



Arborist Associates Ltd

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Ref: HPD654079677

12th March 2021

For the attention of Mr. Eoin O'Brien

Senior Executive Parks Superintendent
 Parks Capital Programme Manager
 Parks, Community & Cultural Development Department
 Dún-Laoghaire Rathdown County Council
 County Hall
 Marine Road
 Dún-Laoghaire
 Co. Dublin

Dear Mr. O'Brien,

Re: An Arboricultural Assessment on the Site Area at 'Hyde Park Community Sports Centre', Hyde Road, Dalkey, Co. Dublin.

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 I 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	HPD001	A3	1:500
Tree Protection Plan	HPD002	A3	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.

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).

Arborist Associates Ltd.

An Arboricultural Assessment on the Site Area at 'Hyde Park Community Sports Centre', Hyde Road, Dalkey, Co. Dublin.

Prepared for: Dùn- Laoghaire Rathdown County Council

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

Date: 12th March 2021

94 Ballybawn Cottages, Enniskerry, Co. Wicklow.

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1.0 Instructions

1.1 I have been instructed by Parks, Community & Cultural Development Department of Dún-Laoghaire Rathdown County Council to carry out an arboricultural assessment of the site area at 'Hyde Park Community Sports Centre', Hyde Road, Dalkey, Co. Dublin and to report on the following:

- A -** To assess the present condition of the tree vegetation within the site area. See 'Appendix 2' for detail of my findings and drawing No.HPD001 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.HPD002 for detail.
- C -** To show on this drawing 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' of our report and drawing No.HPD002 for detail.

2.0 Report Limitations

- 2.1 The inspection of these trees has been carried out from ground level only, is a preliminary report and does not include climbing inspections, internal investigations of the timber or below ground investigations. The assessment is based on what was visible at the time of the inspection and recommendations made are subject to the knowledge and expertise of the qualified Arboriculturist that carried out the above inspections.
- 2.2 This report only relates to factors apparent at the time of the inspection; as a result, further monitoring is imperative if potential problems/hazards are to be avoided. Recommendations made are intended to minimize or to help reduce potential hazards that may be associated with trees, but it is not possible to remove all such risks especially in the event of heavy winds or storms and as such, there is no guarantee or certainty that all hazardous conditions will be detected. The recommendations within this report are valid for a 12 month period only, unless otherwise stated within the recommendations of the attached report.
- 2.3 Before undertaking any work to these trees, it would be advisable to check whether 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). It may also be necessary to apply for a felling license for the felling of any trees in order to comply with the forestry Act and the wild life Act should also be taken into consideration when planning to carry out any works.

3.0 Survey Data Collection and Methodology

3.1 The trees included within this assessment area are located within an area to the right of the entrance off 'Hyde Road' next to the playground and at the start of a linear tree belt which extends westwards from the western gable end of the existing club building along the southern boundary of these grounds which backs onto the rear garden of houses within 'St. Begnet's Villas'. The trees have been numbered with

aluminum tag reference numbers from Nos.0714-0724 & 0732-0739. The tag numbers are attached to the trees at a height of 1.5- 2m from ground level and are orientated in such a way to assist in their relocation.

- 3.2 The inspection of the trees involves a visual assessment from ground level only and does not include any invasive means of assessing the trees internally, their below ground parts or the aerial parts that are not visible from the ground. Good, fair and poor have been used to summarise the physiological and structural conditions of these trees with the comments giving more detail. Other items that may limit the assessment of a tree included Ivy cover, scrub vegetation and/or basal suckers.
- 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 – An assessment of the trees health, structural form, life expectancy, species and its physical contribution to or effects on other features located on site.

Landscape Value – An assessment of a trees 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 or 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.

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. 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.

From our assessment of the trees within this site area, no trees were categorized as 'U'.

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

These would be seen as trees that have the potential to contribute to the tree cover of these grounds for the long-term and consists of trees of all age classes from semi-mature to mature.

From our assessment of the trees within this site area, no trees were categorized as 'A'.

