



Luas Finglas

Environmental Impact Assessment Report 2024

Appendix A21.1: Arboricultural Impact Assessment





Project Ireland 2040 Building Ireland's Future



Arboricultural Impact Assessment

Prepared for:

Barry Transportation

Proposed site:

Proposed Extension of Luas Line-Broombridge to Finglas

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1 Introduction

1.1 Background

Arbor-Care Ltd (Professional Consulting Tree Service) was retained by Barry Transportation on behalf of the National Transport Authority (NTA) to undertake an Arboricultural Impact Assessment, and a Tree Protection Plan identifying the trees, groups of trees or hedgerows that may be impacted on by the Luas extension. The surveyed trees contained within this report are located within or adjacent to the proposed scheme. The objective of the impact assessment was to identify the areas that contained trees, groups of trees or hedgerows, and to ensure where practicable that these areas would be retained and to identify the trees that are to be removed to facilitate the proposed scheme.

The survey was undertaken on the 17th of August 2021. The survey commenced at the south side of the platform of Broom Bridge Luas Stop and heading towards Finglas.

The below impact assessment report is based on the most recent development plan as of February 2024 and complies with the British standard BS 5837:2012 Trees in relation to design, demolition and construction recommendations. This standard gives recommendations and guidance on the principles to be applied to achieve a satisfactory juxtaposition of trees, including shrubs, hedges and hedgerows, with structures. It sets out to assist those concerned with trees in relation to construction to form balanced judgements. This impact assessment report is accompanied by an inventory of trees and hedgerows on site and a tree protection plan. The Arboricultural Impact Assessment and a tree protection plan was prepared for the Proposed Scheme to identify trees that may be impacted on by the proposed development based on the proposed design.

1.2 Methodology

An initial tree survey and visual condition assessment was undertaken. As part of this report and in accordance with BS 5837: 2012 Trees in relation to design, demolition and construction - recommendations, only trees with diameters of 75mm or greater were surveyed. Also, in accordance with section 4.4.2.3 of the British standard document, where trees formed obvious groups, these were assessed and recorded as groups.



Figure 1.0 Proposed Route

Source National Transport Authority.

2 Soils

On shrinkable clay soil, tree growth can lead to the differential movement of structures as moisture is removed from the soil during the growing season. Soils must be carefully assessed, and any foundations that could be influenced by trees must be installed following the recommendations of National House Building Council (NHBC) Standards Chapter 4.2: Building Near Trees (2021) to avoid potential future damage. Where trees which predate existing structures are to be removed, this can result in heave as the soils are re-wet. This should be monitored by a suitably qualified engineer during the construction works.

3 Trees and Risk in the Context of Development

This report is to inform the design team on the quality and benefits of the trees and is not specifically designed to assess the safety of trees on site. However, when obvious issues have been identified, recommendations have been included in the Tree Survey Schedule.

3.1 Trees and Wildlife

Full consideration must be given to the presence of species protected under the Wildlife Act (1976 – as amended) and other relevant legislation protected wildlife and habitats, in particular the presence of bats and nesting birds. It is recommended that wherever practicable, significant tree/hedge works take place outside of the typical bird nesting season of March to September.

3.2 Tree Works

Any tree surgery recommendations contained within this report are to be undertaken in accordance with BS3998: 2010 Tree work – Recommendations (BS3998), by suitably qualified and insured contractors. Significant pruning works are best undertaken when trees are dormant or outside periods of high functional activity, to reduce the overall impact on energy available to the tree for growth and processes. In general, the optimum period for works is between November to February and July to August (subject to the presence of protected species) when the tree is less active and better placed to respond to wounding and a reduction in leaf area.

4.0 The Trees

A total of 1037 individual/groups of trees were surveyed. The surveyed trees include a mixture of semi-mature to large mature trees, planted mainly as street trees and parkland, as well as vegetation within private properties.

A breakdown of the Tree Categories on site as per BS 5837 2012 is set out in the table below:

Category	Quantity	Category %
A-Tree of high quality	12	1.16%
B-trees of good quality	865	83.41%
C (Low quality or trees less than 75mm	159	15.33%
diameter)		
U (remove due to poor condition)	1	0.10%
Total Trees surveyed	1037	100%

5 Statutory and Non-Statutory Designations

The National Planning Framework (NPF) seeks to ensure that new development is sustainable and underlines the importance of Green Infrastructure, of which trees form an integral part. This encompasses recognition of the importance of trees in relation to the management of air, soil and water quality along with other associated ecosystem services and climate change adaption. The NPF also seeks to achieve the protection and enhancement of landscapes and a net gain in biodiversity.

The survey area traverses the jurisdiction of Fingal County Council and Dublin City Council. The Local Planning Authorities have a statutory duty to consider both the protection and planting of trees when considering planning applications. The potential impact of development on all trees (including those not protected by a Tree Preservation Order or other statutory designation) is therefore a material consideration.

Fingal County Development Plan 2023-2029, Chapter 9 Natural Heritage seeks to protect and enhance biodiversity and landscapes including trees.

Objective NH27 seeks to protect existing woodlands, trees and hedgerows which are of amenity or biodiversity value and/or contribute to landscape character and ensure that proper provision is made for their protection and management and Objective NH28 stipulates the use of Tree Preservation Orders (TPOs) to protect important trees, groups of trees or woodlands. There are no TPOs within the extent of the scheme. 'BS5837:2012 Trees in relation to design demolition and construction – Recommendations (BS5837)' provides a framework which sets out how trees should be considered in this context and also explicitly applies to development where planning consent is not required.

BS5837 recommends that a tree survey is undertaken to identify the quality and benefits of trees and the spatial constraints associated with them. This is then used to produce a Tree Constraints Plan showing the above and below ground constraints associated with trees. This drawing is used to inform the design process and to allow the retention of good quality trees where appropriate.

An Arboricultural Impact Assessment is then developed to identify the likely direct and indirect impacts of the Proposed Development, and a Tree Protection Plan is prepared to identify trees to be removed or retained and to illustrate how retained trees are to be protected. An Arboricultural Method Statement is often required as a condition of planning consent to detail how sensitive operations are to be achieved in close proximity to retained trees. These elements are the minimum normally required for a planning application and are intended to ensure both a sustainable and harmonious relationship between trees and new development.

6 Arboricultural Impact Assessment

This impact assessment sets out the likely principal direct and indirect impacts of the Proposed Scheme on the trees on or immediately adjacent to the site and suitable mitigation measures to allow for the successful retention of significant trees or to compensate for trees to be removed, where appropriate.

A brief summary of trees to be removed, tree works and incursions related to the proposed development are detailed within the table below.

Impact	Category A	Category B	Category C	Category U	Total tree removal
Trees to be removed	0 individual	151	26 individual	1 individual	
to facilitate the	trees	individual	trees	trees	
Proposed Scheme		trees			
Total	0 features	151 features	26 features	1 features	
Trees to be pruned to	0	0	0	0	
facilitate the Proposed					
Scheme (Unknown at					
this stage)					
Total	0	151	26	1	178

6.1 Trees to be Removed

All trees that are destined for removal will be removed prior to any construction or excavation works taking place in the vicinity of any trees to be removed, where practicable.

Any tree/hedgerow remedial works that are required will also be undertaken prior to any construction or demolition activity on the site where practicable. All the above shall be carried out by qualified and insured tree surgeons and in accordance with BS 3998:2010 Tree works Recommendations.

The latest available information on the general arrangement, landscape general arrangement, drainage, structures, earthworks, lighting and compounds have been reviewed to inform this assessment.

Tree removals assume a reasonable worst case and in practice some trees may be able to be retained subject to on site investigation, such as trial holes, to determine root spread in conjunction with the guidance of an arboriculturist.

Where part of a group of trees is to be removed, an arboriculturist will carry out a site walkover immediately following site clearance work to determine the suitability and stability of retained trees, which may have been impacted by a loss of companion shelter.

New tree planting and associated landscaping works are as detailed in the proposed Landscaping Design Drawings. All the remaining recorded trees are likely to be able to be retained and protected.

6.2 Tree Works

Tree removal works to facilitate the Proposed Scheme are detailed in the Tree Survey Schedule included as Appendix A. Aside from tree removals, no other tree works such as pruning have been identified at this stage. Where new areas of access are proposed close to trees, crown lifting to ensure a clear height of 2.5m for footways, 3m for cycleways and 5.2m for highways is likely to be required.

The requirement for pruning will be addressed following a pre-commencement site walkover to review any trees which could form an obstruction, or which require pruning to facilitate construction works and to prevent inadvertent damage to tree crowns.

This level of pruning will generally not have a significant negative impact on the health or amenity of the trees in question.

No additional works to retained trees are likely to be required. All tree work is to follow the principles of BS3998: 2010 Treework.

Should the requirement for additional tree works be identified, this will be discussed with an arboriculturist on site.

6.3 Incursions within the Root Protection Area or Canopy Spread

A range of works are required within or close to the Root Protection Area (RPA) of retained trees which will require specialist working methods to ensure trees are not subject to a significant negative impact. The RPA is a layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability and where the protection of the roots and soil structure is treated as a priority.

Tree RPAs have been calculated in accordance with BS 5837:2012. The formulas used are set out in Table 3.

Number of Stems	Calculation Method
Single Stem Tree	RPA (m ²) = {stem diameter (m) @ 1.5m x 12} ² x 3.142
Tree with more than one stem arising below 1.5m above ground level.	RPA (m ²) = {Basal Dia. (m) x 10} ² x 3.142

Note: The Calculated RPA should be capped to 707m2, e.g. which is the equivalent to a circle with a radius of 15m or a square with approximately 26 m sides.

Given the constraints of the site, incursions into the RPA may be unavoidable therefore the mitigation

measures as set out in the method statement are to be adhered to. The Arboricultural Method

Statement included as Appendix B sets out the methodology for specific activities near retained trees.

The following general principles as outlined below have been applied:

- The extent of resurfacing has not been fully determined at this stage. Where resurfacing of existing
 hard surfacing is required, this will be applied over the existing wearing course or on the existing
 intact subbase following the careful removal of the wearing course.
- New surfacing on existing unsurfaced ground within a significant proportion of an RPA will be achieved using a three-dimensional cellular confinement system (e.g. Cellweb or equivalent), installed without excavation using no dig techniques.
- Where existing verges or footways are to be widened out into the existing carriageway, kerb stones and haunching will be carefully removed by hand to protect adjacent tree roots. The Proposed Scheme will likely result in improved growing conditions for trees where carriageway is replaced by less heavily engineered footway or verge.
- Where the existing road carriageway is to be widened requiring a section of cut into a tree RPA or where new drainage cannot feasibly be adjusted to fully avoid the RPA, tree retention will be feasible where trees are considered on balance to be of an age, condition and species which will tolerate the degree of disturbance required (generally not more than a maximum of 20% of the overall RPA) and that this is preferable to the loss of the tree. The area of excavation nearest the tree will be carried out by hand and roots will be carefully assessed by an arboriculturist and pruned as required. New kerb stones and any haunching will be the narrowest profile feasible and alternative methodologies such as reinforced bridged/lintel sections of kerb can be applied, should significant roots need to be retained and worked around.
- Where a new boundary wall is to be constructed within an RPA, alternative footings utilising low diameter pads or piles will be carefully located to avoid tree roots (via hand dug trial holes) and will support floating beams set at or above ground level, unless trial holes (under arboricultural supervision) determine that limited careful excavation is viable to allow beams to be set into the ground.
- The position of new lamp columns, signs and rail shelter footings can be locally adjusted to avoid significant roots and tree canopies and the lowest diameter footings feasible will be employed (such as screw piles or equivalent). Footings will be hand dug within RPAs.
- All new or diverted utilities will avoid the RPA of retained trees where practicable. Where this is not practicable, they will be installed using trenchless methods or via careful excavation in accordance with BS5837: 2012 and guidance from the National Joint Utilities Group (NJUG) Volume 4. Utilities to be removed will be cut off and left in situ where feasible to minimise disturbance or will be removed via careful excavation.

6.4 The Future Impact of Retained Trees

Retained trees will require periodic inspection to assess their structural condition and safety. Occasional removal of dead wood or other remedial works to address significant defects or obstructions may be required in areas of frequent access. This is unlikely to be overly onerous and will be the responsibility of the tree owner.

All tree works recommended as a result of the preliminary tree survey of the site, which considered trees in the context of the current use of the site (these works are included as preliminary management recommendations in the Tree Survey Schedule in Appendix A of this report), should be actioned within the recommended timescales.

6.5 Tree Protection

Retained trees are vulnerable to damage from construction activities which can include physical damage to stems and branches following impacts with plant, root severance following trenching, root death or dysfunction following damage to soil structure (caused by the movement of people or machinery on unsurfaced ground) or via the spillage of materials toxic to tree health. The default position is that the RPA and canopy spread of trees to be retained will form an effective Construction Exclusion Zone, secured with robust fencing where no access will be permitted. Where access is necessary within this area, special measures such as the use of ground protection (or retention of existing hard surfacing) and arboricultural supervision are generally required. In some cases, existing boundary walls and fences can be employed as a tree protection barrier where they are robust and sufficient to prevent access or damage.

6.6 Tree Planting

Existing areas of unsurfaced ground must be protected during the demolition and construction phases if they are to be re-used for new plantings. Protection can be achieved using fit for purpose ground protection measures as set out in BS5837:2012 Section 6.2.3 or by creating a fenced exclusion zone. Where protection is not practicable, soil amelioration or replacement works will be required to ensure suitable growing conditions for new trees to fully establish. Where new trees are to be planted, the minimum planting distances detailed in Annex A, Table A.1 of BS5837:2012 must be adhered to, to prevent direct damage to services and structures from future tree growth. An extract of BS5837:2012 presenting this table is shown in Figure 3. New tree planting should be implemented in accordance with the guidance set out in *BS8545: 2014 Trees: from nursery to establishment in the landscape – Recommendations*.

Table A.1 Minimum distance between young trees or new planting and structure to avoid direct damage to a structure from future tree growth

Type of structure	Minimum distance between young trees or new planting and structure, in metres (m)					
	Stem dia. <300 mm ^{A)}	Stem dia. 300 mm to 600 mm ^{A)}	Stem dia. >600 mm ^{A)}			
Buildings and heavily loaded structures		0.5	1.2			
Lightly loaded structures such as garages, porches etc.		0.7	1.5			
Services						
<1 m deep	0.5	1.5	3.0			
>1 m deep		1.0	2.0			
Masonry boundary walls	—	1.0	2.0			
In-situ concrete paths and drives	0.5	1.0	2.5			
Paths and drives with flexible surfaces or paving slabs	0.7	1.5	3.0			

^{A)} Diameter of stem at 1.5 m above ground level at maturity

Figure 2 - Annex A, Table A.1 of BS5837:2012

7. Conclusions

The arboricultural impact of the proposed development on the site will be low. It is proposed to remove 178 individual trees out of 1037 individual trees surveyed to facilitate the Proposed Scheme.

The number of individual trees being retained also includes trees adjacent to the Proposed Scheme i.e. outside the site boundary and temporary land acquisition boundary. These trees are evident on the drawings contained in Appendix C.

A breakdown of the number of trees being removed and retained is shown in Table 4 below.

Table 1`: Retained and Removed Tree Quantities

	Retained and Removed Tree Quantities				
Retained trees	Total retained in development (no)	859			
Removed trees	Total identified trees lost (no.)	178			

Trees are to be removed due to a direct conflict with the Proposed Scheme and where specialist methodologies or design tweaks are not considered practical to facilitate their retention. Trees are also proposed to be retained where careful construction methodologies will allow their retention. Tree loss will be mitigated with a robust and high-quality scheme of new tree planting as detailed in the proposed Landscaping General Arrangement drawings which represents an opportunity to increase the quality, impact, diversity, and resilience of the local tree stock. Soil structure for areas of new tree planting where the ground is currently unsurfaced will either be protected using ground protection or fenced exclusion zones; or the soil structure will be ameliorated or replaced following the completion of construction works on site.

A1 Key to Abbreviations Used in the Survey

Ref No	Specific identification number given to eac T=Tree/H=Hedge/G=Group/W=Woodla	ch tree or group. and/S=Shrub.
Tag No.	Tree marked with individual tree tag of this reference	e number on site.
Species	Common name followed by botanical name shown in	italics
RPA	Root Protection Area (As defined by BS5837)	
Stem diameter	Diameter of main stem measured in millimetres at 1.5 m above ground level. (MS = Multi-stem tree measured in accordance with BS5837 Annex C)	Av / Average: indicates an average representative
Spread	The width and breadth of the crown. Estimated on the four compass points in metres.	measured dimension for the group or feature
Crown clearance	The estimated height (in metres) above ground level of the lowest significant branch attachments.	
#	Estimated dimensions	
*	Indicates estimated position of tree (not indicated on topographical survey).	
Р	Privately owned tree (e.g., tree not located in the publ public land).	lic highway or adjacent
Category	Categorisation of the quality and benefits of trees on S of BS5837:2012. 1=Arboricultural quality/value 2=Landscape quality/value 3=Cultural quality/value (including conservation)	Site as per Table 1 and 2
	A=High quality/value 40yrs+ (light green).	
	B=Moderate quality/value 20yrs+ (mid blue)	
	C=Low quality/value min 10yrs/stem diameter less the U=Unsuitable for retention (dark red).	han 150mm (grey).
Life stage	Young (Y): Newly planted tree 0-10 years. Semi-Mature (SM): Tree in the first third of its norm species (significant potential for future growth in size Early Mature (EM): Tree in the second third of its no the species (some potential for future growth in size) Mature (M): Tree in the final third of its normal life e (having typically reached its approximate ultimate siz Over Mature (OM): Tree beyond the normal life expect Veteran (V): Tree, which is of interest biologically, are because of its condition, size or age.	al life expectancy for the e). ormal life expectancy for expectancy for the species ze). ectancy for the species. esthetically or culturally
condition	Fair: Structural defects which can be resolved via ren Poor: Structural defects which cannot be resolved via Dead: Dead.	nedial works. a remedial works.
Physiological condition	 Good: Normal vitality including leaf size, bud growth, wound wood development. Fair: Lower than normal vitality, reduced bud development, reduced response to wounds. Poor: Low vitality, low development and distribution leaves, low crown density, little extension growth for Dead: Dead Fair/Good = Indicates an intermediate condition Fair - Good = Indicates a range of conditions (e.g., with the second sec	, density of crown and pment, reduced crown of buds, discoloured the species. thin a group)
Preliminary management recommendations	Works identified during the tree survey as part of sou management, based on the current context of the Site reference has been made to tree management based of context of the site).	nd arboricultural (where relevant on the potential future

Tree #	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2001	Betula	SM	90	3	N=1	1.5m	Good	Represents a cluster of 5 semi-mature Jacquemonti Birch	No impact	No works	B2	1.0m
x 5	Jacquemonti				S=1			displaying over all good condition.		required		
	Jacquemonti				E=1							
	Birch				W=1							
2002	Tilia	SM	90	4	N=0.5	1.5m	Good	Represents a row of semi-mature Lime displaying over all	Two trees to be	No works	C2	1.0m
-	Lime				S=0.5			good condition.	removed	required		
2003					E=0.5					Remove		
x 14					W=0.5					2		
2004	Jacquemonti	SM	90	3	N=1	1.5m	Good	Represents a group of 14 semi-mature Jacquemonti Birch	Two trees to be	No works	B2	1.0m
-	Birch				S=1			displaying over all good condition. These trees are	removed	required		
2005					E=1			contained within the staff car park.		Remove		
x 14					W=1					2		
2006	Jacquemonti	SM	90	3	N=1	1.5m	Good	Represents a group of 28 semi-mature Jacquemonti Birch	No impact	No works	B2	1.0m
-	Birch				S=1			displaying over all good condition.		required		
2007					E=1							
x 28					W=1							
2007-	Jacquemonti	SM	90	3	N=1	1.5m	Good	Represents a group semi-mature Jacquemonti Birch	Three trees to	No works	B2	1.0m
2008	Birch				S=1			displaying over all good condition.	be removed	required		
					E=1							
					W=1							
T1	Cupressus x	М	320	14	N=3	0.5m	Good	A large mature Leyland Cypress displaying over all good	Remove	Remove	C2	
	Leylandii				S=3			condition. Due to inaccessibility the surveyor was unable to				
*P	Leyland				E=3			physically tag the tree. This tree is located on private				
	Cypress				W=3			property. This tree is of low ecological value.				

