



Pantrhiwgoch Farm  
Michealston-y-Fedw  
Cardiff CF3 6XW

T:0800 298 3686  
info@tr33.co.uk  
www.tr33.co.uk

## ARBORICULTURAL REPORT

for proposed development at

### ALEXANDRA DOCKS 33/11KW SUBSTATION

|                       |                                                                                             |
|-----------------------|---------------------------------------------------------------------------------------------|
| <b>Client:</b>        | National Grid Electricity Distribution                                                      |
| <b>Site Address:</b>  | Land east of the junction between East Way Road and North Dock Road, Newport Docks NP20 2UW |
| <b>Our Reference:</b> | S240827,2                                                                                   |
| <b>Author:</b>        | John Mitchener                                                                              |
| <b>Report Date:</b>   | April 2025                                                                                  |

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## 1 INTRODUCTION

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### 1.1 INSTRUCTIONS

- 1.1.1. TR33 Environments have been instructed by National Grid Electricity Distribution to provide this report in support of a planning application for the development of land east of the junction between East Way Road and North Dock Road, Newport Docks NP20 2UW (hereafter referred to as 'the Site').
- 1.1.2. The purpose of this report is to provide the information necessary for Newport City Council to meet the duty placed upon them by s.197 of the Town and Country Planning Act 1990. This duty requires that local planning authorities '*ensure, whenever it is appropriate, that in granting planning permission for any development adequate provision is made, by the imposition of conditions, for the preservation or planting of trees*'.
- 1.1.3. This report assesses the potential effects of development on trees and puts forward proposals for mitigation where appropriate. In order to avoid additional, or otherwise unforeseen adverse arboricultural impacts, it is essential that the mitigatory measures described within this report are implemented in full during site clearance and construction.

### 1.2 SCOPE OF REPORT

- 1.2.1. The scope of this report has been determined with reference to British Standard BS 5837:2012 *Trees in relation to design, demolition and construction – Recommendations*<sup>1</sup>(BS 5837). It includes reference to the following:
- A tree survey schedule.
  - An Arboricultural Impact Assessment.
  - An Arboricultural Method Statement.
  - A Tree Protection Plan.
- 1.2.2. Root protection areas (RPAs) have been identified and represent the minimum area around a tree (m<sup>2</sup>) deemed to contain sufficient roots and rooting volume to maintain a tree's viability. The RPA, initially plotted as a circle, has been adjusted to account for constraints to root growth such as carriageways and building foundations.
- 1.2.3. The BS 5837 gives recommendations and guidance on the relationship between trees and the design, demolition and construction process. It sets out the principles and procedures to be applied to achieve a harmonious and sustainable relationship between trees and structures. These recommendations and guidance have been applied throughout this report and form the basis of the

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<sup>1</sup> British Standards Institute. 2012. *BS 5837: 2012 Trees in relation to design, demolition and construction – Recommendations*. London: BSI.

Arboricultural Impact Assessment (AIA), Arboricultural Method Statement (AMS) and Tree Protection Plan (TPP).

### **1.3 VALIDITY PERIOD**

- 1.3.1. Trees are dynamic organisms which are influenced by a variety of environmental variables and whose health and condition can rapidly change. Because of this any recommendations made within this report are valid for a period of 24 months from the date of survey or when any site conditions change or pruning or other works unspecified in this report are carried out to, or affecting, the subject trees, whichever is sooner.

### **1.4 SITE DESCRIPTION AND PROPOSED SCHEME**

- 1.4.1. The Site comprises of an area of land which has historically been used for industrial purposes. It is currently unoccupied and includes several derelict structures, an area of hardstanding and non-hard surfaced ground which is of poor quality due to historical disturbance and compaction.
- 1.4.2. The Site is located within Alexandra Docks. This is part of Newport Docks which is managed by Associated British Ports. There is no public access to the Site or surrounding area due to security reasons, this means that the Site has no amenity value to the general public and is only visible to persons working within the secure area.
- 1.4.3. The Proposed Scheme comprises the construction of an electricity substation complete with vehicular parking and secure boundary fencing.

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## **2 TREE SURVEY**

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### **2.1 BASELINE DATA COLLECTION**

- 2.1.1. The tree survey was undertaken on 07 April 2025. The survey was conducted by John Mitchener (Arboricultural Consultant) with aerial photography used as base mapping.
- 2.1.2. The results of the tree survey are presented in **Appendix B: Tree Survey Schedule** and **Appendix C: Tree Protection Plan**.
- 2.1.3. The tree survey has been undertaken in accordance with BS 5837. The tree survey was undertaken without reference to any site layout proposals; tree quality assessments account for the health, condition and estimated remaining contribution based on current site conditions.
- 2.1.4. Further details on the methodology used to obtain tree survey data are provided in **Appendix B: Tree Survey Methodology**.

