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## Arboricultural Impact Assessment Report

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**Prepared for:** Ruden Homes Limited

**Proposed site:** Courtstown, Little Island, Co. Cork

**Prepared by:**

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## Executive Summary

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Arbor-Care Ltd (Professional Consulting Tree Service) was retained by Ruden Homes Ltd to undertake, a Tree Survey, an Arboricultural Impact Assessment and a tree protection plan identifying trees that may be impacted on by the proposed development at the above location. The surveyed trees contained within this report are located adjacent the parameters of the proposed site the site itself contains no trees all the trees are located outside the redline area of the site. The majority of the trees are located along the western boundary within a former golf course.

The proposed development site is a large arable field that is bounded to the north by a public road, to the west and south by a former golf course to the east by an industrial estate

The Tree Survey and inventory 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.

The survey commenced on the 30<sup>th</sup> of July 2020. An updated survey was undertaken on the 15<sup>th</sup> May 2024.

The objective of the tree survey was to identify the areas that contained trees or hedgerows of quality, and to ensure where possible that these areas would be retained.

This Tree Survey report will be accompanied by an inventory of trees and a tree protection plan (Appendix 1 & 2). The Arboricultural Impact Assessment and a tree protection plan was prepared for the site identifying trees that may be impacted on by the proposed development based on the proposed design.

