

The background is a vibrant red color. It features several abstract geometric shapes: a large white circle with a blue border in the upper right; a smaller white circle with a blue border in the lower left; a large teal shape with a white border in the bottom right; and various other shapes in blue, green, and white scattered throughout the corners and edges.

Appendix D
Arboricultural Impact
Assessment Report

National Transport Authority
**Blanchardstown to City Centre
Core Bus Corridor Scheme**
Arboricultural Impact Assessment
Report

Issue | 4 April 2022

This report takes into account the particular instructions and requirements of our client.

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 268401

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1 Introduction

1.1 Background

Arbor-Care Ltd (Professional Consulting Tree Service) was retained by ARUP Consulting Engineers on behalf of the National Transport Authority (NTA) to undertake an Arboricultural Impact Assessment, and a Tree Protection Plan identifying the trees, groups of trees or hedgerows that may be impacted on by the BusConnects Core Bus Corridor. The surveyed trees contained within this report are located within or adjacent to the proposed Blanchardstown to City Centre Core Bus Corridor (refer to Figure 1 on page 5 of this report) (hereinafter referred to as the 'Proposed Scheme'). The objective of the impact assessment was to identify the areas that contained trees, groups of trees or hedgerows, and to ensure where practicable that these areas would be retained, and to identify the trees that are to be removed to facilitate the Proposed Scheme.

The survey was undertaken between the 14th and 17th September 2020. The survey commenced at Junction 3 (Blanchardstown / Mulhuddart) eastbound off-slip from the N3, finishing at Ellis Quay / Arran Quay.

The below impact assessment report is based on the *British Standard BS 5837:2012 Trees in relation to design, demolition and construction – recommendations*; this standard gives recommendations and guidance on the principles to be applied to achieve a satisfactory juxtaposition of trees, including shrubs, hedges and hedgerows, with structures. It sets out to assist those concerned with trees in relation to construction to form balanced judgements. This impact assessment report is accompanied by an inventory of trees and hedgerows on site and a tree protection plan. The Arboricultural Impact Assessment and a tree protection plan was prepared for the site to identify trees that may be impacted on by the Proposed Scheme based on the proposed design.

1.2 Methodology

An initial tree survey and visual condition assessment commenced on the 14th September 2020. The purpose of this survey and in accordance with *BS 5837: 2012 Trees in relation to design, demolition and construction – recommendations*, only trees with diameters of 75mm or greater were surveyed. Also, in accordance with section 4.4.2.3 of the British Standard document, where trees formed obvious groups these were assessed and recorded as groups. The survey commenced at Junction 3 (Blanchardstown/ Mulhuddart) eastbound off-slip from the N3, finishing at Arran Quay/Ellis Quay. The majority of the trees surveyed form part of large groups planted adjacent to the N3, these were planted in tight groups that form copse of trees. Also, a number of trees surveyed are located in around the Blanchardstown shopping centre, and these were planted in formal rows and are groups and act primarily as landscape features.

Section 4.4.2.3 of BS 5837: 2012 states:

Trees growing as groups or woodland should be identified and assessed as such where the arboriculturist determines that this is appropriate. However, an assessment of individuals within any group should still be undertaken if there is a need to differentiate between them, e.g. in order to highlight significant variation in attributes (including physiological or structural condition).

NOTE: The term “group” 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 of each of the three subcategories.

The survey concentrated primarily on the significant trees/hedgerows and groups located within 20m of any development works which could impact on the tree (this could include excavation, resurfacing, utility installation, new signage/lighting etc) within and adjacent to the Proposed Scheme and has been based on the topographical survey plan provided. The objective of this survey was to gather information regarding the trees along the Proposed Scheme and to assess the impact the Proposed Scheme may have on the trees. Refer to Appendix A for the Tree Survey Schedule.

Trees that are of visual importance to the surrounding area justify special efforts to protect/preserve them, as their loss would have an irremediable adverse impact on the local environment. A tree's significance can depend on the tree's age, another variable to imply significance can be the aesthetic merit of the tree based on its unusual size, intrinsic physical features or outstanding appearance or occurring in a unique location or context, and thus provides a special contribution as a landmark or landscape feature.

All above parts of the trees were visually examined at ground level. Tree diameters (DBH) were estimated at 1.5 metres above grade as per standard arboricultural practice. Tree height was measured with the use of a clinometer (where practical). A generalised system was employed to describe the overall health of the trees. The system uses a three tier rating scale with the following descriptors:

Specimen condition 3-tier rating system

- Poor: 1-30%
- Fair: 31-70%
- Good: 71-100%

2 Soils

On shrinkable clay soil, tree growth can lead to the differential movement of structures as moisture is removed from the soil during the growing season. Soils must be carefully assessed, and any foundations that could be influenced by trees must be installed following the recommendations of *National House Building Council (NHBC) Standards Chapter 4.2: Building Near Trees (2021)* to avoid potential future damage. Where trees which predate existing structures are to be removed, this can result in heave as the soils are re-wet. This should be monitored by a suitably qualified engineer during the construction works.

3 Trees and Risk in the Context of Development

This report is to inform the preliminary design, focusing on the quality and benefits of the trees and is not specifically designed to assess the safety of trees on Site. However, when obvious issues have been identified, recommendations have been included in the Tree Survey Schedule.

3.1 Trees and Wildlife

Full consideration must be given to the presence of species protected under the Wildlife Act (1976 – as amended) and other relevant legislation protected wildlife and habitats, in particular the presence of bats and nesting birds. It is recommended that wherever practicable, significant tree/hedge works take place outside of the typical bird nesting season of March to September.

3.2 Tree Works

Any tree surgery recommendations contained within this report are to be undertaken in accordance with *BS3998: 2010 Tree work – Recommendations (BS3998)*, by suitably qualified contractors. Significant pruning works are best undertaken when trees are dormant or outside periods of high functional activity, to reduce the overall impact on energy available to the tree for growth and processes. In general, the optimum period for works is between November and February, and July and August (subject to the presence of protected species) when the tree is less active and better placed to respond to wounding and a reduction in leaf area.

4 Initial Tree Survey Overview

4.1 The Site

The Proposed Scheme commences at Junction 3 (Blanchardstown / Mulhuddart) southbound off-slip from the N3. The Proposed Scheme proceeds along the R121 Blanchardstown Road South into the Blanchardstown Shopping Centre.

From a new terminus to the north-west of Blanchardstown Shopping Centre the Proposed Scheme is routed onto the N3 Navan Road via the Snugborough Road junction and follows the N3 and Navan Road as far as the junction with the Old Cabra Road. From here, the Proposed Scheme is routed along Old Cabra Road, Prussia Street, Manor Street and Stoneybatter to the junction with King Street North. The core bus corridor is then routed via Blackhall Place as far as the junction with Ellis Quay, where it joins the prevailing traffic management regime on the North Quays. At the Stoneybatter / Brunswick Street North junction, cyclists proceed along Brunswick Street North, George's Lane and Queen Street as far as Ellis Quay/Arran Quay. Refer to Figure 1.

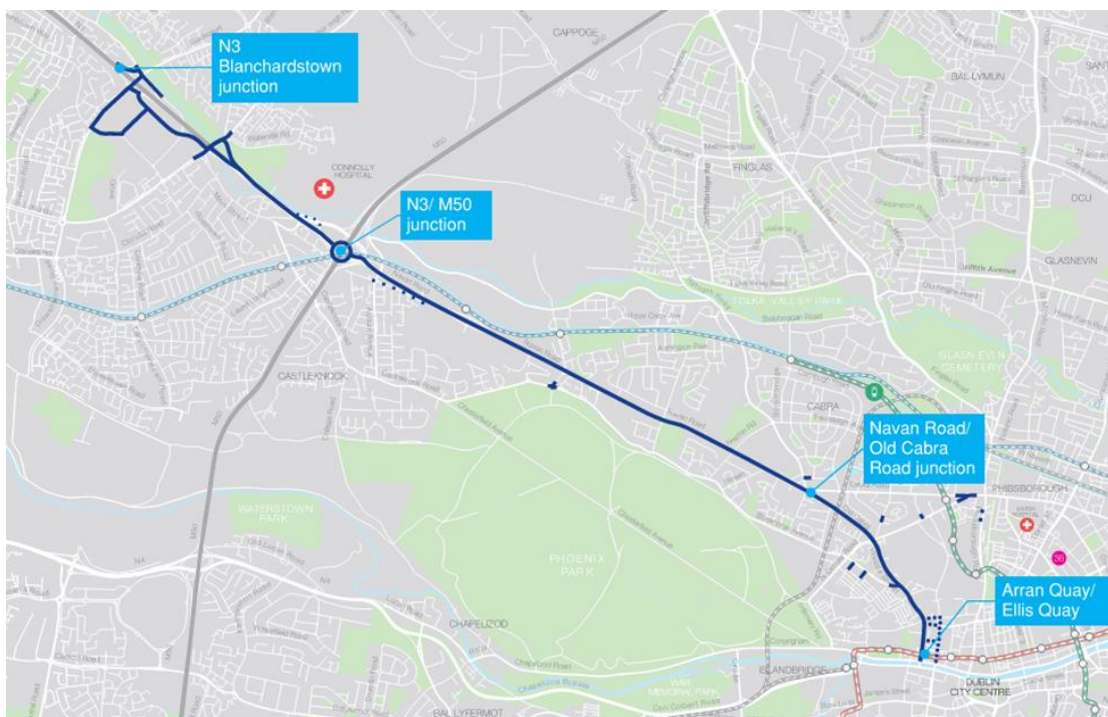


Figure 1: Proposed Blanchardstown to City Centre Scheme

4.2 The Trees

A total of 1010 individual trees were surveyed along with large areas of tree copse, within and adjacent to the Proposed Scheme, particularly around the Mill Road Bridge and along the N3. The numbers of trees in the large areas were estimated and have been shown within the drawing. The impact of the Proposed Scheme on the trees surveyed will be assessed in the Arboricultural Impact Assessment.

A breakdown of the Individual Tree Categories on site as per *BS 5837: 2012* is set out in Table 1 below. The category of all trees including the large areas of tree copse are noted in Appendix A.

Table 1: Individual Surveyed trees category breakdown.

Category	Quantity	Category %
A-Tree of high quality	31	3.1%
B-trees of good quality	670	66.3%
C (Low quality or trees less than 75mm diameter)	307	30.4%
U (remove due to poor condition)	2	0.2%
Total Trees surveyed	1010	100%

5 Statutory and Non-Statutory Designations

The route traverses both Dublin City Council and Fingal County Council administrative areas, with the boundary between both Local Authorities located in close proximity to the Ashtown Road / Navan Road junction. The relevant development plans of both local authorities have been examined.

National Planning Framework

The *National Planning Framework (NPF)* seeks to ensure that new development is sustainable and underlines the importance of Green Infrastructure, of which trees form an integral part. This encompasses recognition of the importance of trees in relation to the management of air, soil and water quality along with other associated ecosystem services and climate change adaptation. The NPF also seeks to achieve the protection and enhancement of landscapes and a net gain in biodiversity.

Dublin City County Development Plan 2016 - 2022

Section 10.5.7 of the *Dublin City Development Plan 2016* recognises the benefits of trees in humanising spaces, enhancing the environment and minimising the impacts of climate change.

Appendix 1: Existing Tree Preservation Orders in Dublin City 2016-2020 of the Dublin City Development Plan has been reviewed and it has been concluded that there are no TPO's identified within the study area.

Fingal County Development Plan 2017-2023

Chapter 9 Natural Heritage of the *Fingal County Development Plan 2017-2023* seeks to protect and enhance biodiversity and landscapes including trees. Objective NH27 seeks to protect existing woodlands, trees and hedgerows which are of amenity or biodiversity value and/or contribute to landscape character and ensure that proper provision is made for their protection and management and Objective NH28 stipulates the use of Tree Preservation Orders (TPOs) to protect important trees, groups of trees or woodlands.

6 Arboricultural Impact Assessment

This impact assessment sets out the likely principal direct and indirect impacts of the Proposed Scheme on the trees on or immediately adjacent to the site and suitable mitigation measures to allow for the successful retention of significant trees or to compensate for trees to be removed, where appropriate.

A summary of trees to be removed, tree works, and incursions related to the Proposed Scheme are detailed within Table 2.

Table 2: Summary of Removals, incursions and pruning to facilitate the Proposed Scheme

Impact	Category A	Category B	Category C	Category U
Trees to be removed to facilitate the Proposed Scheme	15 no. trees and 1,057m ² of woodland trees	256 no. trees and 7,682m ² of woodland trees	140 no. trees, 591m ² of woodland trees	2 no. trees
Trees to be pruned to facilitate the Proposed Scheme	0	0	0	0

6.1 Trees to be Removed

All trees that are destined for removal shall be removed prior to any construction or excavation works taking place in the vicinity of any trees to be removed.

Any tree/hedgerow remedial works that are required shall also be undertaken prior to any construction or demolition activity on the site. All the above shall be carried out by qualified and insured tree surgeons and in accordance with *BS 3998:2010 Tree works Recommendations*.

The latest available information on the general arrangement layout, landscape general arrangement, drainage, structures, earthworks, lighting, and compounds have been reviewed to inform this assessment.

Tree removals assume a reasonable worst case and in practice some trees may be able to be retained subject to on site investigation, such as trial holes, to determine root spread in conjunction with the guidance of an arboriculturist.

Where part of a group of trees is to be removed, an arboriculturist must carry out a site walkover immediately following site clearance work to determine the suitability and stability of retained trees, which may have been impacted by a loss of companion shelter. Where additional tree pruning, or removals are required these will be agreed in advance with the NTA.

New tree planting and associated landscaping works are as detailed in the proposed Landscaping General Arrangement Drawings. All the remaining recorded trees are likely to be able to be retained and protected.

6.2 Tree Works

Tree removal works to facilitate the Proposed Scheme are detailed in the Tree Survey Schedule included as Appendix A. Aside from tree removals, no other tree works such as pruning have been identified at this stage. Where new areas of access are proposed close to trees, crown lifting to ensure a clear height of 2.5m for footpaths, 3m for cycle tracks and 5.2m for highways is likely to be required. The requirement for pruning should be addressed following a pre-commencement site walkover to review any trees which could form an obstruction, or which require pruning to facilitate construction works and to prevent inadvertent damage to tree crowns.

This level of pruning will generally not have a significant negative impact on the health or amenity of the trees in question.

No additional works to retained trees are likely to be required. All tree work is to follow the principles of *BS3998: 2010 Treework. Recommendations*.

Should the requirement for additional tree works be identified, this will be discussed with an arboriculturist on site and no works will be undertaken without consent.

6.3 Incursions within the RPA or Canopy Spread

A range of works are required within or close to the Root Protection Area (RPA) of retained trees which will require specialist working methods to ensure trees are not subject to a significant negative impact. The RPA is a layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability and where the protection of the roots and soil structure is treated as a priority.

Tree RPAs have been calculated in accordance with *BS 5837:2012*. The formulae used are set out in Table 3.

Table 3: RPA Calculation Method

Number of Stems	Calculation Method
Single Stem Tree	$RPA (m^2) = \{ \text{stem diameter (m)} @ 1.5m \times 12 \}^2 \times 3.142$
Tree with more than one stem arising below 1.5m above ground level.	$RPA (m^2) = \{ \text{Basal Dia. (m)} \times 10 \}^2 \times 3.142$
Note: The Calculated RPA should be capped to 707m ² e.g. which is the equivalent to a circle with a radius of 15m or a square with approximately 26 m sides.	

Given the constraints of the site, incursions into the RPA may be unavoidable therefore the mitigation measures as set out in the method statement are to be adhered to.

The Arboricultural Method Statement included as Appendix C sets out the methodology for specific activities near retained trees. The following general principles have been applied:

- The extent of resurfacing has not been fully determined at this stage. Where resurfacing of existing hard surfacing is required, this will be applied over the existing wearing course or on the existing intact subbase following the careful removal of the wearing course.
- New surfacing on existing unsurfaced ground within a significant proportion of an RPA will be achieved using a three-dimensional cellular confinement system (e.g., Cellweb or equivalent) installed without excavation using no dig techniques.

- Where existing verges or footpaths are to be widened out into the existing carriageway, kerb stones and haunching will be carefully removed by hand to protect adjacent tree roots. The Proposed Scheme will likely result in improved growing conditions for trees where carriageway is replaced by less heavily engineered footpath or verge.
- Where the existing road carriageway is to be widened requiring a section of cut into a tree RPA or where new drainage cannot feasibly be adjusted to fully avoid the RPA, tree retention will be feasible where trees are considered on balance to be of an age, condition and species which will tolerate the degree of disturbance required (generally not more than a maximum of 20% of the overall RPA) and that this is preferable to the loss of the tree. The area of excavation nearest the tree will be carried out by hand and roots will be carefully assessed by an arboriculturist and pruned as required. New kerb stones and any haunching will be the narrowest profile feasible and alternative methodologies such as reinforced bridged/lintel sections of kerb can be applied, should significant roots need to be retained and worked around.
- Where a new boundary wall is to be constructed within an RPA, alternative footings utilising low diameter pads or piles will be carefully located to avoid tree roots (via hand dug trial holes) and will support floating beams set at or above ground level, unless trial holes (under arboricultural supervision) determine that limited careful excavation is viable to allow beams to be set into the ground.
- The position of new lamp columns, signs and bus shelter footings can be locally adjusted to avoid significant roots and tree canopies and the lowest diameter footings feasible will be employed (such as screw piles or equivalent). Footings will be hand dug within RPAs.
- All new or diverted utilities will avoid the RPA of retained trees where practicable. Where this is not practicable, they will be installed using trenchless methods or via careful excavation in accordance with *BS5837: 2012* and guidance from the *National Joint Utilities Group (NJUG) Volume 4*. Utilities to be removed will be cut off and left in situ, where feasible, to minimise disturbance, or will be removed via careful excavation.

6.4 The Future Impact of Retained Trees

Retained trees will require periodic inspection to assess their structural condition and safety. Occasional removal of dead wood or other remedial works to address significant defects or obstructions may be required in areas of frequent access. This is unlikely to be overly onerous and will be the responsibility of the tree owner.

All tree works recommended as a result of the preliminary tree survey of the site, which considered trees in the context of the current use of the site (these works are included as preliminary management recommendations in the Tree Survey Schedule in Appendix A of this report) should be actioned within the recommended timescales.

6.5 Tree Protection

Retained trees are vulnerable to damage from construction activities which can include physical damage to stems and branches following impacts with plant, root severance following trenching, root death or dysfunction following damage to soil structure (caused by the movement of people or machinery on unsurfaced ground) or via the spillage of materials toxic to tree health. The default position is that the RPA and canopy spread of trees to be retained will form an effective Construction Exclusion Zone, secured with robust fencing where no access will be permitted. Where access is necessary within this area, special measures such as the use of ground protection (or retention of existing hard surfacing) and arboricultural supervision are generally required. In some cases, existing boundary walls and fences can be employed as a tree protection barrier where they are robust and sufficient to prevent access or damage.

6.6 Tree Planting

Existing areas of unsurfaced ground must be protected during the demolition and construction phases if they are to be re-used for new plantings. Protection can be achieved using fit for purpose ground protection measures as set out in *BS 5837:2012* Section 6.2.3 or by creating a fenced exclusion zone. Where protection is not practicable, soil amelioration or replacement works will be required to ensure suitable growing conditions for new trees to fully establish.

Where new trees are to be planted, the minimum planting distances detailed in Annex A, Table A.1 of *BS 5837:2012* must be adhered to, to prevent direct damage to services and structures from future tree growth. An extract of *BS 5837:2012* presenting this table is shown in Figure 2.

New tree planting should be implemented in accordance with the guidance set out in *BS8545: 2014 Trees: from nursery to independence in the landscape – Recommendations*.

Table A.1 Minimum distance between young trees or new planting and structure to avoid direct damage to a structure from future tree growth

Type of structure	Minimum distance between young trees or new planting and structure, in metres (m)		
	Stem dia. <300 mm ^{A)}	Stem dia. 300 mm to 600 mm ^{A)}	Stem dia. >600 mm ^{A)}
Buildings and heavily loaded structures	—	0.5	1.2
Lightly loaded structures such as garages, porches etc.	—	0.7	1.5
Services			
<1 m deep	0.5	1.5	3.0
>1 m deep	—	1.0	2.0
Masonry boundary walls	—	1.0	2.0
In-situ concrete paths and drives	0.5	1.0	2.5
Paths and drives with flexible surfaces or paving slabs	0.7	1.5	3.0

^{A)} Diameter of stem at 1.5 m above ground level at maturity

Figure 2: Annex A, Table A.1 of BS5837:2012

7 Conclusions

The arboricultural impact of the Proposed Scheme on the site will be moderate. It is proposed to remove 413 individual trees and 9,330 sq. m of woodland tree area to facilitate the Proposed Scheme.

The exact number of trees within the woodland tree area is unknown. Typically trees in these groups are planted at a 1m spacing, therefore by working out the square meterage, the number of trees to be removed can be approximately calculated. This will be graphically shown and displayed within the drawings contained in Appendix B. The majority of these trees are early mature to mature retained is shown in Table 4. The number of individual trees being retained also includes trees adjacent to the Proposed Scheme i.e. outside the site boundary and temporary land acquisition boundary. The area of woodland trees retained is based on areas within the site boundary and temporary land acquisition boundary. These trees and areas are evident on the drawings in Appendix B.

Table 4: Retained and Removed Tree Quantities

Retained trees	Total retained in development (no)	597
Woodland Trees Retained	Area of woodland trees retained (m2)	13526
Removed trees	Total identified trees lost (no.)	413
Woodland Trees Removed	Area of woodland trees lost (m2)	9330

Trees are to be removed due to a direct conflict with the Proposed Scheme and where specialist methodologies or design tweaks are not considered practicable to facilitate their retention. Trees are also proposed to be retained where careful construction methodologies will allow their retention. Tree loss will be mitigated with a robust and high-quality scheme of new tree planting as detailed in the proposed Landscape General Arrangement drawings which represents an opportunity to increase the quality, impact, diversity, and resilience of the local tree stock. Soil structure for areas of new tree planting where the ground is currently unsurfaced will either be protected using ground protection or fenced exclusion zones; or the soil structure will be ameliorated or replaced following the completion of construction works on site.

References

British Standards Institution (BSI), BS5837:2012. Trees in relation to design, demolition and construction – Recommendations. BSI

British Standards Institution (BSI), BS3998:2010. Tree work – Recommendations.

British Standards Institution (BSI) BS8545: 2014 Trees: from the nursery to independence in the landscape - Recommendations

National House Building Council (NHBC) Standards, (2020). Chapter 4.2: Building Near Trees

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

National Tree Safety Group (NTSG), 2011. Common sense risk management of trees. Forestry Commission.

Project Ireland 2040 National Planning Framework

Dublin City Development Plan 2016-2022

Fingal County Development Plan 2017-2023

Appendix A

Tree Survey Schedule

A1 Key to Abbreviations Used in the Survey

Ref No	Specific identification number given to each tree or group. T=Tree/H=Hedge/G=Group/W=Woodland/S=Shrub.	
Tag No.	Tree marked with individual tree tag of this reference number on site.	
Species	Common name followed by botanical name shown in <i>italics</i>	
RPA	Root Protection Area (As defined by BS5837)	
Stem diameter	Diameter of main stem measured in millimetres at 1.5 m above ground level. (MS = Multi-stem tree measured in accordance with BS5837 Annex C)	Av / Average: indicates an average representative measured dimension for the group or feature
Spread	The width and breadth of the crown. Estimated on the four compass points in metres.	
Crown clearance	The estimated height (in metres) above ground level of the lowest significant branch attachments.	
#	Estimated dimensions	
*	Indicates estimated position of tree (not indicated on topographical survey).	
P	Privately owned tree (e.g., tree not located in the public highway or adjacent public land).	
Category	Categorisation of the quality and benefits of trees on Site as per Table 1 and 2 of BS5837:2012. 1=Arboricultural quality/value 2=Landscape quality/value 3=Cultural quality/value (including conservation) A=High quality/value 40yrs+ (light green). B=Moderate quality/value 20yrs+ (mid blue) C=Low quality/value min 10yrs/stem diameter less than 150mm (grey). U=Unsuitable for retention (dark red).	
Life stage	<p>Young (Y): Newly planted tree 0-10 years.</p> <p>Semi-Mature (SM): Tree in the first third of its normal life expectancy for the species (significant potential for future growth in size).</p> <p>Early Mature (EM): Tree in the second third of its normal life expectancy for the species (some potential for future growth in size)</p> <p>Mature (M): Tree in the final third of its normal life expectancy for the species (having typically reached its approximate ultimate size).</p> <p>Over Mature (OM): Tree beyond the normal life expectancy for the species.</p> <p>Veteran (V): Tree, which is of interest biologically, aesthetically or culturally because of its condition, size or age.</p>	
Structural condition	<p>Good: No significant structural defects</p> <p>Fair: Structural defects which can be resolved via remedial works.</p> <p>Poor: Structural defects which cannot be resolved via remedial works.</p> <p>Dead: Dead.</p>	
Physiological condition	<p>Good: Normal vitality including leaf size, bud growth, density of crown and wound wood development.</p> <p>Fair: Lower than normal vitality, reduced bud development, reduced crown density, reduced response to wounds.</p> <p>Poor: Low vitality, low development and distribution of buds, discoloured leaves, low crown density, little extension growth for the species.</p> <p>Dead: Dead</p> <p>Fair/Good = Indicates an intermediate condition</p> <p>Fair – Good = Indicates a range of conditions (e.g., within a group)</p>	

Ref No	Specific identification number given to each tree or group. T=Tree/H=Hedge/G=Group/W=Woodland/S=Shrub.
Preliminary management recommendations	Works identified during the tree survey as part of sound arboricultural management, based on the current context of the Site (where relevant reference has been made to tree management based on the potential future context of the site).
Works to facilitate the scheme	Tree works identified as necessary to facilitate the Proposed Scheme following a desk top analysis of the proposals in relation to tree constraints.

R	Tree id	Tag #	Species	HT (m)	DBH (mm)	CR. Sp. N	Cr. Sp. S	Cr. Sp. E	Cr. Sp. W	Cr clearance & Dir.	Physiological/ Structural condition	Condition comments	Life stage	PMR	Tree works to facilitate dev.	Cat.	RPA Radius m	Est. Remaining yrs
5	T001 x 11	6394 - 6395 P	Tilia Lime	8	240	2	2	2	2	2m North	Good	Represents a row of 11 early mature Lime displaying over all good condition.	EM	No works required	Remove	B2		20+
5	T003	6396 x 2	Lime	8	240	2	2	2	2	2m North	Good	2 early mature Lime displaying over all good condition.	EM	No works required	Remove	B2	3.4m	20+
5	T004 x 9	6397 P	Lime	8	220	2	2	2	2	2m North	Good	Represents a row of 9 early mature Lime displaying over all good condition.	EM	No works required	Remove 8 trees. Retain 1 tree	B2	3.2m	20+
5	T005 x 2	6398 P	Betula Pendula Silver Birch	6	110	0.5	0.5	0.5	0.5	2m East	Good	Represents 2 semi-mature Silver Birch displaying over all good condition.	SM	No works required	Retain	B2	2.1m	20+
5	T006 x 2	6399 *P	Prunus Avium Cherry	4	100	1	1	1	1	1m East	Good	Represents 2 semi-mature Cherry displaying over all good condition.	SM	No works required	Remove	B2	2.0m	20+
5	T007 x 5	6400 P	Platanus Acerifolia London Plane	12	160	1.5	1.5	1.5	1.5	3m North	Good	Represents 5 early mature London Plane displaying over all good condition. These trees are located within the grounds of the Crowne Plaza Hotel.	EM	No works required	Retain	B2	2.6m	40+
5	T008 x 9	6401 - 6402 P	Lime	8	140	2	2	2	2	2m North	Good	Represents 9 early mature Lime displaying over all good condition.	EM	No works required	Retain 8, remove 1 tree	B2	2.4m	20+
5	T009 x 4	6403 P	Lime	8	140	2	2	2	2	2m North	Good	Represents 4 early mature Lime displaying over all good condition.	EM	No works required	1 tree to be removed	B2	2.4m	20+
5	T010 x 7	6404 - 6405 P	Lime	8	220	2	2	2	2	2m North	Good	Represents a row of 7 early mature Lime displaying over all good condition.	EM	No works required	Retain	B2	3.2m	20+
5	T011 x 14	6406 - 6407 P	Lime	8	220	2	2	2	2	2m North	Good	Represents a row of 14 early mature Lime displaying over all good condition.	EM	No works required	Retain	B2	3.2m	20+

R	Tree id	Tag #	Species	HT (m)	DBH (mm)	CR. Sp. N	Cr. Sp. S	Cr. Sp. E	Cr. Sp. W	Cr clearance & Dir.	Physiological/ Structural condition	Condition comments	Life stage	PMR	Tree works to facilitate dev.	Cat.	RPA Radius m	Est. Remaining yrs
5	T012 x 10	6408 P	Fagus Sylvatica Fastigiata Beech	12	150	0.5	0.5	0.5	0.5	0.5m North	Good	Represents 10 early mature Fastigiata Beech displaying over all good condition. These trees are located at the entrance of Liberty Insurance.	EM	No works required	Retain	B2	2.5m	20+
5	T013 x 10	T1 *P	Fagus Beech	10	120	1	1	1	1	1m North	Fair	Represents 10 semi-mature Beech displaying over all fair condition. These trees have been heavily pruned. They are located within the car park of Liberty Insurance.	SM	No works required	Retain	C2	2.2m	10+
5	T014 x 24	6409 P	Lime	10	280	2	2	2	2	2m North	Good	Represents a group of 24 early mature Lime displaying over all good condition.	EM	No works required	9 to be removed	B2	3.8m	20+
5	T015 x 8	6410 P	Lime	8	200	2	2	2	2	2m North	Good	Represents a group of 8 early mature Lime displaying over all good condition. These trees are growing within a Cotoneaster Shrubbery.	EM	No works required	7 to be removed	B2	3.0m	20+
5	T016 x 2	6411 P	Lime Hornbeam	8	180	2	2	2	2	2m North	Good	Represents 2 early mature trees consisting of 1 Lime and 1 Hornbeam displaying over all good condition.	EM	No works required	Remove	B2	2.8m	20+
5	T017	6412 P	Sorbus Mountain Ash	8	210	1	1	1	1	2m North	Good	A mature Mountain Ash displaying over all good condition.	M	No works required	Remove	B2	3.1m	20+
5	T018 x 20	6413 P	Lime	8	210	1.5	1.5	1.5	1.5	2m North	Good	Represents a group of 20 early mature Lime displaying over all good condition.	EM	No works required	Remove 18. Retain 2 trees	B2	3.1m	20+
5	T019 x 6	6414 P	Lime	6	180	1	1	1	1	2m North	Good	Represents a row of 6 early mature Lime displaying over all good condition.	EM	No works required	Remove	B2	2.8m	20+

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5	T020 x 10	6415 P	Lime	6	180	1	1	1	1	2m North	Good	Represents a group of 10 early mature Lime displaying over all good condition.	EM	No works required	Remove	B2	2.8m	20+
5	T021 x 10	6416 P	Lime	6	180	1	1	1	1	2m North	Good	Represents a group of 10 early mature Lime displaying over all good condition.	EM	No works required	Remove	B2	2.8m	20+
5	T022 x 4	6417 P	Lime	6	180	1	1	1	1	2m North	Good	Represents a group of 4 early mature Lime displaying over all good condition.	EM	No works required	Remove	B2	2.8m	20+
5	T023	6418 x4 P	Lime	10	200	2	2	2	2	2m East	Good	An early mature Lime displaying over all good condition.	EM	No works required	Remove 1 tree. Retain 3 trees.	B2	3.0m	20+
5	T024 x 2	6419 P	Lime	8	150	2	2	2	2	2m East	Good	Represents 2 early mature Lime displaying over all good condition.	EM	No works required	Remove	B2	2.5m	20+
5	T025 x 11	6420 P	Lime	8	160	2	2	2	2	1m North	Good	Represents a group of semi-mature Lime displaying over all good condition.	SM	No works required	Remove	B2	2.6m	20+
5	T035 x 2	T3 P	Silver Birch Quercus Oak	16	220	2	2	2	2	2m East	Good	Represents two mature trees consisting of a Silver Birch and an Oak displaying over all good condition. These trees are located within the Ashtown Business Centre.	M	No works required	Remove 1 tree	B2	3.2m	20+
5	T036 x 17	6422 - 6423	Silver Birch Ash Alnus Alder Laurus Nobilis Laurel	14	200	2	2	2	2	3m North	Good	Represents a row of 17 mature mixed deciduous trees consisting of Silver Birch, Ash and Alder with an underlying hedgerow of Laurel displaying over all good condition. These are located outside the Ashtown Business Park.	M	No works required	Retain	B2	3.0m	20+

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5	T037 x 12	6424 - 6425	Sycamore Acer Saccharinum Silver Maple Acer Platanoides Norway Maple Crataegus Monogyna Hawthorn Field Maple	12	300	3	3	3	3	2m North	Good	Represents a row of 12 mature mixed deciduous trees consisting of Sycamore, Silver Maple and Norway Maple displaying over all good condition. These trees are planted within an understory of a Hawthorn and Field Maple hedgerow. The hedgerow is 2m in height.	M	No works required	Remove	B2	4.0m	20+
5	T038	6426	Sycamore	12	340	3	3	3	3	2m North	Good	A mature Sycamore displaying over all good condition.	M	No works required	Retain	B2	4.4m	20+
5	T039	6427	Sycamore	12	240	2	2	3	3	3m East	Fair	A mature Sycamore displaying over all fair condition. This tree has some mid canopy damage.	M	No works required	Retain	C2	3.4m	10+
5	T040	6428	Sycamore	12	340	3	3	3	3	2m North	Good	A mature Sycamore displaying over all good condition.	M	No works required	Retain	B2	4.4m	20+
5	T041	6429	Sycamore	12	340	3	3	3	3	2m North	Good	A mature Sycamore displaying over all good condition.	M	No works required	Remove	B2	4.4m	20+
5	T042 x 5	T4 P	Mountain Ash Juglans Walnut	4	150	0.5	0.5	0.5	0.5	2m North	Good	Represents a group of 5 semi-mature trees consisting of 4 Mountain Ash and 1 Walnut displaying over all good condition.	SM	No works required	Retain	B2	2.5m	20+
5	T044	6430x 2	Sycamore	14	300	2	2	2	2	3m North	Good	A mature Sycamore displaying over all good condition.	M	No works required	Remove	B2	4.0m	20+

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5	T045	6431	Sycamore	14	300	2	2	2	2	3m North	Good	A mature Sycamore displaying over all good condition.	M	No works required	Remove	B2	4.0m	20+
5	T046	6432	Sycamore	14	300	2	2	2	2	3m North	Good	A mature Sycamore displaying over all good condition.	M	No works required	Remove	B2	4.0m	20+
5	T047	6433	Sycamore	14	300	2	2	2	2	3m North	Good	A mature Sycamore displaying over all good condition.	M	No works required	Remove	B2	4.0m	20+
5	T048	6434	Sycamore	8	150	1	1	1	1	3m North	Good	An early mature Sycamore displaying over all good condition.	EM	No works required	Remove	C2	2.5m	10+
5	T049	6435	Sycamore	16	320	1	4	3	3	4m South	Good	A mature Sycamore displaying over all good condition.	M	No works required	Retain	B2	4.2m	20+
5	T050	6436	Sycamore	20	320	2	2	3	3	4m North	Good	A mature co-dominant Sycamore displaying over all good condition.	M	No works required	Retain	B2	4.2m	20+
5	T051	6437	Lime	22	630	3	3	3	3	3m North	Good	A large mature Lime displaying over all good condition.	M	No works required	Retain	B2	7.3m	20+
5	T052	6438	Horse Chestnut	24	980	4	4	6	6	3m North	Good	A large mature Horse Chestnut displaying over all good condition.	M	No works required	Retain	A2	10.8m	40+
5	T053	6439	Sycamore	24	400	4	4	4	4	2m North	Good	A mature Sycamore displaying over all good condition.	M	No works required	Retain	B2	5.0m	20+
5	T054	6440	Horse Chestnut	24	800	4	4	4	4	2m North	Good	A large mature Horse Chestnut displaying over all good condition.	M	No works required	Retain	A2	9.0m	40+
5	T055	6441	Lime	24	600	4	4	4	4	3m North	Good	A large mature Lime displaying over all good condition.	M	No works required	Retain	A2	7.0m	40+
5	T056	6442	Horse Chestnut	24	800	4	4	4	4	2m North	Good	A large mature Horse Chestnut displaying over all good condition.	M	No works required	Retain	A2	9.0m	40+
5	T057	6443	Lime	24	600	4	4	4	4	3m North	Good	A large mature Lime displaying over all good condition.	M	No works required	Retain	A2	7.0m	40+
5	T058	6444	Horse Chestnut	24	1000	6	6	6	6	2m North	Good	A large mature Horse Chestnut.	M	No works required	Retain	A2	11.0m	40+

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5	T059 x 6	6445 - 6446	Sycamore	14	280	3	3	3	3	3m North	Good	Represents a row of 6 early mature Sycamore displaying over all good condition.	EM	No works required	Remove 2	B2	3.8m	20+
5	T060 x 5	6447 - 6448	Sycamore	14	310	3	3	3	3	3m North	Good	Represents 5 mature Sycamore displaying over all good condition.	M	No works required	Remove	B2	4.1m	20+
5	T061	6449	Sycamore	10	150	1	1	1	1	2m North	Good	A semi-mature Sycamore displaying over all good condition.	SM	No works required	Remove	C2	2.5m	20+
5	T062	6450	Sycamore	14	300	3	3	3	3	3m North	Good	A large mature Sycamore displaying over all good condition.	M	No works required	Remove	B2	4.0m	20+
5	T063	6451	Sycamore	14	300	3	3	3	3	3m North	Good	A large mature Sycamore displaying over all good condition.	M	No works required	Remove	B2	4.0m	20+
5	T064	6452	Sycamore	14	300	3	3	3	3	3m North	Good	A large mature Sycamore displaying over all good condition.	M	No works required	Remove	B2	4.0m	20+
5	T065	6453	Sycamore	14	300	3	3	3	3	3m North	Good	A mature Sycamore displaying over all good condition.	M	No works required	Remove	B2	4.0m	20+
5	T066	6454	Sycamore	8	180	2	2	2	2	2m North	Good	An early mature Sycamore displaying over all good condition.	EM	No works required	Remove	B2	2.8m	20+
5	T067	6455	Sycamore	8	180	2	2	2	2	2m North	Good	An early mature Sycamore displaying over all good condition.	EM	No works required	Remove	B2	3.0m	20+
5	T068	T5 P	Prunus Cerasifera Purple Plum	6	200	2	2	2	2	0.5m East	Good	A mature Purple Plum displaying over all good condition. This tree is located on property of 331 Navan Road.	M	No works required	Remove	B2	3.0m	20+
5	T069	6456	Sycamore	4	75	0.5	0.5	0.5	0.5	2m North	Good	A young Sycamore displaying over all good condition.	Y	No works required	Remove	C2	1.0m	10+
5	T070	6457	Sycamore	16	320	2	2	3	3	3m North	Good	A mature Sycamore displaying over all good condition.	M	No works required	Remove	B2	4.2m	20+

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5	T071	T6 P	Robinia Pseudoacacia Robinia	8	300	2	2	2	2	3m East	Fair	A mature Robinia displaying over all fair condition. This tree has been negatively pruned.	M	No works required	Retain	C2	4.0m	10+
5	T072	T7 P	Hawthorn	4	220	1	1	1	1	2m East	Good	A mature Hawthorn displaying over all good condition.	M	No works required	Retain	B2	3.2m	20+
5	T073	6458	Cherry	14	500	2	2	4	4	2m West	Good	A large mature Cherry displaying over all good condition.	M	No works required	Remove	B2	6.0m	10+
5	T074	6459	Sycamore	14	300	2	2	3	3	2m East	Good	A mature Sycamore displaying over all good condition.	M	No works required	Remove	B2	4.0m	20+
5	T075	T8 P	Berberis Aristata Berberis	1	0	0.5	0.5	0.5	0.5	0.5 East	Good	Represents a mature Berberis Shrubbery displaying over all good condition.	M	No works required	Retain	C2	0	10+
5	T076	6460	Sycamore	14	240	2	2	3	3	2m North	Good	A mature Sycamore displaying over all good condition.	M	No works required	Remove	B2	3.4m	20+
5	T077	T9 P	Hawthorn	3	180	2	2	2	2	1.5m North	Good	A mature Hawthorn displaying over all good condition. This tree is located in property of 295 Navan Road.	M	No works required	Remove	B2	2.8m	10+
5	T078	T10 x3 P	Purple plum	3	120	2	2	2	2	1m north	good	Three early mature purple plum.	EM	No works required	Remove	C2	2.2m	20+
5	T079	6461	Cherry	6	480	2	2	2	2	2m East	Poor	A mature Cherry displaying over all poor condition. This tree has been negatively pruned to accommodate overhead wires.	M	Consider for removal	Remove	C2	5.8m	10+
5	T080	T11 P	Cherry	2	75	0.5	0.5	0.5	0.5	0.5 East	Fair	A semi-mature Chery displaying over all fair condition.	SM	No works required	Remove	C2	1.0m	10+
5	T081	6462	Sycamore	8	180	2	2	2	2	2m North	Fair	An early mature Sycamore displaying over all fair condition.	EM	No works required	Remove	C2	2.8m	10+

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5	T082 x 2	T12 P	Purple Plum Mountain Ash	5	200	1	1	1	1	1m East	Fair	Represents 2 early mature trees consisting of a Purple Plum and a Mountain Ash displaying over all fair condition.	EM	No works required	Remove	C2	3.0m	10+
5	T083	6463	Cherry	8	200	0.5	0.5	0.5	0.5	2m North	Poor	An early mature Cherry displaying over all poor condition. This tree is in decline.	EM	Consider for removal	Remove	C2	3.0m	10-
5	T084	T13 P	Araucaria Araucana Monkey Puzzle	12	400	3	3	3	3	3m North	Good	A large mature Monkey Puzzle displaying over all good condition.	M	No works required	Retain	B2	5.0m	20+
5	T085	T14 P	Purple Plum	4	200	2	2	2	2	2m East	Good	An early mature Purple Plum displaying over all good condition.	EM	No works required	Retain	B2	3.0m	20+
5	T086	T15 P	Sabal Palmetto Cabbage Palm	4	200	0.5	0.5	0.5	0.5	1m North	Good	A mature Cabbage Palm displaying over all good condition.	M	No works required	Retain	C2	3.0m	20+
5	T087	6464	Sycamore	12	330	2	2	2	2	3m North	Good	A mature Sycamore displaying over all good condition.	M	No works required	Retain	B2		20+
5	T088	6465	Sycamore	12	330	2	2	2	2	3m North	Good	A mature Sycamore displaying over all good condition.	M	No works required	Remove	B2	4.3m	20+
5	T089 X 2	T16 P	Betula Jacquemonti Jacquemonti Birch	4	200	0.5	0.5	0.5	0.5	1m North	Good	Represents two mature trees consisting of a Jacquemonti Birch and a Purple Plum displaying over all good condition. These trees are located in properties 278 and 280 Navan Road.	M	No works required	Retain	B2	3.0m	20+
5	T090	6466	Sycamore	12	330	2	2	2	2	3m North	Good	A mature Sycamore displaying over all good condition.	M	No works required	Remove	B2	4.3m	20+

