

Arboricultural Assessment Report

Bluebell

Naas

Co. Kildare

Project No.	Project name	Date	Revision
TBLU001	Bluebell	31/10/18	A

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1. Client brief & Methodology

CMK Hort + Arb were commissioned by Ardstone Homes Ltd. to undertake an assessment of trees on the site of a proposed housing development at Bluebell, Naas, Co. Kildare (image 1). The fieldwork was undertaken on the 11th of April 2018.

The survey is designed to be an independent analysis of the trees therefore this assessment does not take into consideration any plans for the future development of the site; however, it is recognised that there are proposals to re-develop the site therefore some of the comments within section 2 reference the suitability of trees for retention in this context.

The survey methodology, supporting drawings and documentation follow the recommendations contained within BS 5837 (2012). The analysis of the trees was undertaken using the VTA methodology as developed by Mattheck and Breloer (1994).

2. General description of trees

The site is located to the edge of Naas and borders housing developments on its northern and eastern boundaries (image 1). A total of twenty individual trees and shelterbelt plantings were identified and assessed for this report. The trees are a mixture of deciduous and evergreen species / cultivars of varying quality (refer to table 1 & section 7 of this report), and they are located on the northern, eastern and western boundaries of the site.

On the southern boundary, there are young sycamore (*Acer pseudoplatanus*) within an agricultural hedgerow (image 2) with two small shelterbelts of Leyland cypress (*xCuprocyparis leylandii*) and a Monterey cypress cultivar (images 3&4). In addition, there are birch (*Betula pendula*) and Swedish whitebeam planted to the east of the Monterey cypress (image 5). In terms of the re-development of the site, the birch and sycamore probably provide greatest potential for retention in terms of their landscape value.

On the northern boundary, there are three large mature beech (*Fagus sylvatica*). Two straddle the boundaries with neighbouring properties (image 6) with one on the boundary with the adjacent green space associated with the Broadfield housing estate. The trees on the boundary with the neighbouring properties are large

mature specimens with wide spreading crowns extending into the site (image 7).

The tree adjacent to the open space area has areas of decay present but these are not considered significant at present.

The eastern boundary has no trees within the site but a number of large mature ash (*Fraxinus excelsior*) and beech are located within neighbouring properties very close to the boundary line (image 8). These trees overhang and are likely to have roots extending into the site. Roots from these trees may have been 'pruned' during agricultural ploughing works thereby reducing their growth into the site however the extent of this is unknown at present.



Image 1. Site boundary

Category	Number	% of total
A	2	10
B	10	50
C	6	30
U	2	10

Table 1. Tree Categories

3. Image sheet



Image 2. Young sycamore on southern boundary



Image 3. Leyland cypress on southern boundary



Image 4. Monterey cypress cultivar on southern boundary



Image 5. Birch and Swedish whitebeam on southern boundary



Image 6. Mature beech on the northern boundary



Image 7. Mature ash within neighbouring properties on the eastern boundary

4. Limitations of Survey

This survey should be regarded as a preliminary assessment of the trees and deals with the current condition as identified during this survey only. Every attempt was made to identify hazardous trees in this report however; this survey was carried out from the ground and therefore cannot be held to have identified elements of decay, which may be hidden out of sight within the crown or beneath ivy or other obstructions. To counter this limitation in the survey process it is vital that during tree works any additional defects found by the climbing arborist are communicated to the consulting arborist to allow appropriate action to be taken.

The details within this survey are based on the condition of the trees during the survey period only. The findings in this survey cannot be held to be valid after any site disturbance, man-made or natural, which may have an adverse effect on any trees present.

5 Relevant legislation

There are no Tree Protection Orders (TPOs) on any of the trees on this site. However, unless planning permission which clearly identifies trees for removal has been granted then under Section 7 of the Forestry Act 2014 a person wishing to fell trees must apply to the minister for a licence to do so.

Exempted trees: Section 19 states that the requirement for a felling licence for the uprooting or cutting down of trees does not apply where:

- The tree in question is standing in an urban area
- The tree is considered dangerous and hazardous.
- The tree is within 10m of a public road and regarded as hazardous
- The tree in question is less than 100 ft. / 30m from a dwelling other than a wall or temporary structure;
- The tree in question is a hazel, apple, plum, damson, pear, or cherry tree grown for the value of its fruit or any other;

Other exceptions apply in the case of local authority road construction, road safety and electricity supply operations.

