LAND PLANNING & DESIGN

CUNNANE STRATTON REYNOLDS

TREE SURVEY

Mountain Road,
Maigh Cuilinn,
Co Galway.

December 2020

CUNNANE STRATTON REYNOLDS
LAND PLANNING & DESIGN
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CONTENTS

Summary

1. Introduction

2. Description of Existing Trees

3. Arboricultural Impact Assessment

4. Recommendations – AMS

Limitations & References

Appendix 1: Tree Survey Schedule

SUMMARY

This report presents a record of those trees existing within or adjacent to the site area that may potentially be impacted by a proposed residential housing development. Trees have been surveyed as individuals or tree groups in accordance with BS 5837 (2012). The survey was undertaken on 30th November 2018 by Cunnane Stratton Reynolds arborist;

Keith Mitchell Diploma Arboriculture (Level 4)
Technician Member Arboricultural Association (UK)
Tree Risk Assessment Qualification (International Society of Arboriculture)
MA(Hons) Landscape Architecture
Member of the Irish Landscape Institute
Chartered Member of the Landscape Institute (UK)
Diploma EIA Management

This survey and report are based on the Topographic Survey information contained in drawing;

- PK Surveys Topographic Survey Dwg No 2143-F

A full tree survey record is presented in Appendix 1, together with accompanying drawings Tree Survey Dwg No 18401_T_101, Constraints Dwg No 18401_T_102 and Tree Protection Plan Dwg No 18401_T_103 Rev A. After introducing the terms of reference and the methodology of the survey, the report summarises the survey findings in an overview of the existing tree cover within the site.

A total of nineteen individual trees and two tree groups were recorded as part of the survey.

Where assessment takes the form of a Tree Group – trees of greatest arboricultural significance or relevance to proposed scheme within these groups may also be identified. Every effort has been made to access all trees for inspection, however in some instances where site conditions prevent full access, some measurements may be visually estimated.

It is noted that the site contains a number of trees of significant maturity and size - every effort should be made to safely retain these as part of any development proposal.

The proposed development will present an opportunity to implement additional new tree planting, both as part of a general landscape design scheme and also as part of a tree management program aimed at maintaining high quality diverse long-term amenity tree cover, in keeping with the setting and proposed site use.

The report concludes with recommendations for protection measures to ensure the conservation of retention trees during any development.

1. INTRODUCTION

Terms of Reference

Cunnane Stratton Reynolds (CSR) were instructed to conduct a tree survey, to inform the master planning of the site for a proposed residential development which is currently almost completely covered by existing woodland and scrub vegetation.

CSR considered all trees on site particular reference to the more mature or developed trees and tree groups that might potentially be impacted upon by such a proposed development and produced a subsequent tree survey report presenting our findings, (in accordance with BS 5837:2012), together with recommendations for their best practice management in relation to the proposed development.

This involved a survey of the principal trees / tree groups concerned in accordance with BS 5837 (2012).

Documents supplied to CSR for purposes of conducting a tree survey include:

- PK Surveys Topographic Survey Dwg No 2143-F
- Indicative Masterplan – Galway Co Co

Site Inspection & Methodology

The site was surveyed on 30th November 2018 by a qualified Arborist. A visual inspection from the ground was performed on all existing trees / tree groups on site. Where access allowed, principal individual trees of greatest maturity were individually examined and reference number tags attached before critical measurements were taken and observations made.

A description was recorded of each tagged tree / group of trees, their species, age class, all relevant measured dimensions (height, stem diameter, crown spread radii and crown clearance height) and an assessment of the tree health / vitality, structural form, life expectancy and quality categorisation. Any recommended remedial works required were outlined. Hedgerows and significant tree groups within/bounding the site are subject to group description and assessment, in accordance with BS 5837 (2012).

The findings of the survey are recorded and presented in this Tree Survey Report and Tree Schedule (Appendix 1).

This report is subject to the scope and limitations as given at the end of the report.

Accompanying Drawings

The tree survey report should be read in conjunction with;

- Tree Survey (Dwg No 18401/T/101).
- Constraints Drawing (Dwg No 18401/T/102).
- Tree Protection Plan (Dwg No 18401/T/103 REV A).

A1 size colour coded drawings which accompany this report, (monochrome drawings should not be relied upon). These drawings are based upon the topographical drawings supplied to CSR.

Site Location

The site is undeveloped land located to the northwest side of Mountain Road and between the existing residential developments of Conocan Rua and Pairc na gCaor in Maigh Cuilinn village County Galway.

