

Proposed Development at Outlands,
Rathbeale Road, Swords, Co. Dublin
Tree Survey & Planning Report

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**Built.
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Survey
Assessment
**Built
Environment**

Client:

Fingal County Council

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1 Introduction

There are plans to construct a new apartment building on land on Rathbeale Road, Swords, Co. Dublin. There are a number of trees around the site and this report has been commissioned to provide an Arboricultural assessment of these trees to assist with the plans for the development of the site and for inclusion in the planning application. The survey data was collected and collated in accordance with BS5837: (2012) *Trees in relation to design, demolition and construction – Recommendations*.

The accompanying drawing 6469-Rathbeale-300 (Tree Survey) shows the locations of the individual trees and tree groups identified on the site during the survey.

2 Report Limitations

The inspection has been carried out from ground level using visual observation methods only.

Trees are living organisms whose health and condition can change rapidly. Trees should be checked on a regular basis, preferably once a year. The conclusions and recommendations of this report are valid for one year.

The fruiting bodies of some important species of decay fungi only emerge at certain times of the year and may not have been visible during this inspection.

There is no such thing as a 100% safe tree in all conditions, since even perfectly healthy trees may fall or suffer branch break.

Climbing plants such as Ivy can obscure structural defects and some symptoms of disease, where such plants prevent a thorough examination it is recommended that the climber be cut at ground level and the tree re-inspected when it has died back.

3 Methodology

The trees were accessed on foot and assessed using Visual Tree Assessment (VTA) techniques only. Hedges and groups of trees were assessed collectively in accordance with BS5837: (2012) *Trees in relation to design, demolition and construction – Recommendations*.

4 Survey Key

4.1 Tree, Tree Group and Hedge Number

Individual trees (prefix T), tree groups (prefix G) and hedges (prefix H) were allotted reference numbers to allow for identification and cross reference with the survey schedule and site drawings. Individual trees were not tagged on site.

4.2 Species

Refers to the specific tree species with both common and botanical names for individual trees and those present within each hedgerow or tree group.

4.3 Age Class

- Y: Young tree – yet to reach biological maturity
- SM: Semi-mature - tree now well established and developing
- EM: Early-Mature - tree not yet fully grown

- M: Mature – Tree fully grown and in full maturity
- LM: Late Mature – in the later stages of maturity
- OM: Over mature - tree now declining from natural causes
- Vet: Veteran - tree of value due to old age and ecological/cultural significance

4.4 Stem Diameter, Tree Height and Crown Size Measurements

- Ht: Total Tree Height in metres
- Dbh: Diameter (in mm) at breast height measured at 1.5m from ground level
- NSEW: Crown spread (in metres) for all 4 cardinal points

4.5 Condition

Condition refers to both physiological condition (good, fair, poor, dead.) and structural condition.

- Good: No obvious defects visible, vigour and form of tree good.
- Fair: Tree in average condition for its age and the environment.
- Poor: Tree shows signs of ill health/structural defect
- Bad: Tree in seriously bad health/major structural problem
- Dead: Tree now completely dead

4.6 Comments

Additional description/commentary on individual trees where appropriate.

4.7 Recommendations

Preliminary management recommendations are noted, these pertain to current site conditions unless otherwise stated.

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

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

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

Sub Categories

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

4.9 Root Protection Area

The Root Protection Area (RPA) is the minimum area around individual trees to be protected from disturbance during construction works; RPA is recorded as a radius (rad) in metres measured from the tree stem and is shown on tree survey drawings as a circle with the tree stem in the centre. For single stem trees, the root protection area (RPA) should be calculated as an area equivalent to a circle with a radius 12 times the stem diameter.

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

- a) For trees with two to five stems, the combined stem diameter should be calculated as follows:

$$\sqrt{((\text{stem diameter } 1)^2 + (\text{stem diameter } 2)^2 \dots + (\text{stem diameter } 5)^2)}$$

- b) For trees with more than five stems, the combined stem diameter should be calculated as follows:

$$\sqrt{((\text{mean stem diameter})^2 \times \text{number of stems})}$$

5 Findings

The trees and tree groups were assessed during a site visit on the 26th March 2019. The field survey findings are recorded in the survey schedule appended to the report and include the data for 11 individual trees and 4 tree groups.