The Act is administered by the Forest Service (Department of Agriculture, Fisheries and Food). The Felling Section of the Forest Service is based in Johnstown Castle, Co. Wexford (053-9160200 or 1890-200223).

If you have any queries about felling in general or are unsure whether or not the trees fall under any of the above cases, it is recommended that you seek the advice of the Felling Section or of your local [forestry development officer](#) for further information.

Trees may contain bats. Bats are protected under Schedule 5 of the Wildlife Act 1976 and Schedule 1 of the European Communities (Natural Habitats) Regulations 1997. Professional advice from a licenced surveyor should be sought prior to any works commencing on trees.

6. Terminology

Tree categories	
A	Trees of high quality and value due to their size, age, condition, historical/visual merit and/or conservation potential (a minimum of 40 years).
A1	Mainly arboricultural values. Particularly good examples of species, essential components of groups or of formal or semi-formal arboricultural features.
A2	Mainly landscape values. Trees, groups or woodlands which provide a definite screening or softening effects to the locality in relation to views into or out of site, or those of particular visual importance.
A3	Mainly cultural values, including conservation. Trees, groups or woodlands of significant conservation, historical, comparative or other value (e.g. veteran trees or wood-pasture).
B	Trees of moderate quality and value (a minimum of 20 years).
B1	Mainly arboricultural values. Trees that might be included in high categories but are downgraded because of impaired condition (e.g. presence of remedial defects including unsympathetic past management and minor storm damage).
B2	Mainly landscape values. Trees present in numbers, usually as groups or woodlands, such that they form distinct landscape features, thereby attracting a higher collective rating than they might as individuals but which are not, individually, essential components of formal or semi-formal features (e.g. trees of moderate quality within an avenue that includes better A category specimens) or trees situated internally to the site, therefore individually having little visual impact on the wider locality.
B3	Mainly cultural values including conservation. Trees with clearly identifiable conservation or other cultural benefits.
C	Trees of low quality and value (a minimum of 10 years).
C1	Not qualifying in higher categories.
C2	Trees present in groups or woodlands but without conferring on them greater landscape value and/or trees offering low or only temporary screening benefit.
C3	Trees with very limited conservation or other cultural benefits.
U	Trees in such 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. Trees that are dead, dying or showing immediate and irreversible decline.

Terminology (cont.)

Comments: Refers to the tree's condition and suitability for the site.

Common name: Most widely used non-botanical name.

Co-dominant: Two branches assuming the role of leading shoots. When growing close together may form a weak attachment (included bark) at their point of contact. Trees with this defect may be in danger of splitting at this weak attachment.

Crown Spread: Measured in meters north, south, east and west.

Decay fungi: Refers to those species of fungi which degrade living wood and which may, depending on the degree of degradation, render the tree structurally unsound.

Defects: Refers to cracks, storm damage and any other damage mechanical or biological.

Diameter: Diameter of the trunk (millimetres) at 1.5m. M.S. after the measurement refers to the tree being multi-stemmed.

Genus & Species: Refers to the botanical names for the tree.

Height: Measured in meters.

Monitor: Refers to trees which need to be re-surveyed on a yearly basis to assess their condition. This timescale may be sooner where works or adverse weather conditions have impacted negatively on the trees.

Overhaul: A reference to standard tree surgery work which consists of the removal of deadwood, crossing branches and balancing where appropriate.

Recommendations: Indicates surgery work necessary for the retention or, where necessary, removal of the tree.

Tree No. Refers to numbered tag fixed to tree during survey.