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

These would be seen as trees that have the potential to contribute to the tree cover of these grounds for the medium term and consists of trees of all age classes from semi-mature to mature.

The category 'B' trees within this site area have been identified on our drawings (Nos.HPD001 & HPD002) with a 'Blue' donut around their trunk positions.

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

These trees would be seen as having the potential to provide tree cover for the short to medium term. As part of the future management, some of these will probably be removed for one reason or another. This category consists of trees of all age classes from young to mature. These trees should not be seen as a considerable constraint on the development of these lands, but should be considered for retention where viable.

The category 'C' trees within this site area have been identified on our drawings (Nos.HPD001 & HPD002) with a 'Grey' donut around their trunk positions.

- 3.5 The trees have been plotted onto the attached drawing (DWG No.HPD001) by a land survey company and their positions are assumed accurate. This drawing has been developed as a constraints drawing to aid the design team in the layout of the development and the tag 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 recommended by BS 5837 2012. The constraint (Minimum Root Protection Area) for each tree has been shown with an 'Orange Circle' and all proposed development should be planned to be positioned outside those trees proposed for retention allowing for additional space for construction activities.

The Root Protection Area (RPA) is the minimum area around individual trees to be protected from disturbance during construction works; RPA is usually expressed as a radius in metres 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, 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 Findings

- 4.1 The trees included within this assessment area are located to the right of the entrance to these grounds and at the start of a linear tree belt which extends westwards from the western gable end of the existing clubhouse building along the southern boundary of these grounds which back onto the rear garden of houses within St. Begnet's Villas.
- 4.2 The first lot of trees (Nos.0732 – 0739) are located on a small grass area between the entrance off 'Hyde Road' and the children's playground and consists of a small group planting of ornamental trees cordoned off from the entrance avenue by a low maintained Hawthorn hedge (Hedge No.1). The tree species include one ornamental Cherry, three Ornamental Apples, two Birches, one Golden Ash and one Lime all of young to semi- mature age class.
- 4.3 The second lot of trees are located at the eastern end of a linear tree belt that extends westwards from the gable end of the clubhouse. This is made up of Lime, Poplar and Alder and they are currently of an early-mature age class. The trees were initially planted at close spacing with the objective of forming a screen barrier along this boundary and was planted with a mix of fast growing species such as Poplar which are now towering up over the other trees and the plan at the time of planting these was to get tree cover established quickly and for these fast growing trees to be removed in the future as the other trees establish and grow to a size to provide tree cover. As a result of this approach, trees have been removed over the years creating a more open linear tree belt.
- 4.4 Within the site area, 19No. trees were tagged and included within our report along with one hedge.

The following table gives a breakdown of the category grading allocation as per the cascade chart in BS5837 2012:

Category Grade	No. of trees
Category U 0 Trees	Tree Nos. -
Category A 0 Trees	Tree Nos. -
Category B 3 Trees	Tree Nos. 0714, 0715 & 0716.
Category C 16 Trees + 1 Hedge	Tree Nos. 0732, 0733, 0734, 0735, 0736, 0737, 0738, 0739, 0717, 0718, 0719, 0720, 0721, 0722, 0723 & 0724. Hedge No.1
Total	19 Trees + 1 Hedge

5.0.0 Arboricultural Implication Study

5.1.0 Introduction

- 5.1.1 It is proposed to demolish the existing clubhouse and associated buildings and to construct a new modern building on a slightly larger foot print and it will be necessary to allow for infrastructural works such as services.
- 5.1.2 This section of the document is designed to assess the impact of the proposed developed layout on the tree vegetation within this site area and to look at the necessary measures that will need to be undertaken to help retain the tree vegetation shown for retention free from adverse impacts for the duration of the construction period.
- 5.1.3 On drawing No.HPD002, I have shown the tree vegetation for removal due to the proposed development and condition/management with 'Red Hatched' crown spreads and those to be retained with a 'Green Hatched' crown spread. I have also shown on this drawing the position of any necessary tree protection measures in order to protect the root zone of the tree 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 at the start of the works and this will need to be maintained in place until all works are completed. This fencing is to protect the root zone of the trees and to ensure their successful integration into the development of this site area.
- 5.1.4 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.

