

REPORT

Gardiner Park Retaining Wall Remediation and Pathway Upgrade - Review of Environmental Factors

Client: Bayside Council

Reference: PA3955-RHD-EA-RP-0002

Status: Draft/03 **For Public Display**

Date: 31 October 2024





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Executive Summary

Project Overview

Bayside Council has engaged Royal HaskoningDHV (RHDHV) to undertake a Review of Environmental Factors (REF) for the proposed remediation works of a segment of collapsed sandstone retaining wall along the perimeter of Gardiner Park and the construction of two new concrete path connections on the eastern and western sides of the synthetic sporting field at Gardiner Park in Banksia NSW.

This REF has been prepared to examine the likely environmental impacts from the retaining wall remediation and construction of the two new concrete pathways and provide measures to mitigate any adverse effects to the surrounding environment.

Approval Pathway

The activity is permissible without development consent pursuant to Part 5 of the Environmental Planning and Assessment Act (*EP&A Act*), through the provisions of Clause 2.73 of State Environmental Planning Policy (SEPP) Transport and Infrastructure (T&I) 2021 which permits development for the purposes of “landscaping, including landscaping structures” (i.e., the landscaped retaining wall) and “pedestrian pathways” (i.e., proposed pathways) to be carried out by or on behalf of a public authority without consent on land owned or controlled by the public authority.

Stakeholder Consultation

Council has shared this REF with relevant internal Council teams during the draft review process. Council has also placed the REF on public display for comment.

As the proposed works require approval under the Transport and Infrastructure SEPP (2021), an assessment of clause 2.15, relating to consultation with public authorities other than councils was conducted and demonstrated that statutory consultation is not required.

Other Approvals and/ or Licences

Approval is required under the *Water Management Act* where construction dewatering greater than 3 ML is required. However, based on the nature and extent of excavation required for the proposed works and the geotechnical report, it is unlikely that this will be required. However, if Council expect dewatering to exceed 3 ML, an exemption for licencing would not be granted by Water NSW and a Water Access License (WAL) would be required.

No other approvals or licenses are required for these works.

Environmental Assessment

The proposed retaining wall is expected to have a positive impact on the heritage value and pedestrian safety of the park by remediation of the wall to its pre-collapsed state with improved structural integrity and drainage. The proposed pathways are expected to have a positive impact on the community and recreational value of the park by providing connectivity between existing pathways and improving disability access around the synthetic sporting field.

Potential environmental impacts most relevant to the proposal including the protection of existing trees and wildlife, preservation of heritage value, pedestrian access/safety, stormwater and sewage underground services and pollution of the environment (e.g., noise, air, water, soils). These impacts are considered to be negligible in accordance with Council’s impact assessment matrix with the implementation of control measures provided in this REF.



All relevant local and state planning instrument provisions and requirements were satisfied by the proposal as assessed in this REF. This included review of the Bayside Local Environmental Plan (BLEP), Gardiner Park Conservation Management Plan (CMP), Bayside Council Plan of Management for Community Land and Public Open and SEPP (T&I) 2021.

The works are not considered to result in significant impacts either onsite or to the surrounding environment with the recommended control measures implemented. Therefore, it is concluded that an EIS is not required, and this REF is considered an appropriate environmental assessment.

No Matters of National Environmental Significance (MNES) would be impacted by the works, therefore referral to the federal minister in accordance with the Environment Protection and Biodiversity Conservation Act (*EPBC Act*) is not required. Furthermore, the proposal is also not likely to significantly affect threatened species or ecological communities, or their habitats so neither a species impact statement (SIS) nor a biodiversity development assessment report (BDAR) is required.

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Appendices

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Appendix C – PMST Species Search Report
Appendix D – Heritage Impact Statement
Appendix E – AHIMS Basic Search Report
Appendix F – BYDA Reports

1 Introduction

1.1 Project Overview

Bayside Council has engaged Royal HaskoningDHV (RHDHV) to undertake a Review of Environmental Factors (REF) for the proposed remediation works of a segment of collapsed sandstone retaining wall along the perimeter of Gardiner Park and the construction of two new concrete path connections on the eastern and western sides of the synthetic sporting field at Gardiner Park in Banksia NSW.

For the purpose of these activities, Council is the proponent and the determining authority under *Part 5* of the *Environmental Planning & Assessment Act, 1979 (EP&A Act)*. This REF has been prepared following the guidance provided in the Department of Planning and Environment (DPE) Guidelines for Division 5.1 assessments (June 2022) and in accordance with the requirements under Divisions 5.5 and 5.7 (i.e., Part 5) of the *EP&A Act* to enable Council to examine any matters related to the works that could impact the environment, and whether any impacts are likely to significantly impact the environment such that the preparation of an Environmental Impact Statement (EIS) will be required.

1.2 REF Objective

This REF has been prepared to examine the likely environmental impacts from the associated retaining wall remediation and construction of the two new concrete pathways detailed in **Section 1.5**, and provide measures to mitigate any adverse effects to the surrounding environment.

1.3 Document Structure

In summary, this REF document details the following sections:

- **Section 1:** The introduction, REF overview and proposal overview (this section)
- **Section 2:** A review of the planning and legislative requirements
- **Section 3:** Stakeholder consultation
- **Section 4:** An assessment of the site conditions for each of the sensitive receptors, the potential environmental impacts, and identification of the proposed mitigation and control measures
- **Section 5:** Summary of future environmental management measures
- **Section 6:** Environmental factors considered under state and federal legislation
- **Section 7:** Conclusion
- **Section 8:** REF Certification
- **Section 9:** References

1.4 Site Description

Gardiner Park is located in the suburb of Banksia within the Bayside Local Government Area (LGA) approximately 11 km southeast of the Sydney CBD.

The segment of retaining wall requiring remediation is located along the southeastern boundary of the park and comprises approximately 20 m of sandstone blockwork. A pedestrian walkway extends along the base of the retaining wall adjacent to the back fence of several Gardiner Avenue residences. There is park access via concrete stairs to the west of the proposal area which connects to Gardiner Avenue to the south. The eastern side of the proposal area is a continuation of the pedestrian pathway. A black metal fence runs along the top of the retaining wall adjacent to a section of metal park bench seating.

The proposed concrete path connections are located on the western and eastern sides of the recently upgraded synthetic sporting field. This area consists of a turf strip adjoining existing concrete pathways. Two sandstone retaining walls and mature trees are located on the western side of the synthetic field with one adjacent to and partially overhanging the proposed path. A black metal mesh fence is positioned next to the proposed path on the eastern side of the synthetic field in proximity to the fixed goal posts. A stormwater line also runs along the proposed path from approximately north to south.

The proposal area is shown in **Figure 1-1**. Site photographs of the retaining wall obtained during a site visit on the 11 September 2024 are provided in **Figure 1-2** and **Figure 1-3**. Recent Nearmap aerial images of the areas proposed for new concrete paths is shown in **Figure 1-4**.



Figure 1-1: Site overview



Figure 1-2: Site photographs: Left - Collapsed retaining wall facing northeast; Right – Collapsed middle section of the retaining wall and prominent adjacent tree



Figure 1-3: Site photographs: Left – Topside of the segment of collapsed retaining wall facing southwest; Right – Topside of the segment of collapsed retaining wall facing northeast



Figure 1-4: Areas proposed for new concrete paths on the eastern side (left image) and western side (right image) of the synthetic sporting field in Gardiner Park (Nearmaps, July 2024)

1.5 Proposed Works

1.5.1 Retaining Wall

1.5.1.1 Proposal Justification and Option Selection

The segment of retaining wall has partially collapsed and is in need of remediation to rectify the damage; attributed to heavy rainfall. Although fenced off, this collapsed section of wall poses a safety hazard to the public and may lead to further erosion/ undercutting of the embankment as photographed in **Figure 1-3**. As such, prompt remediation of this segment of retaining wall is required.

The 'do nothing' approach was not considered feasible due to the safety and structural hazards posed by the collapsed segment of wall.

1.5.1.2 Description of the Proposal

The proposed retaining wall remediation works comprises the reinstatement of approximately 20 m of sandstone wall that has collapsed due to heavy rainfall. This segment of retaining will be deconstructed to enable excavation and the construction of key structural and drainage components of the remediation, followed by reinstatement of the sandstone blockwork and replacement where damage is apparent. The design has also been developed in accordance with Arborist advice provided as part of this REF, including the use of pile foundations and a reinforced beam above the current ground level to avoid impacts to tree roots within the excavation footprint. A plan view drawing of the current design is provided in **Figure 1-5**. The complete set of design drawings are provided In **Appendix A**.