**Figure 1** Displays proposed site layout highlighted in red

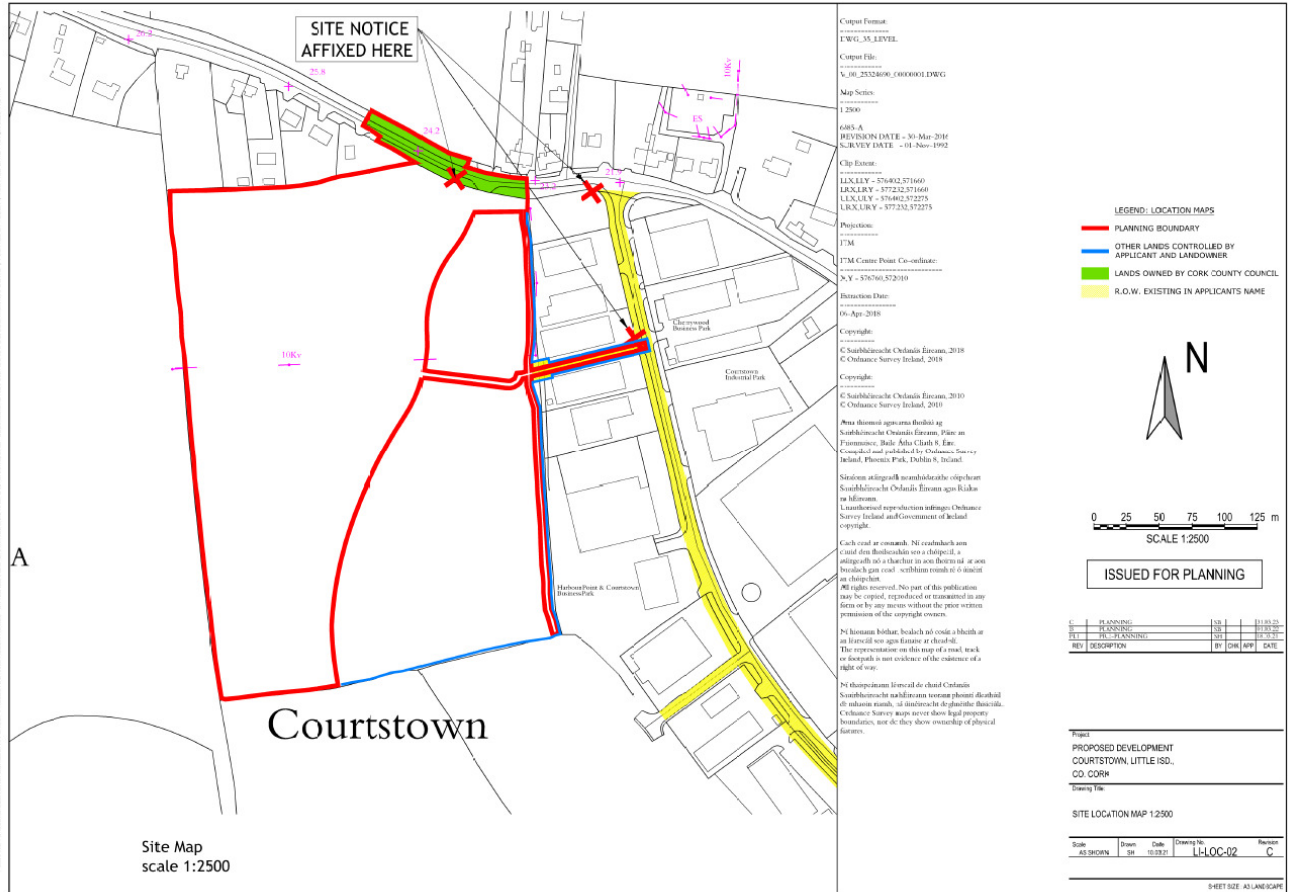


Figure 2. The Proposed Site Layout





## **1.0 Assignment**

1. To undertake a visual tree survey to, identify any potential impact the new development would have on the trees and vice versa.
2. To provide recommendations for their preservation and or removal.
3. Present a written report on the inspection of the trees and hedgerows
4. To provide a tree protection plan highlighting which trees are to be removed and/or retain

## **1.1 Limits of the Assignment**

Unless otherwise stated tree inspections have been undertaken from ground level and using non-invasive techniques only. The trees along the southern boundary were located in private property and were assessed from the proposed development site. Comments on the condition and safety of any tree relate to the condition of that tree at the time of the survey. It should be recognised that tree condition is subject to change due to, for example the effects of disease, wind or nearby development works. Changes in land use are also significant in respect of risk assessment. Trees should therefore be inspected at intervals relative to identified site risk. To note there were no trees within the site, the trees along the western boundary are located on private property and were assessed from within the site. Due to the dense overgrowth not all trees were physically tagged.

## 2.0 Methodology Employed

An initial tree survey and visual condition assessment was on the 30<sup>th</sup> of July 2020,

An updated survey was undertaken on the 15<sup>th</sup> May 2024.

. For 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. The survey commenced along the western boundary and continued in an northerly direction

*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 significant trees located within or adjacent the proposed development area, as highlighted in figure one. The objective of this survey was to gather information regarding the tree’s location on the proposed development site and the impact the proposed development may have on the trees. **Please refer to appendix 1 for the tree inventory.**

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 grade as per standard arboricultural practice. Tree height was measured with the use of a clinometer (Where practical). A generalised system was employed to describe the overall health of the trees. The system uses a five tier rating scale with the following descriptors:

*Specimen condition 5-tier rating system*

1. Very poor-1-20%
2. Poor-21-40%
3. Fair- 41-60%
4. Good- 61-80%
5. Very good81-100%

### 3.0 Trees surveyed

The survey commenced on the 30<sup>th</sup> of July 2020. A total of trees 49 individual trees were assessed as well as a hawthorn and Lawson cypress hedge were surveyed as part of this planning application. An updated survey was undertaken on the 15<sup>th</sup> May 2024.

3.1 A breakdown of the Tree Categories on site as per BS 5837 2012 is set out in the table below:

Category	Quantity
A-Tree of high quality	1
B-trees of good quality	8
C (Low quality or trees less than 75mm diameter)	40
U (remove due to poor condition)	0
Total Trees surveyed	49 + hedgerow

#### **4.0 Arboricultural Impact of The Proposed Development.**

##### *4.1 Trees to be removed onsite*

The arboricultural impact of the proposed development on the site will initially be low. It is proposed to remove 14No semi-mature Lime trees on the Ballytrasna road to facilitate the development. These trees are identified on drawing No RH-TS-001 and are noted for removal in Appendix 1 -Tree Inventory of this document. Some minor tree works that would involve the pruning of overhanging limbs from trees along the western boundary may have to be undertaken.



## 5.0 Tree Removal/Remedial works

Overhanging limbs from the trees located within the golf course may have to be pruned back to allow for development works. All the above shall be carried out by qualified and insured tree surgeons and in accordance with *BS 3998: 2010 Tree Works. Recommendations*

## 6.0 Tree Protection

Prior to any construction or demolition works on this site all trees destined for retention need to be protected by the use of protective barriers and or ground protection, fit for the purpose of ensuring the successful long-term preservation of the trees. In order for the retained trees to be adequately protected on the site a construction exclusion zone needs to be identified. This zone is calculated based on the root protection area (RPA), which is the minimum area in m<sup>2</sup> which should be left undisturbed around each retained tree. The RPA should be calculated as an area equivalent to a circle with a radius 12 times the stem diameter for a single stem tree and 10 times basal diameter measured immediately above the root flare for trees with more than one stem arising below 1.5m above ground level.

