Arborist Associates Ltd

94 Ballybawn Cottages, Enniskerry, Co. Wicklow

Tel: 2742011
Mobile: 087-2629589
Email: arborist@eircom.net

Ref: CLP07897677

14th July 2020

For the attention of Mr. John Murphy
BMA Planning
Taney Hall
Eglinton Terrace
Dundrum
Dublin 14.

Dear Mr. Murphy,

Re: An Arboricultural Assessment of the Tree Vegetation on the Site Area at 'Charlestown Place SHD', Finglas, Dublin 11.

I have carried out my assessment of the tree vegetation on the above site area as requested and have reviewed the proposed development layout drawings including the services and am pleased to submit my report and drawings.

The following documents have been prepared by us to form part of this planning application:

Title	Dwg No.	Page Size	Scale
Tree Constraints Plan	**CLP001**	**A1**	**1:500**
Tree Protection Plan	**CLP002**	**A1**	**1:500**
Arboriculture Report	**--**	**A4**	**--**

If you require further information please do not hesitate to contact us, and we will do our best to be of assistance.

Yours sincerely,
For Arborist Associates Ltd.

Felim Sheridan Type text here

Felim Sheridan
F. Arbor. A, RFS Dip, Nat. Dip & NCH in Arboriculture

Arborist Associates Ltd.

An Arboricultural Assessment of the Tree Vegetation on the Site Area at 'Charlestown Place SHD', Finglas, Dublin 11.

Prepared for: BMA Planning.

Prepared by: Felim Sheridan F. Arbor. A, RFS Dip, Nat. Dip & NCH in Arboriculture

Date: 14th July 2020

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1.0 Instructions

1.1 I have been instructed by BMA Planning (project planning consultants) to assess the tree vegetation located within the site area for the 'Charlestown Place SHD', Finglas, Dublin 11 and to report on the following:

A - To assess the present condition of the tree vegetation within this site area. See 'Appendix 2' for detail of my findings and drawing No.CLP001 which I have prepared as a constraints drawing to aid the design team.

B - To assess the impact of the proposed development layout on the tree vegetation located within the site area indicating those for removal and retention. See 'Section 5.0' of our report and 'Drawing No.CLP002 for detail.

C - To show the position of the tree protective fencing and other tree protection measures that need to be put in place and be maintained in place until all construction works are complete. See 'Section 6.0' or our report and 'Drawing No.CLP002 for detail.

2.0 Report Limitations

2.1 The inspection has been carried out from ground level only and is a preliminary report. It does not include climbing inspections or below ground investigations. Should a more detailed inspection be thought necessary on any tree/s, then this will be highlighted within my recommendations.

2.2 The assessment is based on what was visible at the time and recommendations made are subject to the knowledge and expertise of the qualified Arboriculturist that carried out the above inspections.

2.3 Trees should be inspected on a regular basis as their health and condition can change rapidly due to biotic and abiotic agents. The recommendations within this report are valid for a 12-month period only and this may be reduced in the case of any change in conditions to or in the proximity of the trees.

2.4 Before undertaking any work to these trees, it would be advisable to check whether there is any planning or tree preservation controls are in operation, if they are it will be necessary to obtain consent before undertaking any works (pruning or felling).

3.0 Aims and Report Brief

3.1 Arborist Associates Ltd. has been commissioned to provide a condition assessment of the existing tree vegetation on this site area, to prepare an arboricultural implication study and to recommend tree protective measures for those trees for retention within the proposed development.

3.2 The Arboricultural data which is presented within the attached tree schedule (see Appendix 2), has been recorded in line with BS 5837:2012. The tree survey was conducted by collecting and assessing the following information on all significant trees located on site and plotted onto the land survey map provided.

- Tree Number (metal tags attached to each tree).
- Tree species both common and botanical.
- Dimensions (Trunk diameter, height, crown spread and crown clearance).
- Age Class
- Physiological Condition
- Structural Condition
- Preliminary Recommendations
- Estimated remaining contribution within their present environment
- Retention category

3.3 Their retention category has been assessed and categorized according to their quality and value within the existing context (BS-4.5), and not in conjunction with any proposed development plans. In making this assessment, particular consideration was given to:

- **Arboricultural Value** – including health, structural form, life expectancy, species and its physical contribution to or affects on other features located on site.
- **Landscape Value** – an assessment of a tree's locality including its contributions to other features as well as to the site as a whole.
- **Cultural Value** – additional contributions made such as conservation, historical, commemorative value.

3.4 The trees have been divided into one of the following categories, in accordance with the cascade chart illustrated in table 1 of BS 5837:2012. The classification process begins by determining whether the tree falls within the (U) category, if not then the process will continue by assuming that all trees are considered according to the criteria for inclusion in the high category (A). Trees that do not meet these strict criteria will then be considered in light of the criteria for inclusion in the moderate category (B) and failing this, they will be allocated a low category (C).

The following summarizes each of the categories:

Category U – Those trees in such a condition that any existing value would be lost within 10 years. Most of these will be recommended for removal for reasons of sound Arboricultural Practice/ Management.

These would be seen as trees that have little or no potential either due to their physiological and/or structural condition and their removal would be seen necessary either now or in the short-term as the most appropriate management option.

Any category 'U' trees identified have been shown on our drawings (Nos.CLP001 & CLP002) with a 'Red' donut around their

trunk positions. Due to the condition of these trees, they should not be considered a constraint on the design layout of the proposed development of this site area.

Category A - Trees of high quality/value with a minimum of 40 years life expectancy. These trees would be seen as having the potential to contribute to the tree cover of these grounds for the long-term.

From our assessment of the vegetation within this site area, no trees have been allocated to this category grade.

Category B – Trees of moderate quality/value with a minimum of 20 years life expectancy. These trees would be seen as having the potential to contribute to the tree cover of these grounds for the medium-term.

From our assessment of the vegetation within this site area, no trees have been allocated to this category grade.

Category C – Trees of low quality/value with a minimum of 10 years life expectancy.

Any category 'C' trees within this site area have been identified on our drawings (Nos.CLP001 & CLP002) with a 'Grey' donut around their trunk positions. These trees would be seen as having the potential to provide tree cover for the short to medium term and they should not be seen as a considerable constraint on the development of these lands. Where viable, they should be retained.

3.5 The bulk of the trees have been plotted onto the attached drawing (Dwg. No.CLP001) by a land survey company and where they had not been plotted, their positions have been plotted visually to the best of our ability and will need to be checked by a land survey company. The tree reference numbers referred to in the condition tree report have been shown on this drawing along with their crown spreads and their retention category colour coded as detailed above and recommended by BS 5837 2012.

