

Tree Survey Report

Site Ballymahon Road/Garden Vale

Date July 2011



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Instruction

- A ground level visual inspection of the trees situated within the public footpath/area.
- ETC was request to detail and note all tree, shrub or invasive species within the above site, with special attention to any obvious visible tree defects or hazards that may have potential to threaten users of the public amenity. Such as; dead, broken, diseased or any damaged branches, weak stems, and serious decay problems, associated with the relevant species.
- Note any recommended remedial works required in line with general health and safety, and good horticultural practices, associated with the tree species.

Report Limitations

- The inspection has been carried out from ground level only.
- The Inspection was carried out using visual observations methods only.
- Trees are living organisms whose health and condition can change rapidly, due to their position and open access to climatic weather changes (i.e. storms, wind, rain, frost, etc) Trees should then be checked on a regular basis, or after heavy weather, were a change in tree form, has occurred.
- The conclusions and recommendations of this report are valid for one year.

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Introduction

The site surveyed is that of an avenue of trees consisting of 6 mature trees, and 2 newly planted.

Previous re-development works which have taken place in relation to the road layout have cause and enabled root damage and compaction, please note survey findings and recommendations. The road is that of a main artery into the town centre as such has a high volume of foot and vehicle traffic, which in connections to the findings detailed below makes this report come with a very high recommendation, for public safety.

Methodology

The site was inspected and dated detailed against each tree sequence number, and the route was walked and systematically recorded. Tree were visually checked for any obvious defects and the species, age*, height*, spread*, DBH, nearby features, and potential remedial work if required was then recorded. The trees were recorded in sequence and marked on to a site map so as location and correct identification is possible without undue difficulty. Individual trees were not physically tagged or numbered, as this was not seen as keeping with best practice, as the site has limited tree stock/amount. As such appendix 2, in conjunction with Appendix 1 should be acceptable.

(* = Circa/approx size at time of inspection, subject to inspectors VTA of trees location and condition.)

Survey Findings/Recommendations

At the time of the ground level inspection, it was noted that the trees were of reasonable condition and health, for their maturity and location.

Due in line to the roads re-design trees T1 and T2, have been subject to root damage, as seen with the die back within the trees canopy (please see attached images – Appendix 3). Tree T3, is that of a mature Common Horse Chestnut (*Aesculus hippocastanum*), regrettable the nature of this species of trees does not take well to any sudden changes, and additionally due to their habit, they can be very prone to entry of decaying pathogen's. At the time of inspection it was noted that a large majority of the trees canopy was shutting down, and dying slowly, which leads to weak branches that have potentially in that location to cause serve harm. Should a failure occur there is potential to injury or damage, both pedestrians, but also property such as cars, etc

As such we have suggested removal with a suitable replacement, so as to retain the amenity and connection that such a tree would have with its surroundings.

Recommendation 1

Tree T1, be removed within the next 12 months, and a suitable replacement be planted given the location, and of reasonable size.

Recommendation 2

In the interest of public amenity, removal of the cages around the trees is suggested. This would enable the public footpath not look so over crowded with furniture, but also would enable the correct pruning works required to remove the epicormic growth which the trees will naturally produce in this urban setting.

Recommendation

Tree T8, be removed and a suitable replacement species be planted. Tree T7, also be subject to formative pruning, to remove the epicormic growth, and loosen the tree tie if required, additionally removal of the cages is suggested as they add to the street furniture and form no real benefit in this setting.

Conclusion

Many of the species that currently are on site, have only really started their life and as such a small bit of maintenance now, will enable them to flourish in this idea site, as a backdrop to their surroundings.

As such the many years which these trees still can give will benefit the surrounding sites and environment. Whilst at the time of the inspection in line with best practice, no immediate hazard other than what has been noted above was seen. In keeping with good general housekeeping, and for the safety of others, you should note any sudden change or after any extreme weather changes, in the trees form/shape then it is heavily suggested that the site be revisited by a qualified person to determine trees safety, or identify potential hazards.

References

- *The Body Language of Trees – A handbook for failure analysis by Clous Mattheck and Helge Breloer - Research for Amenity trees No 4*
- *Diagnosis of Ill-health In trees – A handbook by R.G. Strouts, T.G. Winter - Research for Amenity Trees. No.2*

Glossary

Amenity Pollarding (AP)

This can be used to describe a modern alternative to the discredited “lopping and topping”. While not the current arboricultural operation/procedure of choice, it is often the only option available for trees that have been subject to extensive damage, or have been subject to bad management in the past. Unless there are essential reasons, it should not be initiated on a tree, except as formative pruning when young, or were needed to reshape trees, which have lost a large percentage of their natural crown shape.

