

murray & associates  
landscape architecture

ARBORICULTURAL INVENTORY AND IMPACT ASSESSMENT

Incorporating a  
TREE PROTECTION STRATEGY

At

**STRATEGIC HOUSING DEVELOPMENT, ON SITE  
AT MILL ROAD, SAGGART, CO. DUBLIN**

**FOR**

Tetrarch Residential Ltd.

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Member of the Irish Landscape Institute



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| Rev. No. | Issue Status              | Date     | Prepared By | Checked By |
|----------|---------------------------|----------|-------------|------------|
| 1        | For Issue                 | 03.11.20 | MP/AG       | JW         |
| 2        | Revised Site Layout       | 19.10.21 | JW          | JW         |
| 3        | Revised impact assessment | 18.11.21 | JW          | MB         |
| 4        | For Issue                 | 14.12.21 | JW          | MB         |
|          |                           |          |             |            |

## Introduction

The trees and hedgerows were surveyed on the 28th of October 2020 and the 11<sup>th</sup> of November 2021 by this practice and the findings have been summarised and recorded in the following report. A number of mature trees on the development site area were re-surveyed and assessed. Some of the trees on the site will have to be removed to accommodate the development.

## Scope

The site is the subject of a planning application for new residential development. The site contains a number of mature trees, and this report has been commissioned to provide an arboricultural assessment of the site to assist the design team as they prepare detailed plans for the new development. The purpose of this assessment is to provide an analysis of any potential impact of the proposed development on the existing trees and hedgerows. The report will provide recommendations for preservation and or removal of trees and hedgerows. It will present a written report on the inspection of the trees. The report will provide a tree protection plan highlighting which trees are to be removed and/or retained

This report should be read with reference to the findings summarised and recorded in the Tree and Hedgerow Assessment report, conducted on 28th October 2020 and the 11<sup>th</sup> of November 2021. The report should also be read in conjunction with the following drawings:

- Landscape Plan (REF: **1829\_PL\_P\_01**)
- Tree Survey (REF. **1829\_TS\_P\_01**)
- Arboricultural Impact Plan (REF. **1829\_TS\_P\_02**)

## Proposed Development

The proposed development will consist of a new residential scheme per the lodged particulars.

The site is located off the N7 route and is located to the south of this route. The site adjoins the Citywest Campus which is to the east. To the west there are single houses located along Mill Road. The main areas of trees are associated with the eastern boundary and the single house which is located off Mill Road.



### **Methodology Employed**

An initial tree survey and visual condition assessment was on the 28<sup>th</sup> of October 2020 and the 11<sup>th</sup> of November 2021. For the purpose of this report the trees were assessed in accordance with BS 5837: 2012 Trees in relation to design, demolition and construction. Only trees with diameters of 75mm or greater were surveyed, and those smaller than this were noted in the survey. 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.

#### **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 the development area. 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 is enough 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.

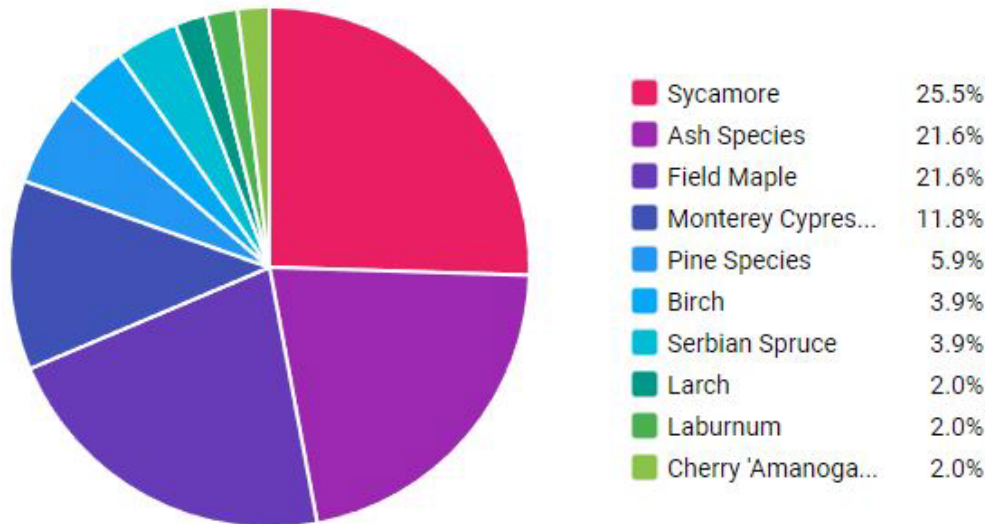
Tree diameters (DBH) were estimated at 1.5 meter above grade as per standard arboricultural practice. Tree height was measured with the use of a digital clinometer. The trees were categorized in accordance with BS5837:2012