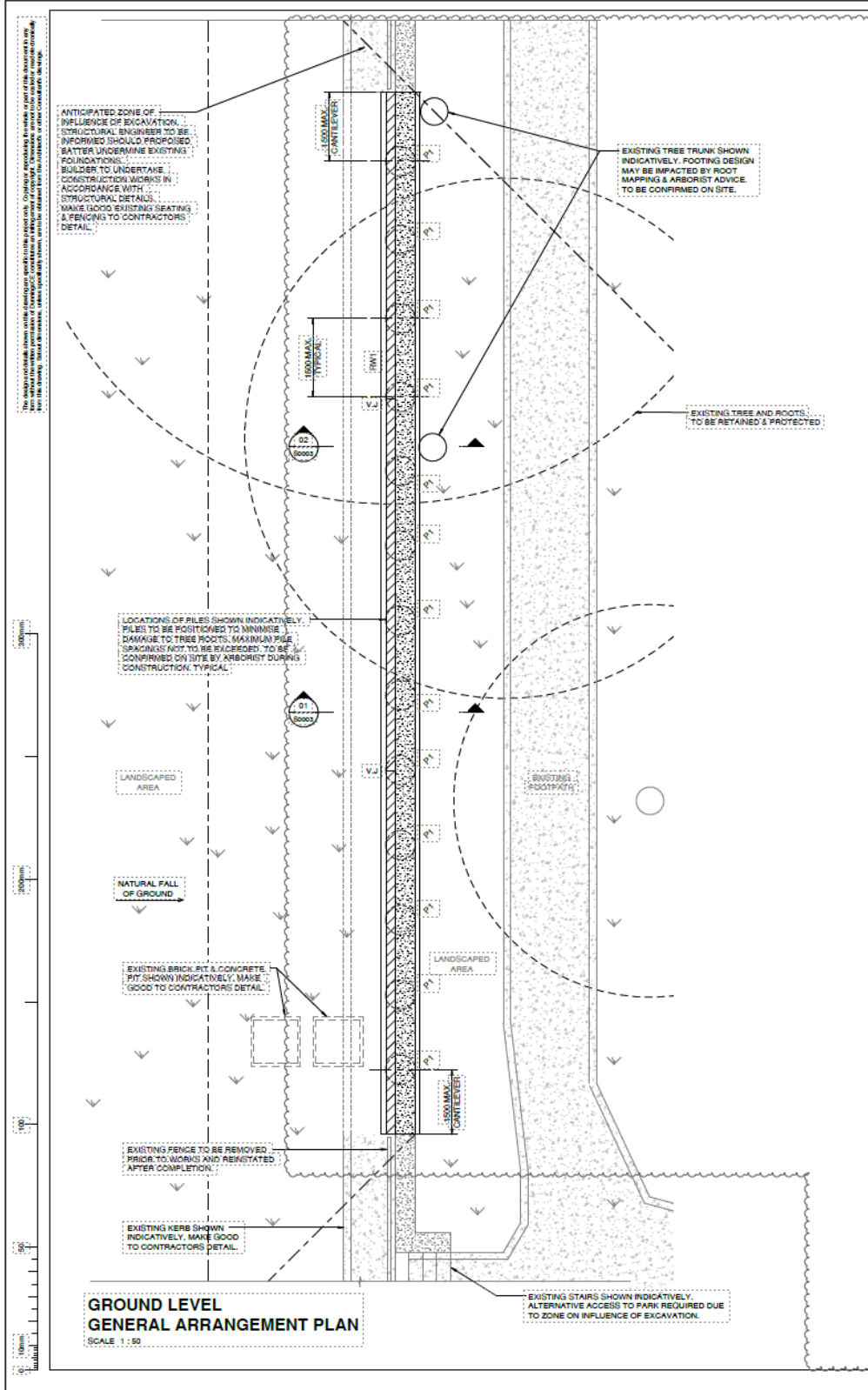


Figure 1-5: Plan of the proposed retaining wall design

1.5.1.3 Proposal Objectives

The primary objectives of the retaining wall remediation proposal are to:

- Reinststate the retaining wall to maintain its heritage and aesthetic value by reusing the collapsed sandstone blocks and using matching sandstone blocks where damage is apparent.
- Improve the structural integrity of the wall by constructing the appropriate footings, core filling, reinforcement, structural blockwork and drainage to support the sandstone wall.
- Prevent damage to adjoining segments of the wall.
- Retain the trees located within the proposal area and ensure they remain healthy.

1.5.1.4 Staging of Works

The following construction staging of works is proposed:

1. Site establishment including temporary fencing and signage (construction and tree protection zone fencing) for the proposed works area and site compound/ ancillary areas.
2. Mulching and preparation of ground within specific tree protection zone areas as per arborist specifications.
3. Careful removal and secure storage of the fallen stone blocks.
4. Removal and storage of aluminum fence from the top of the wall.
5. Demolition of the pine log raised garden bed.
6. Securing of adjoining stone wall.
7. Completion of a “Dial Before You Dig” and any additional required underground service location prior to excavation.
8. Implementation of erosion and sediment controls as required (e.g., meshing nearby drains, silt fencing).
9. Excavation behind the sandstone to allow for safe construction.
10. Excavation for footings by non-destructive excavation (e.g., vacuum truck operating at less than 1000Psi under the supervision of the project arborist)
11. Construction of the footings (pile foundation and reinforced beam) for the wall under project arborist supervision to minimise impact on tree roots. Piles to be certified and signed off by Structural Engineer.
12. Construction of a concrete blockwork retaining wall behind the existing line of the stone wall; core filling of the blocks with concrete. FRP to be certified and signed off by Structural Engineer.
13. Application of waterproof membrane to blockwork wall.
14. Installation of AG pipe, free draining material, and backfill behind blockwork wall. Compaction and make good of surface to match surrounding.
15. Re-building of stone wall using the salvaged stone. Tying into the blockwork wall in the mortar joins for added bracing.
16. Concealment of concrete footings with soil/mulch.
17. Make good works to the surrounding area including re-installation of the aluminum fence along the top side of the wall and bench park seating.
18. Documentation of all relevant works for Quality Assurance through ITP/ITC

1.5.1.5 Construction Materials

The majority of the materials needed for construction would be delivered to site by trucks. These materials may include:

- Temporary supports or braces
- Hessian or carpet underfelt (tree protection)

- Rumble boards or steel plates (tree protection)
- Concrete
- Formwork materials (wood, metal)
- Reinforcement bars (rebar)
- Concrete blocks
- Waterproof membrane
- Adhesives or sealants
- AG (agricultural) pipe
- Free draining material (gravel, coarse aggregate)
- Replacement sandstone block (as required)
- Geotextile fabric
- Mortar mix
- Soil, mulch and turf

1.5.1.6 Plant and Equipment

A range of plant and equipment would be utilised on the proposal, including but not limited to:

- Erosion and sediment control equipment.
- Temporary fencing, barriers and signage.
- Survey equipment for service location.
- Protective coverings/ tarps.
- Suitable excavator for earthworks and piling.
- Variety of hand and power tools for wall disassembly, demolition, concreting, masonry repair and landscaping.
- Compaction equipment.
- Concrete mixer.
- Compacting equipment for backfill.
- Trucks for delivery of materials such as sandstone blocks, engineering fill, bedding materials, and plants, and for removing materials/spoil off-site.

1.5.1.7 Site Access and Compound

Site access for the construction area would be via a chained gate entrance off Gardiner Avenue. The compound facilities including site laydown for the excavator and material storage prior to use and spoil storage prior to disposal offsite would likely be located on the available hardstand and grassed areas south of the proposal area, as shown in **Figure 1-6**.

The existing pedestrian access to this area would be temporarily restricted during construction to allow free movement for construction during the works and minimise public safety risks during construction. Further detail on pedestrian access is provided as part of the environmental assessment in **Section 4.10**.

Driveway access to the garage of the adjacent resident at number 19 Gardiner Avenue would be maintained for the resident if required. It is understood that the property owners do not have a shared access agreement with the Council. Therefore, while the contractor has the right of access for the use of this driveway for site access; care should be taken to not inconvenience the current resident(s) and provide access where feasible.



Figure 1-6: Proposed site access and area(s) suitable for site compound facilities (e.g., material storage, excavator laydown) for the proposed retaining wall remediation

1.5.1.8 Timing of Works

It is estimated the construction works could take approximately 2 months. The program is particularly dependent on the construction contractor's method of working.

Daily working hours will be in accordance with the NSW Interim Construction Noise Guideline (ICNG) (DECC, 2009) as detailed below in **Table 1-1**. Given the proximity to residential areas, it is expected that only non-noisy works (i.e., site shutdown and clean up) are permitted after 5:00 pm. Contractors should have the site completely closed off before 6pm.

Table 1-1: Proposed Working Times

Working Days	Working Times
Monday - Friday	7:00 am – :00 pm*
Saturday	8:00 am – 1:00 pm
Sunday/Public Holidays	No work will occur on Sunday or public holidays

*Only non-noisy works (i.e., site shutdown and clean up) are permitted after 5:00pm

1.5.2 Concrete Paths

1.5.2.1 Proposal Justification and Option Selection

The concrete paths have been proposed to enhance connectivity between existing concrete paths within Gardiner Park and improve disability access around the synthetic field. Council would adopt the City of Sydney Standard path design to construct the proposed pathways.

The 'do nothing' approach restricts disability access, particularly wheelchair access around the synthetic sporting field. Therefore, the option to install the pathways has been adopted by Council.

1.5.2.2 Description of the Proposal

The proposed concrete path works comprise the construction of approximately 100 m of concrete path on the eastern side of the synthetic sporting field and approximately 60 m of concrete path on the western side, including returfing the non-hardstand fringing areas. An overview of the proposed path design is provided in **Figure 1-7**.



Figure 1-7: Proposed new concrete path design

The pathways would be constructed based on the City of Sydney Standard Drawings, as shown in **Figure 1-7**. The design would comprise approximately 350 mm of excavation along the pathway.

