

Arboricultural Assessment

(Tree survey)

To assess the trees

On the site at

Rosemount House,
Northern Cross,
Malahide Road,
Dublin 17

December 2021

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PART ONE – ARBORICULTURAL ASSESSMENT

Introduction

The purpose of this report is to set out the findings following the inspection of trees on site at, **Rosemount House, Northern Cross, Malahide Road, Dublin 17** and set out their condition. The survey work was undertaken 14th October and 1st December 2021 by the undersigned a qualified arboricultural consultant. The term of reference for the report is a planning application on the site. The following categories have been used within the tree report tables and, where appropriate, the criterion used to define each category is defined.

- **Tree No.** : refers to the identification tag attached to a tree [also identified as such on the accompanying survey drawings]
- **Species** : refers to the common and scientific name given to the tree.
- **Stem diameter** : refers to the diameter of the tree stem in millimetres, as measured at 1.5 metres above ground level and above the root flare for multi-stemmed trees.
- **Height** : refers to the total height of the tree in metres. (Heights measured with a TruPluse® 200)
- **Crown spread** : refers to the width of the crown in metres, measured at each cardinal point on the compass. [Dimensions marked with # are estimates as per 4.4.2.6 c) – BS 5837:2012]
- **Condition** : refers to the physiological condition of the tree as a whole described as:
 - Good** – Full healthy canopy but possibly including some suppressed or damaged branches
 - Fair** – Slightly reduced leaf cover, minor dead wood or isolated major dead wood
 - Poor** – Overall sparse leafing or extensive dead wood
- **Age** An estimation of the age of the tree described as;
 - V- Veteran, trees, which by recognized criteria, show features of biological, cultural or aesthetic value that are characteristic of, but not exclusive to individuals surviving beyond the typical age range for the species concerned.
 - OM – Over Mature, trees reaching the end of their life, in decline and senescent.
 - M – Mature, fully grown, with only small annual increments.
 - EM – Early Mature, one-third to two thirds of total life expired.
 - Y – Young, recent planting, with up to one third of total life expired.

- **Remarks:** Descriptive comments about the health (physiological) or form (structural) of the tree, its environment or external influences and may include preliminary management recommendations.

Category grade

- **U** -Those trees in such a condition that any existing value would be lost within 10years and which should be in the correct context, be removed for reasons of sound arboricultural management.
 - **A** -Those trees of a high quality and value in such a condition as to be able to make a substantial contribution.
 - **B** - Those trees of a moderate quality and value in such a condition as to be able to make a significant contribution.
 - **C**- Those trees of a low quality and value currently inadequate condition to remain until new planting could be established, or young trees with a stem diameter below 150mm
- **Estimated remaining contribution in years (ERC):** Expressed as less than 10, 10+, 20+, more than 40

Glossary of terms used:

Basal: The base of the tree close to the ground, (basal shoots are those emanating from the base).

Crown (canopy): The leaves and branches of a tree.

Co-dominant: Stems or branches of near equal diameter, often weakly attached.

Decay: Degradation of wood by fungi and/or bacteria.

Defect: Any feature of a tree which detracts from the uniform distribution of mechanical stress, or which makes the tree mechanically unsuited to its environment.

Dieback: The death of part of a plant, usually starting from a distal point and often progressing in stages.

Epicormic : Pertaining to shoots or roots, which are initiated on mature woody stems; shoots may form in this way from dormant buds or they may be adventitious.

Dysphotic zone : A zone within the canopy which does not have enough light to carry out photosynthesis.

Included Union: bark of adjacent parts of a tree (usually in forks, acutely angled branches or basal flutes), which is in face-to-face contact, so that there is weakness due to the lack of a woody union.

Lean: Departure of the trunk from the vertical.

Scaffold limbs: The branches, which form the main framework of the crown of a tree with a decurrent growth habit.

Shoot: A shoot derived from a dormant or adventitious bud on the main stem or branch.

Stub/peg: A short section of a branch, which may have, been left after previous pruning or storm damage.

Wound: Injuries on the surface of a trunk or branch.

Full: A canopy, which extends to the ground or nearly to the ground

Natural suppressed deadwood: Deadwood in conifers, which died as the crown height extended and the lower branch no longer have a function in the production of foliage.

