

Appendix 5-4

Arboricultural Impact Assessment



Arboricultural Impact Assessment

Prepared for:

Gas Networks Ireland (GNI)

Proposed site:

'Newtown Pipeline'

Prepared by:

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1. Introduction

1.1 Background

Arbor-Care Ltd (Professional Consulting Tree Service) was retained by Fingleton White to undertake an Arboricultural impact Assessment, identifying the trees, groups of trees that may be impacted on by the proposed works. The surveyed trees contained within this report are located along Bay Lane and Kilshane Road. The trees are growing along a ditch that is above the level of the road there is also a drainage ditch separating the trees and the road. As the trees are growing in a row the root systems will be in a lateral direction, due to the drainage ditch separating the trees and the road no impact to the trees is suspected. The lowest limbs are 4m from ground so therefore there will be ample head clearance for passing vehicles

The objective of the impact assessment was to survey the trees and determine the approximate tree and vegetation loss the proposed works may have. Certain trees along the route which are not impacted by the proposed works are in advanced decline and are dead and are a hazard for the road and should be removed in the interest of health and safety, and in the interest of Health and Safety, the respective owners of the trees should be made aware of the poor condition of the trees and the risks they pose.

The below impact assessment report is based on 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.

1.2 Methodology

The tree survey and visual condition assessment was on the 24th of April 2024. The purpose 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.

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.

The survey concentrated primarily on the trees/ groups located along the route, the survey concentrated on the trees along the north side of Kilshane road. The objective of this survey was to gather information regarding the trees within or adjacent to the works area and the impact the proposed works may have on the trees.

Significant trees can be equated as those trees whose visual importance to the surrounding area are sufficient to justify special efforts to protect/preserve and whose loss would have an irremediable adverse impact on the local environment. Significance can also be placed depending on the trees age, another variable to imply significance can be the aesthetic merit of the tree based on its unusual size, intrinsic physical features or outstanding appearance or occurring in a unique location or context, and thus provides a special contribution as a landmark or landscape feature.

All above parts of the trees were visually examined. Tree diameters (DBH) were estimated at 1.5 meter above ground level as per standard arboricultural practice. A generalised system was employed to describe the overall health of the trees. The system uses a three tier rating scale with the following

descriptors:

Specimen condition 3-tier rating system

- Poor- 1-30%
- Fair- 31-60%
- Good- 61-100%

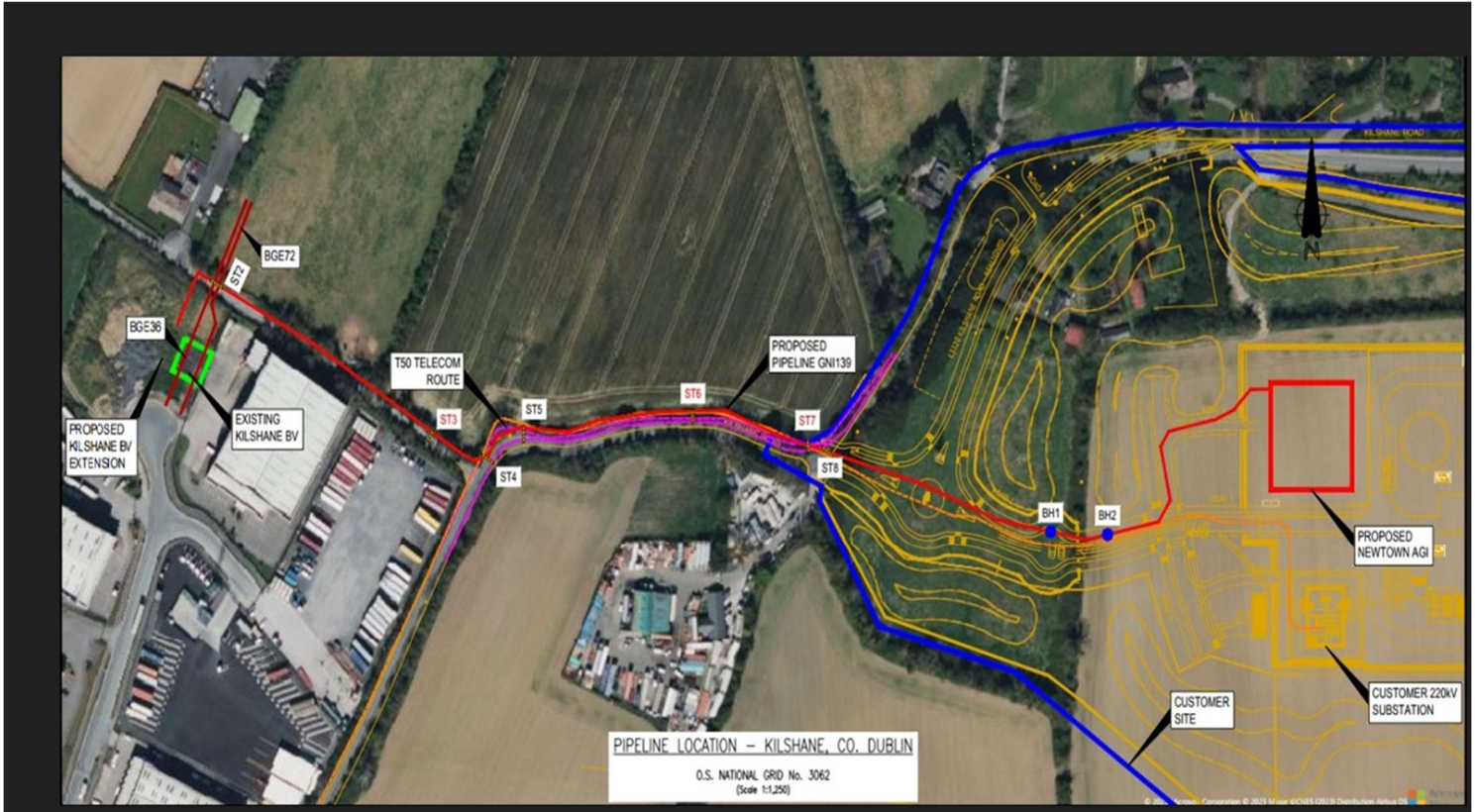
2.0 Initial Tree Survey Overview

2.1 **The Site.** Is a public road. Trees are located along a ditch line

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	0	0%
B-trees of good quality	13	25%
C (Low quality)	34	65%
U (of poor condition)	5	9.6%
Total trees	52	100%

Figure 1.0 Existing Site.



3.0 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 adaptation. The NPF also seeks to achieve the protection and enhancement of landscapes and a net gain in biodiversity.