## Tree Survey Results

| Category | Number of trees | Trees to be removed |
|----------|-----------------|---------------------|
| A        | 0               | 0                   |
| B        | 28              | 6                   |
| C        | 22              | 16                  |
| U        | 6               | 6                   |

**Table 1. Category of the Trees surveyed (BS 5837:2012, Item 4.5 Tree categorisation method)**

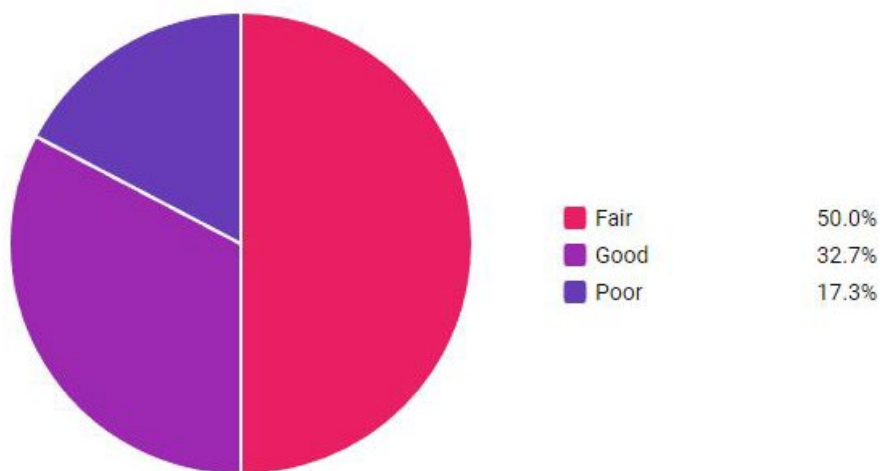
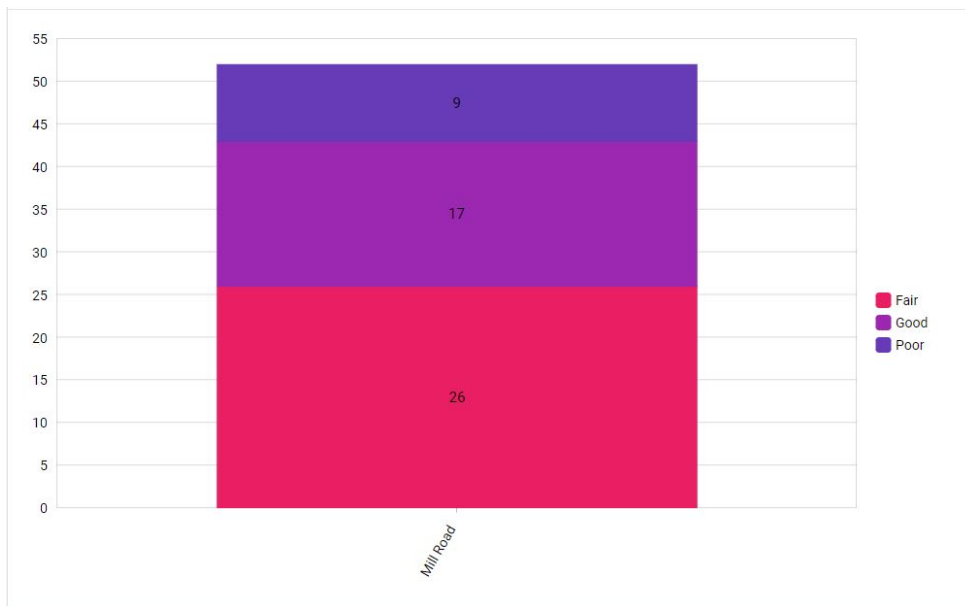
The species composition of the site is shown on the chart below:



There are two main areas of tree cover on the site. The first is along the boundaries and these are composed of Field Maple, Sycamore, Ash and Hawthorn. These plantings will all be retained. The second area is around the existing dwelling on the southwestern boundary. This area contains a number of good specimens of Pine, Birch, Sycamore and Spruce. Of particular note are the two existing Pines 0741 and 0742 (category B1) which are situated along the old Mill Channel, and these will be retained as part of the development. These are in good condition and are very good specimens.