## 2.2 TREE SURVEY RESULTS

- 2.2.1. The tree survey identified the presence of one low-quality tree (T1) and one low-quality hedge (H2).
- 2.2.2. Tree T1 is a moderately sized silver birch (*Betula pendula*) which has most likely arisen from naturally dispersed seed. The tree is formed from three stems and does not display any obvious symptoms of significant structural or physiological defects. It appears to be adapted to its surroundings and has an anticipated retention span which exceeds ten years, under current site conditions.
- 2.2.3. Hedge H2 appears to have been deliberately planted and is formed from leylandii trees (*Cupressocyparis leylandii*) at approximately 1m centres. The hedge, which is positioned outside the Site, is some 13m in height but does appear to have been topped some years ago and has subsequently re-grown. There is no other evidence that the hedge has been actively maintained, and its main function appears to be as a boundary marker and the provision of low-level screening.
- 2.2.4. The long-term viability of hedge H2 has been adversely impacted by a lack of routine maintenance. This is most apparent in the form of the crown radius with branches now extending several metres into the Site, rubbing on the rear wall and roof of the existing building, and partially obstructing areas of hard surfacing. Even under current site conditions, the trimming back of encroaching branches to obtain suitable separation distances from buildings and hard surfacing will result in the permanent loss of foliage, thereby reducing the visual appeal of this hedge, and its ability to provide low-level screening. Branches below a height of approximately 1.8m have been previously removed and there is only limited live foliage present towards the base of the hedge.

## 2.3 PHOTOGRAPHS

**Photograph 1: Silver birch tree T1**



***Photograph 2: Leylandii hedge H2***



***Photograph 3: Hedge H2, branches encroaching into the Site***



### 3 ARBORICULTURAL IMPACT ASSESSMENT

- 3.1.1. The scope of this Arboricultural Impact Assessment (AIA) has been established with reference to BS 5837 Clause 5.4 '*Arboricultural Impact Assessment*'. The scope of assessment is defined as including an evaluation of the direct and indirect arboricultural effects of the Proposed Scheme.
- 3.1.2. This AIA includes specific reference to the effects of any tree loss and other potentially damaging activities which would foreseeably occur in the vicinity of retained trees. Further reference is made concerning recommendations for mitigation, including those matters which require inclusion within an Arboricultural Method Statement (AMS).
- 3.1.3. The spatial relationship between surveyed trees and the Proposed Scheme is presented within **Appendix C: Tree Protection Plan**.

#### TREE REMOVALS

- 3.1.4. Planning Policy Wales Edition 12, February 2024 (Welsh Government) advises that '*where trees, woodland and hedgerows are present, their retention, protection and integration should be identified within planning applications.*' This approach has been adopted as part of the Proposed Scheme with both tree T1 and hedge H2 to be sustainably retained during construction.
- 3.1.5. The retention of tree T1 shall be achieved through minor amendments to the location of the proposed parking area, with the edge of the parking area modified to avoid encroachment into the RPA. Hedge H2 shall be retained by the implementation of appropriate tree protection measures during construction, including tree protection fencing, temporary ground protection and the application of arboricultural supervision for all excavatory work within, or immediately adjacent to, the RPA.
- 3.1.6. The retention of both tree T1 and hedge H2 means that there will be no removals and that, in this respect, the overall impact of the Proposed Scheme will be neutral.

#### TREE PRUNING

- 3.1.7. It is likely that some tree pruning may be required to facilitate site clearance and construction and to avoid unreasonable obstruction during the operation of the proposed substation. Pruning will foreseeably include the crown lifting of tree T1 and hedge H2 to a height of between 2-4m from ground level. This will be required to mitigate the existing encroachment and obstruction caused by low branches. At heights of above 2-4m the crown of hedge H2 may also be trimmed back on its southeastern edge as a means of preventing further lateral encroachment over the top of the switchroom building, and therefore the possibility of branches causing damage to its roof.
- 3.1.8. It is envisaged that a detailed specification for pruning will be developed once a methodology for construction is known. This specification will be provided to Newport City Council for approval prior to implementing any work.

- 3.1.9. All tree pruning work shall be specified in accordance with British Standard BS 3998:2010 *Tree work - recommendations*<sup>2</sup> meaning that it will be undertaken without detriment to the health, wellbeing, or retention prospects of either tree T1 or hedge H2. All tree pruning will be undertaken by a competent tree work contractor.