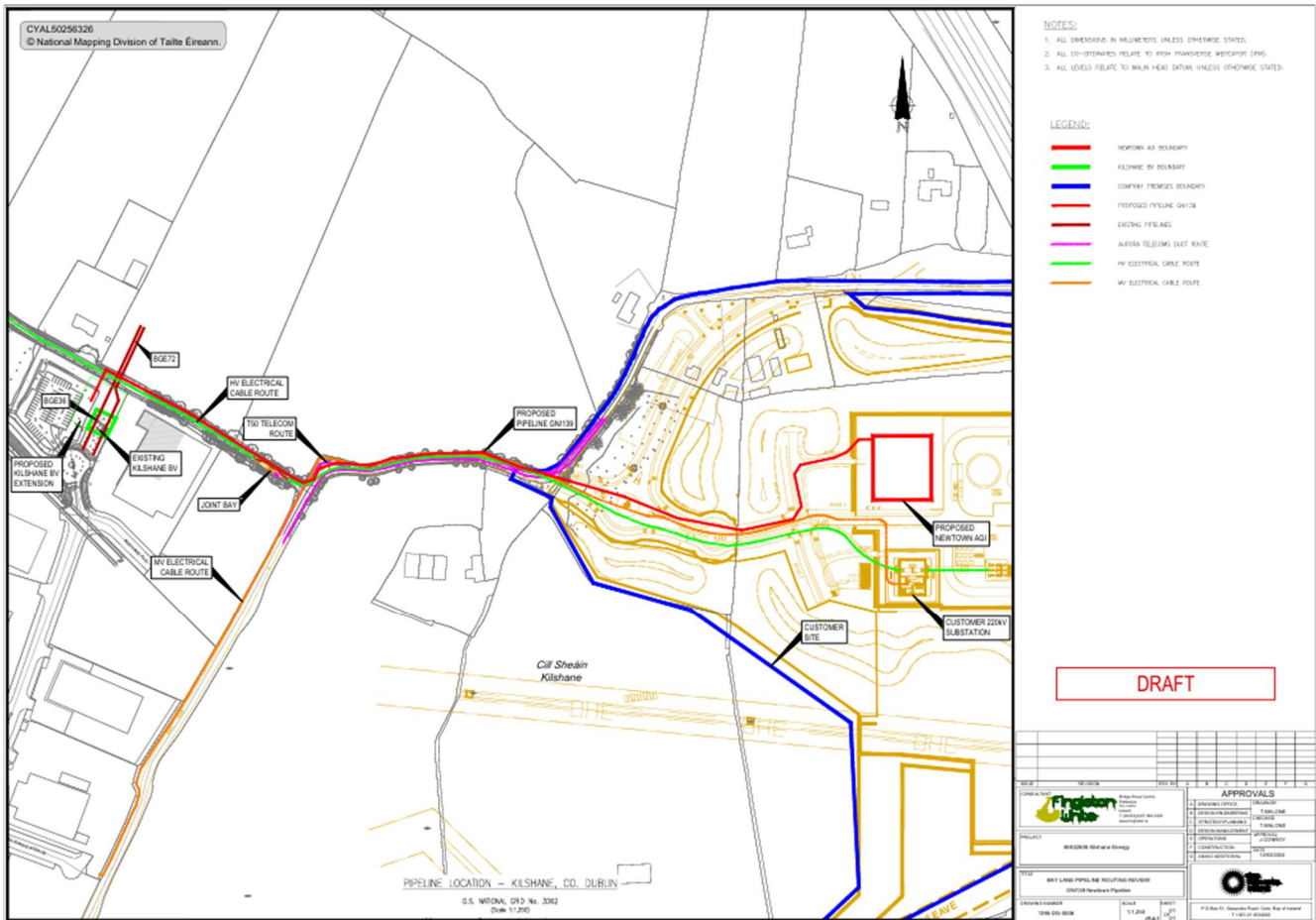
The site is located within the remit of Fingal County Council. The Local Planning Authorities have a statutory duty to consider both the protection and planting of trees when considering planning applications. The potential impact of development on all trees (including those not protected by a Tree Preservation Order or other statutory designation) is therefore a material consideration. I have reviewed *Fingal County Development Plan 2022-2028 Tree Preservation Orders (TPO's)*. There are no TPO's identified within the development site.

This will be in accordance with the GNI document 'Landscaping and Biodiversity Guidelines for Gas Network Ireland Sites'. Opportunities to offset the effects of the trees removed during this project will be explored with local landowners

4.0 The Proposed Development (figure 2)

Brief Summary Development Description

Gas Networks Ireland (GNI) are proposing to build a new transmission gas pipeline, extend an existing Block Valve station and build a new Above Ground Installation (AGI) to supply gas to a proposed power station located in Kilshane, Dublin 15. This proposed development comprises of an underground transmission gas pipeline to connect between the proposed Block Valve (BV) Extension to the existing Kilshane BV station and the proposed AGI inside the new power station. The underground transmission gas pipeline (named Newtown Pipeline) and associated infrastructure will be owned and operated by GNI.



5.0 Arboricultural Impact Assessment

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

5.1 Trees to be Removed

The majority of the trees will be retained. Certain trees will be removed to facilitate the works, primarily entering and existing fields. Certain trees are also recommended for removal in the interest of health and safety.

A brief summary of trees to be removed, related to the Proposed Scheme are detailed within the table below

Table 1: Schedule of trees to be removed to accommodate the design (To be read in conjunction with Appendix 1 and the Tree Protection Plan.

Tree number	Species	Age Class	Tree category
T1 x 4	Ash	Early mature	C2

A total of 4 trees will be removed tree removal to accommodate the proposed design, these consist of 0 no. category A trees, 0 no. category B and 4 no. category C trees and 0 no. category U trees. The majority of the trees to be removed are in the low quality C.