Tree	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
#	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
T2	Sorbus Aria	М	200	8	N=2	2m	Good	A mature Whitebeam displaying over all good condition.	Remove	Remove	B2	
	Whitebeam				S=2			Due to inaccessibility the surveyor was unable to				
					E=2			physically tag the tree.				
					W=2							
T3	Salix	М	120	6	N=2	0.5m	Good	A mature multi-stemmed Willow displaying over all good	Remove	Remove	C2	
	Willow				S=2			condition. Due to inaccessibility the surveyor was unable				
					E=2			to physically tag the tree.				
					W=2							
2008	Betula	М	260	16	N=2	2m	Good	A mature Silver Birch displaying over all good condition.	Remove	Remove	B2	
	Pendula				S=2							
	Silver Birch				E=2							
					W=2							
2009	Sorbus x	М	200	4	N=1.5	1.5m	Good	A mature Swedish Whitebeam displaying over all good	No impact	No works	B2	3.0m
	Intermedia				S=1.5			condition.		required		
	Swedish				E=1.5							
	Whitebeam				W=1.5							
2010	Malus	М	220	5	N=2	1m	Good	A mature Apple displaying over all good condition.	Remove	Remove	B2	
	Domestica				S=2							
	Apple				E=2							
					W=2							

Tree	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
#	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2011	Sorbus Aucuparia	М	150	3	N=2	1m	Good	A mature Mountain Ash displaying over all	Remove	Remove	B2	
	Mountain Ash				S=2			good condition.				
					E=2							
					W=2							
2012	Apple	М	300	8	N=2	0.5m	Good	A mature Apple displaying over all good	No impact	No works	B2	4.0m
					S=2			condition.		required		
					E=2							
					W=2							
2013	Apple	M	160	4	N=2	1.5m	Good	A mature Apple displaying over all good	No impact	No works	B2	2.6m
					S=2			condition.		required		
					E=2							
					W=2							
2014	Acer	M	260	8	N=2	2m	Good	A mature Sycamore displaying over all good	No impact	No works	B2	3.6m
	Pseudoplatanus				S=2			condition.		required		
	Svcamore				E=2							
	,				W=2							
2015	Sycamore	SM	130	4	N=1	1m	Good	A semi-mature Sycamore displaying over all	No impact	No works	C2	2.3m
					S=1		-	aood condition.		required	_	-
					F=1							
					 W=1							
1		1			- • • - I							

Tree	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
#	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2016	Sycamore	М	320	8	N=3	2m	Good	A mature Sycamore displaying over all good	No impact	No works	B2	4.2m
					S=3			condition.		required		
					E=2							
					W=2							
2017	Sycamore	М	250	8	N=2	2m	Good	A mature Sycamore displaying over all good	No impact	No works	B2	3.5m
					S=2			condition.		required		
					E=2							
					W=2							
2018	Sycamore	SM	110	5	N=1	2m	Good	A semi-mature Sycamore displaying over all good	No impact	No works	C2	2.1m
					S=1			condition.		required		
					E=1							
					W=1							
2019	Sycamore	М	310	12	N=2	3m	Good	A mature Sycamore displaying over all good	No impact	No works	B2	4.1m
					S=2			condition. This tree is located within Tolka Valley		required		
					E=2			Park.				
					W=2							
2020	Acer Platanoides	М	280	12	N=2	3m	Good	A mature Norway Maple Crimson King displaying	Remove	Remove	B2	
	Crimson King				S=2			over all good condition.				
	Norway Maple				E=2							
	Crimson King				W=2							

Tree	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of t	the PMR	Category	R.P.A.
#	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2021	Populus	SM	180	6	N=1.5	3m	Fair	A semi-mature Trembling Aspen displaying over	No impact	No works	C2	2.8m
	Tremuloides				S=1.5			all fair condition.		required		
	Trembling				E=1.5							
	Aspen				W=1.5							
2022	Trembling	М	260	8	N=2	3m	Fair	A mature Trembling Aspen displaying over all fair	No impact	No works	C2	3.6m
	Aspen				S=2			condition.		required		
					E=2							
					W=2							
2023	Alnus Incana	М	270	16	N=3	2m	Good	Represents a group of 7 mature Grey Alder	No impact	No works	B2	3.7m
x 7	Grey Alder				S=3			displaying over all good condition.		required		
					E=2							
					W=2							
2024	Grey Alder	М	580	22	N=4	3m	Good	A large mature Grey Alder displaying over all good	No impact	No works	B2	6.8m
					S=4			condition.		required		
					E=4							
					W=4							
2025	Crataegus	SM	130	3	N=1.5	1m	Fair	A semi-mature Hawthorn displaying over all fair	No impact	No works	C2	2.3m
	Monogyna				S=1.5			condition.		required		
	Hawthorn				E=1.5							
					W=1.5							

Tree	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
#	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2026	Fraxinus	М	380	14	N=2	2m	Good	Represents 5 large mature Ash displaying over all good	No impact	No works	B2	4.8m
x 5	Ash				S=2			condition. There was no evidence of Ash Die Back (ADB)		required		
					E=3			in the trees at the time of the assessment				
					W=3							
2027	Quercus	SM	170	6	N=2	0.5m	Good	A semi-mature Oak displaying over all good condition.	No impact	No works	B2	2.7m
	Oak				S=2					required		
					E=2							
					W=2							
2028	Sycamore	М	350	16	N=3	1m	Good	Represents a group of 8 mature mixed deciduous trees	No impact	No works	B2	4.5m
x 8					S=3			consisting of 1 x large Sycamore and 7 x Willow displaying		required		
	Willow				E=3			over all good condition.				
					W=3							
2029	Norway Maple	М	360	14	N=3	2m	Good	Represents a group of 9 mature trees consisting of 8 x	No impact	No works	B2	4.6m
x 9	Crimson King				S=3			Norway Maple Crimson King and 1 x White Poplar		required		
	Populus Alba				E=2			displaying over all good condition.				
	White Poplar				W=2							
2030	Silver Birch	EM	140	6	N=1	1m	Good	An early mature Silver Birch displaying over all good	No impact	No works	B2	2.4m
					S=1			condition.		required		
					E=1							
					W=1							

Tree	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
#	Botanical	class	(mm)	(M)	Sp. (M)	CI.(M)		Observations	development			Meters
	Name											
2031	Acer	М	430	14	N=3	2m	Good	A large mature Field Maple displaying over all good	Remove	Remove	B2	
	Campestre				S=3			condition.				
	Field Maple				E=3							
					W=3							
2032	Field Maple	М	500	8	N=4	2m	Good	A large mature Field Maple displaying over all good	Remove	Remove	B2	
					S=4			condition.				
					E=3							
					W=3							
2033	Silver Birch	SM	140	6	N=1	1m	Good	Represents a row of 3 semi-mature Silver Birch displaying	No impact	No works	C2	2.4m
x 3					S=1			over all good condition. Just to note that the third tree in this		required		
					E=1			row is dead.				
					W=1							
2034	Prunus	Y	40	2.5	N=0.30	2m	Fair	A newly planted young Cherry displaying over all fair	No impact	No works	C2	1.0m
	Avium				S=0.30			condition. This tree does not meet the threshold for the		required		
	Cherry				E=0.30			BS5837 which states that any tree less than 75mm doesn't				
					W=0.30			warrant to be included.				
2035	Ulmus	М	240	6	N=2	2m	Good	A mature English Elm displaying over all good condition.	Remove	Remove	B2	
	Procera				S=2							
	English Elm				E=2							
					W=2							

Tree	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
#	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2036	English Elm	М	220	8	N=2	2.5m	Good	A mature English Elm displaying over all good condition.	Remove	Remove	B2	
					S=2							
					E=2							
					W=2							
2037	Hawthorn	SM	100	2	N=0.5	1m	Good	A row of 11 semi-mature Hawthorn displaying over all good	No impact	No works	C2	2.0m
x 11					S=0.5			condition.		required		
					E=0.5							
					W=0.5							
2038	Ulmus	SM	150	6	N=1	1m	Good	Represents 2 semi-mature Elm displaying over all good	Remove	Remove	B2	
x 2	Elm				S=1			condition.				
					E=1							
					W=1							
2039	Lime	EM	230	6	N=2	3m	Good	An early mature Lime displaying over all good condition.	No impact	No works	B2	3.3m
					S=2					required		
					E=2							
					W=2							
2040	Cherry	Y	40	2	N=0.5	1.5m	Good	A newly planted young Cherry displaying over all fair	No impact	No works	C2	1.0m
					S=0.5			condition. This tree does not meet the threshold for the		required		
					E=0.5			BS5837 which states that any tree less than 75mm doesn't				
					W=0.5			warrant to be included.				

Tree	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
#	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2041	Ash	SM	100	5	N=1	3m	Good	Represents a group of 5 semi-mature Ash displaying over all	No impact	No works	A2	2.0m
x 5					S=1			good condition. There was no evidence of Ash Die Back		required		
					E=1			(ADB) in the trees at the time of the assessment				
					W=1							
2042	Ash	EM	240	8	N=2	2m	Good	Represents 3 early mature Ash displaying over all good	No impact	No works	B2	3.4m
x 3					S=2			condition. There was no evidence of Ash Die Back (ADB) in		required		
					E=2			the trees at the time of the assessment				
					W=2							
2043	Laburnum	Y	50	2	N=0.5	1.5m	Fair	Represents 5 newly planted young Laburnum displaying over	Remove	Remove	C2	
x 5	Anagyroides				S=0.5			all fair condition. These trees have suffered vandalism and				
	Laburnum				E=0.5			are in decline. These trees do not meet the threshold for the				
					W=0.5			BS5837 which states that any tree less than 75mm doesn't				
								warrant to be included.				
2044	Ash	М	200	8	N=2	3m	Good	Represents a row of 6 mature deciduous trees consisting of 4	No impact	No works	B2	3.0m
x 6					S=2			x Ash and 2 x Field Maple displaying over all good condition.		required		
	Field Maple				E=2							
					W=2							

Tree	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
#	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2045	Field Maple	М	230	6	N=2	2m	Good	A mature Field Maple displaying over all good condition.	No impact	No works	B2	3.3m
					S=2					required		
					E=2							
					W=2							
2046	Ash	М	460	16	N=4	2m	Good	A large mature Ash displaying over all good condition.	No impact	No works	B2	5.6m
					S=4			There was no evidence of Ash Die Back (ADB) in the trees		required		
					E=4			at the time of the assessment				
					W=4							
2047	Acer	М	330	10	N=2	3m	Good	A mature Norway Maple displaying over all good	No impact	No works	B2	4.3m
	Platanoides				S=2			condition.		required		
	Norway				E=2							
	Maple				W=2							
2048	Mountain Ash	EM	180	4	N=1.5	2m	Good	An early mature Mountain Ash displaying over all good	No impact	No works	B2	2.8m
					S=1.5			condition.		required		
					E=1.5							
					W=1.5							
2049	Field Maple	EM	280	6	N=2	2m	Good	Represents 2 early mature Field Maple displaying over all	No impact	No works	B2	3.8m
x 2					S=2			good condition.		required		
					E=2							
					W=2							

Tree #	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2050	Norway	М	370	6	N=2	2m	Good	A mature Norway Maple displaying over all good condition.	No impact	No works	B2	4.7m
	Maple				S=2					required		
					E=2							
					W=2							
2051	Norway	EM	200	6	N=1.5	2m	Good	Represents a group of 7 early mature Norway Maple	No impact	No works	B2	
x 7	Maple				S=1.5			displaying over all good condition.		required		
					E=1.5							
					W=1.5							
2052	Fraxinus	М	250	6	N=2	2m	Good	Represents a group of 25 (circa) mature Manna Ash	No impact	No works	B2	3.5m
Group	Ornus				S=2			displaying over all good condition. There was no evidence of		required		
1	Manna Ash				E=2			Ash Die Back (ADB) in the trees at the time of the				
x 25					W=2			assessment				
	I			1	Т	he surve	y is now con	tinuing in the area known as 'Helena's Stop', in the Park.	1	I	I	1
2053	Populus	М	260	18	N=2	3m	Good	Represents 10 large mature Poplar displaying over all good	No impact	No works	B2	3.6m
x 10	Poplar				S=2			condition.		required		
					E=2							
					W=2							

Tree #	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2054	Norway	EM	180	6	N=1	3m	Good	Represents a group of 42 (circa) early mature Norway Maple	4 trees to be	Remove	B2	2.8m
-	Maple				S=1			displaying over all good condition.	removed			
2055					E=1							
Group 2					W=1							
x 42												
2056	Populus	М	260	18	N=2	3m	Good	Represents a group of 30 (circa) mixed deciduous trees	No impact	No works	B2	3.6m
Group 3	Nigra				S=2			consisting predominantly of 14 x large mature Lombardy		required		
x 30	Lombardy				E=2			Poplar with a collection of 16 x smaller early mature Norway				
	Poplar				W=2			Maple displaying over all good condition. These trees are				
								located on the perimeter of green area in the park. These trees				
	Norway	EM	180	6	N=1	3m	Good	are of high amenity and aesthetic value.		No works	B2	2.8m
	Maple				S=1					required		
					E=1							
					W=1							
2057	Norway	EM	180	10	N=2	3m	Good	Represents a group of 30 (circa) early mature Norway Maple	No impact	No works	B2	2.8m
-	Maple				S=2			Crimson King displaying over all good condition.		required		
2058	Crimson				E=2							
Group 4	King				W=2							
x 30												

Tree #	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2059	Lombardy Poplar	М	460	20	N=3	3m	Good	Represents a group of 9 large mature Lombardy	No impact	No works	B2	5.6m
x 9					S=3			Poplar displaying over all good condition.		required		
					E=3							
					W=3							
2060	Norway Maple	EM	180	8	N=2	2m	Good	Represents a group of 28 early mature Norway	No impact	No works	B2	2.8m
-					S=2			Maple displaying over all good condition.		required		
2061					E=2							
Group					W=2							
5												
x 28												
2062	Aesculus	SM	90	3	N=1.5	2m	Fair	Represents a mixed deciduous group of 5 trees	No impact	No works	C2	1.0m
x 5	Hippocastanum				S=1.5			consisting of Horse Chestnut and Pear displaying		required		
	Horse Chestnut				E=1.5			over all fair condition.				
					W=1.5							
	Pyrus											
	Pear											

Tree	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
#	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2063	Norway	EM	270	8	N=2	2m	Good	Represents a group of 6 early mature Norway Maple	No impact	No works	B2	3.7m
x 6	Maple				S=2			displaying over all good condition.		required		
					E=2							
					W=2							
2064	Norway	М	340	10	N=2	3m	Good	Represents a group of 6 mature Norway Maple displaying	1 tree to be	Remove 1	B2	4.4m
x 6	Maple				S=2			over all good condition.	removed			
					E=2							
					W=2							
2065	Norway	М	230	8	N=2	3m	Good	Represents a group of 6 mature Norway Maple displaying	Remove 4	Remove	B2	
x 6	Maple				S=2			over all good condition.				
					E=2							
					W=2							
2066	Lombardy	М	340	16	N=2	3m	Good	Represents a group of 12 mature Lombardy Poplar	No impact	No works	B2	4.4m
x 12	Poplar				S=2			displaying over all good condition.		required		
					E=2							
					W=2							
2067	Ash	М	230	8	N=2	2.5m	Good	Represents a group of 6 mature Ash displaying over all	No impact	No works	B2	3.3m
x 6					S=2			good condition. There is no evidence of any Ash Dieback		required		
					E=2			within this group of trees.				
					W=2							

Tree #	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2068	Silver Birch	EM	200	8	N=1	2m	Good	Represents a group of 5 mixed deciduous trees	Remove	Remove	C2	
x 5					S=1			consisting of 3 x Silver Birch, 1 x Lime and 1 x Alder				
	Lime				E=1			displaying over all good condition.				
					W=1							
	Alnus											
	Alder											
Group	Norway	SM	140	6	N=1.5	2m	Good	Represents a group of 55 (circa) semi-mature Norway	16 trees to be	Remove	B2	2.4m
6	Maple				S=1.5			Maple displaying over all good condition.	removed	16		
x 55					E=1.5							
					W=1.5							
2069	Alnus	М	410	14	N=3	2m	Good	A large mature Italian Alder displaying over all good	No impact	No works	B2	5.1m
	Cordata				S=3			condition.		required		
	Italian Alder				E=2							
					W=2							
2070	Italian Alder	М	410	14	N=3	2m	Good	A large mature Italian Alder displaying over all good	No impact	No works	B2	5.1m
					S=3			condition.		required		
					E=2							
					W=2							

Tree	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
#	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2071	Lime	SM	140	4	N=0.5	0.5m	Poor	A semi-mature Lime displaying over all poor condition. This	Remove	Remove	U	
					S=0.5			tree has suffered vandalism and its upper canopy is				
					E=0.5			snapped off.				
					W=0.5							
2072	Ash	М	340	14	N=2	2m	Good	Represents a group of 5 mature Ash displaying over all	2 trees to be	Remove 2	B2	4.4m
x 5					S=2			good condition. There was no evidence of Ash Die Back	removed			
					E=2			(ADB) in the trees at the time of the assessment				
					W=2							
2073	Lombardy	М	530	18	N=2	2m	Good	Represents a group of 4 large mature Lombardy Poplar	No impact	No works	B2	6.3m
x 4	Poplar				S=2			displaying over all good condition.		required		
					E=2							
					W=2							
2074	Elm	М	280	10	N=2	2m	Good	A mature Elm displaying over all good condition.	No impact	No works	B2	3.8m
					S=2					required		
					E=2							
					W=2							
2075	Fagus	EM	180	8	N=2	2m	Good	Represents a group of 8 early mature Beech displaying over	Three to be	Remove 3	B2	2.8m
x 8	Beech				S=2			all good condition.	removed			
					E=1							
					W=1							