Pathogens: Fungal and /or bacterial infections, which degrade the wood and render trees liable to failure

Wound wood: Wood with atypical anatomical features, formed in the vicinity of a wound or the occluding tissue around a wound

Hazard Limb: An upwardly curved part in which strong internal stresses may occur, cause wood to crack

Burr: Woody protuberances, especially those derived from the mass proliferation of adventitious buds.

Root protection area (RPA) : 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.

Survey Results

Tree no.	Species	Height (m)	Stem dia. (mm)	Spread (m)	Condition	Age	ERC	Remarks	Grade
The tree survey starts in the Northwest corner of the site and goes anticlockwise around the outside of the parking bays.									
6282	Rowan <i>Sorbus aucuparia</i>	5.6	120	N 2.0 S 2.0 E 2.0 W 1.5	Good	EM	20+	A tree with good form, it appears free from any defects.	A
6283	Rowan <i>Sorbus aucuparia</i>	6.6	140	N 2.0 S 1.5 E 2.0 W 2.0	Good	EM	20+	A tree with good form, it appears free from any defects, it has a small basal suckers.	A
6284	Birch <i>Betula pendula</i>	4.9	100	N 2.0 S 1.0 E 1.5 W 1.5	Fair	EM	20+	A tree with low vigour and poor form, the crown has multiple scaffolds.	B
6285	Birch <i>Betula pendula</i>	10.1	150	N 3.0 S 2.0 E 2.0 W 2.0	Fair	EM	20+	A tree with a slight lean, it has a subdominant lateral as well as its main stem.	B

Tree no.	Species	Height (m)	Stem dia. (mm)	Spread (m)	Condition	Age	ERC	Remarks	Grade
6286	Birch <i>Betula pendula</i>	9.1	200	N 2.0 S 2.0 E 2.0 W 2.0	Good	M	20+	A tree with a distorted stem with reasonable form.	B
6287	Rowan <i>Sorbus aucuparia</i>	8.1	200	N 2.0 S 2.0 E 3.0 W 2.0	Good	M	20+	A tree with good form, it appears free from any defects.	A
6288	Birch <i>Betula pendul</i>	8.8	200	N 3.0 S 2.0 E 3.0 W 3.0	Good	M	20+	A tree with a slight lean, it has good form and good vigour.	A
6289	Rowan <i>Sorbus aucuparia</i>	5.6	100	N 2.0 S 2.0 E 2.0 W 2.0	Fair	EM	20+	A tree with good form with low vigour.	B
6290	Birch <i>Betula pendula</i>	5.1	120	N 1.5 S 1.5 E 1.5 W 1.5	Poor	EM	20+	It has a basal wound on its stem, it has reiterative leader above the wound.	C

Tree no.	Species	Height (m)	Stem dia. (mm)	Spread (m)	Condition	Age	ERC	Remarks	Grade
6291	Rowan <i>Sorbus aucuparia</i>	6.4	140	N 2.5 S 2.0 E 2.0 W 2.5	Good	M	20+	A tree with good form, it appears free from any defects.	A
6292	Rowan <i>Sorbus aucuparia</i>	6.9	150	N 2.0 S 1.5 E 1.5 W 1.5	Good	M	20+	A tree with good form, it appears free from any defects.	A
6293	Cider Gum <i>Eucalyptus gunnii</i>	10.1	100	N 1.0 S 1.0 E 1.0 W 1.0	Poor	EM	10+	A tall drawn up narrow weak canopy with scattered deadwood.	C
6294	Rowan <i>Sorbus aucuparia</i>	6.5	120	N 2.0 S 2.0 E 2.0 W 2.0	Good	M	20+	A tree with good form, it appears free from any defects.	A
6295	White birch <i>Betula utilis</i>	7.1	100	N 2.0 S 2.0 E 2.0 W 2.0	Good	EM	20+	A tree with good form, it appears free from any defects.	A