In accordance with *BS 5837: 2012 Trees in relation to design, demolition and construction. Recommendations.*, 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 yrs 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 10yrs is suggested).” 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.

There are examples of dead and or trees in advanced decline, these are posing a hazard to road users and although they will not be impacted on by the pipeline, in the interest of health and safety they should be removed. These trees are under the authority of Fingal County Council who are responsible for their removal. In the interest of Health and Safety , the respective owner of the trees should be made aware of the poor condition of the trees due to the risks they pose.

Schedule of Photographs-Typical trees within the site

Tree Along Bay Lane



A dead and dangerous trees along Kilshane road



Appendix A: Tree Survey

Key abbreviations used in the survey

Ref No	Specific identification number given to each tree or group. T=Tree/H=Hedge/G=Group/W=Woodland/S=Shrub.	
Tag No.	Tree marked with individual tree tag of this reference number on site.	
Species	Common name followed by botanical name shown in <i>italics</i>	
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 Annexe C)	Av / Average: indicates an average representative measured dimension for the group or feature
Spread	The width and breadth of the crown. Estimated on the four compass points in metres.	
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).	
P	Privately owned tree (e.g. tree not located in the public highway or adjacent public land).	
Category	Categorisation of the quality and benefits of trees on Site as per Table 1 and 2 of BS5837:2012. 1=Arboricultural quality/value 2=Landscape quality/value 3=Cultural quality/value (including conservation) A=High quality/value 40yrs+ (light green). B=Moderate quality/value 20yrs+ (mid blue) C=Low quality/value min 10yrs/stem diameter less than 150mm (grey). U=Unsuitable for retention (dark red).	
Life stage	Young (Y): Newly planted tree 0-10 years. Semi-Mature (SM): Tree in the first third of its normal life expectancy for the species (significant potential for future growth in size). Early Mature (EM): Tree in the second third of its normal life expectancy for the species (some potential for future growth in size) Mature (M): Tree in the final third of its normal life expectancy for the species (having typically reached its approximate ultimate size). Over Mature (OM): Tree beyond the normal life expectancy for the species. Veteran (V): Tree which is of interest biologically, aesthetically or culturally because of its condition, size or age.	
Structural condition	Good: No significant structural defects Fair: Structural defects which can be resolved via remedial works. Poor: Structural defects which cannot be resolved via remedial works. Dead: Dead.	
Physiological condition	Good: Normal vitality including leaf size, bud growth, density of crown and wound wood development. Fair: Lower than normal vitality, reduced bud development, reduced crown density, reduced response to wounds. Poor: Low vitality, low development and distribution of buds, discoloured leaves, low crown density, little extension growth for the species. Dead: Dead Fair/Good = Indicates an intermediate condition Fair – Good = Indicates a range of conditions (e.g. within a group)	
Preliminary management recommendations	Works identified during the tree survey as part of sound arboricultural management, based on the current context of the Site (where relevant reference has been made to tree management based on the potential future context of the site).	
Works to facilitate the development	Tree works identified as necessary to facilitate the Proposed Development following a desk top analysis of the proposals in relation to tree constraints.	

Appendix A: Tree Survey Schedule-Kilshane

Tree #	Species Botanical Name	Age class	Size (mm)	Height (M)	Crown Sp. (M)	Crown Cl.(M)	Condition	Structural/Physiological Observations	Impact of the development	PMR	Category	R.P.A. Meters
T 1 x 4	Ash Hawthorn	EM	100	4	N=1 S=1 E=1 W=1	2	Fair	A row of 4 early mature ash with an understorey of hawthorn	4 to be removed	Remove	C2	
T2 X 4	ASH	EM	250	8	N=3 S=3 E=2 W=2	2	Fair	A row of four ash in fair condition, engulfed with ivy	No impact	Retain	C2	3.5m
T3 2819	Ash	M	300	12	N=4 S=4 E=2 W=2	2	Fair	A mature ash in fair condition , engulfed with ivy and displaying early stages of decline	No impact	Retain	C2	4m
T4	Hawthorn	M	240	6	N=3 S=3 E=2 W=2	1	Good	A mature hawthorn	No impact	Retain	B2	3.4m
T5 2820	Ash	M	450	12	N=3 S=3 E=3 W=3	2	Fair	A mature co-dominant ash in fair condition it is in decline	No impact	Retain	C2	5.5m
T6	Hawthorn	M	200	4	N=1 S=1 E=1 W=1	2	Fair	A mature hawthorn	No impact	Retain	C2	3m
T7 2821	Ash	M	300	10	N=4 S=4 E=4 W=4	3	Good	A large co-dominant ash	No impact	Retain	B2	4m