## CONSTRUCTION IMPACTS

- 3.1.10. Construction impacts are defined as anything which has the capacity to adversely affect the health, growth, life expectancy or safety of any retained tree. Construction impacts may arise as result of damage to a tree's rooting environment, roots, stem or branches.
- 3.1.11. Adverse construction impacts shall be avoided in respect of tree T1 through the amendment of the proposed parking area to avoid encroachment into the RPA. This, together with the use of tree protection fencing during construction will ensure that tree T1 can be robustly protected and sustainably retained.
- 3.1.12. Significant adverse construction impacts shall also be avoided in respect of hedge H2. The potential for adverse impacts will be substantially minimised through the deployment of tree protection fencing and temporary ground protection during construction as a means of protecting the RPA.
- 3.1.13. Notwithstanding, the Proposed Scheme will require some minor encroachment into the RPA of hedge H2, both as a result of the construction of foundations for the switchroom building and due to the installation of new boundary fencing.
- 3.1.14. With respect to building foundations, the amount encroachment is limited in scope and, with an area of 19m<sup>2</sup>, or just 3% of the overall RPA, is unlikely to cause in any discernible loss of health, quality or longevity, to the hedge.
- 3.1.15. Equally, although the installation of a boundary fence will require excavation within the RPA for post foundations, this will be limited in extent and can be managed so as to avoid adverse impacts to important roots. Post hole locations can be varied so as to avoid roots wherever reasonably achievable which, coupled with excavation by hand, will ensure that fencing can be erected without causing significant adverse effects.
- 3.1.16. The potential impacts of encroachment on specific tree roots, and the wider rooting environment, will be addressed through the provision of direct arboricultural supervision during excavatory work within, or adjacent to, the RPA of hedge H2. Supervision will ensure that any roots which are encountered are treated in a sympathetic manner, are not damaged unnecessarily or inadvertently, and that roots of importance to the health of hedge H2 are retained.

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<sup>2</sup> British Standards Institute. 2012. BS 5837: 2012 *Tree work – Recommendations*. London: BSI.

## CONCLUSIONS

- 3.1.17. Subject to implementation of the tree protection measures described within the Arboricultural Method Statement provided in subsection 4 of this report, the Proposed Scheme can be delivered without significant adverse arboricultural effects. Both tree T1 and hedge H2 can be retained and, whilst the possibility of some adverse impact to hedge H2 cannot be entirely discounted, this will be insufficient to result in a discernible loss of quality, health or lifespan.
- 3.1.18. The Proposed Scheme does not generate any significant adverse arboricultural effects, nor does it impact any tree, or hedge, which is of importance in from an arboricultural, conservation or public amenity perspective. However, in the event that Newport City Council requires further information on the tree protection measures which will be applied during construction, then this can reasonably be secured using a suitably worded condition attached to a grant of full planning consent.

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## 4 ARBORICULTURAL METHOD STATEMENT

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- 4.1.1. This Arboricultural Method Statement (AMS) describes the tree protection measures that shall be applied during site clearance and construction.
- 4.1.2. This AMS has been compiled with reference to BS 5837. In instances where deviations from the recommended approach are required, or where some relevant information remains unknown, then adequate tree protection shall be achieved through a combination of supervision by the Project Arboriculturist and adherence to the relevant working methodology.
- 4.1.3. This AMS is a 'living document.' This means that it shall be reviewed, and where necessary updated, in response to changes to the design and/or construction methodology. It is envisaged that this AMS will be reviewed at the following stages of design and construction:
- Detailed design.
  - Contractor engagement.
  - Pre-commencement.
  - Prior to any instance where the overarching site clearance or construction methodology is amended.
- 4.1.4. This AMS must be read in conjunction with **Appendix C: Tree Protection Plan**.

### PHASING OF TREE PROTECTION MEASURES

- 4.1.5. It is essential that tree protection measures are phased correctly during construction. Tree protection measures shall be phased in the following manner:
1. Undertake tree pruning to agreed specification.
  2. Install tree protection fencing and ground protection.
  3. Site clearance and construction, including agreed arboricultural supervision and monitoring.
  4. Remove tree protection and ground protection once all construction activities have ceased.
  5. Complete soft landscaping work (if required).

## ARBORICULTURAL MONITORING AND SUPERVISION

- 4.1.6. Arboricultural monitoring and supervision shall be implemented in accordance with the following details.