Tree no.	Species	Height (m)	Stem dia. (mm)	Spread (m)	Condition	Age	ERC	Remarks	Grade
6296	Birch <i>Betula pendula</i>	8.3	150	N 2.5 S 2.0 E 3.0 W2.0	Good	EM	20+	A tree with good form, it appears free from any defects.	A
6297	Birch <i>Betula pendula</i>	6.9	100	N 2.0 S 2.0 E 2.5 W2.0	Good	EM	20+	A tree with a one sided canopy, it has good form.	A
6298	Birch <i>Betula pendula</i>	7.6	150	N 3.0 S 2.0 E 3.0 W2.0	Good	EM	20+	A tree with good form, it appears free from any defects.	A
6299	Rowan <i>Sorbus aucuparia</i>	6.9	150	N 2.5 S 1.5 E 1.5 W1.5	Good	M	20+	A tree with good form, it appears free from any defects.	A
6300	Birch <i>Betula pendula</i>	4.5	100	N 2.0 S 1.5 E 2.0 W1.5	Fair	EM	20+	A tree with a weak form, it has earlier infection of Witches Broom (<i>Taphrina</i> sps.)	C

Tree no.	Species	Height (m)	Stem dia. (mm)	Spread (m)	Condition	Age	ERC	Remarks	Grade
6301	Birch <i>Betula pendula</i>	5.0	120	N 2.0 S 1.0 E 2.5 W2.0	Fair	EM	20+	A tree with poor form and low vigour.	C
6302	Birch <i>Betula pendula</i>	8.2	150	N 2.0 S 1.5 E 2.0 W2.0`	Fair	EM	20+	This tree has a distorted stem with low vigour and an earlier infection of Witches Broom (<i>Taphrina</i> sps.)	B
6303	Scot's pine <i>Pinus sylvestris</i>	7.0	170	N 2.5 S 2.0 E 2.5 W2.5	Fair	EM	20+	A tree with weak foliage and scattered minor deadwood.	B
6304	Birch <i>Betula pendula</i>	6.4	100	N 2.5 S 2.0 E 2.0 W2.0	Fair	EM	20+	A weak canopy with scattered deadwood.	C
6305	Rowan <i>Sorbus aucuparia</i>	6.4	130	N 2.0 S 2.0 E 1.0 W1.0	Good	EM	20+	A tree with good form, it appears free from any defects.	A

Tree no.	Species	Height (m)	Stem dia. (mm)	Spread (m)	Condition	Age	ERC	Remarks	Grade
6306	Rowan <i>Sorbus aucuparia</i>	6.4	120	N 1.5 S 1.5 E 1.5 W1.5	Good	EM	20+	A tree with good form, it appears free from any defects.	A
6307	Snow Gum <i>Eucalyptus niphophila</i>	9.6	400	N 4.0 S 4.0 E 4.0 W3.5	Fair	EM	20+	A tree with multiple stems, it has a high canopy with scattered deadwood.	B
6308	Scot's pine <i>Pinus sylvestris</i>	4.9	90	N 2.5 S 0.0 E 1.5 W1.0	Poor	EM	10+	A weak suppressed tree with significant crown die back.	C
6309	Birch <i>Betula pendula</i>	7.5	120	N 2.5 S 2.0 E 3.0 W1.0	Fair	EM	20+	Suppressed by the Gum tree, it has a one sided crown.	B
6310	Birch <i>Betula pendula</i>	6.2	100	N 2.0 S 2.0 E 2.5 W2.0	Good	EM	20+	A tree with good form, it appears free from any defects.	A

Tree no.	Species	Height (m)	Stem dia. (mm)	Spread (m)	Condition	Age	ERC	Remarks	Grade
6311	Birch <i>Betula pendula</i>	5.9	100	N 2.5 S 2.0 E 2.0 W1.0	Good	EM	20+	A tree with good form, it appears free from any defects.	A
6312	Flowering crab <i>Malus 'Golden Hornet'</i>	6.4	100/ 100/ 100	N 4.0 S 2.0 E 2.5 W2.5	Fair	EM	20+	A tree with multiple stems, it has poor form with wounds on its stem as well as truncated stubs.	C
6313	Flowering crab <i>Malus 'Golden Hornet'</i>	6.1	250	N3.5 S 4.0 E 4.0 W4.0	Fair	EM	20+	A tree with multiple stems, it has poor form with a dense branch structure with wounds on its stem as well as truncated stubs.	C
6314	Birch <i>Betula pendula</i>	6.2	90	N 2.0 S 2.0 E 2.0 W1.0	Good	EM	20+	A tree with reasonable form, it appears free from any defects.	B
6315	Birch <i>Betula pendula</i>	6.0	100	N 2.0 S 2.0 E 2.0 W1.0	Good	EM	20+	A tree with reasonable form, it appears free from any defects.	B