5.2.0 Impact Assessment

5.2.1 To facilitate the proposed development it will be necessary to remove the following trees:

Tree Nos. 0732, 0733, 0734, 0735 & 0738 all semi-mature ornamental tree species and Hedge No.1 will need to be removed to widen the entrance to facilitate safe pedestrian and vehicle movement in and out of the grounds. These trees have all been given a category grade of 'C' within our condition assessment.

Tree Nos.0714, 0715 & 0716 all early- mature Lime of good quality which have been given a category grade of 'B1' along with Tree No.0717 a large mature Poplar and 0719 an early-mature Lime which have all been given a category grade of 'C' within our condition assessment.

Tree No.0718 a mature Poplar will be left more open/exposed by the loss of the above trees and to compensate for this, it is recommended that this tree be reduced in height by 2m to address this issue. The remaining trees will also require some light remedial tree surgery works/pruning to incorporate them into this completed development.

5.2.2 The remaining trees within these grounds are being retained within the finished development and these areas where trees are being removed from will be augmented with new tree planting that will ensure good quality tree cover is retained for the future.

5.2.3 As part of future management of the faster growing tree species such as the Poplar within the linear tree belt along the southern boundary of these grounds, a planned removal strategy should be put in place to remove these trees over the next five to ten years as the surrounding trees establish and grow in size. Tree species that could be added into this linear tree belt include Lime, Field Maple, Birch and Scots Pine.

5.2.4 The root zone of these trees being retained as shown on the accompanying tree protection plan (No.HPD002) need to be cordoned off from the works by the erection of tree protection fencing for the duration of the construction works as per BS5837 2012. Where work space is required for construction works within the root zone of the trees being retained, then ground protection will need to be put in place to the recommendations of 'Section 6' of BS5837. In areas where manual works need to occur within the root zone of the trees, ground protection could be provided by sheets of heavy duty plywood laid on a bed of woodchip and for heavier loading, this could be achieved by a layer of scaffold planks screwed together by sheets of heavy duty plywood on top of these and all this to be laid on a bed of woodchip to help cushion loading on the soil underneath.

5.3.0 Tree Retention and Protection

5.3.1 Main items for consideration during the proposed construction process:

Item	Comments
Tree Pruning	<p>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.</p> <p>All tree felling and pruning work will need to be carried out by qualified and experienced tree surgeons <i>before</i> any construction work commences; all tree work should be in accordance with <i>BS3998 (2010) Tree Work – Recommendations</i>.</p> <p>All trees for removal will need to be felled to stumps taking care not to cause damage during the process to the trees being retained and all stumps, in particular those which are located within the root zone of trees being retained that need to be removed are to be ground out using a mechanical stump grinder taking care not to cause root damage to the trees being retained.</p>
Tree Protection	<p>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.</p> <p>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.HPD002) 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 <i>BS5837: Trees in relation to design, demolition and construction (2012)</i> specifies appropriate fencing, see 'Appendix 1' for details.</p> <p>The 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 centres and onto this, weld mesh panels are to be securely fixed with wire or scaffold clamps.</p> <p>All weather notices will need to be erected on the fences with</p>

Item	Comments
	<p>words such as: "Tree Protection Fence — Keep Out".</p> <p>In some areas where the construction works will encroach in close or into the calculated root zones of the trees and where the tree protection fencing cannot be erected to enclose the entire root zone, then ground protection will need to be put in place. See 'Section 6' of BS5837 2012 for detail.</p> <p>When the fencing has been erected and any necessary ground protection put in place, then 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 heavy building and landscaping work have finished and its removal is authorized by the project Arboriculturist.</p>
Construction	<p>It will be important that good housekeeping is in place at all times so that the site does not become congested.</p> <p>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.</p> <p>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 of trees.</p> <p>For light weight work areas such as for the storage of work material and pedestrian paths, this protection could be provided by the use of boarding and for heavier loading, these areas will need protection with the use of Cell Web of similar product.</p> <p>Where this occurs, the tree protective fence lines are not to be moved to accommodate these until such time as the required ground protection is signed off by the project engineers and arborist and put in place to the recommendations of section 6 of BS5837 2012.</p> <p>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.</p> <p>Materials, which can contaminate the soil, e.g. concrete mixings, diesel oil and vehicle washings, cannot be discharged within 10m of a tree stem.</p> <p>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.</p>

