

TREE SURVEY REPORT

Abbey Quarter Riverside Gardens

Project No.
TKIL001

Project name
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A

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1. Client brief

This tree survey was commissioned by Kilkenny County Council and undertaken on the 16th of November 2015. The purpose of the survey was to provide base-line information on the composition and condition of the trees within the subject area with this information informing any future development of the site. This report should be read with reference to supporting drawing TKIL001 101 Tree Survey. This report identifies individual trees where diameter at breast height (dbh) is above 150mm.

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

2. General description of trees

The trees on the site are primarily located on a narrow strip of land between the former brewery site and the river Nore with a small number of additional trees located within a small area of open space to the south of the brewery complex. The quality of the trees overall is poor with a high percentage within the lower categories C & U (table 1). This is mainly due to poor species selection and poor management practices.

The trees adjacent to the river are mainly Lombardy poplar (*Populus italica* 'nigra') which were presumably planted as screening to the site (Images 2,3 & 4). There are also a small number of self-seeded sycamore present and poplar present and a small cluster of planted Leyland cypress. Lombardy poplar are notable for quick growth and having a slender habit. In this instance they were probably planted at 1m spacings but over time a number appear to have been removed probably due to poor condition. Gaps are now evident between trees. The poplar were also topped at approximately 11m in the past. This practice is detrimental to trees and in this instance there is strong extension growth from the points where cuts were made (image 5). These points will inevitably form areas of decay and structural weakness with the only management option being to continually top the trees before decay or structural weakness becomes an issue. However a number of trees have decay at their base and will need to be removed. The knock-on effect of the removal of these trees will be that the further opening up of the line of trees will lead to full or partial failure of remaining trees. It is therefore recommended that all the poplar are removed to avoid failures amongst the remaining trees. A number of Lombardy poplar on the boundary with the river were not accessible due to demolition works (image 2). These trees have been topped in the same manner as those trees which were assessed. The recommendations for these trees is removal based on their condition and limited long-term potential.

A number of Leyland cypress are also located on the boundary with the river. These trees are very unsuitable for this location and provide very limited aesthetic, ecological or arboricultural benefits. It is recommended that they are removed. The native / naturalized ash (*Fraxinus excelsior*) and sycamore (*Acer pseudoplatanus*) on the bank of the river are probably self-seeded but do provide some ecological services and some stability to the river bank.

The tree group within the open space area to the south of the brewery is dominated by eucalyptus (*Eucalyptus spp*). They are relatively well developed trees however mower impacts and random bark damage has led to decay development and has ultimately reduced their long-term potential.

Category	Number
A	0
B	5
C	51
U	9

Table 1. Tree Categories

3. 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.

4. Relevant legislation

Tree Protection orders and Tree Felling Licences

There are no Tree Protection Orders (TPOs) on any of the trees on this site however under Section 37 of the Forestry Act, 1946, it is illegal to uproot any tree over ten years old or to cut down any tree of any age (including trees which form part of a hedgerow), unless a Felling Notice has been lodged at the Garda Station nearest to the trees at least 21 days before felling commences.

The requirement for a felling licence for the uprooting or cutting down of trees does not apply where:

- The tree in question is a hazel, apple, plum, damson, pear, or cherry tree grown for the value of its fruit or any ozier;
- The tree in question is less than 100 feet from a dwelling other than a wall or temporary structure;
- The tree in question is standing in a County or other Borough or an urban district (that is, within the boundaries of a town council, or city council area).
- The tree is considered dangerous and hazardous.

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

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

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

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 bat specialist should be sought prior to any works commencing on trees. Nesting birds are protected under the Wildlife (Amendment) Act, 2000 and the Birds and Natural Habitats Regulations.

6. Terminology

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

Terminology (cont.)

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

Common name: Most widely used non botanical name.

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

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

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

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

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

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

Height: Measured in meters.