A third part of the site extends into the lands to the east of the site, where a path and cycle track are proposed through the existing golf club lands. There are immature stands of mixed native and trees throughout this area which were planted as part of the golf course development and the route was selected to avoid these groups.

In terms of quality the division of tree condition and quality is as shown on the charts below:



50% of trees are in fair condition, and 1/3 of the trees are in good condition. The site layout has attempted to retain as many of the trees that are in good condition as possible.

It should be noted that there are no trees within the site area of the proposed cycle and pedestrian route to the east of the main part of the development site. The closest distance at which the path passes any of the immature tree groups on the golf course is approximately 3.5m. Based on the formulae for calculation of root protection areas in BS5837 there are not likely to be any substantial roots extending from these immature trees at this distance. The recommended mitigation measure

is to carry out site investigation to determine the prior to construction. If roots are present, a “no-dig” construction methodology shall be employed for these sections of the path.

### SITE PHOTOGRAPHS



Plate 1- View looking north (motorway is to the right)



Plate 2- View looking north along boundary





Plate 3- Eastern Boundary Hedgerow - General



Plate 4- Existing Trees in Northwest Corner - selection to be retained



Plate 5- Southern Boundary Hedgerow - General



Plate 6- Large Pines in Corner of site (1) to be retained

## Conclusions

The proposed development will have a moderate impact on the existing tree cover on the site. Additional replanting will work to mitigate any loss of trees as a result of the proposed development. The proposed landscape plan details the planting of a significant number of new native broadleaf trees. While the short-term impact of the development will be high, in the longer term the new planting will replace the existing tree cover.

There will be no impact on the trees in the golf course area to the east of the main part of the site. The path has been designed to avoid impact on these trees. If necessary, where the path passes closest to trees, the path in this area will be constructed with no excavation to avoid any possible disturbance to the trees (“no-dig” construction methodology as outlined in BS5837).

## Tree Survey Tables

| Tree # | Species Botanical name     | Size dia. (cm) | HT. (m) | Crown Sp.                        | Age class   | Structural/ Physiological Observations &PMR | Impact of development | Remedial works | Category | R.P.A. (M Radius) |
|--------|----------------------------|----------------|---------|----------------------------------|-------------|---|-----------------------|----------------|----------|-------------------|
| 709    | <i>Fraxinus sp.</i>        | 63             | 5       | N=2.3<br>E=2.3<br>S=2.3<br>W=2.3 | Over-mature | Poor, Poor                                  | To be retained        | n/a            | C3       | 7.56              |
| 710    | <i>Fraxinus sp.</i>        | 40.57          | 7       | N=2.3<br>E=3.2<br>S=4<br>W=1.1   | Over-mature | Poor, Poor                                  | To be retained        | n/a            | C3       | 4.87              |
| 711    | <i>Acer pseudoplatanus</i> | 43.93          | 5       | N=5<br>E=1.1<br>S=3.2<br>W=1.1   | Over-mature | Poor, Poor                                  | To be retained        | n/a            | C3       | 5.27              |
| 714    | <i>Acer campestre</i>      | 15             | 3       | N=3<br>E=1<br>S=2<br>W=1.5       | Semi-mature | Fair, Fair                                  | To be retained        | n/a            | B2       | 1.8               |
| 714    | <i>Acer campestre</i>      | 15             | 3       | N=3<br>E=1<br>S=2<br>W=1.5       | Semi-mature | Fair, Fair                                  | To be retained        | n/a            | B2       | 1.8               |
| 714    | <i>Acer campestre</i>      | 15             | 3       | N=3<br>E=1<br>S=2<br>W=1.5       | Semi-mature | Fair, Fair                                  | To be retained        | n/a            | B2       | 1.8               |
| 714    | <i>Acer campestre</i>      | 15             | 3       | N=3<br>E=1<br>S=2<br>W=1.5       | Semi-mature | Fair, Fair                                  | To be retained        | n/a            | B2       | 1.8               |
| 714    | <i>Acer campestre</i>      | 15             | 3       | N=3<br>E=1<br>S=2<br>W=1.5       | Semi-mature | Fair, Fair                                  | To be retained        | n/a            | B2       | 1.8               |