Item	Comments
	<p>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.</p>
Services	<p>See project engineer's drawings for detail for service routes.</p> <p>From my understanding of the service drawing provided to me for assessment, there should be no conflict between these and the tree vegetation proposed to be retained.</p> <p>Prior to the installation of any services routed near trees, 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.</p>
Landscaping	<p>The existing ground levels within the RPA of the trees are to be retained and incorporated into the finished landscaped area. 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.</p> <p>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.</p> <p>It will be important within these areas that all works are carried out manually with minimal intervention with machinery and where machinery is required; this will need to be of a small light weight type and all works will need to be supervised by the project arborist. Where this machinery needs to transverse the root protection areas of trees, the route for this will need to be protected by boarding or other means to meet the requirements of section 6 of BS5837 2012.</p>

5.4.0 Monitoring

- 5.4.1 Any construction works within close proximity to retained tree vegetation are advised to be undertaken in accordance with approved method statements prepared by the construction 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.

- 5.4.2 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 all construction phases.
- 5.4.3 Copies of the tree retention and protection plan (Drawing No. HPD002), 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.
- 5.4.4 On the completion of the construction 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 the tree vegetation needs 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.HPD002), for the position of the protective fencing and other mitigation measures.
- 6.3 The protection of the vegetation shown for retention within this proposed development is divided into three main sections starting with the preconstruction stage right through to post construction and the reassessment of this retained vegetation.

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 developer 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 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 tree vegetation has been removed, the line of the protective fencing that is required around the trees being retained **must be** erected as per Dwg. No.HPD002.
- 6.7.2 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 centres 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.HPD002 & 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.

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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 fences and all other 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 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 the tree and other vegetation to be retained. In certain areas, it may be necessary to use an alternative method of excavating to prevent encroachment into the RPA of the vegetation to be retained and this may include such methods as retaining walls or similar.

Where roots of trees to be retained are exposed during the excavation works, these are to be assessed by the project Arborist and pruned back beyond damaged material. The excavated face is then to be covered with soil or with Hessian sacking to prevent further drying out and 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 or other vegetation being retained, 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

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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 trees 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 these lands 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 12th March 2021 Type text here

Felim Sheridan - For Arborist Associates Ltd.

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.