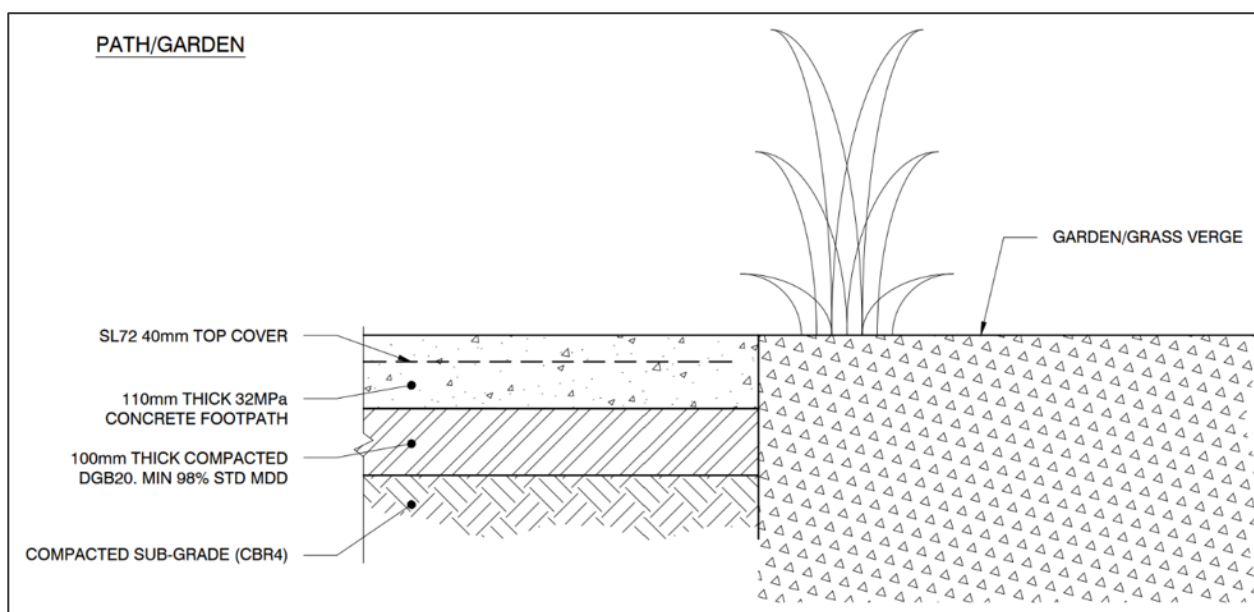


Figure 1-8: City of Sydney Standard Path Design adopted by Council for this proposal

1.5.2.3 Proposal Objectives

The primary objectives of the proposal are to:

- Provide connectivity between the existing pedestrian paths within Gardiner Park.
- Improve disability access around the synthetic sporting field.
- Prevent erosion of the non-hardstand of the synthetic sporting field caused by foot traffic.

1.5.2.4 Staging of Works

The following construction staging of works is proposed:

1. Site establishment including temporary fencing and signage for the proposed works area and site compound/ ancillary areas.
2. Completion of a "Dial Before You Dig" and any additional required underground service location prior to excavation.
3. Implementation of erosion and sediment (ERSED) controls as required (e.g., meshing nearby drains, silt fencing).
4. Excavation to the required depth.
5. Spreading and grading of the existing road base.
6. Compaction of sub-grade with hand compaction equipment due to small areas and tight access.
7. Installation of formwork and steel reinforcement, ensuring correct jointing into nearby pavements using expansion joints and/or dowels.
8. Pouring of concrete using a boom or line pump from the site ancillary area.
9. Grading the pathway to allow appropriate drainage.
10. Smoothing and curing the concrete surface for use.
11. Restoration of the site to its original state including returfing any disturbed areas.
12. Documentation of all relevant works for Quality Assurance through ITP/ITC

1.5.2.5 Construction Materials

The majority of the materials needed for construction would be delivered to site by work vehicles and trucks. These materials may include:

- Gravel base
- Formwork materials (wood, metal)
- Reinforcement bars (rebar)
- Concrete mix
- Erosion control materials (e.g., silt fencing, meshing)
- Temporary fencing materials
- Turf

1.5.2.6 Plant and Equipment

A range of plant and equipment would be utilised on the proposal, including but not limited to:

- Suitable excavator for earthworks
- Wheelbarrow for transporting gravel base and concrete where required.
- Hand compaction equipment.
- Concrete truck and boom/line pump for concrete pouring.
- Concreting hand tools (screed, float, edging tools etc.).
- Tools for steel and formwork installation (e.g., hammers, drills).
- Safety barriers for overnight protection.
- Returfing hand tools (rake, lawn roller etc.)

1.5.2.7 Site Access and Compound

Site access for the construction area would be via a chained gate entrance off Gardiner Avenue for the eastern pathway and via park access along Wollie Creek Road for the western pathway. The site compound would likely be located on a section of concrete hardstand grassed open space immediately west of the proposed western pathway, as shown in **Figure 1-9**. This would include the excavator laydown area and storage for materials, equipment and spoil. For the eastern path, the excavator would be tracked around the synthetic field and materials/ spoil would likely be moved using a tray back utility vehicle. Concreting of this pathway would likely be conducted using a boom or line pump from a truck parked on the hardstand south of the construction area, as shown in **Figure 1-9**. This area may also serve as a site laydown area for materials and spoil. However, given the stairway access these would need to be carried to the construction area by hand.

The existing pedestrian stairway access off Gardiner Avenue would be temporarily restricted during concreting works to minimise public safety risks during construction. Further detail on pedestrian access is provided in **Section 4.10** Environmental Assessment.

In line with the Retaining Wall remediation, driveway access to the garage of the adjacent resident at number 19 Gardiner Avenue would be maintained for the resident if required. It is understood that the property owners do not have a shared access agreement with the Council. Therefore, while the contractor has the right of access for the use of this driveway for site access; care should be taken to not inconvenience the current resident(s) and provide access where feasible.



Figure 1-9: Proposed site access and area(s) suitable for site compound facilities (e.g., material storage, excavator laydown) for the proposed concrete pathways

1.5.2.8 Timing of Works

It is estimated the construction works could take approximately 2 months. The program is particularly dependent on the construction contractor’s method of working.

Daily working hours will be in accordance with the NSW Interim Construction Noise Guideline (ICNG) (DECC, 2009) as detailed below in **Table 1-1**. Given the proximity to residential areas, it is expected that only non-noisy works (i.e. site shutdown and clean up) are permitted after 5:00 pm. Contractors should have the site completely closed off before 6pm.

Table 1-2: Proposed Working Times

Working Days	Working Times
Monday - Friday	7:00 am – 6:00 pm
Saturday	8:00 am – 1:00 pm
Sunday/Public Holidays	No work will occur on Sunday or public holidays

*Only non-noisy works (i.e., site shutdown and clean up are permitted after 5:00pm

2 Planning and Legislative Requirements

2.1 Overview

This section summarises the relevant legislative requirements for the proposed works. The requirements specified in this section have been informed by a review of relevant legislation, and advice provided by relevant government agencies. A summary of key outcomes is provided in **Table 2-1** below and further detail provided in **Section 2.2** to **Section 2.5**.

Table 2-1: Summary of key outcomes from an assessment of planning and legislation requirements for the proposed works

Legislative Requirement	Summary of Key Outcomes	Relevant Section for further detail
Land Use and Ownership	<ul style="list-style-type: none"> The proposal areas are located within Gardiner Park, which is controlled and managed by Council, zoned as RE1 (Public Recreation). No native title claims are noted within or nearby the proposed works area. 	Section 2.2
Approvals Pathway	<p><i>State Environmental Planning Policy (SEPP) Transport and Infrastructure (T&I) 2021</i> Clause 2.73 states:</p> <ul style="list-style-type: none"> Development for the purpose of “landscaping, including landscaping structures” and “pedestrian pathways” may be carried out by or on behalf of a public authority without consent on land owned or controlled by the public authority. As the proposal is for the remediation of a landscaping retaining wall structure and construction of pedestrian pathways, and is to be carried out on behalf of Council, it can be assessed under Division 5.1 of the <i>EP&A Act</i> and development consent is not required. 	Section 2.3.4
Local Environmental Plan	<ul style="list-style-type: none"> The proposed works meet the key objectives of RE1 zoning as per the Bayside LEP (BLEP) 2021. However, pursuant to Section 1.9(1) of the BLEP and as provided by Section 3.28 of the <i>EP&A Act</i>, the provisions of State Environmental Planning Policies prevail over the BLEP provisions. 	Section 2.3.2
Gardiner Park Plan of Management Conservation Management Plan	<ul style="list-style-type: none"> The proposed works satisfies and in no way contradicts the relevant objectives relating to the proposal areas in the context of the Gardiner Park Plan of Management. The proposed works is compliant with the relevant conservation policies defined in the CMP. 	Section 2.3.3
Other Relevant Guiding State Legislation Considered	<ul style="list-style-type: none"> <i>Protection of the Environment Operations Act 1997 (POEO Act)</i> <i>Biodiversity Conservation Act 2017 (BC Act)</i> <i>Water Management Act 2000</i> <i>National Parks & Wildlife Act 1974</i> <i>Native Title Act 1994</i> <i>Heritage Act 1977</i> 	Section 2.3.5
Commonwealth Legislation	<ul style="list-style-type: none"> The proposed works would not have an impact on any matters of national environmental significance defined in the 	Section 2.4

Legislative Requirement	Summary of Key Outcomes	Relevant Section for further detail
	EPBC Act 1979, therefore, referral to the Federal Minister for approval is not required.	

2.2 Land Use and Ownership

The land use for proposed works is zoned as RE1 (Public Recreation) under the BLEP 2021, as annotated in **Figure 2-1**. Surrounding land use includes the remaining parkland also zoned as RE1 land and adjacent low density residential (R2) of Banksia.

