individual trees to facilitate the Proposed Development*

Impact	Category A	Category B	Category C	Category U	**Total**
Individual trees to be removed to facilitate the Proposed Development	13	36	33	21	**103**
Individual trees to be pruned to facilitate the Proposed Development	14	10	5	0	**29**

Table.3 *Summary of removals and pruning for tree groups to facilitate the Proposed Development*

Impact	Category A	Category B	Category C	Category U	**Total**
Tree groups to be removed to facilitate the Proposed Development	0	8	4	1	**13**
Part-groups to be removed to facilitate the Proposed Development	4	1	0	0	**5**
Tree groups to be pruned to facilitate the Proposed Development	2	1	0	0	**3**

4.3 Root Protection Areas

I. The Root Protection Area is defined as a specified area above and below ground and at a given distance, measured radially away from the centre of the tree's trunk and which is set aside for the protection of its roots and crown. It is the area required to provide the viability and stability of the tree/s to be retained, where it is potentially subject to damage by development. The radius of the RPA is calculated by multiplying the DBH by twelve (12). RPA radius = DBH x 12 with DBH being nominally measured at 4.5ft from ground level *(Malone et al. 2009, BSI, 2012 & Lilly, 2010).*

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4.4 Major and Minor Encroachment within the RPA or Canopy Spread

I. Limited encroachment within the RPA and canopy spread may occur, however this is dependent on the type of works proposed and the characteristics of the trees on-site. The British Standards state that if the encroachment is greater than 10%, trees will only remain viable should careful construction measures e.g. non-destructive excavations be carried out *(see Sections 4.5 & 5.2 for more information).*

II. A major incursion or 'encroachment' into the RPA of any tree is considered to occur when it is beyond 10% of the total RPA area. A minor encroachment is determined as being less than 10% of the total RPA area. Tree retention will be feasible where trees are considered, on balance, to be of an age, species and condition which will tolerate the disturbance of the proposed construction work (the default standpoint is not more that a maximum of 20% of the overall RPA) *(BSI, 2012).*

III. The RPA encroachment areas are located directly beside/along the pedestrian and cycle bridge. It is speculated that there will be potential future pressure for removal, either from public safety apprehension or seasonal nuisance. If these conflicts do arise, detailed architectural design should address these issues.

IV. A range of works will likely be required within or close to the RPA of trained trees. The sustained impact of the incursion zones must be minimised by ensuring the right mitigation measures are put in place prior to construction commencing. Mitigation measures must be adhered to if the cumulative effects of RPA incursions are to be avoided. A qualified project arborist must be present during construction to mitigate the risk of construction damage.

V. A more detailed methodology for sensitive construction measures and permitted activities near retained trees should be outlined in an Arboricultural Method Statement and accompanying Tree Protection Plan, when new information becomes available.

4.4.1 Major Encroachments within the RPA or Canopy Spread

I. Eight (8) individual trees will be subjected to major encroachments within their RPA or canopy spread. One (1) individual tree is Category A and seven (7) individual trees are Category B *(see Tables.4 & 5).*

II. The high retention value (Category A) individual tree is numbered: T585. The moderate retention value (Category B) individual trees are numbered: T538, T557, T595, T592, T594, T583 and. T582.

III. It must be noted that the proposed development will be elevated off the woodland floor, so these encroachments may be less invasive than customary building procedures. However, trees and tree groups will require specific root-safe protection measures during construction to ensure they are not subject to significant negative impact; and specialist working methods to ensure they remain viable following the completion of works *(see guidelines in Sections 4.5 & 5.2).* Specific regard and close monitoring of T578, is recommended due to its veteran status.

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4.4.2 Minor Encroachments within the RPA or Canopy Spread

I. Seven (7) individual trees and six (6) tree groups will be subjected to minor encroachments within their RPA or canopy spread. Two (2) individual trees and five (5) tree groups are Category A; and five (5) individual trees and one (1) tree group are Category B *(see Tables. 4 & 5)*. These trees will require generic protection measures throughout the construction phase.

II. The individual tres subject to minor encroachment are: T537, T541, T591, T580, T468, T467 and T461. The tree groups subject to miner encroachment are: G15, and those having sections of their group removed: G18, G21, G19, G17 and G10.

III. There will also be construction related activities occurring outside the tree survey area and subject tree RPA. Given the close proximity of trees in woodland areas, certain construction activities need to be mindful of these trees also.

Table.4 Detailed summary of RPA encroachments for individual trees to facilitate the Proposed Development

Impact	Category A	Category B	Category C	**Total**
Individual trees with major incursions in their RPA (>10%)	1	7	0	**8**
Individual trees with minor incursions in their RPA (<10%)	2	5	0	**7**

Table.5 Detailed summary of RPA encroachments for tree groups to facilitate the Proposed Development

Impact	Category A	Category B	Category C	**Total**
Tree groups with major incursions in their RPA (>10%)	0	0	0	**0**
Tree groups with minor incursions in their RPA (<10%)	5	1	0	**6**

4.5 Additional Excavation/ Trenching within RPAs

I. In the event additional excavation is required within the RPAs of the retained subject trees, arborist involvement will be required to ensure works are undertaken in accordance with BS5837:2012 *(BSI, 2012)* and the National Joint Utilities Group guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees *(NJUG, 2007)*.

II. Machine excavation within the RPAs of retained trees must be prohibited, unless undertaken at the direct consent from the Project Arborist. If excavation is absolutely necessary within this zone, roots should be protected, and the proposed excavation commence at the outer extent of the RPA and move inwards, to minimise root damage to retained trees. Roots discovered are to be treated with care and minor roots (<40mm diameter) pruned with a sharp sterile handsaw or secateurs. All significant roots (>40mm diameter) are to be recorded, photographed and reported to the project arborist.

III. Excavation/ trenching within the RPA of retained trees should be undertaken using sensitive construction methods, employing a 'low pressure excavation methodology', such as manual excavation, hydro-vac or air spade. A project arborist should monitor the manual excavation works and advise on which roots are to be retained.

IV. Overall, trenchless techniques should be used if possible; where possible trenches should be broken rather than continuous. Backfilling and other operations near the tree should be performed to avoid root or stem damage and unnecessary soil compaction. It is recommended that the soil structure be ameliorated or replaced following the competition of construction works on-site.

4.6 Additional Construction within RPAs

I. The constraints imposed by trees, both above and below ground, should inform the site-layout design; although it is recognised that the competing needs of development means that trees are only one factor requiring consideration.

II. To minimise disturbance within the RPAs of trees by soil excavation, an 'above ground level methodology' should be used. For example, over-engineered designs using raided foundations/ suspended slab supported by sleeved piers could be employed. Raising these structures will reduce the need for excavation within the RPA of tree/s and will reduce the overall weight and load exerted by the proposed new infrastructure.

III. The use of strip-footings between tree stem and alignment of the new installations is prohibited. Minimising disturbance of the natural hydrology and nutrient resource currently available to the retained trees is vital for their continued longevity.

IV. Appropriate 'Green' ground surface treatments must be installed above existing grade and be of a permeable nature. This will reduce soil compaction and to promote water and air penetration into the sub-soil. If the surfacing is to be load bearing, then it is suggested that a Geogrid/ web or similar is incorporated to ensure the rooting area below does not become compacted.

V. Where scaffolding is required, it should be erected outside the RPA in accordance with BS5837:2012 and the NJUG guidelines. Where it is essential for scaffolding to be erected within the RPA, branch removal should be minimised. Where this pruning is unavoidable it must be specified and approved by the project arborist *(BSI, 2012 & NJUG, 2007)*.

5.0 RECOMMENDATIONS

5.1 Tree Replacement & Offset Tree Planting

I. Tree removals should be mitigated with a high-quality scheme of new tree planting. It is recommended that trees requiring removal be replaced (preferably on a one-to-one basis) elsewhere nearby. Offset planting should reflect the number of trees removed and the initial loss of biomass and amenity.

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II. New trees should be of long-term potential and sourced from a reputable supplier.

III. New trees should be planted at minimum distances detailed in Annexe A, Table A.1 of BS5837:2012. This will prevent direct damage to services and structures from future tree growth *(BSI, 2012)*.

IV. New tree planting should be implemented in accordance to BS8545:2014 Trees: From nursery to establishment in landscape- Recommendations. Unethical or unprofessional tree selection and/or their placement within the landscape must be avoided *(BSI, 2014)*.

V. Newly planted trees will likely require maintenance after planting care for a period of 2-3 years, to ensure successful establishment. Mitigation plantings failing during this establishment period are to be removed and replaced (like for like).

VI. Soil replacement works, or soil amelioration may be required for new plantings- if existing areas of unsurfaced ground have not been protected during demolition and construction phases. Protection can be achieved using fit for purpose ground protection measures (such as fenced exclusion zones where feasible), in accordance to BS5837:2012, Section 6.2.3 *(BSI, 2012)*.

VII. To sustain the tree survey area's complex biodiversity, both Sites should be planted with the same proportion of native and non-native species, which have comparable form and structure upon maturation.

VIII. Replacement tree species must suit their locations on the Sites; in terms of their potential physical size and their tolerance(s) to the surrounding environmental conditions.

IX. Replacement tree species must be selected in consultation with a project arborist, who can also assist in implementing successful tree establishment techniques.

X. Replacement tree species must have the genetic potential to reach mature size potential of those trees removed. As a guide, potential height will be a minimum of 10m (or more) and produce a spreading canopy so as they may provide amenity value to the property and contribute to the tree canopy of the surrounding area in the future.

5.2 Tree Protection

I. The RPA and canopy spread of the tree to be retained will form effective Construction Exclusion Zones (CEZ). This default requirement will prevent the retained trees from suffering common types of damage, often sustained by trees during construction.

II. Commonly sustained types of damage include: the spillage, dumping or preparation of materials toxic to tree health (chemicals such as cement products) tin close proximity to subject trees; root severance (following trenching) leading to root dysfunction and/or death; and soil grade changes or soil structure damage (from machinery or footfall on unsurfaced ground).

III. An official 'project arborist' must be commissioned to oversee tree protection, any works within the RPA and complete regular monitoring compliance certification.

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IV. The project arborist must have suitable industry experience in the field of arboriculture or horticulture, with relevant demonstrated experience in tree management on construction sites. Inspections are to be conducted by the project arborist at several key points during construction in order to ensure that protection measures are being adhered to during construction stages and decline in tree health, or additional measures can be identified.

V. All trees to be retained require protection during the construction stage. Tree protection measures include: Restricted access to RPA, restricted activities inside the RPA, protective fencing, trunk and ground protection, tree protection signage and project arborist compliance reports. No excavation, construction activity, grade changes, surface treatment or storage materials of any kind are permitted within the RPA.

VI. Protective fencing is to be installed around all retained trees for the extent of its RPA (or as much as is practical). Appropriate fencing outlined BS5837:2012, is of >1.8m height, with highly visible mesh between freestanding posts, each with a diameter >20mm. This fencing must be erected around individual trees and tree groups before any machinery or materials are brought onto the site- before the commencement of all works. Once erected, protective fencing and tee protection signage must not be removed or altered without approval from the project arborist.

VII. The subject trees themselves must also not be used as a billboard to support advertising materials. Affixing ferric nails or screws into main stems damages trees. As such, it is not a recommended practice in the successful retention of trees.

VIII. When access into the CEZ is necessary, special measures such as supervision by the Project Arborist and the use of ground protection (either steel plates or rumble boards, strapped over mulch/aggregate) is required.