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

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

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

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

6. Tree condition analysis & preliminary recommendations

Tag Number	Species	Age Category	Physiological Condition	Comments	Preliminary recommendations	Category	Useful life expectancy
1	Lombardy poplar <i>Populus nigra</i> 'Italica'	Mature	Fair	A relatively well developed specimen though topped at 11m. Regrowth appears structurally sound. Light branch congestion present throughout crown.	Remove light branch congestion.	C2	10-15
2	Lombardy poplar <i>Populus nigra</i> 'Italica'	Mature	Fair	A relatively well developed specimen though topped at 11m. Regrowth appears structurally sound. Light branch congestion present throughout crown.	No action necessary	C2	10-15
3	Lombardy poplar <i>Populus nigra</i> 'Italica'	Mature	Fair	A relatively well developed specimen though topped at 11m. Regrowth appears structurally sound. Light branch congestion present throughout crown.	No action necessary	C2	10-15
4	Black poplar <i>Populus nigra</i>	Mature	Fair	Re-growth from the base of a failed tree. Decay present in base. Longterm potential reduced as a result.	Fell	U	<10
5	Black poplar <i>Populus nigra</i>	Early-mature	Good	This tree has probably self-seeded on river bank. Co-dominant 1m with a wide union between stems. No visible defects.	No action necessary	B2	30
6	Black poplar <i>Populus nigra</i>	Early mature	Good	This tree has probably self seeded on river bank. Trunk co-dominant from base with a tight union between stems. This may prove to be a structurally weak point in the future but is not significant at present. Crown restricted toward south due to competition from neighboring tree.	No action necessary	B2	30
7	Leyland cypress <i>Cupressus x leylandii</i>	Mature	Good	One of a group of cypress planted on river bank presumably as screening to brewery site. No visible defects but a tree which has very limited landscape merit.	No action necessary	C2	40
8	Black poplar <i>Populus nigra</i>	Mature	Good	A relatively well developed specimen on river bank. Probably planted. Topped at 11m. No visible defects at point of crown reduction but longterm potential reduced as a result.	No action necessary	C2	10-15

Tag Number	Species	Age Category	Physiological Condition	Comments	Preliminary recommendations	Category	Useful life expectancy
9	Lombardy poplar <i>Populus nigra</i> 'Italica'	Mature	Good	A relatively well developed specimen on river bank. Probably planted. Topped at 11m. No visible defects at point of crown reduction but longterm potential reduced as a result. Very heavy ivy growth up trunk obscuring view for assessment.	No action necessary	C2	10-15
10	Ash <i>Fraxinus excelsior</i>	Young	Poor	A sub dominant specimen on river bank. Trunk strongly oriented over river due to competition from neighboring trees. A tree of very limited landscape or arboricultural merit.	No action necessary	C2	10-15
11	Lombardy poplar <i>Populus nigra</i> 'Italica'	Mature	Good	Two stems forming on tree. Co-dependent due to close proximity. Topped at 11mm and though no visible defects at point of crown reduction longterm potential reduced as a result.	No action necessary	C2	10-15
12	Sycamore <i>Acer pseudoplatanus</i>	Young	Poor	A sub dominant specimen on river bank. Trunk strongly oriented over river due to competition from neighboring trees. A tree of very limited landscape or arboricultural merit.	No action necessary	C2	10-15
13	Lombardy poplar <i>Populus nigra</i> 'Italica'	Mature	Good	A relatively well developed specimen though topped at 11m. Very heavy ivy growth up trunk obscuring view for assessment but no visible defects however longterm potential reduced as a result of crown reduction.	No action necessary	C2	10-15
14	Leyland cypress <i>Cupressus x leylandii</i>	Young	Poor	A sub dominant specimen with line of poplar. Very poorly developed with very limited longterm potential.	No action necessary	C2	10
15	Lombardy poplar <i>Populus nigra</i> 'Italica'	Mature	Good	A relatively well developed specimen though topped at 11m. No visible defects but longterm potential as a result of crown reduction. In very close proximity to neighboring trees thereby forming a co-dependent group.	No action necessary	C2	10-15
16	Lombardy poplar <i>Populus nigra</i> 'Italica'	Mature	Good	A relatively well developed specimen though topped at 11m. No visible defects but longterm potential as a result of crown reduction. In very close proximity to neighboring trees thereby forming a co-dependent group.	No action necessary	C2	10-15