A search of the [National Native Title Tribunal Spatial Data \(arcgis.com\)](https://arcgis.com) service for Native Title Claims did not indicate any active or determined native title claims at or near the site.



Figure 2-1: Land use zoning map for the proposal area (BLEP 2021)

2.3 NSW Planning and Approvals Process

2.3.1 Overview

The New South Wales (NSW) environmental planning legislative framework provides for the classification of developments, and the assessment of impacts from developments and activities. This framework comprises:

- *Environmental Planning and Assessment Act (EP&A Act) 1979*;
- *Environmental Planning and Assessment Regulation (EP&A Regulation) 2021*;
- Environmental Planning Instruments (EPIs) made under the *EP&A Act* (i.e., State Environmental Planning Policies (SEPPs), Regional Environmental Plans (REPs), and Local Environmental Plans (LEPs)); and
- Other planning codes, policies, guidelines and strategies that relate to any proposed development of a particular site including plans of management and policies.

The statutory basis for planning and environmental assessment in NSW is set out in the *EP&A Act* and the *EP&A Regulations*. In NSW, before the approval's pathway (i.e., assessment under Part 4 or 5 of the *EP&A Act*) for a development can be defined it is necessary to answer two key questions:

- Whether development consent is required under a relevant local environmental planning instrument, and
- Whether the project is likely to have a significant impact on the environment.

Sections 5.5 and 5.7 of the *EP&A Act* and section 171(2) of the *EP&A Regulations* identify the factors required to be considered by a determining authority when assessing the environmental impact of a proposed activity. Clause 5.5 states that a determining authority must examine and take into account to the fullest extent possible all matters affecting or likely to affect the environment by reason of that activity. Where it is concluded that the impact is unlikely to significantly affect the environment and hence an EIS is not required to be prepared under section 5.7 of the *EP&A Act*, the determining authority must consider the environmental factors specified in section 171(2) of the *EP&A Regulation*. These factors are each addressed in **Section 4** and summarised in **Section 6.1**.

Review of the *EP&A Act* indicates that the works may proceed in accordance with Part 5 of the *EP&A Act*, as development consent under Part 4 is not required (refer to **Section 2.3.4**).

As a result of the scope of works detailed in **Section 1.5** there is unlikely to be any significant impact on the environment and therefore an EIS under Section 5.7 of the *EP&A Act* is not required.

2.3.2 Local Environmental Plans

The BLEP (2021) is the primary statutory plan for the site and is based on the requirements of the Standard Instrument (Local Environmental Plans) Order 2006. As noted in **Section 2.2**, the works fall on land zoned RE1 (Public Recreation). Land Zone RE1 has the following objectives:

- To enable land to be used for public open space or recreational purposes.
- To provide a range of recreational settings and activities and compatible land uses.
- To protect and enhance the natural environment for recreational purposes.

The proposed works meet the objectives of RE1 zoning as per the BLEP. However, pursuant to Section 1.9(1) of the BLEP and as provided by Section 3.28 of the *EP&A Act*, the provisions of SEPPs prevail over LEP provisions.

2.3.3 Local Plan of Management

The Bayside Council Plan of Management for Community Land and Public Open Space Version 0.7 (Bayside Council, 2022) is applicable to the proposal area. This plan is an updated and consolidated document that supersedes over twenty five previous plans on various parks that were developed for or by the Council, including the Gardiner Park Plan of Management (2008).

Under this plan, Gardiner Park is defined as Community Land intended for public access and use, which is further categorised into area of General Community Use (GCU), sports fields and areas of cultural significance.

The proposed works have been considered in regard to the key relevant management principles pertaining to areas of GCU and areas of cultural significance. The relevant objectives relating to areas of GCU and areas of cultural significance include:

- Public safety is considered at the planning, design, construction, maintenance and management stages of all public open space.
- Provide the community with sufficient appropriate access to public open spaces.
- Protect, maintain and improve where necessary the individual landscape character, scenic, scientific, educational, aesthetic, cultural, environmental, geological and geomorphological features, landscape and historical values of Council's public open space assets.
- Provide adequate access to passive recreational opportunities.
- To retain and enhance the cultural significance of the area (namely its Aboriginal, aesthetic, archaeological, historical, technical or research or social significance) for past, present or future generations by the active use of conservation methods.
- Protection and appreciation of objects, places, structures and intangible aspects of cultural significance.
- Maintenance and management programs maintains the heritage values of the facilities and park.

The proposed works satisfies and in no way contradict the relevant objectives. The retaining wall would improve public safety through structural improvements to the collapsed segment of wall whilst maintaining the heritage value by retaining the sandstone block aesthetic. Public access would be restricted during the construction phase for both the retaining wall and concrete pathways works, however, this would be short term during construction only. Furthermore, the proposal would ultimately improve the current state of pedestrian access within the park, including improving disability access around the synthetic sporting field.

In addition to the objectives detailed in relation to areas of cultural significance within proposal areas, the Conservation Management Plan (CMP) for Gardiner Park (Britton & Jackson, 2015) has been assessed as part of this REF, included as part the Heritage Impact Statement conducted by Sue Rosen Associated in May 2024 (Refer to **Appendix D**). The relevant policies assessed are summarised in **Table 2-2** below.

Table 2-2: Assessment of the proposal compliance with relevant Gardiner Park CMP (2015) conservation policies

Conservation Policy	Compliance comments
Policy 44: Ensure the conservation of the layout and fabric of Gardiner Park in order to maintain the cultural significance and intrinsic landscape character of the park.	Compliant: The proposed retaining wall works seek to conserve the layout and fabric of the park by repairing the collapsed section of retaining wall. The inclusion of the pathways also aligns with this policy,

Conservation Policy	Compliance comments
	as they are considered to form part of the intrinsic character of an urban park.
<p>Policy 53: As part of the routine risk management of Gardiner Park ensure the ongoing monitoring of the larger trees by arborists, with experience and understanding working in the context of landscapes of high cultural value, in order to prolong the safe, viable life of the larger trees as valuable park assets.</p>	<p>Compliant: The proposal has been planned to ensure the protection of two large trees and their root systems at the base of the retaining wall and trees within the proposed site compound area. An arborist has been engaged to provide advice on the remediation design and control measures to minimise impacts during construction activities. Proposed works would also be supervised by an arborist.</p>
<p>Policy 58: Ensure all new services, infrastructure and facilities proposed within and adjoining Gardiner Park are planned and designed on the basis of this CMP taking into account the cultural significance of the park and the need to ensure that significance is not compromised. For any new buildings within the park, ensure they are also planned and designed to make a positive contribution to the character of the park while respecting that the site is highly valued by its local community.</p>	<p>Compliant: The works propose to construct an additional blockwork retaining wall behind the stone wall, which will take the load of the retained earth. There will be additional drainage works installed behind that new wall to drain groundwater away from the wall.</p> <p>A new concrete footing will be laid under both the new blockwork wall and the re-laid stone wall. The stone wall will be tied in to the blockwork wall for additional structural support. The ties will be concealed by the mortar.</p> <p>The blockwork wall will not be visible and will have the stone wall re-laid in front of it to maintain the high significance of this element of the park.</p> <p>As mentioned above, the works have been planned to consider the health of the medium-high significance trees in the immediate vicinity of the works, the siting of the concrete footings has been adjusted accordingly to accommodate for the presence of the trees and the works will be supervised by an arborist.</p>
<p>Policy 59: Ensure that vehicular access within Gardiner Park is strictly limited to maintenance, and occasional construction, vehicles only as well as all those necessary during major events and, in those cases, only within limited areas.</p>	<p>The proposals are considered “occasional construction”, therefore complies.</p>
<p>Policy 60: In the event of archaeological material being found during any future construction work at the park, the work in that area should cease and the appropriate senior Council staff and Council's heritage advisor should be notified in order to assess the nature of the find before allowing work to recommence.</p>	<p>Compliant: The works have been designed to minimise excavation.</p> <p>All personnel involved in the delivering the works should be made aware of this policy. An unexpected finds protocol (UFP) should be followed.</p>
<p>Policy 67: Ensure the retention of all of Gardiner Park's access points as a means of securing desirable permeability with its surrounding residential neighbourhoods.</p>	<p>Access points along Gardiner Avenue and on the topside of the adjacent stairs would be temporarily closed during the construction phase (~2.5 months) of the proposal. However, given the availability of</p>

Conservation Policy	Compliance comments
	nearby alternative access along Gardiner Avenue midway along the synthetic sporting field and short-term temporary nature of the proposed works, it is not expected to impact the permeability of access with surrounding residential neighbourhoods.
Policy 71: Ensure the conservation of Gardiner Park's fabric of high cultural significance by carrying out maintenance and repair work where required including stonework and concrete step repairs, Crossling memorial reconstruction, plantation thinning, weed removal, routine arboricultural monitoring and limited embankment redesign and reconstruction. While the removal of the 1960s clubhouse is desirable, if this necessarily entails the simultaneous removal of the 1930s change room structure then ensure there is an archival record of the latter and consider interpreting it by way of a new lightweight shelter structure in the same location.	Compliant: The works comprise essential repair works. The stone retaining wall is an element of high significance and the affected section will be restored to its former state using the existing stone blocks.
Policy 73: Remove, replace, redesign or otherwise reduce the intrusiveness of the various elements within Gardiner Park that detract from an appreciation of its cultural significance	Compliant: The works will remove the raised pine-log garden bed in front of the affected section of wall as it has been graded as an intrusive area.