Tree #	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2076	Italian Alder	М	440	16	N=2	3m	Good	Represents a group of 7 mature Italian Alder displaying over	No impact	No works	B2	5.4m
x 7					S=2			all good condition.		required		
					E=2							
					W=2							
2077	Elm	М	450	18	N=2	2m	Good	Represents a group of 7 large mature Elm displaying over	No impact	No works	A2	5.5m
x 7					S=2			all good condition.		required		
					E=2							
					W=2							
2078	Horse	М	330	10	N=2	2m	Good	Represents a group of 8 mature Horse Chestnut displaying	No impact	No works	B2	4.3m
x 8	Chestnut				S=2			over all good condition. These trees have good amenity		required		
					E=2			value. There are some trees within this group that are in				
					W=2			decline.				
2079	Lime	EM	230	6	N=1.5	1m	Good	Represents 2 early mature Lime displaying over all good	No impact	No works	B2	3.3m
x 2					S=1.5			condition.		required		
					E=1.5							
					W=1.5							
2080	Norway	SM	120	4	N=1	2m	Good	Represents a group of 12 semi-mature Norway Maple	No impact	No works	C2	2.2m
Group	Maple				S=1			displaying over all good condition.		required		
7					E=1							
x 12					W=1							

Tree #	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2081	Norway	Y	100	3	N=0.5	2m	Fair/Poor	Represents a group of 12 young Norway Maple displaying	No impact	No works	C2	2.0m
Group	Maple				S=0.5			over all fair to poor condition. There are several trees		required		
8					E=0.5			within this group that are in decline.				
x 12					W=0.5							
2082	Italian Alder	М	340	10	N=2	3m	Good	A mature Italian Alder displaying over all good condition.	No impact	No works	B2	4.4m
					S=2					required		
					E=2							
					W=2							
2083	Elm	М	360	16	N=2	2m	Good	Represents a group of 7 mature Elm displaying over all	No impact	No works	B2	4.6m
x 7					S=2			good condition.		required		
					E=2							
					W=2							
2084	Lime	М	200	6	N=1.5	2m	Good	Represents a group of 5 mature deciduous trees	No impact	No works	B2	3.0m
x 5					S=1.5			consisting of 2 x Lime and 3 x Norway Maple displaying		required		
	Norway				E=1.5			over all good condition.				
	Maple				W=1.5							
2085	Lime	М	240	6	N=2	2m	Good	Represents a row of 5 mature Lime displaying over all	No impact	No works	B2	3.4m
-					S=2			good condition.		required		
2086					E=2							
x 5					W=2							
Tree	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
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#	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2087	Lime	EM	210	6	N=2	2m	Good	Represents a row of 4 early mature Lime displaying over all	No impact	No works	B2	3.1m
-					S=2			good condition.		required		
2088					E=2							
x 4					W=2							
2089	Ash	SM	200	5	N=1.5	2m	Good	Represents a group of 5 semi-mature Ash displaying over all	No impact	No works	B2	3.0m
x 5					S=1.5			good condition. There was no evidence of Ash Die Back		required		
					E=1.5			(ADB) in the trees at the time of the assessment				
					W=1.5							
2090	Lime	EM	200	8	N=2	2m	Good	Represents a group of 5 early mature Lime displaying over	No impact	No works	B2	3.0m
-					S=2			all good condition.		required		
2091					E=2							
x 5					W=2							
2092	Lime	М	320	12	N=3	2m	Good	Represents a row of 5 mature Lime displaying over all good	No impact	No works	B2	4.2m
-					S=3			condition.		required		
2093					E=3							
x 5					W=3							
2094	Lime	М	280	14	N=2	2m	Good	Represents a group of 6 mature Lime displaying over all	Remove	Remove	B2	
x 6					S=2			good condition.		6		
					E=2							
					W=2							

Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
Name				(M)							
Norway	М	340	14	N=2	3m	Good	Represents a group of 5 large mature Norway Maple	Remove	Remove	B2	
Maple				S=2			displaying over all good condition.				
				E=2							
				W=2							
Lime	SM	160	4	N=1	2m	Good	Represents 2 semi-mature Lime displaying over all good	Remove	Remove	C2	
				S=1			condition.				
				E=1							
				W=1							
Lime	SM	140	3	N=1	2m	Good	Represents a group of 5 semi-mature trees consisting of	Remove 1	Remove 1	C2	2.4m
				S=1			4 x Lime and 1 x Mountain Ash displaying over all good	Retain 4			
Mountain				E=1			condition.				
Ash				W=1							
Norway	М	340	10	N=2	3m	Good	Represents a cluster of 7 mature Norway Maple	Unknown	No works	B2	4.4m
Maple				S=2			displaying over all good condition.		required		
				E=2							
				W=2							
Norway	М	280	8	N=2	2m	Good	Represents a group of 5 mature Norway Maple displaying	4 to be removed	Remove 4	B2	3.8m
Maple				S=2			over all good condition.				
				E=2							
	SpeciesBotanicalNameNorwayMapleLimeLimeMountainAshNorwayMapleNorwayMaple	Species Botanical NameAge classNameclassNorwayMMapleMLimeSMLimeSMMountain AshMNorwayMMapleMNorwayMMapleMNorwayMMapleM	Species Botanical NameAge class (mm)Norway MapleM340MapleMLimeSMLimeSMAsh140Mountain Ash340Norway MapleMNorway MapleMSorway MapleMSorway MapleMSorway MapleMSorway MapleMSorway MapleMSorway MapleMSorway MapleMSorway MapleMSorway MapleSorway M	Species Botanical NameAge classSize (mm)Height (M)Norway MapleM34014MapleM34014LimeSM1604LimeSM1403LimeM34010Mountain AshM34010Norway MapleM34010Norway MapleM2808Norway MapleM2808	Species Botanical NameAge classSize (mm)Height (M)Crown Sp. (M)Norway MapleM34014N=2MapleIIS=2E=2Umather ImageImageImageImageImageLimeSM1604N=1ImageSM1604N=1ImageSM1604N=1ImageSM1604S=1ImageSM1403N=1ImageSM1403N=1ImageSM140SS=1ImageImageImageImageImageNorwayM34010N=2NorwayM2808N=2NorwayM2808N=2MapleImage<	Species Botanical NameAge classSize (mm)Height (M)Crown Sp. 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Lime SM 160 4 N=1 2m Good Represents 2 semi-mature Lime displaying over all good condition. Lime SM 160 4 N=1 2m Good Represents 2 semi-mature Lime displaying over all good condition. Lime SM 140 3 N=1 2m Good Represents a group of 5 semi-mature trees consisting of 4 x Lime and 1 x Mountain Ash displaying over all good condition. Mountain - - S=2 - - - Norway M 340 10 N=2 3m Good Represents a cluster of 7 mature Norway Maple displaying over all good condition. Norway M 280 8 N=2 2m Good Represents a group of 5 mature Norway Maple displaying over all good condition.</td><td>Species Botanical Name Age class Size (mm) Height (M) Crown Sp. (M) Crown CL(M) Condition Structural/Physiological Observations Impact of the development Norway Maple M 340 14 N=2 3m Good Represents a group of 5 large mature Norway Maple displaying over all good condition. Remove Lime SM 160 4 N=1 2m Good Represents 2 semi-mature Lime displaying over all good Remove Lime SM 140 3 N=1 2m Good Represents 2 semi-mature Lime displaying over all good Remove Lime SM 140 3 N=1 2m Good Represents a group of 5 semi-mature time displaying over all good Remove Lime SM 140 3 N=1 2m Good Represents a group of 5 semi-mature time displaying over all good Retain 4 Mountain Ash V=1 S=1 S=1 E=1 V V V N N N=2 S=2 V V V N N</td><td>Species Botanical NameAge classSize (mm)Height (M)Crown Sp. (M)Crown ConditionCondition Sp. 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Remove Remove Remove B2 Lime SM 160 4 N=1 2m Good Represents a group of 5 semi-mature Lime displaying over all good condition. Remove Remove Remove C2 Lime SM 160 4 N=1 2m Good Represents a group of 5 semi-mature time displaying over all good condition. Remove Remove Remove C2 Lime SM 140 3 N=1 2m Good Represents a group of 5 semi-mature trees consisting of 4 x Lime and 1 x Mountain Ash displaying over all good condition. Remove 1 Remove 1 C2 Mountain Ash 340 10 N=2 3m Good Represents a cluster of 7 mature Norway Maple displaying over all good condition.</td></tdl<>	Species Botanical Name Age class Size (mm) Height (M) Crown Sp. (M) Crown CI.(M) Condition Structural/Physiological Observations Norway Maple M 340 14 N=2 3m Good Represents a group of 5 large mature Norway Maple displaying over all good condition. Lime SM 160 4 N=1 2m Good Represents 2 semi-mature Lime displaying over all good condition. Lime SM 160 4 N=1 2m Good Represents 2 semi-mature Lime displaying over all good condition. Lime SM 140 3 N=1 2m Good Represents a group of 5 semi-mature trees consisting of 4 x Lime and 1 x Mountain Ash displaying over all good condition. Mountain - - S=2 - - - Norway M 340 10 N=2 3m Good Represents a cluster of 7 mature Norway Maple displaying over all good condition. Norway M 280 8 N=2 2m Good Represents a group of 5 mature Norway Maple displaying over all good condition.	Species Botanical Name Age class Size (mm) Height (M) Crown Sp. (M) Crown CL(M) Condition Structural/Physiological Observations Impact of the development Norway Maple M 340 14 N=2 3m Good Represents a group of 5 large mature Norway Maple displaying over all good condition. Remove Lime SM 160 4 N=1 2m Good Represents 2 semi-mature Lime displaying over all good Remove Lime SM 140 3 N=1 2m Good Represents 2 semi-mature Lime displaying over all good Remove Lime SM 140 3 N=1 2m Good Represents a group of 5 semi-mature time displaying over all good Remove Lime SM 140 3 N=1 2m Good Represents a group of 5 semi-mature time displaying over all good Retain 4 Mountain Ash V=1 S=1 S=1 E=1 V V V N N N=2 S=2 V V V N N	Species Botanical NameAge classSize (mm)Height (M)Crown Sp. (M)Crown ConditionCondition Sp. 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Remove Remove Remove B2 Lime SM 160 4 N=1 2m Good Represents a group of 5 semi-mature Lime displaying over all good condition. Remove Remove Remove C2 Lime SM 160 4 N=1 2m Good Represents a group of 5 semi-mature time displaying over all good condition. Remove Remove Remove C2 Lime SM 140 3 N=1 2m Good Represents a group of 5 semi-mature trees consisting of 4 x Lime and 1 x Mountain Ash displaying over all good condition. Remove 1 Remove 1 C2 Mountain Ash 340 10 N=2 3m Good Represents a cluster of 7 mature Norway Maple displaying over all good condition.

Tree	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
#	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2100	Ash	М	370	10	N=2	2m	Good	Represents a group of 6 mature Ash displaying over all good	4 to be removed	Remove 4	B2	4.7m
x 6					S=2			condition. There is 1 tree in this group that is in decline but				
					E=2			the rest are fine so as a group they are in good overall				
					W=2			condition.				
2101	Ash	EM	230	6	N=2	2m	Good	Represents 2 early mature Ash displaying over all good	No impact	No works	C2	3.3m
x 2					S=2			condition. There was no evidence of Ash Die Back (ADB) in		required		
					E=2			the trees at the time of the assessment				
					W=2							
2102	Ash	М	330	12	N=3	3m	Good	Represents a group of 8 mature Ash displaying over all good	No impact	No works	B2	4.3m
x 8					S=3			condition. There was no evidence of Ash Die Back (ADB) in		required		
					E=3			the trees at the time of the assessment				
					W=3							
2103	Sycamore	М	310	14	N=3	3m	Good	A mature multi-stemmed Sycamore displaying over all good	No impact	No works	B2	4.1m
					S=3			condition.		required		
					E=3							
					W=3							
2104	Carpinus	EM	210	8	N=1	2m	Good	An early mature Hornbeam displaying over all good	No impact	No works	B2	3.1m
	Betulus				S=1			condition.		required		
	Hornbeam				E=1							
					W=1							

Tree	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
#	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2105	Hornbeam	SM	100	4	N=0.5	1m	Good	A semi-mature Hornbeam displaying over all good condition.	No impact	No works	C2	2.0m
					S=0.5					required		
					E=0.5							
					W=0.5							
2106	Hornbeam	EM	230	8	N=1	2m	Fair	Represents 2 early mature Hornbeam displaying over all fair	No impact	No works	C2	3.3m
x 2					S=1			condition. The central canopy of these trees has been cut out		required		
					E=1			to accommodate overhead power lines.				
					W=1							
2107	Betula	EM	200	6	N=1.5	1.5m	Good	Represents 2 early mature Birch displaying over all good	No impact	No works	B2	3.0m
x 2	Birch				S=1.5			condition. These trees are located within the Ravens Court		required		
					E=1.5			Apartment Complex.				
					W=1.5							
Group	Mountain	Y	60	3	N=0.5	2m	Good	Represents a group of young Mountain Ash displaying over all	No impact	No works	B2	1.0m
9	Ash				S=0.5			good condition. These trees are located to the rear of the		required		
					E=0.5			Garda Station so surveyor was unable to access this area.				
					W=0.5			These trees do not meet the threshold for the BS5837 which				
								states that any tree less than 75mm doesn't warrant to be				
								included.				

Tree	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of	the	PMR	Category	R.P.A.
#	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development				Meters
	Name				(M)								
2108	Hornbeam	EM	220	6	N=0.5	2m	Good	An early mature Hornbeam displaying over all good	No impact		No works	B2	3.2m
					S=0.5			condition.			required		
					E=0.5								
					W=0.5								
2109	Hornbeam	EM	220	8	N=0.5	2m	Good	An early mature Hornbeam displaying over all good	No impact		No works	B2	3.2m
					S=0.5			condition.			required		
					E=0.5								
					W=0.5								
2110	Hornbeam	EM	220	8	N=0.5	2m	Good	An early mature Hornbeam displaying over all good	No impact		No works	B2	3.2m
					S=0.5			condition.			required		
					E=0.5								
					W=0.5								
2111	Hornbeam	EM	160	8	N=0.5	2m	Good	An early mature Hornbeam displaying over all good	No impact		No works	B2	2.6m
					S=0.5			condition.			required		
					E=0.5								
					W=0.5								
2112	Lime	EM	250	8	N=2	2m	Good	Represents a group of 20 early mature Lime	3 to be remove	ed	Remove 3	B2	3.5m
-					S=2			displaying over all good condition.					
2113					E=2								
x 20					W=2								

Tree	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
#	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2114	Pinus	EM	250	6	N=2	2.5m	Good	Represents 2 early mature Scots Pine displaying over all	No impact	No works	B2	3.5m
x 2	Sylvestris				S=2			good condition.		required		
	Scots Pine				E=2							
					W=2							
2115	Scots Pine	EM	260	8	N=2	2m	Good	Represents 3 early mature Scots Pine displaying over all	1 to be removed	Remove 1	B2	3.6m
x 3					S=2			good condition. These trees are located just outside the				
					E=2			Youth Resort Centre.				
					W=2							
2116	Scots Pine	EM	260	8	N=2	2m	Good	Represents 2 early mature Scots Pine displaying over all	No impact	No works	B2	
x 2					S=2			good condition.		required		
					E=2							
					W=2							
2117	Scots Pine	EM	270	6	N=2	2m	Good	An early mature Scots Pine displaying over all good	No impact	No works	B2	3.7m
					S=2			condition.		required		
					E=2							
					W=2							
2118	Apple	SM	110	3	N=0.5	2m	Good	Represents a group of 10 semi-mature Apple displaying	No impact	No works	B2	2.1m
x 10					S=0.5			over all good condition.		required		
					E=0.5							
					W=0.5							

Tree #	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2119	Silver Birch	SM	160	8	N=0.5	2m	Good	Represents a group of 3 semi-mature Silver Birch displaying	No impact	No works	B2	2.6m
x 3					S=0.5			over all good condition.		required		
					E=0.5							
					W=0.5							
2120	Mountain	SM	100	3	N=0.5	1m	Fair	Represents a group of 10 semi-mature Mountain Ash	No impact	No works	C2	2.0m
x 10	Ash				S=0.5			displaying over all fair condition. These trees are located		required		
					E=0.5			within the grounds of the Garda Station.				
					W=0.5							
Group	Lime	EM	200	5	N=2	2m	Good	Represents a group of early mature mixed deciduous trees	No impact	No works	B2	3.0m
11					S=2			consisting of Lime, Swedish Whitebeam and Mountain Ash		required		
	Swedish				E=2			displaying over all good condition. These trees are located at				
	Whitebeam				W=2			the entrance of Mellows Crescent in the green area.				
	Mountain											
	Ash											

Tree #	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
Group	Silver Birch	SM	220	10	N=2	2m	Good	Represents a group of 16 (circa) semi-mature mixed	No impact	No works	B2	3.2m
12					S=2			deciduous trees consisting of Silver Birch, Mountain Ash and		required		
x 16	Mountain				E=2			Lime displaying over all good condition. These trees are				
	Ash				W=2			located to the east of the entrance to Mellows Crescent.				
	Lime											
2121	Cherry	SM	160	3	N=1	1.5m	Good	A semi-mature Cherry displaying over all good condition.	Remove	Remove	C2	
					S=1							
					E=1							
					W=1							
2122	Juniperus	М	240	6	N=1.5	2m	Good	A mature Juniper displaying over all good condition. This tree	Remove	Remove	B2	
	Juniper				S=1.5			is located inside the grounds of a private residence.				
					E=1.5							
					W=1.5							
2123	Cherry	М	400	8	N=3	1.5m	Good	A mature Cherry displaying over all good condition.	Remove	Remove	B2	
					S=3							
					E=3							
					W=3							

Tree #	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2124	Ailanthus	М	320	16	N=3	3m	Good	Represents a group of 5 mature Tree of Heaven displaying	Remove	Remove	B2	
x 5	Altissima				S=3			over all good condition.				
	Tree of				E=3							
	Heaven				W=3							
2125	Jacquemonti	EM	140	4	N=1	1.5m	Good	Represents a group of 4 early mature Jacquemonti Birch	Remove	Remove	B2	
x 4	Birch				S=1			displaying over all good condition.				
					E=1							
					W=1							
2126	Oak	SM	140	4	N=0.5	1m	Good	Represents a group of 15 semi-mature Oak displaying over	1 trees to be	Remove	C2	2.4m
-					S=0.5			all good condition.	removed	1		
2127					E=0.5							
x 15					W=0.5							
2128	Acer	М	240	6	N=1	1.5m	Fair	Represents 2 mature Silver Maple displaying over all fair	No impact	No works	C2	3.4m
x 2	Saccharinum				S=1			condition. These trees have suffered canopy damage.		required		
	Silver Maple				E=1							
					W=1							
Group	Ash	EM	240	16	N=2	1m	Good	Represents a group of early mature Ash displaying over all	7 to be	Remove	B2	3.4m
13					S=2			good condition. a few of the central trees in this have	removed	7		
					E=2			sustained lower stem damage but as a group they are in				
					W=2			overall good condition. There was no evidence of Ash Die				
								Back (ADB) in the trees at the time of the assessment				