If amenity pollarding is the only viable option, care must be taken to avoid creating a tree that is more eyesore than amenity. High pollarding (Pruning to high and making it look like a flag pole) is one such mistake. The resulting tree looks quite unnatural. However, it does have a place in a formal avenue, particularly of Planes, or Limes. This is more usually seen on the continent, as are other

Bark Wounds (BW)

Damaged or missing bark, causing a potential entry point for air borne pathogens.

Cavity (Cav)

Open section of the trees outer bark, causing a potential entry point for air borne pathogens, to the internal heart wood.

Clear Services (CS)

To prune branches clear of services such as street lamps or aerial service cables (i.e. telephone & electricity wires). The actual clearance can be specified as a distance. (e.g. clear aerial service wires by 3m).

Crown clean (Clean)

Removal process where dead, dying and diseased branches are removed from the trees crown and stem. Can also include the removal of epicormic shoots, Ivy and rubbish.

Crown Lifting (CL)

Operation where the branches of the lower crown are either completely removed or pruned to increase the ground to tree clearance. A clearance height is normally specified (e.g. crown lift to 3m over footpath, 5m over a road, etc).

Crown Reduction (CR)

Reduce the overall size of the crown by a given specification. The operation should be carried out by pruning the tips of each branch back to a suitable branch union in a manner to create a balanced shape and outline. The reduction specification can be specified as a percentage (e.g. reduce crown by 30%) or as an absolute amount (e.g. reduce crown by 3m) or as an absolute height & spread specification (e.g. reduce crown to leave the tree with an overall height of 18m and a crown radius of 5.5m).

Crown restoration (RES)

Should improve the structure, form and appearance of trees which have been severely headed, vandalized or storm damaged.

Crown Shaping (Shape)

To balance the crown by reducing its spread in certain places to achieve a more desirable shape which is more consistent with the trees habit. The reshape specification can be specified as an absolute amount (e.g. reduce eastern crown spread by 3m).

Crown Spread (Spr)

Distance from stem to crown edge. Usually specified as a single averaged distance or as four separate measurements for north, south, east and west.

Crown Thinning (CT)

To reduce the foliage and outer-branch density of the whole trees crown or just part of the trees crown. This operation would normally be achieved by removing damaged, crossing, rubbing limbs and by removing smaller secondary branches but leaving the main branch structure intact. The thinning specification can be specified as a percentage (e.g. thin crown by 10%).

Dead Wood (DW)

Small branches, twigs, or material which can usual be found at the base or within he canopy of many trees. Ie Dead branches and stubs.

DBH - (Diameter Breast Height)

Tree diameter at breast height. This has traditionally been the "sweet spot" on a tree where measurements are taken and a multitude of calculations are made to determine things like growth, age, and volume.

Tree "DBH" is the outside bark diameter at breast height. Breast height is defined as 4.5feet/1.3m above the ground. For the purposes of determining breast height, the ground level is the starting point, but does not include unincorporated woody debris, mulch, ground cover, etc that may rise above the ground line.

Epicormic (Epic)

Branch growth originating from the root plate, or from along the main stem.

Fell

The removal of the tree in one operation. The direction of the fell can be determined and relatively controlled. The remaining stump would normally be cut as low as practically possible (usually just above ground level).

Foreign Objects (FO)

None natural materials which are sometimes left within the trees canopy, ie, signs, wheels, rubbish, etc

Formative Pruning (FP)

Selective pruning of a young tree so as to promote good future shape and habit typical of that tree species. Would normally include the removal of multiple leaders and crossing/rubbing branches.

Fungus (Fun)

Fungus is the most common cause of infectious diseases in trees. There are many different types of fungi that can infect a tree and cause it to wilt and die. Some of these can cause a tree that was once strong and healthy to become weak and damaged. These structurally weakened trees need to be

removed immediately because they pose a risk of falling over and doing damage to property or even causing injury and death.

Girdling Roots (GR)

Roots which have grown in such proximity to the tree, they are causing a strangulation effect on the trees main trunk.