Tag Number	Species	Age Category	Physiological Condition	Comments	Preliminary recommendations	Category	Useful life expectancy
17	Lombardy poplar <i>Populus nigra</i> 'Italica'	Mature	Fair	A tall slender specimen within tree group. No visible defects but topped at 11m thereby reducing the trees longterm potential. In very close proximity to neighboring trees and forming a co-dependent group.	No action necessary	C2	10-15
18	Lombardy poplar <i>Populus nigra</i> 'Italica'	Mature	Good	A relatively well developed specimen though topped at 11m. Longterm potential reduced as a result. In close proximity to neighboring trees and forming a co-dependent group as a result.	No action necessary	C2	10-15
19	Lombardy poplar <i>Populus nigra</i> 'Italica'	Mature	Good	A dominant specimen relatively well developed specimen though topped at 11m. Longterm potential reduced as a result.	No action necessary	C2	10-15
20	Lombardy poplar <i>Populus nigra</i> 'Italica'	Mature	Good	A relatively well developed specimen. Topped at 11m with a reduction in longterm potential as a result. No visible defects at present.			
21	Lombardy poplar <i>Populus nigra</i> 'Italica'	Mature	Good	A relatively well developed specimen though topped at 11m thereby reducing longterm potential. No visible defects at present.	No action necessary	C2	10-15
22	Lombardy poplar <i>Populus nigra</i> 'Italica'	Mature	Good	Trunk with a strong lean over river however upper crown vertical in orientation. Topped at 11m thereby reducing longterm potential. No visible defects at present.	No action necessary	C2	10-15
23	Lombardy poplar <i>Populus nigra</i> 'Italica'	Mature	Good	A sub dominant specimen with decay in trunk below point of main crown formation. Very limited longterm potential as a result.	Fell	U	<10
24	Lombardy poplar <i>Populus nigra</i> 'Italica'	Mature	Good	A relatively well developed specimen though a large cavity in base and topped at 11m reduces longterm potential significantly.	Fell	U	<10
25	Lombardy poplar <i>Populus nigra</i> 'Italica'	Mature	Good	A relatively well developed specimen though topped at 11m with longterm potential reduced as a result. No visible defects but rubbing branch from neighboring tree causing abrasion to trunk.	No action necessary	C2	10-15
26	Lombardy poplar <i>Populus nigra</i> 'Italica'	Mature	Poor	A sub dominant specimen drawn up for light. Totally dependent on shelter from neighboring tree and with potential for failure due to weak extended structure.	Fell	U	<10

Tag Number	Species	Age Category	Physiological Condition	Comments	Preliminary recommendations	Category	Useful life expectancy
27	Lombardy poplar <i>Populus nigra</i> 'Italica'	Mature	Good	A relatively well developed specimen though topped at 11m with longterm potential reduced as a result. This is aa tall slender specimen dependent on neighboring trees due to extended form.	No action necessary	C2	10-15
28	Lombardy poplar <i>Populus nigra</i> 'Italica'	Mature	Good	A relatively well developed specimen though topped at 11m with longterm potential reduced as a result. This is aa tall slender specimen dependent on neighboring trees due to extended form.	No action necessary	C2	10-15
29	Lombardy poplar <i>Populus nigra</i> 'Italica'	Mature	Good	A relatively well developed specimen though topped at 11m with longterm potential reduced as a result. This is aa tall slender specimen dependent on neighboring trees due to extended form.	No action necessary	C2	10-15
30	Lombardy poplar <i>Populus nigra</i> 'Italica'	Early mature	Poor	A poorly developed sub dominant specimen forming an element of under-canopy within tree group. No visible defects but of limited longterm potential.	No action necessary	C2	10
31	Lombardy poplar <i>Populus nigra</i> 'Italica'	Mature	Good	A well developed specimen on river bank. This tree has'nt been topped but crown development restricted toward south due to competition from neighboring tree. Dependent on neighboring trees for shelter and longterm potential	No action necessary	C2	10-15
32	Black poplar <i>Populus nigra</i>	Mature	Poor	Located on river bank. Extensive basal decay renders tree unsuitable for retention.	Fell	U	<10
33	Black poplar <i>Populus nigra</i>	Mature	Good	A very large specimen located on river bank. It has developed well and is substantially larger than other poplars. It has been topped at 11m and a large limb has been removed from base of trunk over river. No visible decay or defects observed and re-growth from points of crown reduction light and structurally sound.	No action necessary	B2	20
34	Lombardy poplar <i>Populus nigra</i> 'Italica'	Mature	Good	A relatively well developed specimen though topped at 11m with longterm potential reduced as a result. No visible defects.	No action necessary	C2	10-15
35	Lombardy poplar <i>Populus nigra</i> 'Italica'	Mature	Good	A relatively well developed specimen though topped at 11m with longterm potential reduced as a result. No visible defects.	No action necessary	C2	10-15