The constraints for each tree were worked out as per the formulas in BS5837 2012 and have been shown on this drawing using an 'Orange Circle' to aid the design team in their final development layout to ensure tree vegetation proposed for retention is retained successfully. The Root Protection Area (RPA) is the minimum area around individual trees to be protected from disturbance during construction works and is expressed as a radius in meters measured from the tree stem. Any deviation in the RPA from the original circular plot takes account of the following factors whilst still providing adequate protection for the root system:

a) The morphology and disposition of the roots, when influenced by past or existing site conditions (e.g. the presence of roads, structures, open drainage ditches and underground apparatus);

b) Topography and drainage;
c) The soil type and structure;
d) The likely tolerance of the tree to root disturbance or damage, based on factors such as species, age, condition and past management.

4.0 Summary of Survey Findings

4.1 The site area is located at 'Charlestown Place', Finglas, Dublin 11 and it is an irregular shaped site, accessed off 'Charlestown Place Road'. The site is bounded to the north by 'Charlestown Place Road', to the south by an existing residential development at 'McKelvey Avenue', to the east by 'St. Margaret's Road / McKelvey Celtic AFC' and to the west by undeveloped lands. The site boundaries consist mainly of steel railings and earth mounding, with the western boundary undefined.

4.2 The bulk of the site area is currently occupied by car parking and vehicular circulation used for the 'Charlestown Shopping Centre'. There is a large grass area located on the southern side of the site.

4.3 Within the site area, 20 No. Trees have been surveyed and 2 No. Hedges have been identified numerically. The majority of the trees are located along the southern boundary within an old field boundary hedgerow (Hedge No.2) which runs east to west forming the boundary between the site area and the rear gardens of the adjoining residential properties where it is cordoned off for most of its length by fences or walls. The hedge is located on a soil bank on the adjoining property side of a field drainage ditch which varies in depth along its length. Soil and rubble has been pushed in on this hedgerow over the years from the adjoining property side, and this has raised the ground levels in places.

The main hedge species is Hawthorn with some Elder and Goat Willow with the undergrowth consisting of Bramble and Dogrose which in places is encroaching out on the site side due to lapsed management. On the rear garden side, it has been cut more regularly to contain width. Protruding up over the hedge height is a line of Ash trees of a mature age class forming the higher canopy and most of them are multiple stemmed, most likely as a result of being cut back previously over the years. Individually, the trees are of low quality, but collectively as a line of trees they are of more visual value to the treescape of this area and based on this, they have been given a category grade of 'C2'.

4.4 Within the remaining site area there is a number of Birch trees of a young age class planted as part of the landscaping around the surface car park area. These have been planted on the maintained grass verges around the car park and are currently of a small size with limited visual value from outside the immediate area and as such, they have been given a category grade of 'C1'. A long the site boundary with the 'McKelvey Celtic AFC' sport grounds, a Privet hedge (Hedge No.1) has been planted and this is currently of a young age class and of a low height.

5.0 Arboricultural Implication Assessment

5.1 This section of the document is designed to assess the impact of the proposed development layout on the tree and hedge vegetation within this site area for the 'Charlestown Place SHD', Finglas, Dublin 11 and to look at the necessary measures that will need to be undertaken to help retain the vegetation shown for retention free from adverse impacts for the duration of the construction period.

5.2 It is proposed to develop these lands for a new residential scheme and it will be necessary to allow for infrastructural works such as services. On drawing (No.CLP002), I have shown the tree vegetation for removal due to the proposed development layout and condition/management with 'Red Hatched' crown spreads and those to be retained with a 'Green Hatched' crown spread.

5.3 On this drawing (No.CLP002), I have also shown the position of any necessary tree protection measures in order to protect the root zone of the tree and hedge vegetation being retained within the vicinity of where the construction works will occur. These work exclusion zones are shown on this drawing using 'Orange Hatching' and these areas will need to be cordoned off by the erection of fencing or other means such as ground protection at the start of the works and this will need to be maintained in place until all works are completed.

5.4 The comments made within this impact assessment study are based on my understanding of the proposed development and what is required to allow for its construction.

5.5 **Tree Vegetation Loss:**

To facilitate the proposed development, it will be necessary to remove Tree Nos. 6, 7, 8, 0304, 0305, 0306 & 0307 all young Birch trees planted into linear grass verges as part of the landscaping around the existing surface car parking. These trees are of a small size and their loss to the treescape of the surrounding area is negligible and their loss can be easily mitigated within the completed landscaped development with new tree, shrub and hedge planting.

5.6 **Tree and Hedge Retention**

Hedge No.1 is proposed to be retained along the eastern boundary of the site area with the adjoining sports grounds and it will be cordoned off from the site area by a new fence. It would not be expected that there will be any negative impact on this hedge by the proposed works. It will need to be fenced /cordoned off from the main site works by tree protection fencing during the construction works. Care will need to be taken during the erection of the boundary treatment not to cause damage to this hedge. The holes for the uprights will need to be dug out with care and kept to a small size and dug manually or with an augur.

Hedge No.2 is located along the southern boundary outside the site area and is cordoned off from the site by a drainage ditch which would appear to be wet at periods during the year. The trees and the hedge vegetation have a crown overhang into the site area. It would be expected that the root zone from the trees within this hedge will have been restricted on the site side by the drainage

ditch and most of the roots will have been contained within the hedgerow bank and would be extending out to the south away from the site area.

For most its length, the area along this hedge will be in soft landscape within the completed development and no impacts are expected from the proposed development on this hedge vegetation. It would benefit from general tidying works and the necessary remedial tree surgery works carried out to address health and safety issues.

This hedge and the drainage ditch will be cordoned off from the completed landscaped development by a fence and again care will need to be exercised during the erection of the fencing to avoid causing damage to this hedge and the trees.

It will be important at the start of the project that the necessary tree protection fencing and other tree protection measures are put in place without delay and prior to the main works commencing on site.

This fencing needs to be erected to cordon off the calculated root protection areas of the trees and the hedge vegetation as shown on drawing no. CLP002. The fencing is to be of a strong robust build capable of withstanding the works that are proposed within its vicinity. See fencing detail on drawing No.CLP002 and within 'Appendix 1' for detail.

Signs will need to be attached to these fences warning people to 'keep out' that this is the root protection area of the hedge/tree vegetation and that no works are allowed within these fenced off areas without prior consultation and agreement with the project Arboriculturist. See sign detail on drawing No.CLP002.

