# TREE SURVEY REPORT

**Canal Bank Development, Limerick**

**Applicant: Revington Developments Ltd.**

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# 1.0 Introduction

This report describes the existing tree stock, including shrubs, at the proposed development site at Canal Bank, Limerick. It provides information on the condition and quality of the existing stock and assesses the potential effects of the proposed development on it. Recommendations with regard to protective measures in case of the retention of any of the trees/shrubs are also made.

## 1.1 Terms of Engagement

SLR Consulting Ireland were appointed by Lawlor, Burns & Associates in June 2020, on behalf of Revington Ltd., to carry out a tree survey on a site at Canal Bank, Limerick. The tree survey is required to support the planning application for a proposed SHD development on this site, with the aim to assess the effects of the proposed development design on the existing tree/shrub stock.

The site is located in Limerick City, to the north of Pa Healy Rd, west of Park Road and south of the City Canal and associated towpath. An existing warehouse and associated hardstanding area in the south-eastern corner of the triangle created by the two roads and the canal is excluded from the development area. The proposed application area is just over 4ha in size.

The majority of the tree/shrub population within the site appears to have developed naturally over the last 10-20 years from previously disturbed ground, judging by aerial photography from different years between 1995 and 2020, available on the GeoHive Map Viewer (http://map.geohive.ie/mapviewer.html). Trees along the Canal appear to have been in place for longer and are likely to have been planted.

The proposed development will consist of a 4ha area bounded by City Canal to the north, Pa Healy Road to the south and Park Road to the east, Canal Bank, Limerick including:

A. Demolition of existing 530m2 warehouse building on site.

B. Block 1 – Student accommodation building of 8,238m2 stepped from three to six storeys, with ground floor café of 144.60m2 and 3 no. retail units facing onto Pa Healy road of 86.59m2 each, with 9 no. two bedroom, 37 no. three bedroom, and 15 no. four bedroom student apartments, totalling 189 bed spaces, ancillary laundry, refuse and enclosed communal courtyard with landscaping and bicycle storage;

C. Block 2 - A residential apartment building of 6,013.25m2 with eight storeys and two penthouse storeys, total ten storeys containing 10 no. studio, 1 no. one bedroom and 52 no. two-bedroom apartments;

D. Block 3 – A residential apartment building of 8,107.10m2 with six storeys and two penthouse storeys, total eight storeys containing 16 no. studio, 10 no. one bedroom, and 62 no. two-bedroom apartments;

E. Block 4 – A residential apartment building of 3,869.18m2 with six storeys and one penthouse storey, total seven storeys containing 7 no. studio, 13 no. one bedroom and 25 no. two-bedroom apartments;

F. Block 5 – A residential apartment building of 5,849.40m2 with six storey and one penthouse storey total seven storeys containing 14 no. studio, 16 no. one bedroom and 36 no. two-bedroom apartments;

G. Block 6 a residential apartment building of 3,869.18m2 with six storeys and one penthouse storey, total seven storeys containing 7 no. studio, 13 no. one bedroom and 25 no. two-bedroom apartments;

H. Block 7 a residential apartment building of 4,962m2 with five storeys and one penthouse storey, total six storeys containing 12 no. studio, 14 no. one bedroom and 30 no. two-bedroom apartments;

I. Community facilities building of 1,336.90m2 and three storeys with creche, café, management offices and common accommodation for use by apartment dwellers;

J. 18 no. Executive Houses – Consisting of 2 no. detached four-bedroom houses of 194.62m2 each and 16 no. terraced four-bedroom houses of 177.82m2 each, with off street parking to front separate from communal parking;

K. 149 Car parking spaces throughout the development and 420 secured bicycle parking spaces throughout the development;

L. Ancillary works comprising; new vehicular entrances onto Pa Healy Road, pedestrian and cycle links to Pa Healy road, Park road and City Canal, bin storage for all developments adjacent to all entrances, New public park of 0.5ha along city canal, communal open space and communal roof gardens for all apartments, all ancillary drainage, civil and landscape works, public lighting within estate and Electricity Sub-station to rear of Block 1

## 1.2 Site visit and Surveyor

The tree survey was carried out on Monday 15th June 2020 by Anne Merkle of SLR Consulting Ireland who holds a Technician's Certificate in Arboriculture and is a Technician's member of the Arboricultural Association. The conditions throughout the survey where mostly sunny, dry and with no significant wind.