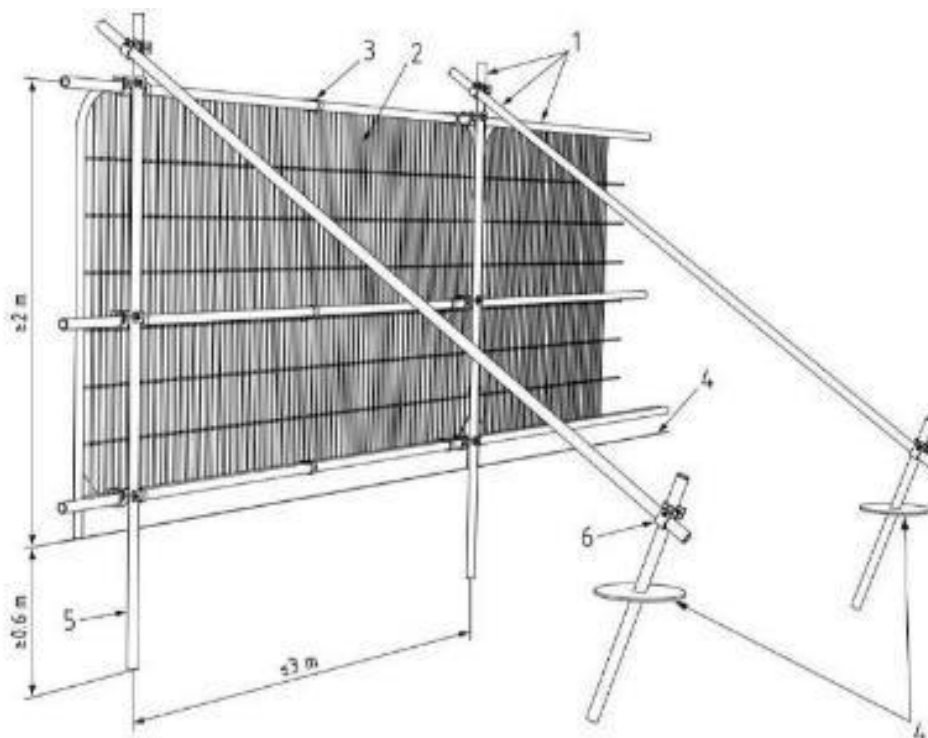
### ***Nominated Persons***

- 4.1.7. The client/contractor shall appoint a Project Arboriculturist. This person shall be suitably qualified and experienced in the field of trees in relation to construction, and shall be available to:
- Attend an initial pre-commencement meeting and supervisory visits as required.
  - Undertake site monitoring.
  - Advise on all ad-hoc arboricultural matters which may arise.
- 4.1.8. The client/contractor shall further nominate a person to be responsible for all arboricultural matters onsite. This person must:
- Be present on site whenever work which has the potential to cause damage to retained trees is being undertaken.
  - Be aware of their arboricultural responsibilities.
  - Have the authority to stop any work that is causing or has the potential to cause harm to any retained tree.
  - Be responsible for ensuring that all site operatives are aware of their responsibilities toward retained trees and the consequences of any failure to observe those responsibilities.
  - Make immediate contact with the Project Arboriculturist and/or Newport City Council in the event of any tree related problems occurring, whether actual or potential.
- 4.1.9. Once works commence the project arboriculturist will undertake a programme of monitoring. This may include phone and email contact with the site manager, regular site visits and the direct supervision of work which has the capacity to cause damage to retained trees. The frequency of any monitoring will be determined by the intensity and proximity of works to trees and will be flexible enough to accommodate changes in the scheduling of tasks as they occur.
- 4.1.10. The project arboriculturist will maintain a record of the arboricultural monitoring. This will provide a record of compliance with any agreed tree protection measures and will assist in the efficient discharge of planning conditions where required. The Project Arboriculturist shall provide Newport City Council with a written record of any monitoring within five working days of it having taken place.

## TREE PROTECTION FENCING

- 4.1.11. Tree protection fencing will be erected in order to create a vertical barrier which prevents damage occurring to retained trees. It shall be fit for the purpose of excluding construction activity and appropriate to the degree and proximity of work taking place around the retained tree(s). Tree protection fencing shall be adequately maintained to ensure that it remains rigid and complete.
- 4.1.12. Once erected, tree protection fencing shall not be altered or removed without the explicit approval from the Project Arboriculturist and authorisation from Newport City Council.
- 4.1.13. A recommended specification for the tree protection fencing is provided in **Figure 2**. The location of the tree protection fencing is shown in **Appendix C: Tree Protection Plan**.

**Figure 2: Recommended specification for tree protection fencing**



### Key to Figure 1

1. Standard scaffold poles.
2. Heavy gauge 2m tall, galvanised tube and welded mesh infill panels.
3. Panels secured to uprights and cross-members with wire ties.
4. Ground level.
5. Uprights driven into the ground until secure (minimum depth 0.6m).
6. Standard scaffold clamps.