Following review of the relevant policies, the proposal was deemed compliant with the CMP conservation policies. Overall, the works respect to the cultural significance of the Park, tree protection and accessibility. Furthermore, the approach does not compromise any built or natural elements which contribute to the heritage significance of the site.

2.3.4 State Environmental Planning Policies (SEPPs)

2.3.4.1 SEPP (Transport and Infrastructure) 2021

SEPP (Transport and Infrastructure) 2021 updates and consolidates SEPP (Infrastructure) 2007, SEPP (Educational Establishments and Childcare Facilities) 2017, SEPP (Major Infrastructure Corridors) 2020, and SEPP (Three Ports) 2013. Chapter 2, aims to facilitate the effective delivery of infrastructure within NSW by public authorities. It does this by prescribing the infrastructure related works that may be undertaken without development consent, although the public authority may still be required to obtain an approval, licence or permit under another Act, such as the *FM Act*.

Division 12 Parks and other public reserves

Clause 2.73 states that “the following developments may be carried out by or on behalf of a public authority without consent on land owned or controlled by the public authority:

- a) development for any of the following purposes:
 - (i) roads, pedestrian pathways, cycleways, single storey car parks, ticketing facilities, viewing platforms and pedestrian bridges
 - (ii) recreation areas and recreation facilities (outdoor), but not including grandstands
 - (iii) visitor information centres, information boards and other information facilities
 - (iv) lighting, if light spill and artificial sky glow is minimised in accordance with the Lighting for Roads and Public Spaces Standard

- (v) landscaping, including landscape structures or features (such as artwork) and irrigation systems
- (vi) amenities for people using the reserve, including toilets and change rooms
- (vii) food preparation and related facilities for people using the reserve
- (viii) maintenance depots
- (ix) portable lifeguard towers
- b) environmental management works
- c) demolition of buildings (other than any building that is, or is part of, a State or local heritage item or is within a heritage conservation area)”

Considering the proposed retaining wall remediation works are defined as a structural landscaping development and the concrete pathway is defined as a pedestrian pathways, both proposed work packages can be permitted without development consent under SEPP (Transport and Infrastructure) 2021.

2.3.5 Other Relevant State Legislation

Relevant additional State Legislation that would potentially apply to the proposed works includes the following:

- *Protection of the Environment Operations Act 1997 (POEO Act)* - Activities should be carried out in a manner which does not result in the pollution of waters.
- *Biodiversity Conservation Act 2017 (BC Act)* -The potential impact of the proposal on threatened species has been assessed. This REF determined that there would not a significant effect on threatened species, populations and/or ecological communities listed in the *BC Act*, or their habitats from the proposed activities with the identified control measures implemented. Therefore, neither a species impact statement (SIS) nor a biodiversity development assessment report (BDAR), is required.
Water Management Act 2000 – Approval is required under the *Water Management Act* where construction dewatering greater than 3 ML is required. However, based on the nature and extent of excavation required for the proposed works and findings of the synthetic sporting field geotechnical report (Douglas Partners, 2018c), it is unlikely that this will be required. However, if Council expect dewatering to exceed 3 ML, an exemption for licencing would not be granted by Water NSW and approval and a Water Access License (WAL) would be required.
- *National Parks & Wildlife Act 1974* - Under s86, it is an offence to harm or desecrate an Aboriginal object or place. This REF determined there are no known sites or places of Aboriginal significance nearby to the work sites. In addition, the project is not located on land reserved under the National Parks and Wildlife Act 1974.
- *Native Title Act 1994* - No native title claims have been identified at or near the site.
- *Heritage Act 1977* - No heritage sites, areas or items identified within vicinity of the proposed works area.

2.4 Commonwealth Legislation

The *EPBC Act* requires that proposals for development or “actions” that have, will have, or are likely to have, a significant impact on any matter of national environmental significance are to be referred to the Commonwealth Environment Minister for consideration and approval.

The *EPBC Act* identifies the following matters of national environmental significance:

- World heritage;

- National heritage;
- Wetlands of international importance;
- Listed threatened species and communities;
- Listed migratory species;
- Protection of the environment from nuclear actions; and,
- Marine environment.

The proposed works would not have a significant impact on any of the above, therefore, referral to the Federal Minister for approval is not required.

2.5 Confirmation of Statutory Position

An assessment of the relevant statutory planning instruments has concluded that development consent is not required, and the proposal can be assessed under Part 5 of the *EP&A Act* by Council as the determining authority. The identified impacts in **Section 4** would not significantly affect the environment and therefore an EIS is not required and the environmental assessment for the proposed retaining wall remediation development activities takes the form of this REF. The proposal is also not likely to significantly affect threatened species or ecological communities, or their habitats so neither a SIS nor a BDAR is required.

3 Stakeholder and Community Consultation

3.1 Consultation Summary

Council has shared this REF with relevant internal Council teams during the draft review process. Council has also placed the REF on public display.

3.2 Transport and Infrastructure SEPP (2021) Assessment

As the proposed works require approval under the Transport and Infrastructure SEPP (2021), clauses 2.10 to 2.15 are relevant to this REF as they contain provisions for public authorities to consult with local councils and **other public authorities** prior to the commencement of certain types of development. However, as clauses 2.10 to 2.14 apply to consultation with councils (and emergency services) and Council is the proponent for this proposal, the consultation requirements of these clauses do not apply. As such, an assessment of clause 2.15, relating to consultation with public authorities other than councils was conducted and is summarised in **Table 3-1** below. Findings from this assessment demonstrates that statutory consultation is not required in accordance with clause 2.15.

Table 3-1: Assessment of Transport and Infrastructure SEPP (2021) consultation requirements

Item	Requirement
a) development adjacent to land reserved under the <i>National Parks and Wildlife Act 1974</i> or to land acquired under Part 11 of that Act—the Office of Environment and Heritage	The proposal is not adjacent to a National Park.
b) development on land in Zone E1 National Parks and Nature Reserves or in a land use zone that is equivalent to that zone—the Office of Environment and Heritage	The proposal is not on land in Zone E1 National Parks and Nature Reserves
c) development comprising a fixed or floating structure in or over navigable waters – Transport for NSW,	The proposal does not comprise a fixed or floating structure in or over navigable waters
d) development that may increase the amount of artificial light in the night sky and that is on land within the dark sky region as identified on the dark sky region map—the Director of the Observatory	The proposal does not comprise development that may increase the amount of artificial light in the night sky and that is on land within the dark sky region as identified on the dark sky region map
e) development on defence communications facility buffer land within the meaning of clause 5.15 of the Standard Instrument—the Secretary of the Commonwealth Department of Defence	The proposal does not comprise development on defence communications facility buffer land within the meaning of clause 5.15 of the Standard Instrument—the Secretary of the Commonwealth Department of Defence
f) development on land in a mine subsidence district within the meaning of the <i>Mine Subsidence Compensation Act 1961</i> —the Mine Subsidence Board	The proposal does not comprise development on land in a mine subsidence district within the meaning of the <i>Mine Subsidence Compensation Act 1961</i>

3.3 Ongoing and Future Consultation

Consultation with the community will continue throughout the construction phases as required.

4 Environmental Assessment

This section considers the existing site conditions and the potential impacts for those environmental sensitivities considered relevant at the site in the context of construction activities proposed in **Section 1.5**. In addition to the detailed environmental assessment provided in **Section 4.3** to **Section 4.14**, mitigation and control measures are summarised for both construction and operational phases in **Table 5-1**.

4.1 Overview

The proposed site for construction activities is understood to comprise council owned and managed land zoned for public recreation (RU1).

The proposed retaining wall remediation works comprises the reinstatement of approximately 20 m of sandstone wall that has collapsed due to heavy rainfall. This segment of retaining will be deconstructed to enable excavation and the construction of key structural and drainage components of the remediation, followed by reinstatement of the sandstone blockwork and replacement where damage is apparent. The current design drawings are provided in **Appendix A**.

The proposed pathways have been proposed to enhance connectivity between existing concrete paths within Gardiner Park and improve disability access around the synthetic field. Council would adopt the City of Sydney Standard path design to construct the proposed pathways.

The works are expected to have discrete and localised environmental impacts, with potential effects on environmental aspects listed in **Table 4-1** and detailed in the following sections.

Table 4-1: Summary of key environmental aspects assessed as part of this REF

Environmental Aspect Assessed	Reference
Soils and Geology	Section 4.3
Environmental Flows and Water Quality	Section 4.4
Noise and Vibration	Section 4.5
Biodiversity	Section 4.6
Air Quality	Section 4.7
Non-Aboriginal Heritage	Section 4.8
Aboriginal Heritage	Section 4.9
Traffic, Parking, Pedestrian Access and Safety	Section 4.10
Visual Amenity and Landscape Character	Section 4.11
Services and Utilities	Section 4.12
Spoil and Waste Management	Section 4.13
Cumulative Impacts	Section 4.14

4.2 Impact Assessment Matrix

Council's impact assessment rating matrix provided in **Table 4-2** has been used to assign impact ratings without proposed environmental controls implementation and with relevant controls.