7. Tree condition analysis & preliminary recommendations

Tag No.	Species	Age Category	General Condition	Comments	Preliminary Recommendations	Landscape and Arboricultural Category	Useful Life Expect-any
986	Leyland cypress hedge cypress xCuprocyparis leylandii	Mature	Good	A cypress hedge consisting of 5 specimens. Not in keeping with location but no visible defects.	No action necessary	B2	40
987	Sycamore Acer pseudoplatanus	Early-mature	Good	Located within an agricultural field boundary hedgerow. This is a relatively well-developed specimen though very heavy ivy growth obscuring view for assessment. Trunk three stemmed from 2m with wide unions between stems. No visible defects.	Cut ivy	B2	40
988	Sycamore Acer pseudoplatanus	Early-mature	Good	Located within field boundary hedgerow. Trunk co dominant from 1.5m with a tight union with included bark present between stems. This is a structurally weak point in the tree and in time could lead to failure. Remaining crown relatively well developed with no visible defects	No action necessary	C2	10-15
989	Sycamore Acer pseudoplatanus	Young	Good	A relatively well-developed specimen located within field boundary hedgerow. Lower limbs broken to south but no associated decay visible. Heavy ivy growth obscuring view for assessment but upper canopy relatively well developed with no visible defects	No action necessary	B2	40
990	Sycamore Acer pseudoplatanus	Young	Fair	Trunk co-dominant from 1.5m with a tight union with included bark present between stems. A structurally weak point in the tree will ultimately reduce long term potential. Becoming swamped in ivy. A large section of crown removed for utility line clearance work.	Cut ivy	C2	10-15
991	Sycamore Acer pseudoplatanus	Young	Fair	A relatively well-developed specimen with no visible defects. Heavy ivy growth becoming established up trunk but no visible defects	Cut ivy	B2	40

Tag No.	Species	Age Category	General Condition	Comments	Preliminary Recommendations	Landscape and Arboricultural Category	Useful Life Expect-any
992	Sycamore Acer pseudoplatanus	Early-mature	Good	Trunk co dominant from 1.25m with a tight union between stems however unlikely to be significant at present. Upper canopy relatively well developed though slightly congested.	No action necessary	B2	40
993	Sycamore Acer pseudoplatanus	Young	Good	A relatively well-developed specimen though becoming swamped in ivy. Crown restricted relatively well developed with no visible defects	Cut ivy	B2	40
994	Sycamore Acer pseudoplatanus	Early-mature	Poor	Crown developed from 1m with tight unions with included bark present between a number of stems. These are areas of structural weakness which have potential for failure. Long term potential limited as a result	No action necessary	C2	10
995	Monterey cypress cultivar Cupressus macrocarpa cv	Mature	Good	A staggered two row planting of Monterey cypress cultivars. A number are suppressed and poorly developed. The larger specimens are relatively well developed but there are areas of included bark present between stems with most of the larger specimens. Their long-term potential is limited as a result with any remaining trees liable to wind throw on this elevated site if thinning actioned.	No action necessary	C2	10-15
996	Birch Betula pendula	Mature	Good	A well-developed specimen beginning to encroached upon by neighbouring screen planting. Trunk co-dominant from 1.5m with a wide union between stems. Upper canopy relatively well developed with no visible defects.	No action necessary	B2	40
997	Swedish whitebeam Sorbus aria	Early-mature	Dead		Fell	U	0

Tag No.	Species	Age Category	General Condition	Comments	Preliminary Recommendations	Landscape and Arboricultural Category	Useful Life Expect-any
998	Birch Betula pendula	Mature	Good	A well-developed specimen with a well-structured crown. Large lateral limb to east well secured to trunk. A point of co-dominance between trunk with no visible defects. Upper canopy relatively well developed. Potential to be encroached upon by neighbouring cypress hedge in near future	No action necessary	B2	40
999	Swedish whitebeam Sorbus aria	Early-mature	Fair	A relatively well-developed specimen however becoming swamped by basal suckers from root stock. Upper canopy relatively well developed but becoming encroached upon by neighbouring cypress hedge. Long term potential limited as a result	Remove basal suckers	C2	10-15
1000	Birch Betula pendula	Mature	Good	A well-developed specimen with trunk co dominant from 1m with a wide union between stems. Upper canopy relatively well developed with no visible defects	No action necessary	B2	40
1001	Cherry cultivar Prunus cv	Early-mature	Good	Sub dominant to neighbouring trees with crown strongly oriented toward south. No visible defects but long-term potential limited as a result	No action necessary	C2	10
1002	Swedish whitebeam Sorbus aria	Early-mature	Dead		Fell	U	0
1003	Beech Fagus sylvatica	Mature	Good	A large specimen straddling the boundary between site and neighbouring property. Full visual access not possible. This is a wide spreading specimen whose crown is developed from large structural limbs from approximately 3m. However, this area is obscured by adventitious growth. Upper canopy appears well developed with no visible defects Compaction of soil to south likely from agricultural activity. A cavity is visible at base to south however decay likely to be localised and surrounding buttresses appear sound.	No action necessary	A2	40