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5	T091	T17 P	Cabbage Palm	3	120 (circa)	0.5	0.5	0.5	0.5	1m North	Good	A mature co-dominant Cabbage Palm displaying over all good condition. This tree is located in property 286 Navan Road.	M	No works required	Retain	C2	2.2m (circa)	20+
5	T092	6467	Sycamore	14	300	2	2	2	2	3m North	Good	A mature Sycamore displaying over all good condition.	M	No works required	Remove	B2	4.0m	20+
5	T093	6468	Sycamore	14	220	2	2	2	2	2m North	Good	A mature Sycamore.	M	No works required	Remove	B2	3.2m	20+
5	T094	6469	Sycamore	14	220	2	2	2	2	2m North	Good	A mature Sycamore displaying over all good condition.	M	No works required	Remove	B2	3.2m	20+
5	T095	6470	Sycamore	16	360	2	2	2	2	3m North	Good	A large mature Sycamore displaying over all good condition.	M	No works required	Remove	B2	4.6m	20+
5	T096	6471	Sycamore	16	360	2	2	2	2	3m North	Good	A large mature Sycamore displaying over all good condition.	M	No works required	Remove	B2	4.6m	20+
5	T097	6472	Sycamore	14	270	3	3	3	3	3m North	Good	A mature Sycamore displaying over all good condition.	M	No works required	Remove	B2	3.7m	20+
5	T098	6473	Sycamore	14	270	3	3	3	3	3m North	Good	A mature Sycamore displaying over all good condition.	M	No works required	Remove	B2	3.7m	20+
5	T099 x 6	6474 - 6475	Sycamore	14	280	2	2	2	2	3m North	Good	Represents a row of 6 mature Sycamore displaying over all good condition.	M	No works required	Remove	B2	3.8m	20+
5	T100	6476	Sycamore	8	140	1	1	1	1	2m North	Fair	A semi-mature Sycamore displaying over all fair condition.	SM	Remove the Basal Suckers	Remove	C2	2.4m	10+
5	T101	6477 x2	Sycamore	12	240	2	2	2	2	3m East	Good	Two mature Sycamore displaying over all good condition.	M	Remove the large Basal Stem	Retain	B2	3.4m	20+
5	T102 x 17	6478 - 6479	Sycamore	14	300	2	2	2	2	3m North	Good	Represents a row of 17 mature Sycamore displaying over all good condition.	M	No works required	Remove 2	B2	4.0m	20+

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5	T103 x 6	6480 - 6481	Sycamore	14	300	2	2	2	2	3m North	Good	Represents a row of 6 mature Sycamore displaying over all good condition.	M	No works required	All to be removed	B2	4.0m	20+
5	T104 x 8	6482	Silver Birch	18	300	2	2	2	2	4m North	Good	Represents a cluster of 8 mature Silver Birch displaying over all good condition.	M	No works required	Retain	B2	4.0m	20+
5	T105	6483	Ash	20	360	3	3	4	4	4m North	Good	A mature Ash displaying over all good condition	M	No works required	Retain	B2	4.6m	20+
5	T106	6484	Sycamore	24	650	6	6	6	6	3m North	Good	A large mature Sycamore displaying over all good condition.	M	No works required	Retain	B2	7.5m	20+
5	T107 x 2	6485	Silver Birch	16	300	2	2	2	2	3m East	Good	2 mature Silver Birch.	M	No works required	Retain	B2	4.0m	20+
5	T108 x 9	6486	Norway Maple	20	300	3	3	3	3	3m North	Good	Represents 3 groups of 3 mature Norway Maple displaying over all good condition. These trees are planted in 3 separate groups within a grassed area of a housing estate.	M	Remove the lower Basal Growth	Retain	B2	4.0m	20+
5	T109 x 6	6487	Lime	16	320	2	2	2	2	3m North	Good	Represents a row of 6 mature Lime displaying over all good condition.	M	No works required	Retain	B2	4.2m	20+
5	T110 x 6	6488 - 6489	Sycamore	14	340	3	3	3	3	3m North	Good	Represents a row of 6 mature Sycamore displaying over all good condition.	M	No works required	All to be removed	B2	4.4m	20+
5	T111 x 5	6490 - 6491	Sycamore	16	340	3	3	3	3	3m North	Good	Represents 5 mature Sycamore displaying over all good condition.	M	No works required	All to be removed	B2	4.4m	20+
5	T113 x 3	T18 P	Cherry	10		3	3	3	3	2m East	Good	Represents 3 mature Cherry displaying over all good condition. These trees are located within the property 159 Navan Road.	M	No works required	Remove for land take	B2		20+

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5	T114 x 5	6492 - 6493	Hornbeam	12	260	2	2	2	2	2m East	Good	Represents a row of 5 mature Hornbeam displaying over all good condition.	M	No works required	Remove	B2	3.6m	20+
5	T115 x 8	6494 - 6495	Hornbeam	12	260	2	2	2	2	2m East	Good	Represents a row of 8 mature Hornbeam displaying over all good condition.	M	No works required	2 to be removed	B2	3.6m	20+
5	T116 x 2	6496	Hornbeam	12	240	1	3	2	2	3m North	Fair	Represents 2 mature Hornbeam displaying over all fair condition. The northern canopy of this tree has been negatively pruned to accommodate overhead wires.	M	Reduce the remaining crown to the height of wire to balance the tree	Remove	C2	3.4m	10+
5	T118	T19 P	Populus Nigra Lombardy Poplar	20	500	2	2	2	2	2m East	Fair	A mature Lombardy Poplar displaying over all fair condition. This tree is contained within the grounds of Belvedere Sports Grounds.	M	No works required	Remove	C2	6.0m	10+
5	T119	6497	Hornbeam	16	270	2	2	2	2	3m North	Good	A mature Hornbeam displaying over all good condition.	M	No works required	Remove	B2	3.7m	20+
5	T120	6498	Cherry	10	400	4	4	2	2	2m North	Fair	A large mature Cherry displaying over all fair condition. This tree is in decline in the upper canopy and there is significant surface rooting which is lifting the surrounding pavement and is a trip hazard.	M	Consider for removal	Remove	C2	5.0m	10+
5	T121	6499	Hornbeam	10	200	1	1	1	1	2m North	Good	A mature Hornbeam displaying over all good condition.	M	No works required	Remove	B2	3.0m	20+

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5	T122 x 3	T20 P	Lawson Cypress Lombardy Poplar	20	350	3	3	3	3	2m East	Good	Represents 3 mature trees consisting of 2 Lawson Cypress and 1 Lombardy Poplar displaying over all good condition. These trees are located within Belvedere Sports Ground.	M	No works required	Poplar to be removed	C2	4.5m	10+
5	T123	6500	Hornbeam	12	280	2	2	2	2	3m South	Good	A mature Hornbeam displaying over all good condition.	M	No works required	Remove	B2	3.8m	20+
5	T124	6501	Cherry	10	400	6	3	3	3	3m North	Fair	A large mature Cherry has surface rooting at the pavement.	M	Consider for removal	Remove	C2	5.0m	10+
5	T125 x 3	T21 P	Sycamore Silver Birch	16	380 (circa)	3	3	3	3	2m South	Good	Represents 3 mature trees consisting of 2 Sycamore and 1 Silver Birch displaying over all good condition. These trees are located within Belvedere Sports Ground.	M	No works required	Retain	B2	4.8m (circa)	20+
5	T126	6502	Cherry	12	560	4	4	3	3	2m North	Fair	A large mature Cherry displaying over all fair condition. This tree has significant surface rooting.	M	Consider for removal	Remove	C2	6.6m	10+
5	T127	6503	Cherry	12	560	4	4	3	3	2m North	Fair	A large mature Cherry displaying over all fair condition. This tree has significant surface rooting.	M	Consider for removal	Remove	C2	6.6m	10+
5	T128	6504	Cherry	12	560	4	4	3	3	2m North	Fair	A large mature Cherry displaying over all fair condition. This tree has significant surface rooting.	M	Consider for removal	Remove	C2	6.6m	10+

R	Tree id	Tag #	Species	HT (m)	DBH (mm)	CR. Sp. N	Cr. Sp. S	Cr. Sp. E	Cr. Sp. W	Cr clearance & Dir.	Physiological/ Structural condition	Condition comments	Life stage	PMR	Tree works to facilitate dev.	Cat.	RPA Radius m	Est. Remaining yrs
5	T129	6505	Cherry	12	450	4	4	4	4	4m North	Good	A large mature Cherry displaying over all good condition.	M	No works required	Remove	B2	5.5m	20+
5	T130	T22 P	Purple Plum	10	150	2	2	2	2	2m East	Good	A large mature Purple Plum displaying over all good condition.	M	No works required	Retain	C2	2.5m	10+
5	T131	6506	Hornbeam	12	340	3	3	3	3	3m North	Good	A mature Hornbeam displaying over all good condition.	M	No works required	Retain	B2	4.4m	20+
5	T132	6507	Cherry	10	380	1	1	1	1	2m North	Poor	A mature Cherry displaying over all poor condition. This tree has suffered significant stem damage	M	Consider for removal	Retain	C2	4.8m	10-
5	T133 x 2	T23 P	Salix Babylonica Weeping Willow	18	350 (circa)	3	3	3	3	2m North	Good	Represents 2 large mature Weeping Willow displaying over all good condition.	M	No works required	Retain	A2	4.5m (circa)	20+
5	T134	6508	Hornbeam	8	75	0.5	0.5	0.5	0.5	2m North	Good	A semi-mature Hornbeam displaying over all good condition.	SM	No works required	Retain	C2	1.0m	20+
5	T135	6509	unknown	3								A standing stump.		Remove	Remove	U		
5	T136	6510	Cherry	8	550	3	3	3	3	3m North	Fair	A mature Cherry displaying over all fair condition. This tree has been negatively pruned in the upper canopy and there is also significant surface rooting.	M	Consider for removal	Remove	C2	6.5m	10+
5	T137	6511	Cherry	12	300	3	3	3	3	3m East	Fair	A mature Cherry displaying over all fair condition.	M	No works required	Remove	C2	4.0m	10+
5	T138	6512	Cherry	12	300	3	3	3	3	3m East	Fair	A mature Cherry displaying over all fair condition.	M	No works required	Remove	C2	4.0m	10+
5	T139 x 3	6513 - 6514	Hornbeam	16	240	2	2	2	2	2m North	Good	Represents a row of 3 mature Hornbeam displaying over all good condition.	M	No works required	Retain	B2	3.4m	20+

R	Tree id	Tag #	Species	HT (m)	DBH (mm)	CR. Sp. N	Cr. Sp. S	Cr. Sp. E	Cr. Sp. W	Cr clearance & Dir.	Physiological/ Structural condition	Condition comments	Life stage	PMR	Tree works to facilitate dev.	Cat.	RPA Radius m	Est. Remaining yrs
5	T140 x 9	6515 - 6516	Sycamore	10	180	2	2	2	2	2m North	Good	Represents a row of 9 early mature Sycamore displaying over all good condition.	EM	No works required	All to be removed	B2	2.8m	20+
5	T141 x 13	6517 - 6518	Ash Norway Maple Beech Scots Pine	10	200	2	2	2	2	2m North	Good	Represents a group of 13 mature mixed deciduous trees consisting of Ash, Norway Maple, Beech and Scots Pine displaying over all good condition	M	No works required	Remove 2	B2	3.0m	20+
5	T142 x 8	6519 - 6520	Sycamore	12	260	2	2	2	2	3m South	Fair	Represents a row of 8 Sycamore displaying over all fair condition. The northern side of the canopies have been negatively pruned back to accommodate the passing buses.	EM	No works required	Remove entire row	C2	3.6m	10+
5	T143 x 7	6521 - 6522	Sycamore	8	200	1	1	1	1	3m North	Good	Represents a row of 7 early mature Sycamore displaying over all good condition. These trees have been impacted on by the passing buses.	EM	No works required	Remove entire row	C2	3.0m	10+
5	T144 x 3	T24 P	Jacquemonti Birch	10	200	2	2	2	2	2m North	Good	Represents a cluster of 3 early mature Jacquemonti Birch displaying over all good condition. These trees are located in a green area in front of the Skoda Park Motors.	EM	No works required	Retain	B2	3.0m	20+

R	Tree id	Tag #	Species	HT (m)	DBH (mm)	CR. Sp. N	Cr. Sp. S	Cr. Sp. E	Cr. Sp. W	Cr clearance & Dir.	Physiological/ Structural condition	Condition comments	Life stage	PMR	Tree works to facilitate dev.	Cat.	RPA Radius m	Est. Remaining yrs
5	T145 x 3	T25 P	Jacquemonti Birch	10	200	2	2	2	2	2m North	Good	Represents a cluster of 3 early mature Jacquemonti Birch displaying over all good condition. These trees are located in a green area in front of the Skoda Park Motors.	EM	No works required	Retain	B2	3.0m	20+
5	T146 x 3	T26 P	Jacquemonti Birch	10	200	2	2	2	2	2m North	Good	Represents a cluster of 2 early mature Jacquemonti Birch displaying over all good condition. These trees are located in a green area in front of the Skoda Park Motors.	EM	No works required	Retain	B2	3.0m	20+
5	T147 x 3	T27 P	Jacquemonti Birch	10	200	2	2	2	2	2m North	Good	Represents a cluster of 2 early mature Jacquemonti Birch displaying over all good condition. These trees are located in a green area in front of the Skoda Park Motors.	EM	No works required	Retain	B2	3.0m	20+
5	T148 x 5	T28 P	Jacquemonti Birch	10	200	2	2	2	2	2m North	Good	Represents a cluster of 5 early mature Jacquemonti Birch displaying over all good condition. These trees are located in a green area in front of the Skoda Park Motors.	EM	No works required	Retain	B2	3.0m	20+
5	T149 x 6	T29 P	Jacquemonti Birch	10	200	2	2	2	2	2m North	Good	Represents a cluster of 6 early mature Jacquemonti Birch displaying over all good condition. These trees are located in a green area in front of the Skoda Park Motors.	EM	No works required	Retain	B2	3.0m	20+

R	Tree id	Tag #	Species	HT (m)	DBH (mm)	CR. Sp. N	Cr. Sp. S	Cr. Sp. E	Cr. Sp. W	Cr clearance & Dir.	Physiological/ Structural condition	Condition comments	Life stage	PMR	Tree works to facilitate dev.	Cat.	RPA Radius m	Est. Remaining yrs
5	T150	6523	Hornbeam	12	230	1.5	1.5	1.5	1.5	2m North	Good	Represents a mature Hornbeam displaying over all good condition. This tree is located in the median on the N3 just outside the Mercedes garage.	M	No works required	Remove	B2	3.3m	20+
5	T151	6524	Hornbeam	12	230	1.5	1.5	1.5	1.5	2m North	Good	Represents a mature Hornbeam displaying over all good condition. This tree is located in the median on the N3 just outside the Mercedes garage.	M	No works required	Remove	B2	3.3m	20+
5	T152 x 5	T30 P	Silver Birch	10	220	2	2	2	2	1m North	Good	Represents a row of 5 early mature Silver Birch displaying over all good condition.	EM	No works required	Retain	B2	3.2m	20+
5	T153 x 4	T31 P	Sycamore	10	200	2	2	2	2	1m North	Good	Represents a group of 4 early mature Sycamore displaying over all good condition.	EM	No works required	Retain	B2	3.0m	20+
5	T154 x 8	6526 - 6527	Sycamore	8	180	1.5	1.5	1.5	1.5	3m North	Fair	Represents a row of 8 early mature Sycamore displaying over all fair condition.	EM	Remove the Basal Suckers	Remove	C2	2.8m	10+
5	T155 x 10	6528 - 6529	Sycamore	10	200	1.5	1.5	1.5	1.5	3m North	Fair	Represents a row of 10 early mature Sycamore displaying over all fair condition.	EM	Remove the Basal Suckers	Remove	C2	3.0m	10+
5	T156 x 3	6530	Malus Domestica Apple	5	170	1.5	1.5	1.5	1.5	2m North	Good	Represents 3 early mature Apple displaying over all good condition.	EM	No works required	Remove	B2	2.7m	20+
5	T157	T32 P	Silver Birch	16	280	2	2	2	2	2m North	Good	A large mature Silver Birch displaying over all good condition. This tree is located just outside Cabra Garda Station.	M	No works required	Retain	B2	3.8m	20+

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5	T158	T33 P	Syringa Lilac	3	140	1	1	1	1	0.5m North	Good	A mature Lilac displaying over all good condition.	M	No works required	Retain	C2	2.4m	10+
5	T159 x 5	6531 - 6532	Hornbeam	8	170	1	1	1	1	2m North	Good	Represents a group of 5 early mature Hornbeam.	EM	No works required	Remove entire row	C2	2.7m	20+
5	T168 x 5	6545 - 6546	Hornbeam	10	200	1	1	1	1	2m North	Good	Represents a row of 5 early mature Hornbeam displaying over all good condition. These trees are located in the median that divides the Old Cabra Road.	EM	No works required	Remove all	B2	3.0m	20+
5	T169	6547	Cherry	8	320	3	3	4	4	3m East	Good	A mature Cherry displaying over all good condition. This tree is growing in a grassed area within the Earls Court housing development.	M	No works required	Retain	B2	4.2m	20+
5	T170	6548	Ash	20	380	3	3	3	3	4m North	Good	A large mature Ash displaying over all good condition.	M	Remove the lower deadwood	Retain	B2	4.8m	20+
5	T171	6549	Ash	16	350	3	3	4	4	2m North	Fair	A large mature Ash displaying over all fair condition. This tree has significant deadwood in the upper canopy. This tree is located in a grassed area within the Earls Court housing development.	M	Remove all deadwood	Retain	C2	4.5m	10+
5	T172	6550	Sycamore	12	280	3	3	3	3	3m North	Good	A mature Sycamore displaying over all good condition.	M	No works required	Remove	B2	3.8m	20+
5	T173	6551	Sycamore	8	140	1	1	1	1	2m North	Good	An early mature Sycamore displaying over all good condition.	EM	No works required	Remove	C2	2.4m	10+

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5	T174	6552	Sycamore	12	210	2	2	2	2	3m North	Fair	A mature Sycamore displaying over all fair condition. This tree has broken stems in the mid canopy and there is significant root surfacing and footpath damage around this tree.	M	Consider for removal	Retain	C2	3.1m	10+
5	T175 x 5	6553 - 6554	London Plane	10	170	2	2	2	2	3m North	Good	Represents row of 5 early mature London Plane.	EM	No works required	Remove	B2	2.7m	20+
5	T160 x 8	6533 - 6534	Silver Birch	18	280	2	2	2	2	2m North	Good	Represents a row of 8 mature Silver Birch displaying over all good condition. These trees are growing within a Shrub bed that is adjacent to Cabra Library.	M	No works required	Retain	B2	3.8m	20+
5	T161 x 5	6535 - 6536	Norway Maple	12	300	3	3	2	2	3m North	Good	Represents a row of 5 early mature Norway Maple displaying over all good condition.	EM	No works required	Retain	B2	4.0m	20+
5	T162 x 2	6537	Sycamore	6	100	0.5	0.5	0.5	0.5	1.5m North	Fair	Represents 2 semi-mature Sycamore displaying over all fair condition.	SM	No works required	Remove	C2	2.0m	10+
5	T163	6538	Sycamore	14	330	3	3	3	3	3m North	Good	A mature Sycamore displaying over all good condition.	M	No works required	Retain	B2	4.3m	20+
5	T164	6539	Sycamore	20	400	4	4	4	4	3m North	Good	A mature Sycamore displaying over all good condition.	M	No works required	Retain	B2	5.0m	20+
5	T165	6540	Sycamore	14	330	3	3	3	3	3m North	Good	A mature Sycamore displaying over all good condition.	M	No works required	Remove	B2	4.3m	20+

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5	T166 x 18	6541 - 6542	Norway Maple	18	330	5	5	4	4	3m North	Good	Represents a row of 18 mature Norway Maple displaying over all good condition. These trees are located on a grass verge on the Old Cabra Road.	M	Crown raise the lower limbs over the footpath	Retain	B2	4.3m	20+
5	T167 x 9	6543 - 6544	Sycamore	10	180	2	2	2	2	3m North	Fair	Represents 9 early mature Sycamore displaying over all fair condition. The northern canopies of these trees have been impacted on by the passing buses. These trees could be considered for removal as to the south there are the row of trees that will maintain screening and also give amenity value.	EM	Consider for removal	3 to be removed	C2	2.8m	10+
5	T176	6555	London Plane	18	360	3	3	3	3	4m North	Good	A large mature London Plane displaying over all good condition.	M	No works required	Retain	B2	4.6m	20+
5	T177	T34 P	<i>Eucalyptus Globulus</i> Eucalyptus	20	500	4	4	4	4	3m North	Good	A mature multi-stemmed Eucalyptus displaying over all good condition. This tree is located on property No.50 Old Cabra Road.	M	No works required	Retain	B2	6.0m	20+
5	T178 x 3	T35 P	Sumac <i>Juniperus</i> Juniper Laurel	8	150 (circa)	1	1	1	1	1m North	Good	Represents a Sumac a Juniper Shrub and some Laurel Shrubbery. These are located on property No.50 Old Cabra Road. These provide good screening to the property.	M	No works required	Retain	B2	2.5m (circa)	20+

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5	T179	T36 P	Silver Birch	18	300 (circa)	3	3	3	3	2m North	Good	A mature Silver Birch displaying over all good condition. This tree is located outside No.48 Old Cabra Road.	M	No works required	Retain	A2	4.0m (circa)	20+
5	T180	T37 P	Norway Maple Crimson King	16	280 (circa)	3	3	3	3	2m North	Good	A mature Norway Maple Crimson King displaying over all good condition.	M	No works required	Retain	B2	3.8m (circa)	20+
5	T181 x 2	T38 P	Silver Birch Purple Plum	5	75	0.5	0.5	0.5	0.5	1m North	Good	Represents 2 semi-mature trees consisting of 1 Silver Birch and 1 Purple Plum displaying over all good condition. These trees are located at property No.46 Old Cabra Road.	SM	No works required	Retain	B2	1.0m	20+
5	T182	6556	London Plane	14	160	2	2	2	2	3m North	Good	Represents an early mature London Plane displaying over all good condition.	EM	No works required	Remove	B2	2.6m	20+
5	T183	6557	London Plane	14	160	2	2	2	2	3m North	Good	Represents an early mature London Plane displaying over all good condition.	EM	No works required	Remove	B2	2.6m	20+
5	T185	T39 P	Cherry	8	150 (circa)	3	3	3	3	1m North	Good	A mature Cherry.	M	No works required	Retain	C2	2.5m (circa)	20+
5	T186	T40 P	Cherry	14	200	3	3	3	3	2m North	Good	A mature Cherry displaying over all good condition. This tree is located outside property No.35 Old Cabra Road.	M	No works required	Retain	B2	3.0m	20+
5	T187 x 3	T41 P	<i>Pinus</i> <i>Pine</i> <i>Cotinus</i> <i>Coggygia</i> <i>Smoke Bush</i> <i>Laburnum</i> <i>Anagyroides</i> <i>Laburnum</i>	6	180	2	2	2	2	2m North	Fair	Represents 3 mature trees consisting of 1 Pine, 1 Smoke Bush and 1 Laburnum displaying over all fair condition. These trees have all been heavily pruned.	M	No works required	Retain	C2	2.8m	10+

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5	T188 x 4	T42 P	Horse Chestnut Silver Birch	16	500 (circa)	3	3	3	3	2m North	Good	Represents a group of 4 large mature trees consisting of 1 Horse Chestnut and 3 Silver Birch along with various Shrubs displaying over all good condition. These trees are located within property No.34 Old Cabra Road.	M	No works required	Retain	B2	6.0m (circa)	20+
5	T189 x 3	T43 P	Silver Birch	4	75	0.5	0.5	0.5	0.5	1.5m North	Good	Represents 3 semi-mature Silver Birch displaying over all good condition. These trees are located within the Lidl car park on the Old Cabra Road.	SM	No works required	Retain	C2	1.0m	10+
5	T190	6558	London Plane	18	400	3	3	3	3	4m North	Good	A mature London Plane displaying over all good condition.	M	No works required	Retain	B2	5.0m	20+
5	T191	6559	London Plane	18	400	3	3	3	3	4m North	Good	A mature London Plane displaying over all good condition.	M	No works required	Retain	B2	5.0m	20+
5	T192	6560	London Plane	18	400	3	3	3	3	4m North	Good	A mature London Plane displaying over all good condition.	M	No works required	Retain	B2	5.0m	20+
5	T193	6561	Sycamore		400	3	3	3	3	3m North	Good	A mature Sycamore displaying over all good condition.	M	No works required	Retain	B2	5.0m	20+
5	T194	6562	Sycamore		400	3	3	3	3	3m North	Good	A mature Sycamore displaying over all good condition.	M	No works required	Retain	B2	5.0m	20+
5	-	T48	London Plane	18	400	3	3	3	3	2m North	Good	A large mature London Plane displaying over all good condition.	M	No works required	Retain	B2	5.0m	20+

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5	T195	6563	London Plane	18	400	3	3	3	3	2m North	Good	A large mature London Plane displaying over all good condition. This tree has significant root surfacing and there is footpath damage at the base of the tree.	M	Repair the footpath	Retain	B2	5.0m	20+
5	T196	6564	London Plane	16	380	3	3	3	3	3m North	Good	A large mature London Plane displaying over all good condition. There is a broken limb hung up on the tree and the footpath is damaged around the base of this tree.	M	Remove the broken limb and repair the footpath	Retain	B2	4.8m	20+
5	T197	6565	London Plane	14	300	3	3	3	3	3m North	Good	A mature London Plane displaying over all good condition. There is footpath damage at the base of this tree.	M	Repair the footpath	Retain	B2	4.0m	20+
5	T198	6566	Pyrus Pear	12	320	2	2	2	2	2m North	Good	A mature Pear displaying over all good condition.	M	No works required	Retain	B2	4.2m	20+
5	T199	6567	Pear	12	320	2	2	2	2	2m North	Good	A mature Pear displaying over all good condition	M	No works required	Retain	B2	4.2m	20+
5	T200	T44 P	Silver Birch	18	400	3	3	3	3	2m North	Good	A mature Silver Birch displaying over all good condition.	M	No works required	Retain	B2	5.0m	20+
5	T201 x 9	T45 P	Mountain Ash Silver Birch	12	150	2	2	2	2	2m North	Good	Represents a group of 9 mature trees consisting of 4 Mountain Ash and 2 Silver Birch displaying over all good condition. These are located within the grounds of a private apartment complex.	M	No works required	Retain	B2	2.5m	20+

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5	T202	6570	Norway Maple Crimson King	16	340	3	3	3	3	2m North	Good	A mature Norway Maple Crimson King displaying over all good condition.	M	No works required	Retain	B2	4.4m	20+
5	T203	6571	Sycamore	18	360	4	4	4	4	2m North	Good	A mature variegated Sycamore displaying over all good condition.	M	No works required	Retain	B2	4.6m	20+
5	T204	6572	Sycamore	16	330	3	3	3	3	3m North	Good	A mature variegated Sycamore displaying over all good condition.	M	No works required	Retain	B2	4.3m	20+
5	T205 x 4	6573 - 6574	Pear	8	180	1	1	1	1	2m North	Good	Represents a row of 4 early mature Pear displaying over all good condition.	EM	No works required	Retain	B2	2.8m	20+
5	T206	6575	Mountain Ash	6	140	1	1	1	1	1.5m North	Good	A semi-mature Mountain Ash displaying over all good condition.	SM	No works required	Remove	C2	2.4m	20+
5	T207	6576	Sorbus x Intermedia Swedish Whitebeam	4	140	0.5	0.5	0.5	0.5	2m East	Fair	A semi-mature Swedish Whitebeam displaying over all fair condition. This tree has some stem wounds.	SM	Remove the lower Basal Growth	Retain	C2	2.4m	10+
5	T208 x 5	6577 - 6578	Pear	6	140	0.5	0.5	0.5	0.5	2m North	Good	Represents a row of 5 semi-mature Pear displaying over all good condition.	SM	No works required	Retain	B2	2.4m	20+
5	T209 x 6	6579 - 6580	Pear	6	140	0.5	0.5	0.5	0.5	2m North	Good	Represents a row of 6 semi-mature Pear displaying over all good condition.	SM	No works required	2 to be removed	B2	2.4m	20+
5	T210	6581	London Plane	16	300	3	3	3	3	3m North	Good	A large mature London Plane displaying over all good condition.	M	No works required	Remove	A2		40+
5	T211	6582	London Plane	16	300	3	3	3	3	3m North	Good	A large mature London Plane displaying over all good condition.	M	No works required	Retain	A2	4.0m	40+
5	T212	6583	London Plane	16	300	3	3	3	3	3m North	Good	A large mature London Plane displaying over all good condition.	M	No works required	Retain	A2	4.0m	40+

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5	T213	6584	London Plane	16	300	3	3	3	3	3m North	Good	A large mature London Plane displaying over all good condition.	M	No works required	Retain	A2	4.0m	40+
5	T214	6585	London Plane	16	300	3	3	3	3	3m North	Good	A large mature London Plane displaying over all good condition.	M	No works required	Retain	A2	4.0m	40+
5	T215	6586	Quercus Robur Fastigiata Fastigiata Oak	20	260	1	1	1	1	3m South	Good	A mature Fastigiata Oak displaying over all good condition.	M	No works required	Retain	B2	3.6m	20+
5	T216	6587	Fastigiata Oak	20	260	1	1	1	1	3m South	Good	A mature Fastigiata Oak displaying over all good condition.	M	No works required	Retain	B2	3.6m	20+
5	T217	6588	Fastigiata Oak	20	260	1	1	1	1	3m South	Good	A mature Fastigiata Oak displaying over all good condition.	M	No works required	Retain	B2	3.6m	20+
5	T218	6589	Fastigiata Oak	20	260	1	1	1	1	3m South	Good	A mature Fastigiata Oak displaying over all good condition.	M	No works required	Retain	B2	3.6m	20+
5	T219	6590	Fastigiata Oak	20	260	1	1	1	1	3m South	Good	A mature Fastigiata Oak displaying over all good condition.	M	No works required	Retain	B2	3.6m	20+
5	T220	6591	Fastigiata Oak	20	260	1	1	1	1	3m South	Good	A mature Fastigiata Oak displaying over all good condition.	M	No works required	Retain	B2	3.6m	20+
5	T221	6592	Unknown									A standing stump.	-	Remove	Remove	U		
5	T222	6593	Fastigiata Oak	18	280	1.5	1.5	1.5	1.5	3m North	Good	A mature Fastigiata Oak displaying over all good condition.	M	No works required	Retain	A2	3.8m	40+
5	T223	6594	Fastigiata Oak	18	280	1.5	1.5	1.5	1.5	3m North	Good	A mature Fastigiata Oak displaying over all good condition.	M	No works required	Retain	A2	3.8m	40+
5	T224	6595	Fastigiata Oak	18	280	1.5	1.5	1.5	1.5	3m North	Good	A mature Fastigiata Oak displaying over all good condition.	M	No works required	Retain	A2	3.8m	40+
5	T225	6596	Lime	8	120	0.5	0.5	0.5	0.5	2m North	Good	A semi-mature Lime displaying over all good condition.	SM	No works required	Retain	C2	2.2m	20+

R	Tree id	Tag #	Species	HT (m)	DBH (mm)	CR. Sp. N	Cr. Sp. S	Cr. Sp. E	Cr. Sp. W	Cr clearance & Dir.	Physiological/ Structural condition	Condition comments	Life stage	PMR	Tree works to facilitate dev.	Cat.	RPA Radius m	Est. Remaining yrs
5	T226	6597	Lime	8	120	0.5	0.5	0.5	0.5	2m North	Good	A semi-mature Lime displaying over all good condition.	SM	No works required	Retain	C2	2.2m	20+
5	T238	7407-08 P	Hornbeam x 20	8	230	1	1	1	1	.5m east	Good	A row of hornbeam appropriate for their location.	EM	No works required	Remove all	B2	3.3m	20+
5	T239	7409-7410 P	lime x 15	5	200	2	2	2	2	2m east	Good	A row of Lime appropriate for their location growing within a cotoneaster shrub bed.	SM	No works required	Retain	C2	3m	20+
5	T240	7411-7412 P	Lime x 26	6	180	1	1	1	1	2m east	Good	A row of Limes appropriate for their location.	SM	No works required	Retain	C2	2.8m	20+
5	T242	7413 P	Alder Plane x 4	8	100	1	1	1	1	2m South	Good	Four trees within the car park of Crown Plaza hotel.	SM	No works required	Retain	B2	2m	20+
5	T245	7414	Norway maple	14	250	2	2	2	2	2m South	Good	A group of Norway maple.	M	No works required	Retain	B2	3.5m	20+
5	T246	7415 *P	Mixed deciduous	14	200	2	2	2	2	3m south	good	A group of mixed deciduous trees.	m	no works required	Partial removal	B2	3m	20+
5	T248	7416 x 4	Pear	8	120	1	1	1	1	2m east	Good	Four early mature pear.	EM	No works required	Retain	B2	2.2m	20+
5	T249	T46 x 3	London plane	10	280	2	2	2	2	2m South	Good	Three early mature Plane trees.	EM	No works required	Retain	B2	3.8m	20+
5	T249	T 47 x 3	London plane	6	180	1	1	1	1	2m South	Fair	Three semi- mature Plane trees.	SM	No works required	Retain	B2	3.8m	20+
5	T250	7417 x 3	Mixed deciduous	3	200	2	2	2	2	2m North	Good	1 x Rowan, 2 x Elm.	M	No works required	Retain	C2	3m	10+
5	T263	7418	Turkey oak	14	280	2	2	3	3	3m south	Good	Two oak trees in good condition.	EM	No works required	Retain	B2	3.8m	20+
5	T264	T 54x 3	lime	6	150	2	2	2	2	2m south	good	3 limes trees.	EM	No works required	Remove all three	C2	2.5m	20+
5	T265	T49	Summach	3	100	1	1	1	1	1 m south	good	A SM summach.	SM	No works required	remove	C2	2m	10+
5	T269	7419	Birch	4	180	1.5	1.5	1.5	1.5	1.5m south	Good	Birch tree in good condition.	SM	No works required	Remove	B2	3m	20+
5	T270	7420	Cherry	4	200	1	1	1	1	1.5m south	Good	Cherry tree in good condition.	SM	No works required	Remove	B2	2m	20+
5	T271	T50	Hornbeam	6	200	2	2	2	2	2m North	Good	A semi-mature Hornbeam displaying over all good condition.	SM	No works required	Remove	C2	3.2m	20+

R	Tree id	Tag #	Species	HT (m)	DBH (mm)	CR. Sp. N	Cr. Sp. S	Cr. Sp. E	Cr. Sp. W	Cr clearance & Dir.	Physiological/ Structural condition	Condition comments	Life stage	PMR	Tree works to facilitate dev.	Cat.	RPA Radius m	Est. Remaining yrs
5	T272	T51	Beech	7	300	2	2	2	2	1m North	Good	An early mature Beech displaying over all good condition.	EM	No works required	Remove	C2	3.4m	20+
5	T273	T52	Beech	6	220	2	2	2	2	2m North	Good	A semi-mature Beech displaying over all good condition.	SM	No works required	Retain	B2	3.2m	20+
5	T274	T53 x 2	Norway Maple	14	360	4	4	4	4	2m North	Good	Represents 2 mature Norway Maple displaying over all good condition.	M	No works required	Retain	B2	4.6m	20+

Groups:

R	Tree id	Tag #	Species	HT (m)	DBH (mm)	CR. Sp. N	Cr. Sp. S	Cr. Sp. E	Cr. Sp. W	Cr clearance & Dir.	Physiological /Structural condition	Condition comments	Life stage	PMR	Tree works to facilitate dev.	Cat.	RPA Radius m	Est. Remaining yrs
5	T002 x 25	Group 1 P	<i>Carpinus</i> <i>Betulus</i> Hornbeam	8	150	0.5	0.5	0.5	0.5	0.5m North	Fair	Represents a row of 19 semi-mature Hornbeam displaying over all fair condition. All of these trees are in decline which is indicated by the upper canopies which are died back. They are located at the service yard entrance of the Retail Park.	SM	No works required	Remove 14 trees. 5 trees to be retained.	C2	2.5m	10+
5	T028	Group 2	<i>Acer Pseudoplatanus</i> Sycamore <i>Fraxinus</i> Ash <i>Acer Campestre</i> Field Maple	16	200	2	2	2	2	3m East	Good	Represents a large group of mature mixed deciduous trees consisting of Sycamore, Ash and Field Maple displaying over all good condition. These trees are located just off the N3.	M	No works required	Partial removal	B2	3.0m	20+
5	T029	Group 3	Sycamore Ash <i>Betula</i> Birch	16	200 (circa)	2	2	2	2	3m East	Good	Represents a group of mature mixed deciduous trees consisting of Sycamore, Ash and Birch displaying over all good condition. These trees divide the N3. Was unable to tag these trees for Health & Safety reasons. These were planted as shelter belts.	M	No works required	Retain	B2	3.0m (circa)	20+

R	Tree id	Tag #	Species	HT (m)	DBH (mm)	CR. Sp. N	Cr. Sp. S	Cr. Sp. E	Cr. Sp. W	Cr clearance & Dir.	Physiological /Structural condition	Condition comments	Life stage	PMR	Tree works to facilitate dev.	Cat.	RPA Radius m	Est. Remaining yrs
5	T030	Group 4	Ash Sycamore <i>Corylus</i> Hazel	16	200 (circa)	2	2	2	2	3m East	Good	Represents a group of mature mixed deciduous trees consisting of Ash, Sycamore and Hazel displaying over all good condition. These trees are located on the north side of the N3.	M	No works required	Retain	B2	3.0m (circa)	20+
5	T031	Group 5	Beech	8	200 (circa)	1	1	1	1	0.5m North	Good	Represents a group of semi-mature Beech displaying over all good condition. These were planted on the N3 as shelter belts.	SM	No works required	Partial removal	C2	3.0m (circa)	20+
5	T032	Group 6	Silver Birch Ash Sycamore	18	240	2	2	2	2	3m East	Good	Represents a group of mature mixed deciduous trees consisting of Silver Birch, Ash and Sycamore displaying over all good condition.	M	No works required	Retain	B2	3.4m	20+
5	T033	Group 7	Silver Birch	16	250	2	2	2	2	3m East	Good	Represents a group of 30 mature mixed deciduous trees consisting predominantly of Silver Birch displaying over all good condition. These trees are located on the south side of the N3 and near the M50 Roundabout, the Navan Road. These trees provide screening between the N3 and the houses to the south.	M	No works required	Retain	B2	3.5m	20+

R	Tree id	Tag #	Species	HT (m)	DBH (mm)	CR. Sp. N	Cr. Sp. S	Cr. Sp. E	Cr. Sp. W	Cr clearance & Dir.	Physiological /Structural condition	Condition comments	Life stage	PMR	Tree works to facilitate dev.	Cat.	RPA Radius m	Est. Remaining yrs
5	T034	Group 8	<i>Pinus Sylvestris</i> Scots Pine <i>Salix</i> Willow <i>Chamaecyparis</i> <i>Lawsoniana</i> Lawson Cypress	18	250 (circa)	2	2	2	2	3m North	Good	Represents a group of mature mixed deciduous trees consisting of Scots Pine, Lawson Cypress and Willow displaying over all good condition. These trees are located to the rear of an existing bus shelter.	M	No works required	Retain	B2	3.5m (circa)	20+
5	T043	Group 9	<i>Pinus Nigra</i> Austrian Pine	22	380	3	3	3	3	4m North	Good	Represents a group of large mature Austrian Pine displaying over all good condition. They have a high amenity value. These trees are located on the Halfway House Roundabout.	M	No works required	Remove to facilitate works	A2	4.8m	20+
5	T112)	Group 10 *P	Silver Birch	12	240	3	3	3	3	2m North	Good	Represents a group of early mature Silver Birch displaying over all good condition. These trees are located within a private housing complex behind a 3m stone wall on the south side of the Navan Road.	EM	No works required	Remove 1 tree	B2	3.4m	20+
5	T227	Group 11	Silver birch Norway Maple	10	180	1	1	2	2	2m South	Good	A group of mixed deciduous trees.	EM	No works required	Retain	B2	2.8m	20+
5	T228	Group 12	Cherry Ash	6	150	2	2	2	2	2m South	Good	A row of cherries and ash in good condition.	SM	No works required	Retain	B2	2.5m	20+
5	T229	Group 13	Sweet chestnut	3	80	1	1	1	1	2m South	Good	A group of young chestnuts not appropriate for their location.	Y	No works required	Retain	C2	1.8m	20+

R	Tree id	Tag #	Species	HT (m)	DBH (mm)	CR. Sp. N	Cr. Sp. S	Cr. Sp. E	Cr. Sp. W	Cr clearance & Dir.	Physiological /Structural condition	Condition comments	Life stage	PMR	Tree works to facilitate dev.	Cat.	RPA Radius m	Est. Remaining yrs
5	T230	Group 14	Alder Sycamore	18	300	2	2	2	2	3m South	Good	A group of mixed deciduous tree on the N3 off ramp.	M	No works required	Retain	B2	4	20+
5	T231	Group 15	Norway maple ash, scots pine	14	260	2	2	2	2	1m South	Good	A mixed deciduous group.	M	No works required	Retain	B2	3.6m	20+
5	T232	Group 16 *P	Cherry Mohina Hazel Lime	8	200	2	2	2	2	2m South	Good	A mixed species planted as a screening.	EM	No works required	A section will be removed	B2	3m	20+
5	T233	Group 17 *P	Silver birch Laurel Field maple	8	200	1.5	1.5	1.5	1.5	1m North	Good	A mixed species planted as a screen.	EM	No works required	retain	B2	3m	20+
5	T234	Group 18 *P	Cotoneaster dogwood Silver birch, scots pine	16	280	1.5	1.5	1.5	1.5	1m North	Good	An embankment planting containing shrubs on the lower embankment with the birch and pine along the upper.	M	The lower row of shrubs is to be removed	Remove the lower row of shrubs	B2	3.8m	20+
5	T235	Tree line 1	Lime	8	240	2	2	2	2	2m North	Good	A row of semi-mature lime.	SM	No works required	Retain	B2	3.4m	20+
5	T236	Group 19 *P	Sycamore	12	230	2	2	2	2	2m East	Good	A group of sycamore within a viburnum shrub bed.	EM	No works required	Remove the group	B2	3.3m	20+
5	T237	Group 20 *P	Cotoneaster dogwood Silver birch, ash	16	280	1.5	1.5	1.5	1.5	1m North	Good	An embankment planting containing shrubs on the lower embankment with the birch and ash along the upper.	M	No works required	Partial removal	B2	3.8m	20+
5	T241	Group 21 P	Lime x 17	6	180	1	1	1	1	2m east	Good	A group of Limes appropriate for their location.	SM	No works required	Retain	C2	2.8m	20+
5	T242	Group 22 P	Lime	3	100	1	1	1	1	2m South	Fair	A group of trees growing with a Skimma shrubbery, they are in decline.	SM	Consider for removal	Partial Removal	C2	2m	10+
5	T243	Group 23	Mixed deciduous	10	150	2	2	2	2	2m South	Good	A mixed deciduous group, these provide a significant screen barrier.	SM	No works required	Retain	B2	2.8m	20+