Number of Stems	Calculation
Single Stem Tree	$\text{RPA (m}^2\text{)} = \frac{\{\text{stem diameter (mm) @ 1.5m x 12}\}^2 \times 3.142}{1000}$
Tree with more than one Stem arising below 1.5m above Ground level	$\text{RPA (m}^2\text{)} = \frac{\{\text{Basal Dia. (mm) x 10}\}^2 \times 3.142}{1000}$

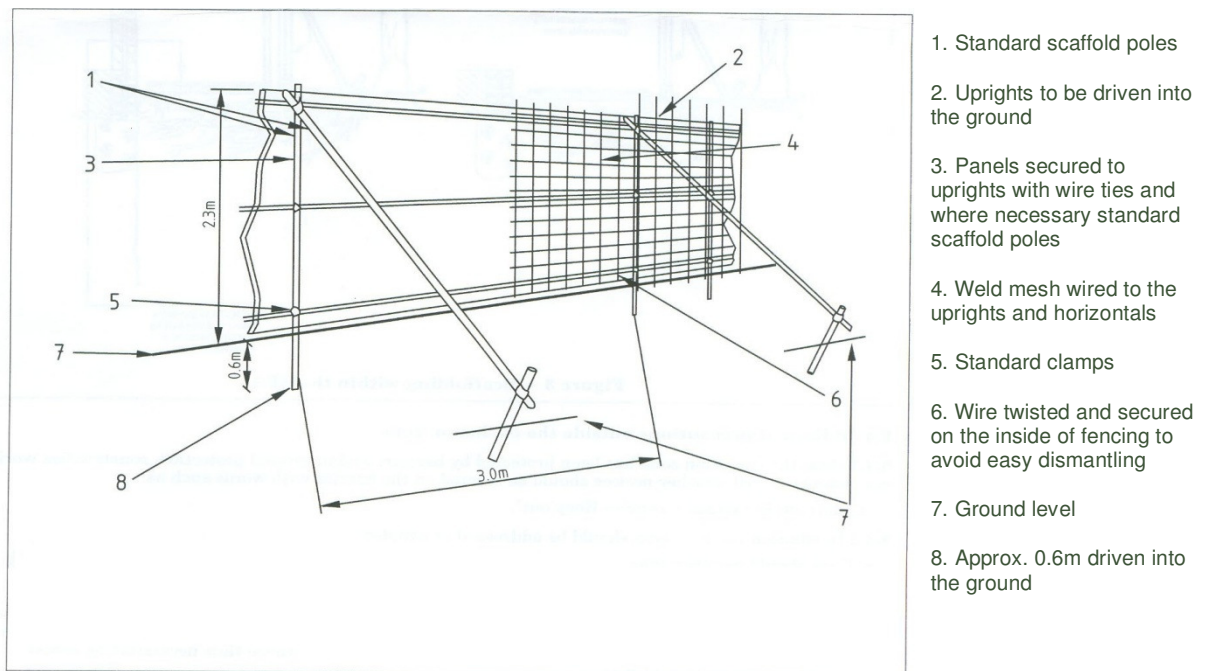
*Note: The Calculated RPA should be capped to 707m<sup>2</sup>. e.g. which is the equivalent to a circle with a radius of 15m or a square with approximately 26 m sides*

## 6.1 Protective Barriers

Trees that are destined to be retained must be protected by protective fencing, signage and/or ground protection prior to any materials or machinery being brought on site and prior to any development, demolition or soil stripping takes place. Areas that are designated for new plantings should be similarly protected. Barriers should be fit for the purpose of excluding construction activity. In most cases barriers should consist of a scaffold framework (Refer to fig. 3 below) comprising a vertical and horizontal framework, well braced to resist impacts. To ensure the protective barriers are respected, clear concise signage must be affixed to the barrier in an unrestricted easily viewed location.