|     |                            |    |   |                                  |             |            |   |     |    |     |
|-----|----------------------------|----|---|----------------------------------|-------------|------------|---|-----|----|-----|
| 714 | <i>Acer campestre</i>      | 15 | 3 | N=3<br>E=1<br>S=2<br>W=1.5       | Semi-mature | Fair, Fair | To be retained                              | n/a | B2 | 1.8 |
| 714 | <i>Acer campestre</i>      | 15 | 3 | N=3<br>E=1<br>S=2<br>W=1.5       | Semi-mature | Fair, Fair | To be retained                              | n/a | B2 | 1.8 |
| 714 | <i>Acer campestre</i>      | 15 | 3 | N=3<br>E=1<br>S=2<br>W=1.5       | Semi-mature | Fair, Fair | To be retained                              | n/a | B2 | 1.8 |
| 714 | <i>Acer campestre</i>      | 15 | 3 | N=3<br>E=1<br>S=2<br>W=1.5       | Semi-mature | Fair, Fair | To be retained                              | n/a | B2 | 1.8 |
| 714 | <i>Acer campestre</i>      | 15 | 3 | N=3<br>E=1<br>S=2<br>W=1.5       | Semi-mature | Fair, Fair | To be retained                              | n/a | B2 | 1.8 |
| 714 | <i>Acer campestre</i>      | 15 | 3 | N=3<br>E=1<br>S=2<br>W=1.5       | Semi-mature | Fair, Fair | To be retained                              | n/a | B2 | 1.8 |
| 714 | <i>Acer campestre</i>      | 15 | 3 | N=3<br>E=1<br>S=2<br>W=1.5       | Semi-mature | Fair, Fair | To be retained                              | n/a | B2 | 1.8 |
| 715 | <i>Acer pseudoplatanus</i> | 82 | 8 | N=2.9<br>E=3.5<br>S=3.7<br>W=3.6 | Mature      | Fair, Fair | To be removed to facilitate the development | n/a | C1 | n/a |
| 716 | <i>Acer pseudoplatanus</i> | 48 | 8 | N=3.3<br>E=1.4<br>S=3.9<br>W=1.6 | Mature      | Fair, Fair | To be removed to facilitate the development | n/a | C1 | n/a |
| 717 | <i>Acer pseudoplatanus</i> | 51 | 8 | N=3.3<br>E=1.4<br>S=3.9<br>W=1.6 | Mature      | Fair, Fair | To be removed to facilitate the development | n/a | C1 | n/a |

|     |                             |        |   |                                  |        |            |   |     |    |     |
|-----|-----------------------------|--------|---|----------------------------------|--------|------------|---|-----|----|-----|
| 718 | <i>Acer pseudoplatanus</i>  | 64     | 8 | N=3.3<br>E=1.4<br>S=3.9<br>W=1.6 | Mature | Fair, Fair | To be removed to facilitate the development | n/a | C1 | n/a |
| 719 | <i>Acer pseudoplatanus</i>  | 64     | 8 | N=3<br>E=1.4<br>S=3.9<br>W=1.6   | Mature | Fair, Fair | To be removed to facilitate the development | n/a | C1 | n/a |
| 720 | <i>Acer pseudoplatanus</i>  | 110.70 | 8 | N=3.3<br>E=1.4<br>S=3.9<br>W=1.6 | Mature | Fair, Fair | To be removed to facilitate the development | n/a | C1 | n/a |
| 721 | <i>Acer pseudoplatanus</i>  | 53     | 8 | N=2.5<br>E=1.4<br>S=2.9<br>W=3   | Mature | Fair, Fair | To be removed to facilitate the development | n/a | C1 | n/a |
| 722 | <i>Acer pseudoplatanus</i>  | 35     | 6 | N=2.3<br>E=1.4<br>S=2<br>W=1.6   | Mature | Fair, Fair | To be removed to facilitate the development | n/a | C1 | n/a |
| 723 | <i>Acer pseudoplatanus</i>  | 122    | 8 | N=2.3<br>E=1.4<br>S=4.8<br>W=1.6 | Mature | Fair, Fair | To be removed to facilitate the development | n/a | C1 | n/a |
| 724 | <i>Cupressus macrocarpa</i> | 46     | 6 | N=2.4<br>E=2.4<br>S=2.7<br>W=2.8 | Mature | Fair, Fair | To be removed to facilitate the development | n/a | B3 | n/a |
| 725 | <i>Cupressus macrocarpa</i> | 127.22 | 6 | N=2.3<br>E=2.7<br>S=2.5<br>W=2.6 | Mature | Fair, Fair | To be removed to facilitate the development | n/a | B3 | n/a |
| 726 | <i>Picea omorika</i>        | 63     | 7 | N=2<br>E=2<br>S=2<br>W=4         | Mature | Good, Good | To be removed to facilitate the development | n/a | B2 | n/a |