Table 4-2: Bayside Council impact rating matrix

Negligible	Minor	≥ Moderate
Does not create a nuisance	Creates a temporary nuisance	Creates a continuous or ongoing nuisance
Impacts contained within work site	Impact short term/localised, for life of project	Impact ongoing/long term or widespread impact
No detectable/noticeable change	Measurable change/may be offensive	Obvious change/offensive
Complies with industry guidelines	Exceeds industry guidelines (minor)	Exceeds industry guidelines (major)
Reasonable inconvenience/financial loss	Sustained/short term inconvenience/financial loss	Unacceptable inconvenience/financial loss
Change but similar to original land use	Slight or temporary change to land use	Transforms a locality permanently
No negative impact to the significance of heritage items, heritage items in the vicinity or native flora or fauna	Work to heritage items is easily reversible, native flora and fauna able to be repaired/rehabilitated	Significant and/or permanent damage/loss of a heritage item/flora or fauna from an area
No foreseen increase to risk from natural hazards	Slight increase to risk from natural hazards	Major increase to risk from natural hazards
Waste disposed/recycled of at licenced waste facility or reused immediately	Waste stockpiled with end use unknown, potential for temporary impact to air, soil or water	Long term contamination of air, soil or water due to waste disposal
No remediation required following work to prevent/remove pollution	Minor /short term site remediation required at completion of work to prevent/remove pollution	Extensive site remediation required over extended timeframe to prevent/remove pollution (e.g. soil or water contamination, severe soil erosion, large scale revegetation)

4.3 Soils and Geology

4.3.1 Existing Conditions

Strata

Review of the Sydney 1:100,000 Geological Series Sheet 9130) accessed via MinView ([MinView | Regional NSW | Mining, Exploration and Geoscience](#)) indicates that the subsurface material is underlain by Hawkesbury Sandstone, which is generally a medium to coarse-grained quartz sandstone with minor shale and laminite layers. The Soil Conservation Service of NSW's 1:100,000-scale Soil Landscape Series Sheet describes the overburden as primarily consisting of Newport aeolian soils, which includes:

- Deep, leached soils on steep slopes, lower slopes, and depressions.
- Sandy soils on upper slopes.
- Shallow, well-sorted, siliceous sands over moderately deep, buried soils, including yellow leached soils with sandy topsoils, on crests and gentle slopes.

A contamination investigation was undertaken by Douglas Partners (2018a) for the development of the synthetic sporting fields adjacent to the proposal area. Review of two boreholes drilled in close proximity to the proposed retaining wall remediation area (BH6 and BH122 shown in **Figure 4-1**) indicates the material onsite is likely comprised of varying layers of compacted sandy fill material with some construction rubble (brick fragments, gravel and crushed sandstone) to a depth of 2 m bgl.

Fill material similar in nature was observed in the exposed eroded ground on the topside of the retaining wall during RHDHV's site inspection undertaken on the 11 September 2024. Photographs of the exposed soil along the retaining wall is provided in **Figure 4-2**.

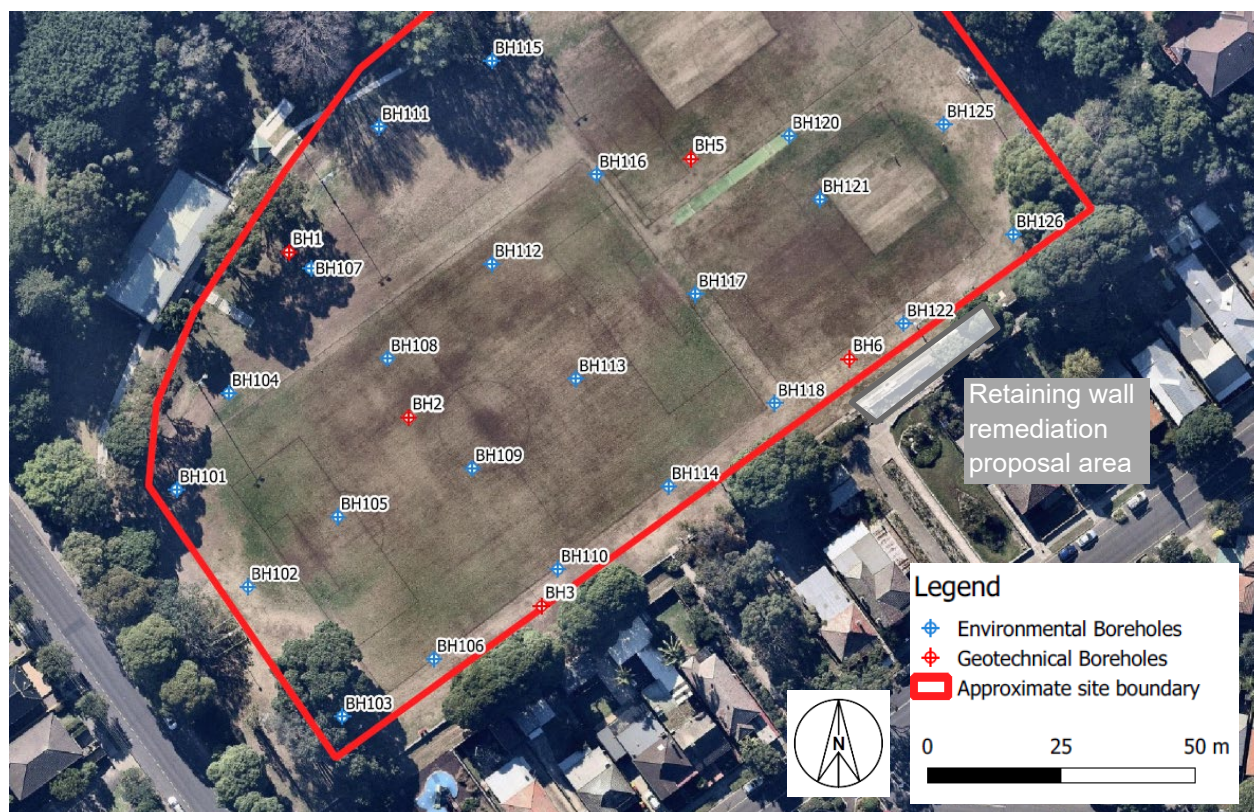


Figure 4-1: Geotechnical and contamination boreholes (adapted from Douglas Partners, 2018)



Figure 4-2: Exposed fill material on the top side of the collapsed retaining wall

Review of boreholes located along the proposed pathway alignments indicated the subsurface material was also silty sand filling in the upper profile where excavation is proposed. Considering the proposed pathways are located inside of the synthetic field's construction earthworks footprint as shown in **Figure 4-3**, subsurface material is expected to be either reworked sandy fill obtained from the park or imported clean fill similar in composition used for levelling works.



Figure 4-3: Gardiner Park synthetic sporting field construction earthworks footprint (Nearmaps, 2021)

Contamination

A search of the NSW EPA's Contaminated Land Record (accessed via <https://apps.epa.nsw.gov.au/prclmapp/searchregister.aspx>) did not present any contaminated sites in or nearby the proposal areas.

Contamination testing conducted as part of the synthetic sporting fields upgrade at boreholes in proximity to the proposed retaining wall remediation area (BH118, BH122 and BH126) did not present any exceedances of adopted human and ecological guidelines levels, nor did it detect the presence of Asbestos within samples analysed. Furthermore, assessment against the NSW Waste Classification Guidelines indicated the material has a preliminary classification of General Solid Waste (GSW).

As noted above, the shallow subsurface material proposed for excavation as part of the pathway construction is expected to be either reworked or imported clean sandy fill used to elevate and level the synthetic sporting field. Soil contamination was reported at BH101 and BH117 along the proposed pathway alignments, exceeding adopted national human health guideline values for PAHs and PCBs, and adopted ecological guidelines values for PCBs. However, this soil is understood to be beneath the proposed pathway excavation level and would not be disturbed by the works. Furthermore, follow up delineation sampling conducted as part of the synthetic sporting field development (Douglas Partners, 2018b) at these locations did not present any guidelines exceedances, suggesting the contamination was discrete in nature.

Acid Sulfate Soils

Acid Sulfate Soils (ASS) is the common name given to sediment and soil containing iron sulfide. The exposure of iron sulfides to air will result in oxidation and the generation of sulphuric acid that can adversely impact the environment.

In 1995, the then Department of Land and Water Conservation (DLWC) published Acid Sulfate Soils Risk Maps for NSW coastal areas, now integrated into the NSW Department of Planning, Industry and the Environment eSPADE v2.2 web mapping application. The risk maps identify four risk classes (high probability of occurrence, low probability of occurrence, no known occurrence, and disturbed terrain) based on the probability of ASS being present. Within each risk class, the depth to acid sulfate material, landform and environmental risks are documented.

A search of the ASS probability map via eSPADE v2.2 ([eSPADE v2.2 \(nsw.gov.au\)](https://www.nsw.gov.au/eSPADE)) indicates the works area within an area of no known occurrence. Moreover, given the material is likely fill material it is unlikely this would contain naturally forming acid sulfate soils.

4.3.2 Potential Impacts

Given the lack of contamination reported in previous contamination investigations at Gardiners Park, likely presence of clean fill material across the site from ground raising and levelling works conducted as part of the synthetic field construction, and lack of visual contamination indicators (e.g., asbestos fragments or oil staining) observed in exposed in eroded sections of the retaining wall during RHDHV's site inspection, the likelihood of encountering contamination during excavation works is considered low. However, there remains the potential for excavation to uncover unknown buried contaminated material, particularly contaminants discrete in nature which would require an Unexpected Finds Protocol implemented as part of the CEMP.

Other potential impacts to the subsurface environment during construction activities include contamination from machinery leaks and spills (e.g., oils, lubricants and fuels) particularly during refuelling and

maintenance, the tracking of soil offsite and further erosion and scour of the excavation area during construction if heavy rainfall or windy conditions prevail during construction. However, implementation of the appropriate control measure provided in this REF would result in negligible impact from these activities.