The protective barriers shall remain in an undisturbed condition and only removed on completion of all construction activity finished grading and sodding. Any breach of the protective fence shall be reported to the consulting arborist.

Figure 3. Protective Barrier



The above displays an example of a suitable protective barrier as recommended by *BS. 5837 2012 Trees in Relation to Construction. Recommendations.*

Figure 4. Signage to be placed on all protective fencing



The signage must state the following;

- No construction activity is to take place within the R.P.A. (unless pre-agreed with the arborist)
- No materials of any kind are to be stored within the R.P.A.
- No “Spilling out” of materials shall take place within the R.P.A.
- No fires are to be lit within the R.P.A.

### **6.2 Ground Protection**

Although works within the RPA are not recommended should essential works be required within the RPA. The installation of ground protection in the form of a single thickness of scaffold boards on top of a compressible layer laid onto a geotextile may be acceptable

### **6.3 Tree Protection Plan**

A site specific Tree/hedgerow Protection Plan has been included. See Appendix 2.

## 7.0 Arboricultural Method Statement/Tree Protection Strategy

The objective of this arboricultural method statement and tree protection plan is to provide information for the building contractor/site manager on how the trees on the site need to be protected pre, during and post development works so that they can prepare their own site specific detailed method statement for their works

It is necessary for the protective fencing to be erected and all other mitigation measures required to be put in place prior to any development works commencing on site to ensure all retained trees and their critical rooting zone are protected for the duration of the works. Refer to tree protection plan (Appendix 4) for the position of protective fencing and additional mitigation measures

The protection for trees shown for retention will occur in three stages known as pre, during and post development.

*Table 1. Arboricultural Method Statement/Tree Protection Strategy – Management Stages*

<b>Arboricultural Method Statement/Tree Protection Strategy – Management Stages</b>		
<b>Stage 1 – Pre development works</b>	<b>Stage 2 - The construction works stage</b>	<b>Stage 3-Post Development Works</b>
1. Consultation with Arborist and developer	1. Protective Fencing – management and maintenance	1. Site inspection by arborist to ensure plan adhered to and trees and hedgerow protected
2. Site meeting - consultation with Arborist, developer, main contractor and sub-contractor	2. Excavations – works only commence when protective fencing in place	
3. Tree works – Appointment of professional tree surgeon	3. Working within the RPA – All works within the RPA to be discussed and agreed with the arborist	
4. Erection of protective fencing/Mitigation measures	4. Finished ground levels/Landscaping – All works to ensure the integrity of tree/s protected.	

### *7.1 Stage 1 - Pre development works*

Prior to works commencing on site the following needs to be agreed and implemented:

1. The developer may need if requested by the Local Authority to appoint an arborist for the duration of the project. The arborist if requested to may have to make regular site visits to ensure that the protection measures are in place and are being adhered too.
2. The main contractor and sub-contractors are to be briefed on the tree protection plan and ensure all measures are kept in place for the duration of the project
3. All personnel are to adhere to the recommendations of the appointed arborist
4. Any issues in relation to trees shown for retention must be discussed with the appointed arborist and the necessary mitigation measures put in place without delay and prior to the works taking place.

### *7.2 Site meeting*

Prior to any works on site, if requested to by the Local Authority that a meeting be arranged between the project manager, site foreman, the project landscape architect, the project arborist and the local authority to identify and finalise the trees for removal and the line of protective fencing and any other mitigation measures.

### *7.3 Tree works*

The developer or the main contractor is to appoint a professional tree surgery company to undertake any tree removal or surgery works identified. The works are to be undertaken in accordance with *BS 3998 2010*.

### *7.4 Erection of protective fencing/Mitigation measures*

The erection of protective fencing is to be erected to the fence line shown in tree protection plan. The fencing must adhere with BS 5837: 2012 (Figure 2 and Figure 3 above). Signage must be placed on the fence to highlight its importance. Once the fencing is erected works can commence on-site.

## **8.0 Stage 2 - The construction works stage**

### ***8.1 Protective Fencing***

During the course of the construction works the integrity of the fencing must be respected and remain in place at all times. No building materials or soil heaps are to be stored within this area. Should essential works need to take place with the root protection area the project arborist must be informed in advance and any mitigation measures are to be put in place. The protective fencing must remain in situ for the duration of the project and must only be removed upon completion of all works.