## 1.3 Limitations

The tree survey was carried out from ground level only. Further investigation, including aerial inspections, may be required for those trees, which are proposed for retention, as part of the proposed development (refer to section 2.0).

Trees and shrubs are living organisms whose health and condition can change rapidly. The health, condition and safety of trees should be checked on a regular basis, at least once a year. Any recommendations made 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 in proximity to the trees and/or following extreme weather events.

It should be noted that the topographical survey provided did not include the location of individual trees (with the exception of a small number of trees outside the proposed application area) or show the extent of existing scrub/woodland areas. The location of trees and extent of scrub/woodland areas, as shown on the Tree Survey Plan (refer to Drawing T1, in Appendix 02 of this report), were therefore approximated during the site visit and using the aerial photography available on the GeoHive Map Viewer. It is recommended that any trees/scrub areas to be retained are accurately surveyed for inclusion in any design drawings.

# 2.0 Tree Survey

The tree/shrub population included in the tree survey consist of scrub areas covering large parts of the proposed application area, a woodland area along its northern boundary and a small number of individual trees on the southern side of the footpath to the south of City Canal, just outside the application area. The trees to the north of the footpath on the southern bank of the canal were also taken into consideration.

There are no trees along Pa Healy Rd or Park Rd on the sides adjoining the application area. Trees on the opposite sides of these two roads, i.e. the southern and eastern sides respectively, where not included, due to the separation created by the carriageways. This will ensure that any such trees are highly unlikely to be affected by works within the site.

Refer to Drawing T1 in Appendix 02 of this report for the approximate location and extent of the individual trees, as well as scrub and woodland areas described in further detail below. The effects on each of these elements by the proposed development and recommendations for their protection should they be retained are also provided.

## 2.1 Individually Measured Trees (T1-T9)

### 2.1.1 Description

Nine individual trees were surveyed along the southern side of the footpath between City Canal and the application area. These are the only trees along this side of the footpath that have distinct crowns that have not fully merged with neighbouring trees and the bases of which are located in the grass verge beside and on a similar level as the footpath. Five of the trees are located near the western end of the northern boundary of the application area (T1-T5) and the remaining four approximately at the centre of that boundary (T6-T9).

Refer to Appendix 01 for the tree survey schedule covering these nine trees, which was prepared in accordance with BS5837:2012 – Trees in relation to design, demolition and construction – Recommendations.

#### T1-T5

T1-T5 include one pedunculate oak (*Quercus robur*), one wild cherry (*Prunus avium*) and three poplar (*Populus species*), one of which is an Aspen. There is a drop of approximately 1m in level into the application area near the base of these trees and they are adjoined by a grassland area within the site. There are some smaller woody species along the line formed by these trees (see Scrub 2, below).

The trees range from 4.5m (oak) to 9.5m (poplars) in height and are all classed as middle aged (i.e. within the second third of its life expectancy) with the exception of the oak, which is classed as young (i.e. within the first third of its life expectancy), as this is a much longer lived species compared to the others.

All five trees are placed into tree quality category C1, as per BS5837:2012, i.e. trees of low arboricultural quality. This is due their limited merits, impaired structural condition and/or short-lived nature in the case of T2-T5, and the small stem diameter in the case of T1. Refer to Figure 1 for some examples of the impaired structural conditions present, i.e. co-dominant and leaning stems.