Of the 11 individual trees assessed, none were graded category A (high value), five were category B (moderate value), four were category C (low value) and two were classed as category U (poor quality or <10 years contribution left). Two groups were graded category B and two were graded category C.

The site covers land around a walled council owned compound between Rathbeale Road and Pine Grove Park, Swords, Co. Dublin.

Trees T1201-T1203 & T1206 are growing on a small area of open space close to the junction of Rathbeale Road and Pine Grove Park. Trees T1204, T1205, T1207-T1209 are street trees growing out of the narrow verge alongside Pine Grove Park.

Trees T1210 & T1211 and groups G1 and G2 are a less formal, perhaps partially self-sown cluster of vegetation located within the wider verge between the existing compound wall and Pine Grove Park. The group labelled G3 are a row or recently planted young trees outside the compound wall. Group G4 are ornamental garden trees located in a line inside the garden of the residential house to the south-east of the compound.

6 Preliminary Recommendations

Preliminary management recommendations for the trees, hedges and tree groups under present site conditions are listed in the survey schedule.

No urgent works are recommended, however, the street trees tagged T1207-T1209 should be monitored on a regular basis to check on their health and condition.

7 Arboricultural Impact of New Development

The new apartment building and associated infrastructure has been designed to minimise the impact on the existing trees on the site. The existing compound and sheds etc. will be demolished, with parts of the boundary wall being removed and rebuilt; some along existing lines, other sections will be re-aligned.

The impact of the new layout on the existing trees and hedges is shown on the accompanying drawing 6469-Rathbeale-301 (Tree Protection Plan). The direct impact of the development will be minimal, with only the young, recently planted trees (group G3) to be removed.

Some of the other trees around the site will be vulnerable to construction damage unless properly protected during the demolition works and the construction phase of the project. The Birch tree tagged T1206 will be very close to the re-aligned boundary wall and will need to be protected by fencing during the demolition and early construction phase; ground protection around the tree root zone will be necessary for the building works to proceed on the outer side of the new wall.

The trees along Pine Grove Park will need to be separated from the works by well located fencing in order to protect them from inadvertent damage.

Tree group G4 are unlikely to have significant root mass extending into the compound area, however they are located close to the edge of the proposed works and will need protection from construction traffic etc. during the project.

8 Arboricultural Method Statement

8.1 Tree Surgery Works

The young trees making up group G3 earmarked for removal will be felled and the stumps removed.

All woody material arising from the clearance works should be disposed of at an appropriate green waste facility or recycled for use on the project (woodchip mulch for example).

These works should be undertaken by professional tree surgeons working to BS 3998 (2010) Tree Work – Recommendations.

8.2 Tree Protection Measures

Sturdy tree protection fencing will be erected along the lines shown on the Tree Protection Plan Drawing 6469-Rathbeale-301 to prevent demolition and construction work encroaching into the root protection areas (RPAs) of the trees to be retained.

Demolition works will be carried out such that materials are drawn back into the compound area, away from the surrounding trees. Care will be taken with machinery swing shovels, buckets etc. to avoid damage to the branching of trees.

Any works operating from outside the boundary wall (such as wall rendering etc.) will be carried out from well supported scaffolding or ground protection (such as scaffold boards, ground protection mats etc.) to avoid root damage to the surrounding trees. This is especially important close to tree T1206 and alongside tree group G4.

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

All site offices, materials storage, staff parking etc. will located outside of the RPAs of the trees; there is ample space on the site to accommodate these facilities outside the RPAs of the retained trees and hedges.

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

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

The retained trees should be assessed by a qualified arborist following the completion of the construction works.