The generation of waste to landfill also creates a potential impact following demolition of the existing garden bed at the southwestern end of the retaining wall and excavation to support the retaining wall remediation. Spoil management is discussed in further detail in **Section 4.13**.

There would be no impacts to soils and geology during the operation of the retaining wall and pathways.

4.3.3 Recommended Control Measures

Recommended control measures for potential impacts to soils and geology are provided in **Table 4-3**.

Table 4-3: Recommended control measures for soils and geology

Potential Impact	Impact Assessment Rating without Control	Control Measure	Final Impact	Timing
Exposure of contaminated material during excavation works	Minor	The CEMP should include an Unexpected Finds Protocol (UFP) for potential incidental subsurface contamination impacts or potential source finds during excavation.	Negligible	Construction
	Minor	Any excavated material would require testing and a final waste classification during construction prior to re-use or disposal at a licensed facility.	Negligible	Construction
Contamination of subsurface soils by construction plant and machinery	Minor	Implementation of the environmental control measures for water quality protection, specifically those pertaining to the impacts identified above (e.g., spills and leaks from machinery, construction and general waste).	Negligible	Construction
Tracking of soil offsite	Minor	Cleaning of any machinery in a designated washdown area prior to demobilisation from site.	Negligible	Construction

4.4 Environmental Flows and Water Quality

4.4.1 Existing Conditions

The topographic gradient of Gardiner Park north and east of the synthetic sporting field slopes to the southeast, creating a pathway for overland surface water and groundwater flows toward the retaining wall. The recent stormwater upgrade conducted as part of the synthetic field development comprises a new flood storage area to the north of the eastern turf field and an upgraded stormwater pipeline within the park. The existing and upgraded stormwater network is shown in **Figure 4-4** and has demonstrated an overall improvement in the drainage capabilities of the park. It is noted that localised overland flow during flooding events remains an issue in proximity to the proposed retaining wall remediation area as shown by the concentration of surface water the post-development 20% Annual Exceedance Probability (AEP) (WMA, 2024) (refer to **Figure 4-5**). Groundwater flow is also expected to follow this same topographic

pathway and be a partial contributor to the failure of existing retaining wall structure. Findings of synthetic sporting field geotechnical report indicate that the upper side of retaining wall and parkland where the pathways are proposed does not have any free standing groundwater (Douglas Partner, 2018c).

At the southern edge of the park and on the top side of the collapsed retaining wall there is a concrete kerb that diverts shallow flow towards inlet pits as shown in **Figure 4-6**. A new drainage pit is also located at the southwestern extent of the proposal area to improve overland drainage from the fields during periods of high rainfall. On the low side of the retaining wall, there is an overland drainage channel running along the adjoining pedestrian concrete pathway into an inlet pit as pictured in **Figure 4-7**. This drainage system is intended to capture overland flows when the capacity of the drainage system on the top side of the retaining wall is exceeded (WMA, 2024).

The stormwater quality is expected to be consistent with that of urban stormwater systems due to shallow overland flows from the upper catchment areas where the capacity of the stormwater network on Atkinson Street to the north, and Knight Street to the east, is exceeded, in addition to local runoff from the park and surrounding properties (WMA, 2018). This may include the presence of common urban pollutants such as sediments, nutrients, dissolved metals and to a lesser extent hydrocarbons and microbial pathogens. Local stormwater generated from within the park during rainfall events is not expected to be impacted by contamination given low levels reported during extensive soil contamination testing completed in 2018 (refer to **Section 4.3**). Moreover, the park is generally free of any gross pollutants as observed during the RHDHV site inspection in September 2024 which would limit the amount of gross pollution (e.g., litter) captured in the stormwater grates and downstream gross pollutant traps.



Figure 4-4: Site overview mapping provided as part of the recent Updated Flood Risk Assessment for Gardiner Park (WMA, 2024)



Figure 4-5: Post-development flood mapping for a 20% AEP event (WMA, 2024)



Figure 4-6: Concrete kerb overland drainage system and recently installed drainage pit on the top side of the collapsed segment of retaining wall photographed by RHDHV in September 2024.

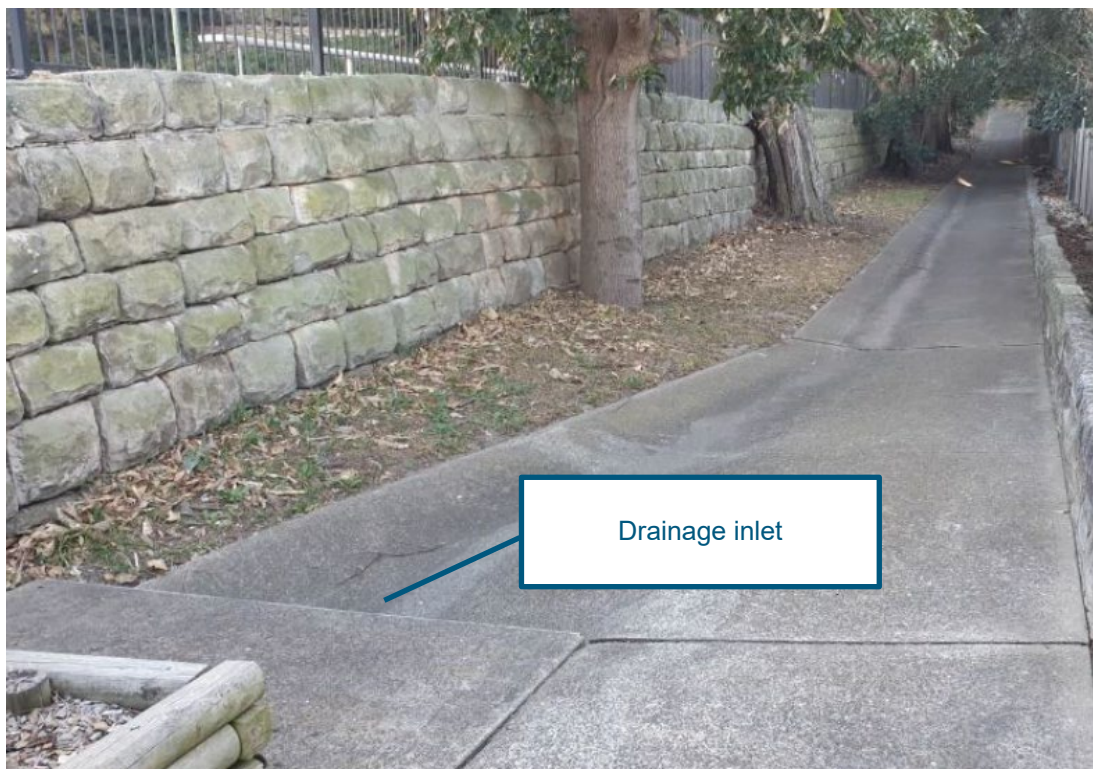


Figure 4-7: Access pathway and overland flow path [looking upstream (northeast)] (WMA, 2024)

4.4.2 Potential Impacts

During the short-term construction phase of the proposed works, potential impacts to environmental flows and stormwater quality may include:

- Excessive overland flows through the proposed retaining wall works area during periods of high rainfall when the concrete kerb is temporarily removed.
- Sediment runoff from exposed soils during excavation and stockpiling.
- Stormwater and groundwater contamination from plant and machinery leaks and spills (e.g., fuel, coolant, lubricants, and hydraulic fluids) during construction and maintenance activities.
- Waste materials from the construction (e.g., general household litter, packaging, agi pipe offcut) entering the stormwater network.
- Inflow and pooling of water in excavations from groundwater and overland flows may require dewatering during construction. Approval is required under the *Water Management Act* where construction dewatering greater than 3 ML is required. However, based on the nature and extent of excavation required, dewatering to this extent is not expected and an exemption would likely be granted.

The remediation of the retaining wall is expected to have a positive impact on the overall drainage in the immediate area during operation due to the proposed agi pipe and free drainage design (refer to design drawings in **Appendix A**) at the base of the wall to redirect groundwater flows along the retaining wall and into the adjacent stormwater system.

Construction of the pathways would reduce the amount of impermeable ground. However, the pathways represent an approximate 1% increase in the amount of impermeable surface within the park and given the recent upgrades to the parks stormwater network conducted during the synthetic sporting field development, this operational impact is expected to be Negligible. Furthermore, it is understood that the paths would be constructed to the existing surface level, which would mitigate any flow redirection.

4.4.3 Recommended Control Measures

Recommended control measures for potential impacts to environmental flows and water quality are provided in **Table 4-4**.