Tree no.	Species	Height (m)	Stem dia. (mm)	Spread (m)	Condition	Age	ERC	Remarks	Grade
6316	Birch <i>Betula pendula</i>	6.4	100	N 2.0 S 2.0 E 2.0 W1.5	Good	EM	20+	A tree with good form, it appears free from any defects.	B
6317	Snow Gum <i>Eucalyptus niphophila</i>	10.3	250/ 300/ 350	N 8.0 S 2.5 E 7.0 W3.0	Good	EM	40+	A tree with multiple scaffolds, it has established well with good vigour, it has a long roots extending along the grass verge. It has very minor deadwood in its canopy.	B
6318	Birch <i>Betula pendula</i>	8.6	150	N 2.5 S 2.0 E 3.0 W2.0	Fair	EM	20+	A tree with a dense canopy and co-dominant stems.	B
6319	Birch <i>Betula pendula</i>	9.3	200	N 2.0 S 2.0 E 2.0 W2.0	Good	EM	20+	A tree with good form, it appears free from any defects. It has a dense canopy.	B
6320	Birch <i>Betula pendula</i>	6.0	140	N 2.0 S 2.0 E 2.0 W2.0	Fair	EM	20+	A tree with a weak crown, it has form for and dense branch structure.	C

Tree no.	Species	Height (m)	Stem dia. (mm)	Spread (m)	Condition	Age	ERC	Remarks	Grade
6321	Birch <i>Betula pendula</i>	5.3	130	N 2.5 S 2.0 E 3.0 W3.0	Fair	EM	20+	A tree with a weak crown, it has form for and dense branch structure.	C
6322	Birch <i>Betula pendula</i>	7.3	130	N 2.0 S 2.0 E 2.0 W2.0	Fair	EM	20+	A tree with good form, it appears free from any defects, it has some minor scattered deadwood.	B
6323	Rowan <i>Sorbus aucuparia</i>	7.5	200	N 2.0 S 2.0 E 2.5 W2.5	Good	EM	20+	A tree with good form, it appears free from any defects.	A
6324	Birch <i>Betula pendula</i>	7.0	150	N 2.0 S 2.0 E 2.0 W2.0	Good	EM	20+	A tree with reasonable form, with scattered deadwood.	B
6325	Birch <i>Betula pendula</i>	9.1	200	N 2.0 S 2.0 E 2.0 W2.0	Good	EM	20+	A tree with good form, it appears free from any defects.	A

Tree no.	Species	Height (m)	Stem dia. (mm)	Spread (m)	Condition	Age	ERC	Remarks	Grade
6326	Birch <i>Betula pendula</i>	8.5	250	N 3.0 S 3.0 E 2.5 W 2.5	Good	EM	20+	A tree with co-dominant leaders with a dense canopy and an earlier infection of Witches Broom (<i>Taphrina</i> sps.)	A
6327	Birch <i>Betula pendula</i>	5.7	120	N 2.0 S 2.0 E 2.0 W 2.0	Fair	EM	20+	A tree with weak form with low vigour and minor scattered deadwood.	C
6328	Birch <i>Betula pendula</i>	6.2	120	N 2.0 S 2.0 E 1.0 W 1.0	Fair	EM	20+	This tree has co-dominant stems, with weak vigour and scattered deadwood. It has good form.	C
6329	Birch <i>Betula pendula</i>	6.9	60	N 1.0 S 0.0 E 0.0 W 1.0	Fair	EM	10+	A weak tree with a tall drawn up stem and a high canopy.	U
The next section of trees are close to the building and the survey continues in an anti-clockwise direction.									
6330	Birch <i>Betula pendula</i>	10.5	150	N 2.0 S 1.5 E 2.0 W 2.0	Good	EM	20+	A tree with a narrow canopy, it has good form.	B