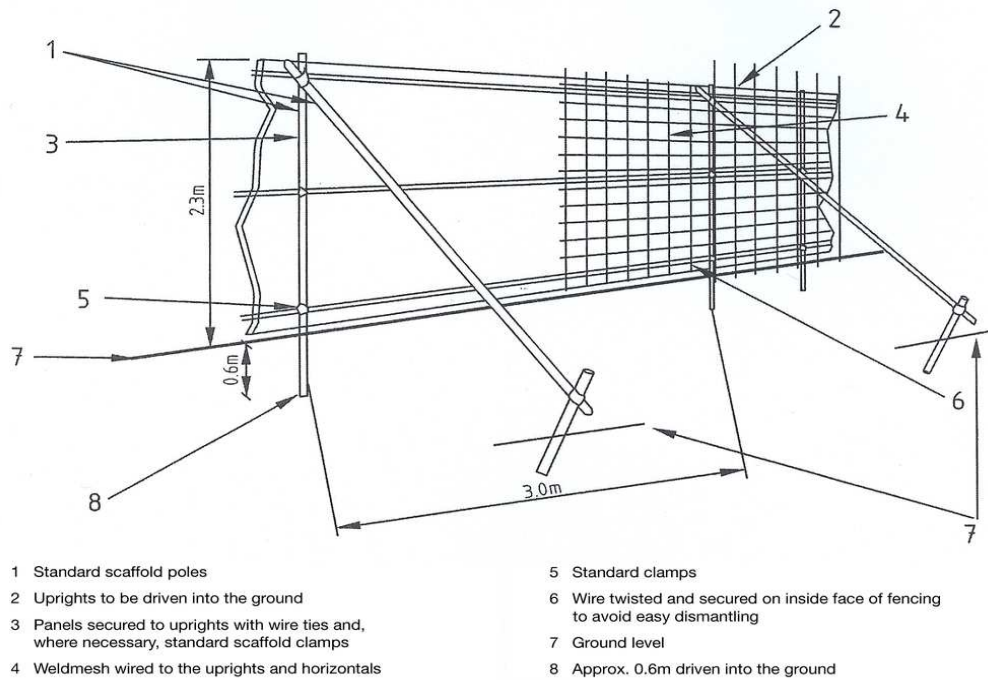


Figure 2. – Protective fencing for RPA

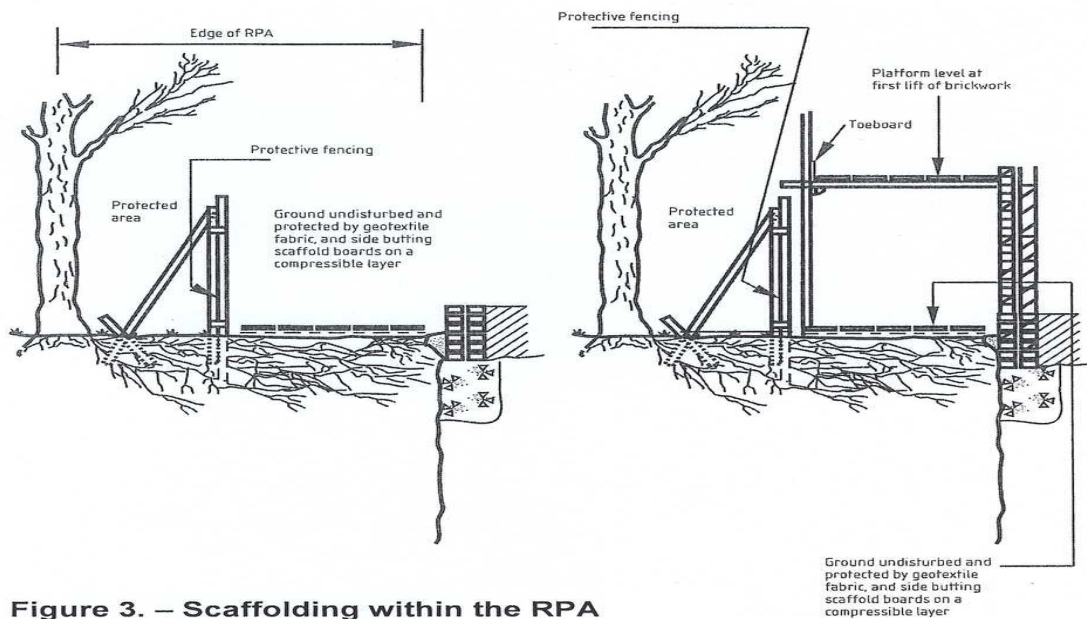


Figure 3. – Scaffolding within the RPA

Appendix 2

Condition Tree Assessment

On the Site Area at 'Hyde Park Community Sports Centre', Hyde Road, Dalkey, Co. Dublin.

Date: 12th March 2021

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 effective 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 10 Years. 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 millimeters (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 from the base of the tree and is given in meters (m).

Root Protection Area (RPA)

The Root Protection Area (RPA) is the minimum area around individual trees to be protected from disturbance during construction works; RPA is usually expressed as a radius in meters measured from the tree stem.

For single stem trees, the root protection area (RPA) should be calculated as an area equivalent to a circle with a radius 12 times the stem diameter.