2. DESCRIPTION OF EXISTING TREES

2.1 The site area (approximate area highlighted red – Fig 1) is in part currently used as a Galway County Council depot, (area along road frontage), but in the main represents a relatively undisturbed area of scrub woodland which has developed over a raised portion of marginal land.

The landform is uneven in topography with a generally raised central portion falling away on all sides to meet the surrounding sites lower levels, with a number of localised undulations, hollows and ditches. It is located centrally within the village of Maigh Cuilinn between two existing housing estates and opposite the shopping centre. An existing childrens playground is located on the sites south west boundary.

Figure 1: Low resolution satellite image of approximate site area (courtesy of Google Earth).

A total of nineteen individual trees and two tree groups were recorded as part of the survey.

Their location, size and quality category may be reviewed with reference to the accompanying Tree Survey Dwg No 18401/T/101 and the tree survey (Appendix 1).

2.2 Photographic Summary of Trees Surveyed

T555/557/558/559 (left to right)

T555

T556

T557

T558

T559


T560


T562


T563


T564


TG1 typical


TG1 Typical


TG1 typical


TG1 typical

2.3 The trees on the site are of mixed quality ranging from low to high, (with the majority being low to moderate), when considered as individuals but cumulatively form a substantial area of valuable woodland. The woodland has a significant value both in terms of visual presence and ecological value.

A small number of trees of some maturity and size are present, particularly along the site southwest and northwest boundary. A mix of species are present, predominantly deciduous but also occasional coniferous species. Age profile varies from young to mature.

Little or no management or maintenance of trees appears to have been undertaken in the past. There is scope for selective management works to improve the quality of existing trees, such as the removal of; ivy, weak tree growth, overcrowding regenerative growth, rubbing limbs, deadwood etc. However, on the whole the trees appear to be in reasonable health. (A number of trees are currently heavily obscured by ivy growth and it would be beneficial to re-inspect when ivy has been removed).

The tree cover present within the site is spread across all areas with the exception of an excavated entrance area. The larger more mature trees are located primarily along the southwest and northwest boundaries. The existing trees make a positive contribution to the surrounding landscape setting. In addition, they provide amenity value and a high ecological habitat value.

(Trees often become more valuable as collective groups, than they might be when considered solely as individuals in isolation - a grouping or woodland being generally of significant visual and ecological value. As such it should be noted that the cumulative value of evaluated Tree Groups often reflects an increased catergorised value than might be awarded to the constituent trees if they were assessed in isolation as individuals).

3. ARBORICULTURAL IMPACT ASSESSMENT

3.1 This section discusses the potential impact of the proposed development on the existing tree cover on site and considers the need for mitigation measures, in accordance with BS 5837 (2012), for sustainable development.

The proposed site layout philosophy endeavors to work with both the existing trees and topography on the site. A buffer strip of green space has been indicated along the boundary with Pairc na gCaor, which will assist in the retention of several larger trees found along this boundary though the buffer may require to be locally widened.

3.2 Category 'U' trees are recommended for immediate removal / felling on general management grounds, irrespective of site development. One standing tree (T568) is assigned to category 'U' due to its compromised structural integrity which would mean that it would not suitable to leave within a public open space in the long term.

Direct Loss of Trees

3.3 The following trees are in direct conflict with the proposed development and are therefore proposed for removal;

Tree Group 1 – this group appears to be in direct conflict with proposed new development.
Tree Group 2 – this group appears to be in direct conflict with proposed new development.
T555 – this tree appears to be in direct conflict with proposed new development.
T557 – this tree appears to be in direct conflict with proposed new development.
T558 – this tree appears to be in direct conflict with proposed new development.
T565 – this tree appears to be in direct conflict with proposed new development.
T566 – this tree appears to be in direct conflict with proposed new development.
T576 – this tree appears to be in direct conflict with proposed new development.
T570 – this tree appears to be in direct conflict with proposed new development.
T571 – this tree appears to be in direct conflict with proposed new development.
T572 – this tree appears to be in direct conflict with proposed new development.
T573 – this tree appears to be in direct conflict with proposed new development.

Indirect Impacts

3.4 Cognisance must also be given to indirect impacts - in particular care must be taken to ensure the proposed development and ancillary works do not represent an unacceptable conflict with the calculated 'Root Protection Area' of the existing trees - as illustrated in Constraints Dwg No 18401/T/102.