#### T6-T9

T6-T9 include one poplar and three crack willow (*Salix fragilis*). There is a steep drop of approximately 2m in level into the application area near the base of these trees, which is associated with a drain located along the northern boundary of the site. The trees are adjoined by a woodland area (see Woodland 1, below), which has established along the drain.

The trees range from 13.5m (willow) to 14.5m (poplar) in height and are all classed as middle aged (i.e. within the second third of its life expectancy). Due to their location in the verge along footpath, they are greater in relative height than those trees located within Woodland 1 and have therefore retained their individual appearance. However, the lower parts of their crowns partially merge with the neighbouring woodland.

All four trees are placed into tree quality category C1, as per BS5837:2012, i.e. trees of low arboricultural quality. As with T2-T5 this is due their limited merits, impaired structural condition and/or short-lived nature (refer to Figure 1).

**Figure 1: Examples of Structural Impairments in T3, T4 & T9**

### 2.1.2 Effects due to proposed development

The proposed site layout provided appears to show that all trees along the northern boundary will be removed, including T1-T9. This is however not clearly stated and considering that green spaces are proposed along all of the northern site boundary, there seems to be scope for the retention of some/all of these trees.

Considering the low arboricultual quality assigned to the nine trees and in particular the mostly short-lived species present, the loss of these trees would not be considered significant. It should however be noted that these trees provide some visual amenity, could soften the appearance of and add maturity to the proposed development.

Works within the application area should not affect the roots of T1-T9, as long as the adjoining banks within the site are not being dug into. Considering the drops of elevation into the application area, the majority of the roots of T1-T9 are expected to be located in the grass verge and under the adjoining footpath. It is unlikely that the root zone extends much into the application area. The majority of the Root Protection Area (RPA, as per BS5837:2012) is therefore shown to the north of the stems of T1-T9 on Drawing T1 in Appendix 02 of this report.

### 2.1.3 Recommendations

The following recommendations should be considered, prior to the removal/retention of any of T1-T9:

- Should T1-T9 be removed, we recommend that the ownership of the trees is confirmed, and the owner's consent sought, as these trees appear to be located outside the application area.
- Should any of the trees be retained, a detailed assessment of their structural condition is recommended, considering the presence of co-dominant/leaning stems in some cases and as some of the stems were covered by ivy, preventing close inspection. Also, the need for the removal of deadwood overhanging

publicly accessible areas and appropriate formative pruning should be assessed. The assessment should be carried out by a suitably qualified arborist. A tree management plan should be prepared and implemented, as part of the future maintenance of the green spaces within the site.

- Should any of the trees be retained, the installation of a construction site boundary barrier must be carried out without damaging these trees. This includes, inter alia, that the barrier is not attached to any of the trees, that the tree stems are not damaged during installation and that no poles are driven into the ground in the vicinity of the tree stems. Advise from a suitably qualified arborist should be sought.
- Should any of the trees be retained and should there be a need to dig into the ground underneath the footpath to access utilities, hand digging should be utilised to minimise the disturbance to tree roots present. Any such work should be overseen by a suitably qualified arborist to advise on how to proceed, should large roots be encountered
- The retention of T6-T9 is not recommended, should all of Woodland 1 be removed, as the trees will be prone to windfall once the shelter provided by the woodland area is removed.

## 2.2 Group 1

### 2.2.1 Description

Approximately 60 individual trees are located on the northern side of the footpath, near the top of the southern bank of City Canal. They are stretched out along the entire length of the canal adjoining the northern boundary of the application area, with some gaps, as indicated on Drawing T1 in Appendix 02 of this report. Figure 2 below shows an example of a row of willows (*Salix species*) near the eastern end of Group 1. Other species included in Group 1 are ash (*Fraxinus excelsior*), beech (*Fagus sylvatica*), common alder (*Alnus glutinosa*), crab-apple (*Malus sylvestris*), hawthorn (*Crataegus monogyna*), poplar, rowan (*Sorbus aucuparia*), wild cherry and whitebeam (*Sorbus aria*).