Tree no.	Species	Height (m)	Stem dia. (mm)	Spread (m)	Condition	Age	ERC	Remarks	Grade
6331	Birch <i>Betula pendula</i>	4.0	90	N 1.5 S 1.0 E 1.5 W 1.5	Fair	EM	20+	A weak tree with poor form.	C
6332	Birch <i>Betula pendula</i>	7.0	120	N 2.0 S 2.0 E 2.0 W 2.0	Fair	EM	20+	A tree with co-dominant stems, it has a high crown and good form.	B
6333	Flowering crab <i>Malus 'Golden Hornet'</i>	5.1	150	N 2.5 S 3.0 E 2.0 W 2.5	Faire	EM	20+	A tree with a leaning stem, with multiple scaffolds and has poor form.	C
6334	Birch <i>Betula pendula</i>	4.8	60	N 1.0 S 1.0 E 1.0 W 1.0	Fair	EM	20+	A weak tree with poor form.	C
6335	Birch <i>Betula pendula</i>	4.3	80	N 1.0 S 1.0 E 1.0 W 1.0	Fair	EM	20+	A tree with good form, it appears free from any defects.	B

Tree no.	Species	Height (m)	Stem dia. (mm)	Spread (m)	Condition	Age	ERC	Remarks	Grade
6336	Birch <i>Betula pendula</i>	7.1	130	N 2.0 S 2.0 E 1.5 W1.0	Fair	EM	20+	A tree with a distorted stem, it has good vigour.	B
6337	Birch <i>Betula pendula</i>	7.3	150	N 2.0 S 2.0 E 2.0 W2.0	Good	EM	40+	A tree with good form, it appears free from any defects.	A
6338	Birch <i>Betula pendula</i>	7.3	120	N 2.0 S 2.0 E 2.0 W1.0	Good	EM	20+	A tree with a dense canopy with good form.	B
6339	Birch <i>Betula pendula</i>	4.3	60	N 1.0 S 1.0 E 1.0 W1.0	Fair	EM	20+	A tree with a high crown, the stem has a supported stake, it has multiple scaffolds.	C
6340	Birch <i>Betula pendula</i>	4.2	60	N 1.0 S 1.0 E 1.0 W1.0	Fair	EM	20+	A tree with a high crown, it has multiple scaffolds.	C

Tree no.	Species	Height (m)	Stem dia. (mm)	Spread (m)	Condition	Age	ERC	Remarks	Grade
6341	Flowering crab <i>Malus 'Golden Hornet'</i>	3.8	150	N 2.0 S 3.0 E 2.0 W 2.0	Fair	EM	20+	A tree with multiple scaffolds forming its crown, it has a slight lean, it appears free from defects.	B
6342	Birch <i>Betula pendula</i>	10.2	140	N 2.0 S 1.5 E 2.0 W 2.0	Good	EM	20+	A tall drawn up stem, it has a small sub-dominant lateral stem. It has very minor deadwood.	B
6343	Birch <i>Betula pendula</i>	6.4	100	N 2.0 S 2.0 E 2.0 W 1.5	Fair	EM	20+	A tree with a poor form. It has a support stake and a distorted leader. It has scattered deadwood in its crown.	C
G1	Hornbeam <i>Carpinus betulus</i>	-	-	-	Good	EM	40+	A line of six trees, in the grass verge along the distributor road. They have well-formed canopies with good vigour and are free from defects. The third tree from the north has a basal wound and a small basal sucker.	B

Assumptions and Limitations

This tree survey was carried out from the ground, no invasive or destructive evaluation techniques were used; all findings observations and recommendations are based on the knowledge and experience of the undersigned a qualified Arboriculturalist. Information contained in this report covers only those items that were examined and reflects the condition of those items at the time of the inspection.

Findings are based on a visual report from ground level only and it should be borne in mind it is subject only to faults visible at the time of inspection, certain pathogens only produce seasonal fruiting bodies and consequentially may not have been noted during this assessment. All trees should be monitored on a regular basis for signs of defects and should be reported to a person qualified to diagnose them and to recommend treatment.

In the event of adverse weather conditions, there is the possibility of any tree, despite having a good report, falling over or suffering crown damage. In the event of a falling tree causing damage to residential or non residential buildings in their proximity, or to any person, any property public or private, or any mechanical vehicle or otherwise no liability will attach to this firm.