Tree #	Species Botanical Name	Age class	Size (mm)	Height (M)	Crown Sp. (M)	Crown Cl.(M)	Condition	Structural/Physiological Observations	Impact of the development	PMR	Category	R.P.A. Meters
T8	Hawthorn	M	200	4	N=1 S=1 E=1 W=1	2	Fair	A mature hawthorn	No impact	Retain	C2	3m
T9 x 2	Hawthorn	EM	210	6	N=2 S=2 E=2 W=2	2	Good	Two mature hawthorn	No impact	Retain	C2	3m
2822	Ash	M	700	16	N=4 S=4 E=4 W=4	2	Good	A large mature ash displaying a good overall condition	No impact	Retain	B2	8m
T11	Ash	M	380	16	N=3 S=3 E=2 W=2	4	Fair	A mature ash that is engulfed in ivy and in decline	No impact	Retain	C2	4.8m
Tree group 1	Hawthorn	M	180	6	N=2 S=2 E=2 W=2	2	Good	A mature hawthorn hedgerow	No impact	Retain	B2	2.8m
T12	Ash	M	250	8	N=2 S=2 E=2 W=2	2	Fair	A mature ash contained within tree group 1 in decline and engulfed with ivy	No impact	Retain	C2	3.5m
T13	Ash	M	250	14	N=3 S=3 E=3 W=3	3	Poor	A mature ash located within tree group 1 , at the junction of Bay lane and Kilshane road, this tree is in advanced decline and a hazard for the road	No impact	Notify the tree owner that in the interest of health& safety the tree requires removal	U	
Tree group 2	Ash Hawthorn	M	250	8	N=2 S=2 E=2 W=2	3	Fair	A group of mature ash in decline with an understorey of hawthorn	No impact	Retain	C2	3.5m

Tree #	Species Botanical Name	Age class	Size (mm)	Height (M)	Crown Sp. (M)	Crown Cl.(M)	Condition	Structural/Physiological Observations	Impact of the development	PMR	Category	R.P.A. Meters
2823 T14	Sycamore	M	280	14	N=3 S=3 E=3 W=3	2	Good	A mature sycamore	No impact	Retain	B2	3.8m
T15 x 3	Ash	M	280	12	N=3 S=3 E=3 W=3	2	Fair	A cluster of 3 ash in fair condition in decline	No impact	Retain	C2	3.8m
T16	Ash	M	300	10	N=1 S=1 E=3 W=1	2	Fair	A mature ash tree that is in decline	No impact	Retain	C2	4m
Hedge 1	Bramble	M	90	4	N=1 S=1 E=1 W=1	4	Fair	An earthen embankment that is overgrown with bramble	No impact	Retain	C2	1.9m
2824 T17	Ash	M	250	8	N=2 S=2 E=2 W=2	3	Dead	A mature ash that is dead, this is a hazard for the road and should be removed	No impact	Notify the tree owner that in the interest of health & safety the tree requires removal	U	
T18 x 2	Sycamore	EM	200	8	N=3 S=3 E=3 W=3	2	Good	Two early mature sycamore	No impact	Retain	B2	3m
T19	Ash	EM	220	6	N=3 S=3 E=3 W=3	3	Good	A mature ash	No impact	Retain	B2	3.2m