Tag Number	Species	Age Category	Physiological Condition	Comments	Preliminary recommendations	Category	Useful life expectancy
36	Lombardy poplar <i>Populus nigra</i> 'Italica'	Mature	Good	A relatively well developed dominant specimen though topped at 11m with longterm potential reduced as a result. No visible defects.	No action necessary	C2	10-15
37	Lombardy poplar <i>Populus nigra</i> 'Italica'	Mature	Fair	A tall slender specimen which appears not to have been topped however drawn up due to competition from neighboring trees and totally dependent on shelter from neighboring trees for longterm potential.	No action necessary	C2	10-15
38	Lombardy poplar <i>Populus nigra</i> 'Italica'	Mature	Good	A relatively well developed dominant specimen though topped at 11m with longterm potential reduced as a result. No visible defects.	No action necessary	C2	10-15
39	Lombardy poplar <i>Populus nigra</i> 'Italica'	Mature	Fair	A tall slender specimen which appears not to have been topped however drawn up due to competition from neighboring trees and totally dependent on shelter from neighboring trees for longterm potential.	No action necessary	C2	10-15
40	Lombardy poplar <i>Populus nigra</i> 'Italica'	Mature	Good	A relatively well developed specimen though very close proximity to neighboring trees rendering tree dependent on shelter from neighboring trees. Topped at 11m with longterm potential reduced as a result.	No action necessary	C2	10-15
41	Lombardy poplar <i>Populus nigra</i> 'Italica'	Mature	Good	A relatively well developed specimen though very close proximity to neighboring trees rendering tree dependent on shelter from neighboring trees. Topped at 11m with longterm potential reduced as a result.	No action necessary	C2	10-15
42	Lombardy poplar <i>Populus nigra</i> 'Italica'	Mature	Poor	Swamped in ivy which limits visual inspection. Vigour and longterm potential limited.	Fell	U	<10
43	Lombardy poplar <i>Populus nigra</i> 'Italica'	Mature	Poor	Swamped in ivy which limits visual inspection. Vigour and longterm potential limited.	Fell	U	<10
44	Lombardy poplar <i>Populus nigra</i> 'Italica'	Mature	Good	A relatively well developed specimen though part of a co-dependent group of trees. Topped at 11m with longterm potential reduced as a result.	No action necessary	C2	10-15
44	Lombardy poplar <i>Populus nigra</i> 'Italica'	Mature	Good	A relatively well developed slightly dominant specimen though part of a co-dependent group of trees. Topped at 11m with longterm potential reduced as a result.	No action necessary	C2	10-15

Tag Number	Species	Age Category	Physiological Condition	Comments	Preliminary recommendations	Category	Useful life expectancy
45	Lombardy poplar <i>Populus nigra</i> 'Italica'	Mature	Good	A relatively well developed dominant specimen. Topped at 11m with longterm potential reduced as a result.	No action necessary	C2	10-15
46	Lombardy poplar <i>Populus nigra</i> 'Italica'	Mature	Fair	A slender slightly sub dominant specimen in very close proximity to neighboring trees. No visible defects but dependent on shelter from neighboring trees for stability	No action necessary	C2	10-15
47	Lombardy poplar <i>Populus nigra</i> 'Italica'	Mature	Fair	A slender slightly sub dominant specimen in very close proximity to neighboring trees. No visible defects but dependent on shelter from neighboring trees for stability	No action necessary	C2	10-15
48	Lombardy poplar <i>Populus nigra</i> 'Italica'	Mature	Good	A relatively well developed dominant specimen. Topped at 11m with longterm potential reduced as a result.	No action necessary	C2	10-15
49	Lombardy poplar <i>Populus nigra</i> 'Italica'	Mature	Poor	Extensive decay in crown at point of crown reduction.	Fell	U	<10
50	Lombardy poplar <i>Populus nigra</i> 'Italica'	Mature	Good	A relatively well developed dominant specimen. Topped at 11m with longterm potential reduced as a result.	No action necessary	C2	10-15
51	Lombardy poplar <i>Populus nigra</i> 'Italica'	Mature	Poor	A sub slightly sub dominant specimen with crown limited in extent toward north due to competition from neighboring tree. Dependent on shelter from neighboring tree trees for longterm potential. Longterm potential reduced as a result of crown reduction at 11m	No action necessary	C2	10-15
52	Lombardy poplar <i>Populus nigra</i> 'Italica'	Mature	Poor	A relatively well developed dominant specimen. Topped at 11m with longterm potential reduced as a result. A large cavity present in base renders tree unsuitable for retention.	Fell	U	<10
53	Lombardy poplar <i>Populus nigra</i> 'Italica'	Mature	Fair	A tall slender slightly sub dominant specimen. Crown topped at 11m and subsequent growth limited due to competition from neighboring trees. Dependent on shelter from neighboring trees for longterm potential.	No action necessary	C2	10-15