**Figure 2: Sample of Some Trees in Group 1**

The trees within Group 1 were not surveyed individually, as they are unlikely to be affected by any works taking place within the site, due to the separation from the application area by the footpath. The roots of the trees in Group 1 are likely to be concentrated in the bank along the canal and under the footpath. They are unlikely to reach within the application area, due to the distance, but also due to the level changes into the application area.

### 2.2.2 Effects due to proposed development

Group 1 is fully located outside the application area. Assuming that no works will take place anywhere along the footpath, including that no machinery will be driven along the path, damage to the above ground parts of the trees, due to the proposed development are highly unlikely.

As mentioned above, damage to the root systems of the trees within Group 1, due to the proposed development is also considered unlikely. To proof this point, the stem diameter of one of the largest trees in Group 1 was measured, i.e. the willow at the very eastern end. The resulting RPA is an area equivalent to a circle with a 6.6m radius. This was plotted on the Tree Survey Plan (Drawing T1 in Appendix 02 of this report) and clearly shows that it does not extent into the application area. Considering the remainder of the trees in this group typically have smaller stem diameters, their RPAs would be smaller and therefore damage to the root system by any works within the application area are even less likely.

### 2.2.3 Recommendations

The following recommendations should be implemented to ensure the protection of Group 1 from above or below ground damage, due to the proposed development:

- The footpath between the site and Group 1 should be excluded from any works associated with the proposed development, including access by machinery. A sturdy site boundary barrier should be installed, to prevent access onto the footpath from the construction site.
- Should there be a need to dig into the ground underneath the footpath to access utilities, hand digging should be utilised to minimise the disturbance to tree roots present. Any such work should be overseen by a suitably qualified arborist to advise on how to proceed, should large roots be encountered.

## 2.3 Woodland Area 1

### 2.3.1 Description

Along the aforementioned drain along the northern boundary of the application area a woodland area of approximately 4,000m$^2$ has developed. Most trees within this area, dominated by several species of willow, have reached over 5m in height.

No trees are visible in the area covered by the woodland in the aerial photography dated 2005 on the GeoHive Map Viewer but are present in that dated 2005-2012. The woodland is therefore a maximum of 15 years old. Considering the dominance of willow, it is assumed that is has developed naturally from willow scrub.

While the main body of the woodland is largely dominated by several willow species, some other species are present, in particular along the northern boundary, i.e. the boundary with the footpath along the City Canal. Species include bramble (*Rubus fruticosus*) butterfly bush (*Buddleja davidii*), hawthorn, ivy (*Hedera helix*), pedunculate oak and sycamore (*Acer pseudoplatanus*). The oak appears to have been planted in the grass verge along the footpath at some point, but the trees have not grown to a substantial height and their crowns have merged with the woodland canopy.

No standout individual trees were identified and therefore no individual trees were measured. Access into the main body of the woodland is difficult, due to its density and the presence of the steep banks associated with the drain. The woodland forms a cohesive dense mass of vegetation, as illustrated by Figure 3.

**Figure 3: Woodland Area 1 (Viewed from the SW Corner of Application Area)**

### 2.3.2 Effects due to proposed development

As mentioned for T1-T9 above, the proposed site layout provided appears to show that all trees along the northern boundary will be removed, including Woodland 1. This is however not clearly stated and considering that green spaces are proposed along all of the northern site boundary, there seems to be scope for the retention of some of the woodland area.

Similar to T1-T9, Woodland 1 provides visual amenity, could soften the appearance of and add maturity to the proposed development. However, considering the dominance of short-lived willow species, the woodland is not considered suitable in the long-term, in its current form.