### ***8.2 Excavations***

Excavation works are only to commence once the protective fence line is in place. The excavations need to be viewed on site once marked out with the project manager, site foreman and the project arborist in advanced of excavation to determine the extent of the impact and the works space required to allow the construction works proceed and to assess any additional mitigation measures that may be required to protect the retained trees. In certain areas it may be necessary to use alternative methods of excavation to prevent encroachment into the RPA of the trees to be retained and this may include such methods as retaining walls, no dig technique etc.

### ***8.3 Working within the RPA***

If it becomes necessary to undertake works within the RPA of tree these must be discussed and agreed beforehand with the project arborist. All works must be carried out manually, and root greater than 100mm in diameter must be pruned using hand held equipment such as a handsaw.

For pedestrian movements within the R.P.A. the installation of ground protection in the form of a single thickness of scaffold boards on top of a compressible layer laid onto a geotextile may be acceptable.

#### **8.4 Finished ground levels/Landscaping**

The existing ground levels within the RPA of the retained trees must be retained and incorporated into the finished landscaped development. Where changes in level occurs these are to be either graded into the finished levels starting outside the RPA or alternatively, retaining wall structures are to be used differentiating between the different levels.

All soft and hard landscaping within the RPAs must be carried out manually and the soil levels must not be lowered or raised resulting in root damage to the trees. All finished surfaces are to be porous to allow the free movement of water and gaseous exchange to the roots.

#### **9.0 Stage 3-Post Development Works**

The project is not to be considered complete until the arborist has inspected the site and is satisfied that all retained trees and hedgerows have been protected in accordance with the site specific Tree Protection Plan and there has been no negative impact on the retained trees on site as a result of the development.

#### **10.0 Conclusion**

The arboricultural impact of the proposed development on the site will initially be low.

A comprehensive landscape plan which will involve planting additional site appropriate trees that will enhance the arboreal footprint of the site (Please refer to separate landscape plan).

I consider subject to implementing proposed landscape plan the above Arboricultural Method Statement/Tree Protection Strategy that there is unlikely to be significant long term detrimental impact as a consequence of the development proposal.

## Appendix 1 – Tree Inventory

### Tree Inventory Legend

*Tree Dimensions* - All dimensions are in meters.

*Ht*- Tree Height

*Crown clearance* - Lowest canopy height (distance from ground level to the first live branch)

*Crown spread* - Tree Canopy Spread measured by radii at north, east, south and west

*Dia.* -Stem diameter at approx. 1.50m from ground level.

*RPA* - Root Protection Area, as a radius measured from the tree's stem centre.

#### Physiological Condition

*Good* - A specimen of generally good form and health

*Fair* - A specimen with defects or ill health that can be either rectified or managed typically allowing for retention

*Poor* - A specimen whom through defect, disease attack or reduced vigour has a limited longevity or may be un-safe

*Dead* - A dead tree

*Structural Condition* - Information on structural form, defects, damage, injury or disease supported by the tree

*PMR (Preliminary Management Recommendations)* – refers to Arboricultural actions or works considered necessary at the time of the inspection and relating to the existing site context and tree condition. *Note is also made of works considered as urgent.*

*Age Class - Young:* A tree, which has been planted in the last 10 years.

*Semi-mature* A tree that is less than 1/3 the expected height of the species in question.

*Early mature:* A tree, which is approximately 2/3's the expected height of the species in question.

*Mature:* A tree that has reached the expected height of the species in question, but still increasing in size.

*Overmature:* A tree at the end of its life cycle and the crown is starting to break up and decrease in size.

Species Common name is given; botanical name is also given upon its first entry, in Italics