5.7 **Main areas for consideration during the proposed work are:**

Item	Comments
Tree Pruning	As part of the initiating works, the crowns of some of the trees being retained are to be pruned to remove dead/unstable growth, the pruning of individual limbs/branches or entire crowns to reduce size due to structural weaknesses or to improve their juxtaposition within the built environment. A preliminary list of these works is given within the condition tree assessment in 'Appendix 2' of this report and these are to be reviewed on site prior to being carried out. The hedges being retained in most instances will require trimming particularly of their sides to contain the width and encroachment out onto the surrounding areas and to better incorporate them into the completed landscaped area. All tree felling and pruning work will need to be carried out by qualified and experienced tree surgeons *before* any construction work commences; all tree work should be in accordance with *BS3998 (2010) Tree Work – Recommendations.*
Tree Protection	Trees being retained will need to be protected from unnecessary damage during the construction process by effective construction-proof barriers that will define the limits for machinery drivers and other construction staff. Ground protected by the fencing will be known as the 'Work Exclusion Zone' and sturdy protective fencing will need to be erected along the points identified in the Tree Protection Plan (Dwg No.CLP002) prior to any soil disturbance and excavation work starting on site. This is essential to prevent any root or branch damage to the retained trees. The British Standard BS5837: *Trees in relation to design, demolition and construction (2012)* specifies appropriate fencing, see 'Appendix 1' for details. This fencing is to be of a strong robust build capable of withstanding the works that are proposed within its vicinity. The fencing will need to be 2.3m high and constructed in accordance with figure 2 of BS 5837 2012 (see 'Appendix 1' for detail) using vertical and horizontal scaffold bars well braced together with the verticals spaced out at a maximum of 3m centers and onto this, weld mesh panels are to be securely fixed with wire or scaffold clamps. All weather notices will need to be erected on the fences with words such as: "Tree Protection Fence — Keep Out". When the fencing has been erected, the construction work can commence. The fencing should be inspected on a regular basis during the duration of the construction process and shall remain in place until

Item	Comments
	heavy building and landscaping work have finished and its removal is authorized by the project Arboriculturist.
Construction	It will be important that good housekeeping is in place at all times so that the site does not become congested. All construction works are to be well planned in advance so as not to put pressure on the protective zone around the trees. All works are to occur from outside the protective zones. Where work space between the building lines and the protective fence lines is limited/ restricted, alternative work methods will need to be looked at so as to keep the work areas to their minimum in order to reduce the extent of soil and root damage occurring to the trees proposed for retention. See section 6.2.3 of BS5837 2012 for detail on working within the RPA and ground protection. For light access works within the work exclusion zone, the installation of suitable ground protection in the form of scaffold boards, woodchip mulch or specialist ground protection mats/plates may be acceptable. These are to be reviewed with the project Arboriculturist and installed to their recommendations. See detail in 'Appendix 1' of this report for sample. Care will need to be taken when planning site operations to ensure that wide or tall loads or plant with booms, jibs and counterweights can operate without coming into contact with retained trees. Such contact can result in serious damage to them and might make their safe retention impossible. Materials, which can contaminate the soil, e.g. concrete mixings, diesel oil and vehicle washings, cannot be discharged within 10m of a tree stem. Fires cannot be lit in a position where their flames can extend to within 5 m of foliage, branches or trunk. This will depend on the size of the fire and the wind direction. Notice boards, wires and such like cannot be attached to any trees. Site offices, material storage and contractor parking will need to be located outside the work exclusion zones of the tree and hedge vegetation being retained.
Services	See project engineer's drawings for detail for service routes. From my understanding of the services proposed, there should be no conflict between these and the tree and hedge vegetation proposed to be retained. There is sufficient area on site to adjust or re-route the proposed services without a need to encroach into the root zone of the trees and hedge vegetation being retained.

Item	Comments
	Prior to the installation of any services routed near trees or hedges, they are to be marked out on site for review by the project Arboriculturist and a detailed method statement is to be prepared by the installation contractor in conjunction with the project Arboriculturist on how these services are to be installed while providing protection to the tree vegetation shown for retention.
Boundary Treatments	It is my understanding that all boundary treatments along by the tree and hedge vegetation being retained is to be of a fence type structure where there will only be a need to excavate small diameter holes for the fence uprights and these will need to be dug manually or with an augur with no machinery allowed to operate within the work exclusion zones fenced off by the tree protection fencing. The working ground area required during these works will need to be protected from impacts/damage by a suitable ground protection such as scaffold planks laid butt jointed on a bed of woodchip.
Landscaping	The existing ground levels within the RPA of the tree and hedge vegetation are to be retained and incorporated into the finished landscaped development. Where changes in levels occur, these are to be either graded into the finished levels starting outside the RPA or alternatively, retaining wall structures are to be used differentiating between the different levels. All soft and hard landscaping within the RPA of the trees to be retained are to be carried out manually and the soil levels are not to be lowered or raised resulting in root damage to the trees. All surfaces are to be porous to allow the free movement of air and moisture to the roots below. Recommendations of sections 8 of BS5837 2012 are to be adhered to during the landscaping within the RPA's of these trees.

5.8.0 Monitoring

5.8.1 Any works within close proximity to retained tree and hedge vegetation are advised to be undertaken in accordance with approved method statements prepared by the main contractor under the direct supervision of a qualified consultant Arboriculturist. Therefore, during the construction works, a professionally qualified Arboriculturist is recommended to be retained by the principal contractor or site manager to monitor and advise on any works within the RPA of retained trees to ensure successful tree retention and planning compliance.

5.8.2 It is advised that tree protection fencing, any required special engineering and supervision works must be included in the main tender documents, including responsibility for the installation, cost and maintenance of tree protection measures throughout the proposed works.

5.8.3 Copies of the tree retention and protection plan (Dwg No. CLP002) a copy of BS 5837(2012) and NJUG 4 (2007) should all be kept available on site during the construction works and all works are to be in accordance with these documents.

5.8.4 On the completion of the works, all tree and hedge vegetation retained are to be reviewed by the project Arboriculturist and any necessary remedial tree surgery works required to promote the health of the trees and safety are to be implemented.

6.0 Arboricultural Method Statement/Tree Protection Strategy

6.1 The objective of this arboricultural method statement/tree protection strategy is to provide information for the main contractor/site manager on how tree and hedge vegetation need to be protected during a construction project and so that they can prepare their own site specific detailed method statement for their works.

6.2 It is necessary for tree protective fencing to be erected and all other mitigation measures required to be put in place prior to the development works commencing on site and these are to enclose and protect the root zone of the tree vegetation proposed for retention. See drawing Dwg 'No.CLP002', for the position of the protective fencing and other mitigation measures.

6.3 The protection of the tree and hedge vegetation shown for retention is divided into three main sections starting with the preconstruction stage right through to post construction and the reassessment of the retained trees.