## GROUND PROTECTION

- 4.1.14. Temporary ground protection shall be installed in any instance where construction access is required within the CEZ. Its purpose is to create a horizontal barrier which prevents rutting or additional compaction of the underlying soil thereby protecting tree roots and the rooting environment. The area within which temporary ground protection shall be installed is shown in **Appendix C: Tree Protection Plan**.
- 4.1.15. Temporary ground protection shall adhere to the following specification as advised in BS 5837 paragraph 6.2.3.4:
- For pedestrian movements only, a single thickness of scaffold boards placed either on top of a driven scaffold frame, so as to form a suspended walkway, or on top of a compression resistant layer (e.g., 100mm depth of woodchip) laid onto a geotextile membrane.
  - For pedestrian-operated plant up to a gross weight of 2t, proprietary, inter-linked ground protection boards placed on top of a compression-resistant layer (e.g., 150 mm depth of woodchip), laid onto a geotextile membrane.
  - For wheeled or tracked construction traffic exceeding 2t gross weight, an alternative system (e.g., proprietary systems or pre-cast reinforced concrete slabs) to an engineering specification designed in conjunction with arboricultural advice, to accommodate the likely loading to which it will be subject.
- 4.1.16. Ground protection shall be installed as follows:
1. Clear the area within which the ground protection is to be installed. Shrubs and other woody vegetation should be cut to ground level.
  2. Install ground protection to the specification provided in paragraph 4.1.15. Obtain confirmation from the Project Arboriculturist that the ground protection is acceptable.
  3. Ground protection shall be retained in-situ until all construction work is complete.

## EXCAVATION OF FOUNDATIONS WITHIN RPAS

- 4.1.17. Excavation for foundations within the RPA must be undertaken using a non-toothed excavator bucket and/or hand tools only. This is necessary in order to minimise the risk of damage to the roots of retained trees.
- 4.1.18. In all instances all work shall be supervised by the Project Arboriculturist and all staff which are involved in the activity will be briefed on this methodology.

### **Methodology**

- Soil shall be carefully removed under the direct supervision of the Project Arboriculturist. Spoil shall be deposited outside the RPA. A trowel shall be used to loosen and remove soil in proximity to roots.
- If tree roots are uncovered, then they shall be treated in the following manner:

- o Roots <25mm diameter shall be cleanly cut back to the edge of the excavation using a sharp saw or pair of secateurs.
  - o Roots >25mm diameter shall only be severed following technical approval from an arboriculturist. If approval is given, then roots shall be cleanly cut back to the edge of the excavation using a sharp saw.
- Once excavation reached the desired depth the final soil surface shall be inspected for the presence of roots which could become damaged during construction. The advice of the Project Arboriculturist shall be sought regarding the most suitable means of protecting any roots which may have been identified.
- Exposed roots shall be covered at the earliest opportunity to protect them from extremes of temperature and desiccation. Roots shall be protected from the use of wet concrete through the use impermeable membrane, to be installed over the root prior to any concrete pouring.

#### **INSTALLATION OF BOUNDARY FENCING**

- 4.1.19. Excavation for fence post foundations within the RPA must be undertaken using hand tools only. This is necessary in order to minimise the risk of damage to the roots of retained trees.
- 4.1.20. In all instances all work shall be supervised by the Project Arboriculturist and all staff which are involved in the activity will be briefed on this methodology.

#### ***Methodology***

- Any branches which may be become damaged during the work shall be trimmed back by a competent tree work contractor and in accordance with an agreed specification
- Where required, t existing boundary fence shall be dismantled by hand. Supporting posts shall be cut off at ground level and any concrete foundations left insitu, where possible.
- The line of the new fence shall be marked. Post holes shall be excavated using hand tools and under the direct supervision of the Project Arboriculturist. In the event that trees roots > 25mm diameter are encountered then the post hole shall be relocated. If roots < 25mm diameter are encountered, then these shall be cut back to the edge of the post hole using a pair of secateurs.
- Supporting posts shall be secured using concrete. Post hole shall be lined with an impermeable membrane before concrete is poured.