9 Site Photographs



Photo 1 Trees T1201-T1206 at the north western end of the survey area



Photo 2.Trees T1209-T1211 and small groups G1 and G2 just outside the northern wall of the compound

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Photo 3 Linear tree group G4 in the garden of the adjoining residential dwelling

10 Schedule of Trees Included in the Survey

No.	Species	Age	Ht m	Dbh mm	St	Cr	N	S	E	W	ERC	Phys Cond	Structural Condition/Comments	Preliminary Recommendations	RPA m	Area m2	Cat
T1201	Fraxinus excelsior (Ash)	EM	12.5	390	1	2	6.5	3.5	5	5.5	20+	Fair	Fair. Tree of reasonable form in open space. Compacted root-zone with some damage to large surface roots. Crown somewhat distorted due to group pressure. Some slightly low branches over road.	Crown lift to improve clearance from road traffic. Improve soil conditions by mulching, decompaction etc.	4.68	68.8	B2
T1202	Fraxinus excelsior (Ash)	EM	12.5	350	1	2	5	3	3.5	3	10+	Fair	Fair. Compacted root-zone. Some damage to surface roots. Unbalanced crown shape due to side pruning works by ESB contractors. Scattered minor deadwood.	No urgent works needed. Improve soil conditions by mulching, decompaction etc.	4.2	55.4	C2
T1203	Fraxinus excelsior (Ash)	EM	14	450	1	1.5	4.5	6	7	3.5	20+	Fair	Fair. Compacted root-zone. Unbalanced crown shape. Scattered minor deadwood.	No urgent works needed. Improve soil conditions by mulching, decompaction etc.	5.4	91.6	B2
T1204	Acer platanoides (Norway Maple)	EM	10	380	1	4	5	6	5	5	20+	Fair	Fair. Street tree with a restricted and compacted root-zone. Some damage to large surface roots.	No urgent works needed.	4.56	65.3	B2
T1205	Acer platanoides (Norway Maple)	EM	10.5	450	1	2	6	5	6	5.5	20+	Fair	Fair. Street tree with a restricted and compacted root-zone.	No urgent works needed.	5.4	91.6	B2

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													Some damage to large surface roots.				
T1206	Betula pendula (Silver Birch)	M	10.5	340	1	0.5	3.5	3	3	3	20+	Fair	Fair. Upright form. Compacted root-zone. Some damage to surface roots. Some old wounds on stem.	No urgent works needed.	4.08	52.3	B2
T1207	Acer platanoides (Norway Maple)	EM	10.5	440	1	3	6	6	5	5	10+	Fair	Fair. Street tree with a restricted and compacted root-zone. Some damage to surface roots. Some lesions/exudation on stem indicative of stress and possible disease.	Monitor tree condition.	5.28	87.6	C2
T1208	Acer platanoides (Norway Maple)	EM	10.5	420	1	3.5	4	5.5	5	5	<10	Poor	Fair/Poor. Street tree with compacted and restricted root-zone. Some damage to surface roots. Dieback and deadwood in crown. Slow bud break indicative of low vitality and poor health.	Crown clean. Monitor tree condition.	5.04	79.8	U
T1209	Acer platanoides (Norway Maple)	EM	10	440	1	4	7	6	4.5	3	<10	Poor	Fair/Poor. Street tree with compacted and restricted root-zone. Some damage to surface roots. Dieback and deadwood in unbalanced crown. Slow bud break indicative of low vitality and poor health.	Crown clean. Monitor tree condition.	5.28	87.6	U