For trees with more than one stem, one of the two calculation methods below should be used. The calculated RPA for each tree should be capped to 707 m².

a) For trees with two to five stems, the combined stem diameter should be calculated as follows:

$$\sqrt{((\text{stem diameter } 1)^2 + (\text{stem diameter } 2)^2 \dots + (\text{stem diameter } 5)^2)}$$

b) For trees with more than five stems (not illustrated in Annex C), the combined stem diameter should be calculated as follows:

$$\sqrt{((\text{mean stem diameter})^2 \times \text{number of stems})}$$

The RPA for each tree is plotted on the Tree Constraints Plan (No.ASC001); 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 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.

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	Remaining years	Category Grade
				N	S	E	W							
				N	S	E	W			N-North S-South E-East W-West Ht.- Height C- Crown Phy Con.- Physiological Condition	A- Average Dia.- Diameter Cat.- Category			
A condition assessment of the trees within the site area at 'Hyde Park Community Sports Centre', Hyde Road, Dalkey, Co. Dublin														
Hedge No. 1	Hawthorn <i>Crataegus monogyna</i>	It extends along the right-hand side of the entrance driveway. It is of an early-mature age class in fair to good condition physiologically and in fair condition structurally. It has been clipped/ maintained as a low formal hedge and cordons off the grass area from the entrance driveway.									Continue present maintenance. Maintain Ivy growth.		C2	
		Average Height		Average Width										
		1.2m		1.5m										
The following trees are located on the lawn area behind Hedge No.1.														
0732	Ornamental Flowering Cherry <i>Prunus sp.</i>	5	170	2	2	3	3	2.2	Semi Mature	Fair / Good	Fair The lower branches have been pruned in the past in order to raise up its crown.	Requires no work at the present time.	20+	C1
0733	Ornamental Apple <i>Malus domestica</i>	5	100	2	2	2	2	2	Semi Mature	Fair	Fair It is infected by 'Wholly Aphid' leading to bud distortion. A lot of the lower branches have been pruned in the past in order to raise up its crown.	Requires no work at the present time.	20+	C1
0734	Birch <i>Betula pendula</i>	8	180	1	2	2	1	3	Semi Mature	Fair / Good	Fair The lower branches have been pruned in the past in order to raise up its crown.	It may require further pruning in order to maintain clearance.	20+	C1
0735	Birch <i>Betula pendula</i>	10	200	1	2	2	1	3	Semi Mature	Fair / Good	Fair The lower branches have been pruned in the past in order to raise up its crown.	Requires no work at the present time.	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	Remaining years	Category Grade
				N	S	E	W							
				N	S	E	W				N-North S-South E-East W-West Ht.- Height C- Crown Phy Con.- Physiological Condition	A- Average Dia.- Diameter Cat.- Category		
0736	Ornamental Apple <i>Malus domestica</i>	4	90	1	1	1	1	2	Semi Mature	Fair/ Good	Fair It has an upright habit and is suckering from base.	Maintain basal suckers and a larger weed-free area around its base.	20+	C1
0737	Ornamental Apple <i>Malus domestica</i>	4	90	1	1	1	1	1.7	Semi Mature	Fair/ Good	Fair It is suckering from base and has suffered bark wounding caused by the grass maintenance at its base. It is being overcrowded by the larger surrounding trees.	Maintain basal suckers and a larger weed-free area around its base.		
0738	Golden Ash <i>Fraxinus excelsior 'aurea'</i>	8	200	2	2	3	2	3	Semi Mature	Good	Fair It is located close to the overhead utility lines and public lighting and its crown is beginning to interfere with these as it grows in size. Pruning has been carried out on the lower branches in the past in order to raise up its lower crown. It's also located within close proximity to the neighbouring tree and it may eventually overcrowd this space.	It will require repeat pruning in order to maintain clearance with the road and the surrounding surfaces/ utility lines.	10-20	C1
0739	Lime <i>Tilia sp.</i>	9	410	3	3	3	3	2	Early Mature	Fair/ Good	Fair It forms a twin-stemmed tree from c. 1.6m up with an acute union formation between stems with some included bark present. It is the largest trees within this group and the lower branches have been pruned/ removed in the past in order to raise up its crown. It has also received pruning on the roadside in order to maintain clearance with the road and the utility lines; however, its crown is beginning to grow up into these utility lines again.	It will require further pruning to maintain clearance with the overhead utility lines.	20+	B1