## APPENDIX A: TREE SURVEY METHODOLOGY

### METHODOLOGY

The tree survey was undertaken in accordance with the following methodology:

- Arboricultural features have been recorded as tree groups or wooded areas where this has been deemed appropriate. Tree groups have been recorded on the basis that they form distinct arboricultural features either aerodynamically, visually or because they contain trees of similar cultural and biodiversity value. Wooded areas are recorded where larger expanses of trees exist and included features which may otherwise be referred to as corpses, spinneys or shelterbelts.
- The trees have been inspected using the Visual Tree Assessment methodology as developed by Mattheck and Breoler<sup>3</sup>.
- The tree survey was carried out from ground level only.
- No tissue samples were taken nor was any internal investigation of the subject trees undertaken.
- Tree heights and crown spreads have been estimated to the nearest 1m.
- Notes have been recorded where they relate to the quality of the arboricultural feature. Management recommendations have been provided where work is necessary for the abatement of a hazard which presents an unacceptable or intolerable level of risk to persons or property.
- Stem diameters have been measured in accordance with Annex C of BS 5837. Diameters of single stem trees on level ground have been measured at 1.5m above ground level. The combined stem diameters for multi-stemmed trees have been calculated in accordance with BS 5837 paragraph 4.6.1.
- By default, Root Protection Areas (RPAs) are calculated as an area equivalent to a circle with a radius 12 times the stem diameter and are capped at a distance of 15 metres.

### QUALITY ASSESSMENT

The quality of arboricultural features has been determined in accordance with BS 5837 Table 1, a summary of which is provided in **Table 1**. The purpose of the quality assessment is to enable informed decisions to be made regarding site layout, land use and design. The quality assigned to each survey item is recorded within **Appendix B: Arboricultural Survey Schedule**.

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<sup>3</sup> Mattheck, C., Breloer, H., 2006. *The body language of trees*. Norwich: The Stationary Office

**Table 1: BS 5837:2012 Table 1 – Cascade chart for tree quality assessment**

| Category and definition                                                                                                                                                   | Criteria (including subcategories where appropriate)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                   |                                                                                                                                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| Trees unsuitable for retention                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                   |                                                                                                                                       |
| <b>Category U</b><br>Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years | Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g., where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning)<br>Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline<br>Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low-quality trees suppressing adjacent trees of better quality |                                                                                                                                                                                                                                                                   |                                                                                                                                       |
|                                                                                                                                                                           | <b>1 Mainly arboricultural qualities</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>2 Mainly landscape qualities</b>                                                                                                                                                                                                                               | <b>3 Mainly cultural values, including conservation</b>                                                                               |
| <b>Category A</b><br><b>Trees of high quality</b> with an estimated remaining life expectancy of at least 40 years                                                        | Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g., the dominant and/or principal trees within an avenue)                                                                                                                                                                                                                                                                                                                                 | Trees, groups, or woodlands of particular visual importance as arboricultural and/or landscape features                                                                                                                                                           | Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture) |
| <b>Category B</b><br><b>Trees of moderate quality</b> with an estimated remaining life expectancy of at least 40 years                                                    | Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation                                                                                                                                                                                                         | Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality | Trees with material conservation or other cultural value                                                                              |

|                                                                                                                   |                                                                                                                   |                                                                                                                                                                                                      |                                                             |
|-------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|
| <b>Category C</b><br><b>Trees of low quality</b> with an estimated remaining life expectancy of at least 40 years | Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories | Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits | Trees with no material conservation or other cultural value |
|-------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|

## LIMITATIONS

Arboricultural survey data is typically valid for a period of two years unless otherwise stated. Significant environmental events (such as extreme weather conditions) or changes to the Site may render it invalid within a shorter timescale.

The survey has only been undertaken from land within the client's ownership, from public land or from areas where formal access has been arranged.

The position of arboricultural features not recorded on a topographical survey has been estimated using aerial imagery.

Whilst arboricultural surveys are not seasonally limited it is the case that certain pests and diseases may be more or less evident at different times of the year. This is especially true of certain wood decaying fungi such as the Giant Polypore (*Meripilus giganteus*) where fruiting bodies are short-lived, and the early stages of root decay may not result in other identifiable symptoms. Walkover survey data is therefore based upon observations made at the time of the site visit and may be subject to change should further or more detailed inspections be undertaken.

### Health and Safety

This report in no way constitutes a health and safety survey. Where concerns for tree health and safety exist the necessary and appropriate tree inspections should be carried out.

Arboricultural survey data is of a preliminary nature and has been collected based on a walkover survey. Only defects visible from the ground have been noted and each individual feature may not have been inspected closely due to access difficulties, the presence of dense ivy or vegetation or safety constraints. Safety related features have recorded on the basis that the arboricultural features will be subject to a normal programme of tree hazard assessment and only those features which materially affect the quality of the feature or pose a real and immediate safety concern have been recorded.

### Wildlife and Conservation

Trees have the capacity to provide habitat for species such as bats, birds, and mammals some of which may be protected under UK or European Legislation. It is a statutory offence to injure, kill or disturb any protected species or to damage or destroy their breeding site or resting place. It is also an offence to disturb any nesting bird.