Disturbance of 'Root Protection Area' may just as readily kill or destabilise a tree over time, by means of root damage/severance and or earth compaction/covering preventing essential transfer of water and air to roots.

Particular care will be required around T559 the RPA of which extends into the site but area, however its retention is deemed possible as the majority will be within a planned greenspace. It is essential however that the area be protected as indicated on Tree Protection Dwg No 18401/T/103 Rev A.

Provided proper tree protection measures are adhered to, it is not anticipated that any further trees will require removal due to indirect impacts.

Additional Loss of Trees – Considerations

3.5 It is proposed to develop pedestrian pathways through the existing tree groups along the northern western site boundary, assuming the philosophy of aligning the route to avoid direct conflict and the use of a 'no-dig' permeable pathway construction method, (e.g. timber edged bark mulch paths or cellweb system with gravel surface or similar approved), there should be no additional loss of significant trees.

(It is accepted that some scrub and saplings / young trees may be selectively removed both to facilitate alignment and as part of a woodland management thinning excercise).

Summary of Trees to be Removed

3.6 The following standing trees are proposed for removal.

Tree Group 1
Tree Group 2
T555
T557
T558
T565
T566
T576
T570
T571
T572
T573

Tree Protection

3.7 Adequate protection and so successful retention of those trees to be retained within the land take area, (including those not individually surveyed), will be achieved by rigidly excluding all construction activities from tree root protection areas by fit for purpose barriers/fencing and/or additional ground protection.

3.8 Tree Protection Areas (TPAs) are proposed, as indicated on accompanying Tree Protection Plan (Dwg No 18401_T_103). Protective fence line locations and details for these areas are also indicated on the plan.

Services

3.9 Services that are planned as part of this project must also avoid designated 'Root Protection Area' of tree / tree groups for retention.

4. RECOMMENDATIONS – Arboricultural Method Statement

Recommendations for the specific measures advised regarding management of the trees in relation to this development are detailed within Appendix 1. These recommendations should inform, and be referred to in, the method statements submitted for approval prior to commencement by the responsible building/engineering and landscape contractors whose works (subject to grant of permission) will affect retained trees and the Tree Protection Areas.

1. *Tree Works.*

Subject to the required permissions removal / felling works as specified on Dwg No No18401_T_103, should be performed prior to project commencement, by reputable contractors in accordance with BS 3998:2010 and current best practice. Removal of scrub vegetation and ivy clearance should preferably be performed in winter outside of the bird nesting season. Tree felling should be preceded by a competent assessment as to the presence of any protected wildlife species, where required specialist advice should be sought if necessary.

2. *Protective Fencing.*

Following above permitted, priority tree works, protective fencing (barriers) should be erected in the positions and alignments as indicated on the Tree Protection Plan (Dwg No No18401_T_103). Fencing should be in accordance with BS 5837:2012 unless otherwise agreed with the planning authority. Commencement of development should not be permitted without adequate protective fencing being in place. This fencing, enclosing the minimum tree protection areas indicated, must be installed prior to any plant, vehicle or machinery access on site. Fencing should be signed 'Tree Protection Area – No Construction Access'. Fencing is not to be taken down or re-positioned without written approval of the project Arborist. No excavation, plant or vehicle movement, materials handling or soil storage is to be permitted within the fenced tree protection areas indicated on plan.

3. Boundary Treatments

Landscape works and installation of / work to boundary treatments within the Root Protection Area should be undertaken to a specification and method statement in accordance with BS 5837: 2012 - submitted for approval prior to commencement of works, under the supervision of an Arborist and / or Landscape Architect.

4. Landscape Works

Proposed landscaping works including new planting, shall be performed in accordance with BS 5837:2012. During these works, the ground around retained trees must not compacted by vehicles, nor be mechanically excavated for planting, nor be significantly altered in terms of ground levels.

5. Monitoring & Compliance

A number of potentially critical future works in proximity to retained trees are potentially to be undertaken in association with the development of this greenfield site, these should be done in accordance with approved method statements and under direct supervision by a qualified consultant Arborist. Therefore, during the development, a professionally qualified Arborist is recommended to be retained as required by the principal contractor or developer to monitor and advise on any works

within the RPA of retained trees to ensure successful tree retention and planning compliance.

It is advised that tree protection fencing, any required special engineering and supervision works etc must be included / itemised in the main contractor tender document, including responsibility for the installation, costs and maintenance of tree protection measures throughout all construction phases.