IX. Further detailing of tree protection measures should be outlined in a subsequent Arboricultural Method Statement (AMS) and accompanying Tree Protection Plan, prior to work commencing, as-and-when further information becomes available.

6.0 CONCLUSIONS

I. One hundred and three (103) individual trees, five (5) part-groups (i.e sections of a tree group) and thirteen (13) tree groups have been selected for removal to facilitate the proposed development. The estimated total number of trees to be removed on-site is two hundred and seventy seven (277). This totals 32% of the total trees on-site. This sum is made up of eighty five (85) trees of high retention value trees (Category A); one hundred and eleven (111) trees of moderate retention value (Category B); and fifty eight (58) trees of low retention value (Category C). In addition twenty three (23) trees of very low retention value (Category U) are being removed to facilitate the proposed development- however these trees would be removed regardless of the Proposed Development.

II. Eight (8) individual trees will be subjected to major encroachments within their RPA or canopy spread. One (1) individual tree is Category A and seven (7) individual trees are Category B.

III. Of the trees to be retained, forty six (46) individual trees and three (3) tree groups require pruning or some level of tree maintenance.

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IV. All proposed tree work are listed in the BS5837 Tree Survey Schedule in Appendix C. All tree work is to be carried out in accordance to British Standard BS 3998: 2010 Tree Work – Recommendations *(BSI, 2010)*, by a suitably qualified and insured arborist.

V. Any negative impact the proposed development will have on the the trees to be retained, must be mitigated by appropriate and careful construction methodologies, via the protection measures recommended. These include the use of ground protection to protect the soil structure of the unsurfaced ground, and fenced exclusion zones to protect the structural tree roots and canopies of the trees on Sites A and B.

VI. Tree protection measures should be further expanded upon through the further request and provision of an Arboricultural Method Statement and accompanying Tree Protection Plan, when more information becomes available. The AMS will detail the specifications for tree protection and how sensitive construction operations are to be achieved in proximity to retained trees. No changes may take place to the content or application of the AIA or AMS without the prior written approval of the Planning Authority. .

VII. Tree-loss should be mitigated with a high-quality and robust scheme of new tree-planting and subsequent tree management and monitoring strategies.

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APPENDICES

Appendix A: Arboricultural Reporting Assumptions and Limiting Concerns
Appendix B: Explanation of Tree Assessment Terms
Appendix C: BS5837 Tree Survey Schedule
Appendix D: Tree Clearance Plan
Appendix E: Tree Constraints Plan

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APPENDIX A

Arboricultural Reporting Assumptions and Limiting Concerns

I. Any legal description provided to the consultant is assumed to be correct. Any titles and ownership of any property are assumed to be good. No responsibility is assumed for matters legal in character.

II. Inspections is limited to visual examination of accessible components, without dissection, excavation or probing. There is no warranty or guarantee expressed or implied that the problems or deficiencies of the plants or property in question, may not arise in the future.

III. It is assumed that any property/ project is not in violation of any applicable codes, ordinances, statutes or other government regulations.

IV. Information contained in the report covers only those items that were examined and reflect the condition of those items at the time of inspection.

V. Care has been taken to obtain all information from reliable sources. All data has been verified in so far as possible, however the consultant can neither guarantee nor be responsible for the accuracy of the information provided by others.

VI. Sketches, diagrams and photographs in this report, are intended as visual aids, and and are not necessarily to scale and should not be construed as engineering or architectural reports or surveys unless expressed otherwise.

VII. The consultant shall not be required to give testimony or attend court by reason of this report, unless subsequent contractual arrangements are made; including payment of an additional fee for such services.

VIII. The report and any values expressed herein represent the opinion of the consultant and the consultant's fee is in no way contingent upon the reporting of a specified value, a stipulated result, the occurrence of a subsequent event, nor upon any finding to be reported.

IX. Loss or alteration of any part of this report invalidates the entire report.

X. Neither all nor any part of the contents of this report, nor any copy thereof, shall be used for any purpose by anyone but the person to whom it is addressed, without the written consent of the consultant. Nor shall it be conveyed by anyone, including the client, to the public through advertising, public relations, news, sales, or other media, without the written consent of the consultant.

XI. Possession of this report or a copy thereof does not imply right of publication or use for any purpose by anyone but the person to whom it is addressed, without the prior written consent of the consultant.

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APPENDIX B

Explanation of Tree Assessment Terms

I. **Tree Name:** Provides the botanic name (Genus, species, sub-species, variety and cultivar where applicable) in accordance with the International Code of Botanical Nomenclature (ICBN), and an accepted common name.

II. **Age:** Refers to the life cycle of the tree.

Category	Description
Young	Newly planted tree not fully established, may be capable of being transplanted or easily replaced.
Juvenile	Tree is small in terms of its potential physical size and had not reached its full reproductive ability.
Semi-Mature	Tree in active growth phase of life cycle and has not yet attained an expected maximum physical size for its species and/or its location.
Mature	Tree has reached an expected maximum physical size for the species and/or location and is showing a reduction in the rate of seasonal extension growth.
Senescent	Tree is approaching the end of its life cycle, and is exhibiting a reduction in vigour often evidenced by natural deterioration in health and structure.

III. **Physiological Condition:** Summarises the health and vigour of the trees

Category	Description
Excellent	Canopy full with dense foliage coverage throughout, leaves are entire and are of an excellent size and colour for the species, with no visible pathogen image. Excellent growth indicators, e.g. seasonal extension growth.
Good	Canopy full with minor variations in foliage density throughout, leaves are entire and are of a good size and colour for the species, with minimal or no visible pathogen damage. Good growth indicators.
Fair	Canopy with moderate variations in foliage density throughout, leaves not entire with reduced size and/or atypical in colour, moderate pathogen damage. Reduced growth indicators, visible amounts of deadwood/dieback, and epicormic growth.
Poor	Canopy density significantly reduced throughout, leaves are not entire, are significantly reduced in size and/or are discoloured, significant pathogen damage. Significant amounts of deadwood and/or epicormic growth, noticeable dieback of branch tips, possibly extensive.
Dead	No live plant material observed throughout the canopy, bark may be visibly delaminating from the trunk and/or branches.

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IV. **Structural Condition:** Summarises the structure of the tree from roots to crown.

Category	Description
Good	Good form and branching habit. Minor structural defects that are insignificant and atypical or common within the species. E.g. included bark, co-dominant stems. No fungal pathogens present. No visible wounds to the trunk and/or root plate.
Fair	Moderate structural defects present that impact longevity, e.g. apical leaders sharing common union(s). Minor damage to structural roots. Small wounds present where decay could begin. No fungal pathogens present. A fair representation of the species.
Poor	Significant structural defects present that have a significant impact on longevity and result in a poor representation of the species, e.g. Branch/stems with included bark, with failure likely within 0-5 years. Wounding evident with cavities and/or decay present. Damage to structural roots.
Hazardous	Serious structural defects with failure determined to be imminent (<12 months). Defects may include active splits and/or partial branch or root plate failures. Tree requires immediate arboricultural works to alleviate the associated risk.

V. **Useful Life Expectancy (ULE):** Useful Life Expectancy refers to an expected period of time the tree can be retained within the landscape before its amenity value declines to a point where it may detract from the appearance of the landscape and/or becomes potentially hazardous to people and/or property. ULE values consider tree species, current age, health, structure and location. ULE values are based on the tree at the time of assessment and do not consider future changes to the tree's location and environment which may influence the ULE value.

VI. Tree Quality:

		Health**			
		Excellent/ Good	Fair	Poor	Dead
	Good	A	B	C	U
	Fair	B	B	C	U
	Poor	C	C	U	U
	Hazard*	U	U	U	U

** Structural hazard that cannot be remediated through mitigation works to enable safe retention.*
*** Trees of short term reduced health that can be remediated via basic, low cost plant heath care works (e.g. mulching, irrigation etc.) may be designated in a higher health rating to ensure correct retention value nomination.*

VII. Tree Retention Value:

Based upon *BS5837:2012: Trees in relation to design, demolition and construction- recommendations.*

Category and Definition	**Criteria (including sub-categories where appropriate)**		
Category U			
Trees in such a condition that they cannot realistically be retained as viable trees in the context of the current land use for longer than 5 years.	• Trees that have a severe structural defect that are not remediable such that their failure is expected within 12 months. • Trees that will become unviable after removal of other Category U trees (e.g. where for whatever reason the loss of companion shelter cannot be mitigated by pruning). • Tres that are dead or are showing signs of significant, immediate and irreversible overall decline. • Trees infected with pathogens of significance to the health and/or safety of other trees nearby. • Low quality trees suppressing adjacent trees of better quality. • Noxious weeds or species categorised as weeds within the local area. **Note:** Category U trees can have existing potential conservation value* which might make it desirable to preserve.		
	1. Arboricultural Qualities	**2. Landscape Qualities**	**3. Cultural & Environmental Values**
Category A			
Trees of High Quality with an estimated remaining life expectancy of at least 25 years and of dimensions and prominence that it cannot be readily replaced in <20 years.	Trees that are particularly good examples of their species, especially if rare or unusual (in the wild or under cultivation); or those that are important components of groups or avenues.	Trees or groups of significant visual importance as arboricultural and/ or landscape features (e.g. feature and landmark trees).	Trees, groups or plant communities of significant conservation, historical, commemorative or other value (e.g. remnant trees, critically endangered plant communities, trees listed specifically within a Heritage statement of significance).
Category B			
Trees of Moderate Quality with an estimated remaining life expectancy of 15-25 years and of dimensions and prominence that cannot be readily replaced within 10 years.	Trees that might be included within Category A but are downgraded because of diminished conditions such that they are unlikely to be suitable for retention beyond 25 years.	Trees that are visible from surrounding properties and/or the street but make little visual contribution to the wider locality.	Trees with conservation or other cultural value (trees within conservation areas or landscapes described within a statement of significance).
Category C			
Trees of Low Quality with an estimated remaining life expectancy of 5-15 years, or young trees that are easily replaceable.	Trees of very limited value or such impaired condition that they do not qualify in higher categories.	Trees offering low or only temporary/ transient landscape benefits.	Trees with no material conservation or other cultural value.