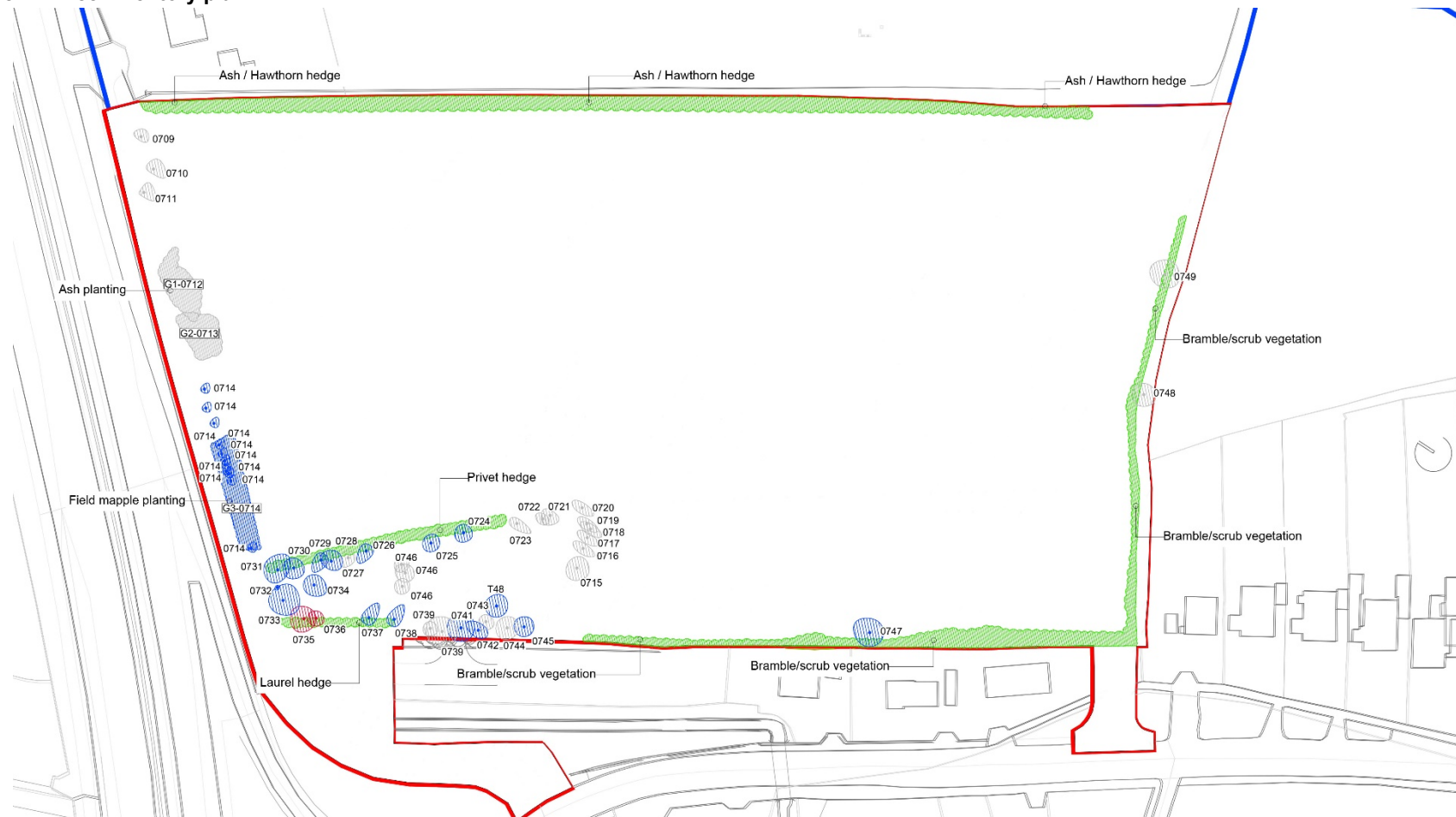
|     |                                 |    |    |                                   |                 |            |   |     |    |       |
|-----|---------------------------------|----|----|-----------------------------------|-----------------|------------|---|-----|----|-------|
| 727 | <i>Fraxinus sp.</i>             | 29 | 6  | N=2<br>E=2<br>S=2<br>W=3          | Early<br>mature | Poor, Poor | To be removed to<br>facilitate the<br>development | n/a | C3 | n/a   |
| 728 | <i>Cupressus<br/>macrocarpa</i> | 87 | 6  | N=3.4<br>E=3.2<br>S=3.3<br>W=2.3  | Early<br>mature | Good, Good | To be removed to<br>facilitate the<br>development | n/a | B2 | 10.44 |
| 729 | <i>Picea omorika</i>            | 46 | 9  | N=2<br>E=2<br>S=2<br>W=4          | Mature          | Good, Good | To be removed to<br>facilitate the<br>development | n/a | B1 | 5.52  |
| 730 | <i>Pinus sp.</i>                | 63 | 11 | N=3.1<br>E=2.8<br>S=3.2<br>W=3.2  | Mature          | Good, Good | To be removed to<br>facilitate the<br>development | n/a | B2 | 7.56  |
| 731 | <i>Betula pendula</i>           | 56 | 11 | N=4<br>E=5<br>S=3<br>W=3.9        | Mature          | Good, Good | To be retained                                    | n/a | B1 | 6.72  |
| 732 | <i>Larix decidua</i>            | 42 | 9  | N=0.6<br>E=0.7<br>S=0.65<br>W=0.8 | Mature          | Good, Good | To be retained                                    | n/a | B3 | 5.04  |
| 733 | <i>Betula pendula</i>           | 53 | 9  | N=4<br>E=5<br>S=5<br>W=3.9        | Mature          | Good, Good | To be retained                                    | n/a | B1 | 6.36  |
| 734 | <i>Acer<br/>pseudoplatanus</i>  | 29 | 4  | N=3<br>E=3<br>S=4.1<br>W=3        | Early<br>mature | Good, Good | To be retained                                    | n/a | B2 | 3.48  |
| 735 | <i>Prunus<br/>'Amanogawa'</i>   | 39 | 3  | N=4.1<br>E=3.4<br>S=3.4<br>W=4.1  | Mature          | Poor, Poor | To be removed to<br>facilitate the<br>development | n/a | U  | n/a   |