Tree #	Species Botanical Name	Age class	Size (mm)	Height (M)	Crown Sp. (M)	Crown Cl.(M)	Condition	Structural/Physiological Observations	Impact of the development	PMR	Category	R.P.A. Meters
T20	Elder	EM	110	3	N=3 S=3 E=3 W=3	1	Fair	An early mature Elder	No impact	Retain	C2	2.1m
T21 x 2	Hawthorn Elder	EM	110	4	N=1 S=1 E=1 W=1	2	Fair	An early mature elder and hawthorn	No impact	Retain	C2	2.1m
T22 x 4	Ash x 2 Hawthorn x 2	EM	200	8	N=2 S=2 E=2 W=2	2	Fair	Two ash and two hawthorn engulfed in ivy	No impact	Retain	C2	3m
T23 x 4	Ash	M	200	8	N=2 S=2 E=2 W=2	2	Fair	A cluster of 4 ash that are in decline	No impact	Retain	C2	3m
2825	Sycamore	M	250	10	N=3 S=3 E=3 W=3	3	Good	A mature multi-stemmed sycamore	No impact	Retain	B2	3.5m
2826	Ash	M	280	8	N=2 S=2 E=2 W=2	2	Poor	A mature ash that is in advanced decline and is a hazard for the road	No impact	Notify the tree owner that in the interest of health& safety the tree requires removal	U	
Hedge 2	Hawthorn bramble	M	90	4	N=1 S=1 E=1 W=1	4	Fair	An earthen embankment that is overgrown with bramble	No impact	Retain	C2	1.9m

Tree #	Species Botanical Name	Age class	Size (mm)	Height (M)	Crown Sp. (M)	Crown Cl.(M)	Condition	Structural/Physiological Observations	Impact of the development	PMR	Category	R.P.A. Meters
2827	Ash	M	280	8	N=2 S=2 E=2 W=2	1	Fair	Am mature ash in advanced decline a potential hazard for the road	No impact	Notify the tree owner that in the interest of health & safety the tree requires removal	U	
T24	Monterey cypress	M	650	18	N=4 S=4 E=4 W=4	2	Good	A large mature cypress	Remove to facilitate the Kilshane Energy Ltd Gas Turbine Power Generation station and road improvement works to Kilshane Rd	Remove	B2	
T25	Sycamore	M	250	8	N=2 S=2 E=2 W=2	2	Good	A mature sycamore	Remove to facilitate the Kilshane Energy Ltd Gas Turbine Power Generation station and road improvement works to Kilshane Rd	Remove	B2	
T26	Ash	M	200	8	N=32 S=2 E=2 W=2	2	Fair	A mature ash in decline	Remove to facilitate the Kilshane Energy Ltd Gas Turbine Power Generation station and road improvement works to Kilshane Rd	Remove	B2	



This report was prepared by:

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Arbor-Care Ltd, Professional Consulting Tree Service

Yours in Conservation,

Michael Garry.

