



Horticulture & Arboriculture Ltd.

# Arboricultural Assessment, Arboricultural Impact and Tree Protection Strategy Report

White Pines Central,  
Stocking Avenue,  
Rathfarnham,  
Dublin 16

Project No.	TSTO005	Date	27/05/21
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## 1. Client brief & Methodology

CMK Hort + Arb Ltd. were commissioned by Ardstone Homes to undertake an arboricultural assessment of trees on a 2.2Ha site located south of Stocking Avenue, Rathfarnham, Dublin 16 (image 1). The fieldwork was undertaken on the 9th of August 2019 and the 16th of September 2020.

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).



Image 1. Site overview with red line outline of survey boundary located at south side the Stocking Avenue, Rathfarnham, Dublin 16.

**2. General description of trees**

A total of three trees were assessed within the subject site with an additional two trees which lie just outside of the site boundary also included (image 3). The trees are located within or adjacent to a hawthorn (*Crataegus monogyna*) field boundary hedgerow on the southern boundary of the site. The locations of all trees are shown on drawing TSTO005 101. The condition of the trees is generally moderate to poor with all falling within categories B and C (table 1).

The surveyed trees are a mixture of native/naturalised species (Ash *Fraxinus excelsior* and Sycamore *Acer pseudoplatanus*) that are part of a former agricultural boundary, located on the south eastern corner of the site (see chart 1 for species breakdown).

The hedgerow runs east-west on the southern site boundary (images 4-5). In addition to the mature hawthorn and standard trees it contains occasional elder *Sambucus nigra* and a single juvenile self-seeded ash and sycamore (image 7).

Category	Number	% of total
A	0	0%
B	2	66.6%
C	1	33.3%
U	0	0%

Table 1. Tree Category breakdown of trees (see page 4 for tree category explanations).

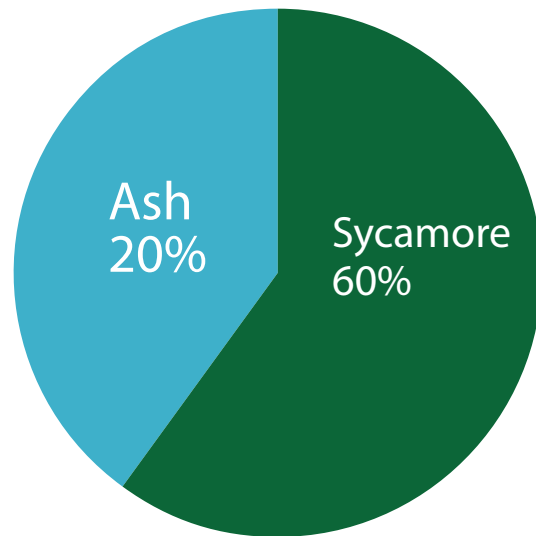


Chart 1. Tree species breakdown (including self seeded juveniles).



Image 2. Mature sycamore (#1172,1170 & 1169).



Image 2. Mature ash (#2260) in a state of decline.



Image 3. Sycamore (#1169) and cherry (#1171) outside of the southern site boundary.



Images 4 & 5. Hawthorn hedgerow (#H01) on the southern site boundary.



Image 6. Gorse on the northern site boundary.



Image 7. Juvenile ash within hedgerow H01.

### 3. Arboricultural Impact and Mitigation

#### 3.1 Arboricultural Impact

A total of 1 tree and western part of hedgerow (H01) (approximately 90m) are to be removed to facilitate works. This impact represents a loss of ecosystem services in the form of habitat reduction.

Category	Number	% of Category	% of total
A	0	0%	0%
B	0	0%	0%
C	1	100%	33.3%
U	0	0%	0%

Table 2. Tree Removal Categories

Trees located within a grass verge within the public domain adjacent to the northern boundary of the site will not impacted upon by the proposed development.

The proposed construction would therefore have a limited impact on the arboricultural character of the site, with the potential to improve tree density with proposed new plantings.

#### 3.2 Mitigation

New tree plantings have been proposed by landscape architects Mitchell + Associates (LSTO006 Planting Schedule). These plantings will provide a new generation of trees suited to urban locations. These tree have the potential over time if managed appropriately to provide some mitigation for the loss of the existing vegetation.

The remaining 40m section of hedgerow H01 (refer to drawing TSTO005 102) will provide a potential shelter for existing biodiversity and give a benefit of seeding the proposed woodland planting area.

## 4. Tree Protection Strategy

This section is designed to outline the procedures which will be undertaken to effectively retain trees free from adverse construction impacts for the duration of the construction period on the site of proposed construction at Stocking Avenue central, Rathfarnham, Dublin. The section is divided into sub-sections which begin at the pre-construction planning stage and follows on to post construction re-assessment of retained trees.