Tag Number	Species	Age Category	Physiological Condition	Comments	Preliminary recommendations	Category	Useful life expectancy
54	Lombardy poplar <i>Populus nigra</i> 'Italica'	Mature	Good	A relatively well developed specimen though topped at 11m thereby reducing longterm potential. Slightly sub dominant to neighboring tree and dependent on shelter from neighboring trees for longterm potential.	No action necessary	C2	10-15
55	Lombardy poplar <i>Populus nigra</i> 'Italica'	Mature	Good	A relatively well developed dominant specimen though topped at 11m thereby reducing longterm potential. No visible defects.	No action necessary	C2	10-15
56	Lombardy poplar <i>Populus nigra</i> 'Italica'	Mature	Good	A relatively well developed dominant specimen though topped at 11m thereby reducing longterm potential. No visible defects.	No action necessary	C2	10-15
57	Lombardy poplar <i>Populus nigra</i> 'Italica'	Mature	Good	A relatively well developed dominant specimen though topped at 11m thereby reducing longterm potential. No visible defects.	No action necessary	C2	10-15
58	Sycamore <i>Acer pseudoplatanus</i>	Mature	Good	Located on river bank. Trunk co-dominant from 2m with a wide union between stems. Very heavy ivy growth up trunk obscuring view for assessment and canopy poorly developed overall. Of limited arboricultural merit but providing bank stabilisation.	No action necessary	B2	40
59	Gum tree <i>Eucalyptus sp</i>	Mature	Good	Located within open space area. Mower impact damage at base with localised decay though unlikely to be significant at unlikely to be significant at present. Upper crown well developed with no visible defects.	No action necessary	B2	40
60	Gum tree <i>Eucalyptus sp</i>	Mature	Good	A relatively well developed specimen within open space area. Trunk co-dominant from base with an area of included bark present between stems. This is an area which is potentially weak but it is unlikely to be significant at present. Minor light suppressed deadwood in lower crown but no visible defects.	Deadwood	C2	20-30
61	Gum tree <i>Eucalyptus sp</i>	Mature	Fair	A multi-stemmed specimen located within an open space area. There is a tight union between two stems at 0.5m which is structurally weak at this point. Unlikely to be significant at present but may lead to partial failure in time. Minor light suppressed deadwood in lower crown but not indicative of decline.	Deadwood	C2	20-30

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Tag Number	Species	Age Category	Physiological Condition	Comments	Preliminary recommendations	Category	Useful life expectancy
62	Gum tree <i>Eucalyptus sp</i>	Mature	Poor	Located within open space area. There are numerous areas of decay present in trunk and main structural limbs up to 2m. Longterm potential of tree significantly reduced as a result. Upper crown well developed with no visible defects.	Deadwood	C2	10-15
63	Gum tree <i>Eucalyptus sp</i>	Mature	Poor	Located within open space area. There are numerous areas of decay present in trunk and main structural limbs up to 2m. Longterm potential of tree significantly reduced as a result. Upper crown well developed with no visible defects.	Deadwood	C2	10-15
64	Norway maple <i>Acer platanoides</i>	Mature	Poor	Slightly sub dominant to neighboring trees in open space area. Several mower impacts has led to extensive areas of bark loss. Associated decay not present but longterm potential reduced as a result of impacts. Bark damage to major limb to east at 2m with decay present. Upper crown well developed with no visible defects.	No action necessary	C2	20