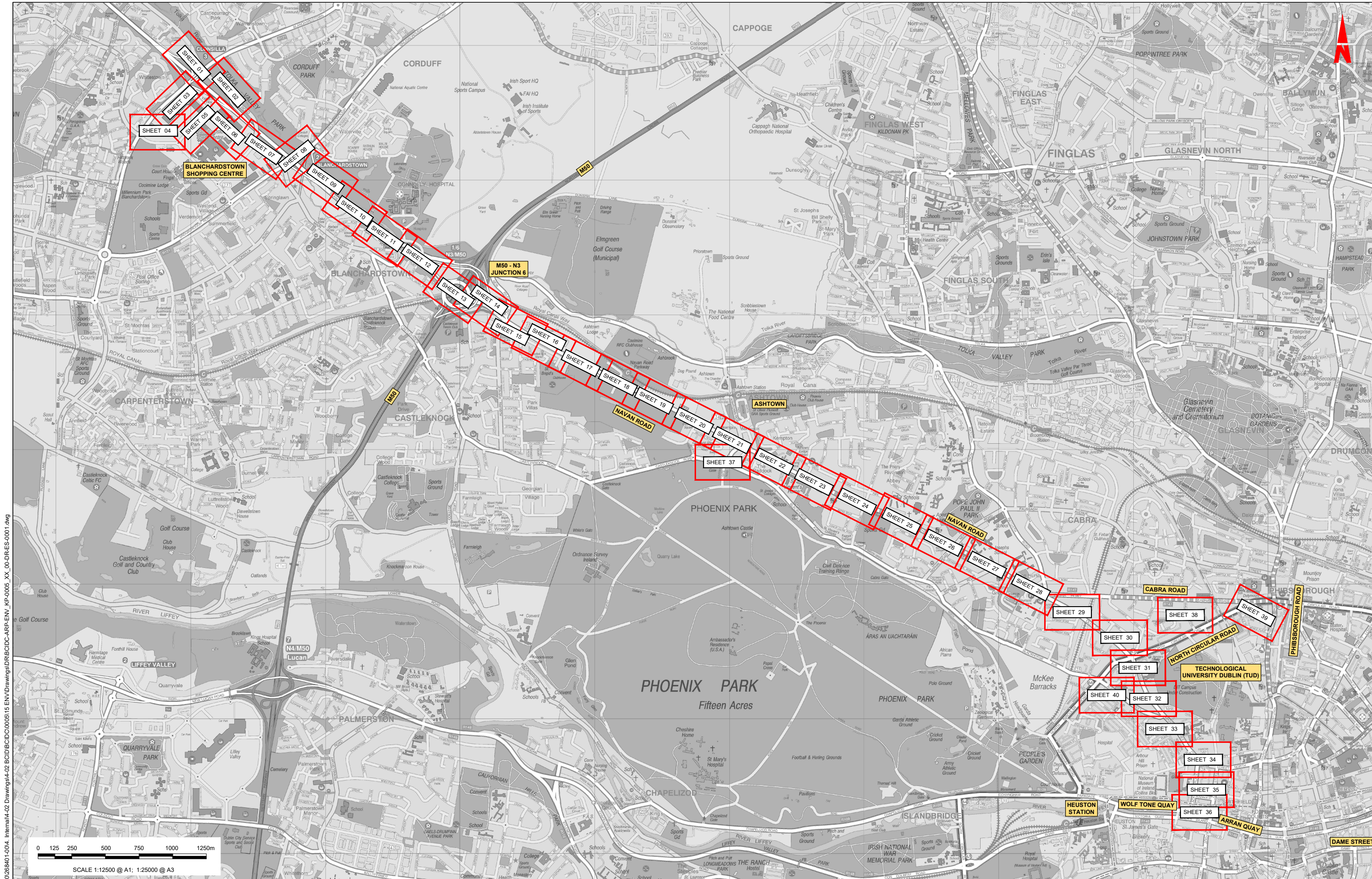
R	Tree id	Tag #	Species	HT (m)	DBH (mm)	CR. Sp. N	Cr. Sp. S	Cr. Sp. E	Cr. Sp. W	Cr clearance & Dir.	Physiological /Structural condition	Condition comments	Life stage	PMR	Tree works to facilitate dev.	Cat.	RPA Radius m	Est. Remaining yrs
5	T244	Group 24	Beech x10	8	180	2	2	2	2	3m South	Good	A group of beech trees.	SM	No works required	Retain	B2	2.8m	20+
5	T245	Group 25	Norway maple	14	250	2	2	2	2	2m South	Good	A group of Norway maple.	M	No works required	Retain	B2	3.5m	20+
5	T251	Group 26 *P	Austrian pine/ash/maple	24	500	3	3	3	3	5m east	Good	A row of large mature pine ash and maple, the row of pine closet the road will be removed.	M	No works required	Remove the entire row. Larger trees to the rear to be retained	A2	6m	20+
5	T246	Group 27	Sycamore Larch Birch	16	280	3	3	3	3	3m North	Good	A mixed deciduous group.	EM	No works required	Retain	B2	3.8m	20+
5	T252	Group 28 *P	Lawson cypress	14	280	2	2	2	2	1m east	Good	A cypress hedge that provides good screening.	M	No works required	Retain	C2	3.8m	20+
5	T253	Group 30 P	Sycamore	20	400	3	3	3	3	2m east	Good	A row of mature sycamore s in good condition high amenity value.	M	No works required	Retain	B2	5m	20+
5	T252	Group 29 *P	Lawson cypress	14	280	2	2	2	2	1m east	Good	A cypress hedge that provides good screening.	M	No works required	Retain	C2	3.8m	20+
5	T254	Group 31 *P	Mixed deciduous	16	250	3	3	3	3	2m South	Good	A significant group of Norway maple, ash, hawthorn, these provide a significant screen barrier.	M	No works required	Partial removal	B2	3.5m	20+
5	T255	Group 32 *P	Mixed deciduous	16	250	3	3	3	3	2m South	Good	A significant group of Norway maple, ash, birch hawthorn, these provide a significant screen barrier.	M	No works required	Partial removal	B2	3.5m	20+
5	T256	Group 33	Silver birch Scots pine Ash	12	200	2	2	2	2	2m South	Good	A group of mixed deciduous/ pine trees.	EM	No works required	Retain	B2	3m	20+
5	T257 x 4	Group 34	Beech x 13	3	180	1	1	1	1	1m South	Fair	A group of 13 young beech.	Y	No works required	Remove for land take.	B2	2m	20+

R	Tree id	Tag #	Species	HT (m)	DBH (mm)	CR. Sp. N	Cr. Sp. S	Cr. Sp. E	Cr. Sp. W	Cr clearance & Dir.	Physiological /Structural condition	Condition comments	Life stage	PMR	Tree works to facilitate dev.	Cat.	RPA Radius m	Est. Remaining yrs
5	T258	Group 35	Ash	16	300	2	2	2	2	2m South	Good	A row of mature ash.	M	No works required	Remove to facilitate works	B2	3m	20+
5	T259	Group 36	Mixed deciduous	16	250	2	2	2	2	1m South	Good	A mixed deciduous group ash and Norway maple, they provide good screening.	M	No works required	Retain	B2	3.5m	20+
5	T260	Group 37	Alder Mountain ash	6	150	1	1	1	1	1m North	Good	A mixed deciduous group of young trees.	Y	No works required	Remove to facilitate compound	B2	3.8m	20+
5	T261	Group 38	Mixed deciduous	18	300	2	2	2	2	2m east	Good	a large group of mixed deciduous trees providing good screening and of high amenity value.	M	No works required	A section of trees to be removed to facilitate soil nail wall	B2	4m	20+
5	T262	Group 39	Mixed deciduous	16	260	2	2	2	2	2m east	good	A large group of mixed deciduous tree.	EM	No works required	Partial removal	B2	3.6m	20+
5	T263	Group 40	Norway maple Scots pine	6	150	1	1	1	1	2m east	Good	A group of semi-mature maple and pine.	SM	No works required	Retain	C2	2.5m	20+
5	T258	Group 41 P	Mixed deciduous, Ash, Norway maple	8	200	2	2	2	2	2m south	Good	A group of mixed deciduous trees.	EM	No works required	Partial Removal	C2		10+
5	T259	Tree line 2x 30 circa	Mixed deciduous, Ash, Norway maple	10	200	2	2	2	2	2m south	Good	A group of mixed deciduous trees.	EM	No works required	Retain	C2		10+
5	T261	Group 42	Alder x 14oak	6	150	1	1	1	1	2m north	Good	A group of mixed deciduous trees within a park.	SM	No works required	Retain	C2	2.5m	20+

R	Tree id	Tag #	Species	HT (m)	DBH (mm)	CR. Sp. N	Cr. Sp. S	Cr. Sp. E	Cr. Sp. W	Cr clearance & Dir.	Physiological /Structural condition	Condition comments	Life stage	PMR	Tree works to facilitate dev.	Cat.	RPA Radius m	Est. Remaining yrs
5	T262	Group 46	Norway maple Birch Alder	18	300	2	2	2	2	2m north	Good	A group of mixed deciduous trees.	M	Remove	Partial removal	B2	4m	20+
5	T264	Group 43	Hawthorn Birch	8	240	2	2	2	2	2m south	Good	A group of mature birch and hawthorn.	EM	No works required	Retain	B2	3.4m	20+
5	T265	Group 44	Mixed group of Lawson cypress, cherry and pine	12	2m	2	2	2	2	3m south	Good	Mixed group of Lawson cypress, cherry and pine.	EM	No works required	Retain	B2	3m	20+
5	T266	Group 45 x 6	Hornbeam	8	180	1	1	1	1	.5m south	Good	A group of hornbeams.	SM	No works required	Retain	B2	2.8m	20+
5	T267	Group 47 x 24 P	hornbeam	6	120	1	1	1	1	2m north	fair	A row of 24 hornbeams in the central median between the two Retail Parks.	SM	No works required	Remove all to facilitate works	C2	2.2m	10+
5	T267	Elm Maple Group	Norway maple	8	200	2	2	2	2	1m north	good	a group of mixed deciduous.	EM	No works required	retain	B2	3m	20+
5	T268	Group 48	Mixed deciduous	10	220	2	2	2	2	2m north	Good	A group of mixed deciduous trees.	M	No works required	retain	B2	3.2m	20+
5		Group 49	Mixed deciduous row of ash/maple	16	300	2	2	2	2	2m north	Good	A row of deciduous trees a section closest the N3 to be removed.	EM	Remove	A section to be removed	B2		20+

Appendix B

Tree Protection Plan Drawings



\global\europa\Dublin\Jobs\268000\26840-1\004_1\Internal\4-02 Drawings\4-02 BCID\BCID\000515 ENVD\Drawings\DR\BCID-ARP-ENV_KP-0005_XX_00-DR-ES-0001.dwg

0 125 250 500 750 1000 1250m
 SCALE 1:12500 @ A1; 1:25000 @ A3

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 b. This drawing is to be used for the design element identified in the title block. Other information shown is to be considered indicative only. The drawing is to be read in conjunction with all other relevant design drawings.
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d. Information concerning the position of apparatus shown on this drawing is based on drawings supplied by the utility owners and/or the utility works contractor, whilst every care has been taken in the preparation of this drawing, positions should be taken as approximate and are intended for general guidance only and no representation is made by the NTA as to the accuracy, completeness, sufficiency or otherwise of this drawing and the position of the apparatus. The information contained herein does not purport to be comprehensive or final as the apparatus is subject to being altered and/or superseded. Recipients should not rely on this information. Any liabilities are hereby expressly disclaimed.

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Rev	Date	Drn	Chk'd	App'd	Description
M01	04/04/2022	BM	BD	DC	ISSUE FOR PHASE 4: PLANNING

Client: **NTA**
Udarás Náisiúnta Iompair
National Transport Authority

Engineering Designer: **ARUP**

Date: 04/04/2022 | Scale: 1:500 @ A1, 1:1000 @ A3 | Drawn: BM | Checked: BD | Approved: DC

Project Code: BCIDC | Originator Code: ARP | OMS Code: 268401-00

Programme Title	BUSCONNECTS DUBLIN		
	CORE BUS CORRIDORS INFRASTRUCTURE WORKS		
Drawing Title	BLANCHARDSTOWN TO CITY CENTRE CORE BUS CORRIDOR SCHEME		
	TREE PROTECTION PLAN		
	KEY PLAN		
Drawing File Name	BCIDC-ARP-ENV_LA-0005_XX_00-DR-ES-0001	Sheet Number	01 of 01
Status	A	Rev	M01

DO NOT SCALE USE FIGURED DIMENSIONS ONLY

GENERAL NOTES:

- TREE SURVEY CARRIED OUT BY SUB CONSULTANT AS DETAILED IN ARBORICULTURAL REPORT.
- TREE LOCATIONS BASED ON AVAILABLE TOPOGRAPHICAL SURVEY LOCATIONS WITH REFERENCE TO AERIAL IMAGERY AND ON SITE OBSERVATIONS.
- DRAWINGS SHOULD BE READ IN CONJUNCTION WITH THE ARUP ARBORICULTURAL REPORT.
- EXISTING TREE CANOPY BASED ON DIMENSIONS GATHERED ON SITE IN 4 DIRECTIONS, NORTH, SOUTH, EAST AND WEST.

LEGEND:

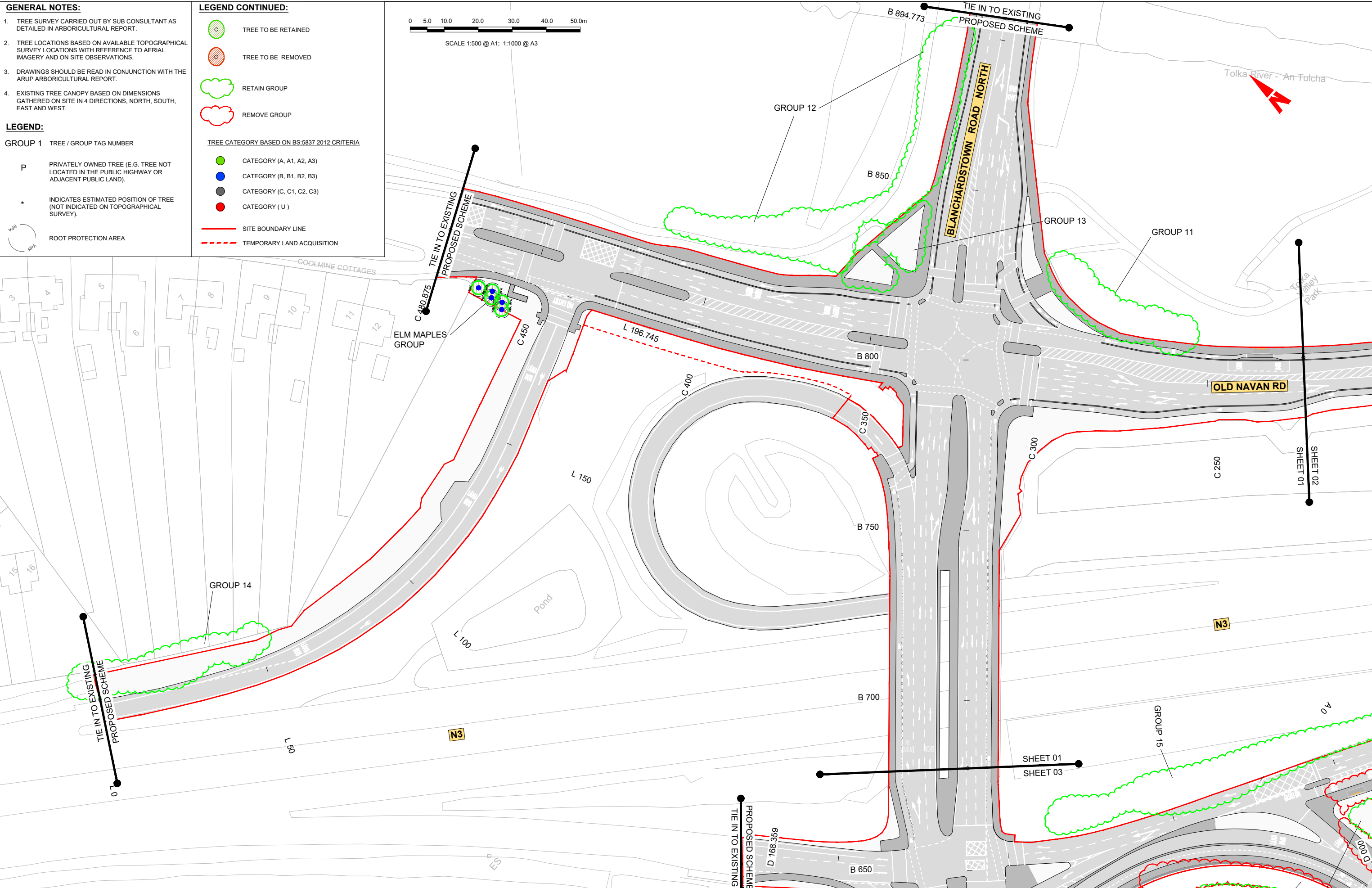
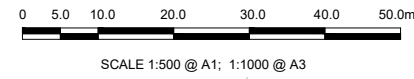
- GROUP 1 TREE / GROUP TAG NUMBER**
- P** PRIVATELY OWNED TREE (E.G. TREE NOT LOCATED IN THE PUBLIC HIGHWAY OR ADJACENT PUBLIC LAND).
- *** INDICATES ESTIMATED POSITION OF TREE (NOT INDICATED ON TOPOGRAPHICAL SURVEY).
- Root Protection Area**

LEGEND CONTINUED:

- TREE TO BE RETAINED
- TREE TO BE REMOVED
- RETAIN GROUP
- REMOVE GROUP

TREE CATEGORY BASED ON BS:5837 2012 CRITERIA

- CATEGORY (A, A1, A2, A3)
- CATEGORY (B, B1, B2, B3)
- CATEGORY (C, C1, C2, C3)
- CATEGORY (U)
- SITE BOUNDARY LINE
- TEMPORARY LAND ACQUISITION



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Project Ireland 2040
 Building Ireland's Future

Rev	Date	Drn	Chk'd	App'd	Description
M01	04/04/2022	BM	BD	DC	ISSUE FOR PHASE 4: PLANNING

Client: **NTA**
 Udarás Náisiúnta Iompair
 National Transport Authority

Engineering Designer: **ARUP**
 Drawn: BM, Checked: BD, Approved: DC

Date: 04/04/2022, Scale: 1:500 @ A1, 1:1000 @ A3
 Project Code: BCIDC, Originator Code: ARP, OMS Code: 268401-00

Programme Title: BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS			
Drawing Title: BLANCHARDSTOWN TO CITY CENTRE CORE BUS CORRIDOR SCHEME TREE PROTECTION PLAN			
Drawing File Name: BCIDC-ARP-ENV_LA-0005_XX_00-DR-ES-0001	Sheet Number: 01 of 40	Status: A	Rev: M01

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GENERAL NOTES:

- TREE SURVEY CARRIED OUT BY SUB CONSULTANT AS DETAILED IN ARBORICULTURAL REPORT.
- TREE LOCATIONS BASED ON AVAILABLE TOPOGRAPHICAL SURVEY LOCATIONS WITH REFERENCE TO AERIAL IMAGERY AND ON SITE OBSERVATIONS.
- DRAWINGS SHOULD BE READ IN CONJUNCTION WITH THE ARUP ARBORICULTURAL REPORT.
- EXISTING TREE CANOPY BASED ON DIMENSIONS GATHERED ON SITE IN 4 DIRECTIONS, NORTH, SOUTH, EAST AND WEST.

LEGEND:

- GROUP 1 TREE / GROUP TAG NUMBER**
- P PRIVATELY OWNED TREE (E.G. TREE NOT LOCATED IN THE PUBLIC HIGHWAY OR ADJACENT PUBLIC LAND).
 - * INDICATES ESTIMATED POSITION OF TREE (NOT INDICATED ON TOPOGRAPHICAL SURVEY).
- ROOT PROTECTION AREA**

LEGEND CONTINUED:

- TREE TO BE RETAINED
- TREE TO BE REMOVED
- RETAIN GROUP
- REMOVE GROUP

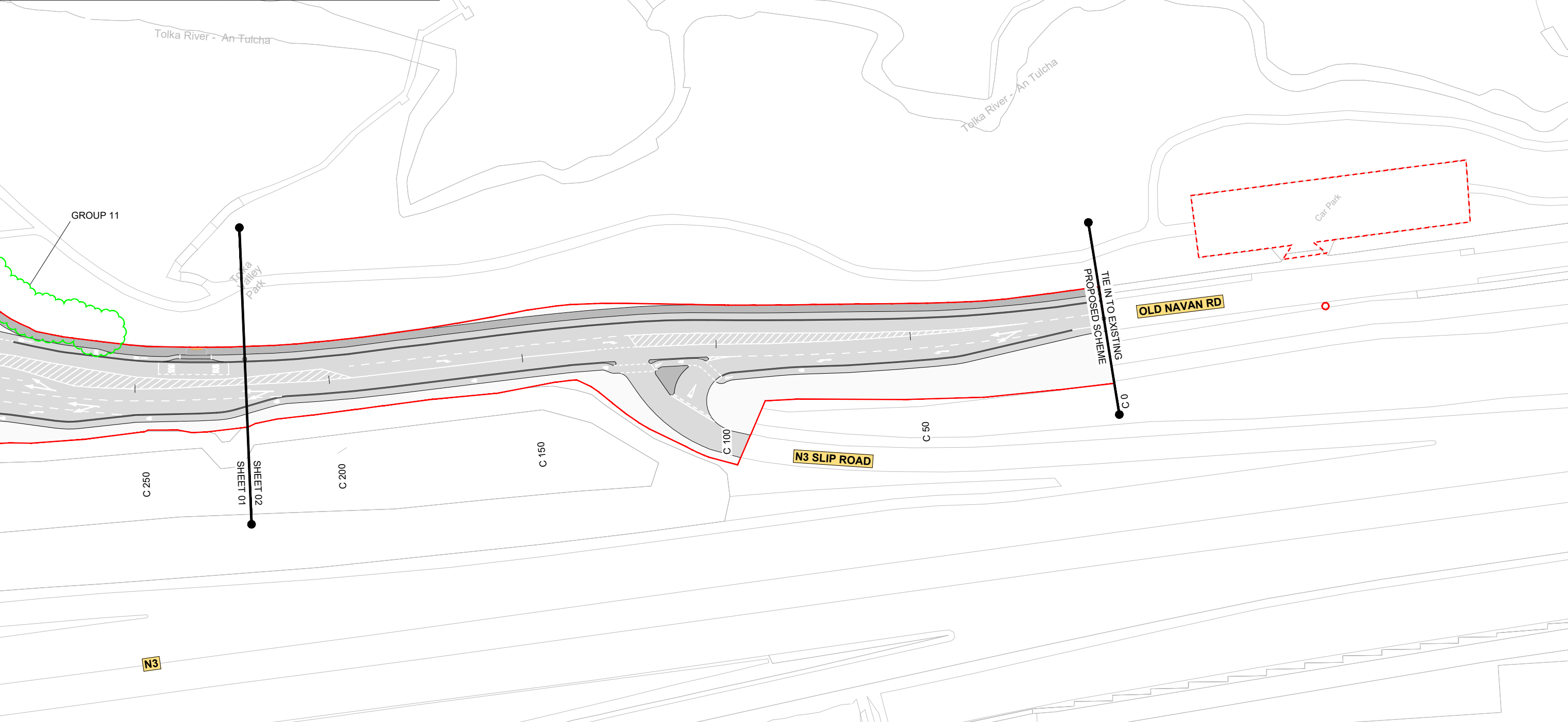
TREE CATEGORY BASED ON BS:5837 2012 CRITERIA

- CATEGORY (A, A1, A2, A3)
- CATEGORY (B, B1, B2, B3)
- CATEGORY (C, C1, C2, C3)
- CATEGORY (U)

- SITE BOUNDARY LINE
- TEMPORARY LAND ACQUISITION



SCALE 1:500 @ A1; 1:1000 @ A3



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Transverse Mercator Grid (ITM) as defined by OSI active local coordinate system.
 d. Information concerning the position of apparatus shown on this drawing is based on drawings supplied by the utility owners and/or the utility works contractor, whilst every care has been taken in the preparation of this drawing, positions should be taken as approximate and are intended for general guidance only and no representation is made by the NTA as to the accuracy, completeness, sufficiency or otherwise of this drawing and the position of the apparatus. The information contained herein does not purport to be comprehensive or final as the apparatus is subject to being altered and/or superseded. Recipients should not rely on this information. Any liabilities are hereby expressly disclaimed.

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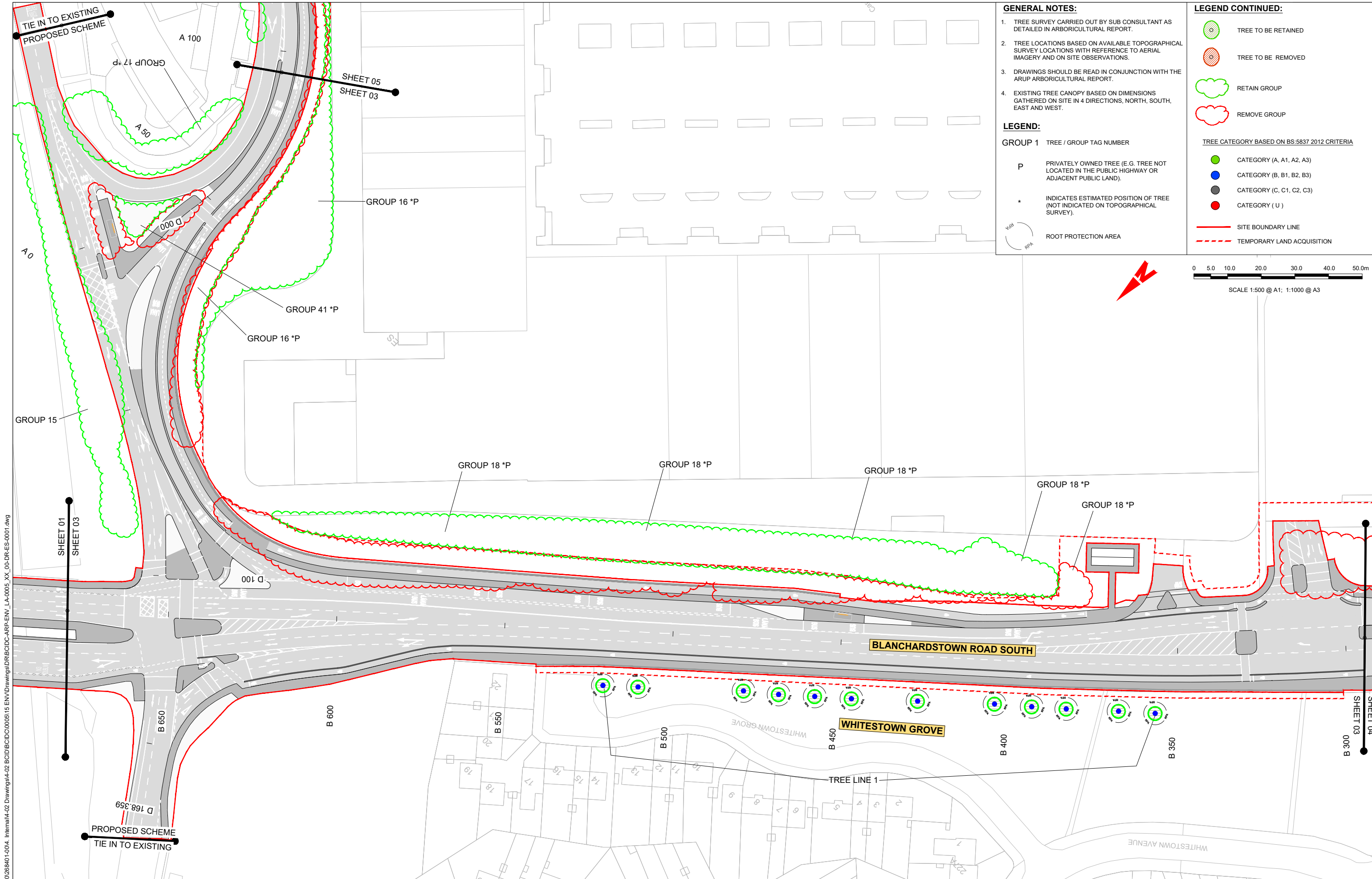
Rev	Date	Drn	Chk'd	App'd	Description
M01	04/04/2022	BM	BD	DC	ISSUE FOR PHASE 4: PLANNING

Client
NTA
 Údarás Náisiúnta Iompair
 National Transport Authority

Engineering Designer
ARUP
 ARUP Group Limited
 Department: Groundwater Care Science

Programme Title BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS			
Drawing Title BLANCHARDSTOWN TO CITY CENTRE CORE BUS CORRIDOR SCHEME TREE PROTECTION PLAN			
Drawing File Name BCIDC-ARP-ENV_LA-0005_XX_00-DR-ES-0002	Sheet Number 02 of 40	Status A	Rev M01

DO NOT SCALE USE FIGURED DIMENSIONS ONLY



GENERAL NOTES:

- TREE SURVEY CARRIED OUT BY SUB CONSULTANT AS DETAILED IN ARBORICULTURAL REPORT.
- TREE LOCATIONS BASED ON AVAILABLE TOPOGRAPHICAL SURVEY LOCATIONS WITH REFERENCE TO AERIAL IMAGERY AND ON SITE OBSERVATIONS.
- DRAWINGS SHOULD BE READ IN CONJUNCTION WITH THE ARUP ARBORICULTURAL REPORT.
- EXISTING TREE CANOPY BASED ON DIMENSIONS GATHERED ON SITE IN 4 DIRECTIONS, NORTH, SOUTH, EAST AND WEST.

LEGEND:

GROUP 1 TREE / GROUP TAG NUMBER

P PRIVATELY OWNED TREE (E.G. TREE NOT LOCATED IN THE PUBLIC HIGHWAY OR ADJACENT PUBLIC LAND).

* INDICATES ESTIMATED POSITION OF TREE (NOT INDICATED ON TOPOGRAPHICAL SURVEY).

Root Protection Area

LEGEND CONTINUED:

TREE TO BE RETAINED

TREE TO BE REMOVED

RETAIN GROUP

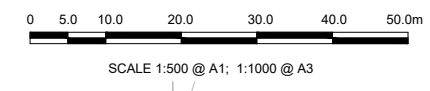
REMOVE GROUP

TREE CATEGORY BASED ON BS:5837 2012 CRITERIA

- CATEGORY (A, A1, A2, A3)
- CATEGORY (B, B1, B2, B3)
- CATEGORY (C, C1, C2, C3)
- CATEGORY (U)

SITE BOUNDARY LINE

TEMPORARY LAND ACQUISITION



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 SHEET 01
 SHEET 03
 SHEET 04
 SHEET 03

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Rev	Date	Drn	Chk'd	App'd	Description
M01	04/04/2022	BM	BD	DC	ISSUE FOR PHASE 4: PLANNING

Client

NTA
Udarás Náisiúnta Iompair
National Transport Authority

Date: 04/04/2022
Scale: 1:500 @ A1
1:1000 @ A3

Engineering Designer

ARUP

Drawn: BM
Checked: BD
Approved: DC

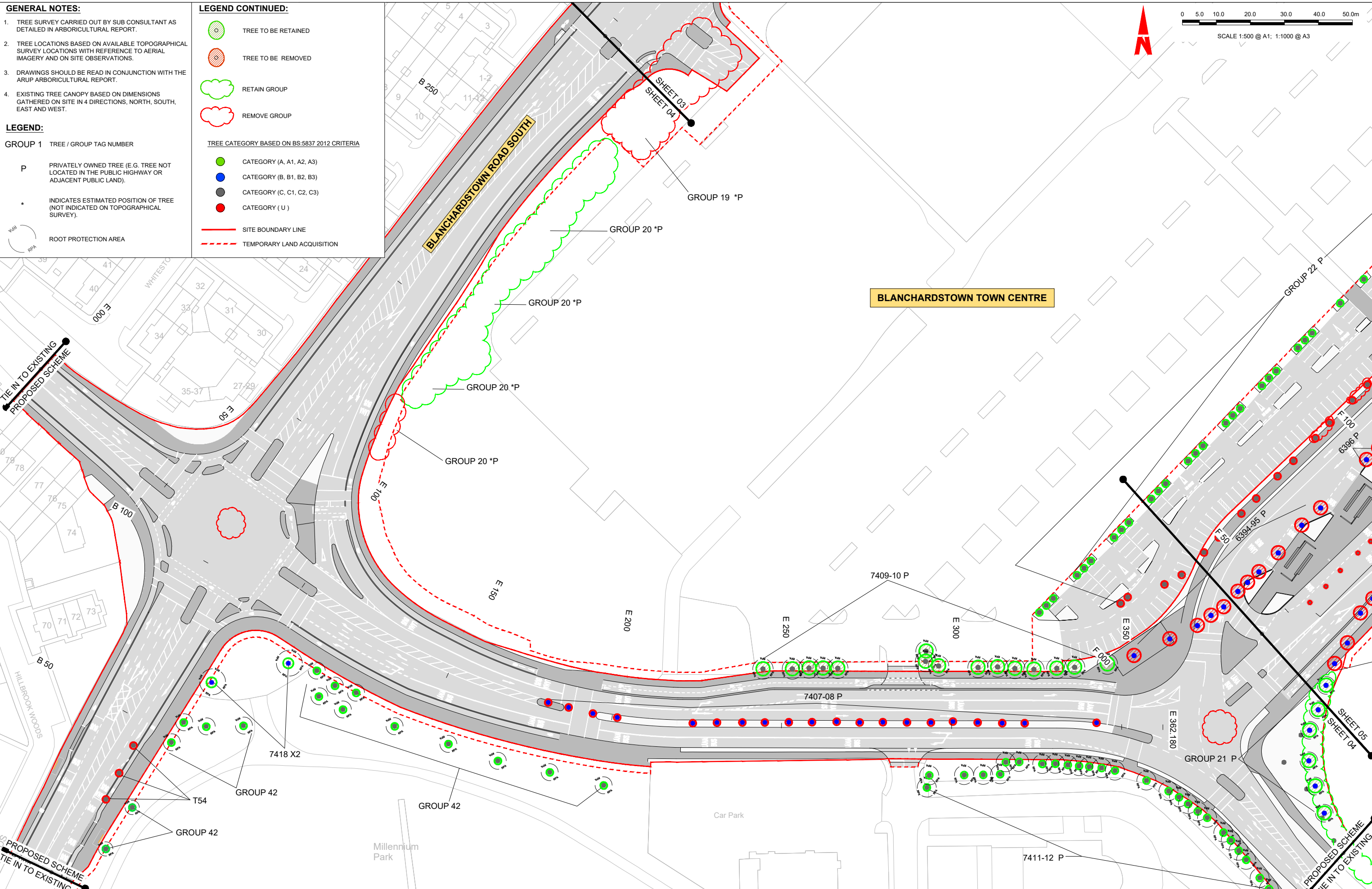
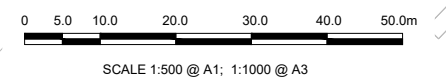
OMS Code: 268401-00

Programme Title BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS			
Drawing Title BLANCHARDSTOWN TO CITY CENTRE CORE BUS CORRIDOR SCHEME TREE PROTECTION PLAN			
Drawing File Name BCIDC-ARP-ENV_LA-0005_XX_00-DR-ES-0003	Sheet Number 03 of 40	Status A	Rev M01

DO NOT SCALE USE FIGURED DIMENSIONS ONLY

- GENERAL NOTES:**
- TREE SURVEY CARRIED OUT BY SUB CONSULTANT AS DETAILED IN ARBORICULTURAL REPORT.
 - TREE LOCATIONS BASED ON AVAILABLE TOPOGRAPHICAL SURVEY LOCATIONS WITH REFERENCE TO AERIAL IMAGERY AND ON SITE OBSERVATIONS.
 - DRAWINGS SHOULD BE READ IN CONJUNCTION WITH THE ARUP ARBORICULTURAL REPORT.
 - EXISTING TREE CANOPY BASED ON DIMENSIONS GATHERED ON SITE IN 4 DIRECTIONS, NORTH, SOUTH, EAST AND WEST.
- LEGEND:**
- GROUP 1 TREE / GROUP TAG NUMBER**
- P PRIVATELY OWNED TREE (E.G. TREE NOT LOCATED IN THE PUBLIC HIGHWAY OR ADJACENT PUBLIC LAND).
- * INDICATES ESTIMATED POSITION OF TREE (NOT INDICATED ON TOPOGRAPHICAL SURVEY).
- Root Protection Area (RPA)

- LEGEND CONTINUED:**
- TREE TO BE RETAINED
 - TREE TO BE REMOVED
 - RETAIN GROUP
 - REMOVE GROUP
- TREE CATEGORY BASED ON BS:5837 2012 CRITERIA**
- CATEGORY (A, A1, A2, A3)
 - CATEGORY (B, B1, B2, B3)
 - CATEGORY (C, C1, C2, C3)
 - CATEGORY (U)
- SITE BOUNDARY LINE
TEMPORARY LAND ACQUISITION



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Rev	Date	Drn	Chk'd	App'd	Description
M01	04/04/2022	BM	BD	DC	ISSUE FOR PHASE 4: PLANNING

Client

NTA
Udarás Náisiúnta Iompair
National Transport Authority

Engineering Designer

ARUP
Department
Groundwater Care Science

Programme Title
BUSCONNECTS DUBLIN
CORE BUS CORRIDORS INFRASTRUCTURE WORKS

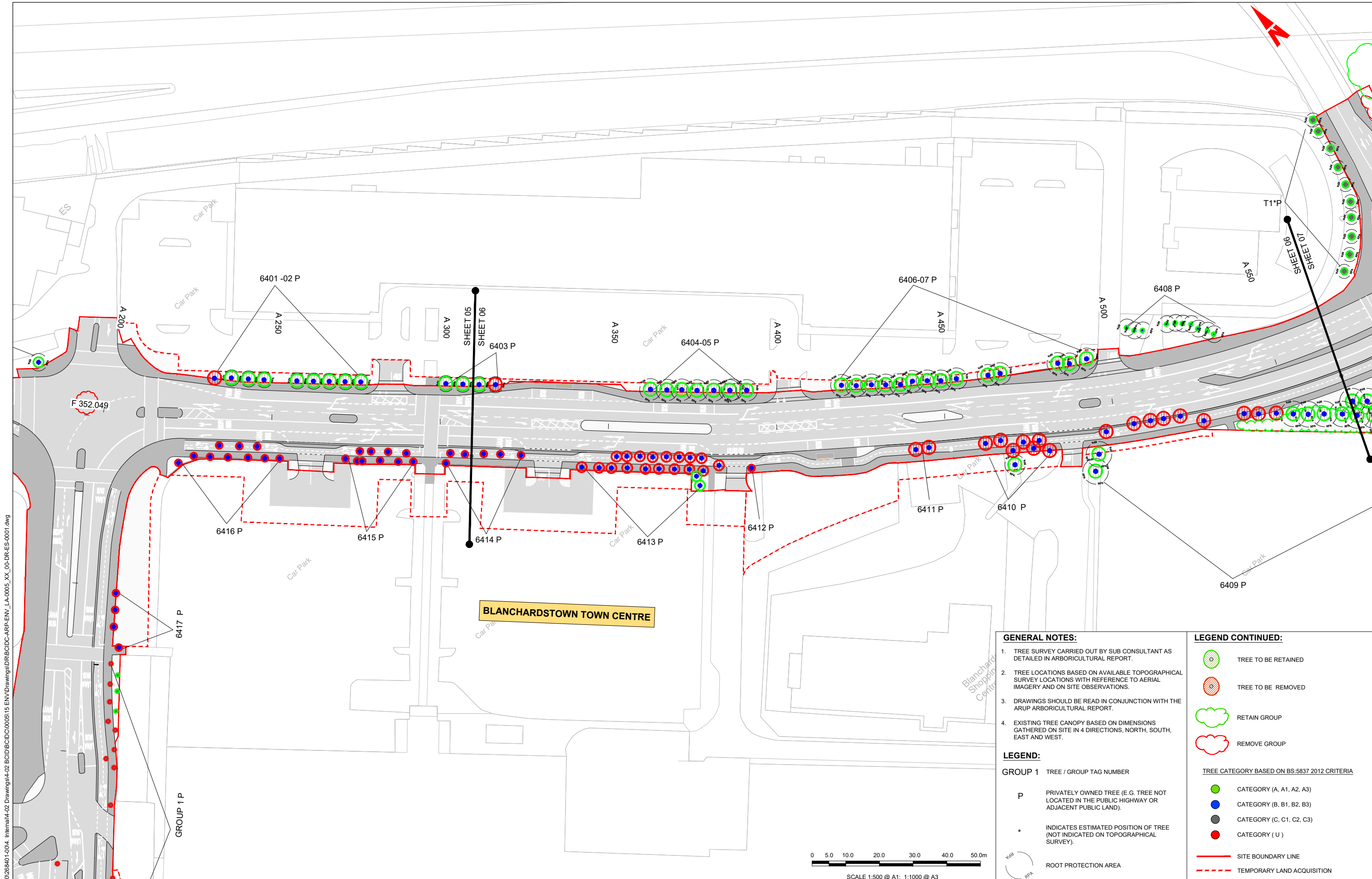
Drawing Title
BLANCHARDSTOWN TO CITY CENTRE CORE BUS CORRIDOR SCHEME
TREE PROTECTION PLAN

Date	04/04/2022	Scale	1:500 @ A1 1:1000 @ A3	Drawn	BM	Checked	BD	Approved	DC
Project Code	BCIDC	Originator Code	ARP	OMS Code	268401-00				

Drawing File Name	BCIDC-ARP-ENV_LA-0005_XX_00-DR-ES-0004	Sheet Number	04 of 40	Status	A	Rev	M01
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GENERAL NOTES:

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- DRAWINGS SHOULD BE READ IN CONJUNCTION WITH THE ARUP ARBORICULTURAL REPORT.
- EXISTING TREE CANOPY BASED ON DIMENSIONS GATHERED ON SITE IN 4 DIRECTIONS, NORTH, SOUTH, EAST AND WEST.