Tree #	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2129	Norway	М	300	16	N=3	3m	Good	Represents a group of 8 mature mixed deciduous trees	No impact	No works	B2	4.0m
Group	Maple				S=3			consisting of 3 x Norway Maple and 5 x Ash displaying		required		
14					E=3			over all good condition.				
x 8	Ash				W=3							
2130	Lime	М	360	12	N=3	3m	Good	A mature Lime displaying over all good condition.	No impact	No works	B2	4.6m
					S=3					required		
					E=3							
					W=3							
2131	White	М	510	18	N=4	4m	Fair	A large mature multi-stemmed White Poplar displaying	Remove	No works	C2	
	Poplar				S=4			over all fair condition. This tree has suffered significant		required		
					E=4			basal damage.				
					W=4							
Group	Hawthorn	EM	200	12	N=2	3m	Good	Represents a group of 20 early mature mixed deciduous	No impact	No works	B2	3m
15					S=2			trees consisting of Hawthorn, Silver Birch and Trembling		required		
x 20	Silver Birch				E=2			Aspen displaying over all good condition.				
					W=2							
	Trembling											
	Aspen											

Tree	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of	the	PMR	Category	R.P.A.
#	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development				Meters
	Name				(M)								
2132	Ash	М	300	10	N=2	3m	Good	A mature Ash displaying over all good condition.	No impact		No works	B2	4.0m
					S=2						required		
					E=2								
					W=2								
2133	Norway Maple	EM	270	10	N=2	3m	Good	An early mature Norway Maple displaying over all	No impact		No works	B2	3.7m
					S=2			good condition.			required		
					E=2								
					W=2								
2134	Sycamore	EM	220	10	N=1	2m	Fair	An early mature Sycamore displaying over all fair	Remove		remove	C2	
					S=1			condition.					
					E=1								
					W=1								
2135	Ash	М	370	10	N=2	2m	Good	Represents 2 mature Ash displaying over all good	Remove		Remove	B2	
x 2					S=2			condition.					
					E=2								
					W=2								
2136	Oak	SM	160	6	N=1	2m	Good	Represents a group of 15 semi-mature Oak	No impact		No works	B2	2.6m
x 15					S=1			displaying over all good condition.			required		
					E=1								
					W=1								

Tree #	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2137	Sycamore	М	290	8	N=2	2m	Good	A mature Variegated Sycamore displaying over all good	No impact	No works	B2	3.9m
					S=2			condition.		required		
					E=2							
					W=2							
2138	Norway	EM	260	10	N=2	2m	Good	Represents a group of 12 early mature Norway Maple	No impact	No works	B2	3.6m
Group	Maple				S=2			displaying over all good condition.		required		
16					E=2							
x 12					W=2							
2139	Lime	EM	150	4	N=1	2m	Good	An early mature Lime displaying over all good condition.	No impact	No works	C2	2.5m
					S=1					required		
					E=1							
					W=1							
2140	Ash	М	300	10	N=2	3m	Good	Represents a group of 20 (circa) mature Ash displaying	No impact	No works	B2	4.0m
Group					S=2			over all good condition. There was no evidence of Ash Die		required		
17					E=2			Back (ADB) in the trees at the time of the assessment				
x 20					W=2							
2141	Norway	EM	190	6	N=1.5	1m	Good	Represents a group of 18 early mature Norway Maple	No impact	No works	B2	2.9m
Group	Maple				S=1.5			displaying over all good condition.		required		
18					E=1.5							
x 11					W=1.5							

Tree #	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
Group	White Poplar	EM	240	10	N=2	2m	Good	Represents a group of 18 early mature White Poplar	No impact	No works	B2	3.4m
19					S=2			displaying over all good condition.		required		
x 18					E=2							
					W=2							
2142	Norway	М	200	12	N=2	2.5m	Good	Represents a group of 25 (circa) mature Norway Maple	1 to be remove	Remove 1	B2	3.0m
Group	Maple				S=2			displaying over all good condition.				
20					E=2							
x 25					W=2							
Group	Norway	EM	200	8	N=2	3m	Good	Represents a group of 32 early mature Norway Maple	10 to be removed	Remove	B2	
21	Maple				S=2			displaying over all good condition.		10		
x 32					E=2							
					W=2							
Group	Oak	SM	160	6	N=1	2m	Good	Represents a group of 14 semi-mature mixed deciduous	No impact	No works	C2	2.6m
22					S=1			trees consisting of Oak and Lime displaying over all		required		
x 14	Lime				E=1			good condition.				
					W=1							

Tree #	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
Group	Lombardy	М	360	20	N=1	1.5m	Good	Represents a group of 16 (circa) mature mixed deciduous	No impact	Consider	C2	4.6m
23	Poplar				S=1			trees consisting of Lombardy Poplar and Cherry displaying		for		
x 16					E=1			over all good condition. These trees are located in the middle		removal		
	Cherry				W=1			of the pedestrian overpass and were inaccessible. These trees				
								are not suitable for their location due to the prevalence of				
								wind-throw.				
2143	Lime	EM	220	8	N=1	1.5m	Good	Represents a group of 9 early mature Lime displaying over all	No impact	No works	B2	3.2m
-					S=1			good condition.		required		
2144					E=1							
x 9					W=1							
2145	Lime	SM	160	3	N=0.5	2m	Good	Represents a group of 7 semi-mature Lime displaying over all	No impact	No works	B2	2.6m
-					S=0.5			good condition. These trees are located within the Lidl car		required		
2146					E=0.5			park.				
x 7					W=0.5							
Group	Ash	М	240	14	N=2	2m	Good	Represents a double row of 30 (circa) trees of predominantly	No impact	No works	B2	3.4m
24					S=2			mature Ash with some Norway Maple displaying over all good		required		
x 30	Norway				E=2			condition. These trees are located within the Lidl car park.				
	Maple				W=2							

Tree	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
#	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2147	Lime	SM	180	4	N=2	2m	Good	Represents 3 semi-mature Lime displaying over all	No impact	No works	C2	2.8m
x 3					S=2			good condition. These trees are located within the Lidl		required		
					E=2			car park.				
					W=2							
2148	Swedish	SM	250	6	N=1	2m	Good	Represents a row of 3 semi-mature Swedish	No impact	No works	B2	3.5m
x 3	Whitebeam				S=1			Whitebeam displaying over all good condition.		required		
					E=1							
					W=1							
2149	Hornbeam	SM	80	4	N=0.5	0.5m	Fair	A semi-mature Hornbeam displaying over all fair	No impact	No works	C2	1.0m
					S=0.5			condition. These tree appears to be in decline.		required		
					E=0.5							
					W=0.5							
2150	Mountain Ash	EM	200	4	N=1	1m	Good	An early mature Mountain Ash displaying over all good	No impact	No works	B2	3.0m
					S=1			condition.		required		
					E=1							
					W=1							
2151	Mountain Ash	EM	200	4	N=1	1m	Good	An early mature Mountain Ash displaying over all good	Remove	Remove	B2	
					S=1			condition.				
					E=1							
					W=1							

Tree #	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2152	Mountain	EM	200	4	N=1	1m	Good	An early mature Mountain Ash displaying over all good	Remove	Remove	B2	
	Ash				S=1			condition.				
					E=1							
					W=1							
Group	Norway	SM	80	3	N=0.5	1m	Good	Represents a group of semi-mature mixed trees and shrubs	5 to be removed	Remove	C2	1.0m
25	Maple				S=0.5			consisting of Norway Maple, Mountain Ash and Cherry		5		
					E=0.5			displaying over all good condition. These are located at the				
	Mountain				W=0.5			pedestrian entrance into an industrial estate.				
	Ash											
	Cherry											
2153	Whitebeam	М	240	6	N=2	3m	Good	A mature Whitebeam displaying over all good condition.	Remove	Remove	B2	
					S=2							
					E=2							
					W=2							
2154	Whitebeam	SM	140	3	N=1	2m	Fair	Represents 2 semi-mature Whitebeam displaying over all	No impact	No works	C2	2.4m
x 2					S=1			fair condition.		required		
					E=1							
					W=1							

Tree	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
#	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2155	Hornbeam	EM	200	8	N=1	2m	Good	Represents a group of 5 early mature Hornbeam	4 to be removed	Remove 4	B2	
x 5					S=1			displaying over all good condition.				
					E=1							
					W=1							
2156	Norway	М	410	14	N=2	2m	Good	Represents a cluster of 6 mature Norway Maple	No impact	No works	B2	5.1m
x 6	Maple				S=2			displaying over all good condition.		required		
					E=2							
					W=2							
2157	Norway	М	410	14	N=2	2m	Good	Represents a cluster of 4 mature Norway Maple	Remove all 4	Remove	B2	
x 4	Maple				S=2			displaying over all good condition.				
					E=2							
					W=2							
2158	Prunus	SM	290	4	N=1.5	1.5m	Good	Represents 3 semi-mature trees consisting of 2 x Purple	No impact	No works	C2	3.9m
x 3	Cerasifera				S=1.5			Plum and 1 x Mountain Ash displaying over all good		required		
	Purple Plum				E=1.5			condition.				
					W=1.5							
	Mountain											
	Ash											

Tree #	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2159	Carpinus	EM	200	8	N=0.5	2m	Good	Represents a row of 6 early mature Fastigiate Hornbeam	Remove	No works	B2	
x 6	Betulus				S=0.5			displaying over all good condition.		required		
	Fastigiate				E=0.5							
	Hornbeam				W=0.5							
Group	Norway	EM	220	10	N=2	2m	Good	Represents a group of early mature mixed deciduous trees	7 to be removed	Remove	B2	
26	Maple				S=2			consisting of Norway Maple and Lime displaying over all good		7		
					E=2			condition. These trees are located within the grounds of				
					W=2			Charlestown ESB property so were inaccessible.				
2160	Lime	SM	80	3	N=1.5	2m	Good	Represents a row of 20 semi-mature Lime displaying over all	11 to be	Remove	B2	
-					S=1.5			good condition.	removed	11		
2161					E=1.5							
x 20					W=1.5							
2162	Lime	SM	180	4	N=1	2m	Good	Represents a row of 12 semi-mature Lime displaying over all	11 to be	Remove	B2	
-					S=1			good condition.	removed	11		
2163					E=1							
x 12					W=1							
2164	Cherry	EM	200	4	N=1.5	1m	Good	Represents 3 early mature Cherry displaying over all good	No impact	No works	B2	3.0m
x 3					S=1.5			condition. This tree is located at the junction of St. Margarets		required		
					E=1.5			Road and Melville Road contained within a private complex.				
					W=1.5			These are the first Cherry trees in a long line of Cherry trees.				

Tree	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
#	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2165	Hornbeam	EM	180	8	N=0.5	0.5m	Good	Represents a group of 4 early mature Hornbeam displaying	No impact	No works	B2	2.8m
x 4					S=0.5			over all good condition. These trees are located within a		required		
					E=0.5			private industrial park just outside the Eve Castle View HSE				
					W=0.5			Building.				
2166	Hornbeam	EM	160	8	N=0.5	0.5m	Good	Represents 2 early mature Hornbeam displaying over all	No impact	No works	B2	2.6m
x 2					S=0.5			good condition. These trees are located within a car park in		required		
					E=0.5			front of MCG Logistics Ltd.				
					W=0.5							
2167	Sliver Birch	EM	200	6	N=0.5	1.5m	Good	Represents a cluster of 6 early mature Silver Birch displaying	No impact	No works	B2	3.0m
x 6					S=0.5			over all good condition. These trees are located within a car		required		
					E=0.5			park in front of MCG Logistics Ltd.				
					W=0.5							

Appendix B

Arboricultural Method Statement

B1 Arboricultural Method Statement Overview

This Arboricultural Method Statement details the specification for tree protection measures and how sensitive operations are to be achieved in proximity to trees to be retained. It also addresses the general management of site activities to ensure that retained trees are not inadvertently damaged.

This document may need to be amended to reflect more detailed or updated information as it becomes available. The final agreed version must be read in conjunction with the final Tree Protection Plan (to be developed) and copies of both documents must be permanently available on site for reference throughout the works. No changes may take place to the content or application of the Method Statement without the prior written approval of the Project Arboriculturist

When planning permission is in place, some details (including changes in layout, services, materials, tree protection measures and the order of works) may be subject to change. No changes should be enacted without the prior written approval of the Project Arboriculturist. The Method Statement must be reviewed in advance of the commencement.

B2 Pre commencement site meeting

Prior to the commencement of works on site a meeting must take place including the contractor and the Project Arboriculturist. This meeting will allow a further discussion of the programme of works, tree protection measures, the locations of the areas for storage/site organisation and the agreement of any changes to the Method Statement which will then be formally updated and approved as required.

B3 Order of operations

- 1 Pre commencement Site meeting;
- 2 Preliminary tree works;
- 3 Site briefing for Site personnel;
- 4 Installation of protective fencing and ground protection as required;
- 5 Demolition and enabling works including utility diversions;
- 6 Re-adjustment of protective fencing and ground protection as required;
- 7 Construction operations;
- 8 Re-adjustment of protective fencing and ground protection as required;
- 9 Installation of new hard surfaces and hard landscaping;
- 10 Site signed off on agreed completion of significant development works;
- 11 Dismantling of tree protection measures;
- 12 Soft landscaping works within the Root Protection Area (RPA) of retained trees;

B4 Preliminary tree works

All approved tree works are to be completed by suitably qualified and insured contractors and must take place before protective fencing is installed and any Site works begin.

All tree works must be carried out in line with the principles of BS3998: 2010 Tree work – recommendations and be conducted in such a way that no damage is caused to any tree to be retained. The tree works contractor must avoid the production of ruts on unmade ground.

A tree works specification which identifies trees to be felled or pruned is included in the schedule in Appendix A.

Due to the extensive nature of the Site and the potential for tree growth in the period between planning and construction, prior to the commencement of works on a given area of the Site a walkover must be undertaken by the Site team including the Project Arboriculturist to determine if any additional tree works are likely to be required to facilitate the development.

If further additional tree works are deemed to be required during the construction period, the advice of the Project Arboriculturist is to be obtained. No tree works are to take place without the consent of the Project Arboriculturist.

Prior to the commencement of any tree works a thorough check for protected species (including nesting birds, bats and badgers) is to be undertaken. If evidence of any protected species is discovered the advice of a suitably qualified ecologist must be obtained. Tree works are to be undertaken outside of the typical nesting bird season (March to September).

Outside of this period any individual trees will be inspected for evidence of nesting birds by a suitably qualified person prior to works being carried out.

The Site Manager is responsible for ensuring that all personnel are made fully aware of the constraints posed by retained trees on site and the measures in place to ensure they are protected, including having full on-site access to the Arboricultural Method Statement and Tree Protection Plan (TPP). It is good practice for the Project Arboriculturist to be involved in the site briefing to ensure all constraints and tree protection measures are clearly understood.

B6 Site monitoring

Site monitoring shall be established to guide contractors on Site, ensure that tree protection measures are implemented and adhered to.

This includes site visits by the Project Arboriculturist to confirm the correct installation of protective fencing, to oversee sensitive elements of works within the RPA of retained trees and to sign off the site when works are complete before fencing can be dismantled.

The frequency of Site monitoring will be agreed in writing before works begin on Site (but is recommended to be at least every four weeks in addition to ad hoc monitoring of particularly sensitive operations near retained trees as required).

B7 Toolbox talk

A toolbox talk should be provided to Site workers to highlight the need for safe driving of plant and working within the defined corridor to ensure that accidents and resulting potential damage to trees not covered by tree protection measures are eliminated. A copy of the TPP should be used in the process of explaining to all personal the requirements required to ensure retained trees are not damaged and copies of both the TPP and this Method Statement must be available in the Site office at all times.

B8 Protective fencing

In many areas of the Site the works are contained within the existing highway boundary bordered by existing walls or fencing and surrounded by hard surfacing. In such cases no additional tree protection fencing is likely to be required.

Where retained trees are at risk of damage, the default position as set out by BS 5837:2012 is that retained trees must be protected from construction operations with the erection of robust protective fencing positioned on the outer edge of the RPA or crown spread (whichever is greatest).

All site operations will be restricted to the area outside of tree protection fencing and this area will form a Construction Exclusion Zone (CEZ) unless agreed otherwise. Protection measures will be installed as set out in the Tree Protection Plan.

The area inside the fence and any additional tree protection measures will be sacrosanct and must not be removed or altered without the prior approval of the Project Arboriculturist. Any damage to tree protection measures must be reported immediately.

Default Specification:

Fencing shall be constructed with robust vertical and horizontal scaffold framework with weldmesh panels firmly attached in accordance with BS 5837:2012 Figure 2. Vertical support poles and bracing poles must be located with care to avoid underground utility services and will be sited to avoid the structural roots of retained trees. Where driven supports are not practicable due to the presence of roots or underground utilities block trays, counterweights or equivalent can be utilised.

B9 Ground protection

Existing hard surfacing will act as fit for purpose ground protection where it is to be retained within the RPA of retained trees. For existing areas of unsurfaced ground within RPAs where construction access is unavoidable, ground protection will be required to protect the structure of the soil from compaction. This should also apply to areas for new tree planting.

As set out in section 6.2.3.3 of BS5837:2012 the following ground protection measures will be appropriate:

- Suitable ground protection for pedestrian only access will comprise a single thickness of scaffold boards set on a compressible layer of 100mm of woodchip on a geotextile separation layer.
- Pedestrian operated plant up to two tonnes in weight will require the use of a proprietary ground protection system (such as Ground Guards, Eki mats, Eve Trakway or equivalent) set on a minimum depth of 150mm woodchip or sharp sand.
- Heavier loads will require ground protection to an engineering specification in conjunction with arboricultural advice.

As a guide, the threshold beyond which root development is significantly affected is a bulk density ranging from 1.4g per cm3 for clay soils, to 1.75g per cm3 for sandy soils.

B10 Carriageway widening into footway or verge

Where the carriageway is to be widened into the existing footway or verge within the RPA of a retained tree, this must be supervised by the Project Arboriculturist.

The outer extent of the required excavation (nearest to the tree) should be carefully excavated by hand to allow roots to be assessed and pruned as necessary. Exposed roots must be covered with hessian sacking or equivalent. The existing kerb edging and haunching can then be very carefully removed with an excavator working from the existing carriageway, reaching towards the tree and working backwards, reverting to working using hand tools in areas close to retained tree roots as required.

New edging must have the thinnest profile and extent of haunching practicable and pinned alternatives will be applied where practicable. Backfill is to utilise the excavated parent material to replicate the original soil profile.

The sub-base for replacement hard surfacing (where required) must be hand tamped only to prevent significant compaction of the underlying soil.

B11 Footway or verge widening into existing carriageway

Where the footway is to be widened into the existing carriageway, the existing kerb will need to be carefully removed under arboricultural supervision. Kerb stones must be removed using hand tools including pneumatic breakers. Plant positioned on the carriageway can lift out kerb sections using slings. Haunching must be carefully broken out by hand. Any exposed roots must then be covered with soil or hessian to prevent drying out. There will be no constraint on new edging or haunching as it will sit within or above the existing build-up of the carriageway where no roots are present. Backfill must utilise good quality topsoil where the verge is being widened. Where the footway is being widened the new section of the footway can be constructed using a standard methodology providing that the sub-base of the existing footway is retained intact and undisturbed.

B12 Removal and/or replacement of an existing hard surface within an RPA

At the time of writing, the full extent of resurfacing has not been fully determined but there is a potential for extensive areas of resurfacing across the Scheme. Where resurfacing is required within the RPA of a retained tree the following principles will apply:

Replacement hard surfacing on top of existing surface:

Where practicable, the new hard surface is to be installed on top of the existing surface and the existing edging is to be retained intact.