** Where trees would otherwise be categorised U, B, or C, but have significant identifiable conservation, heritage or landscape value even though only for the short term, they may be upgraded, although they might be suitable for retention only.*

APPENDIX C

BS5837 TREE SURVEY SCHEDULE

Prepared For: Cork County Council
Assessment & Report Prepared By: Heritage Tree Care Ltd.
Site: Little Island Railway Station to Eastgate Business Park

Heritage Reference No. VTA220083
Date: 31.03.23

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Site A

Tree Tag No.	Group No.	Species	Height (m)	DBH (mm)	No. Stems	Canopy Spread (N, S, E, W)	Lower Branch Height (m)	Age	Physiological Condition	Structural Condition	ULE (Year)	Retention Category	Tree Quality	RPA Radial Distance (m)	RPA Area (m3)	Work Recommendations
408		Silver birch	3.47	170	1	2, 2, 2, 2	1.5	Semi-mature	Excellent	Good	>40	A		2.04	13.1	Remove to facilitate proposed development
409		Silver birch	3.65	175	1	3, 2, 4, 2	1.6	Semi-mature	Excellent	Good	>40	A		2.10	13.8	Remove to facilitate proposed development
410		Chinese elm	5.99	320	1	3, 3, 3, 3	2	Mature	Fair	Fair	>25	B		3.84	45.3	Remove to facilitate proposed development
411		Silver birch	7.62	300	1	2, 4, 2, 2	3.6	Mature	Excellent	Fair	>40	A		3.6	40.7	Remove to facilitate proposed development
412		Norway maple	5.12	410	2	4, 4, 4, 4	2	Mature	Good	Fair	>25	B		4.9	75.4	Remove to facilitate proposed development
413	**G1**	Alder (x4)	10.66	~300	1-2	2, 2, 2, 2	2	Mature	Fair	Fair	>25	B		3.6	40.7	Intersecting power line. Monitor growth. Clear brambles, sever ivy
414	**G2**	Grey willow (x40)	7.62	~150	1-2	2, 2, 2, 2	2	Young	Fair	Fair	>25	B		1.8	10.2	No work required
415		Ash	5.37	250	3	4, 4, 4, 4	1.7	Semi-mature	Good	Fair	>25	B		3.0	28.2	Included bark. Recommended bi-annual monitoring. Mulch around base.
416		Horse chestnut	6.11	310	4	3, 3, 3, 3	1.8	Mature	Good	Poor	<25	C		3.7	43.0	Bifurcated 0.3m from ground level. Remove 2 stems. Mulch around base.
417		Norway maple	6.39	480	3	4, 4, 4, 4	2	Mature	Good	Fair	>40	A		5.7	102.1	Included bark. Recommended bi-annual monitoring. Mulch around base.
418		Hornbeam	7.62	180	1	3, 1, 1, 3	0.5	Mature	Good	Fair	>40	B		2.1	13.8	Remove Willow branches growing into canopy. Mulch around base.
419	**G3**	Grey willow (x5)	8.13	~180	Multi stem 2-4	4, 1, 3, 3	1	Mature	Fair	Fair	>25	B		2.1	13.8	No work required
420		Alder	5.84	190	2	2, 2, 2, 2	3.1	Semi-mature	Excellent	Fair	>40	A		2.3	16.6	Bifurcated 0.2m from ground level. Clear epicormic growth. Mulch around base. Recommended bi-annual monitoring.
421	**G4**	Alder (x16)	10.46	~200	1	3, 1, 1, 1	2.9	Semi-mature	Good	Good	>40	A		2.4	18.1	*Not tagged due to restricted access. Good screening/drainage/ habitat amenity.* No work required
422	**G5**	Grey willow (x26)	5.23	180	1	3, 1, 1, 1	1.1	Mature	Fair	Fair	>25	B		2.1	13.8	Poor access. Good screening/drainage amenity. No work required
423	**G6**	Alder (x12)	10.89	~200	1	2.5, 2, 2, 2	3.2	Semi-mature	Good	Good	>40	B		2.4	18.1	Not tagged due to restricted access. Good screening/drainage/ habitat amenity. No work required
424	**G7**	Grey willow (x15)	8.61	~200	Multi stem 2-3	2, 2, 2, 2	1	Mature	Fair	Fair	>25	B		2.4	18.1	Not tagged due to restricted access. Good screening/drainage/ habitat amenity. No work required
425	**G8**	Alder (x4)	11.1	~300	3	2.5, 2.5, 2.5, 2.5	3	Mature	Good	Good	>40	A		3.6	40.7	Not tagged due to restricted access. Good screening/drainage/ habitat amenity. No work required
426	**G9**	Grey willow (x6)	6.24	~160	Multi stem 2-3	2, 2, 2, 2	1	Mature	Fair	Fair	>25	B		1.9	11.3	Not tagged due to restricted access. Pruned heavily around power line. Epicormic growth. Good screening/ drainage/ habitat amenity. No work required
427	**G10**	Alder (x45)	12.19	~200	1	2.5, 2.5, 2.5, 2.5	2	Semi-mature	Good	Good	>40	A		2.4	18.1	*Remove East section of G10 that crosses boundary line for proposed development.* Rest of group to be retained. *Not tagged due to restricted access.* No work required.
428		Grey willow	6.12	210	1	3, 1, 1, 1	2	Mature	Fair	Poor	>25	C		2.5	19.3	Uncorrected lean over fence line. No work required
429	**G11**	Grey willow (x4)	10.66	250	Multi stem 2-5	3.5, 3, 3, 3.5	0.8	Mature	Fair	Fair	<25	C		3.0	28.3	Remove to facilitate proposed development
430		English Oak	3.65	100	1	1.5, 1, 1, 1	0.7	Juvenile	Good	Good	>40	A		1.2	4.5	Remove to facilitate proposed development
431		Hawthorn	3.8	120	2	1, 1, 1, 1	1	Juvenile	Fair	Fair	>25	B		1.4	6.2	Remove to facilitate proposed development
432		English Oak	3.15	100	1	1, 1, 1, 1	0.6	Juvenile	Good	Good	>40	A		1.2	4.5	Remove supporting stake.
433	**G12**	Grey willow (x4)	6.15	280	1	3, 3, 3, 3	1	Mature	Poor	Poor	<25	C		3.3	34.2	Remove to facilitate proposed development
434	**G13**	Alder (x6)	6.87	~200	1	2, 2, 2, 2	2	Semi-mature	Good	Good	>25	B		2.4	18.1	*Not tagged due to restricted access.* No work required
435		Grey willow	9.14	~350	4	2, 2, 2, 2	1	Mature	Fair	Fair	>25	B		4.2	55.4	*Not tagged due to restricted access.* Epicormic shoots at base. No work required
436	**G14**	Grey willow (x4)	7.62	320	1	3, 3, 3, 3	2	Mature	Poor	Hazardous	<10	U		3.8	45.4	Remove due to hazardous condition.

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Tree Tag No.	Group No.	Species	Height (m)	DBH (mm)	No. Stems	Canopy Spread (N, S, E, W)	Lower Branch Height (m)	Age	Physiological Condition	Structural Condition	ULE (Year)	Retention Category	Tree Quality	RPA Radial Distance (m)	RPA Area (m3)	Work Recommendations
437	**G15**	Alder (x25)	9.18	~250	1	2, 2, 2, 2	3	Mature	Good	Good	>40	A		3.0	28.3	Not tagged due to restricted access Good screening/drainage/ habitat amenity. No work required.
438	**G16**	Grey willow (x33)	9.28	~250	Multi-stem 3-6	2, 2, 2, 2	1	Mature	Good	Good	>40	A		3.0	28.3	Willow woodland, Good screening/ drainage/ habitat amenity. Re-assess in drier conditions.
439	**G17**	Alder (x46)	7.73	~180	1	1.5, 1.5, 1.5, 1.5	2.7	Semi-mature	Good	Good	>40	A		2.1	13.8	Remove ~1/3 of the trees (~15) (on North end) to facilitate development. All other trees to be retained. Good screening/drainage/ habitat amenity.
440	**G18**	Ash (x95)	6.78	~240	1	1, 1, 1, 1	3	Semi-mature	Good	Good	>40	A		2.8	24.6	Remove ~1/3 of the northern-most trees in group, to facilitate 3m boundary of proposed footway. All other trees in group to be retained. Good screening/drainage/ habitat amenity. Preserve as many trees as possible of group. Remove ~1/3 of the trees (on North end) to facilitate development (~30).
441	**G19**	Grey willow (x6)	4.57	180	Multi-stem 2-4	2, 2, 2, 2	1	Mature	Fair	Fair	>25	B		2.1	13.8	Remove ~1/2 of the northern-most trees in group, to facilitate 3m boundary of proposed footway. All other trees in group to be retained.
442		English oak	2.56	300	1	1, 1, 1, 1	0.5	Semi-mature	Poor	Fair	<25	C		3.6	40.7	Remove to facilitate proposed development
443	**G20**	Grey willow (x19)	7.52	180	Multi-stem 2-5	1.5, 1.5, 1.5, 1.5	1	Semi-mature	Fair	Fair	>25	B		2.1	13.8	Good screening/drainage/ habitat amenity. No work required
444	**G21**	Alder (x46)	9.32	270	1	2, 2, 2, 2	1	Mature	Good	Godd	>40	A		3.2	32.1	Remove northern ~1/3 of the trees in group to facilitate 3m boundary of proposed footway. All other trees in group to be retained. Good screening/drainage/ habitat amenity.
445	**G22**	Hazel (x4)	7.42	200	Multi-stem 2-5	2, 2, 2, 2	1	Mature	Fair	Fair	>25	B		2.4	18.1	Remove to facilitate proposed development
446	**G23**	Hawthorn (x7)	6.54	200	Multi-stem 2-5	2, 2, 2, 2	1	Semi-mature	Fair	Fair	>25	B		2.4	18.1	Remove to facilitate proposed development
447	**G24**	Hawthorn (x6)	7.12	200	Multi-stem 3-6	4, 4, 4, 4	1	Semi-mature	Fair	Fair	>25	B		2.4	18.1	Remove to facilitate proposed development
448	**G25**	Hazel (x4)	5.89	100	Multi-stem 6-8	2, 2, 2, 2	0.3	Young	Good	Good	>40	B		1.2	4.5	Remove to facilitate proposed development. Remove untagged Buddleia neighbouring G25
449	**G26**	Hazel (x6)	6.76	140	Multi-stem 6-8	2, 2, 2, 2	0.4	Semi-mature	Good	Good	>25	B		1.6	8.1	Remove to facilitate proposed development
450		Alder	6.01	130	1	1, 1, 1, 1	0.3	Young	Good	Good	>25	B		1.5	7.1	Remove to facilitate proposed development
451		Scots pine	7.54	210	1	1.5, 1.5, 1.5, 1.5	4.5	Mature	Fair	Fair	>25	B		2.5	19.6	Remove to facilitate proposed development
452		Chilean myrtle	6.91	280	1	3, 3, 3, 3	1.8	Mature	Good	Fair	>40	A		3.4	36.3	Remove to facilitate proposed development
453	**G27**	Hawthorn (x6)	3.99	90	Multi-stem 4-7	2, 2, 2, 2	1	Young	Fair	Fair	>25	B		1.1	3.8	Remove to facilitate proposed development
454		Field maple	6.55	210	3	2, 2, 2, 2	0.5	Mature	Good	Good	>40	A		2.5	19.6	No work required.
Site B																
455		Ash	24.11	340	1	0	3.65	Mature	Poor	Hazardous	<10	U		4.1	52.8	Lifted root plate, leaning into other trees at 45° angle. Remove to ground level.
456		Sycamore	24.82	340	1	0	N/A	Mature	Poor	Hazardous	<10	U		4.1	52.8	Lifted root plate, leaning into other trees at 70° angle. Remove to ground level.
457		Sitka spruce	27.43	220	1	0	N/A	Semi-mature	Poor	Hazardous	<10	U		2.6	21.2	Lifted root plate, leaning into other trees at 50° angle. Remove to ground level.
458		Sitka spruce	27.24	170	1	0	N/A	Semi-mature	Dead	Hazardous	0	U		2.1	13.8	Lifted root plate, leaning into other trees at 10° angle. Remove to ground level.
459		Sitka spruce	30.48	410	1	1, 1, 1, 1	1.2	Mature	Fair	Fair	>25	B		4.9	75.4	Visible surface roots on N side. Reassess when neighbouring trees have been removed.
460		Sitka spruce	21.36	260	1	0	0.7	Mature	Dead	Hazardous	0	U		3.1	30.1	Dead. Remove to ground level.
461		Grey poplar	31.87	570	1	5, 5, 5, 5	4.57	Mature	Fair	Fair	>25	B		6.8	145.2	Uncorrected lean, compressive loading on E side above root collar. Weight reduce canopy by 15%. Deadwood removal. Recommended bi-annual monitoring.