### 4.1 Key issues

Appointment of an arborist (Site Arborist) to oversee all works relevant to trees.

Scheduling of tree and construction works.

Establishment of tree protection (refer to drawings Tree Protection TSTO005 103).

Monitoring of tree protection (adherence to the Tree Protection Code of Practice).

Supervision of works in the vicinity of trees.

Post construction re-assessment of retained trees.

### 4.2. Consulting Arborist

A Site Arborist shall be appointed prior to the commencement of site construction works and will be responsible for the setting up and monitoring of tree protection, liaising with local authority tree/planning officers and providing feedback and advice to the design construction teams on issues relevant to trees. The Site Arborist shall be retained for the duration of construction works and should be appointed to carry out a post-construction tree survey/assessment.

### 4.3 Scheduling of works

#### 4.3.1 Pre-construction meetings/tree works

- An onsite meeting will be held if required, with all relevant parties; including the Developer and or his Agents, Site Arborist and Local Planning Authority
- Remedial works to trees throughout the site where indicated as necessary within the Tree Works Schedule. All works will be undertaken to BS 3998 2010 Tree Work and/or to current best practice.
- Erection of tree protection fencing as per recommendations contained within BS 5837:2012 Trees in relation to design, demolition and construction -Recommendations. Tree protection to be erected under supervision of Site Arborist prior to main construction works being undertake on site (refer to drawings Tree Protection TSTO005 103).

#### 4.3.2 Construction period

- The Site Arborist shall monitor tree protection.
- The Site Arborist shall specify any necessary remedial works to trees which may arise due to construction works.
- The Main Contractor shall carry out any instructions made by the Site Arborist with regard to the protection of retained trees and ensure where necessary that these instructions are followed by any sub-contractors.

#### 4.3.3 Post construction works will consist of:

- Re-survey of retained trees and the implementation of measures contained with the survey document.

### 4.4 Preservation of Trees

#### 4.4.1 Contractors obligations

The Contractor shall take all precautions to ensure that any trees which are not required to be taken down under the contract shall remain undisturbed and undamaged. All works to trees and all operations adjacent to trees should be undertaken in accordance with the Code of Practice. The Contractor must appoint a qualified arboricultural contractor to undertake all tree works subject to approval by the Consulting Arborist. The Contractor shall undertake no works to trees unless instructed by the Contract Administrator. All works on or within the Construction Exclusion Zone are to be supervised by the site arborist. Five working days notice of intention to undertake works to be given.

#### 4.4.2 Setting out: Protected Tree Zone/Construction Exclusion Zone

The tree protection zone shall be set out in accordance with the Code of Practice (5) and as per drawings Tree Protection TSTO005 103. A notice 'Construction Exclusion Zone' shall be placed on tree protection fencing at regular intervals along the protective fencing. This notice shall include contact details for the Site Arborist. Strictly no access should be permitted to this zone unless instructed by the Site Arborist.

The Contractor is to maintain the protective fencing in good condition to the satisfaction of the Site Arborist for the duration of the contract. Any damage to fencing is to be reported to the Site Arborist immediately. Damaged fencing is to be repaired within 2 hours of the damage occurring. All works within the vicinity of the damaged fencing are to be suspended until the fencing is repaired. Fencing should remain in place until the end of construction and the commencement of soft landscaping works.

#### 4.4.3 Maintenance of Protected Tree Zone

The Site Arborist should be given 5 days notice of any works within or access required to this zone. The 'Protected Tree Zone' should under no circumstances be used for storage of materials, equipment, or site debris. No fires should be lit within the "Protected Tree Zone", or equipment washed or cleaned.



## **4.5. Code of Practice for the preservation of trees**

The following specification is intended for the preservation of trees.

These guidelines will help sustain vigour and minimise adverse growing conditions for trees set out for retention.

### **4.5.1 Code of Practice notifications**

The Code of Practice will be brought to the attention of all site personnel including those of the Main Contractor, Sub-Contractors and Engineering Specialists associated with the project.

All operations to be in accordance with BS 5837:2012 Trees in relation to design, demolition and construction -Recommendations.

The Contractor should purchase and make available on site a copy of the above

### **4.5.2 The Site Arborist:**

- Supervise the installation of tree protection fencing.
- Supervise all tree works and assess on-going tree protection.
- 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, where necessary, all works carried out by the Arboricultural Contractor and Main Contractor within the 'Protected Tree Zone'.

### **4.5.3 Arboricultural Contractor:**

- Submit a full method statement containing machinery to be used, removal of wood etc. to the Site Arborist.
- Carry out works to the most up to date arboricultural practices available e.g. BS 3998. Recommendations for tree work (as amended).
- Undertake work only with suitably qualified operatives in constant consultation with the Site Arborist.
- Trees identified for removal will be section felled in wooded areas so as not to damage remaining trees.