7. Tree measurements

Tree No.	Height m.	D.B.H. mm.	Spread m. N,S,E,W	Clear Stem N,S,E,W	Root Protection Diameter m.
1	26	790	3,4,5,5	8,8,10,12	9.5
2	26	470	2,2,2,4	6,7,8,7	5.6
3	26	490	1,1,3,4	11,10,11,10	5.9
4	26	250	NA	NA	NA
5	26	360	2,2,2,2	5,4,5,5	4.3
6	26	390	2,0,1,1	3,8,8,8	4.7
7	26	470	5,1,5,5	0.5,6,0.5,6	5.6
8	26	340	3,1,3,1	8,11,11,11	4.1
9	26	330	3,1,2,1	11,11,11,11	4
10	26	250	4,0,5,0	3,0,3,0	3
11	26	700	4,2,1,1	7,11,11,11	8.4
12	26	250	1,1,5,1	5,3,5,5	3
13	26	420	4,2,4,1	11,11,7,12	5
14	26	160	1,1,1,1	11,11,11,11	1.9
15	26	420	3,3,1,1	11,10,11,11	5
16	26	350	1,1,1,1	11,11,11,11	4.2
17	26	280	1,3,1,1	11,11,11,11	3.4
18	26	320	2,2,1,1	11,11,11,11	3.8
19	26	330	1,1,3,1	11,11,11,11	4
20	26	380	1,4,2,2	11,10,11,11	4.6
21	26	400	1,2,1,1	11,11,11,11	4.8
22	26	390	2,0,1,1	11,11,11,11	4.7
23	13	260	NA	NA	NA
24	26	410	NA	NA	NA
25	26	320	2,2,2,1	11,11,11,11	3.8
26	26	220	NA	NA	NA
27	26	280	2,1,3,1	11,11,11,11	3.4

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Tree No.	Height m.	D.B.H. mm.	Spread m. N,S,E,W	Clear Stem N,S,E,W	Root Protection Diameter m.
28	26	350	2,3,2,2	11,10,10,11	4.2
29	26	350	2,3,1,1	11,11,10,10	4.2
30	26	170	2,0,1,1	4,4,4,4	2
31	26	350	3,0,4,0	6,10,6,6	4.2
32	26	530	NA	NA	NA
33	26	1040	8,8,8,8	1,8,5,8	12.5
34	26	350	1,2,2,3	11,11,11,11	4.2
35	26	360	1,2,2,3	11,11,11,11	4.3
36	26	390	4,1,3,1	8,8,8,10	4.7
37	26	210	3,0,0,0	4,0,0,0	2.5
38	26	320	3,1,1,1	6,11,11,11	3.8
39	26	220	2,0,0,0	11,11,11,11	2.6
40	26	240	4,1,0,0	11,11,11,11	2.9
41	26	380	4,3,0,0	11,11,11,11	4.6
42	26	280	NA	NA	NA
43	26	300	NA	NA	NA
44	26	400	1,3,1,1	11,11,11,11	4.8
44	26	290	4,1,3,1	11,8,11,11	3.5
45	26	270	4,3,4,1	11,6,11,11	3.2
46	26	210	1,1,1,1	11,11,11,11	2.5
47	26	290	2,1,1,1	11,11,11,11	3.5
48	26	360	3,2,0,0	11,11,11,11	4.3
49	26	250	NA	NA	NA
50	26	290	2,1,1,1	11,11,11,11	3.5
51	26	330	0,2,0,0	11,11,11,11	4
52	26	390	1,3,11,1	11,11,11,11	4.7
53	23	280	2,2,0,0	11,11,11,11	3.4
54	25	350	3,0,1,1	9,11,11,11	4.2
55	27	390	3,3,0,1	9,11,11,11	4.7
56	27	430	4,2,1,1	9,11,11,11	5.2

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Tree No.	Height m.	D.B.H. mm.	Spread m. N,S,E,W	Clear Stem N,S,E,W	Root Protection Diameter m.
57	27	440	2,4,0,5	11,11,11,5	5.3
58	12	460	5,5,5,5	3,2,2,2	5.5
59	11	490	4,6,5,4	3,1,4,4	5.9
60	17	720	6,5,7,6	1,3,3,3	8.6
61	16	520	4,5,5,5	4,0,5,3,0,5	6.2
62	17	490	6,3,4,6	1,4,4,4	5.9
63	20	480	3,5,4,1	3,4,3,5	5.8
64	11	290	5,1,4,4	3,3,2,5,2,5	3.5

Note: Tree height and dbh recorded for category U trees only.