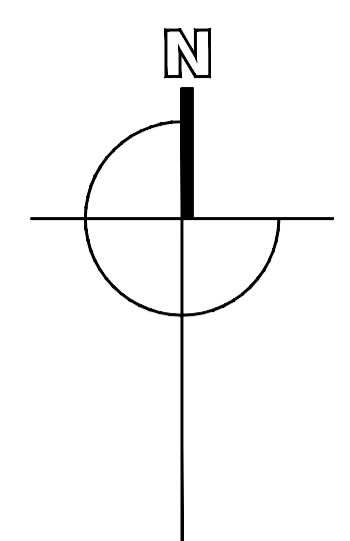
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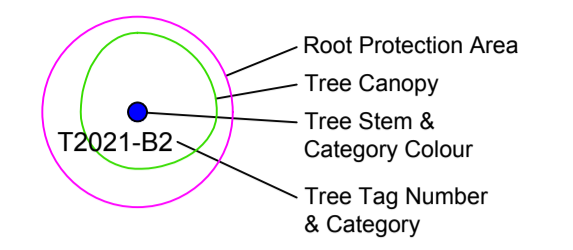
T1210	Acer campestre (Field Maple)	M	10.5	350	1	3	5	4	4.5	5.5	20+	Fair	Fair. Poor shape & form. Suckers around stem base.	No urgent works needed.	4.2	55.4	C2
T1211	Crataegus monogyna (Hawthorn)	M	5	377	3	2	3	3	2	2	10+	Fair	Fair. Smaller bush/tree with thick Ivy growth on tree stem. Multiple stems below 1.5m.	No urgent works needed.	4.52	64.2	C2
G1	Betula pendula (Silver Birch) Crataegus monogyna (Hawthorn) Corylus avellana (Hazel)	EM	10.5	200	1	3	3	2.5	3	2.5	10+	Fair	Fair. Cluster of young trees in verge. Thick Ivy growth on tree stems. Individual trees of relatively low value.	No urgent works needed.	2.4	18.1	C2
G2	Betula pendula (Silver Birch)	EM	13	300	1	3.5	4	4	4	4	20+	Fair	Fair. Group of slightly larger trees in verge. Thick Ivy growth on tree stems. Dbh range between 150 to 400mm.	Cut Ivy around stem bases and review.	3.6	40.7	B2
G3	Juglans regia (Walnut)	Y	3.5	<100	1	1.5	1	1	1	1	20+	Fair	Fair. Linear planting of 5 small young trees outside compound wall, one other stem appears to have been removed leaving a gap.	No urgent works needed.	1.2	4.52	C2
G4	Acer platanoides (Norway Maple) Prunus spp. (Flowering Cherry)	EM	11.5	350	1	2	4.5	4.5	4.5	4	20+	Fair	Fair. Linear group of 4 Maple trees plus single Cherry tree in garden of house immediately south east of the compound buildings. Trees appear to be in reasonable condition.	No urgent works needed.	4.2	55.4	B2



11 Tree Survey Drawing



LEGEND



- Category A Trees (high value)
- Category B Trees (moderate value)
- Category C Trees (low value)
- Category U Trees (unsuitable for retention)