Copies of the Tree Survey and all accompanying drawings, a copy of BS 5837:2012 and NJUG 4 (2007)*'Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees'* should all be kept available on site by the contractor during development. All works are to be in accordance with these documents.

It is advised that all retained trees be subject to expert re-inspection within 12 months and/or prior to completion of development and public occupancy/access of the site.

Limitations and Scope of this Survey Report

This report covers only those trees individually inspected, (shown on the 'Tree Survey Drawings' and described in the 'Schedule'), reflecting the condition of those trees at the time of inspection. Inspection is limited to visual examination of the subject trees from the ground without; test boring, use of tomographic equipment, dissection, probing, coring, ivy removal or excavation to establish structural integrity.

The trees were not climbed and dimensions are approximate, but considered a reasonable reflection of the trees measurements. A number of trees were visually obscured by heavy ivy growth, which could potentially hide from view existing faults or weaknesses, as such they would benefit from re-inspection upon removal of ivy growth. This survey can only therefore be regarded as a preliminary assessment.

There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the subject trees may not arise in the future. The currency of this survey report and its recommendations is one year.

The accompanying drawings are illustrative and based on the land (topographical) survey supplied; CSR Ltd accept no legal liability or responsibility for any errors in the information contained in the supplied drawings.

CSR Ltd accept no responsibility for the performance of trees subject to pruning or other site works (including construction activities) not performed in strict accordance with recommendations as specified in this report and/or in accordance with BS 3998:2010 and BS 5837:2012

All retained trees mentioned in this report should be subject to expert re-inspection within 12 months and prior to completion of development works and public occupancy of the site.

This report was produced as a part of a planning application for the scheme; the author accepts no responsibility or liability for actions taken by reason of this report by the client or their agents unless subsequent contractual arrangements are agreed. Public disclosure or submission of any part of this report without title, or permission from the author, renders this report invalid and legally inadmissible.

References/Bibliography

BS 5837 (2012). *Trees in Relation to Design, Demolition and Construction - Recommendations*. British Standards Institution. TSO, London.

BS 3998 (2010) *Tree Work - Recommendations*. British Standards Institution. TSO, London.

NJUG 4 (2007) *Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees (Issue 2).* National Joint Utilities Group.

APPENDIX 1

TREE SURVEY KEY

Information in the attached schedule is given under the following headings:

Tree No.

Individual trees have been numbered and tagged on site with corresponding survey tag or treated as a group where appropriate (e.g. Woodlands/hedgerows) and illustrated on accompanying tree survey drawing.

Species

Common & Latin names of species are provided

Height

Overall estimated height given in meters (measured using Truplus 200 Laser Rangefinder).

Stem Diameter

The diameter of the main trunk taken at a height of 1.5m on a single stem tree, or, on each branch of multi-stemmed (MS) trees.

Crown Spread

The largest radius of branch spread is provided in meters for North / East / South and West directions.

Height of lowest branch

The distance between ground level and first significant branch or canopy (and direction of growth) given in meters (m).

Any measurement or dimension that has been estimated (for offsite or otherwise inaccessible trees where accurate data cannot be recovered) is identified by the suffix #.

Life stage

The tree's age is defined as:

Y = Young, in first third of life (tree which has been planted in the last 10 years or is less than 1/3 the expected height of the species in question).

MA = Middle Age, in second third of life (tree, which is between a 1/3 and 2/3's the expected height of the species in question).

M = Mature, in final third of life (tree that has reached the expected height of the species in question, but still increasing in size).

OM = Over mature (tree at the end of its life cycle and the crown is starting to break up and decrease in size).

V = Veteran Tree (exceptionally old tree).

Physiological Condition

The tree's physiological condition is defined as:

Good -Good vitality: normal bud growth, leaf size, crown density and wound closure

Fair - Average to below average vitality: reduced bud growth, smaller leaf size, lower crown density and reduced wound closure

Poor - Low vitality: limited bud growth, small chlorotic leaves, sparse crown, poor wound closure

Dead - No longer living.

Structural Condition

The trees structural condition is defined as:

Good - No major structural defects observed (possibly some minor defects)

Fair - Minor defects present, (such as bark wounds, isolated decay pockets or structure affected due to overcrowding), that could be alleviated by tree surgery/management

Poor - Major structural defects present such as extensive deadwood, decay or defective to the point of being dangerous. (Significant defects are noted e.g. decay, collapsing etc).