There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the trees in question may not arise in the future. The author takes no responsibility for any actions taken by the landowner or their agents by reasons of this report unless subsequent contractual arrangements are made.

This report is intended solely for the benefit of the parties to whom it is addressed and no responsibility is extended to any third party for the whole or any part of its contents. All trees mentioned in this report should be subject to reassessment every two years to assess physiological and environmental changes.

PART TWO - ARBORICULTURAL IMPACT ASSESSMENT

General Description of Site and Surroundings

The site is comprised of a business headquarters, it is a single building surround by a landscaped carpark. In addition to the scheduled trees there are areas of grass and shrubs. The shrubs include; Sumach, ground ivy, Photinia, Fatsia, Bergenia and Juniper. To the north of the site is an area being used as a site compound for an adjoining development and further north is a linear woodland along the Mayne river. The site is located within an established business park, with residential and commercial developments to the east.

Description of Proposed Development

The proposed development consists of the demolition of the existing 3-storey office block on site and the construction of a mixed-use block of up to 9 storeys over basement in a 4-sided building around a central courtyard area, consisting of 176 no. apartments with associated residential amenities, office (c. 1,060.5 sq.m), and café use (c. 143.7 sq.m), at Rosemount House, Northern Cross, Malahide Road, Dublin 17, on a c. 0.6462 ha site.

Designations Relating to Trees

There are no Tree Preservation Orders on the site. There is no objective in the County Development plan to protect and preserve trees and woodlands at locations within the site.

Implications of Proposed Development

The current proposal under consideration has the following impact on the existing trees.

(1) Direct Loss of Trees

The following trees will have to be removed due to a direct impact; All the trees within the site are to be removed.

Summary Table of survey trees

Grade	Total No.	No. to be removed	% of all trees (68)
U (worst – remove)	1	1	1.47%

Grade	Total No.	No. to be removed*	% of grade	% of all trees (68)
'V' Veteran	0	0	0	0
'A' (best quality)	20	20	100%	29.4%
'B' (moderate quality)	23 (6)	25	86.2%	36.76%
'C' (low quality)	18	18	100%	26.74%
Total	68	64		

(2) Indirect Impacts

Condition

Tree 6329, is in such a condition that it would need to be removed based on it is condition.

PART THREE - ARBORICULTURAL METHOD STATEMENT

Introduction

This document sets out the methodology for all proposed works that affect trees on and adjacent to the site. Compliance with this method statement will be a requirement of all relevant contractors associated with the development proposals.

Copies of this document will be available for inspection on site. The developer will inform the local planning authority within twenty-four hours if the arboricultural consultant is replaced.

The contractor shall take all precautions to ensure that any trees, which are to be retained, shall remain undisturbed and undamaged.

All works to trees and all operations adjacent to trees should be undertaken in accordance with the Method Statement. The contractor shall undertake no works to trees unless instructed by the Contract Administrator. All works within or close to the protected tree zones are to be supervised by the appointed Consultant Arboriculturalist. Two working days notice of intention to undertake such works to be given prior to any works commencing.

Root Protection Area

In accordance with the Method statement and as per the issued drawings protective fences shall be erected before the commencement of building works any works on site (other than remedial tree works and erection of the boundary fence). The area within the tree fencing should be clearly identified with signage as the 'Protected Tree Zone'. The local planning authority will be notified in writing once the fencing is in place. Strictly no access should be permitted to this zone unless instructed by the CA. The appointed Consultant Arboriculturalist should be notified of any works or access to this zone. The fencing will remain in place until completion of the main construction phase and then only removed with the consent of the local planning authority to permit completion of the scheme.

Other than works detailed within this method statement or approved in writing by the local planning authority, no works including storage or dumping of materials shall take place within the exclusion zones defined by the protective fencing. No fires should be lit close to or within 20 metres of the trunk of any tree that is to be retained. No materials that are likely to have an adverse effect on tree health such as oil, bitumen or cement will be stored or discharged within 10 metres of the trunk of a tree that is to be retained.

Code of Practice for the preservation of trees

The following code of practice is intended for the preservation of existing trees. These guidelines will help sustain vigour and minimise adverse growing conditions, for trees set out for retention.