LEGEND:

GROUP 1 TREE / GROUP TAG NUMBER

P PRIVATELY OWNED TREE (E.G. TREE NOT LOCATED IN THE PUBLIC HIGHWAY OR ADJACENT PUBLIC LAND).

* INDICATES ESTIMATED POSITION OF TREE (NOT INDICATED ON TOPOGRAPHICAL SURVEY).

Root Protection Area

LEGEND CONTINUED:

- TREE TO BE RETAINED
- TREE TO BE REMOVED
- RETAIN GROUP
- REMOVE GROUP

TREE CATEGORY BASED ON BS:5837 2012 CRITERIA

- CATEGORY (A, A1, A2, A3)
- CATEGORY (B, B1, B2, B3)
- CATEGORY (C, C1, C2, C3)
- CATEGORY (U)

— SITE BOUNDARY LINE
- - - TEMPORARY LAND ACQUISITION

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Rev	Date	Drn	Chk'd	App'd	Description
M01	04/04/2022	BM	BD	DC	ISSUE FOR PHASE 4: PLANNING

Client: **NTA**
Udarás Náisiúnta Iompair
National Transport Authority

Engineering Designer: **ARUP**
LABOR CARE
Department
Geotechnical Core Science

Date: 04/04/2022
Scale: 1:500 @ A1
1:1000 @ A3

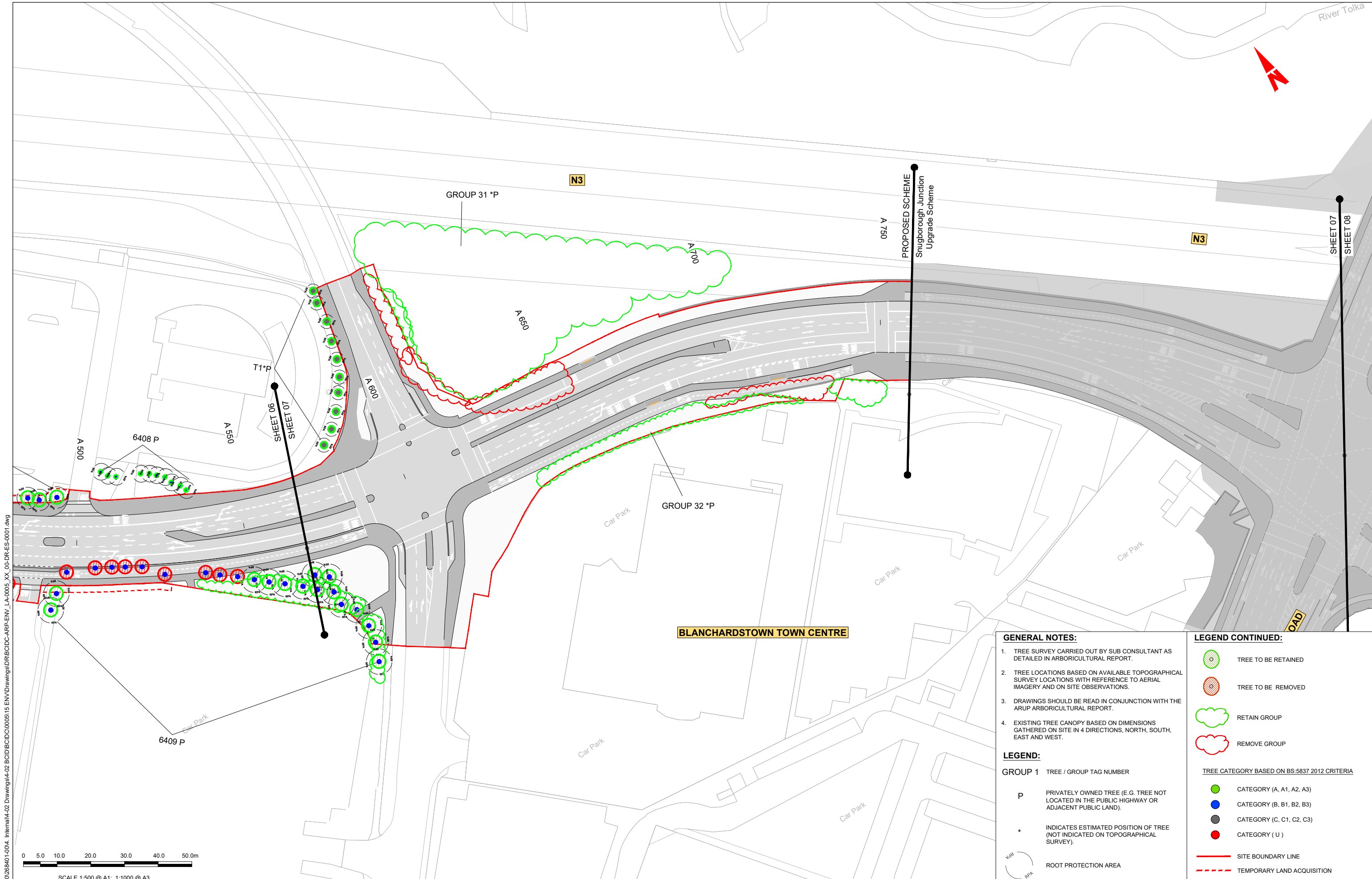
Drawn: BM
Checked: BD
Approved: DC

Project Code: BCIDC
Originator Code: ARP
OMS Code: 268401-00

Programme Title: BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS			
Drawing Title: BLANCHARDSTOWN TO CITY CENTRE CORE BUS CORRIDOR SCHEME TREE PROTECTION PLAN			
Drawing File Name: BCIDC-ARP-ENV_LA-0005_XX_00-DR-ES-0006	Sheet Number: 06 of 40	Status: A	Rev: M01

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GENERAL NOTES:

- TREE SURVEY CARRIED OUT BY SUB CONSULTANT AS DETAILED IN ARBORICULTURAL REPORT.
- TREE LOCATIONS BASED ON AVAILABLE TOPOGRAPHICAL SURVEY LOCATIONS WITH REFERENCE TO AERIAL IMAGERY AND ON SITE OBSERVATIONS.
- DRAWINGS SHOULD BE READ IN CONJUNCTION WITH THE ARUP ARBORICULTURAL REPORT.
- EXISTING TREE CANOPY BASED ON DIMENSIONS GATHERED ON SITE IN 4 DIRECTIONS, NORTH, SOUTH, EAST AND WEST.

LEGEND:

GROUP 1 TREE / GROUP TAG NUMBER

P PRIVATELY OWNED TREE (E.G. TREE NOT LOCATED IN THE PUBLIC HIGHWAY OR ADJACENT PUBLIC LAND).

* INDICATES ESTIMATED POSITION OF TREE (NOT INDICATED ON TOPOGRAPHICAL SURVEY).

Root Protection Area

LEGEND CONTINUED:

- TREE TO BE RETAINED
- TREE TO BE REMOVED
- RETAIN GROUP
- REMOVE GROUP

TREE CATEGORY BASED ON BS:5837 2012 CRITERIA

- CATEGORY (A, A1, A2, A3)
- CATEGORY (B, B1, B2, B3)
- CATEGORY (C, C1, C2, C3)
- CATEGORY (U)

— SITE BOUNDARY LINE
 - - - TEMPORARY LAND ACQUISITION

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Rev	Date	Drn	Chk'd	App'd	Description
M01	04/04/2022	BM	BD	DC	ISSUE FOR PHASE 4: PLANNING

Client: **NTA**
 Údarás Náisiúnta Iompair
 National Transport Authority

Date: 04/04/2022
 Scale: 1:500 @ A1
 1:1000 @ A3

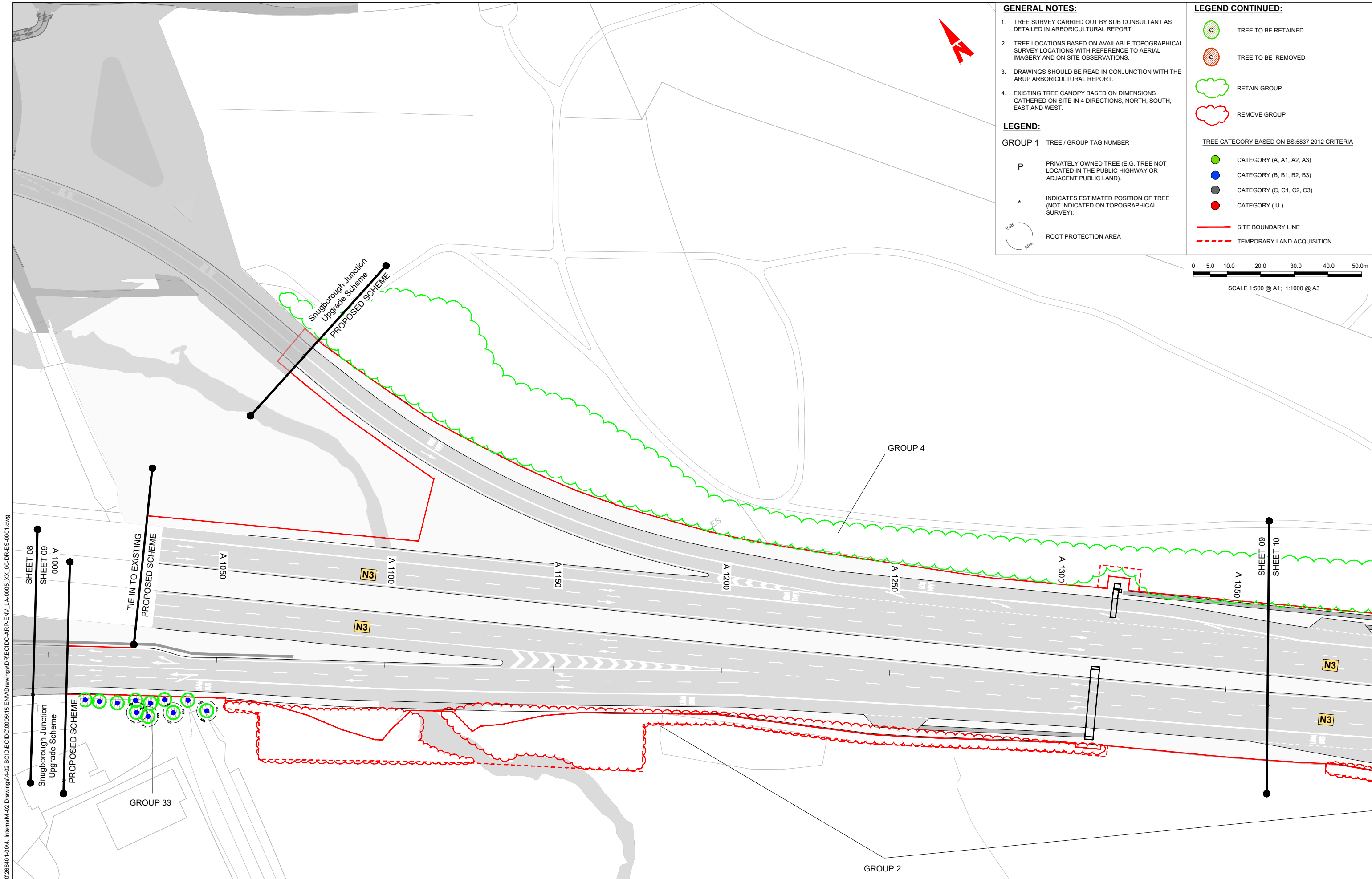
Engineering Designer: **ARUP**

Drawn: BM
 Checked: BD
 Approved: DC

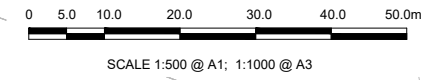
Project Code: BCIDC
 Originator Code: ARP
 OMS Code: 268401-00

Programme Title BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS			
Drawing Title BLANCHARDSTOWN TO CITY CENTRE CORE BUS CORRIDOR SCHEME TREE PROTECTION PLAN			
Drawing File Name BCIDC-ARP-ENV_LA-0005_XX_00-DR-ES-0007	Sheet Number 07 of 40	Status A	Rev M01

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- GENERAL NOTES:**
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 - EXISTING TREE CANOPY BASED ON DIMENSIONS GATHERED ON SITE IN 4 DIRECTIONS, NORTH, SOUTH, EAST AND WEST.
- LEGEND:**
- GROUP 1 TREE / GROUP TAG NUMBER
- P PRIVATELY OWNED TREE (E.G. TREE NOT LOCATED IN THE PUBLIC HIGHWAY OR ADJACENT PUBLIC LAND).
 - * INDICATES ESTIMATED POSITION OF TREE (NOT INDICATED ON TOPOGRAPHICAL SURVEY).
- Root Protection Area (RPA) symbol
- LEGEND CONTINUED:**
- TREE TO BE RETAINED (Green circle with cross)
 - TREE TO BE REMOVED (Red circle with cross)
 - RETAIN GROUP (Green cloud)
 - REMOVE GROUP (Red cloud)
- TREE CATEGORY BASED ON BS:5837 2012 CRITERIA**
- CATEGORY (A, A1, A2, A3) (Green circle)
 - CATEGORY (B, B1, B2, B3) (Blue circle)
 - CATEGORY (C, C1, C2, C3) (Grey circle)
 - CATEGORY (U) (Red circle)
- SITE BOUNDARY LINE
 - - - TEMPORARY LAND ACQUISITION



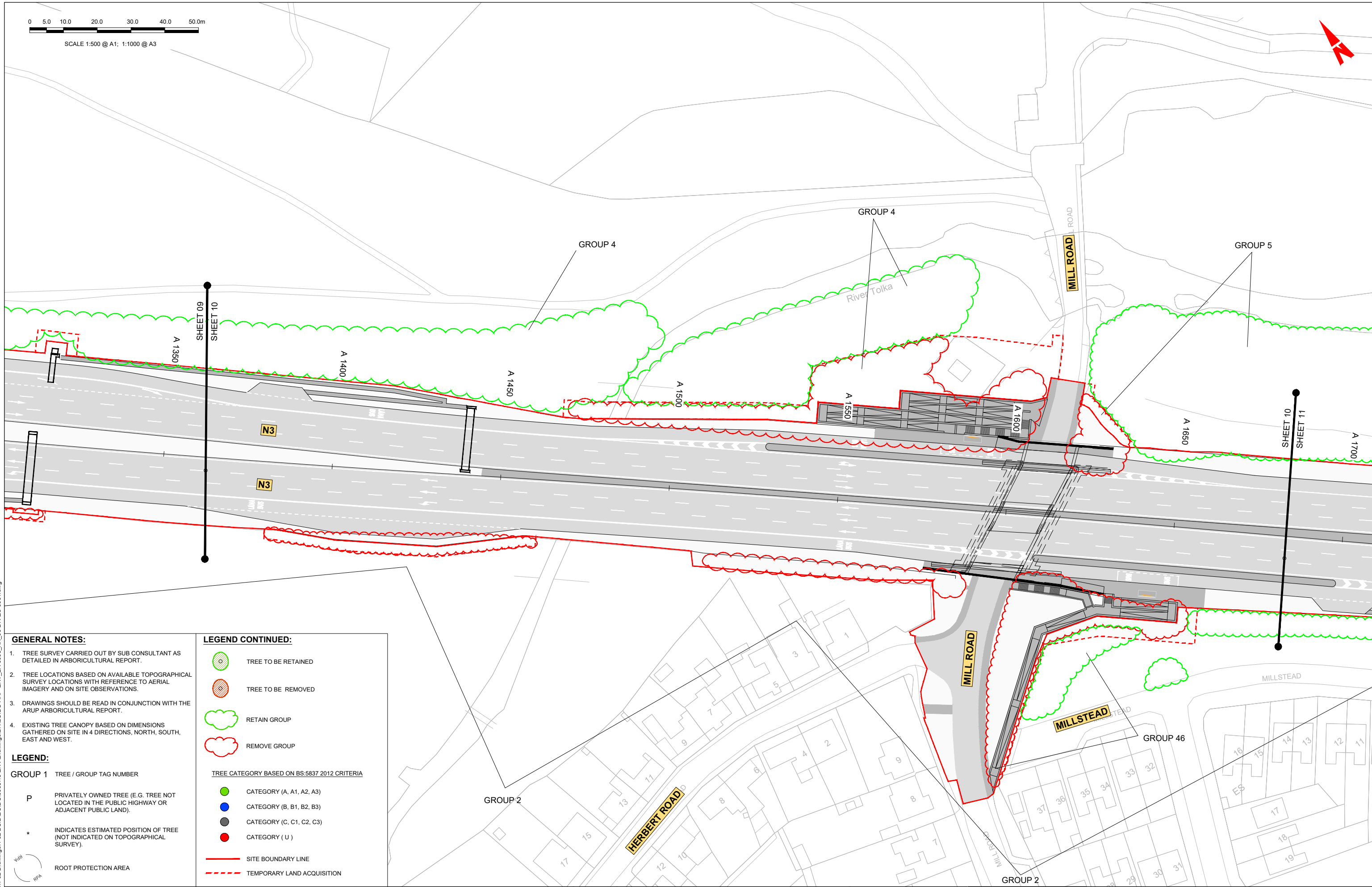
\global\europa\dublin\Jobs\2688000\268401-004 - Internal\4-02 Drawings\4-02 BCID\BCID\000515 ENV\Drawings\DR\BCID\ARP-ENV_LA-0005_XX_00-DR-ES-0001.dwg

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<p>Date 04/04/2022 Scale 1:500 @ A1 1:1000 @ A3</p>			<p>Drawn BM Checked BD Approved DC</p>			<p>Drawing Title BLANCHARDSTOWN TO CITY CENTRE CORE BUS CORRIDOR SCHEME TREE PROTECTION PLAN</p>			<p>Drawing File Name BCIDC-ARP-ENV_LA-0005_XX_00-DR-ES-0009</p>				
<p>Project Code BCIDC Originator Code ARP</p>			<p>OMS Code 268401-00</p>			<p>Sheet Number 09 of 40</p>			<p>Status A Rev M01</p>				

DO NOT SCALE USE FIGURED DIMENSIONS ONLY

0 5.0 10.0 20.0 30.0 40.0 50.0m

SCALE 1:500 @ A1; 1:1000 @ A3



GENERAL NOTES:

1. TREE SURVEY CARRIED OUT BY SUB CONSULTANT AS DETAILED IN ARBORICULTURAL REPORT.
2. TREE LOCATIONS BASED ON AVAILABLE TOPOGRAPHICAL SURVEY LOCATIONS WITH REFERENCE TO AERIAL IMAGERY AND ON SITE OBSERVATIONS.
3. DRAWINGS SHOULD BE READ IN CONJUNCTION WITH THE ARUP ARBORICULTURAL REPORT.
4. EXISTING TREE CANOPY BASED ON DIMENSIONS GATHERED ON SITE IN 4 DIRECTIONS, NORTH, SOUTH, EAST AND WEST.

LEGEND:

- GROUP 1 TREE / GROUP TAG NUMBER**
- P PRIVATELY OWNED TREE (E.G. TREE NOT LOCATED IN THE PUBLIC HIGHWAY OR ADJACENT PUBLIC LAND).
 - * INDICATES ESTIMATED POSITION OF TREE (NOT INDICATED ON TOPOGRAPHICAL SURVEY).
- ROOT PROTECTION AREA**

LEGEND CONTINUED:

- TREE TO BE RETAINED
 - TREE TO BE REMOVED
 - RETAIN GROUP
 - REMOVE GROUP
- TREE CATEGORY BASED ON BS:5837 2012 CRITERIA**
- CATEGORY (A, A1, A2, A3)
 - CATEGORY (B, B1, B2, B3)
 - CATEGORY (C, C1, C2, C3)
 - CATEGORY (U)
- SITE BOUNDARY LINE
 - TEMPORARY LAND ACQUISITION

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Project Ireland 2040
Building Ireland's Future

Rev	Date	Drn	Chk'd	App'd	Description
M01	04/04/2022	BM	BD	DC	ISSUE FOR PHASE 4: PLANNING

Client: **NTA**
Udarás Náisiúnta Iompair
National Transport Authority

Engineering Designer: **ARUP**
LABOR CARE
Department
Geomatics Core Science

Date: 04/04/2022
Scale: 1:500 @ A1
1:1000 @ A3

Drawn: BM
Checked: BD
Approved: DC

Project Code: BCIDC
Originator Code: ARP
OMS Code: 268401-00

Programme Title: BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS			
Drawing Title: BLANCHARDSTOWN TO CITY CENTRE CORE BUS CORRIDOR SCHEME TREE PROTECTION PLAN			
Drawing File Name: BCIDC-ARP-ENV_LA-0005_XX_00-DR-ES-0010	Sheet Number: 10 of 40	Status: A	Rev: M01

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C:\26800\001\268401-00\4_internet\4-02_Drawing\4-02_BCIDC\000515 ENV\Drawings\DR\BCIDC-ARP-ENV_LA-0005_XX_00-DR-ES-0010.dwg

0 5.0 10.0 20.0 30.0 40.0 50.0m

SCALE 1:500 @ A1; 1:1000 @ A3

GENERAL NOTES:

1. TREE SURVEY CARRIED OUT BY SUB CONSULTANT AS DETAILED IN ARBORICULTURAL REPORT.
2. TREE LOCATIONS BASED ON AVAILABLE TOPOGRAPHICAL SURVEY LOCATIONS WITH REFERENCE TO AERIAL IMAGERY AND ON SITE OBSERVATIONS.
3. DRAWINGS SHOULD BE READ IN CONJUNCTION WITH THE ARUP ARBORICULTURAL REPORT.
4. EXISTING TREE CANOPY BASED ON DIMENSIONS GATHERED ON SITE IN 4 DIRECTIONS, NORTH, SOUTH, EAST AND WEST.

LEGEND:

GROUP 1 TREE / GROUP TAG NUMBER

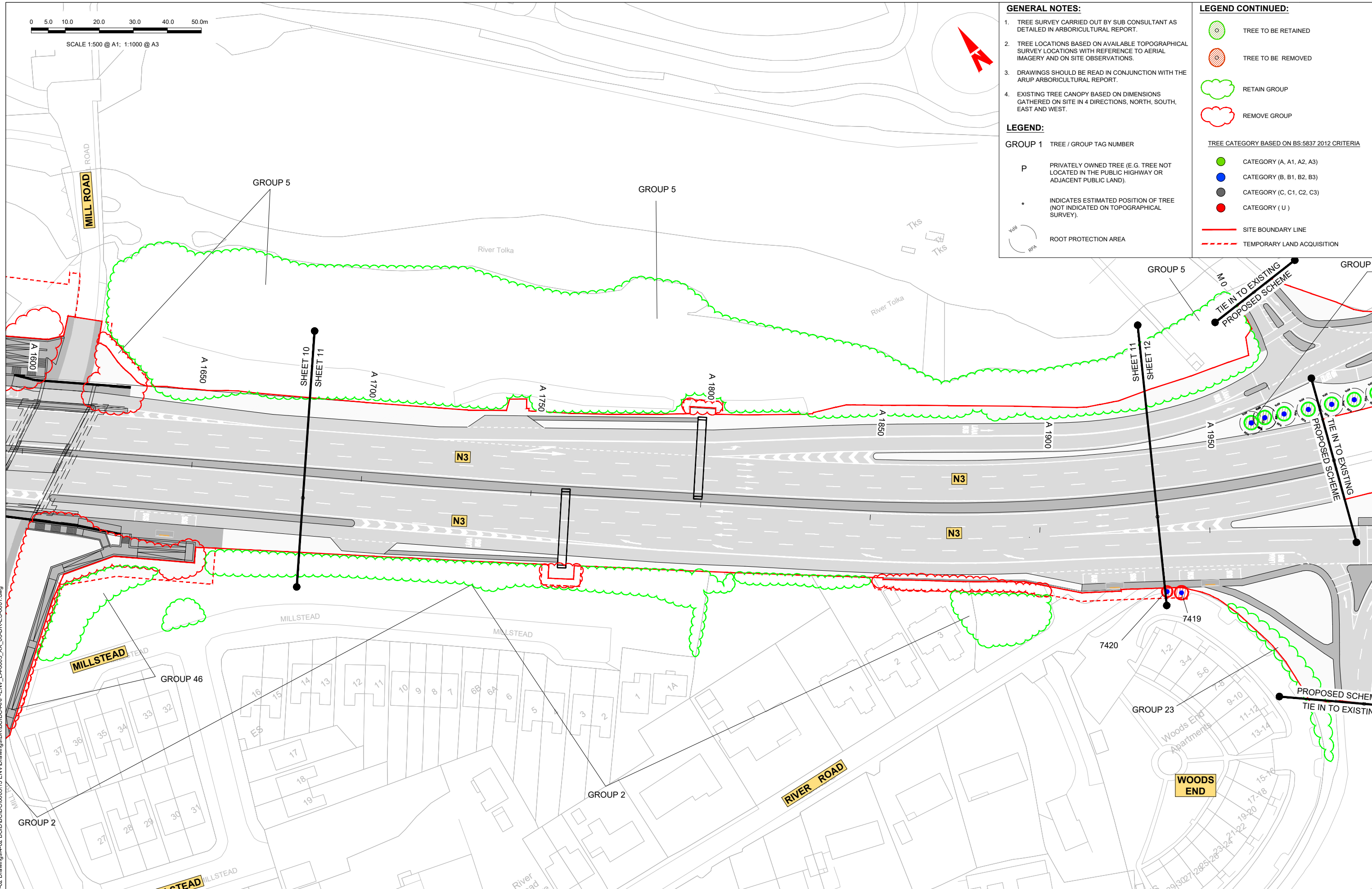
- P PRIVATELY OWNED TREE (E.G. TREE NOT LOCATED IN THE PUBLIC HIGHWAY OR ADJACENT PUBLIC LAND).
- * INDICATES ESTIMATED POSITION OF TREE (NOT INDICATED ON TOPOGRAPHICAL SURVEY).
- Root Protection Area

LEGEND CONTINUED:

- TREE TO BE RETAINED
- TREE TO BE REMOVED
- RETAIN GROUP
- REMOVE GROUP

TREE CATEGORY BASED ON BS:5837 2012 CRITERIA

- CATEGORY (A, A1, A2, A3)
- CATEGORY (B, B1, B2, B3)
- CATEGORY (C, C1, C2, C3)
- CATEGORY (U)
- SITE BOUNDARY LINE
- TEMPORARY LAND ACQUISITION



C:\268000\26840\1-00\4 - Internal\4-02 Drawings\4-02 BCID\BCID0000515 ENV\Drawings\DR\BCID-ARP-ENV_LA-0005_XX_00-DR-ES-0001.dwg

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Rev	Date	Drn	Chk'd	App'd	Description
M01	04/04/2022	BM	BD	DC	ISSUE FOR PHASE 4: PLANNING

Client: **NTA**
Udarás Náisiúnta Iompair
National Transport Authority

Engineering Designer: **ARUP**
Department: Geomatics & Survey Science

Date: 04/04/2022 Scale: 1:500 @ A1, 1:1000 @ A3

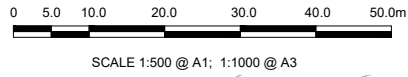
Project Code: BCIDC Originator Code: ARP

Drawn: BM Checked: BD Approved: DC

OMS Code: 268401-00

Programme Title: BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS			
Drawing Title: BLANCHARDSTOWN TO CITY CENTRE CORE BUS CORRIDOR SCHEME TREE PROTECTION PLAN			
Drawing File Name: BCIDC-ARP-ENV_LA-0005_XX_00-DR-ES-0011	Sheet Number: 11 of 40	Status: A	Rev: M01

DO NOT SCALE USE FIGURED DIMENSIONS ONLY



GENERAL NOTES:

- TREE SURVEY CARRIED OUT BY SUB CONSULTANT AS DETAILED IN ARBORICULTURAL REPORT.
- TREE LOCATIONS BASED ON AVAILABLE TOPOGRAPHICAL SURVEY LOCATIONS WITH REFERENCE TO AERIAL IMAGERY AND ON SITE OBSERVATIONS.
- DRAWINGS SHOULD BE READ IN CONJUNCTION WITH THE ARUP ARBORICULTURAL REPORT.
- EXISTING TREE CANOPY BASED ON DIMENSIONS GATHERED ON SITE IN 4 DIRECTIONS, NORTH, SOUTH, EAST AND WEST.

LEGEND:

GROUP 1 TREE / GROUP TAG NUMBER

P PRIVATELY OWNED TREE (E.G. TREE NOT LOCATED IN THE PUBLIC HIGHWAY OR ADJACENT PUBLIC LAND).

* INDICATES ESTIMATED POSITION OF TREE (NOT INDICATED ON TOPOGRAPHICAL SURVEY).

Root Protection Area

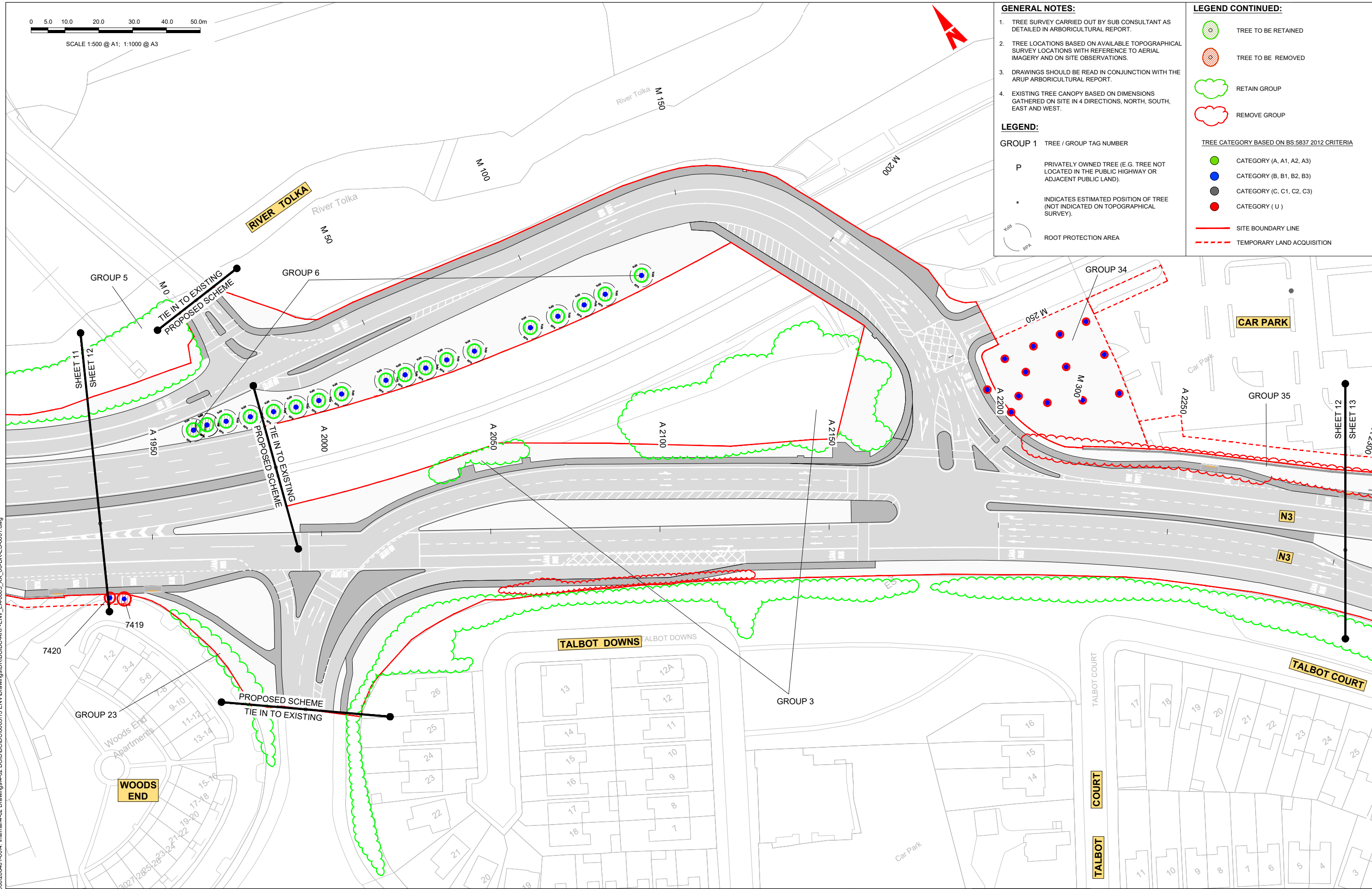
LEGEND CONTINUED:

- TREE TO BE RETAINED
- TREE TO BE REMOVED
- RETAIN GROUP
- REMOVE GROUP

TREE CATEGORY BASED ON BS:5837 2012 CRITERIA

- CATEGORY (A, A1, A2, A3)
- CATEGORY (B, B1, B2, B3)
- CATEGORY (C, C1, C2, C3)
- CATEGORY (U)

SITE BOUNDARY LINE
TEMPORARY LAND ACQUISITION



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Rev	Date	Drn	Chk'd	App'd	Description
M01	04/04/2022	BM	BD	DC	ISSUE FOR PHASE 4: PLANNING

Client: **NTA**
Udarás Náisiúnta Iompair
National Transport Authority

Engineering Designer: **ARUP**
Department: **Geotechnical Engineering**

Date: 04/04/2022
Scale: 1:500 @ A1
1:1000 @ A3

Drawn: BM
Checked: BD
Approved: DC

Project Code: BCIDC
Originator Code: ARP
OMS Code: 268401-00

Programme Title: **BUSCONNECTS DUBLIN
CORE BUS CORRIDORS INFRASTRUCTURE WORKS**

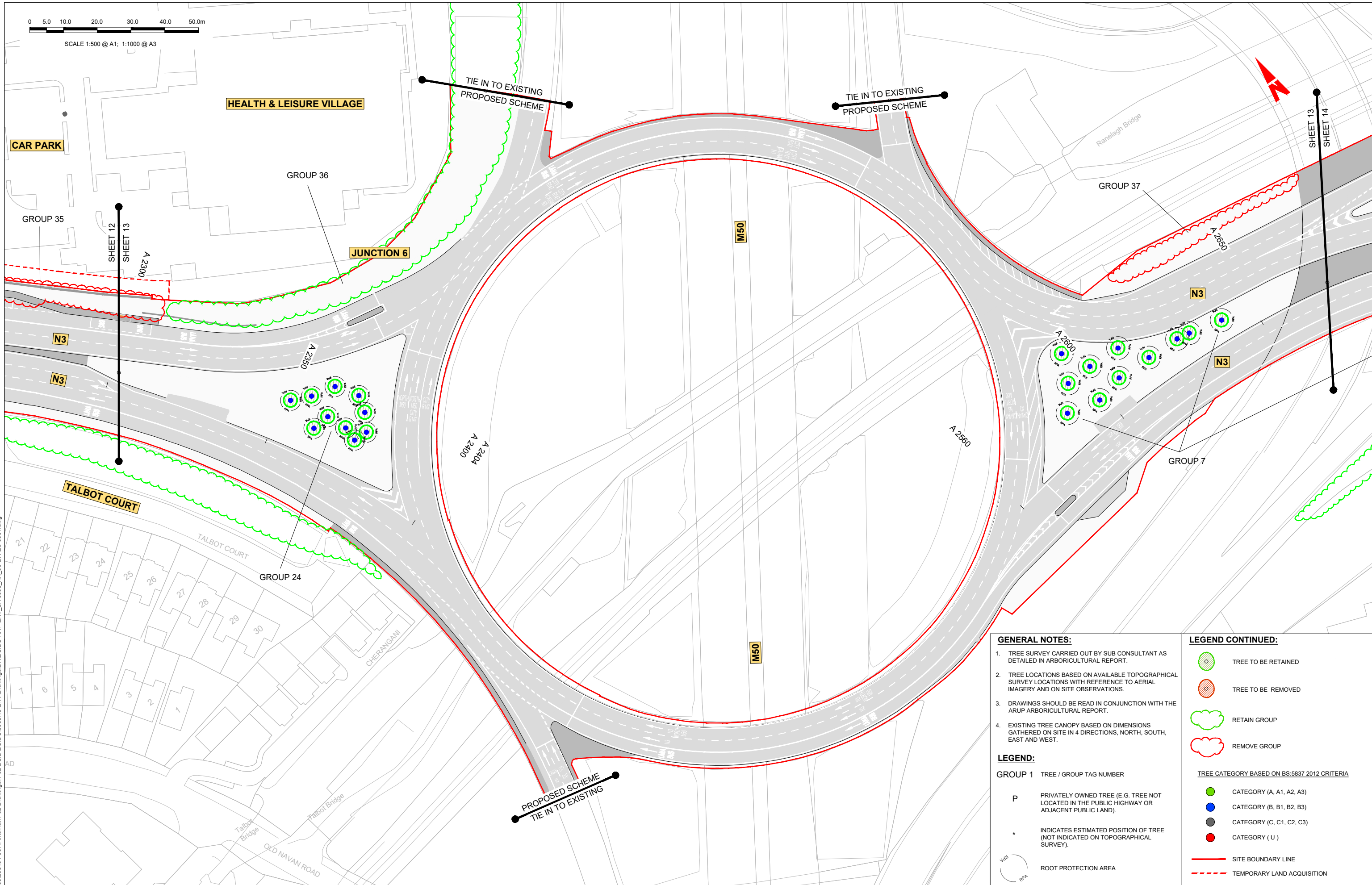
Drawing Title: **BLANCHARDSTOWN TO CITY CENTRE CORE BUS CORRIDOR SCHEME
TREE PROTECTION PLAN**

Drawing File Name: BCIDC-ARP-ENV_LA-0005_XX_00-DR-ES-0012
Sheet Number: 12 of 40
Status: A
Rev: M01

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0 5.0 10.0 20.0 30.0 40.0 50.0m

SCALE 1:500 @ A1; 1:1000 @ A3



GENERAL NOTES:

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- DRAWINGS SHOULD BE READ IN CONJUNCTION WITH THE ARUP ARBORICULTURAL REPORT.
- EXISTING TREE CANOPY BASED ON DIMENSIONS GATHERED ON SITE IN 4 DIRECTIONS, NORTH, SOUTH, EAST AND WEST.

LEGEND:

GROUP 1 TREE / GROUP TAG NUMBER

P PRIVATELY OWNED TREE (E.G. TREE NOT LOCATED IN THE PUBLIC HIGHWAY OR ADJACENT PUBLIC LAND).

* INDICATES ESTIMATED POSITION OF TREE (NOT INDICATED ON TOPOGRAPHICAL SURVEY).

Root Protection Area

LEGEND CONTINUED:

- TREE TO BE RETAINED
- TREE TO BE REMOVED
- RETAIN GROUP
- REMOVE GROUP

TREE CATEGORY BASED ON BS:5837 2012 CRITERIA

- CATEGORY (A, A1, A2, A3)
- CATEGORY (B, B1, B2, B3)
- CATEGORY (C, C1, C2, C3)
- CATEGORY (U)

— SITE BOUNDARY LINE
- - - TEMPORARY LAND ACQUISITION

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Rev	Date	Drn	Chk'd	App'd	Description
M01	04/04/2022	BM	BD	DC	ISSUE FOR PHASE 4: PLANNING

Client: **NTA**
Udarás Náisiúnta Iompair
National Transport Authority

Engineering Designer: **ARUP**
LABOR CARE
Department
Geomatics Core Science

Date: 04/04/2022 Scale: 1:500 @ A1, 1:1000 @ A3

Drawn: BM, Checked: BD, Approved: DC

Project Code: BCIDC, Originator Code: ARP, OMS Code: 268401-00

Programme Title: BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS			
Drawing Title: BLANCHARDSTOWN TO CITY CENTRE CORE BUS CORRIDOR SCHEME TREE PROTECTION PLAN			
Drawing File Name: BCIDC-ARP-ENV_LA-0005_XX_00-DR-ES-0013	Sheet Number: 13 of 40	Status: A	Rev: M01

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4. EXISTING TREE CANOPY BASED ON DIMENSIONS GATHERED ON SITE IN 4 DIRECTIONS, NORTH, SOUTH, EAST AND WEST.