Stage 1:

6.4.0 Pre-Construction Works

6.4.1 Prior to the main construction works commencing on site the following needs to be planned:

1. The client or main contractor needs to appoint an Arboriculturist for the duration of the project. The Arboriculturist is to make regular site visits to ensure that the tree protection measures are in place and adhered to.
2. The main contractors and all sub-contractors work force are to be briefed on the tree protection and ensure that these measures are to be kept in place throughout the construction period.
3. All personnel are to adhere to the recommendations of the appointed Arboriculturist.
4. Any issues in relation to the trees and vegetation shown for retention must be discussed with the appointed project Arboriculturist and the necessary mitigation measures put in place without delay and prior to the works being carried out.

6.5.0 Site meeting

6.5.1 Prior to any works commencing on site, it is necessary that a meeting be arranged between the project manager, site foremen, the project landscape architect, the project Arboriculturist and local authority to identify and finalize the vegetation for removal and the line of the protective fencing.

6.6.0 Tree Works

6.6.1 The client or the main contractor is to appoint a tree surgery company competent of carrying out the remedial tree surgery works and tree felling that are required on this site. The tree surgery contractor is to produce a method statement detailing how he plans to undertake the works and informing the site foreman of the process so the necessary steps can be taken to ensure the works are carried out safely and efficiently. The works are to be carried out by appropriately trained personnel taking account of the recommendations of BS3998 2010.

6.6.2 **Tree removal -** Trees for removal are to be identified by the project Arboriculturist and the method of removing the stumps is to be carried out to the recommendations of the project Arboriculturist. The trees in the way of the development layout are to be removed in such a manner not to cause damage to those being retained. Where necessary to avoid damage to the trees to be retained, these are to be removed in sections by a tree surgeon (Arborist). Where necessary, the roots and stumps are to be dug out with a digger except where the stumps are located within the RPA (root protection area) of trees being retained. In this instance, the stumps are to be ground out with a mechanical stump grinder taking care not to cause damage to the roots of trees being retained.

6.6.3 **Remedial tree surgery works -** The necessary remedial tree surgery works required to promote health and safety of the trees to be retained is to be carried out. A schedule of these works is to be produced by the project Arboriculturist taking into consideration the trees within their new built environment and prior to these works being carried out; they are to be agreed with the local authority.

6.7.0 Erection of the protective fencing

6.7.1 Once the trees have been removed, the line of the protective fencing that is required around the trees being retained **must be** erected as per Dwg. No.CLP002.

6.7.2 Where it is expected that there will be a high concentration of construction works, the fencing will need to be 2.3m high and constructed in accordance with figure 2 of BS 5837 2012 (see fencing detail within 'Appendix 1') using vertical and horizontal scaffold bars well braced together with the verticals spaced out at a maximum of 3m centers and onto this, weld mesh panels are to be securely fixed with wire or scaffold clamps.

6.7.3 Signs need to be attached to these fences warning people to 'keep out'. See detail within drawing No.CLP002 & Appendix 1.

6.7.4 Once the protective fence line is erected, then the main construction works can commence on site.

6.7.5 **Storage of Material, Work Yards and staff car parking -** These areas must be identified on the work drawings prior to the construction works starting. These must be positioned outside the root protection areas around the trees being retained.

Stage 2:

6.8.0 The Construction Works Stage

6.8.1 **Protective fencing -** During the course of the works, special attention must be paid to ensure that these tree protection measures are kept in place, in good order and remain upright, rigid and complete at all times. They must be checked daily by the main contractor/foreman and any damage noted must be fixed immediately.

If works need to take place inside the protective fence lines, then the project Arboriculturist must be informed in advance of the works taking place and the mitigation measures required to reduce impact on the tree vegetation agreed. These mitigation measures will include the supervisions of these works by the project Arboriculturist.

The protective fencing and all other protection measures are to remain in place throughout the construction works phase and must only be removed when all the works are complete and at this stage incorporated into the finished landscape.

6.8.2 **Excavations -** The excavation works are only to commence once the protective fence line and all other protection measures are in place.

The excavations in the vicinity of the tree and hedge vegetation being retained will need to be viewed on site once marked out with the project manager, site foreman and the project Arboriculturist in advance of excavation to determine the extent of the impact and the work space required to allow for the construction works to proceed and to assess what additional mitigation measures will be required to protect those trees to be retained.

No roots are to be severed by the construction works without prior approval by the project Arboriculturist. Where roots are encountered, the project Arboriculturist is to assess these prior to cutting and these are to be pruned back to appropriate pruning points beyond the excavation line. Where roots cannot be cut; alternative methods of construction will need to be considered. The excavated face is then to be covered with soil or with Hessian sacking to prevent further drying out and the death of root material. Where the Hessian sacking is used, it will be necessary to keep this moist especially during dry periods.

6.8.3 **Working within the RPA** *(Root Protection Area)* – If it becomes necessary to carry out works within the RPA of a tree/trees, these must be discussed and agreed with the project Arboriculturist. All works must be carried out manually. Root pruning is to be undertaken by an Arboriculturist using proprietary cutting tools such as a secateurs or hand pruning saw.

The ground within the RPA of the trees must be protected from damage as per the recommendations of **section 6.2.3** of BS5837 2012. See detail within appendix 1 on ground protection using boarding for pedestrian loading.

6.8.4 **Finished ground levels/Landscaping -** The existing ground levels within the RPA of trees must be retained and incorporated into the finished landscaped

development. Where changes in levels occur, these are to be either graded into the finished levels starting outside the RPA or alternatively, retaining wall structures are to be used differentiating between the different levels.

All soft and hard landscaping within the RPA of the trees to be retained must be carried out manually and the soil levels must not be lowered or raised resulting in root damage to the trees. All surfaces are to be porous to allow the free movement of air and moisture to the roots below. Recommendations of sections 8 of BS5837 2012 must be adhered to during the landscaping within the RPA of the trees being retained.

6.9.0 Other items

6.9.1 The following is a list of additional activities ***that are not allowed*** within the RPA or within the vicinity of the trees being retained.

1 - Storage of equipment, fuel, construction material, or the stockpiling of soil or rubble.

2 - Burning rubbish

3 -The washing of machinery

4 - Attaching notice boards, cables or other services to any part of the tree.

5 - Using neighbouring trees as anchor points.

6 - Care is required when using machinery such as Tele-porters, cranes or other equipment close to trees so as not to damage the crown or any other parts.

Stage 3:

6.10.0 Post Construction Works

6.10.1 This project is not to be considered complete until all retained tree and hedge vegetation have been re-examined by the project Arboriculturist and the remedial works necessary to ensure the health of the trees and the immediate safety of the end user of this development are implemented.

This report has been produced as part of a planning application for this site area and is for the sole use of the above named client and refers to only those trees identified within. Its use by any other person(s) in attempting to apply its contents for any other purpose renders the report invalid for that purpose.