Removal of existing surface (wearing course):

Before work commences, the Project Arboriculturist will assess the potential for significant roots immediately below the wearing course and in such areas, all works must be achieved by hand. The wearing course must be removed with hand tools (including a handheld pneumatic breaker where required). The existing surface must be 'rolled back' with contractors working from the existing hard surface and with pedestrian only access on the exposed sub-base. With the prior agreement of the Project Arboriculturist, it will be acceptable to use light tracked machinery such as a mini excavator with an untoothed bucket to assist with the removal of the existing surfacing where this can be achieved without damage to any significant roots beneath.

Machinery must work from existing hard standing only. Where surface roots are obviously present (and at the junction between hard and soft ground) surfacing is to be removed by hand only.

Restoring hard surfacing to soft ground:

Following the removal of the wearing course the sub-base is to be broken up using hand tools via pedestrian access only. Materials must be removed using wheelbarrows or via hand loading of long reach machinery positioned on adjacent hard surfacing or ground protection. The sub-base is to be rolled back. Following removal, any low points or hollows are to be filled with sharp sand or gravel and topsoil be applied to the required level which can then be seeded or turfed as required. This area must then be completely fenced off for the remainder of the works or be otherwise protected with ground protection.

Installing replacement pedestrian or light vehicular hard surfacing on an existing sub-base.

The sub-base must be retained intact, ameliorated as required and utilised for the new surface. Levels are to be increased using inert granular fill by a maximum of 100mm. The sub-base must be hand tamped only to prevent significant compaction of the underlying soil.

Exposed roots must be treated in accordance with the guidelines in Section B19 of this Method Statement.

Following the removal of existing hard surfacing, the unprotected ground within RPAs must be immediately protected with protective fencing and/or ground protection (where access is required) as set out in Section B9 to ensure that the structure of the soil and tree roots are protected.

Pedestrian only access onto the exposed and retained sub-base will be acceptable to allow the installation of replacement hard surfacing. The new surface should be laid as soon as practicable.

Any exposed roots greater than 25mm in diameter must be assessed by the Project Arboriculturist.

If roots which are to be retained are exposed at ground level these should be covered with a thin layer of sharp sand and adjacent levels built up around it. This layer must not be significantly compacted, and hand tamped only.

Installing replacement heavy vehicular hard surfacing on an existing sub-base:

The sub-base must be retained intact, ameliorated as required and utilised for the new surface. Exposed roots are unlikely to be encountered due to the heavily engineered sub-base of the existing surface. Where encountered any roots must be treated in accordance with the guidelines in Section B19 of this Method Statement. The new surface must be rolled out working from the existing sub-base only.

Surfacing operations are to be conducted solely from the existing footprint of the road. Access beyond the footprint will be restricted with Tree Protection Barriers as necessary.

Edging:

Existing edging within the RPA of a retained tree will be retained intact and used as the edging for the new surface.

Where the removal of existing edging is unavoidable within an RPA, this will be removed carefully by hand under the supervision of the Project Arboriculturist.

Plant positioned outside of the RPA, or on existing hard surfacing within the RPA, may reach in to assist in lifting edging out of its position using slings but must not be used to excavate around the edging unless otherwise agreed in advance with the Project Arboriculturist.

Where practicable, new edging must be installed without excavation using pinned alternatives. Where an excavated edge is unavoidable both the edging and any footing must have the narrowest profile practicable. Where significant roots are present, which cannot be pruned, reinforced sections of kerb acting as lintels to bridge important roots will be applied where practicable.

B13 Installation of new hard surfacing within RPAs

Very small areas of new hard surfacing in the outer RPA of a retained tree can be constructed using hand excavation supervised by the Project Arboriculturist. Due to the very small incursion within an RPA, no specialist construction measures will be required. No roots greater than 25mm in diameter will be severed without the consent of the Project Arboriculturist. Where significant roots are encountered, the methodology set out below will be applied to avoid root severance. The approach below will apply where any significant area of new surfacing is required within the RPA of a retained tree.

Three-Dimensional Load Bearing Raft:

Construction of the significant areas of new footway or cycleway hard surfacing within the RPA of retained trees shall follow 'no dig' principles. The surface shall be engineer designed to meet the highest expected loads, including those used for the construction of the route.

A proprietary 3D cellular confinement system will be used to allow the hard surface to be installed without excavation within RPAs.

Work will preferably be carried out in dry conditions within the period of May to October when the ground is less liable to compaction.

Existing ground vegetation shall be treated with an approved herbicide such as glyphosate, 2-3 weeks before construction takes place. Killed vegetation can then be subject to a maximum 50 mm vegetative scrape which must take place by hand. Any arisings shall be removed (if left in situ they could cause anaerobic conditions as they break down which could be detrimental to tree roots).

Any hollows must be filled with inert granular material such as sharp sand or washed no fines gravel.

Builder's sand must not be used as this contains salts which are toxic to tree roots.

Any rocks, stumps (if present) or other protruding objects within the footprint of the load bearing surface must be removed. Stumps must be ground out below ground level. All other objects must be removed by hand.

A robust geotextile membrane must be laid out across the proposed area for the load bearing surface within the RPA. Joints must overlap by approx. 300 mm and be stapled together. This must be capable of resisting puncture by the angular stone fill, and also able to filter pollutants to prevent or reduce contamination of the soil. The load bearing surface is only required within the RPAs.

It is essential to consider the final levels of the load bearing surface which will typically be 75mm-100 mm in thickness for footway or cycleway applications plus the final wearing course (dependent on its application).

The final surface must be resistant to future growth of tree roots and also must be positioned to give a minimum clearance of 500mm from the base of a retained tree. The resulting gap can be filled with inert granular fill, if required. A three-dimensional load bearing surface which allows the lateral and horizontal movement of air and water (e.g., Cellweb or equivalent), must be fully expanded and stapled together. This is to be laid on top of the geotextile layer. This surface must be able to support the greatest expected load the surface is likely to experience (including any construction traffic).

The load bearing surface shall be 'rolled out', with construction operations beginning from outside the RPA or from existing hard standing and progressing forwards using the new load bearing surface. The load bearing surface must be filled with 4/20, 20/20 or 20/40 washed angular stone.

Edging is not typically required to stabilise the load bearing surface and the edge of the surface. If edging is required, this must be installed without excavation within RPAs. Appropriate methods would include the use of treated wooden peg and boards.

Concrete kerb stones can be cast directly onto the web if required, however all uncured concrete must be fully contained with impermeable plastic sheeting and sandbags to prevent run off into the RPA of retained trees. The use, storage and mixing of concrete must comply with the provisions set out in section B19.

Where a road edge kerb must be installed by excavation this must be of the thinnest profile practicable with the minimum extent of haunching feasible and all excavation work must be undertaken by hand with any roots managed under the guidance of the Project Arboriculturist. Alternative kerb construction may be required where significant roots are identified (such as using lintels or equivalent to bridge important roots).

The load bearing surface must have an even transition with adjacent hard surfacing or structures. This must be achieved outside of the RPA of all retained trees. Where this is not practicable, structural soil or a mixture of topsoil and sharp sand can be employed to raise levels by up to 100mm. Where levels are to be raised in excess of this height the advice of the Project Arboriculturist must be obtained.

B14 Demolition

Existing boundary walls, noise barriers, footbridges, lamp columns and other structures are to be demolished within or close to the RPA of retained trees. All demolition must be inward into the existing footprint of the structure or away from tree positions and be achieved by working backwards away from retained trees. No arisings are to fall or be stored in unsurfaced or protected areas of tree RPAs.

All plant and machinery associated with the demolition process will be positioned outside of the RPA of retained trees or on existing hard surfacing or ground protection and must operate under the guidance of a banksman where they must operate within 5m of any part of a retained tree.

Existing footings are to be retained, in situ where practicable to minimise disturbance. Where removal is unavoidable, footings within RPAs must be broken out carefully by hand, or where feasible via the careful use of plant positioned outside of RPAs or on ground protection/existing hard surfacing under the supervision of the Project Arboriculturist.

B15 Construction of New Boundary Walls

Where a new wall cannot avoid an RPA, specialist construction methods must be employed to prevent extensive root severance. Footings must utilise carefully located pads or narrow diameter piles with floating beams (at or above ground level) unless the presence of significant roots has been otherwise discounted following trial excavations under the supervision of the Project Arboriculturist.

Footings must be carefully positioned with hand dug (potentially using compressed air/soil vacuum) trial holes or trenches to identify optimal positioning to avoid significant roots.

Ground protection must be in place where repeated access is required over unsurfaced ground within an RPA.

B16 Installation of Piles

Where new piles are to be installed within or close to the RPA or retained trees the canopy of the tree is to be pruned back before any construction work commences on Site to provide a clearance of the pile head to facilitate this work. For smaller piles, smaller plant or pedestrian installation only should be applied.

Piling rigs to be sited outside of the RPA or on ground protection within an RPA and protective fencing is to be installed to maintain an exclusion zone within as much of the RPA as practicable.

The piling rig is to be positioned as far from the canopy and RPA of the tree as practicable and reach inwards.

B17 Movement of Vehicles and People and the Movement and Operation of Machinery

Due to the spatial constraints on site, construction works and in particular the use of machinery must be carefully coordinated to avoid damage to retained trees. A banksman must be in place for any operations which occur within 5m of any part of a retained tree. Long reach machinery with jibs, booms

or counterweights will require particular care.

Where trees are at risk of impact damage from plant that cannot be controlled with fencing or a careful working methodology, consideration must be given to any requirement for access to facilitate pruning which must be agreed in advance with the Project Arboriculturist.

B18 Site organisation, storage and mixing of materials

The area of constraint associated with retained trees within, or surrounding compounds will be fenced off as an exclusion zone at the outset.

The storage and mixing of materials and any re-fuelling shall take place at least 5m from the RPA of any retained trees and also take into account any potential for run off. Where this is an issue, measures such as bunding with robust impermeable polythene sheeting and sandbags must be put in place to prevent accidental run off reaching the rooting zone of retained trees.

No changes in ground level are permitted within the RPA of a retained tree.

No fires shall take place within an RPA or within 5m of any part of a retained tree. No signs, cables or other items are to be attached to any part of a retained tree.

B19 General principles for the management of tree roots

Where agreed excavation by hand tools or compressed air takes place within an RPA the following principles will apply:

- Individual or small groups of roots less than 25 mm in diameter will be retained where practicable but can be severed with a sharp tool such as secateurs or pruning saws to leave a clean-cut end (ideally 100mm back from the face of the excavation to account for future regrowth) where they pose an obstruction.
- Where roots are encountered which are larger than 25 mm in diameter or where significant groups of smaller roots are found, the advice of the Project Arboriculturist must be sought to decide an appropriate course of action.
- Roots must only be exposed for the minimum period practicable. In the interim period any exposed roots (including the face of any excavation within an RPA) must be completely covered with dampened hessian sacking (which may require ongoing re wetting) to avoid drying out and exposure to light. Backfill for excavations should ideally utilise the parent material and must not be significantly compacted.

B20 Installation of new lamp columns, road signs and Rail shelters

Where new features such as lamp columns, road signs or rail shelters are to be installed within the RPA of a retained tree, the final position of the feature must be adjusted to give the greatest clearance of adjacent tree stems practicable and to reduce any conflict with tree branches or any requirement for pruning.

Footings must be excavated by hand or compressed air (e.g., air spade/soil vacuum) for at least the upper 0.5-1m and be adjusted to avoid significant tree roots. Footings must be the smallest dimensions feasible and utilise screw piles or equivalent where necessary. Any uncured concrete required must use the driest mix feasible and excavations must be lined with an impermeable liner to prevent uncured concrete leaching into the surrounding soil. Any cabling must be installed in accordance with the principles set out in B22.

B21 Installation of new drainage within RPAs

Drainage has been designed to avoid the RPA of retained trees as much as practicable. Solutions such as surface channels, off set chambers positioned to avoid RPAs as much as practicable and hand excavated sections of piped filter drain positioned to avoid trees roots will be utilised to further reduce impacts on adjacent trees as appropriate. Where excavation for new drainage must take place within an RPA, the method of installation will be agreed in advance with the Project Arboriculturist and will typically involve the nearest area of excavation to the tree being completed by hand or equivalent to allow significant roots to be carefully exposed and pruned. Roots will be managed in accordance with the principles set out in Section B19.

B22 Installation or diversion of utilities within RPAs

Utility diversion and new utilities have not been fully defined at this stage. The default position is that all services be located outside of the RPA of retained trees. In the context of this Site, it is not feasible to fully avoid the RPA of retained trees and therefore either trenchless installation below tree root systems or hand dug/compressed air excavation through RPAs where significant roots can be retained and worked around, will be required.

Use of trenchless techniques:

Where services can't avoid the RPA of retained trees, the primary consideration must be to install them using trenchless insertion techniques such as impact moling, direct drilling or equivalent.

Insertion and retrieval pits must be located outside of the RPA of retained trees. The depth of the run must be at least 2m below ground level and should be located as far from the tree as practicable.

The mole must be lubricated with water only.

Installation must follow the principles set out in the National Joint Utilities Group (NJUG) Vol 4: Guidelines for the planning, installation, and maintenance of utility apparatus in proximity to trees (issue 2) and BS5837 Section 7.7 and Table 3.

Replacement pipes must be installed via pipe bursting, relining or equivalent trenchless techniques where they are located within the RPA of a retained tree. Pipe bursting or relining equipment must be positioned outside of the RPA at all times.

Hand digging:

Where trenchless installation isn't feasible, shallow utility runs can be installed via hand or compressed air/soil vacuum excavation. The excavation will be located as far from the stem of the tree as practicable and must be carried out by hand (ideally using compressed air such as an Air Spade and soil vacuum) under the supervision of the Project Arboriculturist.

Pedestrian only access will be permitted, and ground protection measures as set out in Section B10 will be employed where no hard surfacing is in place, with fencing positioned immediately adjacent to restrict any further access into RPAs.

Excavation will be supervised by the Project Arboriculturist who will be on hand to advise on the management of any roots encountered and to ensure the approved tree protection methodology is fully adhered to. Roots smaller than 25mm in diameter can be cut with a clean sharp tool where they pose an obstruction.

Should significant roots (larger than 25mm diameter or large clumps of smaller roots) be encountered, these will be retained and wrapped in dampened hessian to prevent drying out and pipes will be routed around them wherever practicable. If significant roots are encountered which cannot be feasibly worked around and retained, appropriate action will be agreed with the Project Arboriculturist.

Pipes must be constructed to resist future incursion by tree roots.

All spoil/ arisings from excavation will be placed onto ground protection boards to prevent compaction, ground level changes and to assist in removal or reinstatement. Backfill is to utilise the excavated parent material where feasible, applied to restore the soil profile to its original structure (i.e., topsoil will be installed last) and must be lightly hand tamped only.

Services shall be installed following the principles set out in the National Joint Utilities Group (NJUG) Vol 4: Guidelines for the planning, installation, and maintenance of utility apparatus in proximity to trees (issue 2).

B23 Redundant utilities

Where existing services are to be removed, these must be winched out from an access/inspection chamber located outside of an RPA or left in situ.

Redundant pipework will be sealed off and will not be removed via excavation within the RPA of a retained tree.

Redundant pipework can be filled with an inert material or if confirmed to be fully watertight, may be filled with foamed concrete applied from an access point located outside the RPA of all retained trees. Concrete must be managed in accordance with section B18 of this Method Statement.

B24 Dismantling of tree protection measures

All protective fencing and ground protection must remain in place until all significant site works for a given location have been completed and approval has been obtained from the Project Arboriculturist.



This report was prepared by:

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Yours in Conservation, Michael Garry. www.arborcare.ie

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Baseline Tree Survey Report

Prepared for:

Barry Transportation

Proposed site:

Proposed extension of Luas Line, Broom Bridge to Finglas, Co. Dublin.

Prepared by:

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1.0 Introduction

- 1.1 Arbor-Care Ltd (Professional Consulting Tree Service) have been retained by Barry Transportation to undertake, a Tree Survey, Tree Constraints Plan outlining the existing trees, groups of trees that are located within the proposed development site (Figure 1.0 below). This survey was undertaken without prejudice to the proposed works. The objective of this initial survey was to assess and quantify the tree stock that is located within the proposed site to assess their conditions and retention potential.
- 1.2 The survey commenced on the 17th August 2021. The survey commenced at the south side of the platform of Broom Bridge Luas Stop and heading towards Finglas.
- 1.3 This Tree Survey report will be accompanied by an inventory of trees on site and a Tree Constraints Plan. A separate Arboricultural Impact Assessment and a Tree Protection Plan will also be prepared for the site identifying trees impacted on by the proposed development once the final design is known.
- 1.5 The tree survey and report is based on the British standard *BS 5837:2012 Trees in relation to design, demolition and construction-Recommendations*¹, this standard gives recommendations and guidance on the principles to be applied to achieve a satisfactory juxtaposition of trees, including shrubs, hedges and hedgerows, with structures. It sets out to assist those concerned with trees in relation to construction to form balanced judgements. This British standard is used in Ireland by policy makers as a guidance note to protect trees and hedgerows during development.





www.bsigroup.com





Source National Transport Authority.

2.0 Policy Context

- 2.1 The National Planning Framework (NPF) seeks to ensure that new development is sustainable and underlines the importance of green infrastructure, of which trees form an integral part. This encompasses recognition of the importance of trees in relation to the management of air, soil and water quality along with other associated ecosystem services and climate change adaption. The NPF also seeks to achieve the protection and enhancement of landscapes and a net gain in biodiversity.
- 2.2 Arbor-Care Ltd have reviewed the Fingal County Council 2023-2029 (Draft) local area plan and there are no *Tree Preservation Orders (TPO's)* identified within the proposed development site.
- 2.3 'BS5837:2012 Trees in relation to design demolition and construction Recommendations (BS5837)' provides a framework which sets out how trees should be considered in this context and also explicitly applies to development where planning consent is not required.







- 2.4 BS5837 recommends that a tree survey is undertaken to identify the quality and benefits of trees and the spatial constraints associated with them. This is then used to produce a Tree Constraints Plan showing the above and below ground constraints associated with trees. This drawing is used to inform the design process and to allow the retention of good quality trees where appropriate.
- 2.5 An Arboricultural Impact Assessment is then developed to identify the likely direct and indirect impacts of the proposed development, and a Tree Protection Plan is prepared to identify trees to be removed or retained and to illustrate how retained trees are to be protected. An Arboricultural Method Statement is often required as a condition of planning consent to detail how sensitive operations are to be achieved in close proximity to retained trees. These elements are the minimum standard typically normally required for a planning application and are intended to ensure both a sustainable and harmonious relationship between trees and new development.

3.0 Methodology Employed

3.1 An initial tree survey and visual condition assessment was completed on the 17th August 2021. In accordance with '*BS 5837: 2012 Trees in relation to design, demolition and construction. Recommendations'*, only trees with diameters of 75mm or greater were surveyed. Further in accordance with section 4.4.2.3 with the above British standard document where trees formed obvious groups these were assessed and recorded as groups. The survey commenced along the northern boundary and continued in a southerly direction. All trees were individually tagged with a metal disc. This was placed on the northern side of the tree where practical. Where trees were inaccessible due to site conditions such as overgrown areas, a virtual tag with a T number (For example T1) was used.