### 2.3.3 Recommendations

The following recommendations should be considered, prior to the removal/retention of Woodland 1:

- Should Woodland 1 be removed completely, the removal of T6-T9, is also recommended (see 2.1.3 above).
- All removal works should be carried out from within the application area, in order to protect the trees within Group 1 (see 2.2.3 above).
- The retention of individual trees within Woodland 1 is not recommended, as they would lack the protection/shelter currently provided by neighbouring trees, were these removed. If retention is an option, only substantial sized areas should be retained (1,000m$^2$ or more).
- Should any parts of Woodland 1 be retained, a detailed survey of the woodland area is recommended, in order to be able to choose suitable area(s) and describe the root protection measures required for the woodland area(s) to be retained. The survey should be carried out by a suitably qualified arborist. (Note: the drain should not be infilled, in areas where Woodland 1 is retained, as this would result in damage to those trees growing within the drain).
- A long-term management plan, providing for the transformation of this willow dominated woodland area to one with a more varied species mix, including long-lived species, should be prepared by a suitably qualified arborist. This should be implemented as part of the future maintenance of the green spaces within the site.

## 2.4 Scrub Areas 1-5

### 2.4.1 Description

Several areas of scrub are located within the main body of the application area. These are typically 2-5m in height and dominated by willow species. Other species are present in some of the areas, which is why they have been divided into several sub-areas (Scrub 1-5), as described separately below.

Apart from some locations along the eastern boundary, most of the scrub is not yet visible on the aerial photography dated 2011-2013 on the GeoHive Map Viewer and is therefore less than 10 years old. All appears to have naturally developed on previously disturbed ground.

#### Scrub Area 1

This area of approximately 450m$^2$ is located in the western corner of the site alongside the ramp connecting Pa Healy Rd to the footpath along the City Canal. Silver birch (*Betula pendula*) is present in equal measures to willow in part of this area. Some individuals of butterfly bush are also present. This scrub area appears to have emerged in the last 5-7 years.

**Figure 4: Scrub Area 1 (front right) and Scrub 3 (back left)**

#### Scrub Area 2

This area of approximately 300m$^2$ is located south and parallel to the footpath along the canal on a low ditch. Part of this area forms the understorey of T2-T5. The dominant species in this area is poplar, which is regenerating freely. Other species are butterfly bush, bramble, pedunculate oak and wild cherry. This scrub area appears to have emerged in the last 5-7 years.

**Figure 5: Scrub Area 2 (marked in yellow)**

### Scrub Area 3

This area of approximately 8,600m$^2$ is made up from four separate areas surrounding the centre of the site. The only species noted in these areas is willow. Except for a number of bushes in the south eastern corner of the application area, which are visible on the aerial photography from 2005, the majority of this scrub appears to have emerged in the last 5-7 years.

**Figure 6: Scrub Area 3 (south eastern corner of the application area)**

### Scrub Area 4

This area of approximately 2,350m$^2$ is located is located along the eastern boundary, south of the warehouse located within the application area. The majority of the shrubs within this area, all of which are species of willow, are already visible on the aerial photography from 2000, and have since reached heights of around 5m. However, none have grown into distinct individual trees. In some parts of this area bramble covers the ground.

**Figure 7: Scrub Area 4**

### Scrub Area 5

This area of approximately 3,100m$^2$ is located in the north eastern corner of the application area. While willow is the dominant species, many others are present, in particular along the northern boundary. They include ash, butterfly bush, bramble, dog rose (*Rosa canina*), elder (*Sambucus nigra*), fuchsia (*Fuchsia magellanica*), gorse (*Ulex europaeus*), hawthorn, ivy, pedunculate oak and silver birch.

Those shrubs located along the eastern boundary are already visible on the aerial photography from 2005. The remainder of the vegetation has emerged since then.

**Figure 8: Scrub Area 5**

### 2.4.2 Effects due to proposed development

The proposed site layout provided indicates that the vast majority of the scrub areas are located in those areas where construction will take place and therefore the vast majority of scrub will require removal. Considering the mostly recent emergence of this vegetation, dominance of one genera (willow) and lack of individual trees of merit, this loss would not be significant in arboricultural terms.