Signed Felim Sheridan Date 14th July 2020

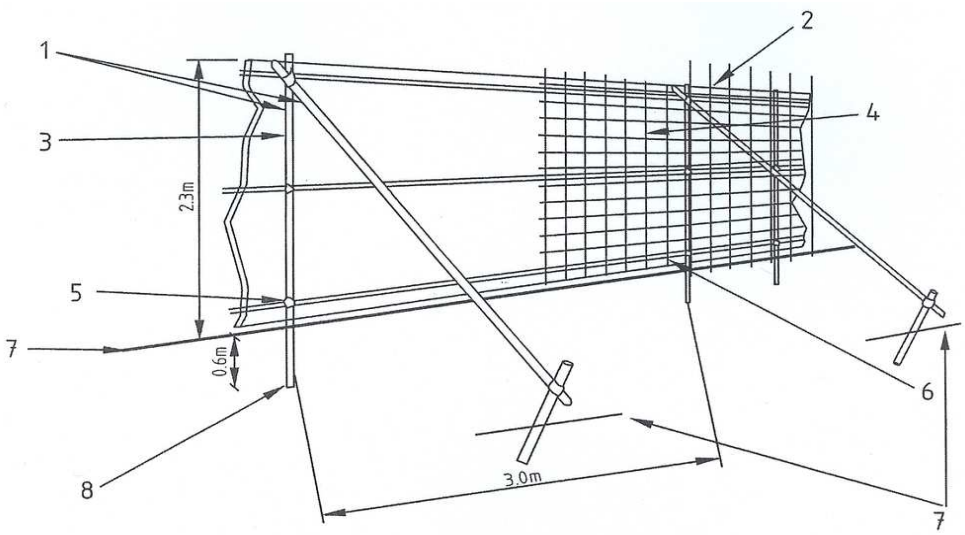
Felim Sheridan

F. Arbor. A, RFS Dip, Nat. Dip & NCH in Arboriculture

Felim Sheridan's qualifications:
Fellow of the Arboricultural Association (F. Arbor. A), Professional diploma Arboriculture (RFS), National diploma Arboriculture (ND) and National certificate Horticulture (NCH).

Appendix 1

Sample of Temporary Tree Protection Fencing Detail.



1 Standard scaffold poles
2 Uprights to be driven into the ground
3 Panels secured to uprights with wire ties and, where necessary, standard scaffold clamps
4 Weldmesh wired to the uprights and horizontals
5 Standard clamps
6 Wire twisted and secured on inside face of fencing to avoid easy dismantling
7 Ground level
8 Approx. 0.6m driven into the ground

Figure 2. – Protective fencing for RPA

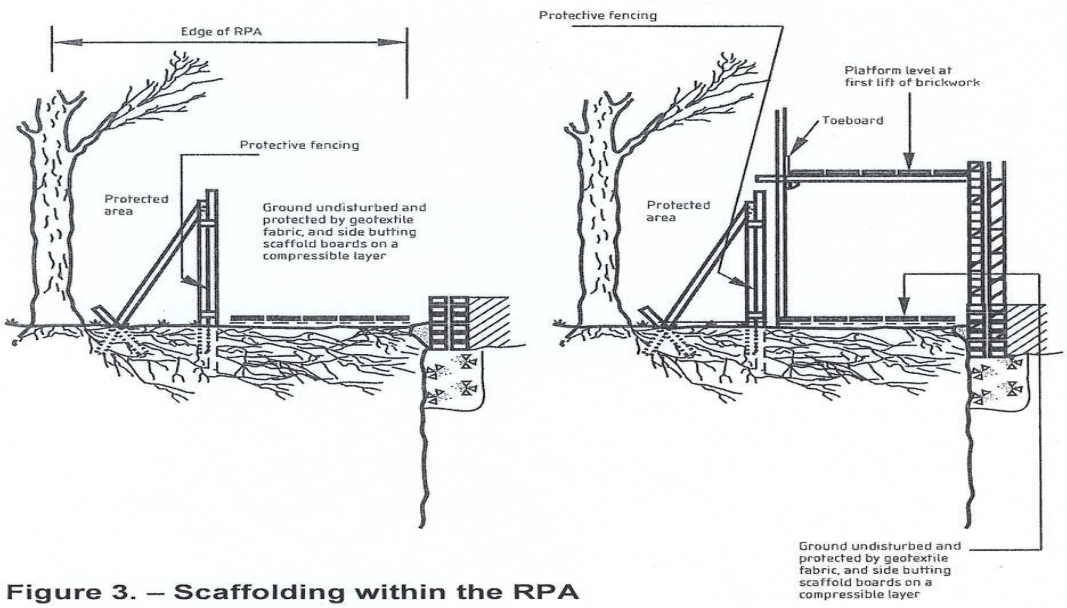


Figure 3. – Scaffolding within the RPA

Appendix 2

Condition Tree Assessment.

On Site Area at 'Charlestown Place SHD', Finglas, Dublin 11.

Date: 14th July 2020

Survey Notes

All codes referred to in this report are approximate and serve as a general guide only.

Reference to Numbers: The trees have metal tags attached and these correspond with the numbers in this report.

Reference to age class is as follows:

Young: A tree, which has been planted in the last 10 years.

Semi Mature A tree that is less than 1/3 the expected height of the species in question.

Early Mature: A tree, which is between a 1/3 and 2/3's the expected height of the species in question.

Mature: A tree that has reached the expected height of the species in question, but still increasing in size.

Over Mature: A tree at the end of its life cycle and the crown is starting to break up and decrease in size.

Reference to Physiological, Structural Condition and other comments:

Physiological Condition

Good: A tree with no major defects, but possibly including some small defects.

Fair: A tree with some minor defects such as bark Wounds, isolated decay pockets or structure affected due to overcrowding.

Poor: A tree with more serious defects such as extensive deadwood, decay or defective to the point of being dangerous.

Structural condition and other comments –
This records noted visual defects and other information about the trees health and structure.

Estimated Remaining Contribution in years

This is based on an Arboricultural assessment of the tree and is estimated based of the findings noted at time. Trees still need to be reviewed on a regular basis, preferably annually.

Less than (<) 10 years remaining contribution
10 + years remaining contribution
20 + years remaining contribution
40 + years remaining contribution.

Retention Categories

The purpose of the tree categorization method is to identify the quality and value of the existing tree stock, allowing informed decisions to be made concerning which trees should be removed or retained should development occur.

It is carried out in accordance with section 4.5 (Tree Categorization Method) of BS 5837 2012.