Section 4.4.2.3 of BS 5837: 2012 states:

Trees growing as groups or woodland should be identified and assessed as such where the arboriculturist determines that this is appropriate. However, an assessment of individuals within any group should still be undertaken if there is a need to differentiate between them, e.g. in order to highlight significant variation in attributes (including physiological or structural condition).

NOTE: The term "group" is intended to identify trees that form cohesive arboricultural features either aerodynamically (e.g. trees that provide companion shelter), visually (e.g. avenues or screens) or culturally, including for biodiversity (e.g. parkland or wood pasture), in respect of each of the three subcategories.

- 3.2 The survey concentrated primarily on the significant trees/hedgerows and groups located within and adjacent to the proposed development area. The objective of this survey was to gather information regarding the trees location on the proposed development site and the impact the proposed development may have on the trees. **Please refer to appendix 1 for the tree inventory**.
- 3.3 Significant trees can be equated as those trees whose visual importance to the surrounding area are sufficient to justify special efforts to protect and preserve and whose loss would have an irremediable adverse impact on the local environment. The significance of a particular tree can depend on the age/maturity of the tree, the aesthetic merit of the tree based on its unusual size, intrinsic physical features or the outstanding appearance of the tree or occurring in a unique location or context, thus providing a special contribution as a landmark or landscape feature.
- 3.4 All above parts of the trees were visually examined. Tree diameters (DBH) were estimated at 1.5 meter above grade as per standard arboricultural practice. Tree height was measured with the use of a clinometer (Where practical). A visual tree assessment from ground level was employed to describe the overall health of the trees. The system uses a five tier rating scale with the following descriptors:







Specimen condition 5-tier rating system

- 1. Very poor-1-20%
- 2. Poor- 21-40%
- 3. Fair- 41-60%
- 4. Good- 61-80%
- 5. Very good 81-100%

4.0 Trees surveyed

- 4.1 The survey commenced on the 17th August 2021. A total of 1,037 individual trees and tree groups were surveyed. The impact of the development on the trees surveyed will be assessed in the Arboricultural Impact Assessment when the design is finalised.
- 4.2 A breakdown of the Tree Categories on site as per BS 5837 2012 is set out in the table below: In accordance with *BS 5837: 2012 Trees in relation to design, demolition and construction Recommendations.* Category A, those trees of a high quality and value, in such a condition as to be able to make a substantial contribution. (A minimum of 40 years is suggested) Category B signifies those trees of a "moderate value and in such a condition as to be able to make a substantial contribution (A minimum life expectancy of 20 years is suggested)." Category C signifies those trees/hedgerows of "a low quality and value that are currently in an adequate condition to remain until new planting could be established

(A minimum life expectancy of 10 years is suggested)." Category U signifies 'those trees that are in such a condition that any existing value would be lost within 10 years and which should, in the current context, be removed for reasons of sound arboricultural management'.







A breakdown of the Tree Categories on site as per BS 5837 2012 is set out in the table below:

Category	Quantity	Category %
A-Tree of high quality	12	1.16%
B-trees of good quality	865	83.41%
C (Low quality or trees	159	15.33%
less than 75mm		
diameter)		
U (remove due to poor	1	0.10%
condition)		
Total Trees surveyed	1,037	100%

5.0 Conclusion

5.1 A complete tree inventory has been provided in Appendix 1 outlining the schedule of trees and hedgerows on site in accordance with '*BS 5837: 2012 Trees in relation to design, demolition and construction Recommendations'*. An in-depth impact assessment will be undertaken when the development plans for the site are known



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Appendix 1 - Tree Categorisation

Tree Categorization.

Category U

This category signifies those trees that are in such a condition that any existing value would be lost within 10 years and which should, in the current context, be removed for reasons of sound arboricultural management.

Category A.

Those trees of a high quality and value, in such a condition as to be able to make a substantial contribution. (A minimum of 40 years is suggested)

Category B

This category signifies those trees of a moderate value and in such a condition as to be able to make a substantial contribution (A minimum life expectancy of 20 yrs is suggested)

Category C

This category signifies those trees of a low quality and value that are currently in an adequate condition to remain until new planting could be established (A minimum life expectancy of 10yrs is suggested), or young trees with a stem diameter below 150mm. Whilst C category trees will usually not be retained where they would impose a significant constraint on development, young trees with a stem diameter of less than 150mm should be considered for relocation.

The above categories have sub-categories attached to the tree categorisation. Sub-category 1- Mainly Arboricultural Values eg-A1 Sub-category 2- Mainly Landscape Values- B2 Sub-category 3- Mainly cultural values, including conservation C2







Appendix 1 – Tree Inventory

Tree Inventory Legend

Tree Dimensions - All dimensions are in meters.

Ht - Tree Height

Crown clearance - Lowest canopy height (distance from ground level to the first live branch) *Crown spread* - Tree Canopy Spread measured by radii at north, east, south and west

Dia. -Stem diameter at approx. 1.50m from ground level.

RPA - Root Protection Area, as a radius measured from the tree's stem centre.

Physiological Condition

Good - A specimen of generally good form and health

Fair - A specimen with defects or ill health that can be either rectified or managed typically allowing for retention

Poor - A specimen whom through defect, disease attack or reduced vigour has a limited longevity or may be un-safe

Dead - A dead tree

Structural Condition - Information on structural form, defects, damage, injury or disease supported by the tree

PMR (Preliminary Management Recommendations) – refers to Arboricultural actions or works considered necessary at the time of the inspection and relating to the existing site context and tree condition. *Note is also made of works considered as urgent.*

Species Common name is given; botanical name is also given upon its first entry, in Italics.







Tree	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
#	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2001	Betula	SM	90	3	N=1	1.5m	Good	Represents a cluster of 5 semi-mature Jacquemonti Birch	Unknown	No works	B2	1.0m
x 5	Jacquemonti				S=1			displaying over all good condition.		required		
	Jacquemonti				E=1							
	Birch				W=1							
2002	Tilia	SM	90	4	N=0.5	1.5m	Good	Represents a row of semi-mature Lime displaying over all	Unknown	No works	C2	1.0m
-	Lime				S=0.5			good condition.		required		
2003					E=0.5							
x 14					W=0.5							
2004	Jacquemonti	SM	90	3	N=1	1.5m	Good	Represents a group of 14 semi-mature Jacquemonti Birch	Unknown	No works	B2	1.0m
-	Birch				S=1			displaying over all good condition. These trees are		required		
2005					E=1			contained within the staff car park.				
x 14					W=1							
2006	Jacquemonti	SM	90	3	N=1	1.5m	Good	Represents a group of 28 semi-mature Jacquemonti Birch	Unknown	No works	B2	1.0m
-	Birch				S=1			displaying over all good condition.		required		
2007					E=1							
x 28					W=1							
T1	Cupressus x	М	320	14	N=3	0.5m	Good	A large mature Leyland Cypress displaying over all good	Unknown	No works	C2	4.2m
	Leylandii				S=3			condition. Due to inaccessibility the surveyor was unable to		required		
*P	Leyland				E=3			physically tag the tree. This tree is located on private				
	Cypress				W=3			property. This tree is of low ecological value.				





Tree	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
#	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
T2	Sorbus Aria	М	200	8	N=2	2m	Good	A mature Whitebeam displaying over all good condition.	Unknown	No works	B2	3.0m
	Whitebeam				S=2			Due to inaccessibility the surveyor was unable to		required		
					E=2			physically tag the tree.				
					W=2							
Т3	Salix	М	120	6	N=2	0.5m	Good	A mature multi-stemmed Willow displaying over all good	Unknown	No works	C2	2.2m
	Willow				S=2			condition. Due to inaccessibility the surveyor was unable		required		
					E=2			to physically tag the tree.				
					W=2							
2008	Betula	М	260	16	N=2	2m	Good	A mature Silver Birch displaying over all good condition.	Unknown	No works	B2	3.6m
	Pendula				S=2					required		
	Silver Birch				E=2							
					W=2							
2009	Sorbus x	М	200	4	N=1.5	1.5m	Good	A mature Swedish Whitebeam displaying over all good	Unknown	No works	B2	3.0m
	Intermedia				S=1.5			condition.		required		
	Swedish				E=1.5							
	Whitebeam				W=1.5							
2010	Malus	М	220	5	N=2	1m	Good	A mature Apple displaying over all good condition.	Unknown	No works	B2	3.2m
	Domestica				S=2					required		
	Apple				E=2							
					W=2							





Tree	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
#	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2011	Sorbus Aucuparia	М	150	3	N=2	1m	Good	A mature Mountain Ash displaying over all	Unknown	No works	B2	2.5m
	Mountain Ash				S=2			good condition.		required		
					E=2							
					W=2							
2012	Apple	М	300	8	N=2	0.5m	Good	A mature Apple displaying over all good	Unknown	No works	B2	4.0m
					S=2			condition.		required		
					E=2							
					W=2							
2013	Apple	М	160	4	N=2	1.5m	Good	A mature Apple displaying over all good	Unknown	No works	B2	2.6m
					S=2			condition.		required		
					E=2							
					W=2							
2014	Acer	М	260	8	N=2	2m	Good	A mature Sycamore displaying over all good	Unknown	No works	B2	3.6m
	Pseudoplatanus				S=2			condition.		required		
	Sycamore				E=2							
					W=2							
2015	Sycamore	SM	130	4	N=1	1m	Good	A semi-mature Sycamore displaying over all	Unknown	No works	C2	2.3m
					S=1			good condition.		required		
					E=1							
					W=1							





Tree	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
#	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2016	Sycamore	М	320	8	N=3	2m	Good	A mature Sycamore displaying over all good	Unknown	No works	B2	4.2m
					S=3			condition.		required		
					E=2							
					W=2							
2017	Sycamore	М	250	8	N=2	2m	Good	A mature Sycamore displaying over all good	Unknown	No works	B2	3.5m
					S=2			condition.		required		
					E=2							
					W=2							
2018	Sycamore	SM	110	5	N=1	2m	Good	A semi-mature Sycamore displaying over all good	Unknown	No works	C2	2.1m
					S=1			condition.		required		
					E=1							
					W=1							
2019	Sycamore	М	310	12	N=2	3m	Good	A mature Sycamore displaying over all good	Unknown	No works	B2	4.1m
					S=2			condition. This tree is located within Tolka Valley		required		
					E=2			Park.				
					W=2							
2020	Acer Platanoides	М	280	12	N=2	3m	Good	A mature Norway Maple Crimson King displaying	Unknown	No works	B2	3.8m
	Crimson King				S=2			over all good condition.		required		
	Norway Maple				E=2			-				
	Crimson King				W=2							





Tree	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of t	the	PMR	Category	R.P.A.
#	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development				Meters
	Name				(M)								
2021	Populus	SM	180	6	N=1.5	3m	Fair	A semi-mature Trembling Aspen displaying over	Unknown		No works	C2	2.8m
	Tremuloides				S=1.5			all fair condition.			required		
	Trembling				E=1.5								
	Aspen				W=1.5								
2022	Trembling	М	260	8	N=2	3m	Fair	A mature Trembling Aspen displaying over all fair	Unknown		No works	C2	3.6m
	Aspen				S=2			condition.			required		
					E=2								
					W=2								
2023	Alnus Incana	М	270	16	N=3	2m	Good	Represents a group of 7 mature Grey Alder	Unknown		No works	B2	3.7m
x 7	Grey Alder				S=3			displaying over all good condition.			required		
					E=2								
					W=2								
2024	Grey Alder	М	580	22	N=4	3m	Good	A large mature Grey Alder displaying over all good	Unknown		No works	B2	6.8m
					S=4			condition.			required		
					E=4								
					W=4								
2025	Crataegus	SM	130	3	N=1.5	1m	Fair	A semi-mature Hawthorn displaying over all fair	Unknown		No works	C2	2.3m
	Monogyna				S=1.5			condition.			required		
	Hawthorn				E=1.5								
					W=1.5								





Tree	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
#	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2026	Fraxinus	М	380	14	N=2	2m	Good	Represents 5 large mature Ash displaying over all good	Unknown	No works	B2	4.8m
x 5	Ash				S=2			condition. There was no evidence of Ash Die Back (ADB)		required		
					E=3			in the trees at the time of the assessment				
					W=3							
2027	Quercus	SM	170	6	N=2	0.5m	Good	A semi-mature Oak displaying over all good condition.	Unknown	No works	B2	2.7m
	Oak				S=2					required		
					E=2							
					W=2							
2028	Sycamore	М	350	16	N=3	1m	Good	Represents a group of 8 mature mixed deciduous trees	Unknown	No works	B2	4.5m
x 8					S=3			consisting of 1 x large Sycamore and 7 x Willow displaying		required		
	Willow				E=3			over all good condition.				
					W=3							
2029	Norway Maple	М	360	14	N=3	2m	Good	Represents a group of 9 mature trees consisting of 8 x	Unknown	No works	B2	4.6m
x 9	Crimson King				S=3			Norway Maple Crimson King and 1 x White Poplar		required		
	Populus Alba				E=2			displaying over all good condition.				
	White Poplar				W=2							
2030	Silver Birch	EM	140	6	N=1	1m	Good	An early mature Silver Birch displaying over all good	Unknown	No works	B2	2.4m
					S=1			condition.		required		
					E=1							
					W=1							





Tree	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
#	Botanical	class	(mm)	(M)	Sp. (M)	CI.(M)		Observations	development			Meters
	Name											
2031	Acer	М	430	14	N=3	2m	Good	A large mature Field Maple displaying over all good	Unknown	No works	B2	5.3m
	Campestre				S=3			condition.		required		
	Field Maple				E=3							
					W=3							
2032	Field Maple	М	500	8	N=4	2m	Good	A large mature Field Maple displaying over all good	Unknown	No works	B2	6.0m
					S=4			condition.		required		
					E=3							
					W=3							
2033	Silver Birch	SM	140	6	N=1	1m	Good	Represents a row of 3 semi-mature Silver Birch displaying	Unknown	No works	C2	2.4m
х З					S=1			over all good condition. Just to note that the third tree in this		required		
					E=1			row is dead.				
					W=1							
2034	Prunus	Y	40	2.5	N=0.30	2m	Fair	A newly planted young Cherry displaying over all fair	Unknown	No works	C2	1.0m
	Avium				S=0.30			condition. This tree does not meet the threshold for the		required		
	Cherry				E=0.30			BS5837 which states that any tree less than 75mm doesn't				
					W=0.30			warrant to be included.				
2035	Ulmus	М	240	6	N=2	2m	Good	A mature English Elm displaying over all good condition.	Unknown	No works	B2	3.4m
	Procera				S=2					required		
	English Elm				E=2							
					W=2							





Tree	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
#	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2036	English Elm	М	220	8	N=2	2.5m	Good	A mature English Elm displaying over all good condition.	Unknown	No works	B2	3.2m
					S=2					required		
					E=2							
					W=2							
2037	Hawthorn	SM	100	2	N=0.5	1m	Good	A row of 11 semi-mature Hawthorn displaying over all good	Unknown	No works	C2	2.0m
x 11					S=0.5			condition.		required		
					E=0.5							
					W=0.5							
2038	Ulmus	SM	150	6	N=1	1m	Good	Represents 2 semi-mature Elm displaying over all good	Unknown	No works	B2	2.5m
x 2	Elm				S=1			condition.		required		
					E=1							
					W=1							
2039	Lime	EM	230	6	N=2	3m	Good	An early mature Lime displaying over all good condition.	Unknown	No works	B2	3.3m
					S=2					required		
					E=2							
					W=2							
2040	Cherry	Y	40	2	N=0.5	1.5m	Good	A newly planted young Cherry displaying over all fair	Unknown	No works	C2	1.0m
					S=0.5			condition. This tree does not meet the threshold for the		required		
					E=0.5			BS5837 which states that any tree less than 75mm doesn't				
					W=0.5			warrant to be included.				





Tree	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
#	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2041	Ash	SM	100	5	N=1	3m	Good	Represents a group of 5 semi-mature Ash displaying over all	Unknown	No works	A2	2.0m
x 5					S=1			good condition. There was no evidence of Ash Die Back		required		
					E=1			(ADB) in the trees at the time of the assessment				
					W=1							
2042	Ash	EM	240	8	N=2	2m	Good	Represents 3 early mature Ash displaying over all good	Unknown	No works	B2	3.4m
х З					S=2			condition. There was no evidence of Ash Die Back (ADB) in		required		
					E=2			the trees at the time of the assessment				
					W=2							
2043	Laburnum	Y	50	2	N=0.5	1.5m	Fair	Represents 5 newly planted young Laburnum displaying over	Unknown	No works	C2	1.0m
x 5	Anagyroides				S=0.5			all fair condition. These trees have suffered vandalism and		required		
	Laburnum				E=0.5			are in decline. These trees do not meet the threshold for the				
					W=0.5			BS5837 which states that any tree less than 75mm doesn't				
								warrant to be included.				
2044	Ash	М	200	8	N=2	3m	Good	Represents a row of 6 mature deciduous trees consisting of 4	Unknown	No works	B2	3.0m
x 6					S=2			x Ash and 2 x Field Maple displaying over all good condition.		required		
	Field Maple				E=2							
					W=2							





Tree	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
#	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2045	Field Maple	М	230	6	N=2	2m	Good	A mature Field Maple displaying over all good condition.	Unknown	No works	B2	3.3m
					S=2					required		
					E=2							
					W=2							
2046	Ash	М	460	16	N=4	2m	Good	A large mature Ash displaying over all good condition.	Unknown	No works	B2	5.6m
					S=4			There was no evidence of Ash Die Back (ADB) in the trees		required		
					E=4			at the time of the assessment				
					W=4							
2047	Acer	М	330	10	N=2	3m	Good	A mature Norway Maple displaying over all good	Unknown	No works	B2	4.3m
	Platanoides				S=2			condition.		required		
	Norway				E=2							
	Maple				W=2							
2048	Mountain Ash	EM	180	4	N=1.5	2m	Good	An early mature Mountain Ash displaying over all good	Unknown	No works	B2	2.8m
					S=1.5			condition.		required		
					E=1.5							
					W=1.5							
2049	Field Maple	EM	280	6	N=2	2m	Good	Represents 2 early mature Field Maple displaying over all	Unknown	No works	B2	3.8m
x 2					S=2			good condition.		required		
					E=2							
					W=2							





Tree #	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2050	Norway	М	370	6	N=2	2m	Good	A mature Norway Maple displaying over all good condition.	Unknown	No works	B2	4.7m
	Maple				S=2					required		
					E=2							
					W=2							
2051	Norway	EM	200	6	N=1.5	2m	Good	Represents a group of 7 early mature Norway Maple	Unknown	No works	B2	3.0m
x 7	Maple				S=1.5			displaying over all good condition.		required		
					E=1.5							
					W=1.5							
2052	Fraxinus	М	250	6	N=2	2m	Good	Represents a group of 25 (circa) mature Manna Ash	Unknown	No works	B2	3.5m
Group	Ornus				S=2			displaying over all good condition. There was no evidence of		required		
1	Manna Ash				E=2			Ash Die Back (ADB) in the trees at the time of the				
x 25					W=2			assessment				
					Т	he surve	y is now con	tinuing in the area known as 'Helena's Stop', in the Park.	I			
2053	Populus	М	260	18	N=2	3m	Good	Represents 10 large mature Poplar displaying over all good	Unknown	No works	B2	3.6m
x 10	Poplar				S=2			condition.		required		
					E=2							
					W=2							