LEGEND:

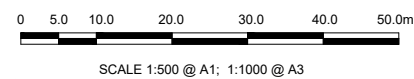
- GROUP 1 TREE / GROUP TAG NUMBER**
- P** PRIVATELY OWNED TREE (E.G. TREE NOT LOCATED IN THE PUBLIC HIGHWAY OR ADJACENT PUBLIC LAND).
- *** INDICATES ESTIMATED POSITION OF TREE (NOT INDICATED ON TOPOGRAPHICAL SURVEY).
- Root Protection Area**

LEGEND CONTINUED:

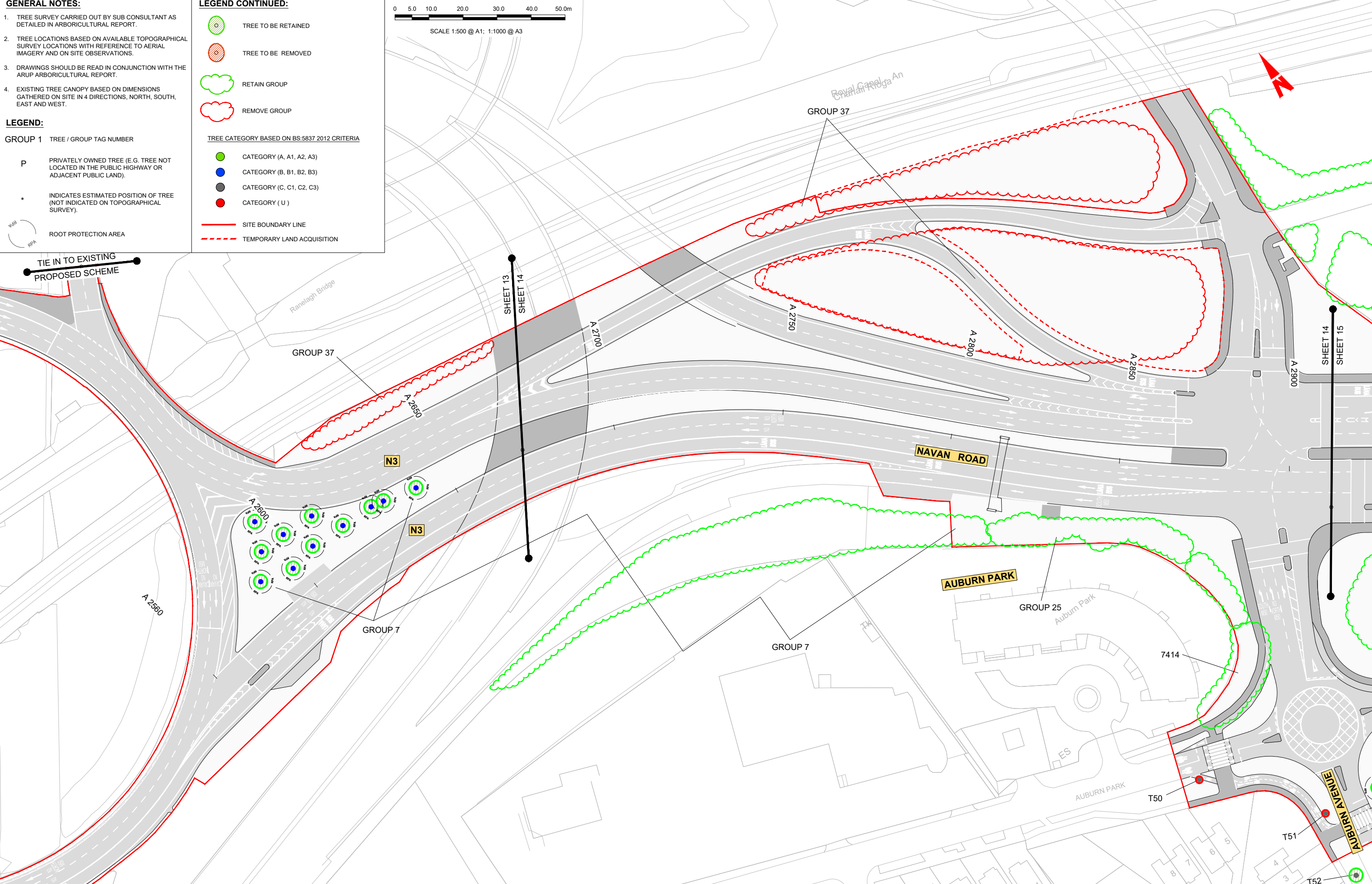
- TREE TO BE RETAINED
- TREE TO BE REMOVED
- RETAIN GROUP
- REMOVE GROUP

TREE CATEGORY BASED ON BS:5837 2012 CRITERIA

- CATEGORY (A, A1, A2, A3)
- CATEGORY (B, B1, B2, B3)
- CATEGORY (C, C1, C2, C3)
- CATEGORY (U)
- SITE BOUNDARY LINE
- TEMPORARY LAND ACQUISITION



TIE IN TO EXISTING PROPOSED SCHEME



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Rev	Date	Drn	Chk'd	App'd	Description
M01	04/04/2022	BM	BD	DC	ISSUE FOR PHASE 4: PLANNING

Client
 NTA
 Údarás Náisiúnta Iompair
 National Transport Authority

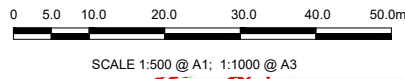
Engineering Designer
 ARUP
 Department: Consulting
 Core Science

Date: 04/04/2022
 Scale: 1:500 @ A1, 1:1000 @ A3
 Project Code: BCIDC
 Originator Code: ARP
 OMS Code: 268401-00

Programme Title BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS			
Drawing Title BLANCHARDSTOWN TO CITY CENTRE CORE BUS CORRIDOR SCHEME TREE PROTECTION PLAN			
Drawing File Name	Sheet Number	Status	Rev
BCIDC-ARP-ENV_LA-0005_XX_00-DR-ES-0014	14 of 40	A	M01

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LEGEND:

GROUP 1 TREE / GROUP TAG NUMBER

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Root Protection Area

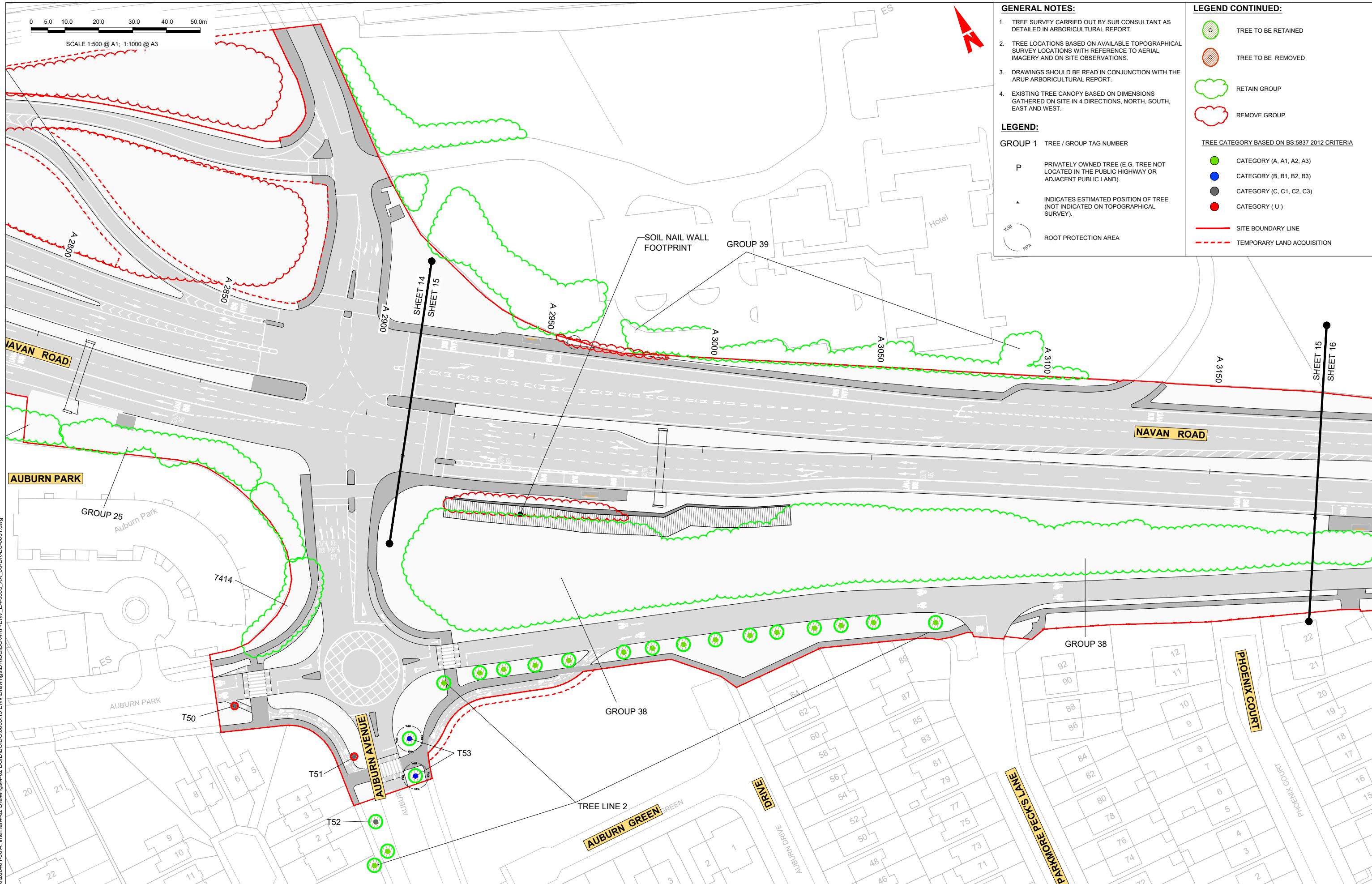
LEGEND CONTINUED:

- TREE TO BE RETAINED
- TREE TO BE REMOVED
- RETAIN GROUP
- REMOVE GROUP

TREE CATEGORY BASED ON BS:5837 2012 CRITERIA

- CATEGORY (A, A1, A2, A3)
- CATEGORY (B, B1, B2, B3)
- CATEGORY (C, C1, C2, C3)
- CATEGORY (U)

SITE BOUNDARY LINE
TEMPORARY LAND ACQUISITION



\\global\europa\dublin\jobs\2688000\268401-004_1\internat\4-02 Drawings\4-02 BCID\BCID\0005\15 ENV\Drawings\DR\BCID-ARP-ENV_LA-0005_XX_00-DR-ES-0001.dwg

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Rev	Date	Drn	Chk'd	App'd	Description
M01	04/04/2022	BM	BD	DC	ISSUE FOR PHASE 4: PLANNING

Client: **NTA**
Udarás Náisiúnta Iompair
National Transport Authority

Engineering Designer: **ARUP**
LABOR CARE
Department
Geotechnical Case Science

Date: 04/04/2022
Scale: 1:500 @ A1
1:1000 @ A3

Drawn: BM
Checked: BD
Approved: DC

Project Code: BCIDC
Originator Code: ARP
OMS Code: 268401-00

Programme Title: BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS			
Drawing Title: BLANCHARDSTOWN TO CITY CENTRE CORE BUS CORRIDOR SCHEME TREE PROTECTION PLAN			
Drawing File Name: BCIDC-ARP-ENV_LA-0005_XX_00-DR-ES-0015	Sheet Number: 15 of 40	Status: A	Rev: M01

DO NOT SCALE USE FIGURED DIMENSIONS ONLY

0 5.0 10.0 20.0 30.0 40.0 50.0m

SCALE 1:500 @ A1; 1:1000 @ A3

GENERAL NOTES:

1. TREE SURVEY CARRIED OUT BY SUB CONSULTANT AS DETAILED IN ARBORICULTURAL REPORT.
2. TREE LOCATIONS BASED ON AVAILABLE TOPOGRAPHICAL SURVEY LOCATIONS WITH REFERENCE TO AERIAL IMAGERY AND ON SITE OBSERVATIONS.
3. DRAWINGS SHOULD BE READ IN CONJUNCTION WITH THE ARUP ARBORICULTURAL REPORT.
4. EXISTING TREE CANOPY BASED ON DIMENSIONS GATHERED ON SITE IN 4 DIRECTIONS, NORTH, SOUTH, EAST AND WEST.

LEGEND:

GROUP 1 TREE / GROUP TAG NUMBER

P PRIVATELY OWNED TREE (E.G. TREE NOT LOCATED IN THE PUBLIC HIGHWAY OR ADJACENT PUBLIC LAND).

* INDICATES ESTIMATED POSITION OF TREE (NOT INDICATED ON TOPOGRAPHICAL SURVEY).

Root Protection Area

LEGEND CONTINUED:

TREE TO BE RETAINED

TREE TO BE REMOVED

RETAIN GROUP

REMOVE GROUP

TREE CATEGORY BASED ON BS:5837 2012 CRITERIA

CATEGORY (A, A1, A2, A3)

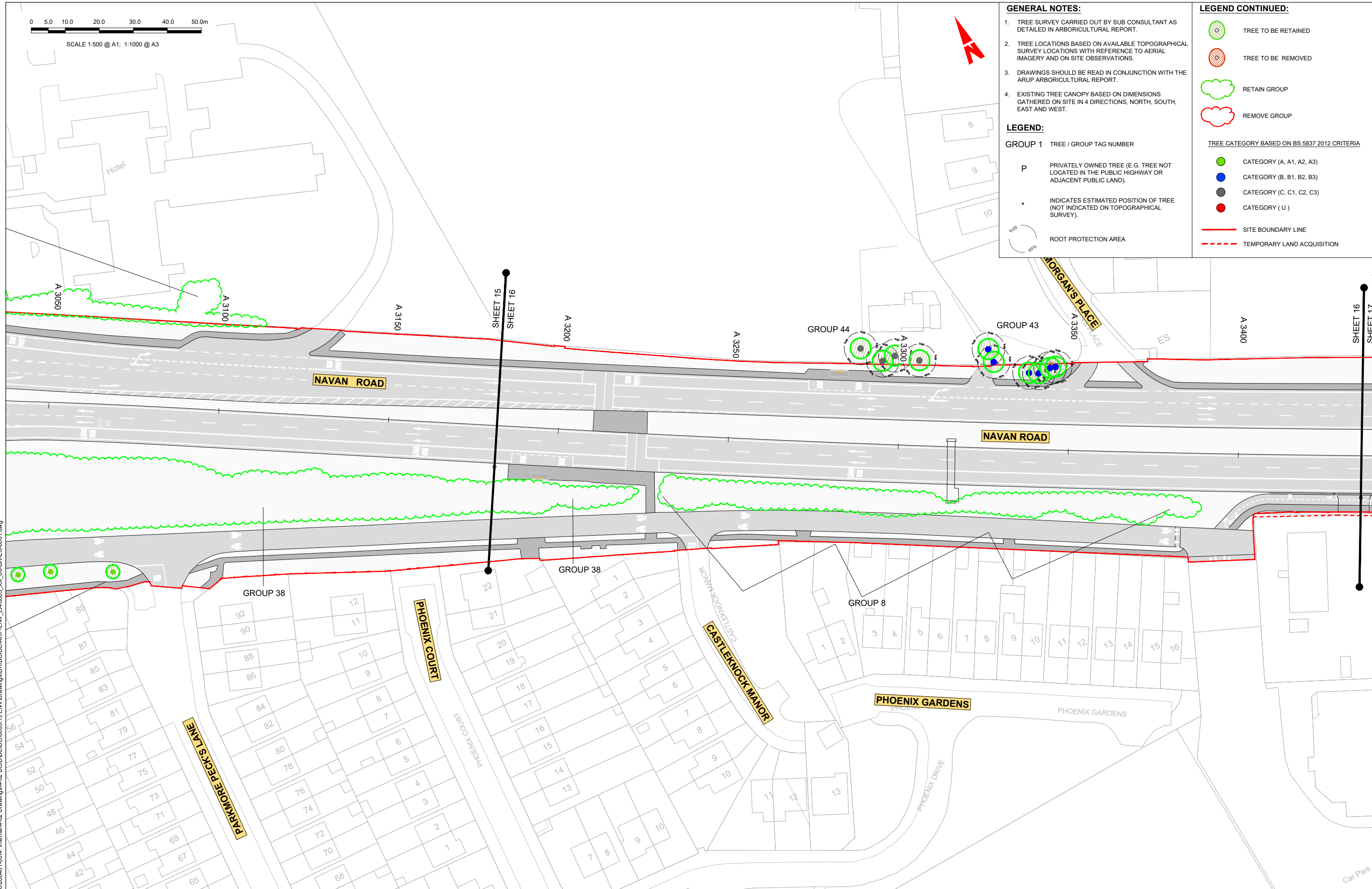
CATEGORY (B, B1, B2, B3)

CATEGORY (C, C1, C2, C3)

CATEGORY (U)

SITE BOUNDARY LINE

TEMPORARY LAND ACQUISITION



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Project Ireland 2040
 Building Ireland's Future

Rev	Date	Drn	Chk'd	App'd	Description
M01	04/04/2022	BM	BD	DC	ISSUE FOR PHASE 4: PLANNING

Client: **NTA**
 Udarás Náisiúnta Iompair
 National Transport Authority

Date: 04/04/2022 Scale: 1:500 @ A1, 1:1000 @ A3

Engineering Designer: **ARUP**

Drawn: BM, Checked: BD, Approved: DC

Project Code: BCIDC, Originator Code: ARP, OMS Code: 268401-00

Programme Title: **BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS**

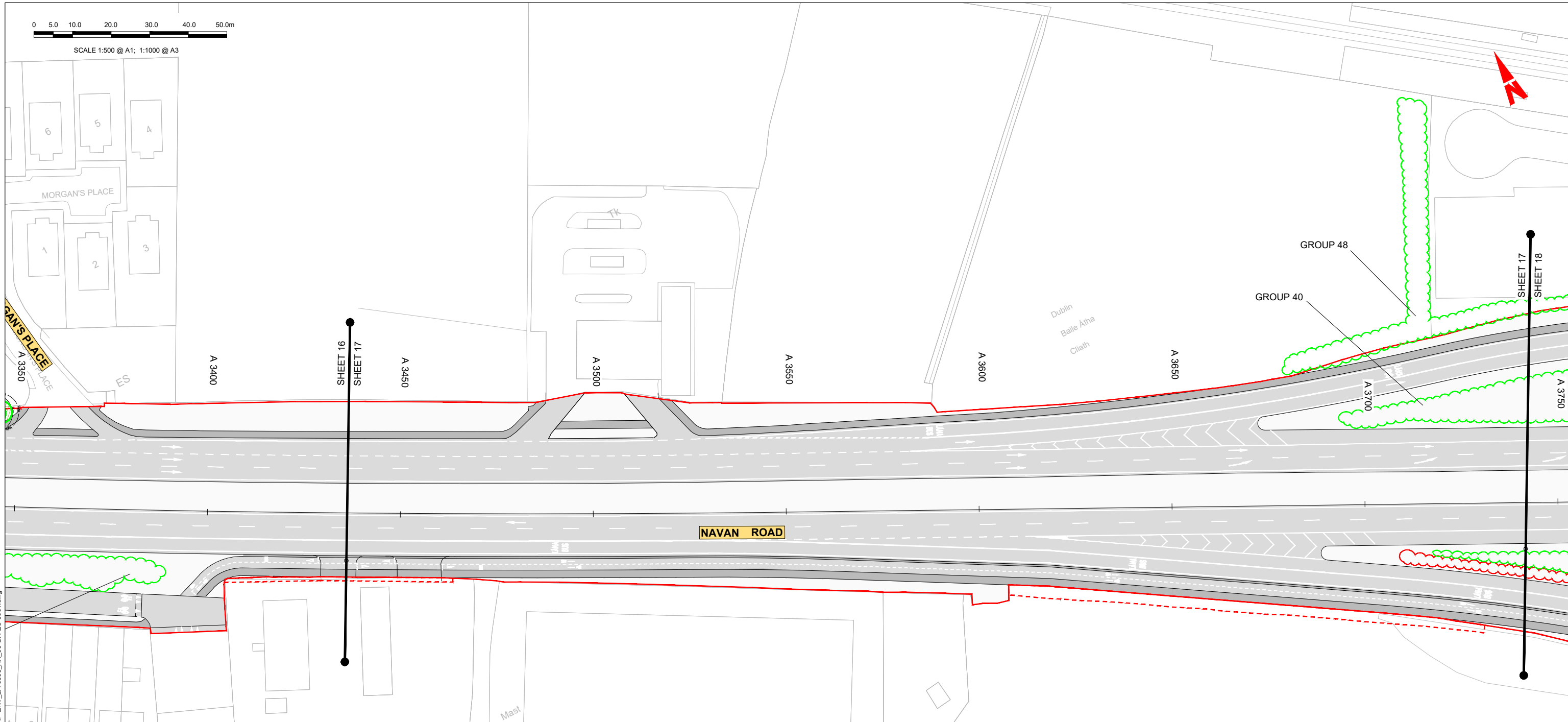
Drawing Title: **BLANCHARDSTOWN TO CITY CENTRE CORE BUS CORRIDOR SCHEME TREE PROTECTION PLAN**

Drawing File Name: BCIDC-ARP-ENV_LA-0005_XX_00-DR-ES-0016	Sheet Number: 16 of 40	Status: A	Rev: M01
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DO NOT SCALE USE FIGURED DIMENSIONS ONLY

0 5.0 10.0 20.0 30.0 40.0 50.0m

SCALE 1:500 @ A1; 1:1000 @ A3



GENERAL NOTES:

1. TREE SURVEY CARRIED OUT BY SUB CONSULTANT AS DETAILED IN ARBORICULTURAL REPORT.
2. TREE LOCATIONS BASED ON AVAILABLE TOPOGRAPHICAL SURVEY LOCATIONS WITH REFERENCE TO AERIAL IMAGERY AND ON SITE OBSERVATIONS.
3. DRAWINGS SHOULD BE READ IN CONJUNCTION WITH THE ARUP ARBORICULTURAL REPORT.
4. EXISTING TREE CANOPY BASED ON DIMENSIONS GATHERED ON SITE IN 4 DIRECTIONS, NORTH, SOUTH, EAST AND WEST.

LEGEND:

- GROUP 1 TREE / GROUP TAG NUMBER**
- P PRIVATELY OWNED TREE (E.G. TREE NOT LOCATED IN THE PUBLIC HIGHWAY OR ADJACENT PUBLIC LAND).
 - * INDICATES ESTIMATED POSITION OF TREE (NOT INDICATED ON TOPOGRAPHICAL SURVEY).
- ROOT PROTECTION AREA**

LEGEND CONTINUED:

- TREE TO BE RETAINED
 - TREE TO BE REMOVED
 - RETAIN GROUP
 - REMOVE GROUP
- TREE CATEGORY BASED ON BS:5837 2012 CRITERIA**
- CATEGORY (A, A1, A2, A3)
 - CATEGORY (B, B1, B2, B3)
 - CATEGORY (C, C1, C2, C3)
 - CATEGORY (U)
- SITE BOUNDARY LINE
 - TEMPORARY LAND ACQUISITION

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Rev	Date	Drn	Chk'd	App'd	Description
M01	04/04/2022	BM	BD	DC	ISSUE FOR PHASE 4: PLANNING

<p>Udarás Náisiúnta Iompair National Transport Authority</p>		<p>Engineering Designer</p>							
Date	04/04/2022	Scale	1:500 @ A1 1:1000 @ A3	Drawn	BM	Checked	BD	Approved	DC
Project Code	BCIDC	Originator Code	ARP	OMS Code	268401-00				

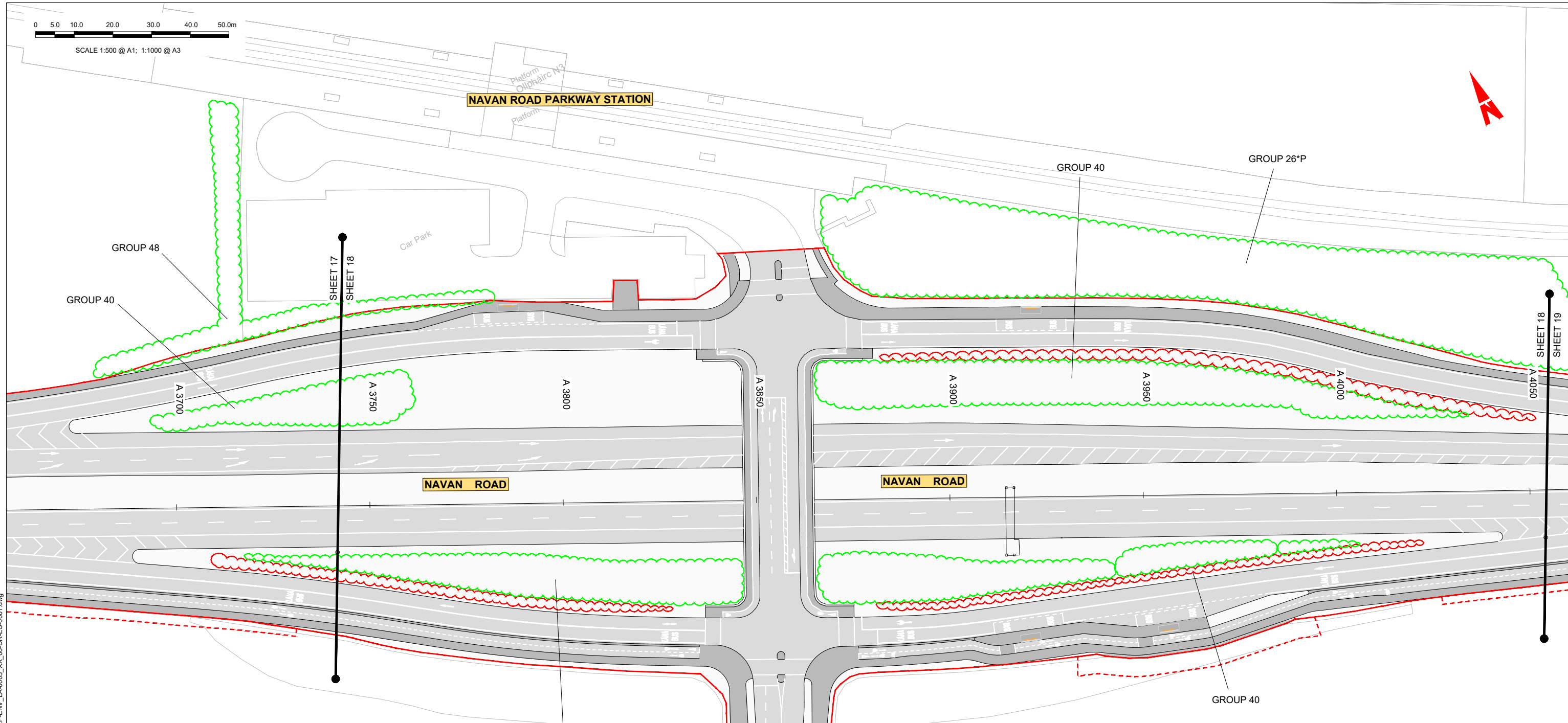
<p>Programme Title</p> <p>BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS</p>			
<p>Drawing Title</p> <p>BLANCHARDSTOWN TO CITY CENTRE CORE BUS CORRIDOR SCHEME TREE PROTECTION PLAN</p>			
Drawing File Name	BCIDC-ARP-ENV_LA-0005_XX_00-DR-ES-0017	Sheet Number	17 of 40
Status	A	Rev	M01

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0 5.0 10.0 20.0 30.0 40.0 50.0m

SCALE 1:500 @ A1; 1:1000 @ A3



GENERAL NOTES:

- TREE SURVEY CARRIED OUT BY SUB CONSULTANT AS DETAILED IN ARBORICULTURAL REPORT.
- TREE LOCATIONS BASED ON AVAILABLE TOPOGRAPHICAL SURVEY LOCATIONS WITH REFERENCE TO AERIAL IMAGERY AND ON SITE OBSERVATIONS.
- DRAWINGS SHOULD BE READ IN CONJUNCTION WITH THE ARUP ARBORICULTURAL REPORT.
- EXISTING TREE CANOPY BASED ON DIMENSIONS GATHERED ON SITE IN 4 DIRECTIONS, NORTH, SOUTH, EAST AND WEST.

LEGEND:

- GROUP 1 TREE / GROUP TAG NUMBER**
- P PRIVATELY OWNED TREE (E.G. TREE NOT LOCATED IN THE PUBLIC HIGHWAY OR ADJACENT PUBLIC LAND).
 - * INDICATES ESTIMATED POSITION OF TREE (NOT INDICATED ON TOPOGRAPHICAL SURVEY).
 - ROOT PROTECTION AREA

LEGEND CONTINUED:

- TREE TO BE RETAINED
 - TREE TO BE REMOVED
 - RETAIN GROUP
 - REMOVE GROUP
- TREE CATEGORY BASED ON BS:5837 2012 CRITERIA**
- CATEGORY (A, A1, A2, A3)
 - CATEGORY (B, B1, B2, B3)
 - CATEGORY (C, C1, C2, C3)
 - CATEGORY (U)
- SITE BOUNDARY LINE
 - TEMPORARY LAND ACQUISITION

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Project Ireland 2040
 Building Ireland's Future

Rev	Date	Drn	Chk'd	App'd	Description
M01	04/04/2022	BM	BD	DC	ISSUE FOR PHASE 4: PLANNING

Client: **NTA**
 Údarás Náisiúnta Iompair
 National Transport Authority

Engineering Designer: **ARUP**
 Drawn: BM, Checked: BD, Approved: DC

Date: 04/04/2022, Scale: 1:500 @ A1, 1:1000 @ A3, Project Code: BCIDC, Originator Code: ARP, OMS Code: 268401-00

Programme Title: BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS			
Drawing Title: BLANCHARDSTOWN TO CITY CENTRE CORE BUS CORRIDOR SCHEME TREE PROTECTION PLAN			
Drawing File Name: BCIDC-ARP-ENV_LA-0005_XX_00-DR-ES-0018	Sheet Number: 18 of 40	Status: A	Rev: M01

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0 5.0 10.0 20.0 30.0 40.0 50.0m

SCALE 1:500 @ A1; 1:1000 @ A3

GROUP 26*P

GROUP 26*P

NAVAN ROAD

GROUP 49

GROUP 49

GROUP 40

GENERAL NOTES:

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LEGEND:

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 - Root Protection Area (RPA)

LEGEND CONTINUED:

- TREE TO BE RETAINED
 - TREE TO BE REMOVED
 - RETAIN GROUP
 - REMOVE GROUP
- TREE CATEGORY BASED ON BS:5837 2012 CRITERIA**
- CATEGORY (A, A1, A2, A3)
 - CATEGORY (B, B1, B2, B3)
 - CATEGORY (C, C1, C2, C3)
 - CATEGORY (U)
- SITE BOUNDARY LINE
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M01	04/04/2022	BM	BD	DC	ISSUE FOR PHASE 4: PLANNING



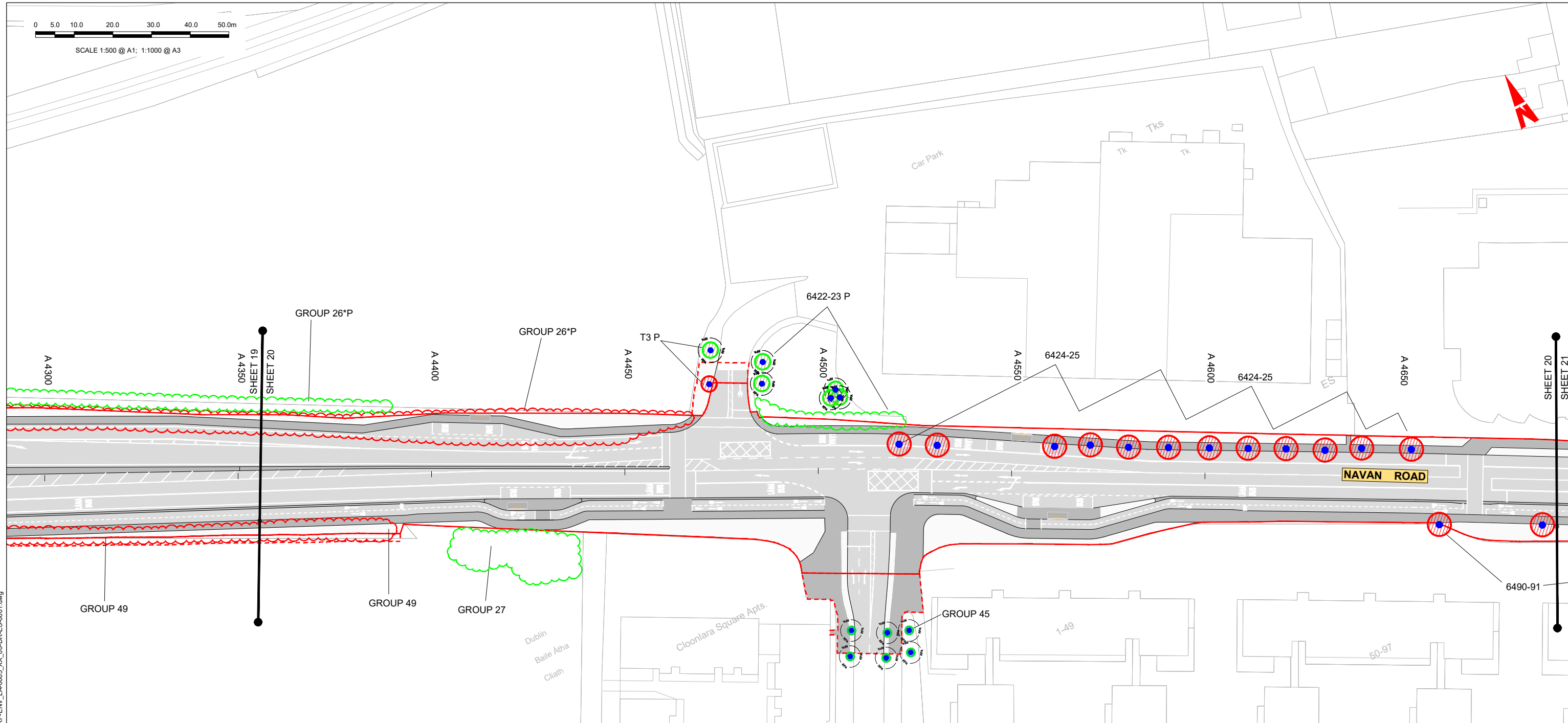
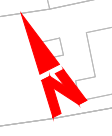
Client				Engineering Designer			Programme Title				
Date 04/04/2022				Scale 1:500 @ A1 1:1000 @ A3			BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS				
Project Code BCIDC				Originator Code ARP			Drawing Title				
OMS Code 268401-00				Drawn BM Checked BD Approved DC			BLANCHARDSTOWN TO CITY CENTRE CORE BUS CORRIDOR SCHEME TREE PROTECTION PLAN				
Drawing File Name BCIDC-ARP-ENV_LA-0005_XX_00-DR-ES-0019							Sheet Number 19 of 40		Status A		Rev M01

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SCALE 1:500 @ A1; 1:1000 @ A3



GENERAL NOTES:

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 - ROOT PROTECTION AREA

LEGEND CONTINUED:

- TREE TO BE RETAINED
 - TREE TO BE REMOVED
 - RETAIN GROUP
 - REMOVE GROUP
- TREE CATEGORY BASED ON BS:5837 2012 CRITERIA**
- CATEGORY (A, A1, A2, A3)
 - CATEGORY (B, B1, B2, B3)
 - CATEGORY (C, C1, C2, C3)
 - CATEGORY (U)
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 - - - TEMPORARY LAND ACQUISITION

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Project Ireland 2040
 Building Ireland's Future

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Client: **NTA**
 Udarás Náisiúnta Iompair
 National Transport Authority

Engineering Designer: **ARUP**

Date: 04/04/2022 Scale: 1:500 @ A1, 1:1000 @ A3

Drawn: BM, Checked: BD, Approved: DC

Project Code: BCIDC, Originator Code: ARP, OMS Code: 268401-00

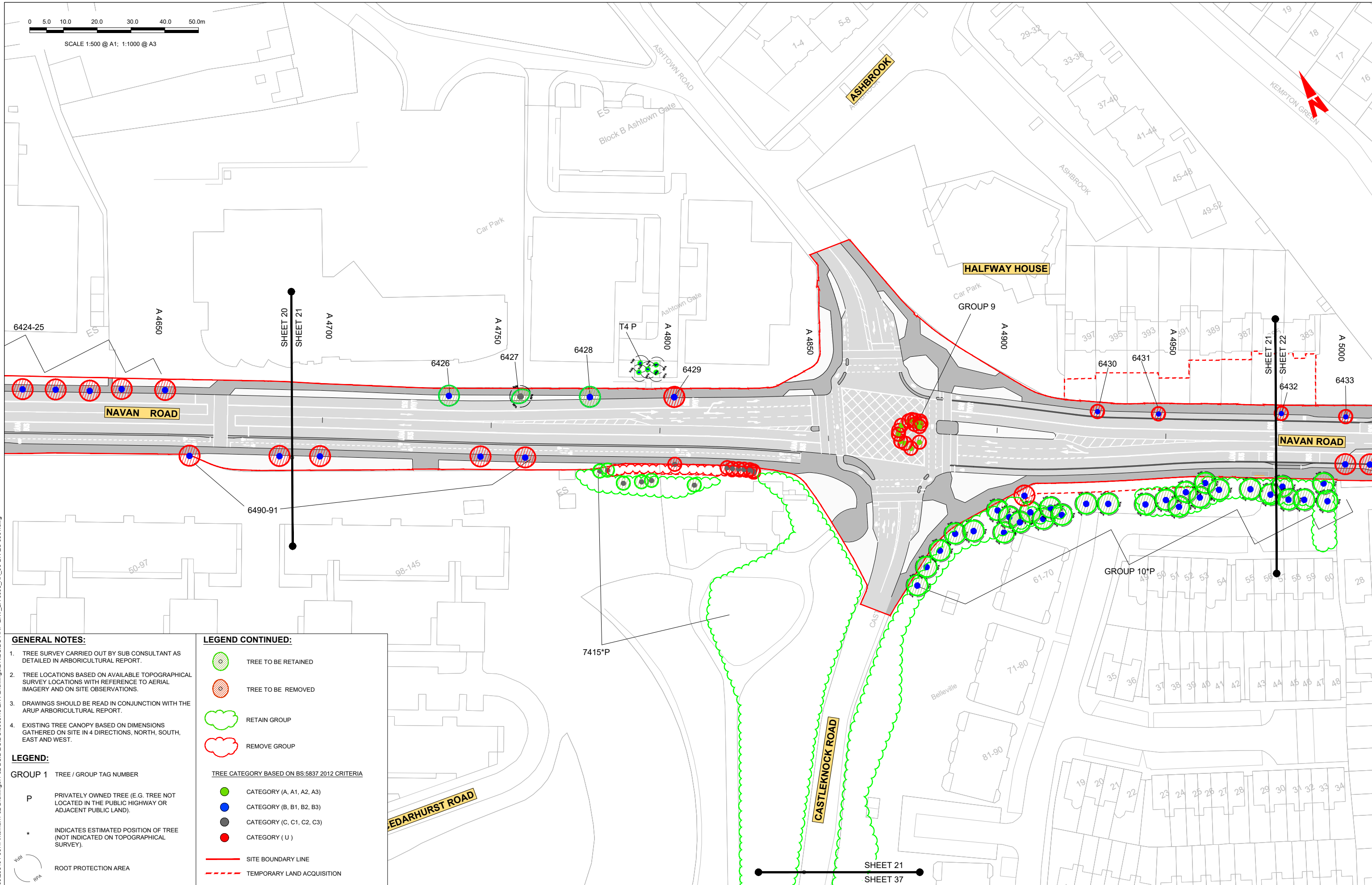
Programme Title: BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS			
Drawing Title: BLANCHARDSTOWN TO CITY CENTRE CORE BUS CORRIDOR SCHEME TREE PROTECTION PLAN			
Drawing File Name: BCIDC-ARP-ENV_LA-0005_XX_00-DR-ES-0020	Sheet Number: 20 of 40	Status: A	Rev: M01

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SCALE 1:500 @ A1; 1:1000 @ A3



GENERAL NOTES:

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 - ROOT PROTECTION AREA

LEGEND CONTINUED:

- TREE TO BE RETAINED
 - TREE TO BE REMOVED
 - RETAIN GROUP
 - REMOVE GROUP
- TREE CATEGORY BASED ON BS:5837 2012 CRITERIA**
- CATEGORY (A, A1, A2, A3)
 - CATEGORY (B, B1, B2, B3)
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Rev	Date	Drn	Chk'd	App'd	Description
M01	04/04/2022	BM	BD	DC	ISSUE FOR PHASE 4: PLANNING

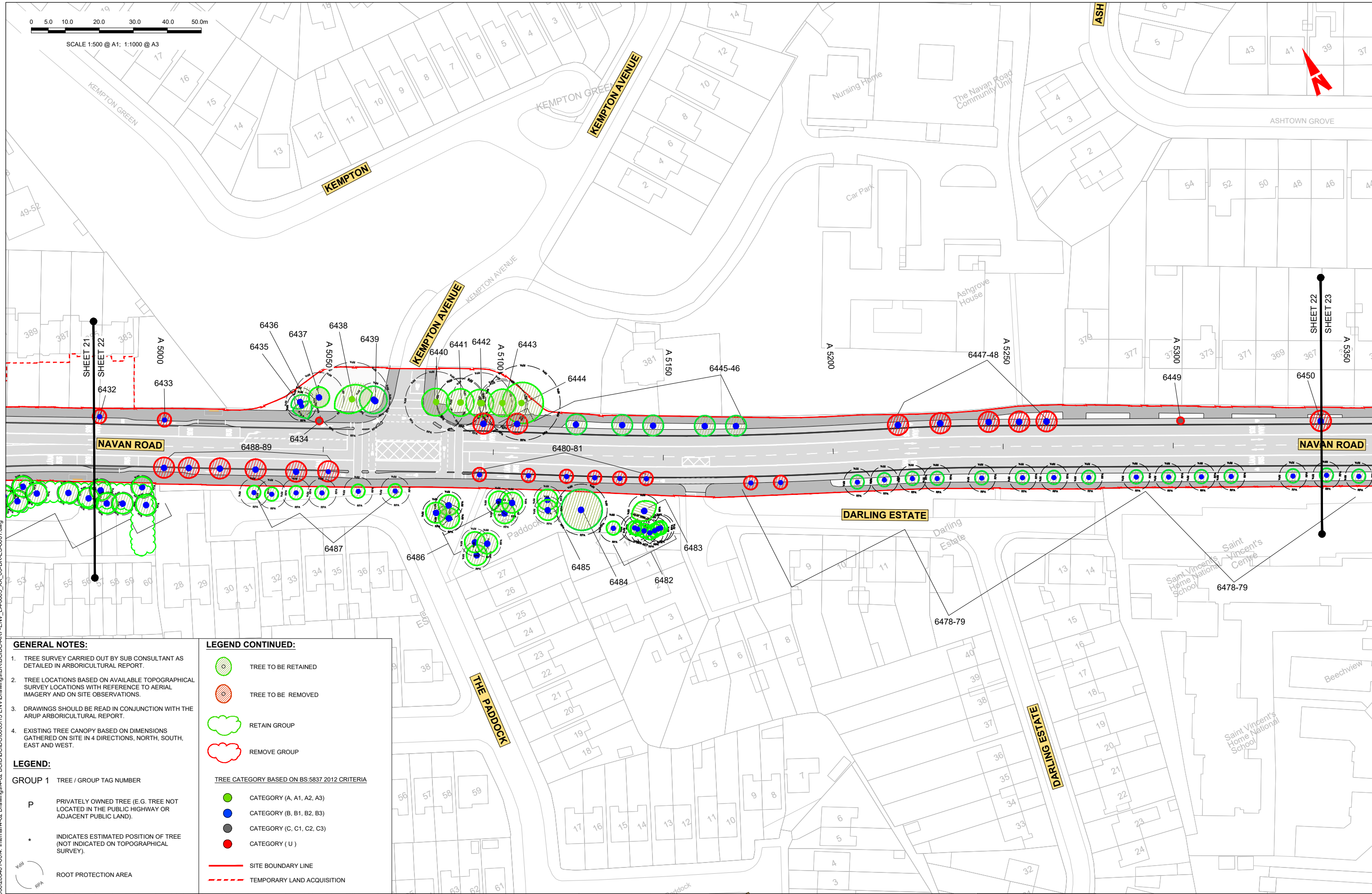
Client
NTA
Udarás Náisiúnta Iompair
National Transport Authority

Engineering Designer
ARUP
ARBOR CARE
Department
Groundwork Care Science

Date	04/04/2022	Scale	1:500 @ A1 1:1000 @ A3	Drawn	BM	Checked	BD	Approved	DC
Project Code	BCIDC	Originator Code	ARP	OMS Code	268401-00		Drawing File Name	BCIDC-ARP-ENV_LA-0005_XX_00-DR-ES-0021	
Sheet Number	21 of 40	Status	A	Rev	M01				



SCALE 1:500 @ A1; 1:1000 @ A3



GENERAL NOTES:

1. TREE SURVEY CARRIED OUT BY SUB CONSULTANT AS DETAILED IN ARBORICULTURAL REPORT.
2. TREE LOCATIONS BASED ON AVAILABLE TOPOGRAPHICAL SURVEY LOCATIONS WITH REFERENCE TO AERIAL IMAGERY AND ON SITE OBSERVATIONS.
3. DRAWINGS SHOULD BE READ IN CONJUNCTION WITH THE ARUP ARBORICULTURAL REPORT.
4. EXISTING TREE CANOPY BASED ON DIMENSIONS GATHERED ON SITE IN 4 DIRECTIONS, NORTH, SOUTH, EAST AND WEST.