Preliminary Management Recommendations & Timescale

Recommendations actions based on limitations of survey – (may include further investigation and or assessment of suspected defects by means and or methods not undertaken / within the remit of this survey).

Estimated Remaining contribution (Years)

Life of the tree is given as;

10 < less than 10 years remaining
10 + in excess of 10 years remaining
20 + in excess of 20 years remaining
40 + in excess of 40 years remaining

Tree Quality Assessment Category

U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.

• Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning)

• Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline

• Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality

(NOTE: Category U trees can have existing or potential conservation value which it might be desirable to preserve).

A High quality

Trees of high quality with an estimated remaining life expectancy of at least 40 years

A1 Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)

A2 Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features

A3 Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)

B Moderate quality

Those trees of moderate quality with an estimated remaining life expectancy of at least 20 years.

B1 Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation.

B2 Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality.

B3 Trees with material conservation or other cultural value

C Low quality

Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm.

C1 Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories.

C2 Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits.

C3 Trees with no material conservation or other cultural value

Appendix 1

Tag	Species	Height (m)	Crown Spread (m) N/S/E/W	Dia' (mm)@ 1.5m	RPA circle radius (m)	Ht of lowest branch (m) & direction of growth	Life Stage	Estimated remaining contribution (years)	PhysiologIcal Condition	Structural Condition	Preliminary management recommendations	Category of retention + sub-category	Notes / GPS Location
555	Acer pseudoplatanus	11	5/5/5/5	800	9.60	2m all	MA	40+	Good	Fair	Remove Ivy	A1	
556	Alnus glutinosa	8	4/2/3/3	300x2	5.01	2m all	MA	20+	Good	Fair	Remove Ivy	B1	
557	Acer pseudoplatanus	10	5/5/5/5	700	8.40	2m w	MA	40+	Good	Fair	Remove Ivy	A1	
558	Acer pseudoplatanus	9	5/5/5/5	600/300/200	8.40	0m all	MA	40+	Good	Fair	Remove Ivy	A1	
559	Acer pseudoplatanus	13	6/6/6/6	800	9.60	2m all	MA	40+	Good	Fair	Remove Ivy	A1	
560	Alnus glutinosa	9	5/4/4/4	700/350	9.39	0m e/w	MA	40+	Good	Fair	Remove Ivy	B1	
561	Crataegus monogyna	7	2/4/2/2	200x3	3.34	1m all	MA	20+	Good	Fair	Remove Ivy	B1	
562	Alnus glutinosa	6	6/6/6/6	150x10	5.70	0m all	MA	40+	Good	Fair		A1	
563	Acer platanoides	9	5/5/5/5	600	7.20	2m all	MA	40+	Good	Fair		B1	
564	Sorbus aucuparia	5	3/3/3/3	350	4.20	2m all	MA	20+	Good	Fair		B1	
565	Salix sp.	8	5/4/4/4	300x2/400	7.00	0m all	MA	20+	Fair	Fair		B2	Some decay present
566	Betula pendula	13	3/3/3/3	350	4.20	2m all	MA	40+	Good	Fair	Remove Ivy	B1	
567	Acer pseudoplatanus	12	4/2/3/4	400	4.80	1.5m w	MA	40+	Good	Fair	Remove Ivy	B1	
568	Acer pseudoplatanus	14	5/5/5/5	900	10.80	4m all	MA	10<	Fair	Poor	Monolith	U	Significant basal decay
569	Acer pseudoplatanus	14	2/4/2/4	400	4.80	5m w	MA	40+	Good	Fair	Remove Ivy	B2	
570	Acer pseudoplatanus	13	4/6/5/5	570	6.84	2m s	MA	40+	Good	Fair		B1	
571	Acer pseudoplatanus	12	3/3/3/3	400	4.80	5m all	MA	40+	Good	Fair	Remove Ivy	B1	
572	Acer pseudoplatanus	15	5/5/5/5	820	9.84	2m all	MA	40+	Good	Fair	Remove Ivy	B1	
573	Salix sp.	11	4/4/6/4	500	6.00	2m e	MA	40+	Good	Fair	Remove Ivy	B2	
TG1	Mixed Broadleaf	6 to 12			0.00		MA	40+	Good	Fair	Remove Ivy & Crown Clean	B2	
TG2	Mixed Broadleaf	6 to 12			0.00		MA	40+	Good	Fair	Remove Ivy & Crown Clean	B2	