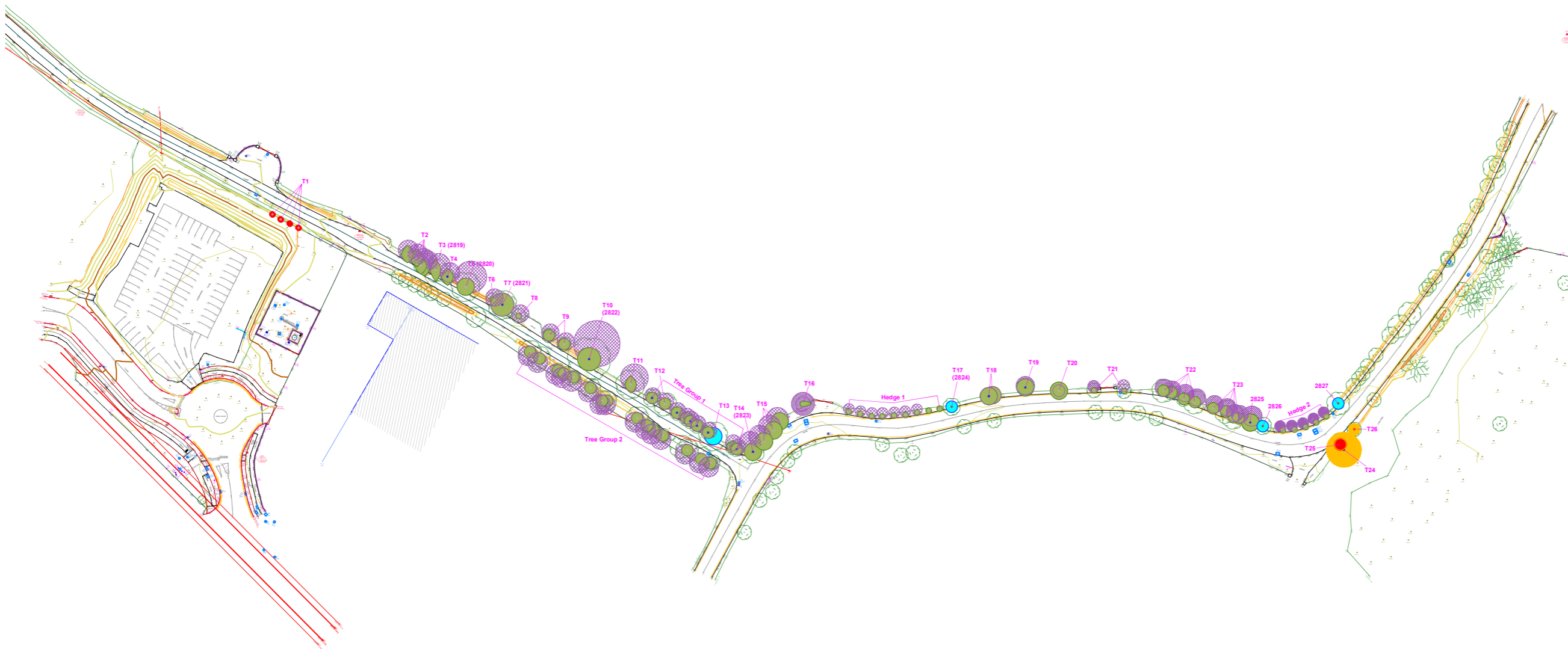
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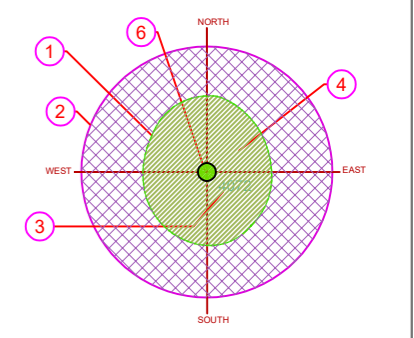
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Rev.	Date	Description

Legend:

- **Category (A, A1, A2, A3)**
Those of high quality and value: in such a condition as to be able to make a substantial contribution (a minimum of 40 years)
- **Category (B, B1, B2, B3)**
Those of moderate quality and value: those in such a condition as to make a significant contribution (a minimum of 20 years)
- **Category (C, C1, C2, C3)**
Those of low quality and value: currently in adequate condition to remain until new planting could be established (a minimum of 10 years) or young trees with a stem diameter below 150mm
- **Category (U)**
Those in such condition that any existing value would be lost within 10 years and which should, in the current context, be removed for reason of sound arboricultural management



- 1 EXISTING TREE CANOPY BASED ON DIMENSIONS GATHERED ON SITE IN 4 DIRECTIONS, NORTH, SOUTH, EAST AND WEST
- 2 ROOT PROTECTION ZONE BASED ON 12 TIMES THE (DBH) AT CHEST HEIGHT
- 3 TREE TAG NUMBER
- 4 TREE TO BE RETAINED
- 5 TREE TO BE REMOVED
- 6 TREE CATEGORY BASED ON BS:5837 2012 CRITERIA
- 7 TREE IN POOR CONDITION. NOTIFY TREE OWNER IN THE INTEREST OF HEALTH AND SAFETY
- 8 TREES BEING REMOVED TO FACILITATE CONSTRUCTION WORKS ON THE KILSHANE ENERGY POWER STATION

Client:
Gas Network Ireland

Project:
Kilshane Block Value

Drawing Title:
Tree Survey Plan

Drawn By: WA	Checked By: MG	Date: 05/09024	Scale: 2:1
Drg. No. 01	CAD File: #G554172_T_ITM_2d_	Issued For: Information	Rev. 03

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