Scrub Areas 1 & 2 and the northern section of Scrub Area 5 are located within proposed areas of green space and there may be scope for the retention of some of this vegetation, which could add maturity to the proposed development. In particular, the varied species mix in the very north eastern corner of the site may lend itself to retention.

### 2.4.3 Recommendations

The following recommendations should be considered, prior to the retention of any of the scrub areas:

- Should any parts of the scrub areas be retained, a detailed survey is recommended, in order to be able to choose suitable area(s) and describe the root protection measures required for those areas to be retained. The survey should be carried out by a suitably qualified arborist.
- A long-term management plan, providing for the continued management of the areas as scrub or for their transformation to woodland areas with a varied species mix, including long-lived species, should be prepared by a suitably qualified arborist. This should be implemented as part of the future maintenance of the green spaces within the site.

# 3.0 Summary and Recommendations

No trees of high arboricultural quality, meriting retention, were found within the application area. However, the retention of some trees, woodland and/or scrub areas should be considered, for the visual amenity and maturity they could provide to the proposed development.

Further to that the protection of all trees to the north of the footpath along the northern site boundary (i.e. on the southern bank of City Canal), must be ensured, by excluding access to the footpath as part of the construction works, at all times.

Recommendations for the protection of any parts of the trees, woodland or scrub areas, should they be retained, are provided. These include detailed surveys, protection of rooting areas and future management plans.

# APPENDIX 01

# TREE SURVEY SCHEDULE

# Tree Survey Schedule: Canal Bank, Limerick, 15.06.2020

**Clarifications (refer to Table Appendix 1-A)**

| | |
|---|---|
| (*1) Tree No: | The individual trees surveyed were not tagged. Refer to Drawing T1 – Tree Survey Plan for the approximate location of these trees. |
| (*2) Stem diameter: | As per Annex C of BS5837:2012: measured at 1.5m above highest adjacent ground; 'MS' = multi-stemmed tree; combined diameter and Root Protection Area (RPA) calculated, as per section 4.6.1 of BS5837:2012. |
| (*3) Branch spread: | Taken at the four cardinal points. # denotes estimated measurement, due to inaccessibility. |
| (*4) Life stage: | NP = newly planted (i.e. within 3 years of planting);<br>Y = young (i.e. within first third of its life expectancy);<br>MA = middle aged (i.e. within the second third of its l. e.);<br>M = mature (i.e. within the final third of its l. e.);<br>OM = over mature (i.e. tree in decline). |
| (*5) Category grading: | Tree categories U, A, B or C and criteria 1, 2 or 3, as per Table 1 of BS5837:2012 |

**Glossary (copied from Section 3 – Terms and definitions of BS3998:2010 Tree work – Recommendations)**

| | |
|---|---|
| Crown: | main foliage-bearing part of a tree. |
| Co-dominant: | upward growing stem/branch with a similar height and disposition as another stem/branch. *NOTE Where such stems/branches arise from the same union, their stability or the integrity of the attachment of the stems/branches could be compromised.* |
| Stem: | principal above-ground structural component of a tree that supports the branches. |