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	Remaining years	Category Grade
				N	S	E	W							
										N-North S-South E-East W-West Ht.- Height C- Crown Phy Con.- Physiological Condition	A- Average Dia.- Diameter Cat.- Category			
		These trees are located to the west of the site area for 'Hyde Park Community Sports Centre'.												
Tree Belt No.1	Lime <i>Tilia sp.</i> Alder <i>Alnus incana</i> Poplar <i>Populus sp.</i>	<p>It consists of a liner tree belt, c.8m wide that extends westwards from the western gable end of the existing clubhouse building.</p> <p>In relation to this proposed project, those trees of concern are located at the eastern end of this tree belt, close to the gable end of the clubhouse.</p> <p>They are of an early-mature age class in fair condition both physiologically and structurally. The tree species include Lime, Alder and Poplar and they were initially planted at wide spacing and are growing up together forming part of the one continuous canopy formation. Some trees have either been removed or have failed over the years, creating openings within this tree belt. They are a prominent feature within this area and they back onto the back gardens of the houses on the south side.</p> <p>The following gives details on the trees within and adjoining the site area.</p>									Maintain a larger weed-free area around the base of these trees. Carry out infill planting to bulk up this tree belt and to help rejuvenate it. A management plan should be put in place to selectively remove the faster growing tree species as the other tree species grow in size.	-	-	
0714	Lime <i>Tilia sp.</i>	13	390	4	3	5	3	2.5	Early Mature	Good	Fair/ Good It is located close to the gable end of the clubhouse and the lower branches are beginning to rub off the building. The container has been positioned within c.1.5m to the west of this tree and it may have suffered some soil and root damage during the installation works as a result. It has a slightly asymmetrical crown formation due to its group growing environment. The lower branches have been pruned/removed in the past in order to raise up	Prune lower branches in order to improve clearance over the surrounding surfaces / structures. Maintain basal suckers.	20-40	B1