Summary

Main categories
Category U – Those trees in such a condition that any existing value would be lost within 10Years. Most of these will be recommended for removal for reasons of sound Arboricultural practice.
Category A - Trees of high quality/value with a minimum of 40 years life expectancy.
Category B – Trees of moderate quality/value with a minimum of 20 year life expectancy.
Category C – Trees of low quality/value with a minimum of 10 years life expectancy

Sub categories

1 – Mainly Arboricultural Values
2 – Mainly Landscape values
3- Mainly Cultural and conservation value

Note: Whilst C category trees will usually not be retained where they would impose a significant constraint on development, young trees with a stem diameter of less than 150mm should be considered for relocation.

If a layout design places Category U trees in an inaccessible location such that concerns over public safety are reduced to an acceptable level, it may be preferable or possible to defer the recommendation to fell.

The terms 'Group, woodland or tree line' is intended to identify trees that form cohesive Arboricultural features either aerodynamically (e.g. trees that provide companion shelter), visually (e.g. avenues or screens) or culturally including for biodiversity (e.g. parkland or wood pasture), in respect to each of the three subcategories.

Reference to Crown spread, Height and Trunk Diameter:
This gives **a guide** to the area taken up by the tree.
Trunk diameter is the diameter of the main trunk taken at a height of 1.5m and is recorded in millimetres (mm).
Height records the overall height of the tree and is given in meters (m).
Crown Spread records the extent of the branches normally in a north, south, east and west direction from the base of the tree and is given in meters (m).
Clear crown height records the distance between the ground and the first branch form the base of the tree and is given in meters (m)

Tree No.	Tree Species	Ht. (m)	Stem Dia. (mm)	Branch Spread (m)	C-Ht. (m)	Age Class	Phys. Con.	Structural Condition Other Comments	Preliminary Recommendation	Remain Contribute in years	Cat. Grade
								N-north **S**-south **E-**east **W**- west **Phys.-**physiological.	**A-** average		
		A Condition Assessment of the trees within the site area known as 'Charlestown Place SHD', Finglas, Dublin 11.									
		The survey commences on the eastern boundary near the entrance to 'McKelvey Celtic AFC' sports ground. It moves in a clockwise direction around the site before continuing on the northern boundary of the existing car park. It concludes at the pedestrian entrance to the car park area in the north-east corner of the site									
Hedge No.1	**Privet** *Ligustrum ovalifolium.*	**This hedge extends in a broadly north to south direction along the sites eastern boundary fence with 'McKelvey Celtic AFC' sports ground.** It is of a young age class and is in fair condition physiologically and structurally. It has been planted on the site side of the boundary fence and is establishing well but has not been pruned or clipped. A1.5 | - | A1.5 | -							It would benefit from clipping to shape the sides and to encourage lateral growth.		C2
Hedge No.2	**Ash** *Fraxinus excelsior* **Hawthorn** *Crataegus monogyna* **Elder** *Sambucus nigra* **Goat Willow** *Salix caprea* **Dog Rose** *Rosa canina* **Bramble** *Rubus fruticosa* **Ivy** *Hedera helix.*	**This hedge extends in a broadly east to west direction along the southern boundary of the site area with the rear gardens of the houses on 'McKelvey Avenue'.** It is of a mature age class and is in fair condition physiologically and structurally. It is growing on a hedgerow bank where soil, rubble and debris have been pushed in on top of the hedge from the adjoining property side. It is located south of a drainage ditch, part of which holds water at certain times of the year. Ash is the dominant tree species, particularly at the eastern end where the trees extend above the general hedge line. The hedge is mostly continuous along its length. Bramble and Dog rose are encroaching out on the site side due to lapsed management and it has received more regular trimming on the garden side. A7.0 | - | A6.0 | - **The following trees are located within this hedge line working from east to west.** Where trees couldn't be accessed from the site side they have been numbered numerically and the assessment of these trees is from the site side only and may be limited in places, as a result.								Make safe large size, dead/ unstable growth and control encroachment of Bramble and other hedge species out onto the site area.		C2

Tree No.	Tree Species	Ht. (m)	Stem Dia. (mm)	Branch Spread (m)	C-Ht. (m)	Age Class	Phys. Con.	Structural Condition Other Comments	Preliminary Recommendation	Remain Contribute in years	Cat. Grade
								N-north **S**-south **E-**east **W**- west **Phys.-**physiological.	**A-** average		
0296	**Ash** *Fraxinus excelsior*	13	A. 210 (4 stems)	7N 5S 6E 3W	2	Mature	Fair	Fair It is growing out on the hedgerow bank and it divides at ground level into three stems, with a broad / acute union formation between the stems.	Cut Ivy at ground level.	10-20	C2
Tree No. 1	**Ash** *Fraxinus excelsior*	13	200	5N 5S 2E 1W	4	Mature	Fair	Fair It has been drawn up for light and the crown has been partially suppressed by surrounding trees, affecting its structure.	Cut Ivy at ground level.	10-20	C2
Tree No. 2	**Ash** *Fraxinus excelsior*	13	300/ 300	5N 5S 4E 4W	4	Mature	Fair	Fair/ It divides near ground level and the crown is open. There is heavy Ivy growth extending high into the crown, increasing the crowns wind sail.	Cut Ivy at ground level.	10-20	C2
0297	**Ash** *Fraxinus excelsior*	13	120/ 120/ 120/ 150	5N 4S 3E 3W	3	Mature	Fair	Poor It divides near ground level and appears to be re-growing from an old decaying stump, which will structurally weaken this tree. It has been drawn up for light and the crown is thin, with deadwood present. Ivy growth extends up into the crown.	Cut / coppice back into the hedge line and retain as hedge bulking	10+	C2
0298	**Ash** *Fraxinus excelsior*	13	360	5N 5S 3E 3W	3	Mature	Fair	Fair / poor It is growing out of the bank and it is re-growing from a decaying stump. It has a distorted structure and Ivy growth extends up into the crown.	Cut Ivy at ground level.	10+	C2
0299	**Ash** *Fraxinus excelsior*	14	500/ 500	8N 6S 4E 5W	4	Mature	Fair	Fair A twin stem tree from ground level with an acute union formation between the stems. Originally a three stem tree, the western stem has broken out leaving a stump which is decaying back. Heavy Ivy extends high	Cut Ivy at ground level. Clear around the base and re-assess in 12 months.	10-20	C2