Rev	Date	Drawn	Checked	Description

Notes

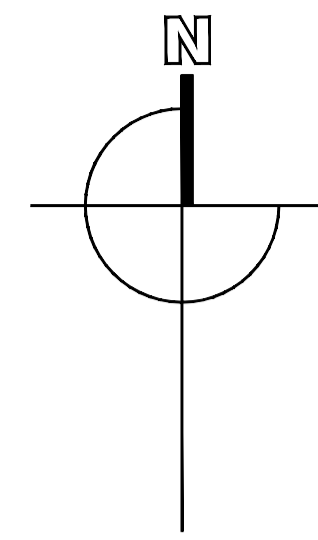
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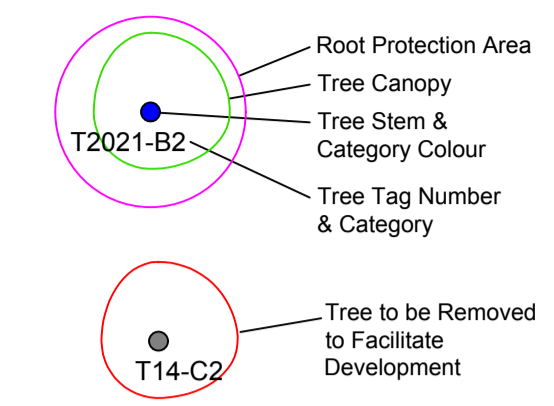
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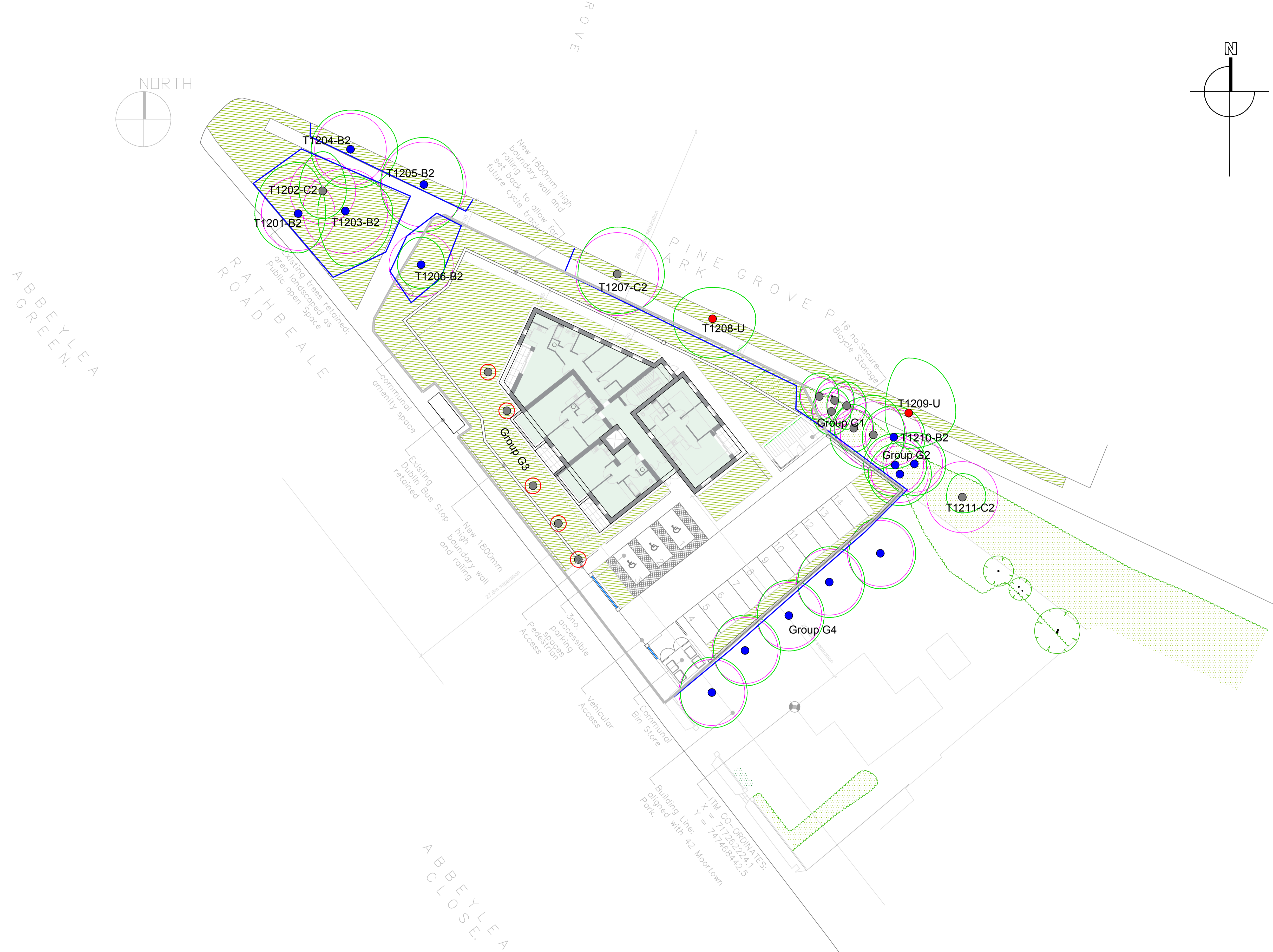
12 Tree Protection Plan Drawing



LEGEND



- Category A Trees (high value)
- Category B Trees (moderate value)
- Category C Trees (low value)
- Category U Trees (unsuitable for retention)
- Tree Protection Fence - Indicative Line During Main Demolition & Construction Works



ITM CO-ORDINATES:
 X = 717262229.41
 Y = 747468442.5
 Building Line aligned with 42, Moortown Park.

Rev	Date	Drawn	Checked	Description

Notes

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