Appendix 1 – Tree Inventory

Tree #	Species Botanical Name	Age Classes	Dia Size (mm)	HT	Crown Sp.(M)	Crown Cl.(M)	Condition	Structural/Physiological Observations	Impact of development	PMR	Category	R.P.A. (M Radius)
5582 x 3	<i>Piceasitchensis</i> Sitka spruce	M	300	16	N=2 S=2 E=2 W=2	3	Fair	Represents 3 mature spruce that are located within private property.	No impact	Retain	C2	4m
T1	Sitka spruce	M	400	20	N=3 S=3 E=3 W=3	3	Good	A mature spruce located within private property. It is a forestry tree of low ecological value	No impact	Retain	C2	5m
T2	Sitka spruce	M	400	20	N=3 S=3 E=3 W=3	3	Good	A mature spruce located within private property. It is a forestry tree of low ecological value	No impact	Retain	C2	5m
Hedge 1	Hawthorn	M	200	6	N=2 S=2 E=2 W=2	1	Good	Represents a hawthorn hedge located on the boundary of the site and private homes. It is very overgrown with briars	No impact	Retain	C2	3m
T3 x 6	<i>Populusnigra</i> <i>'Italica'</i> Lombardy Poplar	M	320	24	N=3 S=3 E=3 W=3	3	Good	Represents 6 large mature Poplar located off site. A tree of low ecological value	No impact	Retain	C2	4.2m
T4 x 5	<i>Populusnigra</i> <i>'Italica'</i> Lombardy Poplar	M	320	24	N=3 S=3 E=3 W=3	3	Good	Represents 5 large mature Poplar located off site. A tree of low ecological value	No impact	Retain	C2	4.2m
5583	<i>Larix x europea</i> European larch	M	350	16	N=3 S=3 E=3 W=3	4	Good	A large mature Larch located within the golf course in good condition	No impact	Retain	B2	4.5m
5584	<i>Alnusincana</i> Grey alder	M	300	14	N=4 S=4 E=6 W=8	3	Good	A large mature alder located within the golf course in good condition	No impact	Prune back the overhanging limbs	B2	4m

### Appendix 1 – Tree Inventory

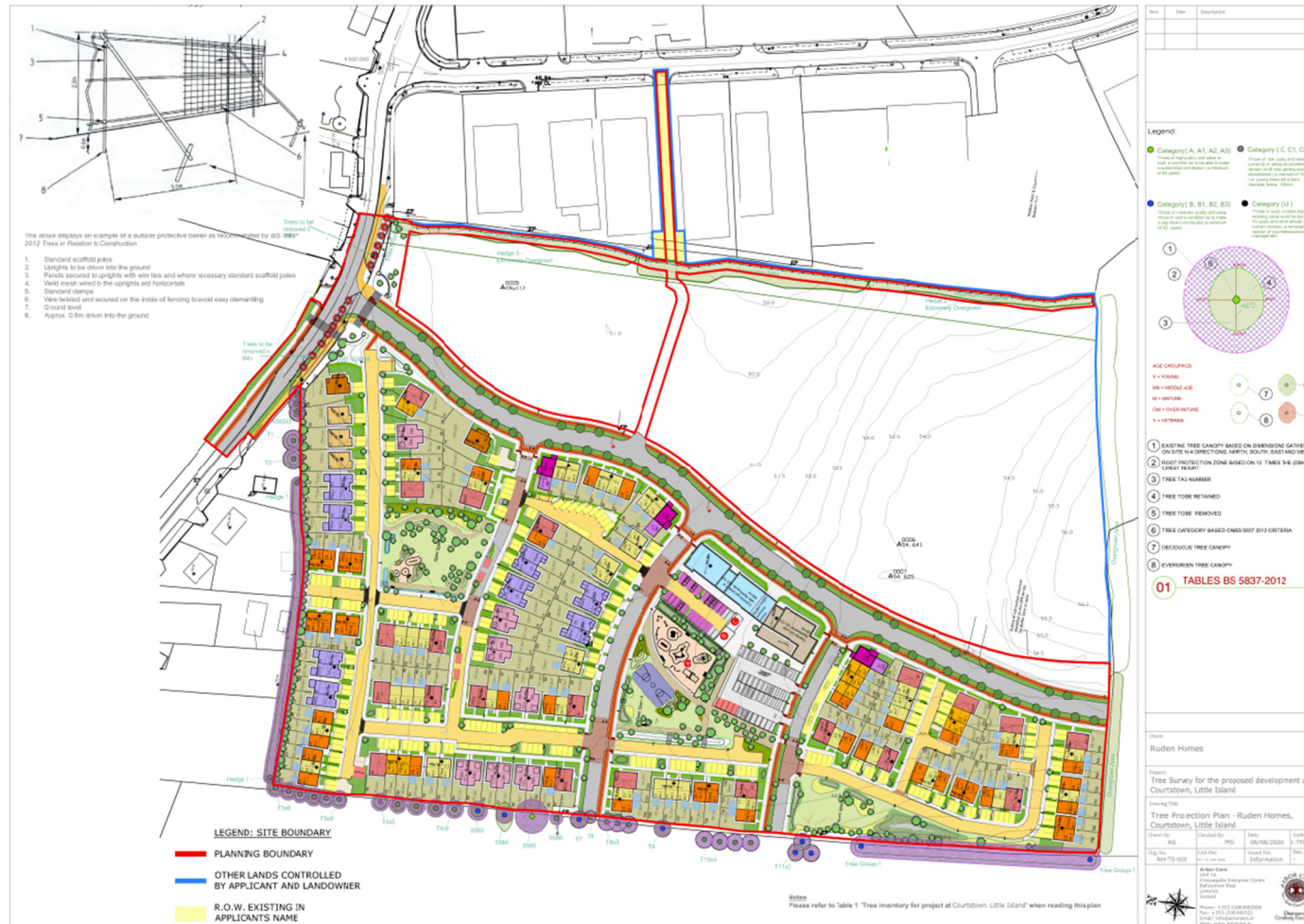
Tree #	Species Botanical Name	Age Class	Dia Size (mm)	HT	Crown Sp.(M)	Crown Cl.(M)	Condition	Structural/Physiological Observations	Impact of development	PMR	Category	R.P.A. (M Radius)
5585	<i>Pinusradiata</i> Monterey Pine	M	700	28	N=8 S=8 E=8 W=8	3	Good	A large mature Pine located within the golf course circa 4m from the boundary	No impact	Retain	A2	8m
5586	Hawthorn	M	200	6	N=3 S=3 E=3 W=3	1	Fair	A mature hawthorn located along the boundary	No impact	Retain	C2	3m
T6	Hawthorn	M	200	6	N=3 S=3 E=3 W=3	1	Fair	A mature hawthorn located along the boundary	No impact	Retain	C2	3m
T7	Grey alder	M	300	14	N=4 S=4 E=4 W=4	3	Good	A large mature alder located within the golf course in good condition	No impact	Retain	B2	4m
T8 x 3	Larch	M	300	16	N=1 S=1 E=1 W=1	5	Fair	Represents 3 larch in fair condition, they have had the upper canopies removed	No impact	Consider for removal	C2	4m
T9	Grey alder	M	300	14	N=4 S=4 E=4 W=4	3	Good	A large mature alder located within the golf course in good condition	No impact	Retain	B2	4m
T10 x 4	European larch	M	300	16	N=1 S=1 E=1 W=1	5	Fair	Represents 4 larch in fair condition, they have had the upper canopies removed	No impact	Consider for removal	C2	4m
T11 x 3	<i>Acer platanoides</i> Norway Maple	M	300	16	N=4 S=4 E=4 W=4	3	Good	A group of 3 maples in good condition	No impact	Prune back the overhanging limbs	B2	4m