Tree No.	Tree Species	Ht. (m)	Stem Dia. (mm)	Branch Spread (m)	C-Ht. (m)	Age Class	Phys. Con.	Structural Condition Other Comments	Preliminary Recommendation	Remain Contribute in years	Cat. Grade
								N-north **S**-south **E-**east **W**- west **Phys.-**physiological.	**A-** average		
								into the crown.			
0300	**Ash** *Fraxinus excelsior*	10	450/ 450	8N 2S 2E 5W	4	Mature	Fair	Fair / Poor A twin stem tree from near ground level. It has been drawn up and out for light due to competition/ overcrowding.	Clear around the base and re-assess in twelve months.	10-20	C2
Tree No. 3	**Ash** *Fraxinus excelsior*	10	400	6N 6S 3E 3W	4	Mature	Fair	Fair It is growing on top of the hedgerow bank and it has been drawn up and out for light, affecting its structure.	Clear around the base and re-assess in twelve months.	10-20	C2
0301	**Ash** *Fraxinus excelsior*	12	300/ 250	5N 6S 4E 3W	5	Mature	Fair	Fair It is twin stemmed from base and is growing out of the hedgerow bank. It has been drawn up for light, affecting its structure. The crown contains light deadwood and lower branches have been removed in the past. Ivy extends into its crown.	Cut Ivy at ground level. Clear around the base and re-assess in twelve months.	10-20	C2
0302	**Ash** *Fraxinus excelsior*	11	200	0N 7S 1E 2W	4	Mature	Fair	Poor It is growing out of the hedgerow bank and there are decay pockets on the main stem near base. It has been drawn up for light due to overcrowding/ competition, affecting its structure.	Retain for now as part of the bulking of the area.	10+	C2
0303	**Ash** *Fraxinus excelsior*	12	450	6N 6S 4E 4W	5	Mature	Fair	Fair A single stem tree growing out of the hedgerow bank. The crown contains light deadwood and heavy Ivy extends high up into the canopy, increasing the crowns wind sail.	Retain for now as part of the bulking of this area. Cut Ivy at ground level.	10-20	C2
Tree No. 4	**Ash** *Fraxinus excelsior*	9	300	2N 2S 1E	6	Mature	Fair	Fair It has been drawn up for light due to competition and the crown is somewhat	Cut Ivy at ground level. Clear around the base	10-20	C2

Tree No.	Tree Species	Ht. (m)	Stem Dia. (mm)	Branch Spread (m)	C-Ht. (m)	Age Class	Phys. Con.	Structural Condition Other Comments	Preliminary Recommendation	Remain Contribute in years	Cat. Grade
								N-north **S**-south **E-**east **W**- west **Phys.-**physiological.	**A-** average		
				1W				suppressed. Heavy Ivy growth extends high into the crown, increasing the crowns wind sail.	and re-assess in twelve months.		
Tree No. 5	**Ash** *Fraxinus excelsior*	8	450/ 400/ 400/ 200/ 250	3N 2S 4E 3W	4	Mature	Fair	Fair / Poor A multi-stem tree from near ground level, it has been reduced/ topped in the recent past to its current height. The majority of the crown has been removed by this pruning and re-growth is likely to be structurally weak.	Retain for now as part of the hedge bulking. Review again in twelve months.	10+	C2
		The following trees are located on the grass verge around the existing car park area. They would have been planted in recent years as part of the landscaping.									
Tree Nos. 6 & 7	**Himalayan Birch** *Betula utilis*	A.5	A.80	2N 2S 2E 2W		Young	Fair	Fair Planted into a grass verge area as part of the more recent landscaping. They are still attached to their tree ties and stakes which have caused bark damage/ wounding to their lower trunks. There is bark damage around their bases caused by grass maintenance.	Remove their planting stake and tie to protect the bark, where they are no longer required. Otherwise, adjust so that the tree tie is not compressing the stem. Mulch around their bases.	20+	C1
Tree No. 8	**Himalayan Birch** *Betula utilis*	5	80	2N 2S 2E 2W		Young	Fair	Fair Planted into a grass verge area as part of the more recent landscaping. It is still attached to the tree tie and stakes which has caused bark damage/ wounding to the lower trunk. There is bark damage around the base caused by grass maintenance.	Remove planting stake and tie to protect the bark where no longer required. Otherwise, adjust so that the tree tie is not compressing the stem. Mulch around its base.	20+	C1
0304	**Himalayan Birch** *Betula utilis*	4	70	1N 1S 1.5E	2	Young	Fair	Fair A single stem tree growing with a slight lean to the east. The planting stake and tie	Remove planting stake and tie to protect the bark, where they are no	20+	C1

Tree No.	Tree Species	Ht. (m)	Stem Dia. (mm)	Branch Spread (m)	C-Ht. (m)	Age Class	Phys. Con.	Structural Condition Other Comments	Preliminary Recommendation	Remain Contribute in years	Cat. Grade
								N-north **S**-south **E-**east **W**- west **Phys.-**physiological.	**A-** average		
				1W				are still present and are beginning to cause damage. There is bark damage around the base caused by grass maintenance.	longer required. Otherwise, adjust so that the tree tie is not compressing the stem. Mulch around base.		
0305	**Himalayan Birch** *Betula utilis*	4	70	2N 2S 2E 0.5W	2	Young	Fair	Fair A single stem tree growing with a slight lean to the east. The planting stake and tie are still present and are beginning to cause damage. A branch has been lost on the north west side at c.2m leaving a wound area open to decay. There is bark damage around the base caused by grass maintenance.	Remove planting stake and tie to protect the bark, where they are no longer required. Otherwise, adjust so that the tree tie is not compressing the stem. Mulch around base.	20+	C1
0306	**Himalayan Birch** *Betula utilis*	4	70	1N 1S 1E 1W	2	Young	Fair	Fair A single stem tree, the planting stake and tie are still present and are beginning to cause damage. There is bark damage around the base caused by grass maintenance.	Remove planting stake and tie to protect the bark, where they are no longer required. Otherwise, adjust so that the tree tie is not compressing the stem. Mulch around base.	20+	C1
0307	**Himalayan Birch** *Betula utilis*	4	100	2N 1.5S 1.5E 1W	2	Young	Fair	Fair A single stem tree growing with a slight lean to the north east. The planting stake is still present but the tree tie is gone. The tree is suckering from the base and there is bark damage around the base caused by grass maintenance.	Remove planting stake to protect the bark. Mulch around base.	20+	C1

Tree No.	Tree Species	Ht. (m)	Stem Dia. (mm)	Branch Spread (m)	C-Ht. (m)	Age Class	Phys. Con.	Structural Condition Other Comments	Preliminary Recommendation	Remain Contribute in years	Cat. Grade
								N-north **S**-south **E-**east **W**- west **Phys.-**physiological.	**A-** average		
Notes:											

Notes:

Tree Constraints
Tag Number
0439
Category grade
Actual Crown Spread

BS5837: 2012 - Category Retention Rating

Category U Trees-
Trees in such a condition that any existing value would be lost within 10 years or being recommended for removal sound arboricultural practice.