|     |                             |       |    |                                      |              |            |   |     |    |      |
|-----|-----------------------------|-------|----|--------------------------------------|--------------|------------|---|-----|----|------|
| 736 | <i>Laburnum amygaloides</i> | 36.06 | 3  | N=2.3<br>E=2.1<br>S=2.4<br>W=2.3     | Over-mature  | Poor, Poor | To be removed to facilitate the development | n/a | U  | n/a  |
| 737 | <i>Fraxinus sp.</i>         | 54    | 8  | N=2<br>E=4.9<br>S=2<br>W=2           | Early mature | Good, Good | To be removed to facilitate the development | n/a | B3 | 6.48 |
| 738 | <i>Fraxinus sp.</i>         | 71    | 8  | N=2<br>E=4.9<br>S=2<br>W=2           | Early mature | Good, Good | To be removed to facilitate the development | n/a | B3 | n/a  |
| 739 | <i>Fraxinus sp.</i>         | 36    | 7  | N=1.95<br>E=1.95<br>S=2.25<br>W=2.25 | Early mature | Fair, Fair | To be retained                              | n/a | C3 | n/a  |
| 740 | <i>Cupressus macrocarpa</i> | 80    | 9  | N=4.7<br>E=4.2<br>S=4.4<br>W=4.6     | Mature       | Fair, Fair | To be retained                              | n/a | C2 | n/a  |
| 741 | <i>Pinus sp.</i>            | 72    | 13 | N=3.95<br>E=4.24<br>S=3.9<br>W=3.9   | Veteran      | Good, Good | To be retained                              | n/a | B1 | n/a  |
| 742 | <i>Pinus sp.</i>            | 82    | 13 | N=3.95<br>E=2<br>S=3<br>W=2          | Veteran      | Good       | To be retained                              | n/a | B1 | n/a  |
| 743 | <i>Cupressus macrocarpa</i> | 58    | 9  | N=2<br>E=2<br>S=2.5<br>W=2.5         | Over-mature  | Poor, Poor | To be retained                              | n/a | C3 | n/a  |
| 744 | <i>Cupressus macrocarpa</i> | 49    | 6  | N=3.2<br>E=3.4<br>S=3.2<br>W=3.4     | Over-mature  | Poor, Poor | To be retained                              | n/a | C3 | n/a  |
| 745 | <i>Fraxinus sp.</i>         | 42    | 6  | N=3<br>E=3<br>S=2.8                  | Early mature | Good, Good | To be retained                              | n/a | B2 | n/a  |