Included Bark (IB)

Bark which is trapped between a stem union as the two stems press together. In some situations the edges of the two stems fuse together to form a single stem with a single growth ring. However, parts of the stems remain separated inside by the trapped bark.

Ivy

Ivy is very beneficial for wildlife. It is a natural component of the countryside providing food, roosts, nesting and hibernation sites for a wide variety of wildlife.

Ivy can cause damage, however, if it establishes in the crown or on limbs. The tree has developed in tune with its own weight. When Ivy gets high up into the tree, the extra loading it puts on branches can cause them to snap, particularly in high wind. More importantly, in the long term, Ivy can cover up problems in the stem of a tree. A good rule of thumb is that Ivy needs controlling once it appears as a mass in the crown.

Leaning (Lean)

A tree which had a degree of leaning, in the main stem, not typical of the species.

Mower/Strimmer Damage (Mow)

Direct damage to the base, or roots of trees, via a machine being driven to close.

Multiple stemmed (M/S)

A tree with many main stems.

Occlusion

Term used to describe a wound which has become closed by callus growth.

Pollarding/Previous Pollarded (PP)

Maintaining a tree by regularly pruning back the whole trees crown to previous pruning points located on its main stem. Similar to the coppicing procedure except that subsequent shoot rejuvenation forms on the trunk. Final cuts should be angled to assist the run-off of rainwater.
(Please also see Amenity Pollarding)

Reshape Crown

See Crown Shaping

Stump

The remainder of the trunk which is left in the ground after a tree has been removed. The stump is still attached to the root and is normally cut close to ground level, or at a set height to be visible so not to cause a trip hazard.

Stump Grinding

Removal of the stump to a specified depth below soil level by way of a specialised machine.

Sucker Growth (SUG)

Growth from stem base and/or exposed roots.

Suppressed (Supp)

Normal growth interrupted being under that of another tree, causing poor, or slow growth.

Surface Roots (SR)

Surface Roots, which have grown in a way they are visible under the trees canopy.

Tear out wound (Crw)

A usually ragged and splintered wound caused when a branch is torn away from a parent branch, limb or stem.

Tight/Weak Fork (Fork)

A stem or branch union which is exhibiting signs of a potential structural weakness through its growth habit (i.e. included bark).

Tree

Means a woody perennial plant, which can attain a certain height on one or more stems from a single root system. The stem may divide at ground level or above.

While not defined under statute law, a tree is defined in common law. Relevant cases involve those determined by the courts of England and Wales. with which Ireland shares common law jurisdiction (e.g. "anything that ordinarily one would call a tree" (Bullock v Secretary of State, 1980).

VTA - Visual Tree Assessment

(Mattheck and Breloer 1994) Claus Mattheck introduced a biomechanically based system of Visual Tree Assessment (VTA), the basis of which is the identification of symptoms produced by a tree in reaction to a weak spot, or area of mechanical stress. VTA uses the reactive nature of tree growth to identify mechanical or biological changes, or weaknesses in its structure and physiological condition. A tree is a self-optimising mechanical structure, a generating system which reacts to mechanical and physiological stresses by growing more vigorously to re-inforce weak areas, while depriving less stressed parts. This is described by Claus Mattheck as the axiom of uniform stress. An understanding of the axiom of uniform stress allows an arborist to make informed judgements about the condition of a tree.

Survey Schedule

Tree age classes were recorded as:

Y = Young tree recently established

EM = Early-mature tree up to 33% of its usual lifespan

M = Mature tree up to 66% of its usual lifespan

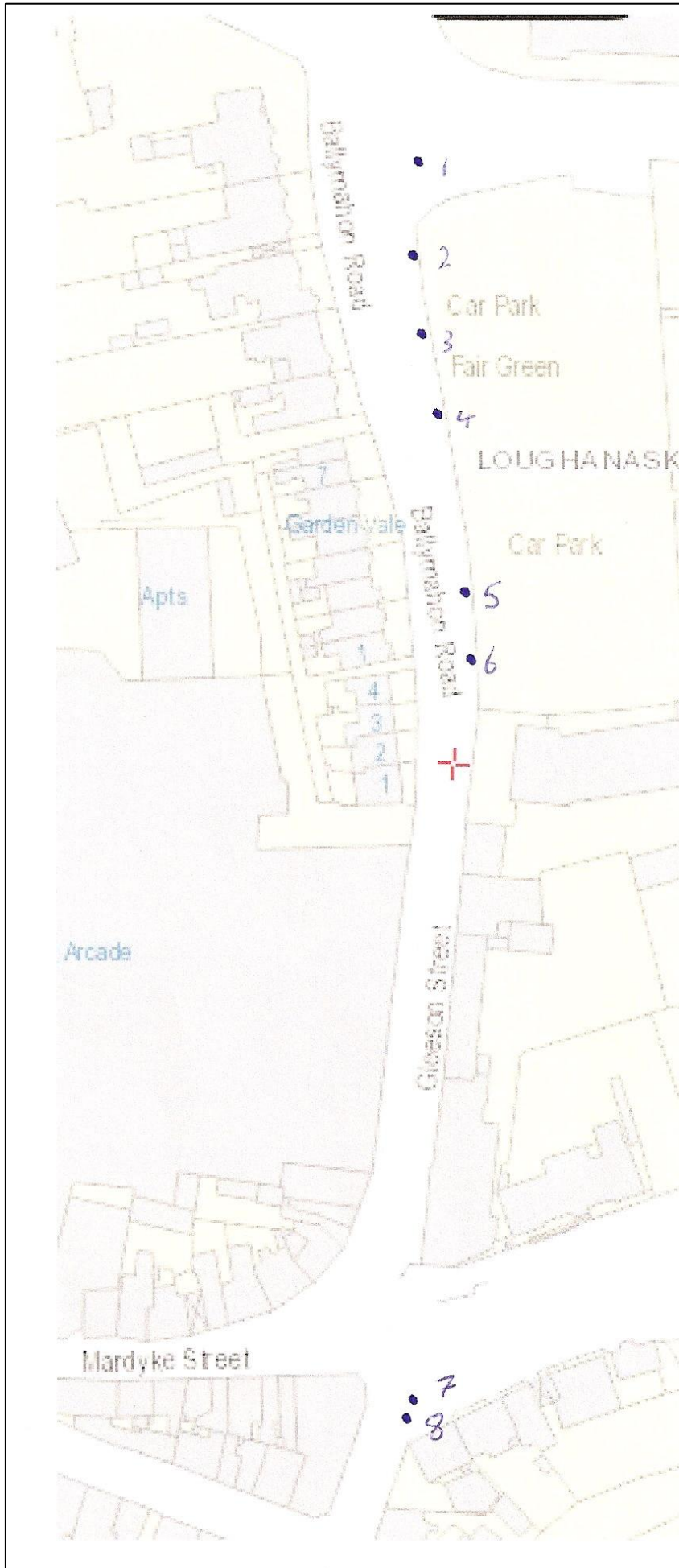
LM = Late maturity up to and over 100% of its usual lifespan

D = Dead

Appendix 1 –Site Survey

Tree Sequence	Species	Common Name	DBH	Height	Spread	Size	Age	Condition	Defects	Features	Recommendations	Photos	Inspector	Date	Weather
1	Aesculus hippocastanum	Common Horse Chestnut	48	11	10	L	F M	Poor	Crown Dieback	Root Damage	Remove & Replace	*	RN	13/06/2011	CD
2	Tilia x europaea	Common Lime	42	10	8	L	F M	Poor	Sparse Crown	Epicormic growth	CL, See note 2	*	RN	13/06/2011	CD
3	Aesculus hippocastanum	Common Horse Chestnut	40	11	8	L	F M	Fair		Epicormic growth	CL, See note 2	*	RN	13/06/2011	CD
4	Tilia x europaea	Common Lime	42	11	8	L	F M	Fair		Epicormic growth	CL, See note 2	*	RN	13/06/2011	CD
5	Tilia x europaea	Common Lime	48	10	10	L	M	Fair		Epicormic growth	CL, See note 2	*	RN	13/06/2011	CD
6	Tilia x europaea	Common Lime	46	10	10	L	M	Fair		Epicormic growth	CL, See note 2	*	RN	13/06/2011	CD
7	Sorbus aria	Whitebeam	18	4	2	S	Y	Fair		Epicormic growth	CL, See note 3	*	RN	13/06/2011	CD
8	Sorbus aria	Whitebeam	16	3	0	S	Y	Dead			Remove & Replace	*	RN	13/06/2011	CD

Appendix 2 – Site Map



Appendix 3 – Recommendation Images

Recommendation 1 – T1



Recommendation 2



Recommendation 3



T8 – Dead



T7