8. Charts and data

Chart 1: Tree condition breakdown

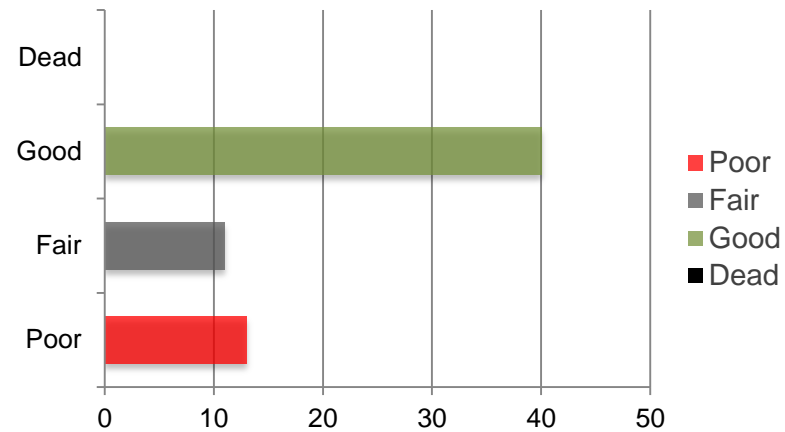
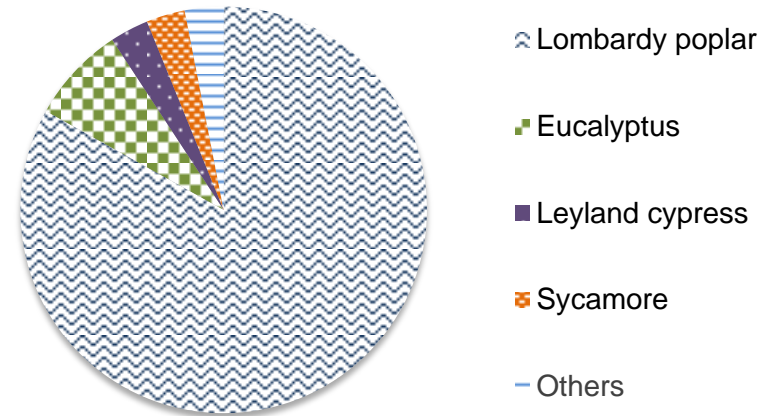
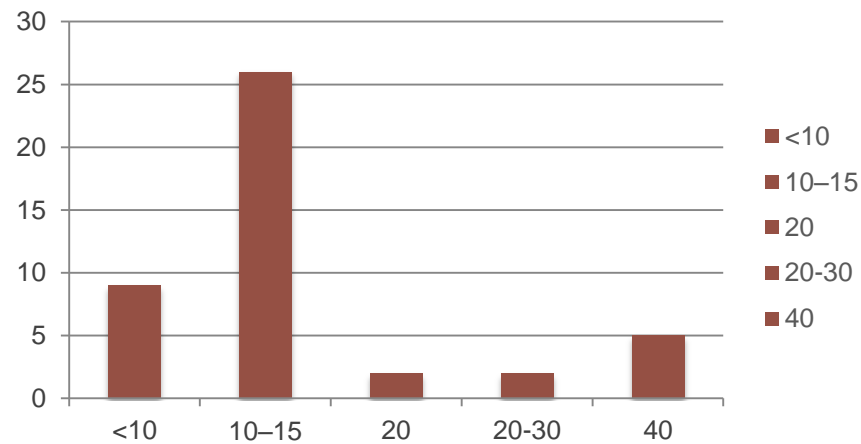


Chart 2: Tree Species breakdown



Useful life expectancy (years)



Age Classes	
Y	Young
S.M	Semi-mature
M	Mature
O.M	Over-Mature
V	Veteran

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9. Image sheets



Image 1: View of eucalyptus from opposite side of river.



Image 2: View of inaccessible Lombardy poplars from opposite side of river.

Image sheets (cont.)



Image 3: View of Lombardy poplar (nos. 53-57) from inside site.



Image 4: View of main group of Lombardy poplar from inside site.



Image 5: View of points where 'topping' has occurred. Note the multiple re-growths where cuts were made.

10. References

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

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