LEGEND:

- GROUP 1 TREE / GROUP TAG NUMBER**
- P PRIVATELY OWNED TREE (E.G. TREE NOT LOCATED IN THE PUBLIC HIGHWAY OR ADJACENT PUBLIC LAND).
 - * INDICATES ESTIMATED POSITION OF TREE (NOT INDICATED ON TOPOGRAPHICAL SURVEY).
 - Root Protection Area (RPA)

LEGEND CONTINUED:

- TREE TO BE RETAINED
 - TREE TO BE REMOVED
 - RETAIN GROUP
 - REMOVE GROUP
- TREE CATEGORY BASED ON BS:5837 2012 CRITERIA**
- CATEGORY (A, A1, A2, A3)
 - CATEGORY (B, B1, B2, B3)
 - CATEGORY (C, C1, C2, C3)
 - CATEGORY (U)
- SITE BOUNDARY LINE
 - TEMPORARY LAND ACQUISITION

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Rev	Date	Drn	Chk'd	App'd	Description
M01	04/04/2022	BM	BD	DC	ISSUE FOR PHASE 4: PLANNING

Client: **NTA**
 Udarás Náisiúnta Iompair
 National Transport Authority

Engineering Designer: **ARUP**
 Drawn: BM, Checked: BD, Approved: DC

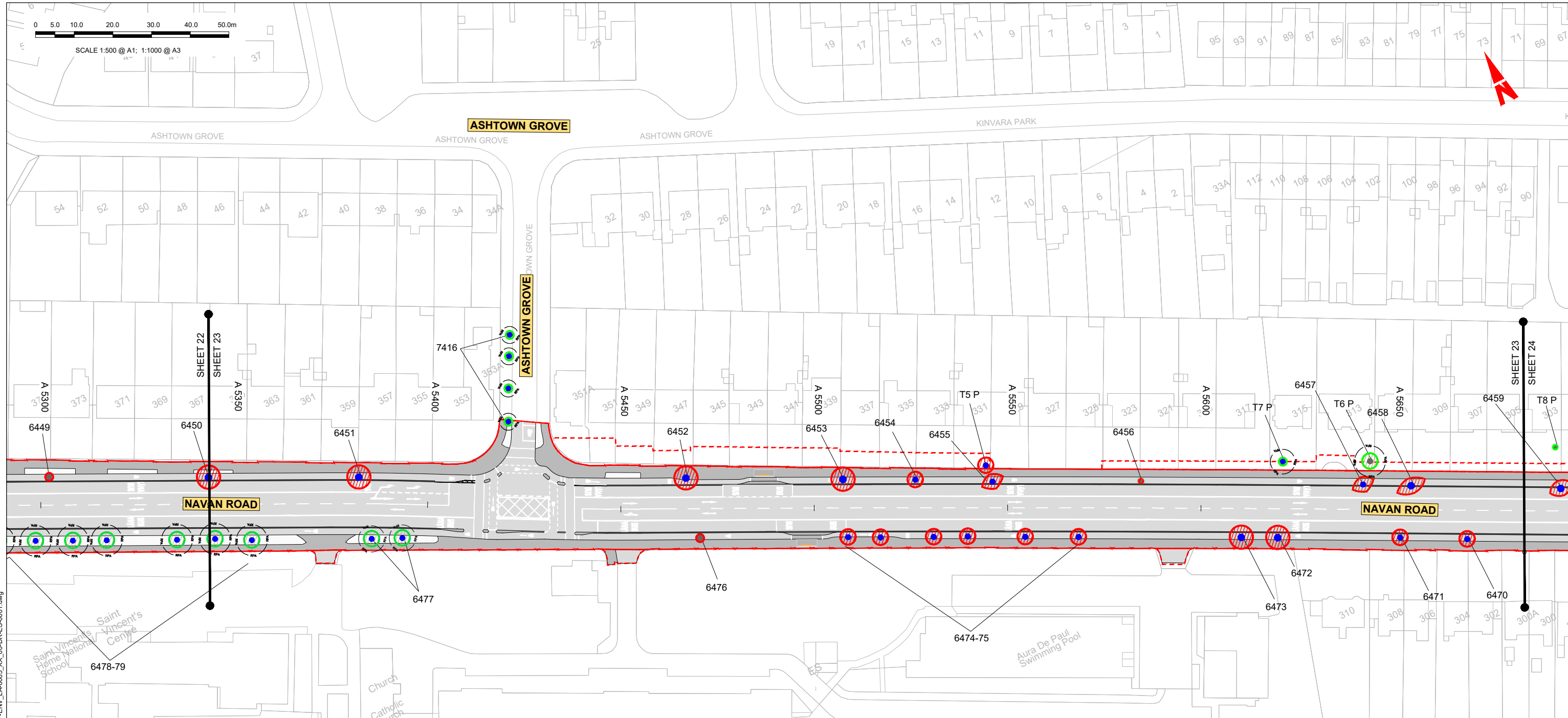
Programme Title: **BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS**
 Drawing Title: **BLANCHARDSTOWN TO CITY CENTRE CORE BUS CORRIDOR SCHEME TREE PROTECTION PLAN**

Date: 04/04/2022	Scale: 1:500 @ A1, 1:1000 @ A3	Drawn: BM	Checked: BD	Approved: DC
Project Code: BCIDC	Originator Code: ARP	OMS Code: 268401-00	Drawing File Name: BCIDC-ARP-ENV_LA-0005_XX_00-DR-ES-0022	Sheet Number: 22 of 40

Status: A	Rev: M01
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SCALE 1:500 @ A1; 1:1000 @ A3



GENERAL NOTES:

- TREE SURVEY CARRIED OUT BY SUB CONSULTANT AS DETAILED IN ARBORICULTURAL REPORT.
- TREE LOCATIONS BASED ON AVAILABLE TOPOGRAPHICAL SURVEY LOCATIONS WITH REFERENCE TO AERIAL IMAGERY AND ON SITE OBSERVATIONS.
- DRAWINGS SHOULD BE READ IN CONJUNCTION WITH THE ARUP ARBORICULTURAL REPORT.
- EXISTING TREE CANOPY BASED ON DIMENSIONS GATHERED ON SITE IN 4 DIRECTIONS, NORTH, SOUTH, EAST AND WEST.

LEGEND:

- GROUP 1 TREE / GROUP TAG NUMBER**
- P PRIVATELY OWNED TREE (E.G. TREE NOT LOCATED IN THE PUBLIC HIGHWAY OR ADJACENT PUBLIC LAND).
 - * INDICATES ESTIMATED POSITION OF TREE (NOT INDICATED ON TOPOGRAPHICAL SURVEY).
 - Root Protection Area (PPA)

LEGEND CONTINUED:

- TREE TO BE RETAINED (Green circle with diagonal lines)
- TREE TO BE REMOVED (Red circle with diagonal lines)
- RETAIN GROUP (Green cloud shape)
- REMOVE GROUP (Red cloud shape)
- TREE CATEGORY BASED ON BS:5837 2012 CRITERIA
 - CATEGORY (A, A1, A2, A3) (Green circle)
 - CATEGORY (B, B1, B2, B3) (Blue circle)
 - CATEGORY (C, C1, C2, C3) (Grey circle)
 - CATEGORY (U) (Red circle)
- SITE BOUNDARY LINE (Red solid line)
- TEMPORARY LAND ACQUISITION (Red dashed line)

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M01	04/04/2022	BM	BD	DC	ISSUE FOR PHASE 4: PLANNING

Client: **NTA**
 Udarás Náisiúnta Iompair
 National Transport Authority

Engineering Designer: **ARUP**

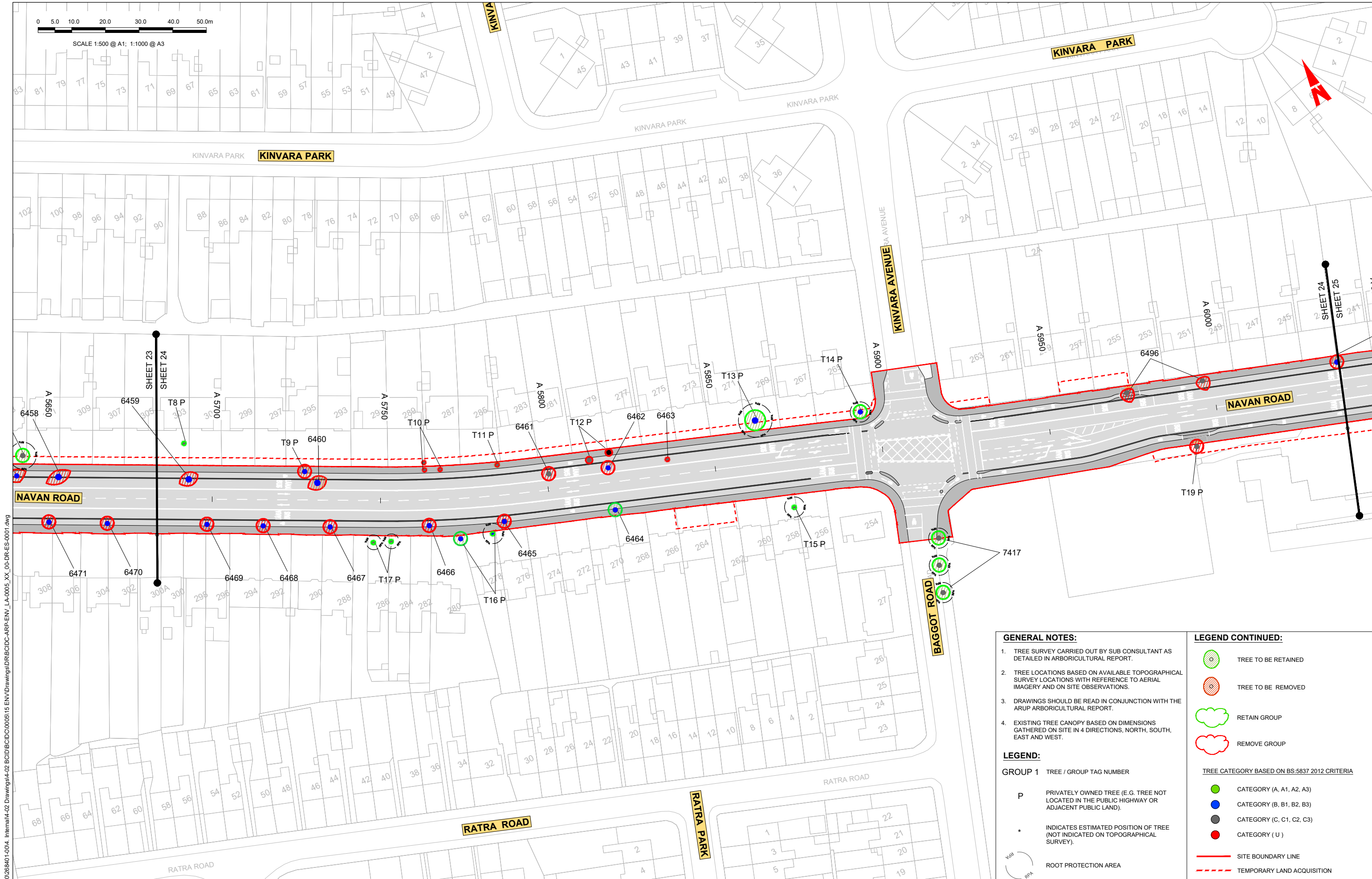
Date	04/04/2022	Scale	1:500 @ A1 1:1000 @ A3	Drawn	BM	Checked	BD	Approved	DC
Project Code	BCIDC	Originator Code	ARP	OMS Code	268401-00				

Programme Title		BUSCONNECTS DUBLIN		
Drawing Title		CORE BUS CORRIDORS INFRASTRUCTURE WORKS		
Drawing File Name		BCIDC-ARP-ENV_LA-0005_XX_00-DR-ES-0023		
Sheet Number	23 of 40	Status	A	
Rev	M01			

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SCALE 1:500 @ A1; 1:1000 @ A3



GENERAL NOTES:

- TREE SURVEY CARRIED OUT BY SUB CONSULTANT AS DETAILED IN ARBORICULTURAL REPORT.
- TREE LOCATIONS BASED ON AVAILABLE TOPOGRAPHICAL SURVEY LOCATIONS WITH REFERENCE TO AERIAL IMAGERY AND ON SITE OBSERVATIONS.
- DRAWINGS SHOULD BE READ IN CONJUNCTION WITH THE ARUP ARBORICULTURAL REPORT.
- EXISTING TREE CANOPY BASED ON DIMENSIONS GATHERED ON SITE IN 4 DIRECTIONS, NORTH, SOUTH, EAST AND WEST.

LEGEND:

GROUP 1 TREE / GROUP TAG NUMBER

P PRIVATELY OWNED TREE (E.G. TREE NOT LOCATED IN THE PUBLIC HIGHWAY OR ADJACENT PUBLIC LAND).

* INDICATES ESTIMATED POSITION OF TREE (NOT INDICATED ON TOPOGRAPHICAL SURVEY).

Root Protection Area

LEGEND CONTINUED:

- TREE TO BE RETAINED
- TREE TO BE REMOVED
- RETAIN GROUP
- REMOVE GROUP

TREE CATEGORY BASED ON BS:5837 2012 CRITERIA

- CATEGORY (A, A1, A2, A3)
- CATEGORY (B, B1, B2, B3)
- CATEGORY (C, C1, C2, C3)
- CATEGORY (U)

— SITE BOUNDARY LINE
- - - TEMPORARY LAND ACQUISITION

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M01	04/04/2022	BM	BD	DC	ISSUE FOR PHASE 4: PLANNING

Client

NTA
Udarás Náisiúnta Iompair
National Transport Authority

Date 04/04/2022 Scale 1:500 @ A1
1:1000 @ A3

Engineering Designer

ARUP

Drawn BM Checked BD Approved DC

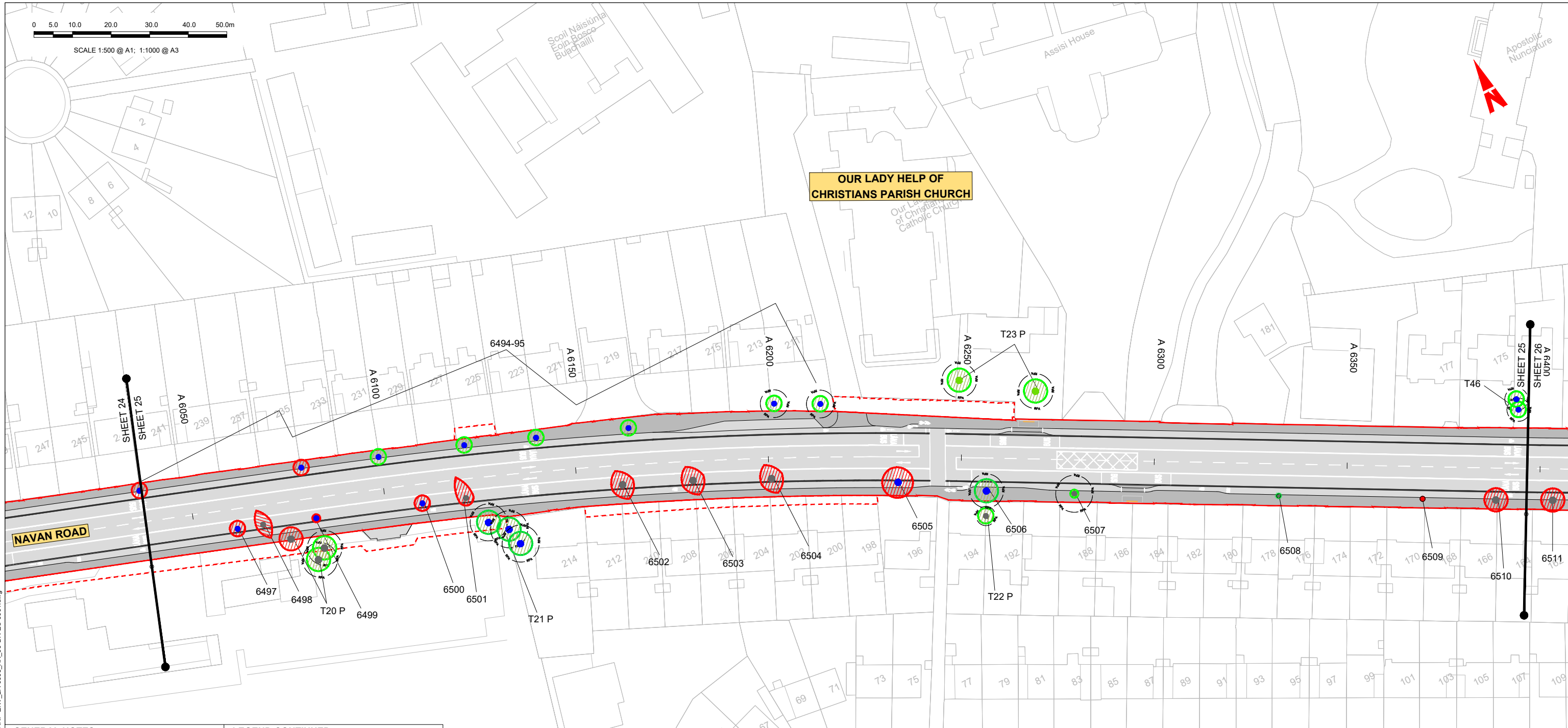
Project Code BCIDC Originator Code ARP OMS Code 268401-00

Programme Title BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS			
Drawing Title BLANCHARDSTOWN TO CITY CENTRE CORE BUS CORRIDOR SCHEME TREE PROTECTION PLAN			
Drawing File Name BCIDC-ARP-ENV_LA-0005_XX_00-DR-ES-0024	Sheet Number 24 of 40	Status A	Rev M01

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0 5.0 10.0 20.0 30.0 40.0 50.0m

SCALE 1:500 @ A1; 1:1000 @ A3



GENERAL NOTES:

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4. EXISTING TREE CANOPY BASED ON DIMENSIONS GATHERED ON SITE IN 4 DIRECTIONS, NORTH, SOUTH, EAST AND WEST.

LEGEND:

- GROUP 1 TREE / GROUP TAG NUMBER**
- P PRIVATELY OWNED TREE (E.G. TREE NOT LOCATED IN THE PUBLIC HIGHWAY OR ADJACENT PUBLIC LAND).
 - * INDICATES ESTIMATED POSITION OF TREE (NOT INDICATED ON TOPOGRAPHICAL SURVEY).
 - Root Protection Area (PPA)

LEGEND CONTINUED:

- TREE TO BE RETAINED
- TREE TO BE REMOVED
- RETAIN GROUP
- REMOVE GROUP
- TREE CATEGORY BASED ON BS:5837 2012 CRITERIA
 - CATEGORY (A, A1, A2, A3)
 - CATEGORY (B, B1, B2, B3)
 - CATEGORY (C, C1, C2, C3)
 - CATEGORY (U)
- SITE BOUNDARY LINE
- TEMPORARY LAND ACQUISITION

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Rev	Date	Drn	Chk'd	App'd	Description
M01	04/04/2022	BM	BD	DC	ISSUE FOR PHASE 4: PLANNING

Client
NTA
 Údarás Náisiúnta Iompair
 National Transport Authority

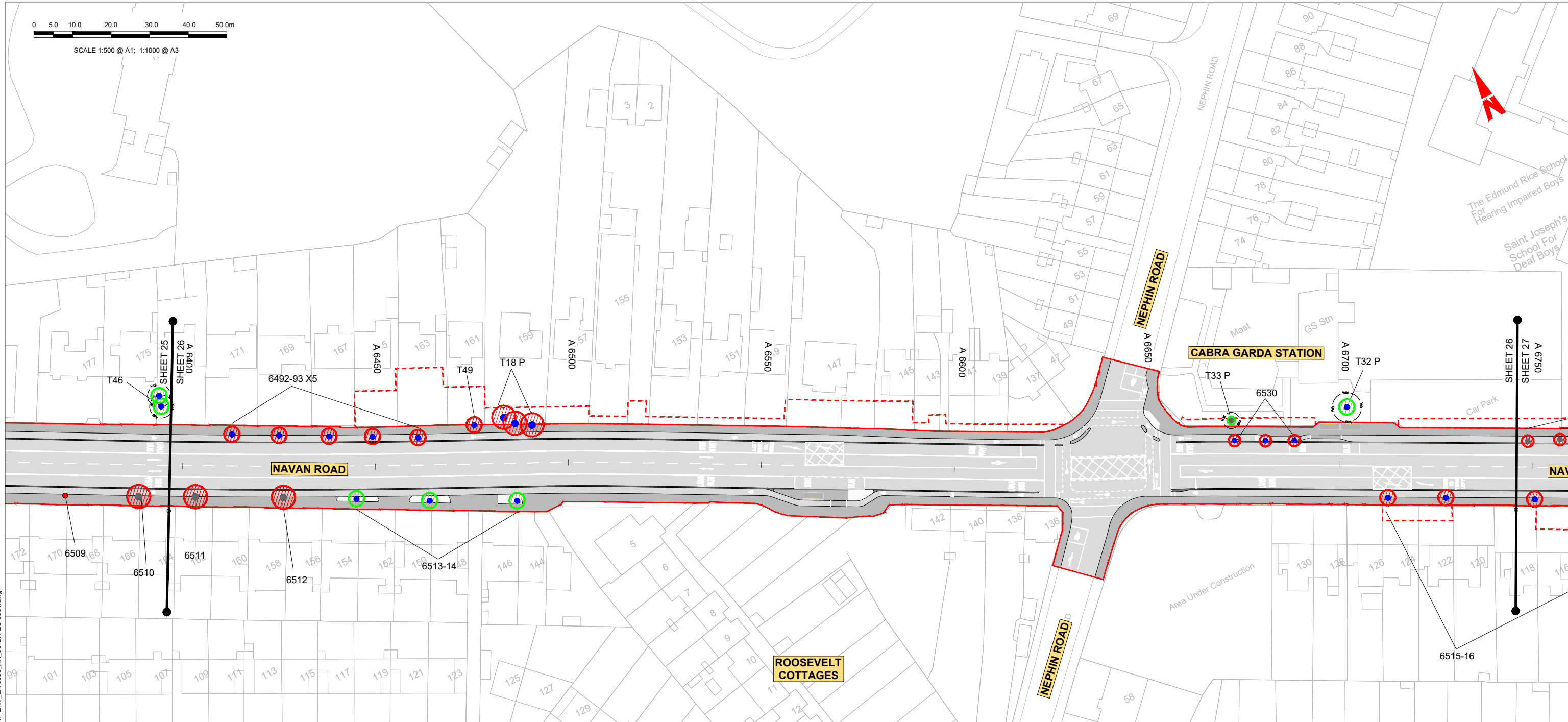
Engineering Designer
ARUP
 Design & Construction
 Department
 Geomatics & Survey Science

Programme Title BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS	
Drawing Title BLANCHARDSTOWN TO CITY CENTRE CORE BUS CORRIDOR SCHEME TREE PROTECTION PLAN	
Drawing File Name BCIDC-ARP-ENV_LA-0005_XX_00-DR-ES-0025	Sheet Number 25 of 40
Status A	Rev M01

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SCALE 1:500 @ A1; 1:1000 @ A3



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- DRAWINGS SHOULD BE READ IN CONJUNCTION WITH THE ARUP ARBORICULTURAL REPORT.
- EXISTING TREE CANOPY BASED ON DIMENSIONS GATHERED ON SITE IN 4 DIRECTIONS, NORTH, SOUTH, EAST AND WEST.

LEGEND:

- GROUP 1 TREE / GROUP TAG NUMBER**
- P PRIVATELY OWNED TREE (E.G. TREE NOT LOCATED IN THE PUBLIC HIGHWAY OR ADJACENT PUBLIC LAND).
 - * INDICATES ESTIMATED POSITION OF TREE (NOT INDICATED ON TOPOGRAPHICAL SURVEY).
 - Root Protection Area (RPA) symbol.

LEGEND CONTINUED:

- TREE TO BE RETAINED (Green circle with diagonal lines)
- TREE TO BE REMOVED (Red circle with diagonal lines)
- RETAIN GROUP (Green cloud shape)
- REMOVE GROUP (Red cloud shape)
- TREE CATEGORY BASED ON BS:5837 2012 CRITERIA
 - CATEGORY (A, A1, A2, A3) (Green circle)
 - CATEGORY (B, B1, B2, B3) (Blue circle)
 - CATEGORY (C, C1, C2, C3) (Grey circle)
 - CATEGORY (U) (Red circle)
- SITE BOUNDARY LINE (Red dashed line)
- TEMPORARY LAND ACQUISITION (Red dashed line)

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Rev	Date	Drn	Chk'd	App'd	Description
M01	04/04/2022	BM	BD	DC	ISSUE FOR PHASE 4: PLANNING

Client: **NTA** Udarás Náisiúnta Iompair National Transport Authority

Engineering Designer: **ARUP**

Date: 04/04/2022 Scale: 1:500 @ A1, 1:1000 @ A3

Project Code: BCIDC Originator Code: ARP

Drawn: BM Checked: BD Approved: DC

OMS Code: 268401-00

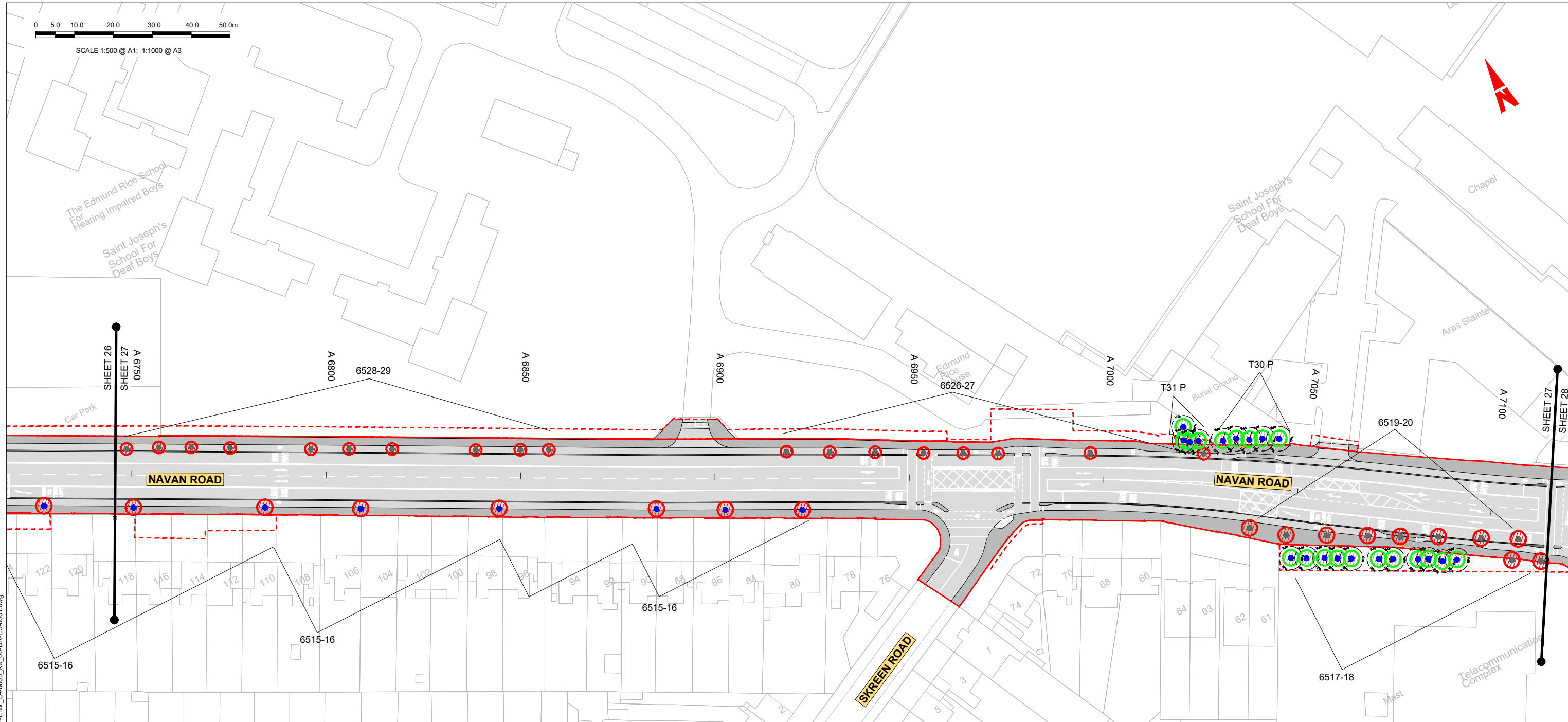
Programme Title: BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS			
Drawing Title: BLANCHARDSTOWN TO CITY CENTRE CORE BUS CORRIDOR SCHEME TREE PROTECTION PLAN			
Drawing File Name: BCIDC-ARP-ENV_LA-0005_XX_00-DR-ES-0026	Sheet Number: 26 of 40	Status: A	Rev: M01

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SCALE 1:500 @ A1; 1:1000 @ A3



GENERAL NOTES:

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LEGEND:

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 - * INDICATES ESTIMATED POSITION OF TREE (NOT INDICATED ON TOPOGRAPHICAL SURVEY).
 - ROOT PROTECTION AREA

LEGEND CONTINUED:

- TREE TO BE RETAINED
 - TREE TO BE REMOVED
 - RETAIN GROUP
 - REMOVE GROUP
- TREE CATEGORY BASED ON BS:5837 2012 CRITERIA**
- CATEGORY (A, A1, A2, A3)
 - CATEGORY (B, B1, B2, B3)
 - CATEGORY (C, C1, C2, C3)
 - CATEGORY (U)
- SITE BOUNDARY LINE
 - TEMPORARY LAND ACQUISITION

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M01	04/04/2022	BM	BD	DC	ISSUE FOR PHASE 4: PLANNING

Client
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 Údarás Náisiúnta Iompair
 National Transport Authority

Engineering Designer
 ARUP
 ARUP
 Design
 Consulting
 Group
 Ireland

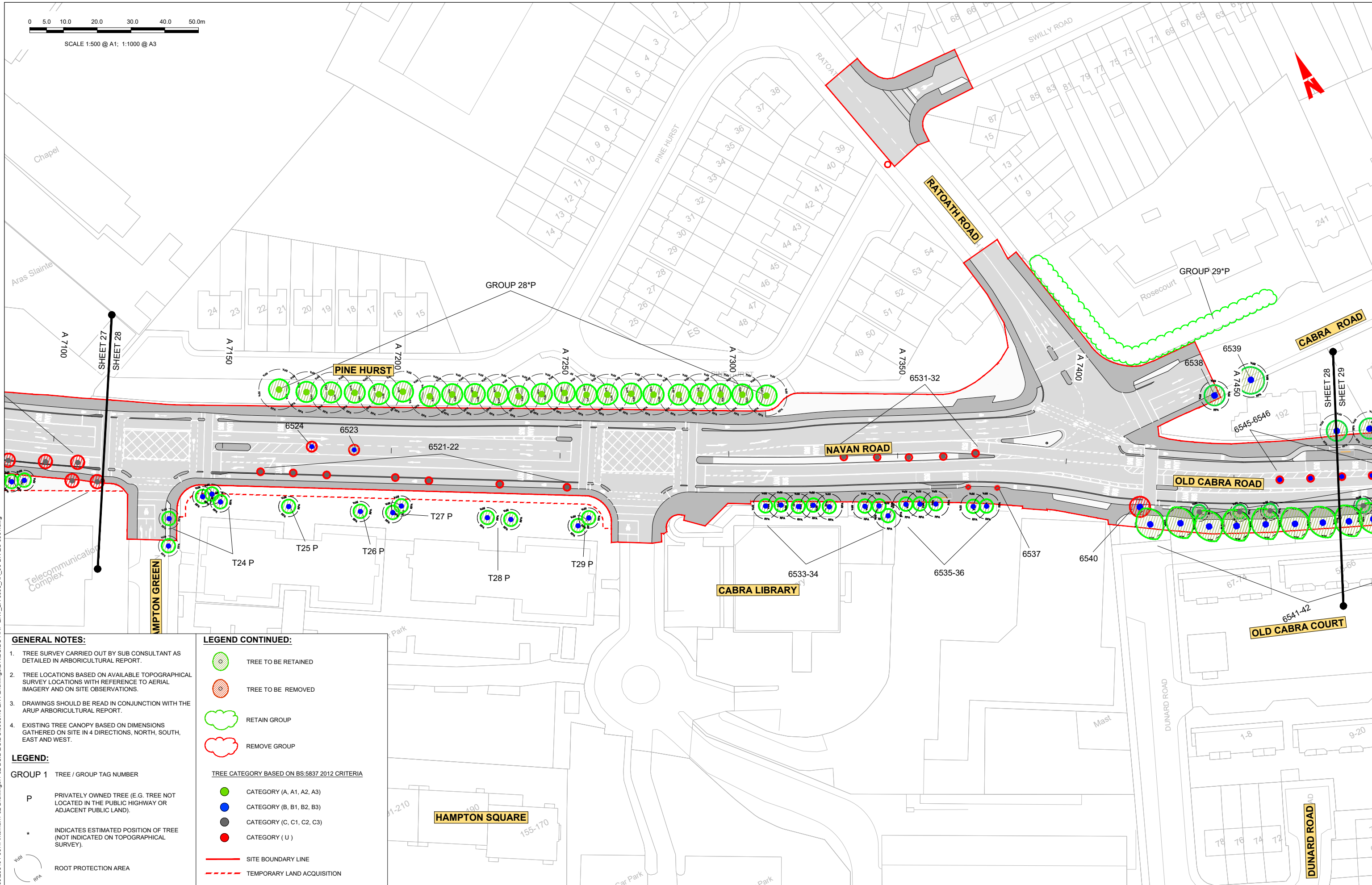
Date	04/04/2022	Scale	1:500 @ A1 1:1000 @ A3	Drawn	BM	Checked	BD	Approved	DC
Project Code	BCIDC	Originator Code	ARP	OMS Code	268401-00				

Programme Title		BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS	
Drawing Title		BLANCHARDSTOWN TO CITY CENTRE CORE BUS CORRIDOR SCHEME TREE PROTECTION PLAN	
Drawing File Name	BCIDC-ARP-ENV_LA-0005_XX_00-DR-ES-0027	Sheet Number	27 of 40
Status	A	Rev	M01

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SCALE 1:500 @ A1; 1:1000 @ A3



GENERAL NOTES:

1. TREE SURVEY CARRIED OUT BY SUB CONSULTANT AS DETAILED IN ARBORICULTURAL REPORT.
2. TREE LOCATIONS BASED ON AVAILABLE TOPOGRAPHICAL SURVEY LOCATIONS WITH REFERENCE TO AERIAL IMAGERY AND ON SITE OBSERVATIONS.
3. DRAWINGS SHOULD BE READ IN CONJUNCTION WITH THE ARUP ARBORICULTURAL REPORT.
4. EXISTING TREE CANOPY BASED ON DIMENSIONS GATHERED ON SITE IN 4 DIRECTIONS, NORTH, SOUTH, EAST AND WEST.

LEGEND:

- GROUP 1 TREE / GROUP TAG NUMBER**
- P PRIVATELY OWNED TREE (E.G. TREE NOT LOCATED IN THE PUBLIC HIGHWAY OR ADJACENT PUBLIC LAND).
 - * INDICATES ESTIMATED POSITION OF TREE (NOT INDICATED ON TOPOGRAPHICAL SURVEY).
 - ROOT PROTECTION AREA

LEGEND CONTINUED:

- TREE TO BE RETAINED
 - TREE TO BE REMOVED
 - RETAIN GROUP
 - REMOVE GROUP
- TREE CATEGORY BASED ON BS:5837 2012 CRITERIA**
- CATEGORY (A, A1, A2, A3)
 - CATEGORY (B, B1, B2, B3)
 - CATEGORY (C, C1, C2, C3)
 - CATEGORY (U)
- SITE BOUNDARY LINE
 - TEMPORARY LAND ACQUISITION

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Rev	Date	Drn	Chk'd	App'd	Description
M01	04/04/2022	BM	BD	DC	ISSUE FOR PHASE 4: PLANNING

Client
NTA
 Udarás Náisiúnta Iompair
 National Transport Authority

Engineering Designer
ARUP
 Drawn BM
 Checked BD
 Approved DC

Programme Title
BUSCONNECTS DUBLIN
CORE BUS CORRIDORS INFRASTRUCTURE WORKS

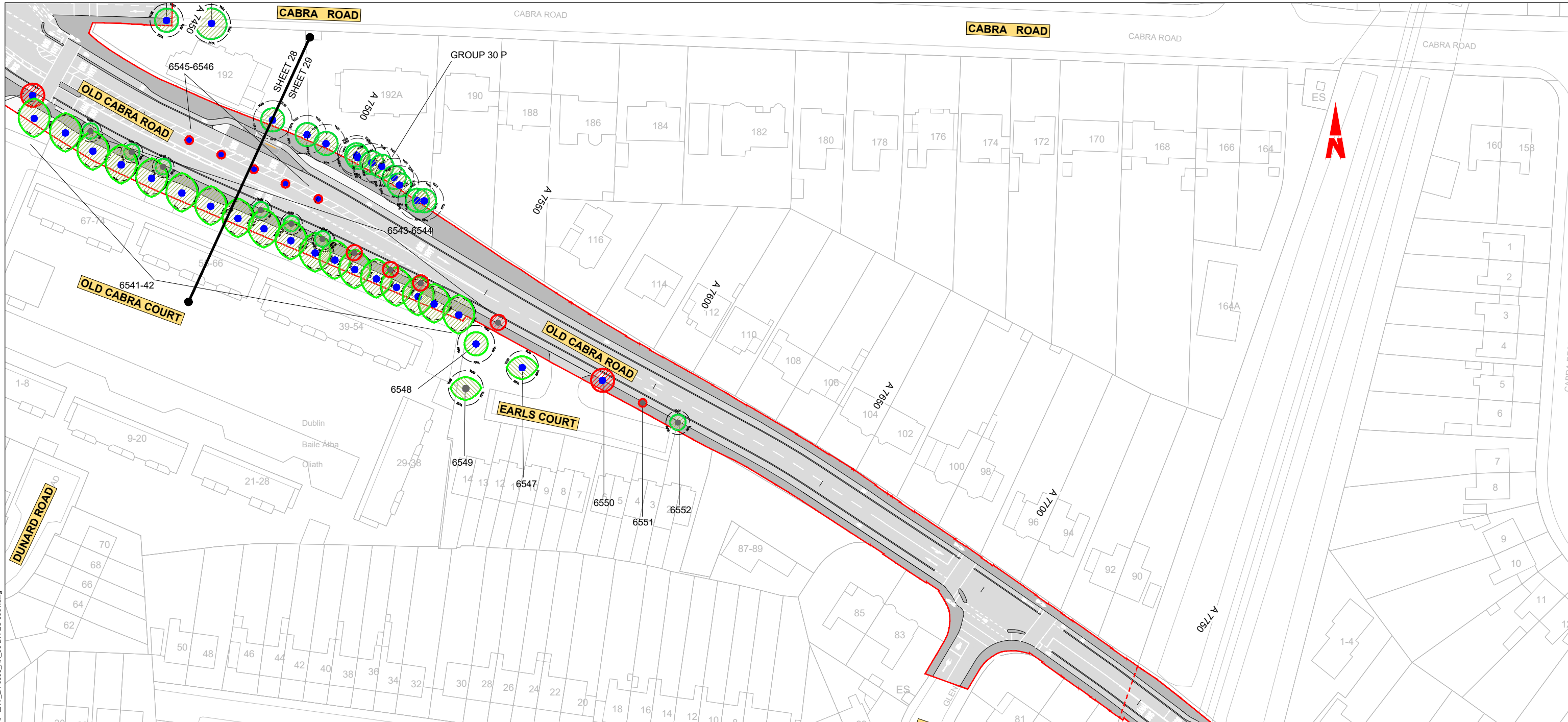
Drawing Title
 BLANCHARDSTOWN TO CITY CENTRE CORE BUS CORRIDOR SCHEME
 TREE PROTECTION PLAN

Drawing File Name
 BCIDC-ARP-ENV_LA-0005_XX_00-DR-ES-0028

Sheet Number
 28 of 40

Status
 A

Rev
 M01



GENERAL NOTES:

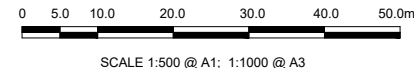
1. TREE SURVEY CARRIED OUT BY SUB CONSULTANT AS DETAILED IN ARBORICULTURAL REPORT.
2. TREE LOCATIONS BASED ON AVAILABLE TOPOGRAPHICAL SURVEY LOCATIONS WITH REFERENCE TO AERIAL IMAGERY AND ON SITE OBSERVATIONS.
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- *** INDICATES ESTIMATED POSITION OF TREE (NOT INDICATED ON TOPOGRAPHICAL SURVEY).
- PPA** ROOT PROTECTION AREA

LEGEND CONTINUED:

- TREE TO BE RETAINED
 - TREE TO BE REMOVED
 - RETAIN GROUP
 - REMOVE GROUP
- TREE CATEGORY BASED ON BS:5837 2012 CRITERIA**
- CATEGORY (A, A1, A2, A3)
 - CATEGORY (B, B1, B2, B3)
 - CATEGORY (C, C1, C2, C3)
 - CATEGORY (U)
- SITE BOUNDARY LINE
 - TEMPORARY LAND ACQUISITION



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Transverse Mercator Grid (ITM) as defined by OSI active local GPS station.
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M01	04/04/2022	BM	BD	DC	ISSUE FOR PHASE 4: PLANNING

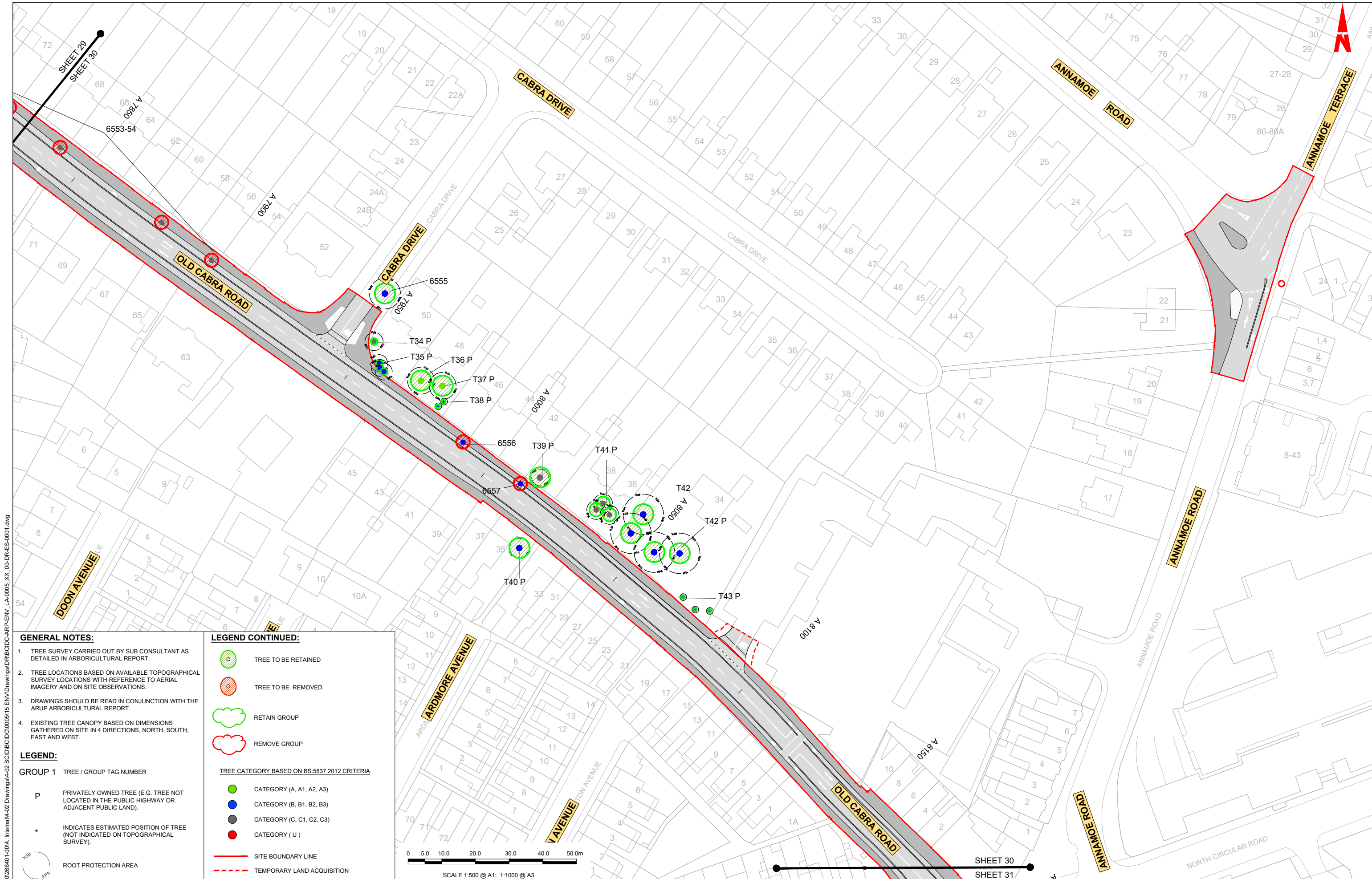
Client

Engineering Designer

Programme Title		BUSCONNECTS DUBLIN	
Drawing Title		CORE BUS CORRIDORS INFRASTRUCTURE WORKS	
Drawing File Name		BLANCHARDSTOWN TO CITY CENTRE CORE BUS CORRIDOR SCHEME TREE PROTECTION PLAN	
Date	Scale	Drawn	Checked
04/04/2022	1:500 @ A1 1:1000 @ A3	BM	BD
Project Code	Originator Code	OMS Code	Approved
BCIDC	ARP	268401-00	DC
Sheet Number	Status	Rev	
29 of 40	A	M01	

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GENERAL NOTES:

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2. TREE LOCATIONS BASED ON AVAILABLE TOPOGRAPHICAL SURVEY LOCATIONS WITH REFERENCE TO AERIAL IMAGERY AND ON SITE OBSERVATIONS.
3. DRAWINGS SHOULD BE READ IN CONJUNCTION WITH THE ARUP ARBORICULTURAL REPORT.
4. EXISTING TREE CANOPY BASED ON DIMENSIONS GATHERED ON SITE IN 4 DIRECTIONS, NORTH, SOUTH, EAST AND WEST.