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Tree Tag No.	Group No.	Species	Height (m)	DBH (mm)	No. Stems	Canopy Spread (N, S, E, W)	Lower Branch Height (m)	Age	Physiological Condition	Structural Condition	ULE (Year)	Retention Category	Tree Quality	RPA Radial Distance (m)	RPA Area (m3)	Work Recommendations
462		Sitka spruce	14.12	200	1	1, 1, 1, 1	0.3	Semi-mature	Fair	Fair	>25	B		2.4	18.1	Remove to facilitate proposed development
463		Alder	12.19	240	2	0	3.89	Semi-mature	Poor	Hazardous	<10	U		2.8	24.6	50% die-back. Remove to ground level. Close proximity to road.
464		Spruce	9.23	300	1	1, 1, 1, 1	7.6	Semi-mature	Fair	Fair	<25	C		3.6	40.7	Remove to facilitate proposed development
465		Sitka spruce	9.61	300	1	1, 1, 1, 1	6.4	Semi-mature	Fair	Fair	<25	C		3.6	40.7	No work required
466		European Yew	30.48	160	1	1, 1, 1, 1	3.4	Juvenile	Dead	Hazardous	0	U		1.9	11.3	Dead. Remove to ground level.
467		Sitka spruce	30.89	330	1	1, 1, 1, 1	1.8	Mature	Fair	Fair	>25	B		3.9	47.8	Leaning 5° angle Eastwards. No work required
468		Sitka spruce	24.36	190	1	1, 1, 1, 1	2.7	Semi-Mature	Fair	Fair	>25	B		2.3	16.6	No work required.
469		Sitka spruce	31.18	400	1	2, 2, 2, 2	1.6	Mature	Fair	Fair	>25	B		4.8	72.4	Remove to facilitate proposed development
470		Sitka spruce	29.37	330	1	2, 2, 2, 2	2.7	Mature	Fair	Fair	>25	B		3.9	47.8	Remove to facilitate proposed development
471		Sitka spruce	12.23	240	1	0	1.9	Mature	Dead	hazardous	0	U		2.8	24.6	Remove to facilitate proposed development
472		Grey poplar	31.27	550	1	5, 5, 5, 5	3.2	Mature	Good	Fair	>40	B		6.6	136.8	Remove to facilitate proposed development
473	**G28**	Hawthorn (x11)	4.57	140	Multi-stem 2-3	1, 1, 1, 1	1	Juvenile	Fair	Fair	<25	C		1.7	9.1	Remove to facilitate proposed development
474		Goat Willow	4.65	250	1	0	N/A	Semi-Mature	Dead	Hazardous	0	U		3.0	28.3	Remove to facilitate proposed development
475		Alder	5.62	160	2	0	N/A	Juvenile	Dead	Hazardous	0	U		1.9	11.3	Remove to facilitate proposed development
476		Alder	10.66	160	1	1, 0, 0, 0	N/A	Juvenile	Fair	Fair	>25	B		1.9	11.3	Remove to facilitate proposed development
477		Sitka spruce	12.54	300	1	1, 1, 1, 1	3.4	Mature	Poor	Poor	<10	U		3.6	40.7	Remove to facilitate proposed development
478		Sitka spruce	9.24	150	1	0	N.A	Semi-Mature	Dead	Hazardous	0	U		1.8	10.2	Remove to facilitate proposed development
479		Sitka spruce	10.2	154	1	0	N.A	Semi-Mature	Dead	Hazardous	0	U		1.8	10.2	Remove to facilitate proposed development
480		Sitka spruce	30.76	300	1	1, 1, 1, 1	N.A	Mature	Fair	Fair	>25	B		3.6	40.8	Remove to facilitate proposed development
481		Sitka spruce	31.54	400	1	1, 1, 1, 1	N.A	Mature	Fair	Good	>25	B		4.8	72.4	Remove to facilitate proposed development
482		Sitka spruce	29.78	230	1	1, 1, 1, 1	N.A	Semi-Mature	Fair	Good	>25	B		2.7	22.9	Remove to facilitate proposed development
483		Sitka spruce	31.41	320	1	1, 1, 1, 1	N.A	Mature	Good	Good	>25	B		3.8	45.4	Remove to facilitate proposed development
484		Goat willow	6.09	320	1	1, 1, 0, 1	1.3	Mature	Poor	Hazardous	<10	U		3.8	45.4	Remove to facilitate proposed development
485		Sitka spruce	6.34	140	1	0	1.9	Juvenile	Dead	Hazardous	0	U		1.6	8.0	Remove to facilitate proposed development
486		Grey poplar	30.89	460	2	4, 4, 4, 4	7.62	Mature	Fair	Poor	<25	C		5.5	95.0	Remove to facilitate proposed development
487		Sitka spruce	30.46	300	1	1, 2, 1, 1	2.6	Mature	Fair	Fair	<25	C		3.6	40.8	Remove to facilitate proposed development
488		Alder	31.24	600	1	4, 4, 4, 4	5.6	Mature	Fair	Poor	<25	B		7.2	162.8	Remove to facilitate proposed development
489		Alder	31.26	400	1	4, 4, 4, 4	7.6	Mature	Fair	Poor	<25	C		4.8	72.3	Remove to facilitate proposed development
490		Sitka spruce	14.38	260	1	1, 1, 2, 1	1.5	Mature	Fair	Fair	>25	B		3.1	30.0	Remove to facilitate proposed development
491		Ash	3.89	210	1	0	N/A	Semi-Mature	Dead	Hazardous	0	U		2.5	19.6	Remove to facilitate proposed development
492		Alder	19.3	190	1	1, 1, 1, 1	N/A	Juvenile	Poor	Poor	<25	C		2.2	15.2	Remove to facilitate proposed development
493		Alder	27.78	320	1	2, 2, 2, 2	N/A	Mature	Fair	Poor	<25	C		3.8	45.3	Remove to facilitate proposed development
494		Sitka spruce	5.89	140	1	1, 1, 1, 1	N/A	Juvenile	Fair	Fair	>25	B		1.6	8.0	Remove to facilitate proposed development
495		Sitka spruce	6.37	120	1	1, 1, 1, 1	N/A	Juvenile	Fair	Fair	>25	B		1.4	6.1	Remove to facilitate proposed development
496		Grey poplar	30.78	500	1	3, 3, 3, 3	3.5	Mature	Fair	Fair	>25	B		6.0	113.1	Remove to facilitate proposed development
497	**G29**	Sitka spruce (x2)	10.66	~150	1	2, 2, 2, 2	~2	Juvenile	Fair	Fair	>25	B		1.8	10.1	Remove to facilitate proposed development
498		Sitka spruce	6.79	130	1	0.5, 0.5, 0.5, 0.5	0.3	Juvenile	Fair	Poor	<25	C		1.5	7.0	Remove to facilitate proposed development
499		Goat willow	15.67	360	1	3, 3, 3, 3	3.6	Mature	Poor	Poor	<25	C		4.3	58.0	Remove to facilitate proposed development
500		Goat willow	4.99	280	1	0	N/A	Mature	Poor	Poor	<10	U		3.4	36.3	Remove to facilitate proposed development
501		Goat willow	9.14	300	1	0	7.6	Mature	Poor	Poor	<25	C		3.6	40.7	Remove to facilitate proposed development

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Tree Tag No.	Group No.	Species	Height (m)	DBH (mm)	No. Stems	Canopy Spread (N, S, E, W)	Lower Branch Height (m)	Age	Physiological Condition	Structural Condition	ULE (Year)	Retention Category	Tree Quality	RPA Radial Distance (m)	RPA Area (m3)	Work Recommendations
502		Goat willow	10.34	400	1	3, 3, 3, 3	5.8	Mature	Fair	Poor	<25	C		4.8	72.3	Remove to facilitate proposed development
503		Alder	10.88	280	1	3, 2, 2, 3	6.54	Mature	Fair	Poor	<25	C		3.4	36.3	Remove to facilitate proposed development
504		Sitka spruce	6.10	130	1	1, 1, 1, 1	4.6	Juvenile	Fair	Fair	>25	C		1.5	7.0	Remove to facilitate proposed development
505		Alder	30.67	330	2	2, 3, 2, 3	18.2	Mature	Fair	Fair	<25	C		3.9	47.7	Remove to facilitate proposed development
506		Alder	30.23	360	1	2, 2, 2, 2	18.4	Mature	Fair	Fair	<25	C		4.3	58.0	Remove to facilitate proposed development
507		Alder	30.44	300	1	3, 2, 3, 2	22.5	Mature	Fair	Fair	<25	C		3.6	40.7	Remove to facilitate proposed development
508		Alder	30.26	320	1	3, 3, 3, 3	22.5	Mature	Fair	Fair	<25	C		3.8	45.3	Remove to facilitate proposed development
509		Alder	30.56	330	2	2, 2, 2, 2	25.6	Mature	Fair	Fair	<25	C		3.9	47.7	Remove to facilitate proposed development
510		Alder	30.41	370	1	3, 3, 3, 3	22.6	Mature	Fair	Fair	<25	C		4.4	60.8	Remove to facilitate proposed development
511		Alder	30.25	360	1	4, 4, 4, 4	23.1	Mature	Fair	Fair	<25	C		4.3	58.0	Remove to facilitate proposed development
512		Alder	30.76	360	2	1, 1, 1, 1	24.3	Mature	Fair	Poor	<25	C		4.3	58.0	Remove to facilitate proposed development
513		Ash	18.19	250	1	0	N/A	Mature	Poor	Poor	0	U		3.0	28.2	Remove to facilitate proposed development
514		Sycamore	18.24	240	1	2, 1, 2, 1	4.5	Mature	Good	Fair	>25	B		2.8	24.6	Remove to facilitate proposed development
515		Sycamore	22.45	340	1	2, 2, 2, 2	3.6	Mature	Fair	Fair	<25	C		4.1	52.8	Remove to facilitate proposed development
516		Sycamore	22.31	300	1	2, 2, 2, 2	4.3	Mature	Fair	Fair	<25	C		3.6	40.7	Remove to facilitate proposed development
517		Sycamore	21.75	280	1	2, 2, 2, 2	3.2	Mature	Fair	Fair	<25	C		3.4	36.3	Remove to facilitate proposed development
518		Sycamore	17.37	130	1	2, 2, 2, 2	N/A	Semi-mature	Poor	Poor	<10	U		1.5	7.1	Remove to facilitate proposed development
519		European Beech	15.54	260	1	1, 1, 1, 1	9.1	Semi-mature	Poor	Poor	<10	U		3.1	30.1	Remove to facilitate proposed development
520		Sycamore	15.24	310	1	2, 1, 3, 2	3.6	Mature	Fair	Fair	>25	C		3.7	43.0	Remove to facilitate proposed development
521		Ash	30.48	350	2	3, 3, 3, 3	19.8	Mature	Fair	Poor	<25	C		4.2	55.4	Remove to facilitate proposed development
522		Ash	30.12	500	1	5, 4, 4, 4	20.5	Mature	Good	Fair	>25	B		6.0	113.1	Remove to facilitate proposed development
523		European Beech	30.54	630	1	7, 7, 7, 7	0.3	Mature	Good	Good	>40	A		7.5	176.7	Remove to facilitate proposed development
524		European Beech	27.43	460	1	2, 2, 2, 2	3.49	Mature	Poor	Hazardous	<10	U		5.5	95.0	Remove to facilitate proposed development
525		Horse Chestnut	24.36	530	1	6, 6, 4, 4	4.5	Mature	Fair	Fair	>25	B		6.3	124.7	Remove to facilitate proposed development
526		Wych elm	30.79	390	1	5, 5, 5, 5	6.7	Mature	Dead	Hazardous	0	U		4.6	66.5	Remove to facilitate proposed development
527	**G30**	Beech Hedging (x43)	4.35	~150	1	1, 1, 1, 1	0.3	Juvenile	Good	Good	>40	A		1.8	10.1	Trim to maintain/ No work required.
528	**G31**	Sycamore (x6)	4.71	~180	1	1.5, 1.5, 1.5, 1.5	1	Semi-mature	Fair	Fair	<25	C		2.1	13.8	Remove to facilitate proposed development
529		Common lime	4.59	160	1	2, 2, 2, 2	1.5	Semi-mature	Good	Good	>40	A		1.9	11.3	No work required.
530		Common lime	4.62	170	1	2, 2, 2, 2	1.8	Semi-mature	Good	Good	>40	A		2.0	12.5	No work required.
531		Common lime	4.59	170	1	2, 2, 2, 2	1.4	Semi-mature	Good	Good	>40	A		2.0	12.5	No work required.
532		Common lime	4.65	172	1	2, 2, 2, 2	1.2	Semi-mature	Good	Good	>40	A		2.1	13.2	No work required.
533		Common lime	4.64	171	1	2, 2, 2, 2	1.2	Semi-mature	Good	Good	>40	A		2.1	13.8	No work required.
534		Common lime	4.71	200	1	2, 2, 2, 2	1.7	Semi-mature	Good	Good	>40	A		2.4	18.1	Remove vine.
535	**G32**	Beech Hedging (x37)	4.13	100	1	1, 1, 1, 1	0.3	Young	Good	Good	>40	A		1.2	4.5	Good screening amenity, visual boundary between carparks. Trim to maintain.
536		English oak	6.09	180	1	2, 2, 2, 2	1.9	Juvenile	Good	Good	>40	A		2.2	15.2	Crown lift by 2.5m for passing cars/ persons in carpark
537		European beech	6.19	200	1	1.5, 1.5, 1.5, 1.5	1.2	Semi-mature	Good	Good	>40	A		2.4	18.1	Cut back from streetlight, crown lift by 2.5m
538		Norway maple	7.63	400	2	5, 5, 5, 5	3.1	Mature	Good	Fair	>25	B		4.8	72.3	Co-dominant at 0.4m from ground level, included bark, dense canopy. Cut back from streetlight, thin-reduce by 15%,
539		Sycamore	12.43	290	4	5, 1, 0, 5	3.2	Mature	Poor	Poor	<25	C		3.5	38.5	Remove to facilitate proposed development
540		Common lime	27.43	620	2	5, 2.5, 2, 2	3.1	Mature	Good	Fair	>25	A		7.4	172.0	Remove to facilitate proposed development
541		European Beech	27.81	490	1	3, 1, 3, 3	6.1	Mature	Good	Fair	>40	A		5.8	105.7	Bifurcated at 6m from ground level. No work required.