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Tree #	Species Botanical Name	Age Class	Dia Size (mm)	HT	Crown Sp.(M)	Crown Cl.(M)	Condition	Structural/Physiological Observations	Impact of development	PMR	Category	R.P.A. (M Radius)
Tree Group 1	<i>Chamecyparis lawsoniana</i> Lawson Cypress	M	400	16	N=3 S=3 E=3 W=3	1	Good	Represents a Lawson cypress hedge located along the south west corner of the site	No impact	Retain	B2	5m
5587-5588 x8	Lime	SM	100	4	N=1 S=1 E=1 W=1	1	Good	A row of 8 semi-mature Lime located along the footpath of the northern boundary	To be removed to accommodate new entrance	To be removed	C2	2m
5589-5590 x 6	Lime	SM	100	4	N=1 S=1 E=1 W=1	1	Good	A row of 6 semi-mature Lime located along the footpath of the northern boundary	To be removed to accommodate new entrance	To be removed	C2	2m
Hedge 2	Hawthorn	M	150	3-4	1.5 - 2m	1	Good	Hawthorn hedge located on boundary of site and industrial properties. Extremely overgrown	No Impact on current development proposal	Retain	C2	3m
Hedge 3	Hawthorn	M	150	3-4	1.5 - 2m	1	Good	Hawthorn hedge located on boundary of site and industrial properties. Extremely overgrown	No Impact on current development proposal	Retain	C2	3M

## Appendix 2. Tree Protection Plan





This report was prepared by:

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*Yours in Conservation.*

*Michael*

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