Wildlife and conservation matters are beyond the scope of this report although incidental comments may be made where these are of direct relevant to the arboricultural survey or subsequent assessments. It is advised that specialist ecological advice is sought prior to any tree removal or

maintenance activities; these recommendations contained within this report should be reviewed in light of any ecological constraints which may be identified.

## APPENDIX B: TREE SURVEY SCHEDULE

Details of the surveyed trees are presented in **Table 2**; a key to the table is provided in **Table 3**.

**Table 2: Tree survey schedule**

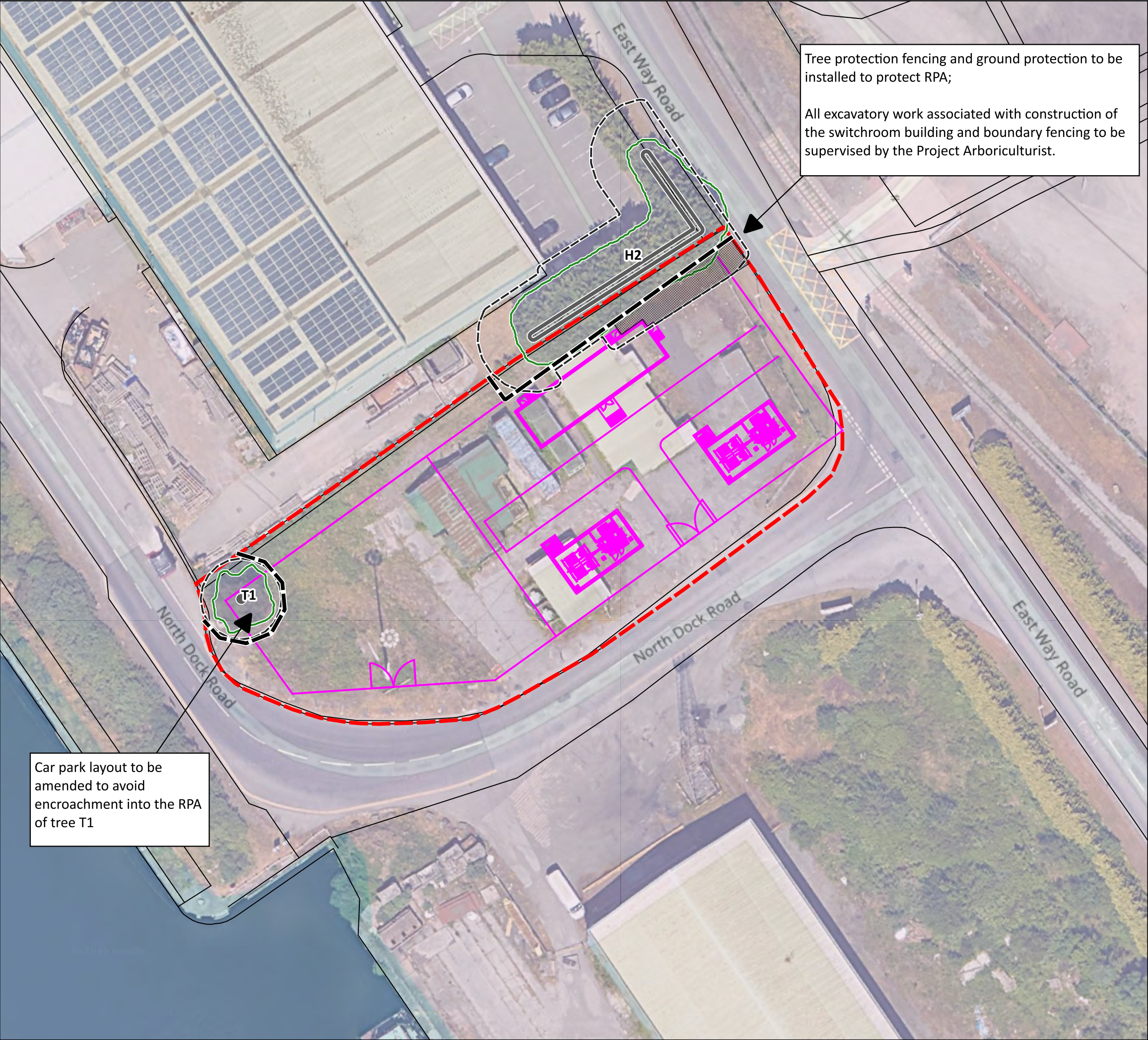
| Reference Nos | TYPE | SPECIES      | HEIGHT (m) | DBH (mm) | CROWN SPREAD (m) | LCH (m) | LBH (m) | AGE CLASS | ESTIMATED REMAINING CONTRIBUTION (years) | CATEGORY | SUB-CATEGORY | NOTES                                                                                 | RPA RADIUS (m) |
|---------------|------|--------------|------------|----------|------------------|---------|---------|-----------|------------------------------------------|----------|--------------|---------------------------------------------------------------------------------------|----------------|
| <b>T</b>      | 1    | silver birch | 11         | 450      | 4                | 1       | 2       | EM        | 10+                                      | C        | 2            | Three stems, Bark wounds and occluding pruning wounds to lower stem to height of 2.5m | 5.4            |
| <b>G</b>      | 2    | Leylandii    | 13         | 300-550  | 4                | 2       | 2       | EM        | 10+                                      | C        | 2            | Historically topped at approximately 8m                                               | 6.6            |