### **4.5.4 Main Contractor:**

- Appoint a member of staff to be responsible for tree protection and this person shall be the point of contact between the Main Contractor and the Site Arborist.
- Undertake all work in accordance with this specification.
- Ensure that all personnel, operatives, sub-contractors etc. are aware of this specification and operate accordingly
- Notify the Site Arborist of any potential conflicts that may affect the health, vigour and viability of trees.

### **4.5.5 Access:**

Access to the site and service roads shall be agreed with the Site Arborist prior to commencement of works. Where it is deemed necessary for heavy machinery access the contractor shall refer to the guidelines within BS 5837 2012 and liaise with the Site Arborist to instigate the most appropriate root protection system.

### 4.6 Post Construction

A post construction report on the condition of trees should be undertaken and all recommendations made within this report should be carried out to BS3998 Tree Works.

#### Examples of above-ground stabilizing systems

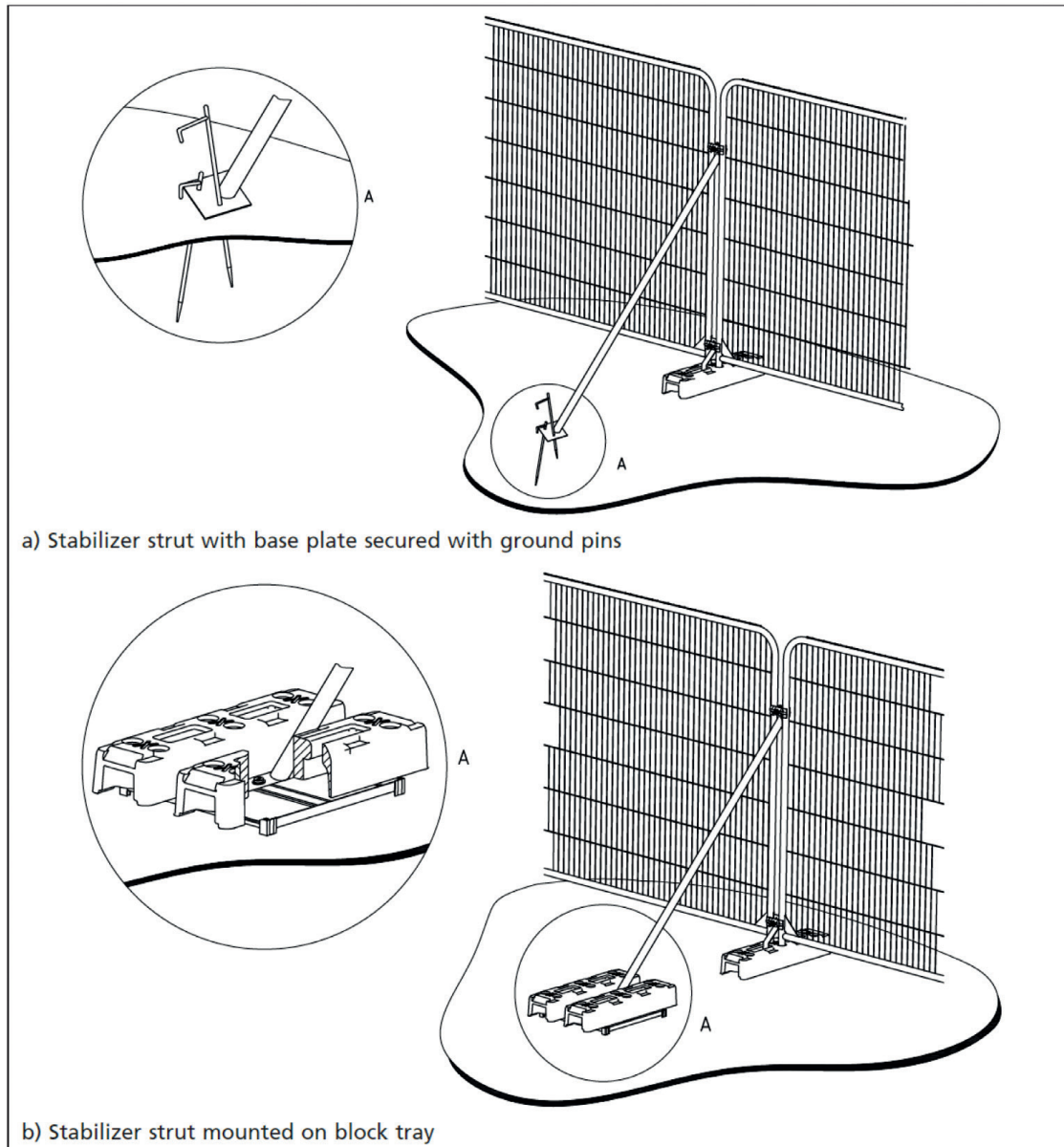


Image 22: Tree Protection Detail (Herras type fencing or similar approved).