## Table Appendix 1-A – Survey Schedule

| Tree No (*1) | Species (Common and Scientific Name) | Height in m | Stem dia. in mm (*2) | Branch spread in m (*3) | Life stage (*4) | Remarks | Category grading (*5) |
|---|---|---|---|---|---|---|---|
| T1 | Pedunculate oak<br>*Quercus robur* | 4.5 | MS:<br>90, 87<br>(Combined: 125)<br>***RPA: circle with radius of 1.5m*** | N 2<br>E 2.5<br>S 2#<br>W 2 | Y | Tree placed in category C, due to small stem diameter.<br>Co-dominant stems from approx. 1.2m height.<br>Healthy crown, some minor deadwood. | C1 |
| T2 | Wild cherry<br>*Prunus avium* | 7 | MS:<br>265, 175<br>(Combined: 317)<br>***RPA: circle with radius of 3.8m*** | N 3.5<br>E 3.5<br>S 5#<br>W 3 | MA | Tree placed in category C, as unremarkable and of limited merit.<br>Co-dominant stems from base.<br>Healthy crown, some minor deadwood. | C1 |
| T3 | Aspen<br>*Populus tremula* | 9.5 | MS:<br>179, 211, 135, 182<br>(Combined: 357)<br>***RPA: circle with radius of 4.3m*** | N 3<br>E 5<br>S 5#<br>W 2.5 | MA | Tree placed in category C, due to structural impairment and as species is typically short-lived.<br>Co-dominant stems from approx. 0.6m height and split into two further co-dominant stems each at approx. 1.2m height.<br>Healthy crown. | C1 |
| T4 | Poplar<br>*Populus sp.* | 9.5 | 255<br>***RPA: circle with radius of 3.1m*** | N 4<br>E 5<br>S 3#<br>W 3 | MA | Tree placed in category C, due to structural impairment and as species is typically short-lived.<br>Stem leaning E. Ivy partially covering stem.<br>Healthy crown. | C1 |
| T5 | Poplar<br>*Populus sp.* | 9.5 | 297<br>***RPA: circle with radius of 3.6m*** | N 4<br>E 5<br>S 3#<br>W 3.5 | MA | Tree placed in category C, as unremarkable, of limited merit and as species is typically short-lived.<br>Many long branch stumps, some dead. Ivy covering stem.<br>Healthy crown. | C1 |
| T6 | Poplar<br>*Populus sp.* | 14.5 | 325<br>***RPA: circle with radius of 3.9m*** | N 3.5<br>E 4<br>S 3#<br>W 3.5 | MA | Tree placed in category C, as unremarkable, of limited merit and as species is typically short-lived.<br>No obvious defects.<br>Healthy crown. | C1 |

| Tree No (*1) | Species (Common and Scientific Name) | Height in m | Stem dia. in mm (*2) | Branch spread in m (*3) | Life stage (*4) | Remarks | Category grading (*5) |
|---|---|---|---|---|---|---|---|
| T7 | Crack willow<br>*Salix fragilis* | 13.5 | MS:<br>215, 220<br>(Combined: 308)<br>***RPA: circle with radius of 3.7m*** | N 3<br>E 4<br>S 4#<br>W 3.5 | MA | Tree placed in category C, due to structural impairment and as species is typically short-lived.<br>Base of tree leaning + Co-dominant stems from approx. 1m height.<br>Minor deadwood. Otherwise healthy crown. | C1 |
| T8 | Crack willow<br>*Salix fragilis* | 13.5 | 340<br>***RPA: circle with radius of 4.1m*** | N 5<br>E 5<br>S 4#<br>W 4 | MA | Tree placed in category C, as unremarkable, of limited merit and as species is typically short-lived.<br>Ivy covering stem.<br>Healthy crown. | C1 |
| T9 | Crack willow<br>*Salix fragilis* | 13.5 | 260<br>***RPA: circle with radius of 3.1m*** | N 3<br>E 4<br>S 4#<br>W 2.5 | MA | Tree placed in category C, due to structural impairment and as species is typically short-lived.<br>Co-dominant stems from approx. 2m height.<br>Healthy crown. | C1 |

# APPENDIX 02

# DRAWING T1 – TREE SURVEY PLAN


NOTES

1. Tree Survey Drawing based on topographical survey provided by PHM Consulting in June 2020.
2. None of the individual trees or the extent of the woodland/scrub areas were marked in the topographical survey. The position/extent of trees/areas shown, are therefore approximate. Should it be decided to retain any of the existing vegetation an updated site survey is recommended.
3. The tree survey was carried out on 15th June 2020 in sunny, dry conditions.
4. Refer to the Tree Survey Report for the Tree Survey Schedule and General Recommendations.
5. This drawing was originally produced to be printed in colour. B&W copies my not accurately portray the findings.