This code will be brought to the attention of all site personnel including Main Contractor, sub-contractors and engineering specialists associated with the project. As appropriate this method statement should be translated. All operations are to be in accordance with BS 5837: 2012, *Trees in relation to design, demolition and construction*. The main contractor should purchase and make available on site a copy of the above.

Prior Notice and Tree removal

All necessary tree works are to be undertaken prior to the commencement of any other works on site. Trees must only be removed with the necessary licenses (*Forestry Act 2014*)¹ or permits. All necessary licenses and permits should be inspected by the appointed Consultant Arboriculturalist prior to commencement of works.

The Arboricultural Consultant will:

- Liaise with the relevant authorities during the project.
- Constantly monitor the project with regard to tree health to ensure that no damage is caused to the subject trees during the operational works.
- Report any negligent damage to trees, which will prejudice their health.
- Monitor works carried out by the Arboricultural Contractor and Main Contractor within the 'Root Protection Area'.

¹ Note that under the Forestry Act 2014, no felling licence will be required on receipt of planning permission.

Guidelines for demolition and site clearance

Demolition of buildings within the recommended RPA (Root protection area) should be undertaken inwards, within the footprint of the existing building, removal of below ground elements should be undertaken with appropriate machinery, under supervision, and with care. The area should be checked for possible root encroachment during operations. Any roots exposed should be treated in accordance with section 11.3 of BS 5837 : 2005.

No stockpiling of spoil will be allowed and it will be removed off site as it is generated.

Prior to and during all construction works on site, no spoil or construction materials etc. are to be stored within the tree protection zone, even if proposed development is an area outside the site.

Before commencement of the piling works a piling mat will be required. This will require the existing ground level to be reduced by up to a metre depending on site conditions.

This will then be replaced by a hardcore to create a hard standing for the piling rig. The final one metre of this site clearance to the protective fence will be excavated by hand so that any roots encountered greater than 50mm diameter can be dealt with as detailed by the Arboriculturalist.

Offences and Penalties

Any damage whatsoever, caused to the protected trees shall be notified to JM McConville + Associates, so that the damage can be assessed and rectified and the main contractor subject to financial penalty as per the Conditions of Contract. Value of damaged tree will be assessed using the 'Helliwell System'.

Supervision and Monitoring

The arboricultural consultant will be responsible for monitoring of all arboricultural works and issuing a certificate of practical completion.

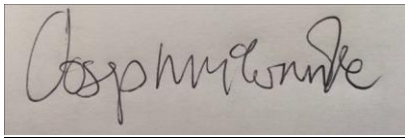
In addition, the arboricultural consultant will inspect the protective fencing and monitor any works within exclusion zones.

A record of site visits will be maintained for inspection on site and copies forwarded to the developer / agent and to the local planning authority. The Contractor shall not fell any trees under any circumstances. All works within the protected tree zones are to be supervised by the arboricultural consultant.

Tree Protection Barrier Fencing

Tree protection barriers are to be in accordance with BS 5837:2012, clause 6.2. Barrier fencing to be 2.0 m high, comprising of 'Herras' style fence, each panel to be secured to the adjoining panel fixed to scaffold poles in with a minimum of 2 anti-tamper couplers, installed so that they can only be removed from inside the fence. The panels are to be supported by stabilizers struts on the inside. Barrier fencing is to be installed to an agreed alignment. The Alignment is to be marked out on site and approved by the arboricultural consultant prior to erection of the barrier fencing. 'Construction Exclusion Zone' signage to be securely attached to the fence. Barrier fencing is to be maintained by the main contractor for the duration of the contract. All damage to be reported immediately to the Arboricultural consultant. Damaged fencing is to be repaired within 2 hours of the damage occurring to the satisfaction of the Arboricultural consultant.

All site operations in the vicinity of the damaged fencing are to be suspended until the fencing is repaired. During site inspections the Arboricultural consultant reserves the right to authorise the cessation of all works in proximity to the protected zones with immediate effect. A breach of such an instruction will be deemed to be a dismissible offence for the employee. As contract work progresses the protective barrier fence can only be adjusted under the supervision of the arboricultural consultant.



Joseph McConville B.Agr.Sc., F.Arbor.A. CEnv
JM McCONVILLE + ASSOCIATES

August 2022