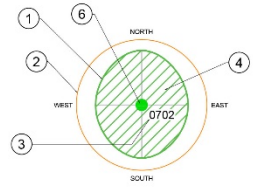
|     |                                |        |   |                                  |                 |            |   |     |    |      |
|-----|--------------------------------|--------|---|----------------------------------|-----------------|------------|---|-----|----|------|
|     |                                |        |   | W=2.8                            |                 |            |   |     |    |      |
| 746 | <i>Fraxinus sp.</i>            | 38     | 9 | N=2.2<br>E=2.3<br>S=2.2<br>W=2.3 | Early<br>mature | Good, Good | To be removed to<br>facilitate the<br>development | n/a | C1 | n/a  |
| 746 | <i>Fraxinus sp.</i>            | 38     | 9 | N=2.1<br>E=2.3<br>S=2.1<br>W=2.3 | Early<br>mature | Good, Good | To be removed to<br>facilitate the<br>development | n/a | C2 | n/a  |
| 746 | <i>Fraxinus sp.</i>            | 38     | 9 | N=3.1<br>E=2.5<br>S=2.7<br>W=2.6 | Early<br>mature | Good, Good | To be removed to<br>facilitate the<br>development | n/a | C2 | n/a  |
| 747 | <i>Acer<br/>pseudoplatanus</i> | 54     | 7 | N=5<br>E=4<br>S=4<br>W=4         | Early<br>mature | Fair, Fair | To be retained                                    | n/a | B1 | 6.48 |
| 748 | <i>Fraxinus sp.</i>            | 108.93 | 8 | N=3.4<br>E=3.2<br>S=3.6<br>W=3.4 | Over-<br>mature | Poor, Poor | To be removed<br>on safety grounds                | n/a | C3 | n/a  |
| 749 | <i>Acer<br/>pseudoplatanus</i> | 49     | 7 | N=4.5<br>E=4.3<br>S=4.4<br>W=3.6 | Early<br>mature | Fair       | To be retained                                    | n/a | C1 | 5.88 |
|     |                                |        |   |                                  |                 |            |   |     |    |      |

Figure 2 – Tree inventory plan

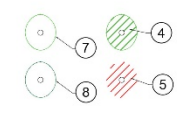


**LEGEND:**

- **Category (A, A1, A2, A3)**  
Those of high quality and value: in such a condition as to be able to make a substantial contribution (a minimum of 40 years)
- **Category (B, B1, B2, B3)**  
Those of moderate quality and value: those in such a condition as to make a significant contribution (a minimum of 20 years)
- **Category (C, C1, C2, C3)**  
Those of low quality and value: currently in adequate condition to remain until new planting could be established (a minimum of 10 years) or young trees with a stem diameter below 150mm
- **Category (U)**  
Those in such condition that any existing value would be lost within 10 years and which should, in the current context, be removed for reason of sound arboricultural management



- AGE GROUPINGS**
- Y = YOUNG
  - MA = MIDDLE AGE
  - M = MATURE
  - OM = OVER MATURE
  - V = VETERAN



- 1 EXISTING TREE CANOPY BASED ON DIMENSIONS GATHERED ON SITE IN 4 DIRECTIONS, NORTH, SOUTH, EAST AND WEST
- 2 TREE PROTECTION BARRIER
- 3 TREE TAG NUMBER
- 4 TREE TO BE RETAINED
- 5 TREE TO BE REMOVED
- 6 TREE CATEGORY BASED ON BS 5837 2012 CRITERIA
- 7 DECIDUOUS TREE CANOPY
- 8 EVERGREEN TREE CANOPY