LEGEND:

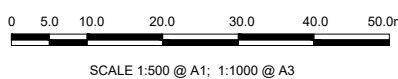
- GROUP 1 TREE / GROUP TAG NUMBER**
- P PRIVATELY OWNED TREE (E.G. TREE NOT LOCATED IN THE PUBLIC HIGHWAY OR ADJACENT PUBLIC LAND).
 - * INDICATES ESTIMATED POSITION OF TREE (NOT INDICATED ON TOPOGRAPHICAL SURVEY).
 - ROOT PROTECTION AREA

LEGEND CONTINUED:

- TREE TO BE RETAINED
 - TREE TO BE REMOVED
 - RETAIN GROUP
 - REMOVE GROUP
- TREE CATEGORY BASED ON BS:5837 2012 CRITERIA**
- CATEGORY (A, A1, A2, A3)
 - CATEGORY (B, B1, B2, B3)
 - CATEGORY (C, C1, C2, C3)
 - CATEGORY (U)
- SITE BOUNDARY LINE
 - TEMPORARY LAND ACQUISITION

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M01	04/04/2022	BM	BD	DC	ISSUE FOR PHASE 4: PLANNING

Client: **NTA**
 Udarás Náisiúnta Iompair
 National Transport Authority

Engineering Designer: **ARUP**
 Drawn: BM, Checked: BD, Approved: DC

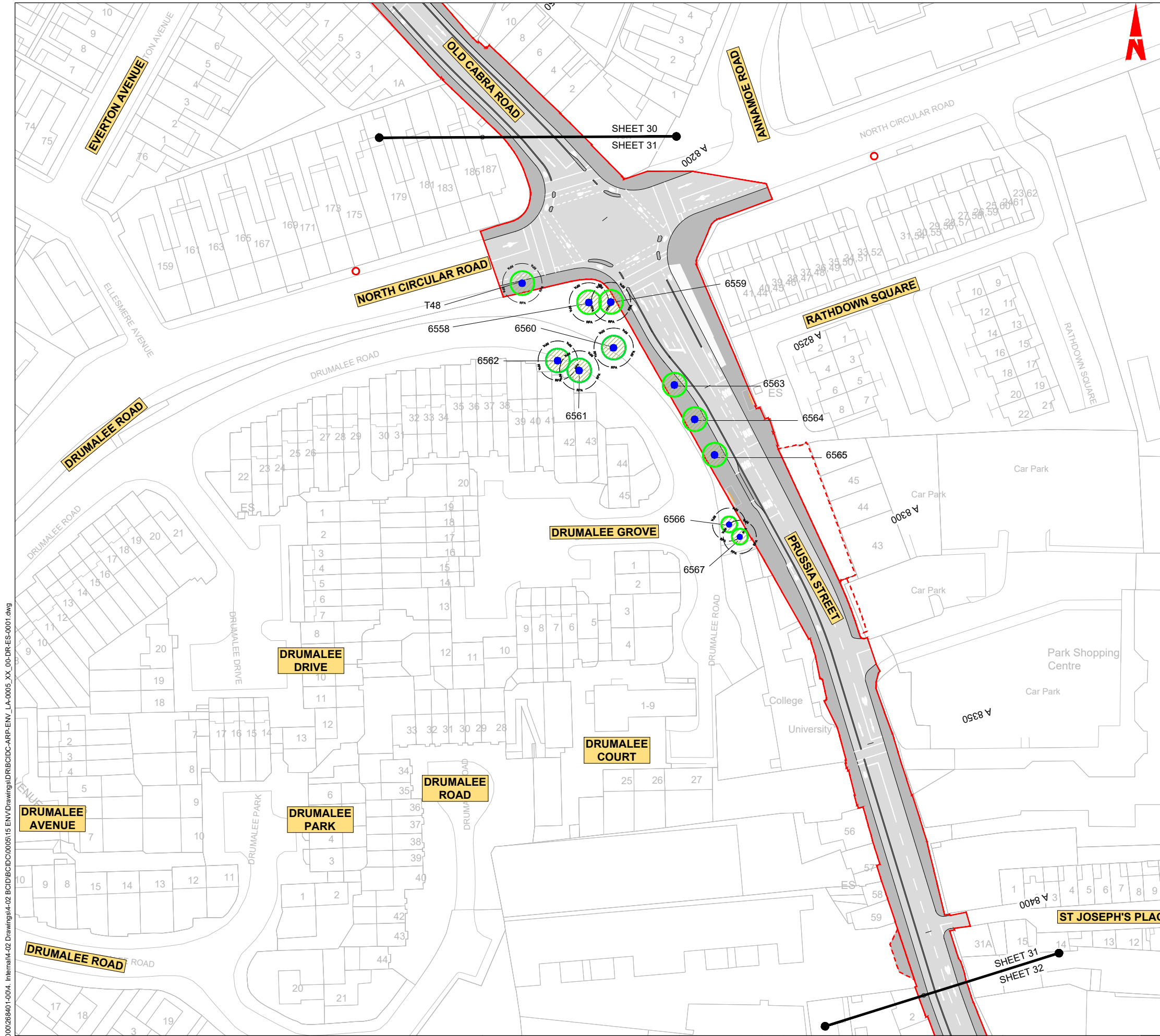
Date: 04/04/2022, Scale: 1:500 @ A1, 1:1000 @ A3

Project Code: BCIDC, Originator Code: ARP, OMS Code: 268401-00

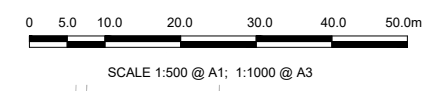
Programme Title: BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS			
Drawing Title: BLANCHARDSTOWN TO CITY CENTRE CORE BUS CORRIDOR SCHEME TREE PROTECTION PLAN			
Drawing File Name: BCIDC-ARP-ENV_LA-0005_XX_00-DR-ES-0030	Sheet Number: 30 of 40	Status: A	Rev: M01

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- GENERAL NOTES:**
- TREE SURVEY CARRIED OUT BY SUB CONSULTANT AS DETAILED IN ARBORICULTURAL REPORT.
 - TREE LOCATIONS BASED ON AVAILABLE TOPOGRAPHICAL SURVEY LOCATIONS WITH REFERENCE TO AERIAL IMAGERY AND ON SITE OBSERVATIONS.
 - DRAWINGS SHOULD BE READ IN CONJUNCTION WITH THE ARUP ARBORICULTURAL REPORT.
 - EXISTING TREE CANOPY BASED ON DIMENSIONS GATHERED ON SITE IN 4 DIRECTIONS, NORTH, SOUTH, EAST AND WEST.
- LEGEND:**
- GROUP 1 TREE / GROUP TAG NUMBER**
- P PRIVATELY OWNED TREE (E.G. TREE NOT LOCATED IN THE PUBLIC HIGHWAY OR ADJACENT PUBLIC LAND).
 - * INDICATES ESTIMATED POSITION OF TREE (NOT INDICATED ON TOPOGRAPHICAL SURVEY).
- LEGEND CONTINUED:**
- TREE TO BE RETAINED
 - TREE TO BE REMOVED
 - RETAIN GROUP
 - REMOVE GROUP
- TREE CATEGORY BASED ON BS:5837 2012 CRITERIA**
- CATEGORY (A, A1, A2, A3)
 - CATEGORY (B, B1, B2, B3)
 - CATEGORY (C, C1, C2, C3)
 - CATEGORY (U)
- SITE BOUNDARY LINE
- - - TEMPORARY LAND ACQUISITION
- Root Protection Area (RPA) symbol: a circle with 'RPA' and 'Tree' labels.



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M01	04/04/2022	BM	BD	DC	ISSUE FOR PHASE 4: PLANNING

Client: **NTA**
Udarás Náisiúnta Iompair
National Transport Authority

Engineering Designer: **ARUP**
Department: Groundwater Care Science

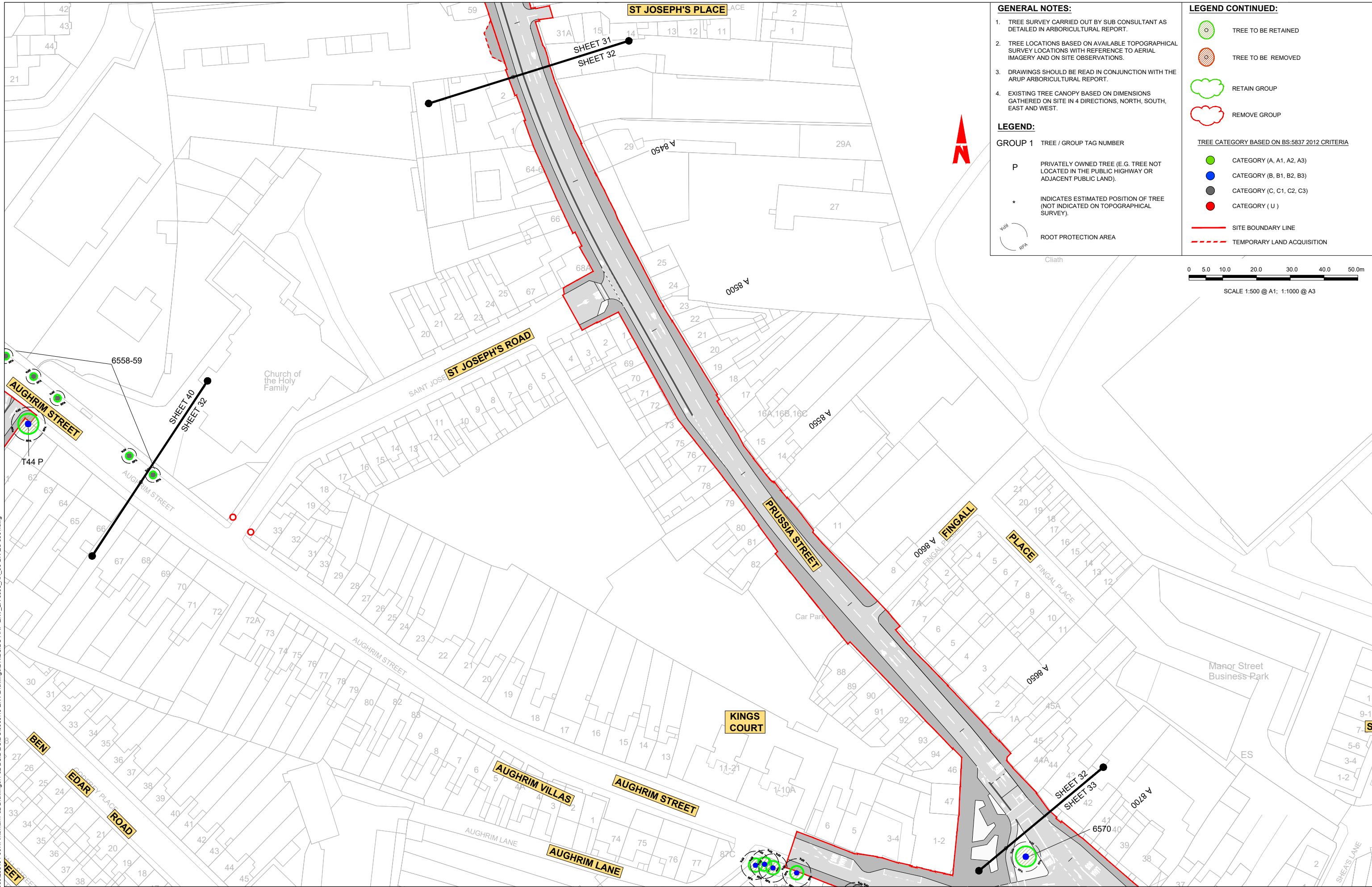
Date: 04/04/2022
Scale: 1:500 @ A1
1:1000 @ A3

Drawn: BM
Checked: BD
Approved: DC

Project Code: BCIDC
Originator Code: ARP
OMS Code: 268401-00

Programme Title: BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS			
Drawing Title: BLANCHARDSTOWN TO CITY CENTRE CORE BUS CORRIDOR SCHEME TREE PROTECTION PLAN			
Drawing File Name: BCIDC-ARP-ENV_LA-0005_XX_00-DR-ES-0031	Sheet Number: 31 of 40	Status: A	Rev: M01

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GENERAL NOTES:

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- DRAWINGS SHOULD BE READ IN CONJUNCTION WITH THE ARUP ARBORICULTURAL REPORT.
- EXISTING TREE CANOPY BASED ON DIMENSIONS GATHERED ON SITE IN 4 DIRECTIONS, NORTH, SOUTH, EAST AND WEST.

LEGEND:

GROUP 1 TREE / GROUP TAG NUMBER

P PRIVATELY OWNED TREE (E.G. TREE NOT LOCATED IN THE PUBLIC HIGHWAY OR ADJACENT PUBLIC LAND).

* INDICATES ESTIMATED POSITION OF TREE (NOT INDICATED ON TOPOGRAPHICAL SURVEY).

Root Protection Area

LEGEND CONTINUED:

TREE TO BE RETAINED

TREE TO BE REMOVED

RETAIN GROUP

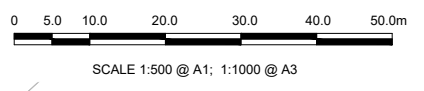
REMOVE GROUP

TREE CATEGORY BASED ON BS:5837 2012 CRITERIA

- CATEGORY (A, A1, A2, A3)
- CATEGORY (B, B1, B2, B3)
- CATEGORY (C, C1, C2, C3)
- CATEGORY (U)

SITE BOUNDARY LINE

TEMPORARY LAND ACQUISITION



\\global\europa\dublin\jobs\268400\268401-004_1\Internal\4-02 Drawings\4-02 BCID\BCID\000515 ENV\Drawings\DR\BCID-APP-ENV_LA-0005_XX_00-DR-ES-0001.dwg

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Rev	Date	Drn	Chk'd	App'd	Description
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Client

NTA
Udarás Náisiúnta Iompair
National Transport Authority

Date: 04/04/2022
Scale: 1:500 @ A1
1:1000 @ A3

Project Code: BCIDC
Originator Code: ARP

Engineering Designer

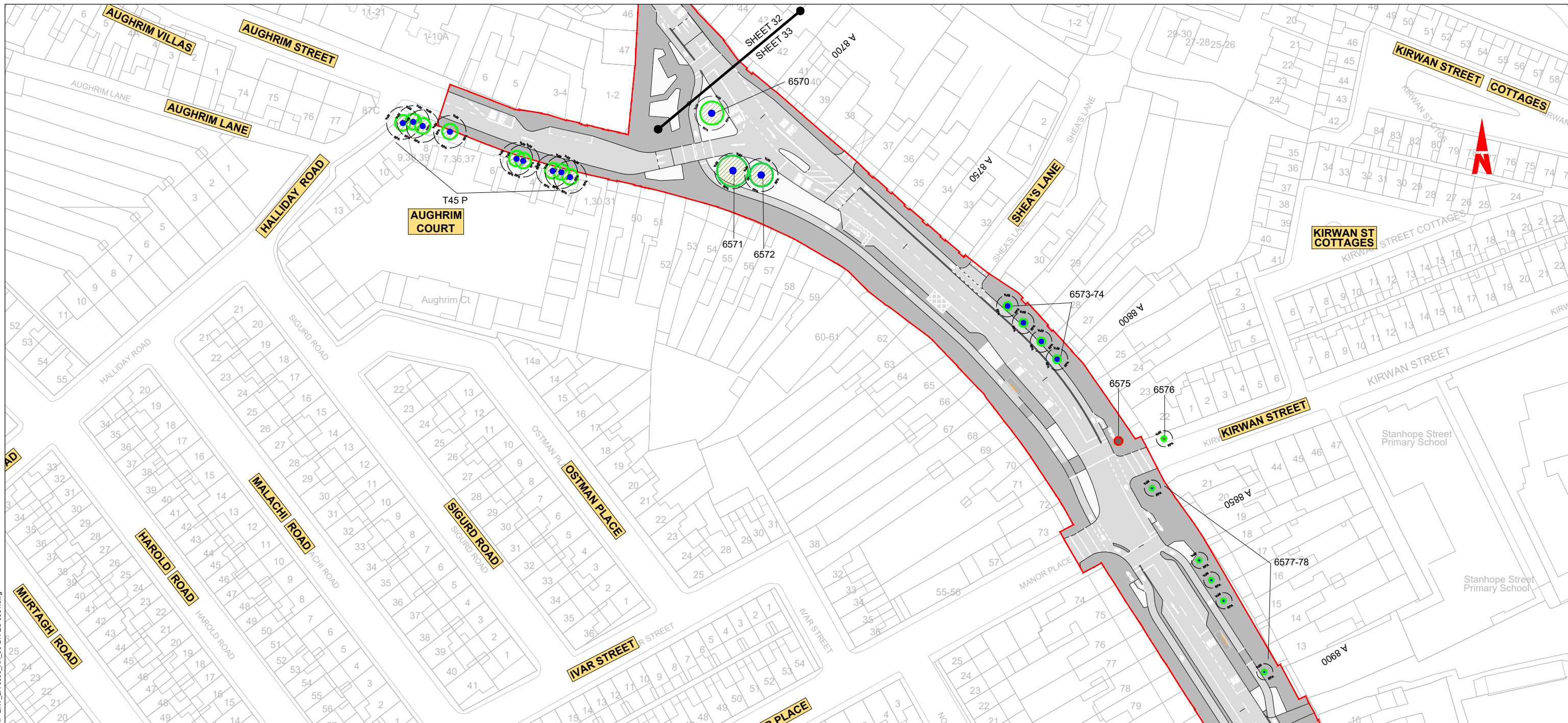
ARUP
ARBOR CONSULTANTS

Drawn: BM
Checked: BD
Approved: DC

OMS Code: 268401-00

Programme Title BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS			
Drawing Title BLANCHARDSTOWN TO CITY CENTRE CORE BUS CORRIDOR SCHEME TREE PROTECTION PLAN			
Drawing File Name	Sheet Number	Status	Rev
BCIDC-APP-ENV_LA-0005_XX_00-DR-ES-0032	32 of 40	A	M01

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GENERAL NOTES:

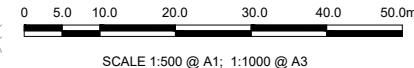
- TREE SURVEY CARRIED OUT BY SUB CONSULTANT AS DETAILED IN ARBORICULTURAL REPORT.
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 - * INDICATES ESTIMATED POSITION OF TREE (NOT INDICATED ON TOPOGRAPHICAL SURVEY).
 - ROOT PROTECTION AREA

LEGEND CONTINUED:

- TREE TO BE RETAINED
 - TREE TO BE REMOVED
 - RETAIN GROUP
 - REMOVE GROUP
- TREE CATEGORY BASED ON BS:5837 2012 CRITERIA**
- CATEGORY (A, A1, A2, A3)
 - CATEGORY (B, B1, B2, B3)
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- SITE BOUNDARY LINE
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M01	04/04/2022	BM	BD	DC	ISSUE FOR PHASE 4: PLANNING

Client: **NTA**
 Udarás Náisiúnta Iompair
 National Transport Authority

Engineering Designer: **ARUP**
 Department: Consulting
 Engineering Services

Date	04/04/2022	Scale	1:500 @ A1 1:1000 @ A3	Drawn	BM	Checked	BD	Approved	DC
Project Code	BCIDC	Originator Code	ARP	OMS Code	268401-00				

Programme Title	BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS		
Drawing Title	BLANCHARDSTOWN TO CITY CENTRE CORE BUS CORRIDOR SCHEME TREE PROTECTION PLAN		
Drawing File Name	BCIDC-ARP-ENV_LA-0005_XX_00-DR-ES-0033	Sheet Number	33 of 40
Status	A	Rev	M01

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GENERAL NOTES:

- TREE SURVEY CARRIED OUT BY SUB CONSULTANT AS DETAILED IN ARBORICULTURAL REPORT.
- TREE LOCATIONS BASED ON AVAILABLE TOPOGRAPHICAL SURVEY LOCATIONS WITH REFERENCE TO AERIAL IMAGERY AND ON SITE OBSERVATIONS.
- DRAWINGS SHOULD BE READ IN CONJUNCTION WITH THE ARUP ARBORICULTURAL REPORT.
- EXISTING TREE CANOPY BASED ON DIMENSIONS GATHERED ON SITE IN 4 DIRECTIONS, NORTH, SOUTH, EAST AND WEST.

LEGEND:

- GROUP 1 TREE / GROUP TAG NUMBER**
- P PRIVATELY OWNED TREE (E.G. TREE NOT LOCATED IN THE PUBLIC HIGHWAY OR ADJACENT PUBLIC LAND).
 - * INDICATES ESTIMATED POSITION OF TREE (NOT INDICATED ON TOPOGRAPHICAL SURVEY).
 - ROOT PROTECTION AREA

LEGEND CONTINUED:

- TREE TO BE RETAINED
 - TREE TO BE REMOVED
 - RETAIN GROUP
 - REMOVE GROUP
- TREE CATEGORY BASED ON BS:5837 2012 CRITERIA**
- CATEGORY (A, A1, A2, A3)
 - CATEGORY (B, B1, B2, B3)
 - CATEGORY (C, C1, C2, C3)
 - CATEGORY (U)
- SITE BOUNDARY LINE
 - TEMPORARY LAND ACQUISITION

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Project Ireland 2040
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Rev	Date	Drn	Chk'd	App'd	Description
M01	04/04/2022	BM	BD	DC	ISSUE FOR PHASE 4: PLANNING

Client: **NTA**
Udarás Náisiúnta Iompair
National Transport Authority

Engineering Designer: **ARUP**
Department: Geomatics / Surveying

Date	04/04/2022	Scale	1:500 @ A1 1:1000 @ A3
Project Code	BCIDC	Originator Code	ARP
OMS Code	268401-00	Checked	BD
Approved	DC	Sheet Number	34 of 40

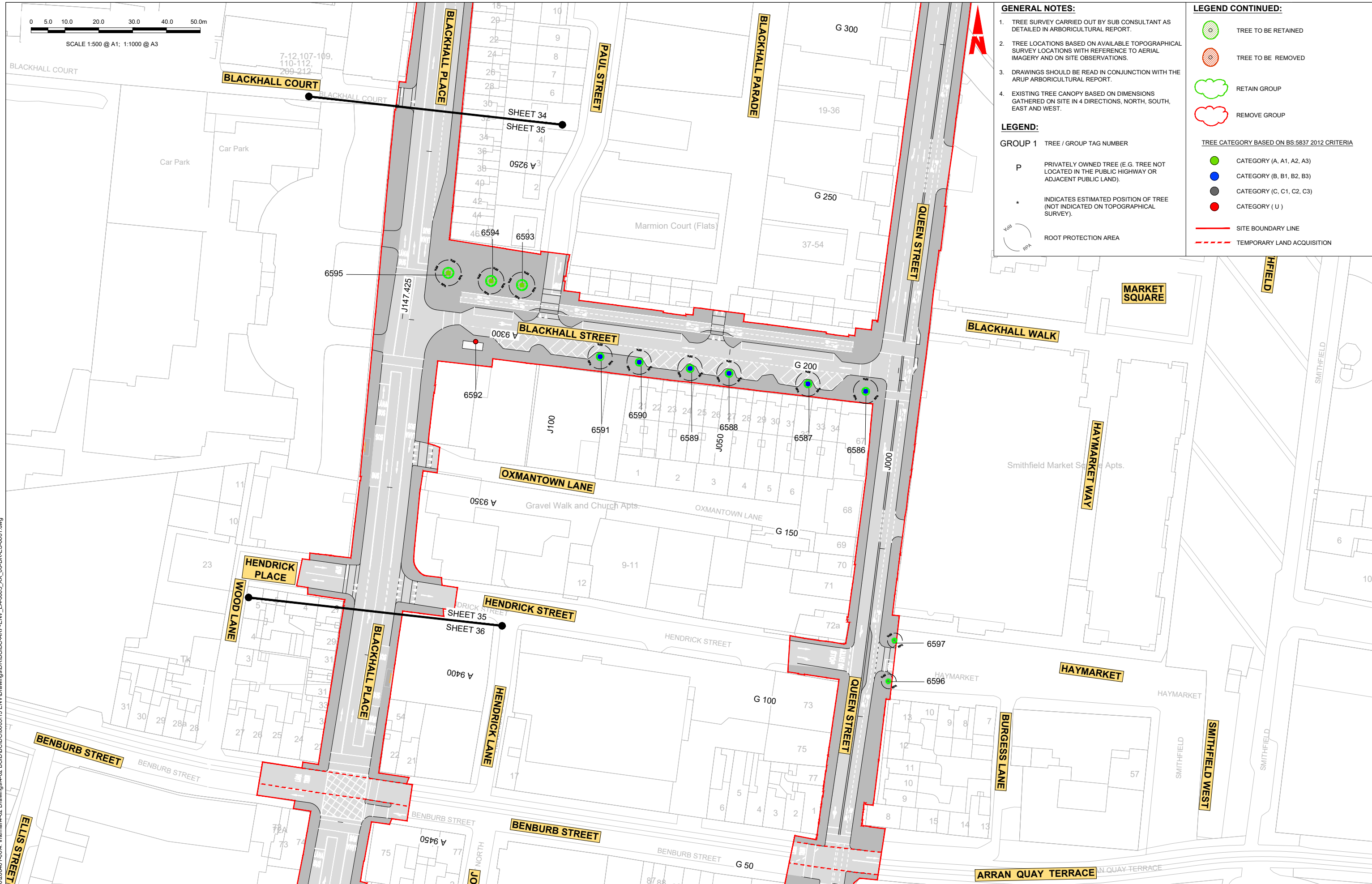
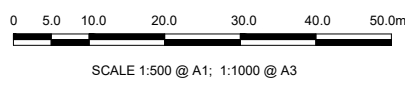
Programme Title: **BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS**

Drawing Title: **BLANCHARDSTOWN TO CITY CENTRE CORE BUS CORRIDOR SCHEME TREE PROTECTION PLAN**

Drawing File Name: BCIDC-ARP-ENV_LA-0005_XX_00-DR-ES-0034

Status: **A**

Rev: **M01**



GENERAL NOTES:

- TREE SURVEY CARRIED OUT BY SUB CONSULTANT AS DETAILED IN ARBORICULTURAL REPORT.
- TREE LOCATIONS BASED ON AVAILABLE TOPOGRAPHICAL SURVEY LOCATIONS WITH REFERENCE TO AERIAL IMAGERY AND ON SITE OBSERVATIONS.
- DRAWINGS SHOULD BE READ IN CONJUNCTION WITH THE ARUP ARBORICULTURAL REPORT.
- EXISTING TREE CANOPY BASED ON DIMENSIONS GATHERED ON SITE IN 4 DIRECTIONS, NORTH, SOUTH, EAST AND WEST.

LEGEND:

GROUP 1 TREE / GROUP TAG NUMBER

- P PRIVATELY OWNED TREE (E.G. TREE NOT LOCATED IN THE PUBLIC HIGHWAY OR ADJACENT PUBLIC LAND).
- * INDICATES ESTIMATED POSITION OF TREE (NOT INDICATED ON TOPOGRAPHICAL SURVEY).

ROOT PROTECTION AREA

LEGEND CONTINUED:

- TREE TO BE RETAINED
- TREE TO BE REMOVED
- RETAIN GROUP
- REMOVE GROUP

TREE CATEGORY BASED ON BS:5837 2012 CRITERIA

- CATEGORY (A, A1, A2, A3)
- CATEGORY (B, B1, B2, B3)
- CATEGORY (C, C1, C2, C3)
- CATEGORY (U)

SITE BOUNDARY LINE
TEMPORARY LAND ACQUISITION

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Rev	Date	Drn	Chk'd	App'd	Description
M01	04/04/2022	BM	BD	DC	ISSUE FOR PHASE 4: PLANNING

Client
NTA
 Udarás Náisiúnta Iompair
 National Transport Authority

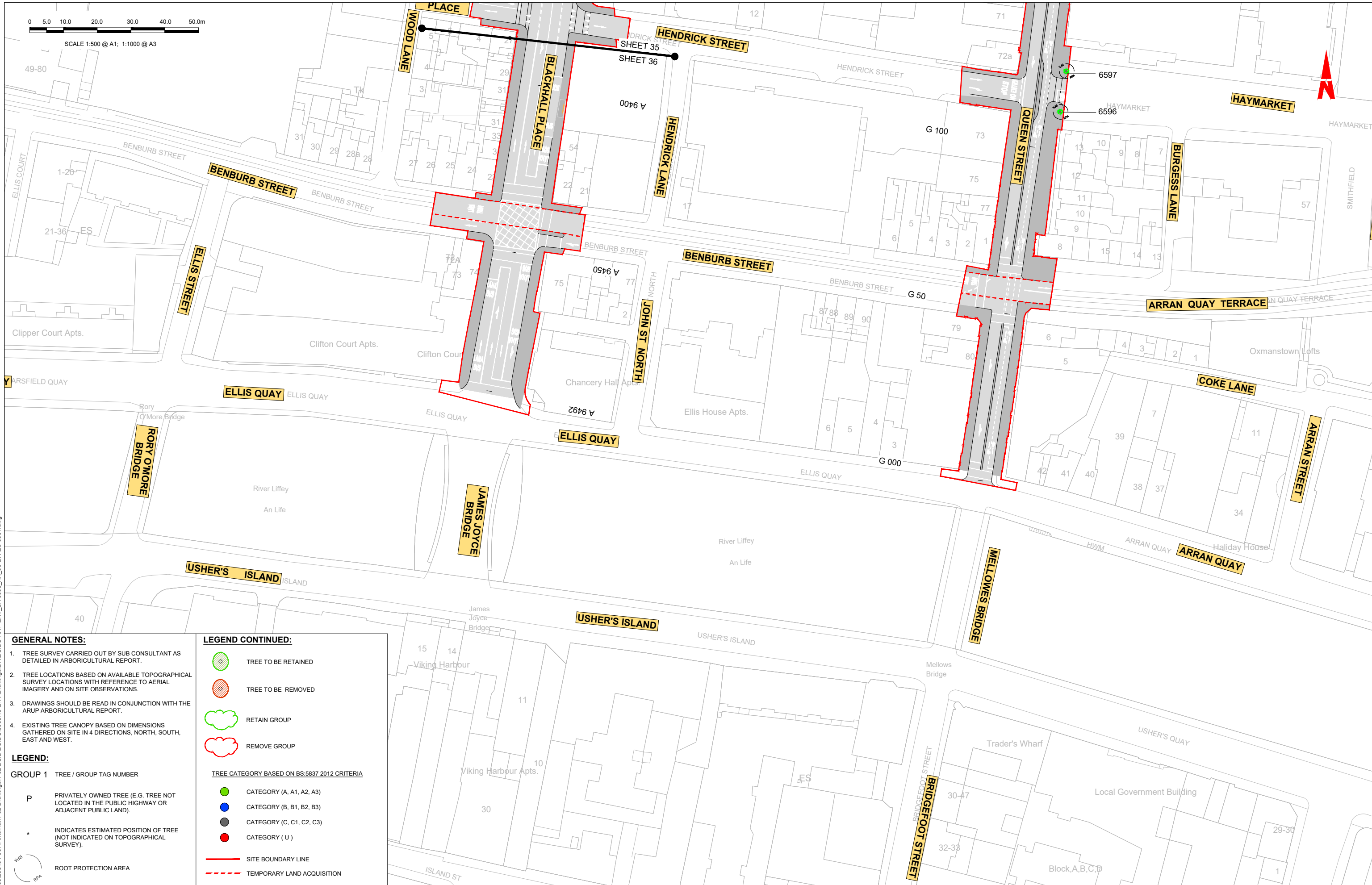
Engineering Designer
ARUP
 Design Group
 Geomatics & Survey Science

Programme Title BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS	Drawing Title BLANCHARDSTOWN TO CITY CENTRE CORE BUS CORRIDOR SCHEME TREE PROTECTION PLAN	Drawing File Name BCIDC-ARP-ENV_LA-0005_XX_00-DR-ES-0035	Sheet Number 35 of 40	Status A	Rev M01
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Date: 04/04/2022 Scale: 1:500 @ A1, 1:1000 @ A3 Drawn: BM, Checked: BD, Approved: DC
 Project Code: BCIDC Originator Code: ARP OMS Code: 268401-00
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SCALE 1:500 @ A1; 1:1000 @ A3



GENERAL NOTES:

- TREE SURVEY CARRIED OUT BY SUB CONSULTANT AS DETAILED IN ARBORICULTURAL REPORT.
- TREE LOCATIONS BASED ON AVAILABLE TOPOGRAPHICAL SURVEY LOCATIONS WITH REFERENCE TO AERIAL IMAGERY AND ON SITE OBSERVATIONS.
- DRAWINGS SHOULD BE READ IN CONJUNCTION WITH THE ARUP ARBORICULTURAL REPORT.
- EXISTING TREE CANOPY BASED ON DIMENSIONS GATHERED ON SITE IN 4 DIRECTIONS, NORTH, SOUTH, EAST AND WEST.

LEGEND:

- GROUP 1 TREE / GROUP TAG NUMBER**
- P** PRIVATELY OWNED TREE (E.G. TREE NOT LOCATED IN THE PUBLIC HIGHWAY OR ADJACENT PUBLIC LAND).
- *** INDICATES ESTIMATED POSITION OF TREE (NOT INDICATED ON TOPOGRAPHICAL SURVEY).
- Root Protection Area (RPA)**

LEGEND CONTINUED:

- TREE TO BE RETAINED
 - TREE TO BE REMOVED
 - RETAIN GROUP
 - REMOVE GROUP
- TREE CATEGORY BASED ON BS:5837 2012 CRITERIA**
- CATEGORY (A, A1, A2, A3)
 - CATEGORY (B, B1, B2, B3)
 - CATEGORY (C, C1, C2, C3)
 - CATEGORY (U)
- SITE BOUNDARY LINE
 - TEMPORARY LAND ACQUISITION

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Rev	Date	Drn	Chk'd	App'd	Description
M01	04/04/2022	BM	BD	DC	ISSUE FOR PHASE 4: PLANNING

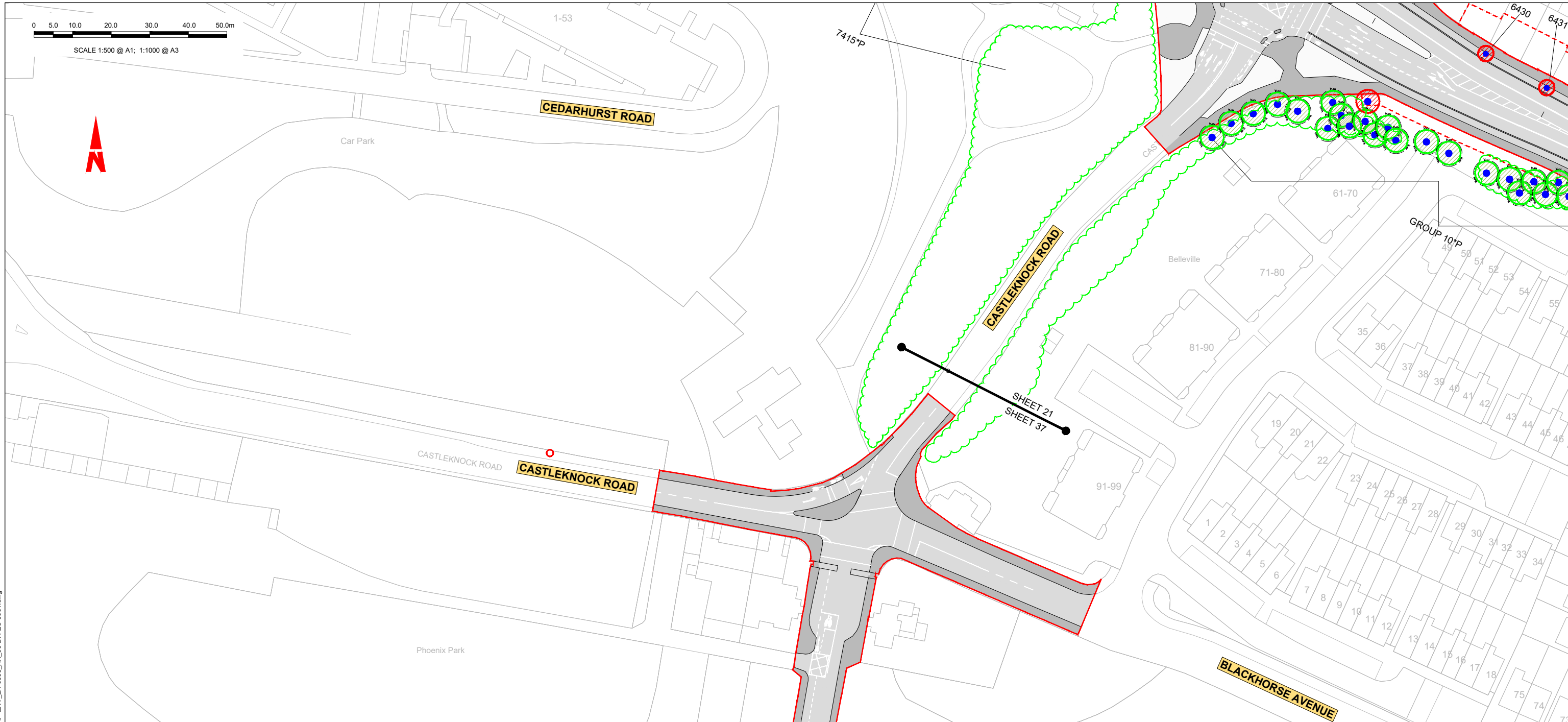
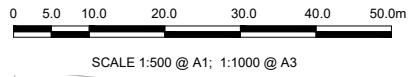
Client: **NTA**
 Udarás Náisiúnta Iompair
 National Transport Authority

Engineering Designer: **ARUP**
 Drawn: BM, Checked: BD, Approved: DC

Date	04/04/2022	Scale	1:500 @ A1 1:1000 @ A3
Project Code	BCIDC	Originator Code	ARP
OMS Code	268401-00	Drawing File Name	BCIDC-ARP-ENV_LA-0005_XX_00-DR-ES-0036

Programme Title	BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS		
Drawing Title	BLANCHARDSTOWN TO CITY CENTRE CORE BUS CORRIDOR SCHEME TREE PROTECTION PLAN		
Sheet Number	36 of 40	Status	A
Rev	M01		

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GENERAL NOTES:

- TREE SURVEY CARRIED OUT BY SUB CONSULTANT AS DETAILED IN ARBORICULTURAL REPORT.
- TREE LOCATIONS BASED ON AVAILABLE TOPOGRAPHICAL SURVEY LOCATIONS WITH REFERENCE TO AERIAL IMAGERY AND ON SITE OBSERVATIONS.
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- EXISTING TREE CANOPY BASED ON DIMENSIONS GATHERED ON SITE IN 4 DIRECTIONS, NORTH, SOUTH, EAST AND WEST.

LEGEND:

- GROUP 1 TREE / GROUP TAG NUMBER**
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 - * INDICATES ESTIMATED POSITION OF TREE (NOT INDICATED ON TOPOGRAPHICAL SURVEY).
 - ROOT PROTECTION AREA

LEGEND CONTINUED:

- TREE TO BE RETAINED
 - TREE TO BE REMOVED
 - RETAIN GROUP
 - REMOVE GROUP
- TREE CATEGORY BASED ON BS:5837 2012 CRITERIA**
- CATEGORY (A, A1, A2, A3)
 - CATEGORY (B, B1, B2, B3)
 - CATEGORY (C, C1, C2, C3)
 - CATEGORY (U)
- SITE BOUNDARY LINE
 - TEMPORARY LAND ACQUISITION

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M01	04/04/2022	BM	BD	DC	ISSUE FOR PHASE 4: PLANNING

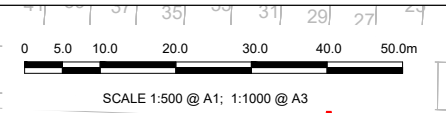
Client

Engineering Designer

Programme Title		BUSCONNECTS DUBLIN	
Drawing Title		CORE BUS CORRIDORS INFRASTRUCTURE WORKS	
Drawing File Name		BLANCHARDSTOWN TO CITY CENTRE CORE BUS CORRIDOR SCHEME	
Sheet Number		37 of 40	
Status		A	
Rev		M01	

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GENERAL NOTES:

1. TREE SURVEY CARRIED OUT BY SUB CONSULTANT AS DETAILED IN ARBORICULTURAL REPORT.
2. TREE LOCATIONS BASED ON AVAILABLE TOPOGRAPHICAL SURVEY LOCATIONS WITH REFERENCE TO AERIAL IMAGERY AND ON SITE OBSERVATIONS.
3. DRAWINGS SHOULD BE READ IN CONJUNCTION WITH THE ARUP ARBORICULTURAL REPORT.
4. EXISTING TREE CANOPY BASED ON DIMENSIONS GATHERED ON SITE IN 4 DIRECTIONS, NORTH, SOUTH, EAST AND WEST.