LEGEND

- PRPOSED PLANNING APPLICATION AREA
- BUILDING
- HARDSTANDING/SEALED SURFACE
- APPROXIMATE EXTENT OF STEEP BANKS ASSOCIATED WITH DRAIN ALONG NORTHERN BOUNDARY

TREE DETAILS
(NOTE: IN ACCORDANCE WITH BS 5837:2012)

- CATEGORY C TREES (TREE NUMBER & BRANCH SPREAD) — T6
- ROOT PROTECTION AREA (RPA)

VEGETATION AREAS
(NOTE: TREES NOT INDIVIDUALLY SURVEYED, SEE SPECIES LIST BELOW LEFT)

- GROUP 1 - TREES TO NORTH OF PATH ALONG CANAL
- WOODLAND - OVER 5M HEIGHT (DOMINATED BY WILLOW, BUT OTHER SPECIES PRESENT)
- SCRUB - UP TO 5M HEIGHT (DOMINATED BY WILLOW, BUT OTHER SPECIES PRESENT)
- GRASSLAND / RE-COLONISING GROUND (SOME SCRUB PRESENT)

TREE/SHRUB SPECIES PRESENT:

T1: Pedunculate oak (*Quercus robur*)
T2: Wild cherry (*Prunus avium*)
T3: Aspen (Populus tremula)
T4: Poplar (*Populus sp.*)
T5: Poplar (*Populus sp.*)
T6: Poplar (*Populus sp.*)
T7: Crack willow (*Salix fragilis*)
T8: Crack willow (*Salix fragilis*)
T9: Crack willow (*Salix fragilis*)

GROUP 1
Ash (*Fraxinus excelsior*)
Beech (*Fagus sylvatica*)
Common alder (*Alnus glutinosa*)
Crab-apple (*Malus sylvestris*)
Hawthorn (*Crataegus monogyna*)
Poplar (*Populus sp.*)
Rowan (*Sorbus aucuparia*)
Wild cherry (*Prunus avium*)
Willow (*Salix sp.*)
Whitebeam (*Sorbus aria*)

WOODLAND 1
Butterfly bush (*Buddleja davidii*)
Bramble (*Rubus fruticosus*)
Hawthorn (*Crataegus monogyna*)
Ivy (*Hedera helix*)
Pedunculate oak (*Quercus robur*)
Sycamore (Acer pseudoplatanus)
Willow (*Salix sp.*) #

# Denotes dominating species

SCRUB 1
Butterfly bush (*Buddleja davidii*)
Silver birch (*Betula pendula*) #
Willow (*Salix sp.*) #

SCRUB 2
Butterfly bush (*Buddleja davidii*)
Bramble (*Rubus fruticosus*)
Pedunculate oak (*Quercus robur*)
Poplar (*Populus sp.*) #
Wild cherry (*Prunus avium*)

SCRUB 3
Willow (*Salix sp.*) #

SCRUB 4
Bramble (*Rubus fruticosus*)
Willow (*Salix sp.*) #

SCRUB 5
Ash (*Fraxinus excelsior*)
Butterfly bush (*Buddleja davidii*)
Bramble (*Rubus fruticosus*)
Dog rose (*Rosa canina*)
Elder (*Sambucus nigra*)
Fuchsia (*Fuchsia magellanica*)
Gorse (*Ulex europaeus*)
Hawthorn (*Crataegus monogyna*)
Ivy (*Hedera helix*)
Pedunculate oak (*Quercus robur*)
Silver birch (*Betula pendula*)
Willow (*Salix sp.*) #

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CANAL BANK DEVELOPMENT
LIMERICK CITY

**TREE SURVEY PLAN**

**DRAWING T1**

Scale: 1:1,250 @ A3
Date: JANUARY 2021

00672.00002.Canal Bank.DWG T1.Tree Survey.dwg

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