Figure 3 – Development impact plan

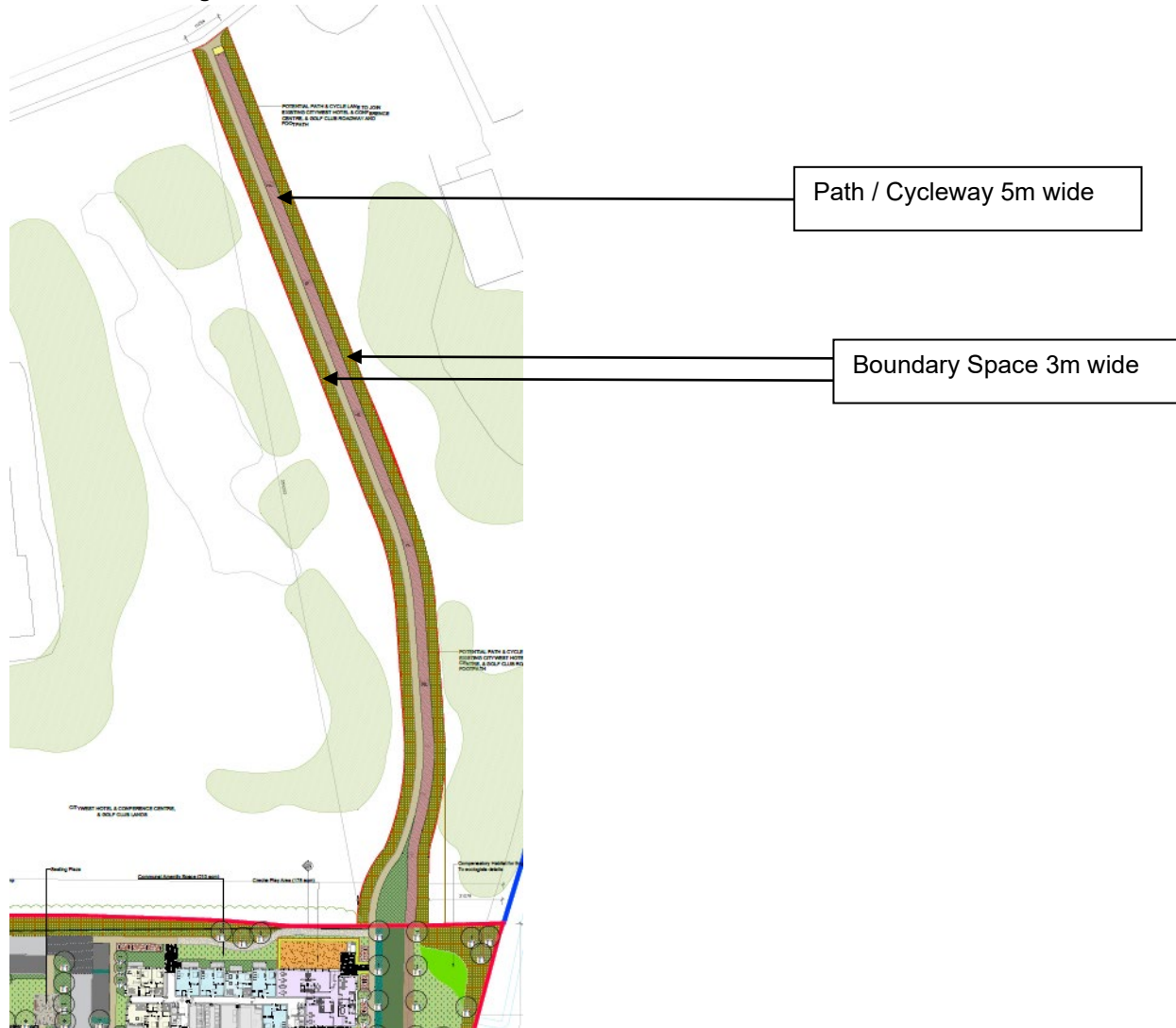


Figure 4 - Proposed landscape layout plan (Page 1/2) – Main Development Area



Figure 5 - Proposed landscape layout plan (Page 2/2) – Eastern Part of Site with Path / Cycle Route

Note that this illustrates that there are no trees within the red line of the site and the nearest trees are c. 3.5m from the nearest edge of the path, so there is no predicted impact to the trees arising in this location which would result in loss of trees due to construction works.



## Disclaimers

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. The conclusions and recommendations in this report are only valid for a period of one year. This period of validity may be reduced in the case of any change in conditions to or in proximity to the tree. In the event of adverse weather conditions, there is the possibility of any tree despite good report surveys, falling over.

In the event of a falling tree causing damage to residential or non-residential buildings in their proximity, no liability will attach to this firm, in the event of damage by such trees, to any person, any building public or private, or any mechanical vehicle or otherwise. Recommendations made in this report are subject to the knowledge and expertise of the qualified Arborist that carried out the above inspections.

Signed \_\_\_\_\_

Dated: 14.12.2021

John Ward

ISA Certified Arborist