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542		European Beech	19.12	200	1	1, 1, 3, 1	4	Semi-mature	Fair	Fair	>25	B		2.4	18.1	Missing bark on N limb, 4.5m from ground level. Remove N limb.
543		European Beech	18.78	230	1	1, 1, 1, 1	1.8	Semi-mature	Good	Good	>40	A		2.7	22.9	Compressive loading at base. Remove entangled Hawthorn branches, remove backfill of compost/ leaves to prevent basal rot.
544		Ash	27.41	400	1	4, 2.5, 4, 2.5	3.2	Mature	Poor	Poor	<25	C		4.8	72.4	Phototropic tension kink 10m from ground level. Sever ivy. Recommended bi-annual monitoring. Re-assess tree at bud break/ when in leaf.
545		European Beech	31.21	550	2	4, 4, 4, 2	1.7	Mature	Fair	Fair	>25	B		6.6	136.8	2 trees adjoined in a co-dominant manner from base. Included bark. Bulge at union on N side. Weight reduce canopy by 15%. Cobra-brace to support limbs. Recommended bi-annual monitoring.
546		Ash	30.76	600	1	5, 5, 5, 5	15.4	Mature	Good	Good	>40	A		7.2	162.8	Bifurcated 10m from ground level. Previously cut on S side. Cobra-brace main stems to ensure safety, remove deadwood, sever ivy.
547		Ash	27.72	360	1	0, 2, 4, 1	9.5	Mature	Fair	Fair	>25	B		4.3	58.1	Corrected lean, previously cut on S side. Remove entangled Hawthorn branches in canopy & wrapped around trunk. Sever ivy.
548		Hawthorn	17.2	160	1	1, 1, 1, 1	3.6	Semi-mature	Fair	Fair	<25	U		1.9	11.3	Remove, detrimental to neighbouring Ash.
549		European Beech	13.51	330	3	3, 3, 2, 3.5	1.5	Semi-mature	Good	Good	>40	A		3.9	47.8	Sever ivy
550		European Beech	16.71	280	1	1.5, 1.5, 1.5, 1.5	5.6	Semi-mature	Good	Good	>40	A		3.4	36.3	Remove to facilitate proposed development
551		European Beech	16.82	300	1	3, 1, 1, 3	6.2	Semi-mature	Fair	Poor	<25	C		3.6	40.7	Remove to facilitate proposed development
552		European Beech	30.48	700	1	6, 6, 6, 6	3.1	Mature	Excellent	Good	>40	A		8.4	221.6	Remove to facilitate proposed development
553		Sycamore	27.68	300	1	2, 3, 2, 5	6.2	Mature	Fair	Fair	>25	B		3.6	40.7	Remove to facilitate proposed development
554		Holly	4.57	190	1	2, 2, 2, 2	2.5	Mature	Fair	Fair	>25	B		2.3	16.6	Remove to facilitate proposed development
555		Hawthorn	4.68	170	1	1, 1, 1, 1	1.5	Semi-mature	Fair	Fair	<25	C		2.0	12.5	Remove to facilitate proposed development
556		Hawthorn	6.10	200	1	2, 1, 1, 1	3.1	Semi-mature	Fair	Fair	<25	C		2.4	15.1	Remove to facilitate proposed development
557		Sycamore	30.49	640	1	7, 3, 3, 3	4.5	Mature	Fair	Poor	>25	B		7.7	186.2	Good visual amenity. 15% die-back in crown, orange Coral Spot fungus on dead branches. Crown clean, remove all fungal infected branches, reduce canopy by 20%, remove epicormic growth, target prune over-extended limbs. Recommended bi-annual monitoring and reassessment at budbreak/ when tree is in leaf & fungal fruiting body has developed.
558		Common lime	7.62	160	1	0	0.6	Semi-mature	Poor	Hazardous	<10	U		1.9	11.3	Leaning NW at 35° angle. Intruding on T557. Remove.
559		Common lime	30.89	380	2	3, 3, 3, 3	2.3	Mature	Good	Fair	>40	A		4.6	66.5	Remove 2nd stem from base to prevent damage to main stem
560		Common lime	18.76	340	2	0, 3, 2, 2	0.6	Mature	Excellent	Good	>40	A		4.1	52.8	Remove epicormic growth at base, sever ivy.
561		Common lime	18.42	600	2	6, 4, 2, 3	4.5	Mature	Fair	Poor	>10	C		7.2	162.8	Good visual amenity. Unhealed occlusion 25m from ground level. Heartwood decay. Remove epicormic growth, sever ivy, remove broken hanger, weight reduce canopy by 15%. Recommended bi-annual monitoring.
562		Ash	6.51	500	1	0	N/A	Mature	Dead	Good	0	B		6.0	113.1	Preserve dead-but-stable post as eco-pole for wildlife habitat.
563		Hawthorn	5.19	120	1	1, 0, 0, 0	2.1	Juvenile	Fair	Fair	>25	C		1.4	6.1	Leaning NE at 30° angle. No work required.
564		Sycamore	18.32	170	1	0, 1, 0, 0	3.5	Juvenile	Fair	Poor	>10	C		2.0	12.6	S facing phototropic kink on main stem with accute tension angle. Remove lowest S facing limb.
565		Hawthorn	6.72	120	1	1, 1, 1, 1	3.7	Juvenile	Poor	Poor	>10	C		1.4	6.1	No work required
566		Sycamore	13.47	180	1	1, 1, 1, 1	2.8	Semi-mature	Fair	Fair	>25	B		2.1	13.8	Grown from the same base as Sycamore T567. No work required.
567		Ash	31.45	380	1	3, 3, 3, 3	10.6	Mature	Excellent	Good	>40	A		4.6	66.4	No work required.
568		Sycamore	15.31	350	1	1, 3, 1, 1	0.9	Mature	Good	Good	>40	A		4.2	55.4	No work required.
569		Sycamore	27.43	280	2	2, 2, 2, 2	1.5	Mature	Good	Good	>40	A		3.4	36.3	No work required.
570		Sycamore	13.98	180	1	1, 1, 1, 1	6.5	Semi-mature	Good	Good	>40	A		2.1	13.8	Corrected S lean. No work required.
571		Sycamore	15.42	280	3	2, 2, 2, 2	5.4	Semi-mature	Good	Good	>40	A		3.4	36.3	No work required.