Tag No.	Species	Age Category	General Condition	Comments	Preliminary Recommendations	Landscape and Arboricultural Category	Useful Life Expect-any
1004	Beech Fagus sylvatica	Mature	Good	A large specimen straddling the boundary between site and neighbouring property. Overhang site by 8m. Trunk co-dominant from 2m with a tight union between stems however area obscured by branching and ivy growth. Upper canopy relatively well developed with upper canopy relatively well developed with no visible defects.	No action necessary	A2	40
1005	Beech Fagus sylvatica	Mature	Fair	Possibly outside site. This tree may have failed as a young specimen and grown with its current form of a large basal stem to south with trunk formed and rooted from this point. Decay present in basal stem and in trunk to west at 0.75m. Both appear to be localised. Trunk co dominant from 1.75m with a tight union and included bark present between stems. Both decay and included bark reduce the trees long term potential but neither are likely to be significant at present.	Monitor decay and area of included bark	B2	20-30

8. Tree measurements

Tree No.	Height m.	D.B.H. mm.	Spread m. N,S,E,W	Clear Stem first cardinal point	Root Protection radius m.
986	8	280	3,3,3,3	0	3.3
987	10.5	360	5,5,5,5	3S	4.3
988	11.5	370	4,4,4,4	1W	4.4
989	5.5	220	2,2,2,2	1S	2.6
990	5	250	3,2,3,3	1W	3
991	5	270	3,3,3,3	0.75S	3.2
992	12	420	5,5,5,5	1N	5
993	7.5	230	4,4,4,4	1E	2.7
994	13.5	420	5,5,4,5	1E	5
995	19av	450av	3,3,3,3 av	NA	4.5
996	19	390	3,5,2,5	2S	4.6
997	16	190	NA	NA	NA
998	20	610	4,7,3,4	0.3S	7.3
999	19	190	1,3,2,2	1.5S	2.2
1000	20	390	4,6,5,5	2.5S	4.6
1001	12	240	2,3,4,1	2.5E	2.8
1002	9	220	NA	NA	NA
1003	19	1000	8,8,10,8	2.5W	12
1004	19.5	890	8,8,8,8	2.5E	10
1005	18.5	620	7,7,8,6	1.5S	7.4

9. Tree protection

Tree protection fencing must be erected before construction works commence and must be in accordance with BS 5837 (2012).

- a.** Oil, bitumen, cement or other materials likely to be injurious to a tree should not be stacked or discharged within 10m of a bole, and materials generally should not be stacked or discharged within 5m of a bole. It is essential that allowance is made for the slope of the ground so that damaging materials such as concrete washings, mortar or diesel oil cannot run towards trees.
- b.** Concrete mixing should not be carried out within 10m of a tree.
- c.** Fires should not be lit in a position where the flames could extend within 5m of foliage, branches or trunk, bearing in mind the size of the fire and the wind direction.
- d.** As the majority of tree roots occur within the top 600mm of soil changes to soil levels within the root zone can have serious consequences for tree health.

Increases in soil levels within the root zone of trees can lead to root asphyxiation and ultimately to tree decline and/or death.

A reduction in soil levels may expose roots to drying out and/or being damaged and have the same effect on the tree as described above.

Tree root protection

The Root Protection Area should be calculated using as per Table 1 and/or Annex D (BS 5837 2012) as an area equivalent to a circle with a radius 12 times the stem diameter for single stem trees and 10 times basal diameter for trees with more than one stem arising below 1.5m above ground level.

Number of stems	Calculation
Single stem tree	$\text{RPA (m}^2\text{)} = \frac{(\text{stem diameter (mm)} @ 1.5 \text{ m} \times 12)^2 \times 3.142}{1000}$
Tree with more than one stem arising below 1.5m above ground level.	$\text{RPA (m}^2\text{)} = \frac{(\text{basal diameter (immediately above root flare (mm)} \times 10)^2 \times 3.142}{1000}$

10. References

BS 5837 (2012). Trees in Relation to Design Demolition and Construction

Mattheck and Breloer (1994). The body language of trees