Tree #	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2054	Norway	EM	180	6	N=1	3m	Good	Represents a group of 42 (circa) early mature Norway Maple	Unknown	No works	B2	2.8m
-	Maple				S=1			displaying over all good condition.		required		
2055					E=1							
Group 2					W=1							
x 42												
2056	Populus	М	260	18	N=2	3m	Good	Represents a group of 30 (circa) mixed deciduous trees	Unknown	No works	B2	3.6m
Group 3	Nigra				S=2			consisting predominantly of 14 x large mature Lombardy		required		
x 30	Lombardy				E=2			Poplar with a collection of 16 x smaller early mature Norway				
	Poplar				W=2			Maple displaying over all good condition. These trees are				
								located on the perimeter of green area in the park. These trees				
	Norway	EM	180	6	N=1	3m	Good	are of high amenity and aesthetic value.	Unknown	No works	B2	2.8m
	Maple				S=1					required		
					E=1							
					W=1							
2057	Norway	EM	180	10	N=2	3m	Good	Represents a group of 30 (circa) early mature Norway Maple	Unknown	No works	B2	2.8m
-	Maple				S=2			Crimson King displaying over all good condition.		required		
2058	Crimson				E=2							
Group 4	King				W=2							
x 30												





Tree #	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2059	Lombardy Poplar	М	460	20	N=3	3m	Good	Represents a group of 9 large mature Lombardy	Unknown	No works	B2	5.6m
x 9					S=3			Poplar displaying over all good condition.		required		
					E=3							
					W=3							
2060	Norway Maple	EM	180	8	N=2	2m	Good	Represents a group of 28 early mature Norway	Unknown	No works	B2	2.8m
-					S=2			Maple displaying over all good condition.		required		
2061					E=2							
Group					W=2							
5												
x 28												
2062	Aesculus	SM	90	3	N=1.5	2m	Fair	Represents a mixed deciduous group of 5 trees	Unknown	No works	C2	1.0m
x 5	Hippocastanum				S=1.5			consisting of Horse Chestnut and Pear displaying		required		
	Horse Chestnut				E=1.5			over all fair condition.				
					W=1.5							
	Pyrus											
	Pear											





Tree	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
#	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2063	Norway	EM	270	8	N=2	2m	Good	Represents a group of 6 early mature Norway Maple	Unknown	No works	B2	3.7m
x 6	Maple				S=2			displaying over all good condition.		required		
					E=2							
					W=2							
2064	Norway	М	340	10	N=2	3m	Good	Represents a group of 6 mature Norway Maple displaying	Unknown	No works	B2	4.4m
x 6	Maple				S=2			over all good condition.		required		
					E=2							
					W=2							
2065	Norway	М	230	8	N=2	3m	Good	Represents a group of 6 mature Norway Maple displaying	Unknown	No works	B2	3.3m
x 6	Maple				S=2			over all good condition.		required		
					E=2							
					W=2							
2066	Lombardy	М	340	16	N=2	3m	Good	Represents a group of 12 mature Lombardy Poplar	Unknown	No works	B2	4.4m
x 12	Poplar				S=2			displaying over all good condition.		required		
					E=2							
					W=2							
2067	Ash	М	230	8	N=2	2.5m	Good	Represents a group of 6 mature Ash displaying over all	Unknown	No works	B2	3.3m
x 6					S=2			good condition. There is no evidence of any Ash Dieback		required		
					E=2			within this group of trees.				
				1	W-2							





Tree #	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2068	Silver Birch	EM	200	8	N=1	2m	Good	Represents a group of 5 mixed deciduous trees	Unknown	No works	C2	3.0m
x 5					S=1			consisting of 3 x Silver Birch, 1 x Lime and 1 x Alder		required		
	Lime				E=1			displaying over all good condition.				
					W=1							
	Alnus											
	Alder											
Group	Norway	SM	140	6	N=1.5	2m	Good	Represents a group of 55 (circa) semi-mature Norway	Unknown	No works	B2	2.4m
6	Maple				S=1.5			Maple displaying over all good condition.		required		
x 55					E=1.5							
					W=1.5							
2069	Alnus	М	410	14	N=3	2m	Good	A large mature Italian Alder displaying over all good	Unknown	No works	B2	5.1m
	Cordata				S=3			condition.		required		
	Italian Alder				E=2							
					W=2							
2070	Italian Alder	М	410	14	N=3	2m	Good	A large mature Italian Alder displaying over all good	Unknown	No works	B2	5.1m
					S=3			condition.		required		
					E=2							
					W=2							





Tree	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
#	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2071	Lime	SM	140	4	N=0.5	0.5m	Poor	A semi-mature Lime displaying over all poor condition. This	Unknown	Remove	U	2.4m
					S=0.5			tree has suffered vandalism and its upper canopy is				
					E=0.5			snapped off.				
					W=0.5							
2072	Ash	М	340	14	N=2	2m	Good	Represents a group of 5 mature Ash displaying over all	Unknown	No works	B2	4.4m
x 5					S=2			good condition. There was no evidence of Ash Die Back		required		
					E=2			(ADB) in the trees at the time of the assessment				
					W=2							
2073	Lombardy	М	530	18	N=2	2m	Good	Represents a group of 4 large mature Lombardy Poplar	Unknown	No works	B2	6.3m
x 4	Poplar				S=2			displaying over all good condition.		required		
					E=2							
					W=2							
2074	Elm	М	280	10	N=2	2m	Good	A mature Elm displaying over all good condition.	Unknown	No works	B2	3.8m
					S=2					required		
					E=2							
					W=2							
2075	Fagus	EM	180	8	N=2	2m	Good	Represents a group of 8 early mature Beech displaying over	Unknown	No works	B2	2.8m
x 8	Beech				S=2			all good condition.		required		
					E=1							
					W=1							
1	1			1						1	1	1





Tree #	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2076	Italian Alder	М	440	16	N=2	3m	Good	Represents a group of 7 mature Italian Alder displaying over	Unknown	No works	B2	5.4m
x 7					S=2			all good condition.		required		
					E=2							
					W=2							
2077	Elm	М	450	18	N=2	2m	Good	Represents a group of 7 large mature Elm displaying over	Unknown	No works	A2	5.5m
x 7					S=2			all good condition.		required		
					E=2							
					W=2							
2078	Horse	М	330	10	N=2	2m	Good	Represents a group of 8 mature Horse Chestnut displaying	Unknown	No works	B2	4.3m
x 8	Chestnut				S=2			over all good condition. These trees have good amenity		required		
					E=2			value. There are some trees within this group that are in				
					W=2			decline.				
2079	Lime	EM	230	6	N=1.5	1m	Good	Represents 2 early mature Lime displaying over all good	Unknown	No works	B2	3.3m
x 2					S=1.5			condition.		required		
					E=1.5							
					W=1.5							
2080	Norway	SM	120	4	N=1	2m	Good	Represents a group of 12 semi-mature Norway Maple	Unknown	No works	C2	2.2m
Group	Maple				S=1			displaying over all good condition.		required		
7					E=1							
x 12					W=1							





Tree #	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2081	Norway	Y	100	3	N=0.5	2m	Fair/Poor	Represents a group of 12 young Norway Maple displaying	Unknown	No works	C2	2.0m
Group	Maple				S=0.5			over all fair to poor condition. There are several trees		required		
8					E=0.5			within this group that are in decline.				
x 12					W=0.5							
2082	Italian Alder	М	340	10	N=2	3m	Good	A mature Italian Alder displaying over all good condition.	Unknown	No works	B2	4.4m
					S=2					required		
					E=2							
					W=2							
2083	Elm	М	360	16	N=2	2m	Good	Represents a group of 7 mature Elm displaying over all	Unknown	No works	B2	4.6m
x 7					S=2			good condition.		required		
					E=2							
					W=2							
2084	Lime	М	200	6	N=1.5	2m	Good	Represents a group of 5 mature deciduous trees	Unknown	No works	B2	3.0m
x 5					S=1.5			consisting of 2 x Lime and 3 x Norway Maple displaying		required		
	Norway				E=1.5			over all good condition.				
	Maple				W=1.5							
2085	Lime	М	240	6	N=2	2m	Good	Represents a row of 5 mature Lime displaying over all	Unknown	No works	B2	3.4m
-					S=2			good condition.		required		
2086					E=2							
x 5					W=2							





Tree	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
#	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2087	Lime	EM	210	6	N=2	2m	Good	Represents a row of 4 early mature Lime displaying over all	Unknown	No works	B2	3.1m
-					S=2			good condition.		required		
2088					E=2							
x 4					W=2							
2089	Ash	SM	200	5	N=1.5	2m	Good	Represents a group of 5 semi-mature Ash displaying over all	Unknown	No works	B2	3.0m
x 5					S=1.5			good condition. There was no evidence of Ash Die Back		required		
					E=1.5			(ADB) in the trees at the time of the assessment				
					W=1.5							
2090	Lime	EM	200	8	N=2	2m	Good	Represents a group of 5 early mature Lime displaying over	Unknown	No works	B2	3.0m
-					S=2			all good condition.		required		
2091					E=2							
x 5					W=2							
2092	Lime	М	320	12	N=3	2m	Good	Represents a row of 5 mature Lime displaying over all good	Unknown	No works	B2	4.2m
-					S=3			condition.		required		
2093					E=3							
x 5					W=3							
2094	Lime	М	280	14	N=2	2m	Good	Represents a group of 6 mature Lime displaying over all	Unknown	No works	B2	3.8m
x 6					S=2			good condition.		required		
					E=2							
					W=2							
1	1	1	1	1	1	1	1		1	1	1	1





Tree	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
#	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2095	Norway	М	340	14	N=2	3m	Good	Represents a group of 5 large mature Norway Maple	Unknown	No works	B2	4.4m
x 5	Maple				S=2			displaying over all good condition.		required		
					E=2							
					W=2							
2096	Lime	SM	160	4	N=1	2m	Good	Represents 2 semi-mature Lime displaying over all good	Unknown	No works	C2	2.6m
x 2					S=1			condition.		required		
					E=1							
					W=1							
2097	Lime	SM	140	3	N=1	2m	Good	Represents a group of 5 semi-mature trees consisting of	Unknown	No works	C2	2.4m
x 5					S=1			4 x Lime and 1 x Mountain Ash displaying over all good		required		
	Mountain				E=1			condition.				
	Ash				W=1							
2098	Norway	М	340	10	N=2	3m	Good	Represents a cluster of 7 mature Norway Maple	Unknown	No works	B2	4.4m
x 7	Maple				S=2			displaying over all good condition.		required		
					E=2							
					W=2							
2099	Norway	М	280	8	N=2	2m	Good	Represents a group of 5 mature Norway Maple displaying	Unknown	No works	B2	3.8m
x 5	Maple				S=2			over all good condition.		required		
					E=2							
					W=2							





Tree	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
#	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2100	Ash	М	370	10	N=2	2m	Good	Represents a group of 6 mature Ash displaying over all good	Unknown	No works	B2	4.7m
x 6					S=2			condition. There is 1 tree in this group that is in decline but		required		
					E=2			the rest are fine so as a group they are in good overall				
					W=2			condition.				
2101	Ash	EM	230	6	N=2	2m	Good	Represents 2 early mature Ash displaying over all good	Unknown	No works	C2	3.3m
x 2					S=2			condition. There was no evidence of Ash Die Back (ADB) in		required		
					E=2			the trees at the time of the assessment				
					W=2							
2102	Ash	М	330	12	N=3	3m	Good	Represents a group of 8 mature Ash displaying over all good	Unknown	No works	B2	4.3m
x 8					S=3			condition. There was no evidence of Ash Die Back (ADB) in		required		
					E=3			the trees at the time of the assessment				
					W=3							
2103	Sycamore	М	310	14	N=3	3m	Good	A mature multi-stemmed Sycamore displaying over all good	Unknown	No works	B2	4.1m
					S=3			condition.		required		
					E=3							
					W=3							
2104	Carpinus	EM	210	8	N=1	2m	Good	An early mature Hornbeam displaying over all good	Unknown	No works	B2	3.1m
	Betulus				S=1			condition.		required		
	Hornbeam				E=1							
					W=1							
2103	Sycamore <i>Carpinus</i> <i>Betulus</i> Hornbeam	EM	310	8	N=3 S=3 E=3 W=3 N=1 S=1 E=1 W=1	3m 2m	Good	A mature multi-stemmed Sycamore displaying over all good condition. An early mature Hornbeam displaying over all good condition.	Unknown Unknown	No works required No works required	B2 B2	4.1m 3.1m





Tree	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
#	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2105	Hornbeam	SM	100	4	N=0.5	1m	Good	A semi-mature Hornbeam displaying over all good condition.	Unknown	No works	C2	2.0m
					S=0.5					required		
					E=0.5							
					W=0.5							
2106	Hornbeam	EM	230	8	N=1	2m	Fair	Represents 2 early mature Hornbeam displaying over all fair	Unknown	No works	C2	3.3m
x 2					S=1			condition. The central canopy of these trees has been cut out		required		
					E=1			to accommodate overhead power lines.				
					W=1							
2107	Betula	EM	200	6	N=1.5	1.5m	Good	Represents 2 early mature Birch displaying over all good	Unknown	No works	B2	3.0m
x 2	Birch				S=1.5			condition. These trees are located within the Ravens Court		required		
					E=1.5			Apartment Complex.				
					W=1.5							
Group	Mountain	Y	60	3	N=0.5	2m	Good	Represents a group of young Mountain Ash displaying over all	Unknown	No works	B2	1.0m
9	Ash				S=0.5			good condition. These trees are located to the rear of the		required		
					E=0.5			Garda Station so surveyor was unable to access this area.				
					W=0.5			These trees do not meet the threshold for the BS5837 which				
								states that any tree less than 75mm doesn't warrant to be				
								included.				





Tree	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of	the	PMR	Category	R.P.A.
#	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development				Meters
	Name				(M)								
2108	Hornbeam	EM	220	6	N=0.5	2m	Good	An early mature Hornbeam displaying over all good	Unknown		No works	B2	3.2m
					S=0.5			condition.			required		
					E=0.5								
					W=0.5								
2109	Hornbeam	EM	220	8	N=0.5	2m	Good	An early mature Hornbeam displaying over all good	Unknown		No works	B2	3.2m
					S=0.5			condition.			required		
					E=0.5								
					W=0.5								
2110	Hornbeam	EM	220	8	N=0.5	2m	Good	An early mature Hornbeam displaying over all good	Unknown		No works	B2	3.2m
					S=0.5			condition.			required		
					E=0.5								
					W=0.5								
2111	Hornbeam	EM	160	8	N=0.5	2m	Good	An early mature Hornbeam displaying over all good	Unknown		No works	B2	2.6m
					S=0.5			condition.			required		
					E=0.5								
					W=0.5								
2112	Lime	EM	250	8	N=2	2m	Good	Represents a group of 20 early mature Lime	Unknown		No works	B2	3.5m
-					S=2			displaying over all good condition.			required		
2113					E=2								
x 20					W=2								





Tree	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
#	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2114	Pinus	EM	250	6	N=2	2.5m	Good	Represents 2 early mature Scots Pine displaying over all	Unknown	No works	B2	3.5m
x 2	Sylvestris				S=2			good condition.		required		
	Scots Pine				E=2							
					W=2							
2115	Scots Pine	EM	260	8	N=2	2m	Good	Represents 3 early mature Scots Pine displaying over all	Unknown	No works	B2	3.6m
х З					S=2			good condition. These trees are located just outside the		required		
					E=2			Youth Resort Centre.				
					W=2							
2116	Scots Pine	EM	260	8	N=2	2m	Good	Represents 2 early mature Scots Pine displaying over all	Unknown	No works	B2	3.6m
x 2					S=2			good condition.		required		
					E=2							
					W=2							
2117	Scots Pine	EM	270	6	N=2	2m	Good	An early mature Scots Pine displaying over all good	Unknown	No works	B2	3.7m
					S=2			condition.		required		
					E=2							
					W=2							
2118	Apple	SM	110	3	N=0.5	2m	Good	Represents a group of 10 semi-mature Apple displaying	Unknown	No works	B2	2.1m
x 10					S=0.5			over all good condition.		required		
					E=0.5							
					W=0.5							





Tree #	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2119	Silver Birch	SM	160	8	N=0.5	2m	Good	Represents a group of 3 semi-mature Silver Birch displaying	Unknown	No works	B2	2.6m
x 3					S=0.5			over all good condition.		required		
					E=0.5							
					W=0.5							
2120	Mountain	SM	100	3	N=0.5	1m	Fair	Represents a group of 10 semi-mature Mountain Ash	Unknown	No works	C2	2.0m
x 10	Ash				S=0.5			displaying over all fair condition. These trees are located		required		
					E=0.5			within the grounds of the Garda Station.				
					W=0.5							
Group	Lime	EM	200	5	N=2	2m	Good	Represents a group of early mature mixed deciduous trees	Unknown	No works	B2	3.0m
11					S=2			consisting of Lime, Swedish Whitebeam and Mountain Ash		required		
	Swedish				E=2			displaying over all good condition. These trees are located at				
	Whitebeam				W=2			the entrance of Mellows Crescent in the green area.				
	Mountain											
	Ash											





Tree #	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
Group	Silver Birch	SM	220	10	N=2	2m	Good	Represents a group of 16 (circa) semi-mature mixed	Unknown	No works	B2	3.2m
12					S=2			deciduous trees consisting of Silver Birch, Mountain Ash and		required		
x 16	Mountain				E=2			Lime displaying over all good condition. These trees are				
	Ash				W=2			located to the east of the entrance to Mellows Crescent.				
	Lime											
2121	Cherry	SM	160	3	N=1	1.5m	Good	A semi-mature Cherry displaying over all good condition.	Unknown	No works	C2	2.6m
					S=1					required		
					E=1							
					W=1							
2122	Juniperus	М	240	6	N=1.5	2m	Good	A mature Juniper displaying over all good condition. This tree	Unknown	No works	B2	3.4m
	Juniper				S=1.5			is located inside the grounds of a private residence.		required		
					E=1.5							
					W=1.5							
2123	Cherry	М	400	8	N=3	1.5m	Good	A mature Cherry displaying over all good condition.	Unknown	No works	B2	5.0m
					S=3					required		
					E=3							
					W=3							





Tree #	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2124	Ailanthus	М	320	16	N=3	3m	Good	Represents a group of 5 mature Tree of Heaven displaying	Unknown	No works	B2	4.2m
x 5	Altissima				S=3			over all good condition.		required		
	Tree of				E=3							
	Heaven				W=3							
2125	Jacquemonti	EM	140	4	N=1	1.5m	Good	Represents a group of 4 early mature Jacquemonti Birch	Unknown	No works	B2	2.4m
x 4	Birch				S=1			displaying over all good condition.		required		
					E=1							
					W=1							
2126	Oak	SM	140	4	N=0.5	1m	Good	Represents a group of 15 semi-mature Oak displaying over	Unknown	No works	C2	2.4m
-					S=0.5			all good condition.		required		
2127					E=0.5							
x 15					W=0.5							
2128	Acer	М	240	6	N=1	1.5m	Fair	Represents 2 mature Silver Maple displaying over all fair	Unknown	No works	C2	3.4m
x 2	Saccharinum				S=1			condition. These trees have suffered canopy damage.		required		
	Silver Maple				E=1							
					W=1							
Group	Ash	EM	240	16	N=2	1m	Good	Represents a group of early mature Ash displaying over all	Unknown	No works	B2	3.4m
13					S=2			good condition. a few of the central trees in this have		required		
					E=2			sustained lower stem damage but as a group they are in				
					W=2			overall good condition. There was no evidence of Ash Die				
								Back (ADB) in the trees at the time of the assessment				