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572		Sycamore	15.38	390	2	3, 3, 2, 2	3.7	Mature	Fair	Fair	>25	B		4.7	69.3	Sever ivy.
573		Hawthorn	9.23	270	1	1, 0, 1, 2	0.3	Mature	Fair	Fair	>25	B		3.2	32.1	Sever ivy.
574		Common lime	32.56	~600	4	4, 4, 4, 4	3.2	Mature	Fair	Good	>25	A		7.2	162.8	Good visual amenity. 5% die-back from tip. Limited access due to epicormic growth. Cobra-brace main stems, reduce crown by 15% & crown clean.
575		European Beech	26.45	500	2	2, 2, 2, 2	3.6	Mature	Good	Good	>40	A		6.0	113.1	Included bark 3.5m from ground level. Compacted soil from passing vehicles. Cobra-brace weak unions over road, weight reduce S side by 15%, mulch around base.
576		European Beech	26.43	600	2	2, 6, 2, 5	1.9	Mature	Good	Good	>40	A		7.2	162.8	Soil compaction, heavily pruned on N side. Crown clean, weight reduce S side of canopy by 10% mulch around base.
577		European Beech	9.61	-28	1	1, 3, 2, 1	1.5	Semi-mature	Good	Good	>40	A		3.4	36.3	No work required
578		Sycamore	30.71	1000	2	10, 5, 6, 5	1.8	Veteran	Fair	Fair	>25	A		12	452.3	17% die-back in crown (characteristic of veteran trees which have reached their maximum crown-size limit). Large kink & compressive loading on E stem. Weight reduce canopy by 20%, crown clean, sever ivy. Cobra-brace stems to support bifurcation and prevent branch-failure and irreversible damage. Highly recommend bi-annual monitoring.
579		Sycamore	24.56	270	7	7, 4, 4, 5	3.7	Mature	Good	Good	>40	A		3.2	32.2	Bundle-grouping, multi-stem x 7 extending from base. Sever ivy.
580		Sycamore	25.71	250	2	2, 2, 2, 2	2.3	Semi-mature	Fair	Fair	>25	B		3.0	28.3	No visible defects.
581		Sycamore	23.89	220	1	N/A	N/A	Semi-mature	Dead	Hazardous	0	U		2.6	21.2	Leaning onto T580 at 45° angle. Lifted at rootball. Remove to ground level.
582		Sycamore	13.78	250	2	3, 2, 2, 2	3.4	Semi-mature	Good	Fair	>40	B		3.0	28.2	Weight reduce N side of canopy by 15% to reduce interference with proposed development.
583		Sycamore	30.61	530	3	5, 1, 4, 1	4.5	Mature	Fair	Fair	>25	B		6.4	128.6	Included bark compression forks between all 3 stems. Weight reduce N side of canopy by 20% to take weight out of unions. Cobra-brace to support stems. Sever ivy.
584		Ash	30.56	300	1	2, 2, 2, 2	N/A	Mature	Poor	Poor	<10	U		3.6	40.7	Remove to facilitate proposed development
585		Sycamore	30.81	480	1	6, 2, 1, 4	6.2	Mature	Good	Good	>40	A		5.7	102.1	Weight reduce N side of canopy by 10%. Crown clean, sever ivy.
586		Hawthorn	7.62	190	1	1, 0, 0, 0	2.7	Semi-mature	Poor	Poor	<10	U		2.3	16.6	Remove to facilitate proposed development
587		Ash	30.54	650	2	4, 4, 4, 4	3.8	Mature	Poor	Poor	<10	U		7.8	191.1	Remove to facilitate proposed development
588		European Beech	9.41	180	1	2, 0, 0, 0	1.8	Juvenile	Good	Fair	>40	A		2.2	15.2	Large phototropic kink 6m from ground level, northwards towards proposed development. Weight reduce N side by 5%.
589		Ash	30.57	370	1	5, 5, 5, 5	19.6	Mature	Good	Good	>40	A		4.4	60.8	Crown clean, sever ivy
590		Sycamore	6.81	190	1	0	N/A	Semi-mature	Dead	Hazardous	0	U		3.0	28.3	Remove to ground level.
591		Sycamore	30.91	320	1	4, 2, 4, 1	12.4	Mature	Fair	Fair	>25	B		3.8	45.4	Northerly phototropic kink 3m from ground level. Tree is correcting itself. Sever ivy.
592		Sycamore	30.65	520	2	6, 3, 2, 2	5.5	Mature	Fair	Fair	>25	B		6.2	120.7	Bifurcation 5m from ground level. Weight reduce N side by 5%. Sever ivy. Cobra-brace the main stems to mitigate risk of compression fork. Recommended bi-annual monitoring.
593		European Beech	15.42	260	1	4, 0, 0, 0	N/A	Semi-mature	Fair	Fair	>25	B		3.1	30.1	Remove to facilitate proposed development
594		Sycamore	33.65	470	1	5, 0, 1, 1	9.2	Mature	Fair	Fair	>25	B		5.6	98.5	Weight reduce N side of canopy by 5%. Sever ivy, remove epicormic growth.
595		Sycamore	30.45	400	2	4, 3, 1, 1	12.1	Mature	Fair	Fair	>25	B		4.8	72.4	Bifurcates at 4m from ground level. Cobra-brace main stems to mitigate risk of compression fork. Sever ivy.
596		Sycamore	19.8	260	2	5, 0, 0, 0	3.6	Mature	Fair	Fair	>25	B		3.1	30.2	Remove to facilitate proposed development
597		Hawthorn	6.12	200	1	0	2.5	Semi-mature	Dead	Hazardous	0	U		2.4	18.1	Remove to facilitate proposed development
598		Hawthorn	4.57	150	1	1, 1, 0, 0	3.0	Juvenile	Fair	Fair	<25	C		1.8	10.2	Remove to facilitate proposed development
599		European Beech	30.71	600	1	6, 4, 2, 6	7.6	Mature	Excellent	Good	>40	A		7.2	162.8	Remove to facilitate proposed development
600		Sycamore	29.99	340	2	5, 3, 2, 5	5.4	Mature	Good	Fair	>25	B		4.0	50.2	Remove to facilitate proposed development

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701		Sycamore	15.24	400	2	5, 1, 4, 2	2.3	Mature	Fair	Fair	>25	B		4.8	72.4	Remove to facilitate proposed development
702		Common lime	12.19	160	1	0	N/A	Juvenile	Dead	Hazardous	0	U		1.9	11.3	Remove to facilitate proposed development
703		Common lime	6.12	180	1	1, 2, 0, 0	2.9	Juvenile	Fair	Fair	>25	B		2.1	13.8	Remove to facilitate proposed development
704		Sycamore	12.21	300	3	3, 3, 3, 3	4.3	Mature	Fair	Fair	>25	B		3.6	40.7	Remove to facilitate proposed development
705		Chilean myrtle	12.19	180	3	2, 2, 2, 2	1	Semi-mature	Good	Good	>40	A		2.1	13.8	Remove to facilitate proposed development
706		Ash	4.57	200	1	0	N/A	Semi-mature	Dead	Fair	0	C		2.4	18.1	Remove to facilitate proposed development
707		Ash	6.01	200	2	1, 1, 1, 1	4.7	Semi-mature	Fair	Poor	>25	C		2.4	18.1	Previous heavy pruning for power line clearance. No work required.
708	**G33**	Sycamore (x4)	7.82	~140	1	2, 1, 1, 1	1.5	Juvenile	Fair	Poor	>25	C		1.7	9.1	Re-shooting at branch-tip. No work required.
709		Sycamore	7.91	160	1	2, 2, 2, 2	1.9	Juvenile	Good	Good	>40	A		1.9	11.3	No work required.
710	**G34**	Ash (x6)	12.81	300	1	3, 3, 3, 3	3.5	Mature	Fair	Fair	>25	B		3.6	40.7	Remove vines. Re-assess trees when vines have been removed. Recommended bi-annual monitoring.
711	**G35**	Wild cherry (x10)	9.24	360	1	2, 2, 2, 2	2	Mature	Poor	Fair	>10	C		4.3	58.1	Crown clean, sever ivy, remove vines. Re-assess trees when vines have been removed. Recommended bi-annual monitoring.
712		Wych elm	13.45	430	1	1, 1, 1, 1	N/A	Mature	Dead	Hazardous	0	U		5.2	84.9	Remove to ground level.
713		Alder	30.73	500	1	3, 3, 3, 3	1.5	Mature	Good	Good	>40	A		6.0	113.1	Remove to facilitate proposed development
714		Alder	30.65	714	1	4, 1, 1, 4	1.5	Mature	Good	Good	>40	A		8.5	226.9	Remove to facilitate proposed development
715		Alder	30.56	340	2	2, 2, 2, 2	4.5	Mature	Fair	Fair	>25	B		4.1	52.8	Remove to facilitate proposed development
716		Alder	31.21	400	1	3, 3, 3, 3	12.5	Mature	Fair	Fair	>25	B		4.8	72.4	Remove to facilitate proposed development
717		Alder	27.43	390	1	2, 2, 2, 2	24.3	Mature	Fair	Fair	>25	B		4.7	69.4	Remove to facilitate proposed development
718	**G36**	Alder (x14)	28.2	392	1	2, 2, 2, 2	22.1	Mature	Fair	Fair	>25	B		4.7	69.4	Remove to facilitate proposed development
719																
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732		Goat willow	9.21	270	2	0	N/A	Mature	Dead	Hazardous	0	U		3.2	32.1	Remove to facilitate proposed development
733		Goat willow	12.19	275	1	1, 1, 1, 1	9.1	Mature	Poor	Hazardous	<10	U		3.3	34.2	Remove to facilitate proposed development
734		Goat willow	13.45	300	1	2, 2, 2, 2	0.9	Mature	Fair	Fair	>25	B		3.6	40.7	Remove to facilitate proposed development
735		Sitka spruce	12.23	170	1	1, 1, 1, 1	1.5	Semi-mature	Fair	Fair	>25	B		2.0	12.5	Remove to facilitate proposed development
736		Alder	12.56	190	3	1, 1, 1, 1	2.91	Semi-mature	Fair	Fair	>25	B		2.3	16.6	No work required.
737	**G37**	Hawthorn (x4)	6.09	120	Multi-stem 3-5	1, 1, 1, 1	0.5	Young	Fair	Fair	>25	B		1.4	6.2	No work required.
738		Goat willow	13.21	310	1	2, 2, 2, 2	6.1	Mature	Fair	Fair	>25	B		3.7	43.0	Remove to facilitate proposed development
739		Ash	12.78	240	2	1, 1, 1, 1	5.8	Semi-mature	Fair	Fair	>25	B		2.8	24.6	Remove to facilitate proposed development
740		Goat willow	4.57	280	1	0	N/A	Mature	Dead	Hazardous	0	U		3.7	43.0	Remove to facilitate proposed development

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741	**G38**	Sitka Spruce (x3)	10.33	~220	1	1, 1, 1, 1	0.6	Semi-mature	Fair	Fair	>25	B		2.6	21.2	No work required. Each tree has been individually tagged due to their close proximity to the proposed development. This will aid future monitoring schedules.
742																
743																
744	**G39**	Sitka Spruce (x2)	10.12	210	1	1, 1, 1, 1	N/A	Semi-mature	Dead	Hazardous	0	U		2.5	19.6	Remove to facilitate proposed development
745																Remove to facilitate proposed development
746		Goat willow	6.31	240	1	0	N/A	Semi-mature	Poor	Hazardous	<10	U		2.8	24.6	Remove to facilitate proposed development
747		Ash	11.72	190	1	1, 1, 1, 1	9.5	Semi-mature	Fair	Fair	>25	B		2.3	16.6	No work required.
748		Alder	30.57	330	2	2, 2, 2, 2	10.3	Mature	Fair	Fair	>25	B		4.0	50.2	Remove to facilitate proposed development
749		Alder	29.46	270	1	2, 2, 2, 2	9.8	Mature	Fair	Fair	>25	B		3.2	32.1	Remove to facilitate proposed development
750		Alder	30.45	370	1	2, 2, 2, 2	19.7	Mature	Good	Poor	>25	B		4.4	60.8	Remove to facilitate proposed development
751		Alder	12.54	120	1	0	N/A	Young	Dead	Hazardous	0	U		1.4	6.1	Remove to facilitate proposed development
752	**G40**	Alder (x10)	11.8	~220	1	4, 4, 4, 4	1	Young	Good	Fair	>25	B		2.6	21.2	Not tagged due to restricted access. Remove to facilitate proposed development
753	**G41**	Grey Willow (x13)	9.7	~150	Multi-stem	3, 3, 3, 3	0.5	Young	Good	Fair	>25	B		1.8	10.2	Not tagged due to restricted access. Remove to facilitate proposed development

Table Key			**Terminology**	
	Category A	High Retention Value	N	North
	Category B	Moderate Retention Value	S	South
	Category C	Low Retention Value	E	East
	Category U	Very Low Retention Value	W	West
	Clearance Trees	Remove to facilitate proposed development		