LEGEND:

- GROUP 1 TREE / GROUP TAG NUMBER**
- P** PRIVATELY OWNED TREE (E.G. TREE NOT LOCATED IN THE PUBLIC HIGHWAY OR ADJACENT PUBLIC LAND).
- *** INDICATES ESTIMATED POSITION OF TREE (NOT INDICATED ON TOPOGRAPHICAL SURVEY).
- PPA** ROOT PROTECTION AREA

LEGEND CONTINUED:

- TREE TO BE RETAINED
 - TREE TO BE REMOVED
 - RETAIN GROUP
 - REMOVE GROUP
- TREE CATEGORY BASED ON BS:5837 2012 CRITERIA**
- CATEGORY (A, A1, A2, A3)
 - CATEGORY (B, B1, B2, B3)
 - CATEGORY (C, C1, C2, C3)
 - CATEGORY (U)
- SITE BOUNDARY LINE
 - TEMPORARY LAND ACQUISITION

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Project Ireland 2040
 Building Ireland's Future

Rev	Date	Drn	Chk'd	App'd	Description
M01	04/04/2022	BM	BD	DC	ISSUE FOR PHASE 4: PLANNING

Client: **NTA**
 Udarás Náisiúnta Iompair
 National Transport Authority

Date: 04/04/2022
 Scale: 1:500 @ A1
 1:1000 @ A3

Project Code: BCIDC
 Originator Code: ARP

Engineering Designer: **ARUP**

Drawn: BM
 Checked: BD
 Approved: DC

OMS Code: 268401-00

Programme Title: **BUSCONNECTS DUBLIN
 CORE BUS CORRIDORS INFRASTRUCTURE WORKS**

Drawing Title: **BLANCHARDSTOWN TO CITY CENTRE CORE BUS CORRIDOR SCHEME
 TREE PROTECTION PLAN**

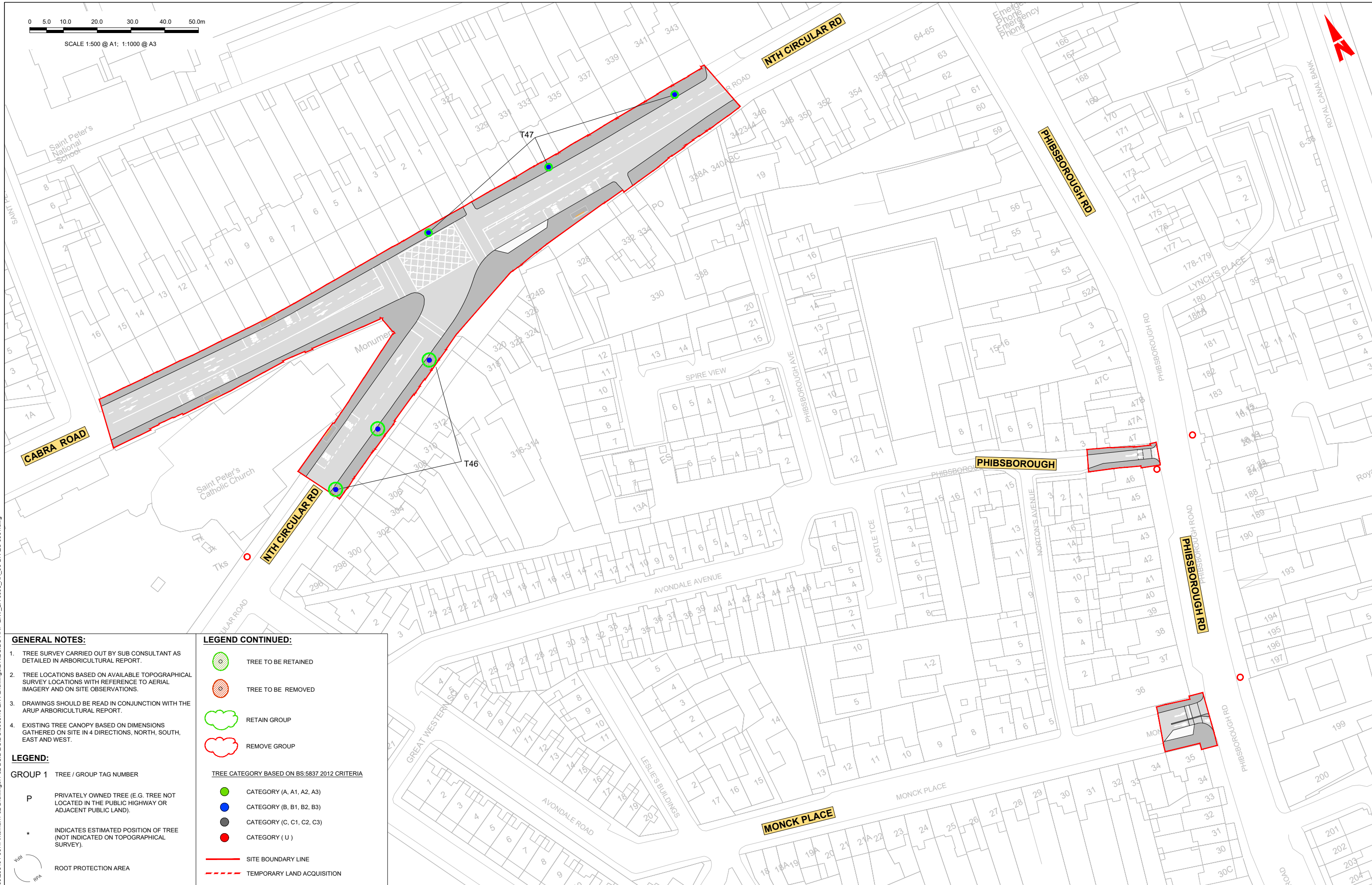
Drawing File Name: BCIDC-ARP-ENV_LA-0005_XX_00-DR-ES-0038
 Sheet Number: 38 of 40
 Status: A
 Rev: M01

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0 5.0 10.0 20.0 30.0 40.0 50.0m

SCALE 1:500 @ A1; 1:1000 @ A3



GENERAL NOTES:

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- DRAWINGS SHOULD BE READ IN CONJUNCTION WITH THE ARUP ARBORICULTURAL REPORT.
- EXISTING TREE CANOPY BASED ON DIMENSIONS GATHERED ON SITE IN 4 DIRECTIONS, NORTH, SOUTH, EAST AND WEST.

LEGEND:

- GROUP 1 TREE / GROUP TAG NUMBER**
- P PRIVATELY OWNED TREE (E.G. TREE NOT LOCATED IN THE PUBLIC HIGHWAY OR ADJACENT PUBLIC LAND).
 - * INDICATES ESTIMATED POSITION OF TREE (NOT INDICATED ON TOPOGRAPHICAL SURVEY).
 - Root Protection Area (RPA)

LEGEND CONTINUED:

- TREE TO BE RETAINED
- TREE TO BE REMOVED
- RETAIN GROUP
- REMOVE GROUP

- TREE CATEGORY BASED ON BS:5837 2012 CRITERIA**
- CATEGORY (A, A1, A2, A3)
 - CATEGORY (B, B1, B2, B3)
 - CATEGORY (C, C1, C2, C3)
 - CATEGORY (U)
 - SITE BOUNDARY LINE
 - TEMPORARY LAND ACQUISITION

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M01	04/04/2022	BM	BD	DC	ISSUE FOR PHASE 4: PLANNING

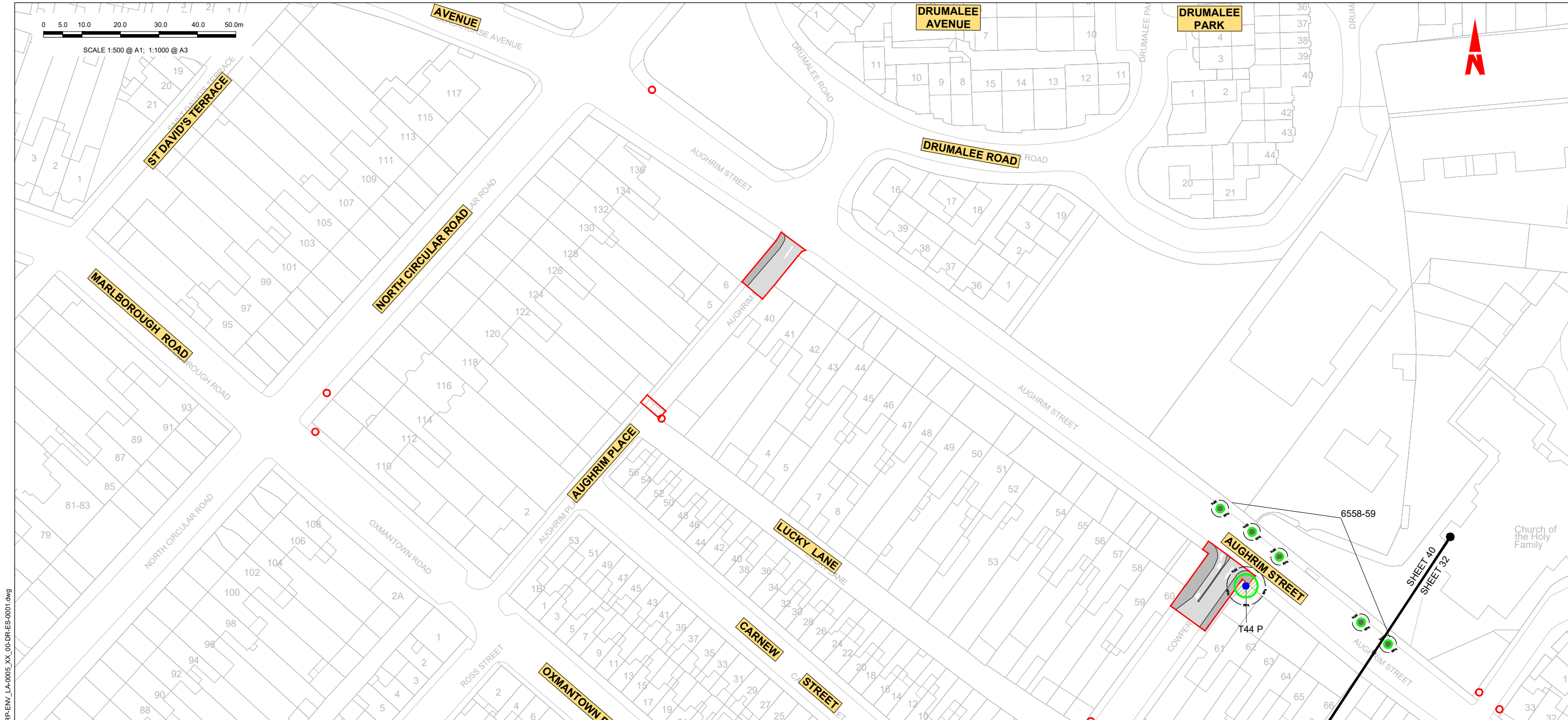
Client

Engineering Designer

Programme Title		BUSCONNECTS DUBLIN	
Drawing Title		CORE BUS CORRIDORS INFRASTRUCTURE WORKS	
Drawing File Name		BLANCHARDSTOWN TO CITY CENTRE CORE BUS CORRIDOR SCHEME	
Sheet Number		39 of 40	
Status		A	
Rev		M01	

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GENERAL NOTES:

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 - * INDICATES ESTIMATED POSITION OF TREE (NOT INDICATED ON TOPOGRAPHICAL SURVEY).
 - Root Protection Area (RPA) symbol

LEGEND CONTINUED:

- TREE TO BE RETAINED (Green circle with diagonal lines)
 - TREE TO BE REMOVED (Red circle with diagonal lines)
 - RETAIN GROUP (Green cloud)
 - REMOVE GROUP (Red cloud)
- TREE CATEGORY BASED ON BS:5837 2012 CRITERIA**
- CATEGORY (A, A1, A2, A3) (Green circle)
 - CATEGORY (B, B1, B2, B3) (Blue circle)
 - CATEGORY (C, C1, C2, C3) (Grey circle)
 - CATEGORY (U) (Red circle)
 - SITE BOUNDARY LINE (Red dashed line)
 - TEMPORARY LAND ACQUISITION (Red solid line)

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Engineering Designer: **ARUP**

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Drawing Title: BLANCHARDSTOWN TO CITY CENTRE CORE BUS CORRIDOR SCHEME TREE PROTECTION PLAN			
Drawing File Name: BCIDC-ARP-ENV_LA-0005_XX_00-DR-ES-0040	Sheet Number: 40 of 40	Status: A	Rev: M01

Appendix C

Arboricultural Method Statement

C1 Arboricultural Method Statement Overview

This Arboricultural Method Statement details the specification for tree protection measures and how sensitive operations are to be achieved in proximity to trees to be retained. It also addresses the general management of site activities to ensure that retained trees are not inadvertently damaged.

This document may need to be amended to reflect more detailed or updated information as it becomes available. The final agreed version must be read in conjunction with the final Tree Protection Plan (to be developed) and copies of both documents must be permanently available on site for reference throughout the works. No changes may take place to the content or application of the Method Statement without the prior written approval of the Project Arboriculturist

When planning permission is in place, some details (including changes in layout, services, materials, tree protection measures and the order of works) may be subject to change. No changes should be enacted without the prior written approval of the Project Arboriculturist. The Method Statement must be reviewed in advance of the commencement.

C2 Pre commencement site meeting

Prior to the commencement of works on site a meeting must take place including the contractor and the Project Arboriculturist. This meeting will allow a further discussion of the programme of works, tree protection measures, the locations of the areas for storage/site organisation and the agreement of any changes to the Method Statement which will then be formally updated and approved as required.

C3 Order of operations

- 1 Pre commencement Site meeting;
- 2 Preliminary tree works;
- 3 Site briefing for Site personnel;
- 4 Installation of protective fencing and ground protection as required;
- 5 Demolition and enabling works including utility diversions;
- 6 Re-adjustment of protective fencing and ground protection as required;
- 7 Construction operations;

- 8 Re-adjustment of protective fencing and ground protection as required;
- 9 Installation of new hard surfaces and hard landscaping;
- 10 Site signed off on agreed completion of significant development works;
- 11 Dismantling of tree protection measures;
- 12 Soft landscaping works within the Root Protection Area (RPA) of retained trees;

C4 Preliminary tree works

All approved tree works are to be completed by suitably qualified contractors.

All tree works must be carried out in line with the principles of *BS 3998:2010 Tree work. Recommendations* and be conducted in such a way that no damage is caused to any tree to be retained. The tree works contractor must avoid the production of ruts on unmade ground.

A tree works specification which identifies trees to be felled or pruned is included in the schedule in Appendix A.

Due to the extensive nature of the Site and the potential for tree growth in the period between planning and construction, prior to the commencement of works on a given area of the Site a walkover must be undertaken by the Site team including the Project Arboriculturist to determine if any additional tree works are likely to be required to facilitate the Proposed Scheme.

If further additional tree works are deemed to be required during the construction period, the advice of the Project Arboriculturist is to be obtained. No tree works are to take place without the consent of the Project Arboriculturist.

Prior to the commencement of any tree works a thorough check for protected species (including nesting birds, bats and badgers) is to be undertaken. If evidence of any protected species is discovered the advice of a suitably qualified ecologist must be obtained. Tree works are to be undertaken outside of the typical nesting bird season (March to September).

Outside of this period any individual trees will be inspected for evidence of nesting birds by a suitably qualified person prior to works being carried out.

C5 Site briefing

The Site Manager is responsible for ensuring that all personnel are made fully aware of the constraints posed by retained trees on site and the measures in place to ensure they are protected, including having full on-site access to the Arboricultural Method Statement and Tree Protection Plan (TPP). It is good practice for the Project Arboriculturist to be involved in the site briefing to ensure all constraints and tree protection measures are clearly understood.

C6 Site monitoring

The Project Arboriculturist will visit site to confirm the correct installation of protective fencing, to oversee sensitive elements of works within the RPA of retained trees and to sign off the Site when works are complete before fencing can be dismantled.

The frequency of Site monitoring will be agreed in writing before works begin on Site (but is recommended to be at least every four weeks in addition to ad hoc monitoring of particularly sensitive operations near retained trees as required). An example Site monitoring form is included as Appendix D .

C7 Toolbox talk

A toolbox talk should be provided to Site workers to highlight the need for safe driving of plant and working within the defined corridor to ensure that accidents and resulting potential damage to trees not covered by tree protection measures are eliminated. A copy of the TPP should be used in the process of explaining to all personnel the requirements to ensure retained trees are not damaged and copies of both the TPP and this Method Statement must be available in the Site office at all times.

C8 Protective fencing

In many areas of the Site the works are contained within the existing highway boundary bordered by existing walls or fencing and surrounded by hard surfacing. In such cases no additional tree protection fencing is likely to be required.

Where retained trees are at risk of damage, the default position as set out by *BS 5837:2012* is that retained trees must be protected from construction operations with the erection of robust protective fencing positioned on the outer edge of the RPA or crown spread (whichever is greatest).

All site operations will be restricted to the area outside of tree protection fencing and this area will form a Construction Exclusion Zone (CEZ) unless agreed otherwise. Protection measures will be installed as set out in the Tree Protection Plan.

The area inside the fence and any additional tree protection measures will be sacrosanct and must not be removed or altered without the prior approval of the Project Arboriculturist. Any damage to tree protection measures must be reported immediately.

Default Specification:

Fencing shall be constructed with robust vertical and horizontal scaffold framework with weldmesh panels firmly attached in accordance with *BS 5837:2012* Figure 2. Vertical support poles and bracing poles must be located with care to avoid underground utility services and will be sited to avoid the structural roots of retained trees. Where driven supports are not practicable due to the presence of roots or underground utilities block trays, counterweights or equivalent can be utilised.

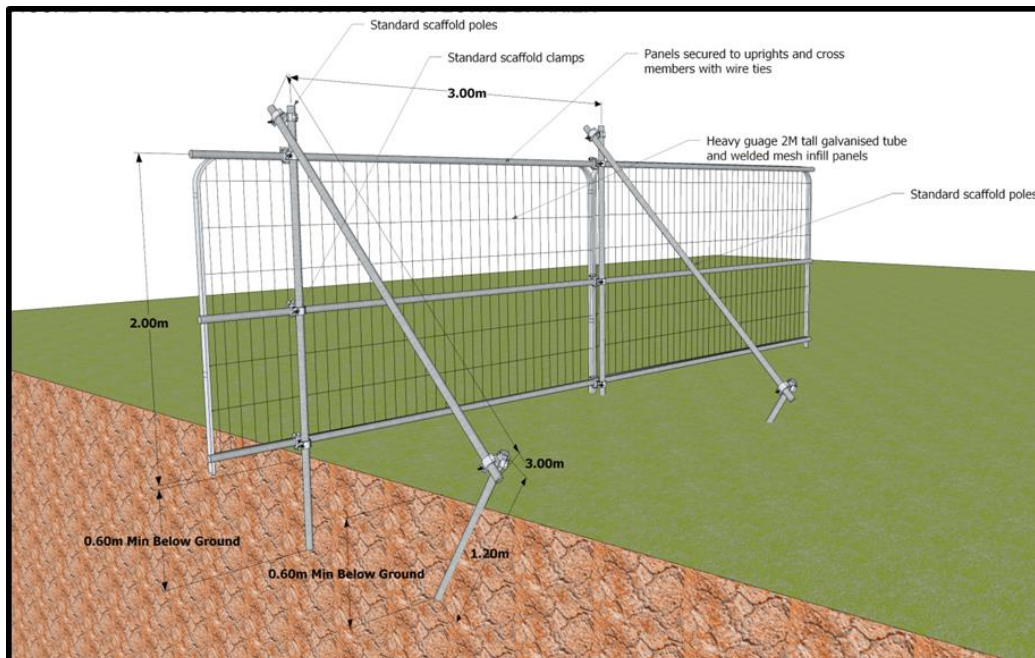


Figure 4: Default specification for tree protection barrier in accordance with *BS5837:2012* figure 2.

Alternative equivalent robust and immovable fencing specification including site hoarding will also be appropriate.

Suitable all-weather signage will be fixed to fencing to notify site staff and visitors of the CEZ and its purpose (example included as Appendix E).

When entering and exiting the site, the fencing contractor must avoid the production of ruts on the unprotected surface of the ground.

Protective fencing and ground protection shall stay in place until all construction operations are completed and removal is agreed with the Project Arboriculturist.

Chestnut Paling Stem/Limb Wrapping:

Where tree stem or the limbs of trees are at risk of damage (e.g., where plant is unavoidably operating in proximity) they will be protected with a double layer of hessian, carpet felt or equivalent cushioning material, and a double layer of chestnut paling fencing or equivalent hardwood batons secured with wire which is to be wrapped around the stem or branch and must not be pinned or attached to the tree itself. Measures must be removed following completion of works.

C9 Ground protection

Existing hard surfacing will act as fit for purpose ground protection where it is to be retained within the RPA of retained trees. For existing areas of unsurfaced ground within RPAs where construction access is unavoidable, ground protection will be required to protect the structure of the soil from compaction. This should also apply to areas for new tree planting.

As set out in section 6.2.3.3 of *BS5837:2012* the following ground protection measures will be appropriate:

- Suitable ground protection for pedestrian only access will comprise a single thickness of scaffold boards set on a compressible layer of 100mm of woodchip on a geotextile separation layer.
- Pedestrian operated plant up to two tonnes in weight will require the use of a proprietary ground protection system (such as Ground Guards, Eki mats, Eve Trakway or equivalent) set on a minimum depth of 150mm woodchip or sharp sand.
- Heavier loads will require ground protection to an engineering specification in conjunction with arboricultural advice.

As a guide, the threshold beyond which root development is significantly affected is a bulk density ranging from 1.4g per cm³ for clay soils, to 1.75g per cm³ for sandy soils.

C10 Carriageway widening into footway or verge

Where the carriageway is to be widened into the existing footway or verge within the RPA of a retained tree, this must be supervised by the Project Arboriculturist.

The outer extent of the required excavation (nearest to the tree) should be carefully excavated by hand to allow roots to be assessed and pruned as necessary. Exposed roots must be covered with hessian sacking or equivalent. The existing kerb edging and haunching can then be very carefully removed with an excavator working from the existing carriageway, reaching towards the tree and working backwards, reverting to working using hand tools in areas close to retained tree roots as required.

New edging must have the thinnest profile and extent of haunching practicable and pinned alternatives will be applied where practicable. Backfill is to utilise the excavated parent material to replicate the original soil profile.

The sub-base for replacement hard surfacing (where required) must be hand tamped only to prevent significant compaction of the underlying soil.

C11 Footway or verge widening into existing carriageway

Where the footway is to be widened into the existing carriageway, the existing kerb will need to be carefully removed under arboricultural supervision. Kerb stones must be removed using hand tools including pneumatic breakers. Plant positioned on the carriageway can lift out kerb sections using slings. Haunching must be carefully broken out by hand. Any exposed roots must then be covered with soil or hessian to prevent drying out. There will be no constraint on new edging or haunching as it will sit within or above the existing build-up of the carriageway where no roots are present. Backfill must utilise good quality topsoil where the verge is being widened. Where the footway is being widened the new section of the footway can be constructed using a standard methodology providing that the sub-base of the existing footway is retained intact and undisturbed.

C12 Removal and/or replacement of an existing hard surface within an RPA

At the time of writing, the full extent of resurfacing has not been fully determined but there is a potential for extensive areas of resurfacing across the Proposed Scheme. Where resurfacing is required within the RPA of a retained tree the following principles will apply:

Replacement hard surfacing on top of existing surface:

Where practicable, the new hard surface is to be installed on top of the existing surface and the existing edging is to be retained intact.

Removal of existing surface (wearing course):

Before work commences, the Project Arboriculturist will assess the potential for significant roots immediately below the wearing course and in such areas, all works must be achieved by hand. The wearing course must be removed with hand tools (including a handheld pneumatic breaker where required). The existing surface must be 'rolled back' with contractors working from the existing hard surface and with pedestrian only access on the exposed sub-base. With the prior agreement of the Project Arboriculturist, it will be acceptable to use light tracked machinery such as a mini excavator with an untoothed bucket to assist with the removal of the existing surfacing where this can be achieved without damage to any significant roots beneath.

Machinery must work from existing hard standing only. Where surface roots are obviously present (and at the junction between hard and soft ground) surfacing is to be removed by hand only.

Restoring hard surfacing to soft ground:

Following the removal of the wearing course the sub-base is to be broken up using hand tools via pedestrian access only. Materials must be removed using wheelbarrows or via hand loading of long reach machinery positioned on adjacent hard surfacing or ground protection. The sub-base is to be rolled back. Following removal, any low points or hollows are to be filled with sharp sand or gravel and topsoil applied to the required level which can then be seeded or turfed as required. This area must then be completely fenced off for the remainder of the works or be otherwise protected with ground protection.

Installing replacement pedestrian or light vehicular hard surfacing on an existing sub-base.

The sub-base must be retained intact, ameliorated as required and utilised for the new surface. Levels are to be increased using inert granular fill by a maximum of 100mm. The sub-base must be hand tamped only to prevent significant compaction of the underlying soil.

Exposed roots must be treated in accordance with the guidelines in Section C19 of this Method Statement.

Following the removal of existing hard surfacing, the unprotected ground within RPAs must be immediately protected with protective fencing and/or ground protection (where access is required) as set out in Section C9 to ensure that the structure of the soil and tree roots are protected.

Pedestrian only access onto the exposed and retained sub-base will be acceptable to allow the installation of replacement hard surfacing. The new surface should be laid as soon as practicable.

Any exposed roots greater than 25mm in diameter must be assessed by the Project Arboriculturist.

If roots which are to be retained are exposed at ground level these should be covered with a thin layer of sharp sand and adjacent levels built up around it. This layer must not be significantly compacted, and hand tamped only.

Installing replacement heavy vehicular hard surfacing on an existing sub-base:

The sub-base must be retained intact, ameliorated as required and utilised for the new surface. Exposed roots are unlikely to be encountered due to the heavily engineered sub-base of the existing surface. Where encountered any roots must be treated in accordance with the guidelines in Section C19 of this Method Statement. The new surface must be rolled out working from the existing sub-base only.

Surfacing operations are to be conducted solely from the existing footprint of the road. Access beyond the footprint will be restricted with Tree Protection Barriers as necessary.

Edging:

Existing edging within the RPA of a retained tree will be retained intact and used as the edging for the new surface.

Where the removal of existing edging is unavoidable within an RPA, this will be removed carefully by hand under the supervision of the Project Arboriculturist.

Plant positioned outside of the RPA, or on existing hard surfacing within the RPA, may reach in to assist in lifting edging out of its position using slings but must not be used to excavate around the edging unless otherwise agreed in advance with the Project Arboriculturist.

Where practicable, new edging must be installed without excavation using pinned alternatives. Where an excavated edge is unavoidable both the edging and any footing must have the narrowest profile practicable. Where significant roots are present, which cannot be pruned, reinforced sections of kerb acting as lintels to bridge important roots will be applied where practicable.

C13 Installation of new hard surfacing within RPAs

Very small areas of new hard surfacing in the outer RPA of a retained tree can be constructed using hand excavation supervised by the Project Arboriculturist. Due to the very small incursion within an RPA, no specialist construction measures will be required. No roots greater than 25mm in diameter will be severed without the consent of the Project Arboriculturist. Where significant roots are encountered, the methodology set out below will be applied to avoid root severance. The approach below will apply where any significant area of new surfacing is required within the RPA of a retained tree.

Three-Dimensional Load Bearing Raft:

Construction of the significant areas of new footway or cycle track hard surfacing within the RPA of retained trees shall follow 'no dig' principles. The surface shall be engineer designed to meet the highest expected loads, including those used for the construction of the route.

A proprietary 3D cellular confinement system will be used to allow the hard surface to be installed without excavation within RPAs.

Work will preferably be carried out in dry conditions within the period of May to October when the ground is less liable to compaction.

Existing ground vegetation shall be treated with an approved herbicide such as glyphosate, 2-3 weeks before construction takes place. Killed vegetation can then be subject to a maximum 50 mm vegetative scrape which must take place by hand. Any arisings shall be removed (if left in situ they could cause anaerobic conditions as they break down which could be detrimental to tree roots).

Any hollows must be filled with inert granular material such as sharp sand or washed no fines gravel.

Builder's sand must not be used as this contains salts which are toxic to tree roots.

Any rocks, stumps (if present) or other protruding objects within the footprint of the load bearing surface must be removed. Stumps must be ground out below ground level. All other objects must be removed by hand.

A robust geotextile membrane must be laid out across the proposed area for the load bearing surface within the RPA. Joints must overlap by approximately 300 mm and be stapled together. This must be capable of resisting puncture by the angular stone fill, and also able to filter pollutants to prevent or reduce contamination of the soil. The load bearing surface is only required within the RPAs.

It is essential to consider the final levels of the load bearing surface which will typically be 75 mm-100 mm in thickness for footway or cycle track applications plus the final wearing course (dependent on its application).

The final surface must be resistant to future growth of tree roots and also must be positioned to give a minimum clearance of 500mm from the base of a retained tree. The resulting gap can be filled with inert granular fill, if required. A three-dimensional load bearing surface which allows the lateral and horizontal movement of air and water (e.g., Cellweb or equivalent), must be fully expanded and stapled together. This is to be laid on top of the geotextile layer. This surface must be able to support the greatest expected load the surface is likely to experience (including any construction traffic).

The load bearing surface shall be 'rolled out', with construction operations beginning from outside the RPA or from existing hard standing and progressing forwards using the new load bearing surface. The load bearing surface must be filled with 4/20, 20/20 or 20/40 washed angular stone.

Edging is not typically required to stabilise the load bearing surface and the edge of the surface. If edging is required, this must be installed without excavation within RPAs. Appropriate methods would include the use of treated wooden peg and boards.

Concrete kerb stones can be cast directly onto the web if required, however all uncured concrete must be fully contained with impermeable plastic sheeting and sandbags to prevent run off into the RPA of retained trees. The use, storage and mixing of concrete must comply with the provisions set out in section C19.

Where a road edge kerb must be installed by excavation this must be of the thinnest profile practicable with the minimum extent of haunching feasible and all excavation work must be undertaken by hand with any roots managed under the guidance of the Project Arboriculturist. Alternative kerb construction may be required where significant roots are identified (such as using lintels or equivalent to bridge important roots).

The load bearing surface must have an even transition with adjacent hard surfacing or structures. This must be achieved outside of the RPA of all retained trees. Where this is not practicable, structural soil or a mixture of topsoil and sharp sand can be employed to raise levels by up to 100mm. Where levels are to be raised in excess of this height the advice of the Project Arboriculturist must be obtained.

C14 Demolition

Existing boundary walls, noise barriers, footbridges, lamp columns and other structures are to be demolished within or close to the RPA of retained trees. All demolition must be inward into the existing footprint of the structure or away from tree positions and be achieved by working backwards away from retained trees. No arisings are to fall or be stored in unsurfaced or protected areas of tree RPAs.

All plant and machinery associated with the demolition process will be positioned outside of the RPA of retained trees or on existing hard surfacing or ground protection and must operate under the guidance of a banksman where they must operate within 5m of any part of a retained tree.

Existing footings are to be retained, in situ where practicable to minimise disturbance. Where removal is unavoidable, footings within RPAs must be broken out carefully by hand, or where feasible via the careful use of plant positioned outside of RPAs or on ground protection/existing hard surfacing under the supervision of the Project Arboriculturist.

C15 Construction of New Boundary Walls

Where a new boundary wall cannot avoid a RPA of retained trees, specialist construction methods must be employed to prevent extensive root severance. Footings must utilise carefully located pads or narrow diameter piles with floating beams (at or above ground level) unless the presence of significant roots has been otherwise discounted following trial excavations under the supervision of the Project Arboriculturist.

Footings must be carefully positioned with hand dug (potentially using compressed air/soil vacuum) trial holes or trenches to identify optimal positioning to avoid significant roots.

Ground protection must be in place where repeated access is required over unsurfaced ground within an RPA.

C16 Installation of Piles

Where new piles are to be installed within or close to the RPA or retained trees the canopy of the tree is to be pruned back before any construction work commences on Site to provide a clearance of the pile head to facilitate this work. For smaller piles, smaller plant or pedestrian installation only should be applied.

Piling rigs to be sited outside of the RPA or on ground protection within an RPA and protective fencing is to be installed to maintain an exclusion zone within as much of the RPA as practicable.

The piling rig is to be positioned as far from the canopy and RPA of the tree as practicable and reach inwards.

Piles will be the lowest diameter feasible. Where piles are to be installed within the RPA of a retained tree, an initial trial hole will be excavated by hand to allow for the assessment and management of any exposed roots under the supervision of the Project Arboriculturist. Pile locations will be adjusted to avoid significant tree roots where feasible.

Pile caps within the RPA must be located above the existing ground level to minimise the level of disturbance. Beams must not bear on the existing ground level unless the presence of significant tree roots can be discounted following careful trial excavation.

C17 Movement of Vehicles and People and the Movement and Operation of Machinery

Due to the spatial constraints on site, construction works and in particular the use of machinery must be carefully coordinated to avoid damage to retained trees. A banksman must be in place for any operations which occur within 5 m of any part of a retained tree. Long reach machinery with jibs, booms or counterweights will require particular care.

Where trees are at risk of impact damage from plant that cannot be controlled with fencing or a careful working methodology, consideration must be given to any requirement for access to facilitate pruning which must be agreed in advance with the Project Arboriculturist.

C18 Site organisation, storage and mixing of materials

The area of constraint associated with retained trees within, or surrounding compounds will be fenced off as an exclusion zone at the outset.

The storage and mixing of materials and any re-fuelling shall take place at least 5 m from the RPA of any retained trees and also take into account any potential for run off. Where this is an issue, measures such as bunding with robust impermeable polythene sheeting and sandbags must be put in place to prevent accidental run off reaching the rooting zone of retained trees.

No changes in ground level are permitted within the RPA of a retained tree.

No fires shall take place within an RPA or within 5 m of any part of a retained tree. No signs, cables or other items are to be attached to any part of a retained tree.

C19 General principles for the management of tree roots

Where agreed excavation by hand tools or compressed air takes place within an RPA the following principles will apply:

- Individual or small groups of roots less than 25 mm in diameter will be retained where practicable but can be severed with a sharp tool such as secateurs or pruning saws to leave a clean-cut end (ideally 100 mm back from the face of the excavation to account for future regrowth) where they pose an obstruction.
- Where roots are encountered which are larger than 25 mm in diameter or where significant groups of smaller roots are found, the advice of the Project Arboriculturist must be sought to decide an appropriate course of action.
- Roots must only be exposed for the minimum period practicable. In the interim period any exposed roots (including the face of any excavation within an RPA) must be completely covered with dampened hessian sacking (which may require ongoing re wetting) to avoid drying out and exposure to light. Backfill for excavations should ideally utilise the parent material and must not be significantly compacted.

C20 Installation of new lamp columns, road signs and bus shelters

Where new features such as lamp columns, road signs or bus shelters are to be installed within the RPA of a retained tree, the final position of the feature must be adjusted to give the greatest clearance of adjacent tree stems practicable and to reduce any conflict with tree branches or any requirement for pruning.

Footings must be excavated by hand or compressed air (e.g., air spade/soil vacuum) for at least the upper 0.5-1 m and be adjusted to avoid significant tree roots. Footings must be the smallest dimensions feasible and utilise screw piles or equivalent where necessary. Any uncured concrete required must use the driest mix feasible and excavations must be lined with an impermeable liner to prevent uncured concrete leaching into the surrounding soil. Any cabling must be installed in accordance with the principles set out in C22.

C21 Installation of new drainage within RPAs

Drainage has been designed to avoid the RPA of retained trees as much as practicable. Solutions such as surface channels, off set chambers positioned to avoid RPAs as much as practicable and hand excavated sections of piped filter drain positioned to avoid trees roots will be utilised to further reduce impacts on adjacent trees as appropriate. Where excavation for new drainage must take place within an RPA, the method of installation will be agreed in advance with the Project Arboriculturist and will typically involve the nearest area of excavation to the tree being completed by hand or equivalent to allow significant roots to be carefully exposed and pruned. Roots will be managed in accordance with the principles set out in Section C19.

C22 Installation or diversion of utilities within RPAs

Utility diversion and new utilities have not been fully defined at this stage. The default position is that all services be located outside of the RPA of retained trees. In the context of this Site, it is not feasible to fully avoid the RPA of retained trees and therefore either trenchless installation below tree root systems or hand dug/compressed air excavation through RPAs where significant roots can be retained and worked around, will be required.

Use of trenchless techniques:

Where services can't avoid the RPA of retained trees, the primary consideration must be to install them using trenchless insertion techniques such as impact moling, direct drilling or equivalent.

Insertion and retrieval pits must be located outside of the RPA of retained trees. The depth of the run must be at least 2 m below ground level and should be located as far from the tree as practicable.

The mole must be lubricated with water only.

Installation must follow the principles set out in the National Joint Utilities Group (NJUG) Vol 4: Guidelines for the planning, installation, and maintenance of utility apparatus in proximity to trees (issue 2) and BS5837 Section 7.7 and Table 3.

Replacement pipes must be installed via pipe bursting, relining or equivalent trenchless techniques where they are located within the RPA of a retained tree. Pipe bursting or relining equipment must be positioned outside of the RPA at all times.

Hand digging:

Where trenchless installation isn't feasible, shallow utility runs can be installed via hand or compressed air/soil vacuum excavation. The excavation will be located as far from the stem of the tree as practicable and must be carried out by hand (ideally using compressed air such as an Air Spade and soil vacuum) under the supervision of the Project Arboriculturist.

Pedestrian only access will be permitted, and ground protection measures as set out in Section C10 will be employed where no hard surfacing is in place, with fencing positioned immediately adjacent to restrict any further access into RPAs.

Excavation will be supervised by the Project Arboriculturist who will be on hand to advise on the management of any roots encountered and to ensure the approved tree protection methodology is fully adhered to. Roots smaller than 25 mm in diameter can be cut with a clean sharp tool where they pose an obstruction.

Should significant roots (larger than 25 mm diameter or large clumps of smaller roots) be encountered, these will be retained and wrapped in dampened hessian to prevent drying out and pipes will be routed around them wherever practicable. If significant roots are encountered which cannot be feasibly worked around and retained, appropriate action will be agreed with the Project Arboriculturist.

Pipes must be constructed to resist future incursion by tree roots.

All spoil/ arisings from excavation will be placed onto ground protection boards to prevent compaction, ground level changes and to assist in removal or reinstatement. Backfill is to utilise the excavated parent material where feasible, applied to restore the soil profile to its original structure (i.e., topsoil will be installed last) and must be lightly hand tamped only.

Services shall be installed following the principles set out in the *National Joint Utilities Group (NJUG) Vol 4: Guidelines for the planning, installation, and maintenance of utility apparatus in proximity to trees (issue 2)*.

C23 Redundant utilities

Where existing services are to be removed, these must be winched out from an access/inspection chamber located outside of an RPA or left in situ.

Redundant pipework will be sealed off and will not be removed via excavation within the RPA of a retained tree.

Redundant pipework can be filled with an inert material or if confirmed to be fully watertight, may be filled with foamed concrete applied from an access point located outside the RPA of all retained trees. Concrete must be managed in accordance with section C18 of this Method Statement.

C24 Dismantling of tree protection measures

All protective fencing and ground protection must remain in place until all significant site works for a given location have been completed and approval has been obtained from the Project Arboriculturist.

Appendix D

Example Site Monitoring Form

Appointed Site Arboricultural Consultant: Company: Consultant's name: Tel: Mob:
Development site address:
Developer's details: Company: Developer's name: Tel:

Stage of Development (x)

Pre-construction works

- Tree works
- Protective fencing/tape
- Fencing signage
- Ground protection
- Temporary haul road

Construction works

- Demolition
- Grading/muck away
- Placing portacabin
- Excavation/services
- Construction work

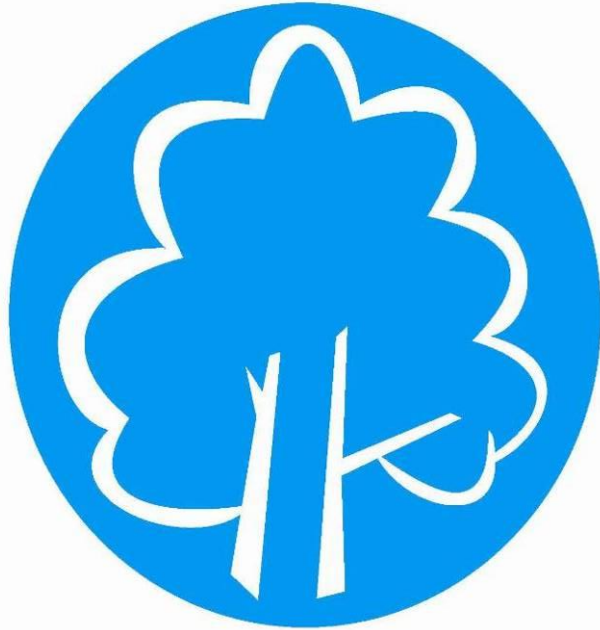
Post-construction works

- Rectifying tree damage/pruning
- Hard landscaping/walls/drives
- Removal of protective fencing etc
- Soft landscaping
- Special surfacing
- Tree planting

Comments:

Appendix E

Tree Protection Signage (Example)



**PROTECTIVE FENCING. THIS
FENCING MUST BE
MAINTAINED IN ACCORDANCE
WITH THE APPROVED PLANS
AND DRAWINGS FOR THIS
DEVELOPMENT.**



**TREE PROTECTION AREA
KEEP OUT !**
(TOWN & COUNTRY PLANNING ACT 1990)
**TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY
PLANNING CONDITIONS AND/OR ARE THE SUBJECTS OF A
TREE PRESERVATION ORDER.**
**CONTRAVENTION OF A TREE PRESERVATION ORDER MAY
LEAD TO CRIMINAL PROSECUTION**

**ANY INCURSION INTO THE PROTECTED AREA MUST BE
WITH THE WRITTEN PERMISSION OF THE LOCAL
PLANNING AUTHORITY**