## 5. 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.

## 6. 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 ozier;

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 any queries arise re tree felling in general it is recommended that advice is sought from Felling Section of the Forest Service or the local forestry development officer for further information.

### Bats

Trees may contain bats. Bats are afforded legal protection under Irish and EU legislation and agreements (Wildlife Act (1976), Wildlife (Amendment) Act (2000), S.I. No. 94 of 1997 and S.I. No. 378 OF 2005 implementing the EU Habitats Directive, Bonn Convention (The Convention on the Conservation of Migratory Species of Wild Animal) and the Bern Convention (Convention on the Conservation of European Wildlife and Natural Habitats).

Trees provide roosting opportunities for bats. Mature trees are the most likely to have potential as roost sites. This may be provided by cavities, crevices, limb fractures, storm damage or mechanical damage and may even be by way of loose bark. Felling of mature trees and even surgery to large limbs may place bats at risk and both procedures remove roosting sites for bats.

Professional advice from a licenced surveyor should be sought prior to any works commencing on trees.

## 7. Terminology

### Tree categories

<b>A</b>	Trees of high quality and value due to their size, age, condition, historical/visual merit and/or conservation potential. (a minimum of 40 years)
<b>A1</b>	Mainly arboricultural values. Particularly good examples of species, essential components of groups or of formal or semi-formal arboricultural features.
<b>A2</b>	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.
<b>A3</b>	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>B</b>	Trees of moderate quality and value (a minimum of 20 years)
<b>B1</b>	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)
<b>B2</b>	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.
<b>B3</b>	Mainly cultural values including conservation. Trees with clearly identifiable conservation or other cultural benefits.
<b>C</b>	Trees of low quality and value (a minimum of 10 years).
<b>C1</b>	Not qualifying in higher categories
<b>C2</b>	Trees present in groups or woodlands but without conferring on them greater landscape value and/or trees offering low or only temporary screening benefit.
<b>C3</b>	Trees with very limited conservation or other cultural benefits.
<b>U</b>	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 metres north, east, south, 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 metres.

**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.

## 8. INDIVIDUAL TREE SCHEDULE

Tag Number	Species	Vigour	Age class	Category	Comments	Recommendations	Long Term Potential	DBH (mm)	Height (metre)	Clear Stem (Metre)	Crown spread NESW (Metre)
2660	Ash <i>Fraxinus excelsior</i>	Poor	Mature	C2	Light suppressed deadwood in crown. Slowing signs of indicative of decline. Very heavy ivy growth obscuring view for assessment.	Cut ivy and re-assess	10	520	13	4n	5;5;5;5
1170	Sycamore <i>Acer pseudoplatanus</i>	Good	Mature	B2	Located on the southern site boundary. Dominant in neighbouring tree group. Trunk co- dominant at 1.5m with a sound union present and straight vertical stems. Light ivy covering that has been partly removed recently. No visible defects.	No action necessary	40	1050	17.5	4w	7;4;7;8
1172	Sycamore <i>Acer pseudoplatanus</i>	Good	Mature	B2	Located on the southern site boundary. Subdominant to neighbouring tree 3m west. Canopy extended east as a result. Should only be retained as part of group. No visible defects.	No action necessary	40	680	16.5	4.5n	6;6;6;2
H01	Hawthorn <i>Crataegus</i> Elder <i>Sambucus nigra</i>	Good	Mature	B2	Located on the southern site boundary. A n unmanaged occasional elder. A juvenile self-seeded ash and sycamore a located on its southern side.	No action necessary	30	N/A	3-6	N/A	6;6;6;6
These trees were located to the south of the red-line boundary with RPA intruding within site.											
1169	Sycamore <i>Acer pseudoplatanus</i>	Good	Mature	B2	Located 2m south of redline boundary. Subdominant to neighbouring tree east. Growth extended west as a result. Deadwood north at 5m due to light suppression. Ivy has encroached into areas of deadwood and throughout lower canopy.	Remove deadwood north.	30-40	700	17	3w	3;1;8;6
1171	Cherry <i>Prunus acium</i>	Good	Early Mature	B2	Located 7m south of the redline boundary. Canopy suppressed north due to neighbouring tree group. No visible defects.	No action necessary	20-30	410	10	2.5e	1;7;6;4

\*Refer to drawing TSTO005 101 for tree locations.

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

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