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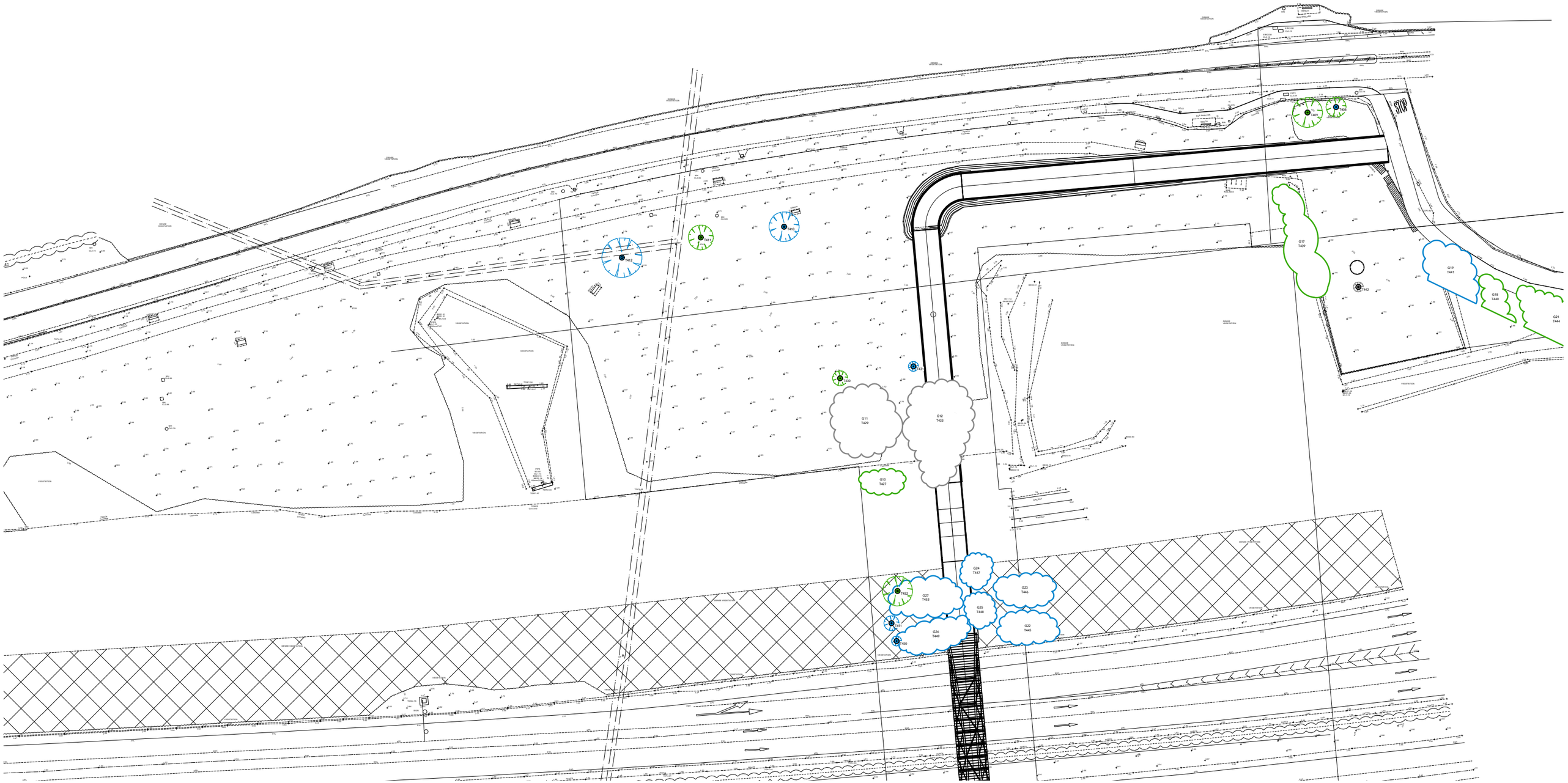
SITE A
TREE CLEARANCE PLAN



BS5837:2012 - Tree Categories

Category A Tree
High quality and value
At least 40 years life-expectancy

Category B Tree
Moderate quality and value
At least 20 years life-expectancy

Category C Tree
Moderate quality and value
At least 10 years life-expectancy

Category U Tree
Poor quality and value
Less than 10 years life-expectancy

Arboricultural Strategy

G1/H1 Trees/groups for removal

G1/H1 Tree group/hedge to be retained

Tree Canopy
Root protection area (RPA)
Diameter of trunk
Tree number as recorded on Survey Schedule

I. The Tree Survey, Assessment and Plans were carried out by the Heritage Tree Care Ltd.
II. Tree locations are based on available aerial imagery, topographical surveys and on-site observations.
III. Plans should be read in conjunctions with the Arboricultural Impact Assessment, BS 5837 Tree Survey and Tree Clearance Plan provided by Heritage Tree Care Ltd.
IV. The original of this drawing was produced in colour. A monochrome copy should not be relied upon.

Site	Client		
N25 Pedestrian & Cycle Bridge	Cork County Council		
Drawing Title	**Status**	**Scale**	**Date**
Tree Clearance Plan	Draft	1:750	02/01/2023

NORTH

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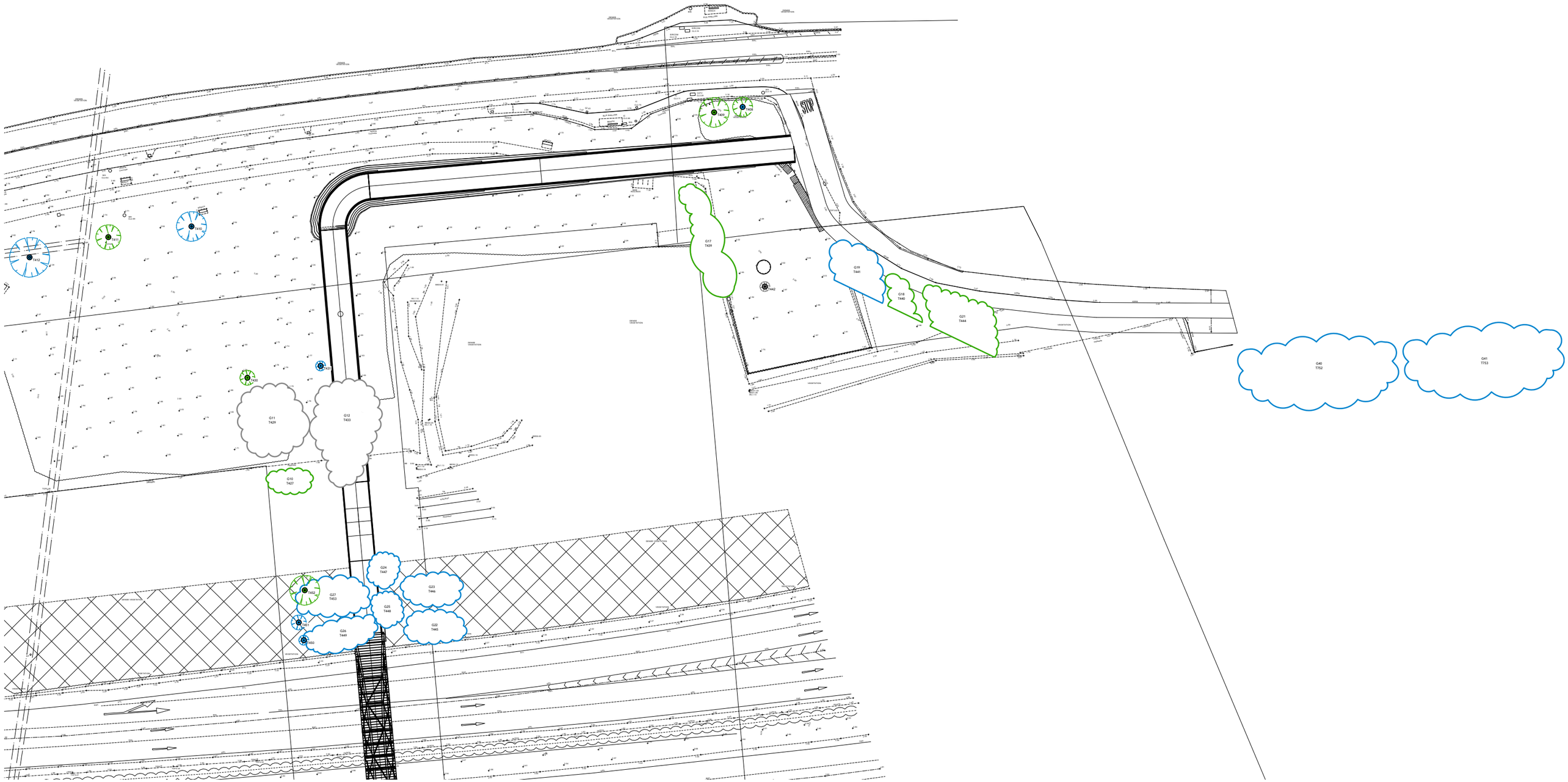
SITE A
TREE CLEARANCE PLAN



BS5837:2012 - Tree Categories

- Category A Tree — High quality and value — At least 40 years life-expectancy
- Category B Tree — Moderate quality and value — At least 20 years life-expectancy
- Category C Tree — Moderate quality and value — At least 10 years life-expectancy
- Category U Tree — Poor quality and value — Less than 10 years life-expectancy

Arboricultural Strategy

G1/H1 — Tree group/hedge

- Tree Canopy
- Root protection area (RPA)
- Diameter of trunk
- Tree number as recorded on Survey Schedule

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Site	Client		
N25 Pedestrian & Cycle Bridge	Cork County Council		
Drawing Title	**Status**	**Scale**	**Date**
Tree Clearance Plan	Final	1:750	01/06/2023

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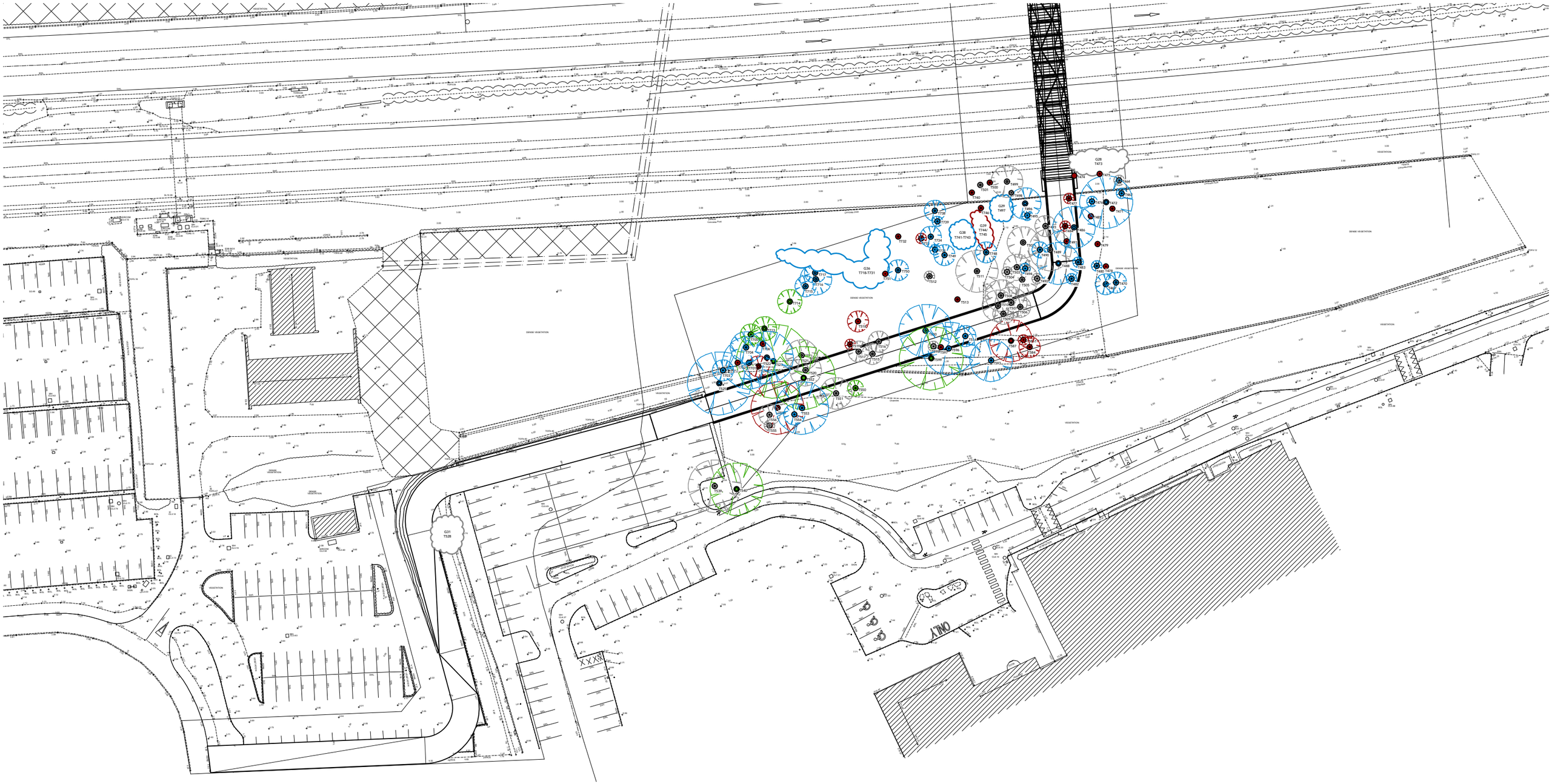
SITE B