Tree #	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2129	Norway	М	300	16	N=3	3m	Good	Represents a group of 8 mature mixed deciduous trees	Unknown	No works	B2	4.0m
Group	Maple				S=3			consisting of 3 x Norway Maple and 5 x Ash displaying		required		
14					E=3			over all good condition.				
x 8	Ash				W=3							
2130	Lime	М	360	12	N=3	3m	Good	A mature Lime displaying over all good condition.	Unknown	No works	B2	4.6m
					S=3					required		
					E=3							
					W=3							
2131	White	М	510	18	N=4	4m	Fair	A large mature multi-stemmed White Poplar displaying	Unknown	No works	C2	6.1m
	Poplar				S=4			over all fair condition. This tree has suffered significant		required		
					E=4			basal damage.				
					W=4							
Group	Hawthorn	EM	200	12	N=2	3m	Good	Represents a group of 20 early mature mixed deciduous	Unknown	No works	B2	3m
15					S=2			trees consisting of Hawthorn, Silver Birch and Trembling		required		
x 20	Silver Birch				E=2			Aspen displaying over all good condition.				
					W=2							
	Trembling											
	Aspen											





Tree	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
#	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2132	Ash	М	300	10	N=2	3m	Good	A mature Ash displaying over all good condition.	Unknown	No works	B2	4.0m
					S=2					required		
					E=2							
					W=2							
2133	Norway Maple	EM	270	10	N=2	3m	Good	An early mature Norway Maple displaying over all	Unknown	No works	B2	3.7m
					S=2			good condition.		required		
					E=2							
					W=2							
2134	Sycamore	EM	220	10	N=1	2m	Fair	An early mature Sycamore displaying over all fair	Unknown	No works	C2	3.2m
					S=1			condition.		required		
					E=1							
					W=1							
2135	Ash	М	370	10	N=2	2m	Good	Represents 2 mature Ash displaying over all good	Unknown	No works	B2	4.7m
x 2					S=2			condition.		required		
					E=2							
					W=2							
2136	Oak	SM	160	6	N=1	2m	Good	Represents a group of 15 semi-mature Oak	Unknown	No works	B2	2.6m
x 15					S=1			displaying over all good condition.		required		
					E=1							
					W=1							





Tree #	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2137	Sycamore	М	290	8	N=2	2m	Good	A mature Variegated Sycamore displaying over all good	Unknown	No works	B2	3.9m
					S=2			condition.		required		
					E=2							
					W=2							
2138	Norway	EM	260	10	N=2	2m	Good	Represents a group of 12 early mature Norway Maple	Unknown	No works	B2	3.6m
Group	Maple				S=2			displaying over all good condition.		required		
16					E=2							
x 12					W=2							
2139	Lime	EM	150	4	N=1	2m	Good	An early mature Lime displaying over all good condition.	Unknown	No works	C2	2.5m
					S=1					required		
					E=1							
					W=1							
2140	Ash	М	300	10	N=2	3m	Good	Represents a group of 20 (circa) mature Ash displaying	Unknown	No works	B2	4.0m
Group					S=2			over all good condition. There was no evidence of Ash Die		required		
17					E=2			Back (ADB) in the trees at the time of the assessment				
x 20					W=2							
2141	Norway	EM	190	6	N=1.5	1m	Good	Represents a group of 18 early mature Norway Maple	Unknown	No works	B2	2.9m
Group	Maple				S=1.5			displaying over all good condition.		required		
18					E=1.5							
x 11					W=1.5							





Tree #	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
Group	White Poplar	EM	240	10	N=2	2m	Good	Represents a group of 18 early mature White Poplar	Unknown	No works	B2	3.4m
19					S=2			displaying over all good condition.		required		
x 18					E=2							
					W=2							
2142	Norway	М	200	12	N=2	2.5m	Good	Represents a group of 25 (circa) mature Norway Maple	Unknown	No works	B2	3.0m
Group	Maple				S=2			displaying over all good condition.		required		
20					E=2							
x 25					W=2							
Group	Norway	EM	200	8	N=2	3m	Good	Represents a group of 32 early mature Norway Maple	Unknown	No works	B2	3.0m
21	Maple				S=2			displaying over all good condition.		required		
x 32					E=2							
					W=2							
Group	Oak	SM	160	6	N=1	2m	Good	Represents a group of 14 semi-mature mixed deciduous	Unknown	No works	C2	2.6m
22					S=1			trees consisting of Oak and Lime displaying over all		required		
x 14	Lime				E=1			good condition.				
					W=1							




Tree #	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
Group	Lombardy	М	360	20	N=1	1.5m	Good	Represents a group of 16 (circa) mature mixed deciduous	Unknown	Consider	C2	4.6m
23	Poplar				S=1			trees consisting of Lombardy Poplar and Cherry displaying		for		
x 16					E=1			over all good condition. These trees are located in the middle		removal		
	Cherry				W=1			of the pedestrian overpass and were inaccessible. These trees				
								are not suitable for their location due to the prevalence of				
								wind-throw.				
2143	Lime	EM	220	8	N=1	1.5m	Good	Represents a group of 9 early mature Lime displaying over all	Unknown	No works	B2	3.2m
-					S=1			good condition.		required		
2144					E=1							
x 9					W=1							
2145	Lime	SM	160	3	N=0.5	2m	Good	Represents a group of 7 semi-mature Lime displaying over all	Unknown	No works	B2	2.6m
-					S=0.5			good condition. These trees are located within the Lidl car		required		
2146					E=0.5			park.				
x 7					W=0.5							
Group	Ash	М	240	14	N=2	2m	Good	Represents a double row of 30 (circa) trees of predominantly	Unknown	No works	B2	3.4m
24					S=2			mature Ash with some Norway Maple displaying over all good		required		
x 30	Norway				E=2			condition. These trees are located within the Lidl car park.				
	Maple				W=2							





Tree	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
#	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2147	Lime	SM	180	4	N=2	2m	Good	Represents 3 semi-mature Lime displaying over all	Unknown	No works	C2	2.8m
x 3					S=2			good condition. These trees are located within the Lidl		required		
					E=2			car park.				
					W=2							
2148	Swedish	SM	250	6	N=1	2m	Good	Represents a row of 3 semi-mature Swedish	Unknown	No works	B2	3.5m
х З	Whitebeam				S=1			Whitebeam displaying over all good condition.		required		
					E=1							
					W=1							
2149	Hornbeam	SM	80	4	N=0.5	0.5m	Fair	A semi-mature Hornbeam displaying over all fair	Unknown	No works	C2	1.0m
					S=0.5			condition. These tree appears to be in decline.		required		
					E=0.5							
					W=0.5							
2150	Mountain Ash	EM	200	4	N=1	1m	Good	An early mature Mountain Ash displaying over all good	Unknown	No works	B2	3.0m
					S=1			condition.		required		
					E=1							
					W=1							
2151	Mountain Ash	EM	200	4	N=1	1m	Good	An early mature Mountain Ash displaying over all good	Unknown	No works	B2	3.0m
					S=1			condition.		required		
					E=1							
					W=1							





Tree #	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2152	Mountain	EM	200	4	N=1	1m	Good	An early mature Mountain Ash displaying over all good	Unknown	No works	B2	3.0m
	Ash				S=1			condition.		required		
					E=1							
					W=1							
Group	Norway	SM	80	3	N=0.5	1m	Good	Represents a group of semi-mature mixed trees and shrubs	Unknown	No works	C2	1.0m
25	Maple				S=0.5			consisting of Norway Maple, Mountain Ash and Cherry		required		
					E=0.5			displaying over all good condition. These are located at the				
	Mountain				W=0.5			pedestrian entrance into an industrial estate.				
	Ash											
	Cherry											
2153	Whitebeam	М	240	6	N=2	3m	Good	A mature Whitebeam displaying over all good condition.	Unknown	No works	B2	3.4m
					S=2					required		
					E=2							
					W=2							
2154	Whitebeam	SM	140	3	N=1	2m	Fair	Represents 2 semi-mature Whitebeam displaying over all	Unknown	No works	C2	2.4m
x 2					S=1			fair condition.		required		
					E=1							
					W=1							





Tree	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
#	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2155	Hornbeam	EM	200	8	N=1	2m	Good	Represents a group of 5 early mature Hornbeam	Unknown	No works	B2	3.0m
x 5					S=1			displaying over all good condition.		required		
					E=1							
					W=1							
2156	Norway	М	410	14	N=2	2m	Good	Represents a cluster of 6 mature Norway Maple	Unknown	No works	B2	5.1m
x 6	Maple				S=2			displaying over all good condition.		required		
					E=2							
					W=2							
2157	Norway	М	410	14	N=2	2m	Good	Represents a cluster of 4 mature Norway Maple	Unknown	No works	B2	5.1m
x 4	Maple				S=2			displaying over all good condition.		required		
					E=2							
					W=2							
2158	Prunus	SM	290	4	N=1.5	1.5m	Good	Represents 3 semi-mature trees consisting of 2 x Purple	Unknown	No works	C2	3.9m
x 3	Cerasifera				S=1.5			Plum and 1 x Mountain Ash displaying over all good		required		
	Purple Plum				E=1.5			condition.				
					W=1.5							
	Mountain											
	Ash											





Tree #	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)			Ocad Democrate a new (Ocade material Easticity Hamborn				
2159	Carpinus	EM	200	8	N=0.5	2m	Good	Represents a row of 6 early mature Fastigiate Hornbeam	Unknown	No works	B2	3.0m
x 6	Betulus				S=0.5			displaying over all good condition.		required		
	Fastigiate				E=0.5							
	Hornbeam				W=0.5							
Group	Norway	EM	220	10	N=2	2m	Good	Represents a group of early mature mixed deciduous trees	Unknown	No works	B2	3.2m
26	Maple				S=2			consisting of Norway Maple and Lime displaying over all good		required		
					E=2			condition. These trees are located within the grounds of				
					W=2			Charlestown ESB property so were inaccessible.				
2160	Lime	SM	80	3	N=1.5	2m	Good	Represents a row of 20 semi-mature Lime displaying over all	Unknown	No works	B2	1.0m
-					S=1.5			good condition.		required		
2161					E=1.5							
x 20					W=1.5							
2162	Lime	SM	180	4	N=1	2m	Good	Represents a row of 12 semi-mature Lime displaying over all	Unknown	No works	B2	2.8m
-					S=1			good condition.		required		
2163					E=1							
x 12					W=1							
2164	Cherry	EM	200	4	N=1.5	1m	Good	Represents 3 early mature Cherry displaying over all good	Unknown	No works	B2	3.0m
х З					S=1.5			condition. This tree is located at the junction of St. Margarets		required		
					E=1.5			Road and Melville Road contained within a private complex.				
					W=1.5			These are the first Cherry trees in a long line of Cherry trees.				





Tree	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	Impact of the	PMR	Category	R.P.A.
#	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	development			Meters
	Name				(M)							
2165	Hornbeam	EM	180	8	N=0.5	0.5m	Good	Represents a group of 4 early mature Hornbeam displaying	Unknown	No works	B2	2.8m
x 4					S=0.5			over all good condition. These trees are located within a		required		
					E=0.5			private industrial park just outside the Eve Castle View HSE				
					W=0.5			Building.				
2166	Hornbeam	EM	160	8	N=0.5	0.5m	Good	Represents 2 early mature Hornbeam displaying over all	Unknown	No works	B2	2.6m
x 2					S=0.5			good condition. These trees are located within a car park in		required		
					E=0.5			front of MCG Logistics Ltd.				
					W=0.5							
2167	Sliver Birch	EM	200	6	N=0.5	1.5m	Good	Represents a cluster of 6 early mature Silver Birch displaying	Unknown	No works	B2	3.0m
x 6					S=0.5			over all good condition. These trees are located within a car		required		
					E=0.5			park in front of MCG Logistics Ltd.				
					W=0.5							





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Yours in Conservation, Michael Garry. <u>www.arborcare.ie</u>

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Ash Tree Condition assessment

Location: Various areas along the proposed Finglas Luas line

Main Contractor: NTA Inspection Date: 17-08-2022 Time of Inspection: 11.00 Site Inspection by: Michael Garry (Arbor- Care Ltd)

Reason of Inspection:

To undertake an inspection on the ash trees that were included within the overall tree survey that was undertaken in 2021 for the proposed Finglas Luas line. The condition assessment was to inspect the ash trees for evidence of ash dieback (*Hymenoscyphus fraxineus*).

Introduction

Ash dieback is a serious disease of ash trees caused by the invasive fungal pathogen *Hymenoscyphus fraxineus* (previously known as *Chalara fraxinea*), which originates in Asia and was brought to Europe in the early 90s. Today, the pathogen covers most of the natural range of ash in Europe causing high mortality rates of ash trees.

Ash dieback was first detected in the Republic of Ireland in October 2012 on plants imported from continental Europe. The disease is now prevalent throughout most of the island of Ireland and is likely to cause the death of the majority of the ash trees over the next two decades.



The disease can affect ash trees of any age and in any setting. The disease can be fatal, particularly among younger trees. Ash dieback is more severe in wet sites, where it is more likely to cause collar infections in ash trees.

Observations

Tree Inspection was undertaken on the 17/8/2022. There were 18 areas within the proposed route that contained ash trees. Please review the main tree survey report and tree protection plan for further information and or locations. In the main the ash trees were health certain trees were displaying early onset if ash dieback. No trees were infected to any degree that remedial works and or tree removal was warranted. The preferred management is to not prune the infested tree unless the tree is completely infected and is a danger to the public.



Tree #	Species	Age	Size	Height	Crown	Crown	Condition	Structural/Physiological	PMR
	Botanical	class	(mm)	(M)	Sp.	CI.(M)		Observations	
	Name				(111)				
2026	Fraxinus	М	380	14	N=2	2m	Good	Represents 5 large mature Ash displaying over all good condition. There	No works
× 5	excelsior				S=2			was no evidence of Ash Die Back (ADB) in the trees at the time of the	required
× 3	Ash				5-2			assessment	
					E=3				
					W=3				
2041	Ash	SM	100	5	N=1	3m	Good	Represents a group of 5 semi-mature Ash displaying over all good	No works
x 5					S=1			condition. There was no evidence of Ash Die Back (ADB) in the trees at the	required
								time of the assessment	
					E=1				
					W=1				
2042	Ach	EN4	240	0	N-2	2	Cood	Depresents 2 early mature Ach displaying over all good condition. There	Noworka
2042	ASN	EIVI	240	8	N=Z	Zm	Good	was no evidence of Ash Die Back (ADR) in the trees at the time of the	NO WORKS
x 3					S=2			assessment	required
					F=2				
					L-2				
					W=2				
				1					



2044	Ash	М	200	8	N=2	3m	Good	Represents a row of 6 mature deciduous trees consisting of 4 x Ash. There	No works
x 4					S=2			was no evidence of Ash Die Back (ADB) in the trees at the time of the assessment	required
					E=2				
					W=2				
2046	Ash	М	460	16	N=4	2m	Good	A large mature Ash displaying over all good condition. There was evidence	No works
					S=4			of minor of Ash Die Back (ADB) in the trees at the time of the assessment	required
					E=4				
					W=4				
2052	Fraxinus	М	250	6	N=2	2m	Good	Represents a group of 25 (circa) mature Manna Ash displaying over all	No works
Group	Ornus				S=2			good condition. There was no evidence of Ash Die Back (ADB) in the trees at the time of the assessment	required
1	Manna Ash				E=2				
x 25					W=2				



2100	Ash	М	370	10	N=2	2m	Good	Represents a group of 6 mature Ash displaying over all good condition. There is 1 tree in this	No works
x 6					S=2			group that is in decline however this in not in decline from ash die back and it may have been	required
-					-			damaged by vandals. The remaining trees are displaying no evidence of ash die back	
					E=2				
					W=2				
2101	Ash	EM	230	6	N=2	2m	Good	Represents 2 early mature Ash displaying over all good condition. There is evidence of early	No works
								onset of ADB	required
x 2					S=2				
					E-2				
					E-Z				
					W=2				
2102	Ash	М	330	12	N=3	3m	Good	Represents a group of 8 mature Ash displaying over all good condition. There is evidence of	No works
								early onset of ADB	required
x 8					S=3				
					E=3				
					M/ 2				
					vv=3				



Group	Ash	EM	240	16	N=2	1m	Good	Represents a group of early mature Ash displaying over all good condition. A few of the	No works
13								central trees in this have sustained lower stem damage but as a group they are in overall	required
					S=2			good condition. There is evidence of early onset of ADB	
					E-2				
					L-Z				
					W=2				
2129	Norway	М	300	16	N=3	3m	Good	Represents a group of 8 mature mixed deciduous trees consisting of 3 x Norway Maple and 5	No works
	Maple							x Ash displaying over all good condition.	required
Group					S=3				
14					F-3				
0	Alah				L-3				
x 8	ASN				W=3				
2132	Ash	М	300	10	N=2	3m	Good	A mature Ash displaying over all good condition. There was no evidence of Ash Die Back	No works
								(ADB) in the trees at the time of the assessment	required
					S=2				
					F-2				
					L-Z				
					W=2				



2135	Ash	Μ	300	10	N=2	3m	Good	A mature Ash displaying over all good condition. There was no evidence of Ash Die Back	No works
					S=2			(ADB) in the trees at the time of the assessment	required
					E=2				
					W=2				
2140	Ash	М	300	10	N=2	3m	Good	Represents a group of 20 (circa) mature Ash displaying over all good condition. There is	No works
Group					S=2			evidence of early onset of ADB in some of the trees.	required
17									
					E=2				
x 20					W=2				
Group	Ash	Μ	240	14	N=2	2m	Good	Represents a double row of 30 (circa) trees of predominantly mature Ash with some Norway	No works
24					5-2			Maple displaying over all good condition. There is evidence of early onset of ADB in some of	required
× 20					5-2			the trees.	
x 30	Norway				E=2				
	Maple				W=2				

















This report was prepared by, *Michael Garry*, Arbor Care Ltd, (Professional Consulting Tree Service) **BS.c Arboriculture & Amenity Forestry P.grad. Ecological Assessment Dip. Arboriculture**

Yours in Conservation,

Michael Garry.

www.arborcare.ie

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Ground level
 Approx. 0.6m driven into the ground

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The image displays an example of a suitable protective barrier as recommended by *BS. 5837* 2012 Trees in Relation to Construction

- Standard scaffold poles
 Uprights to be driven into the ground
 Panels secured to uprights with wire ties and where necessary standard scaffold poles
 Weld mesh wired to the uprights and horizontals
- Standard clamps
 Wire twisted and secured on the inside of fencing to avoid easy dismantling
 Ground level
 Approx. 0.6m driven into the ground

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The image displays an example of a suitable protective barrier as recommended by *BS. 5837* 2012 Trees in Relation to Construction

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 Wire twisted and secured on the inside of fencing to avoid easy dismantling
 Ground level
 Approx. 0.6m driven into the ground

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