Category A Trees
Trees of high quality/value with a min. of 40 years life expectancy.

Category B Trees
Trees of moderate quality/value with a min. of 20 years life expectancy.

Category C Trees
Trees of low quality/value with a min. of 10 years life expectancy.

Sub Categories
1- Mainly Arboricultural values
2 - Mainly Landscape valus
3 - Mainly cultural and conservation values.

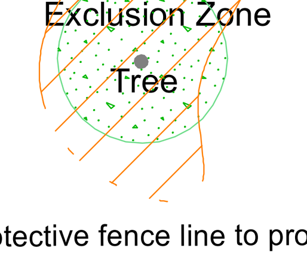
Tree & hedge vegetation being retained

Trees being removed.

Schedule of events

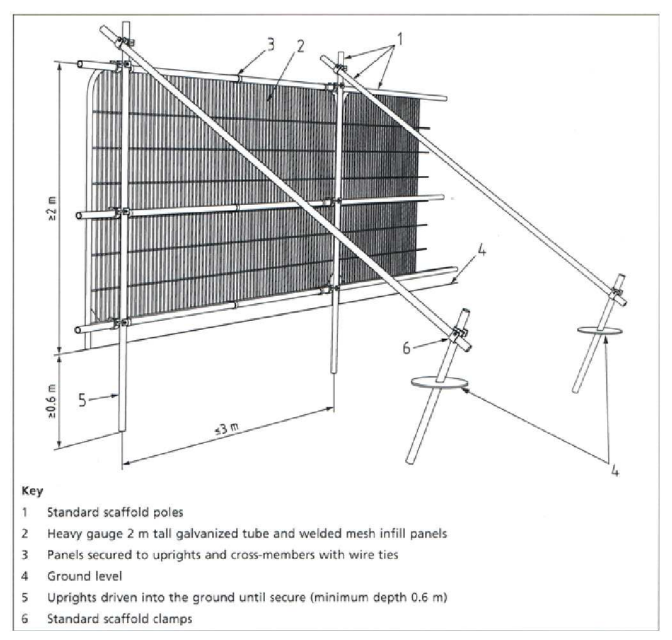
Works	Schedule
Site Meeting	Prior to any works commencing.
Tree Works – Felling & Pruning	Prior to any construction works commencing.
Tree Protection	After tree removal and pruning is complete and prior to any construction works commencing. The erection and removal of the protective fencing is to be scheduled in accordance with the phasing of the construction works.
Site Monitoring	Ongoing throughout the construction works.
Removal of Tree P rotection	Once all the main construction works are completed and in order to incorporate the area into the finished development.
Tree Review and Certification	Once all works are complete.

Tree Protection Detail

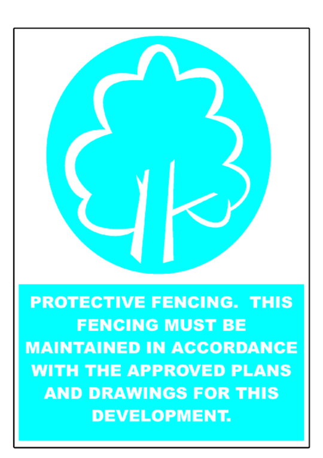


Protective fence line to protect work exclusion zone around trees being retained.

Protective fence detail as per BS 5837 2012.



Detail of singage



The tree protection fencing is to be erected enclosing the root protection areas around the trees being retained as shown on this drawing and appendix 1. In some areas, the site hoarding may be sufficient to act as the protective fencing if the tree and its root zone are positioned outside and no works are envisaged within the area outside the site hoarding. This will need to be discussed and agreed at the initial site meeting.

Where tree protection fencing is needed, this will need to be 2.3m high and constructed in accordance with figure 2 of BS 5837 2012 (see detail on drawing & appendix 1) using vertical and horizontal scaffold bars or similar well braced together with the verticals spaced out at a maximum of 3m centres. Onto this, weld mesh panels (harris fecne panels) are to be securely fixed with wire or scaffold clamps.

Signs are to be attached to these fences warning people that this is a protective area and that the fencing must be maintained in good condition in accordance with the approved plans and drawings for this development.

Once the protective fence line is erected, then the main construction works can commence on site.

The following is a list of activities that are not allowed within the RPA or within the vicinity of the trees being retained.

- Protect tree root systems from damage caused by runoff or spillage of noxious materials while mixing, placing, or storing construction materials.
- Protect root systems from ponding, eroding, or excessive weting caused during construction operations.
- Do not store construction materials, debris, or excavated material inside tree protection zones. When excavating, place excavated soil on opposite side of trench away from the tree.
- Do not permit vehicles or foot traffic within tree protection zones; prevent soil compaction over root systems.
- Do not allow fires under or adjacent to remaining trees or other plants.
- Do not attach notice boards, cables or other services to any part of the tree.
- Do not use neighbouring trees as anchor points.
- Do not use high machinery such as Tele-porters, cranes or other equipment close to trees to avoid damage to the crown or any other parts.

During the construction works the following is required:

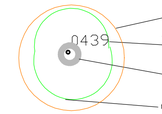
1. The main contractor or site manager is to brief all people working on site on the tree protection measures and the procedure if works need to be carried out within these areas.
2. Storage of Material, Work Yards and staff car parking– are to be identified on the work drawings prior to the constuction works starting. These need to be positioned outside the root protection areas around the trees being retained.
3. The main contractor or site manager is to check the tree protective fencing daily and carry out any repairs required to ensure its stays upright and secure.
4. The main contractor or site manager is to liase with the project Arboriculturist if and when works are to be carried out close to or within the root protection areas around the trees.
5. Any works to occur within the protection areas such as landscaping is to be carried out manually with no machinery allowed. All soft and hard landscaping within the Root Protection Area (RPA) of the trees to be retained are to be carried out manually and the soil levels are not to be lowered or raised resulting in root damage to the trees. Recommendations of sections 8 of BS5837 2012 are to be adhered to during the landscaping within the RPA'S of the trees being retained.
6. The protective fencing around the trees is to stay in position until all the construction works are complete and are only to be removed following discussions and agreement with the project arborist.

ARBORIST ASSOCIATES LTD.
94 BALLYBAWN COTTAGES, ENNISKERRY, CO. WICKLOW
TEL: 01-2742011 / 087-2629589

TITLE :	Tree Protection Plan
Site :	Charlestown Place SHD, Finglas, Dublin 11.

DATE:	Dwg No.CLP002	Scale 1:500 @ A1

Notes:



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TEL: 01-2742011 / 087-2629589

TITLE : Tree Constraints Plan

Site : Charlestown Place SHD, Finglas, Dublin 11.

DATE: | Dwg No.CLP001 | Scale 1:500 @ A1