TREE CLEARANCE PLAN



BS5837:2012 - Tree Categories

- Category A Tree — High quality and value — At least 40 years life-expectancy
- Category B Tree — Moderate quality and value — At least 20 years life-expectancy
- Category C Tree — Moderate quality and value — At least 10 years life-expectancy
- Category U Tree — Poor quality and value — Less than 10 years life-expectancy

Arboricultural Strategy

- G1/H1 — Trees/groups for removal
- G1/H1 — Tree group/hedge to be retained

Tree Canopy
Root protection area (RPA)
Diameter of trunk
Tree number as recorded on Survey Schedule

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Site	Client		
N25 Pedestrian & Cycle Bridge	Cork County Council		
Drawing Title	**Status**	**Scale**	**Date**
Tree Clearance Plan	Draft	1:750	02/01/2023

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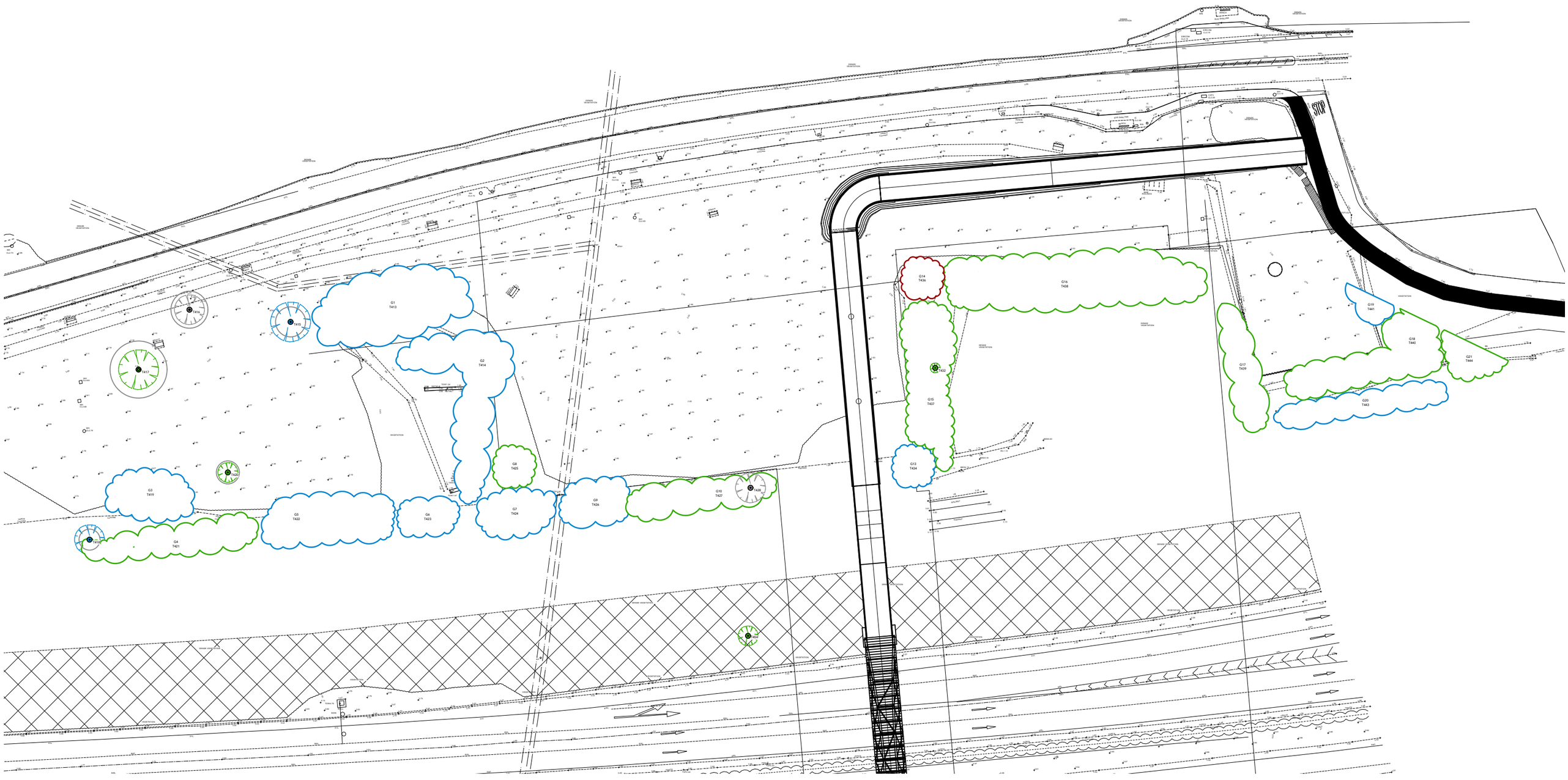
SITE A
TREE CONSTRAINTS PLAN



BS5837:2012 - Tree Categories

- Category A Tree — High quality and value, At least 40 years life-expectancy
- Category B Tree — Moderate quality and value, At least 20 years life-expectancy
- Category C Tree — Moderate quality and value, At least 10 years life-expectancy
- Category U Tree — Poor quality and value, Less than 10 years life-expectancy

Arboricultural Strategy

- G1/H1 — Trees/groups for removal
- G1/H1 — Tree group/hedge to be retained

Tree Canopy
Root protection area (RPA)
Diameter of trunk
Tree number as recorded on Survey Schedule

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Site	Client		
N25 Pedestrian & Cycle Bridge	Cork County Council		
Drawing Title	**Status**	**Scale**	**Date**
Tree Constraints Plan	Draft	1:750	02/01/2023

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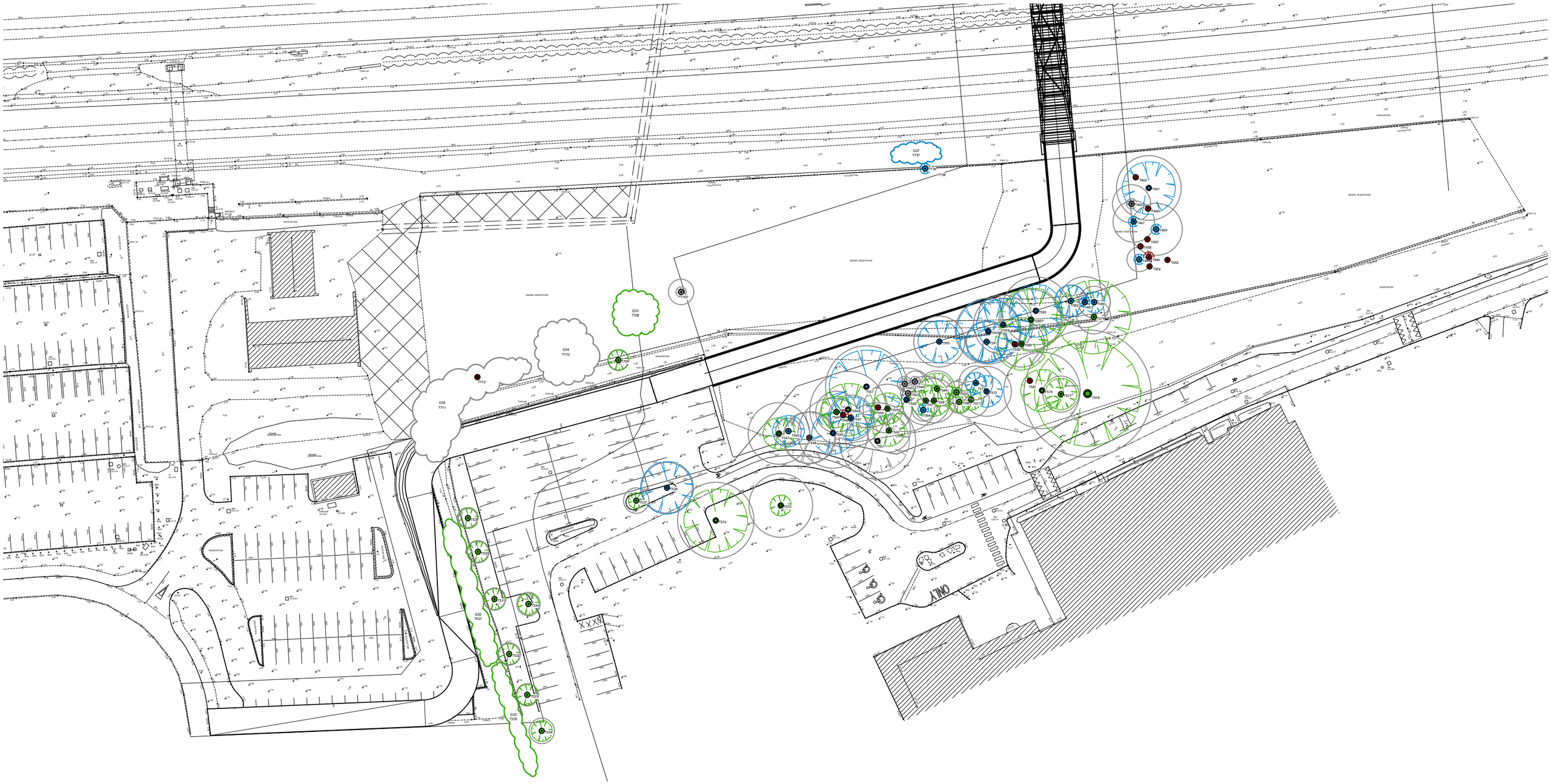
HERITAGE TREE CARE LTD.

SITE B

TREE CONSTRAINTS PLAN



BS5837:2012 - Tree Categories

Category A Tree
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Category B Tree
Moderate quality and value
At least 20 years life-expectancy

Category C Tree
Moderate quality and value
At least 10 years life-expectancy

Category U Tree
Poor quality and value
Less than 10 years life-expectancy

Arboricultural Strategy

G1/H1 — Trees/groups for removal

G1/H1 — Tree group/hedge to be retained

T1 — Tree Canopy; Root protection area (RPA); Diameter of trunk; Tree number as recorded on Survey Schedule

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Site	Client		
N25 Pedestrian & Cycle Bridge	Cork County Council		
Drawing Title	**Status**	**Scale**	**Date**
Tree Constraints Plan	Draft	1:750	02/01/2023

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