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	Remaining years	Category Grade
				N	S	E	W							
											N -North S -South E -East W -West Ht. - Height C - Crown Phy Con. - Physiological Condition its crown.	A - Average Dia. - Diameter Cat. - Category		
0715	Lime <i>Tilia sp.</i>	13	410	4	4	5	4	2.5	Early Mature	Fair/ Good	Fair/ Good It is located at the gable end of the clubhouse and the lower branches are beginning to interfere with the clubhouse building, although they have been pruned back in the past. It is suckering from base and has suffered bark wounding / damage on the lower trunk as a result of vandalism.	Prune lower side branches in order to improve clearance with the clubhouse building. Maintain basal suckers.	20-40	B1
0716	Lime <i>Tilia sp.</i>	13	330	4	4	3	2	3.5	Early Mature	Fair/ Good	Fair It is growing up within a group environment and it forms the central tree. Its crown development/ structure has been slightly restricted due to its group growing environment. The lower branches have been cut/ removed in the past in order to raise up its crown.	Requires no work at the present time.	20-40	B1
0717	Black Poplar <i>Populus nigra sub sp.</i>	25	650	3	5	4	2	4	Mature	Fair/ Good	Fair It is a large size tree located within c. 2m of the boundary wall of the rear garden of the adjoining house. It towers over the surrounding trees and is of value to the group canopy structure. A lower scaffold limb extending in over the rear garden of the neighbouring property has a structural weakness, indicated by the reaction growth and it may be prone to failure as a result.	Remove dead/unstable growth and prune the side branches by c. 1-2m in order to address structural issues, in particular the lower scaffold limb extending south into the neighbouring property. This tree should be considered for removal in the short to medium term as part of the selective	10-20	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	Remaining years	Category Grade
				N	S	E	W							
											N- North S- South E- East W- West Ht.- Height C- Crown Phy Con.- Physiological Condition	A- Average Dia.- Diameter Cat.- Category		
											thinning/ management of this tree belt.			
0718	Poplar <i>Populus sp.</i>	24	390	2	3	2	3	3.5	Mature	Fair	Fair It is a tall central tree growing up for the light due to competition and it is slightly slender as a result. There is epicormic growth present on the lower trunk.	Requires no work at the present time. This tree should be considered for removal in the short to medium term as part of the selective thinning/ management of this tree belt.	10-20	C1
0719	Lime <i>Tilia sp.</i>	12	270	5	1	2	3	3.5	Early Mature	Fair/ Good	Fair It is growing on the outer canopy edge of some of the larger trees in this tree belt. It has been drawn up and out for the light with an asymmetrical crown as a result. It has received pruning of lower branches in order to raise up its crown in the past and this has further impacted on its crown structure. It may also have been impacted upon during the installation of the container located within c.2m of its base on the east side. It has suffered bark wounding on the lower trunk caused by vandalism.	Maintain lower epicormic growth.	20-40	C1
0720	Lime <i>Tilia sp.</i>	7	230	5	1	2	3	2	Early Mature	Fair	Fair/ Poor It is growing on the outer canopy edge of the larger neighbouring trees with an asymmetrical crown drawn out to the north for the light as a result and is of a poor form as a result. It is sheltered within its present group environment. It has suffered a bark	Remove the lower broken branches and retain as part of the group canopy bulking.	10-20	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	Remaining years	Category Grade
				N	S	E	W							
											N-North S-South E-East W-West Ht.- Height C- Crown Phy Con.- Physiological Condition	A- Average Dia.- Diameter Cat.- Category		
											wound at its base with decay developing into the underlying timber as a result.			
0721	Poplar <i>Populus sp.</i>	24	560	5	3	3	2	4	Mature	Fair / Good	Fair It is a tall tree forming part of the group canopy formation and is of value to the group canopy structure. The lower branches have been removed in the past in order to raise up its crown.	Requires no work at the present time. It should be considered for removal in the short to medium term as part of the selective thinning/ management of this tree belt.	20+	C1
0722	Poplar <i>Populus sp.</i>	24	490	4	3	2	3	4	Mature	Fair/ Good	Fair It is a tall central tree growing up within a group environment. The lower branches have been pruned/ removed in the past in order to raise up its crown. It has been left slightly more open/ exposed on the site side due to the failure/ removal of trees in the past. There is some bark wounding occurring around its base caused by the grass maintenance works.	Requires no work at the present time. It should be considered for removal in the short to medium term as part of the selective thinning/ management of this tree belt. Mulch the area around its base to protect its base from further damage during the grass maintenance.	20+	C1
0723	Alder <i>Alnus incana</i>	17	340	4	3	2	2	3	Early Mature	Fair/ Good	Fair They are growing up within a sheltered group environment and have been drawn up for the light as a result and this has affected its structure and crown development. The lower branches have been pruned/ removed in the past in order to raise up its	Mulch the area around its base to protect its base from further damage during the grass maintenance.	10-20	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	Remaining years	Category Grade
				N	S	E	W							
										N-North S-South E-East W-West Ht.- Height C- Crown Phy Con.- Physiological Condition	A- Average Dia.- Diameter Cat.- Category			
										crown. There is evidence to suggest that the soil levels have changed around its base in the past. The lower branches have been removed in the past in order to raise up its crown. It has suffered small bark wounds around its base caused by the grass maintenance works.				
0724 (1012)	Lime <i>Tilia sp.</i>	9	240	3	2	3	2	2	Early Mature	Fair	Fair/ Poor Its crown development/ structure has been affected due to past overcrowding/ competition. It has been left more isolated by the failure/ removal of some of the surrounding trees. It has suffered minor branch breakage within its crown, possibly as a result of previous tree failure or branch breakage during storms. There is evidence to suggest that the soil levels have changed around its base in the past. It has suffered bark wounding at its base exposing the underlying timber to decay.	Mulch the area around its base to protect its base from further damage during the grass maintenance.	20+	C1
Notes:														