**Table 3: Key and relevant descriptors**

| Key:          | Description:                                         |
|---------------|------------------------------------------------------|
| Reference Nos | Individual reference number                          |
| Type:         | T - tree; G - tree group; W - wooded area; H - hedge |
| Species:      | Common name                                          |
| Height:       | Overall height (m)                                   |

| Key:                                     | Description:                                                                                                                                                                                                                                                                                                                                                                                                         |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>DBH:</b>                              | Stem diameter (mm) - calculated in accordance with BS 5837 paragraph 4.6.1. Maximum and minimum diameters are provided for tree groups, wooded areas, and hedges                                                                                                                                                                                                                                                     |
| <b>Crown Spread:</b>                     | Spread of crown(m) - based upon the maximum lateral dimension                                                                                                                                                                                                                                                                                                                                                        |
| <b>LCH:</b>                              | Lowest crown height (m); Where an arboricultural feature abuts the edge of the site then only the portion of the crown within, or overhanging the site has been assessed                                                                                                                                                                                                                                             |
| <b>LBH:</b>                              | Height of lowest significant branch (m); Where an arboricultural feature abuts the edge of the site then only the portion of the crown within, or overhanging the site has been assessed                                                                                                                                                                                                                             |
| <b>Age Class:</b>                        | <b>Y</b> - Young; <b>SM</b> - Semi-Mature; <b>EM</b> - Early Mature; <b>M</b> – Mature<br><br><b>Young:</b> recently planted and yet to fully establish; <b>Semi-Mature:</b> established but yet to attain mature stature (<25% life expectancy); <b>Early Mature:</b> Almost full height although crown still developing (<50% life expectancy); <b>Mature:</b> Full height and crown spread (>50% life expectancy) |
| <b>Estimated Remaining Contribution:</b> | Estimated life expectancy (under current site conditions) - <10 years, 10+ years, 20+ years, 40+ years                                                                                                                                                                                                                                                                                                               |
| <b>Category:</b>                         | BS 5837 Category - <b>A</b> (high-quality) <b>B</b> (moderate-quality) <b>C</b> (low-quality) <b>U</b> (very-low quality/unsuitable for retention)<br>Refer to <b>Table 1</b> for detailed descriptions                                                                                                                                                                                                              |
| <b>Sub-Category:</b>                     | BS 5837 Sub-Category - the primary area of value - <b>1)</b> Arboricultural <b>2)</b> Visual <b>3)</b> Cultural/Conservation                                                                                                                                                                                                                                                                                         |
| <b>Notes:</b>                            | General observations, particularly where relevant to the assigned BS 5837 category                                                                                                                                                                                                                                                                                                                                   |
| <b>RPA Radius:</b>                       | Root Protection Area Radius (m). The radius of the circular Root Protection Area associated with the tree as measured from the centre of the stem. For tree groups, wooded areas and hedges the RPA radius is calculated using the maximum stem diameter.                                                                                                                                                            |

## APPENDIX C: TREE PROTECTION PLAN



**LEGEND:**

**Arboricultural Survey**

Tree  
● Low-Quality / BS 5837 Category C

Hedge  
◻ Low-Quality / BS 5837 Category C

**Arboricultural Constraints**

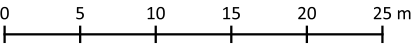
◻ Root Protection Area  
◻ Crown

**Tree Protection**

— Tree Protection Fencing  
◻ Temporary Ground Protection

**Other Item**

— Proposed Scheme  
◻ Red Line Boundary



DRAWING TITLE:

Tree Protection Plan

CLIENT:

National Grid Electricity Distribution

PROJECT:

Alexandra Docks 33/11kw Substation

DATE: 16/04/2025 | SCALE @ A3: 1:500

DRAWING REF:

Figure 1



Pantrhiwgoch Farm Coal Pit Lane, Michaelston Y Fedw  
Cardiff CF3 6XW

T: 0800 2983686 | E: info@tr33.co.uk | W: www.tr33.co.uk