Table 4-4: Recommended control measures for environmental flows and water quality

Potential Impact	Impact Assessment Rating without Control	Control Measure	Final Impact	Timing
Overland flows (Retaining Wall ONLY)	Minor	Stormwater diversion equipment (e.g., silt sock or similar) should be installed on the upgradient side of the embankment and excavation footprint to divert overland flows into the adjacent stormwater pit to the southwest.	Negligible	Construction
Disturbed sediment entering the stormwater	Minor	An Erosion and Sediment Control Plan (ESCP) should be prepared prior to construction and integrated into the CEMP in accordance with Council's requirements and the guideline Managing Urban Stormwater, Soils and Construction (known as the 'Blue Book') (Landcom, 2004). The ESCP is to incorporate measures to prevent the discharge of soil and waterborne pollutants beyond the extent of work during construction. The following control measures should be implemented as a minimum: <ul style="list-style-type: none"> • Implementation of filters / soil traps at all drainage inlets and the removal of any residual soil that has accumulated following removal of the equipment. • Installation of soil fencing along the extent of excavation works. • Covering soil stockpile areas. • Additional soil controls (e.g., curtains, silt socks etc.) to be held onsite for the duration of the works and used for any unforeseen sedimentation issues. • Returning of disturbed areas as soon as practical to promote soil stabilisation. 	Negligible	Pre-construction and construction
Impact to water quality from construction plant leaks and spills	Moderate	The following spill and leak procedures should be adopted as a minimum: <ul style="list-style-type: none"> • Emergency spill kits should be kept onsite at all times and maintained throughout the construction work for use as required by trained Contractor personnel. 	Negligible	Construction

Potential Impact	Impact Assessment Rating without Control	Control Measure	Final Impact	Timing
		<ul style="list-style-type: none"> The contractor should ensure that all plant is maintained in good working order with regular servicing. Refuelling should be undertaken off site. However, if refuelling on site is required, due care should be taken to avoid spilling fuel and a tray should be used to catch any accidentally spilt fuel. Plant refuelling/servicing activities should be completed on-land and away from waterway areas. No major maintenance of equipment should be undertaken on-site. 		
Construction waste materials entering the stormwater network	Minor	Bins should be available for use onsite and disposed of at a license facility frequently.	Negligible	Construction
Groundwater inflows into the excavation	Minor	<p>If shallow groundwater and ponding is encountered during excavations, de-watering may be required through a groundwater extraction technique such as “spear points” around the excavation footprint.</p> <p>If council expect there to be greater than 3ML of construction dewatering, certain approvals may need to be obtained from WaterNSW/ DCCEEW (jointly managed) under the Water Management Act, including a WAL and water supply work approval.</p>	Negligible	Construction and pre-construction if extraction approvals needed

4.5 Noise and Vibration

4.5.1 Existing Conditions

The acoustic environment surrounding the site is influenced primarily by light traffic on Gardiner Avenue and Wollie Creek Road, and recreational users of Gardiner Park. Recreational uses of the park typically include active use of the sporting facilities, playground, dog walking and social events. Overall, given that the site has limited exposure to road traffic and intermittent exposure to recreational use, typically on weekends, the ambient noise levels are considered to be low.

The closest sensitive receivers to construction noise relevant to the proposal areas are the recreational park users and neighbouring residents, particularly those along Gardiner Avenue in proximity to the retaining wall remediation area and proposed locations for site ancillary facilities and access.

Ambient vibration at the site is considered negligible.

4.5.2 Potential Impacts

As construction works are proposed in the vicinity of residences and recreational space of Gardiner Park, the potential for noise impacts to sensitive receptors is expected, albeit short-term and intermittent over the construction period and appropriately managed with the control measures provided as part of this REF.

Noise generating activities relevant to the proposed works include plant and truck movements, concrete kerb removal/ demolition, excavations/ earthmoving and concreting. These noise-generating activities have the potential to impact sleep, increase stress levels, and affect the hearing of sensitive human receptors, particularly neighbouring residents. Additionally, there may be behavioural impacts on animals, including birds inhabiting nearby trees and domestic pets.

Given the low vibration construction methods proposed (refer to **Section 1.5**) and short-term and intermittent nature of the works, they are not expected to generate vibration levels that would impact nearby sensitive receptors and infrastructure. For example, excavation, backfilling and compaction is proposed with light plant (e.g., 5 tonne excavator) and demolition works is limited to a small section of concrete kerb located along the tops of the retaining wall.

There would be no impacts from noise and vibration during the operation of the retaining wall and pathways.

4.5.3 Recommended Control Measures

Recommended control measures for potential impacts to environmental flows and water quality are provided in **Table 4-5**.

Table 4-5: Recommended control measures for Noise and Vibration impacts

Potential Impact	Impact Assessment Rating without Control	Control Measure	Final Impact	Timing
Negative affects to nearby sensitive receptors from noisy plant	Minor	Works should be undertaken during the standard construction hours where practicable (i.e., 7.00 am to 6.00 pm Monday to Friday and 8.00 am to 1.00 pm Saturdays, with no work to be undertaken on Sundays and Public Holidays), in accordance with the NSW Interim Construction Noise Guideline (ICNG) (DECC, 2009). Given the proximity to residential areas, only non-noisy works (i.e. site shutdown and clean up) are permitted after 5:00 pm on weekdays. Contractors should have the site completely closed off before 6pm. Where works are required outside of the standard hours, notification would need to be provided to local residents by Council.	Negligible	Construction
	Minor	Noise levels and management should be maintained in accordance with NSW ICNG (2009) guidelines. No noise monitoring is required based on the proposed construction methodology and low levels of noise expected	Negligible	Construction
	Minor	Construction personnel should be informed of the location of sensitive receptors, and the need to minimise noise	Negligible	Construction

Potential Impact	Impact Assessment Rating without Control	Control Measure	Final Impact	Timing
		from the work, through the site induction and regular toolbox talks.		
	Minor	Community groups and surrounding residences should be notified of the proposed works and hours of operation. A Council contact should be provided for the works in the event of any complaints.	Negligible	Construction
	Minor	Appropriate and practical noise reduction methods should be implemented by the contractor, including but not limited to: <ul style="list-style-type: none"> Plant should be turned off when not in use (i.e., not left idling). Noisy plant and equipment should be oriented away from sensitive receivers where possible. The use of horns and alarms should be minimised to the highest extent possible while satisfying legislative requirements. 	Negligible	Construction

4.6 Biodiversity

4.6.1 Existing Conditions

Flora

The flora in proximity to the retaining wall remediation proposal area comprises turfed areas on the top side of the wall and trees along the bottom side of the proposal area and where site ancillary facilities are proposed. These trees were identified by an Arboriculturist engaged as part of the retaining wall remediation proposal and included species ranging between a medium and high level of landscape significance using the Significance of the Tree Assessment Rating System (STARS) as developed by the Institute of Australian Consulting Arborists (IACA). Further information of each tree identified within the proposal area including a detailed description, health, retention value and significance is provided in the Arboricultural Development Impact Assessment Report (Birds Tree Consulting, 2024) in **Appendix B**. A map showing these trees is provided in **Figure 4-8** and site photographs of mapped trees provided in **Figure 4-9**

A raised pine garden bed with some ornamental plants and shrubs is located at the western extent of the proposal area, however, this is proposed for removal as part of the works in accordance with the CMP, as it has been recognised as an intrusive area that detracts from the parks heritage value. Two trees are also present in the proposed site compound area.

Flora present within the proposed pathways construction footprint is mostly turf laid as part of the synthetic sporting field development in 2021. Review of the site using Nearmaps imagery and the Gardiner Park Conservation Management Planting map (Britton & Jackson, 2015) indicates the presence of one mature London Plan tree (*Platanus x acerifolia*) overhanging the northern extent of the eastern pathway and one mature Port Jackson Fig (*Ficus rubiginosa*) adjacent to and overhanging the western pathway, as shown in **Figure 4-8**.



Figure 4-8: Trees identified within the proposed construction works area



Figure 4-9: Left Photograph – Brushbox and Illawarra Flame Tree located within the proposed retaining wall remediation area; Right Photograph – Brushbox and Green/ Red Ash trees located within part of the proposed site compound area (RHDHV, 2024)

Fauna

Due to the highly urbanised and fragmented nature of Gardiner Park, fauna onsite is expected to be limited to common urban parkland birds, small mammals (e.g., possums), domestic animals (e.g., dogs being walked and cats), lizards, frogs and insects.

Threatened Species and Communities

Records of threatened species, populations and endangered ecological communities have been obtained from a desktop review of databases, sightings data and known habitat descriptions and distributions for the locality. The following databases were searched:

- Australian Government Department of Agriculture, Water and the Environmental (DAWE) **Protected Matters Search Tool (PMST)** (Accessed via <https://pmst.awe.gov.au/>); and,
- NSW Department of Primary Industry and Environment (DPE) **BioNet Atlas** (Accessed via <https://www.environment.nsw.gov.au/atlaspublicapp/>).
- Atlas of Living Australia (ALA) species search tool ([Spatial Portal | Atlas of Living Australia \(ala.org.au\)](https://ala.org.au))

Review of the Australian Government Department of Climate Change, Energy, the Environment and Water (DCCEEW) Protected Matters Search Tool (PMST) (<https://pmst.awe.gov.au/>) for Gardiner Park indicated 51 threatened species, 6 threatened ecological communities and 14 migratory species have the potential to be onsite. These included a number of plants, birds, mammals, reptiles and frogs either with potential for inhabiting or migrating through the area. A RAMSAR wetland (Towra Point Nature Reserve) was also identified within 10 km of the site, located approximately 6.7 km southeast of site in Botany Bay. The PMST report providing a complete list is provided in **Appendix C**.

Given the nature of the proposal, extent of urbanisation surrounding Gardiner Park and fragmentation from any wildlife corridors, majority of the records identified in the PMST search are irrelevant in terms of potential impact. For this reason, a closer examination of the Atlas of Living Australia and NSW BioNet Atlas species sightings provided for the project site and surrounds was completed to assess whether threatened species have been observed and recorded within or in the immediate vicinity of Gardiner Park. The results of this search reported a number animal and plant records (refer to **Figure 4-10**), majority of which are not listed as threatened. Several Grey-headed Flying Fox's and one White Throated Needletail listed as Vulnerable under the NSW *BC Act* have been previously observed nearby site.

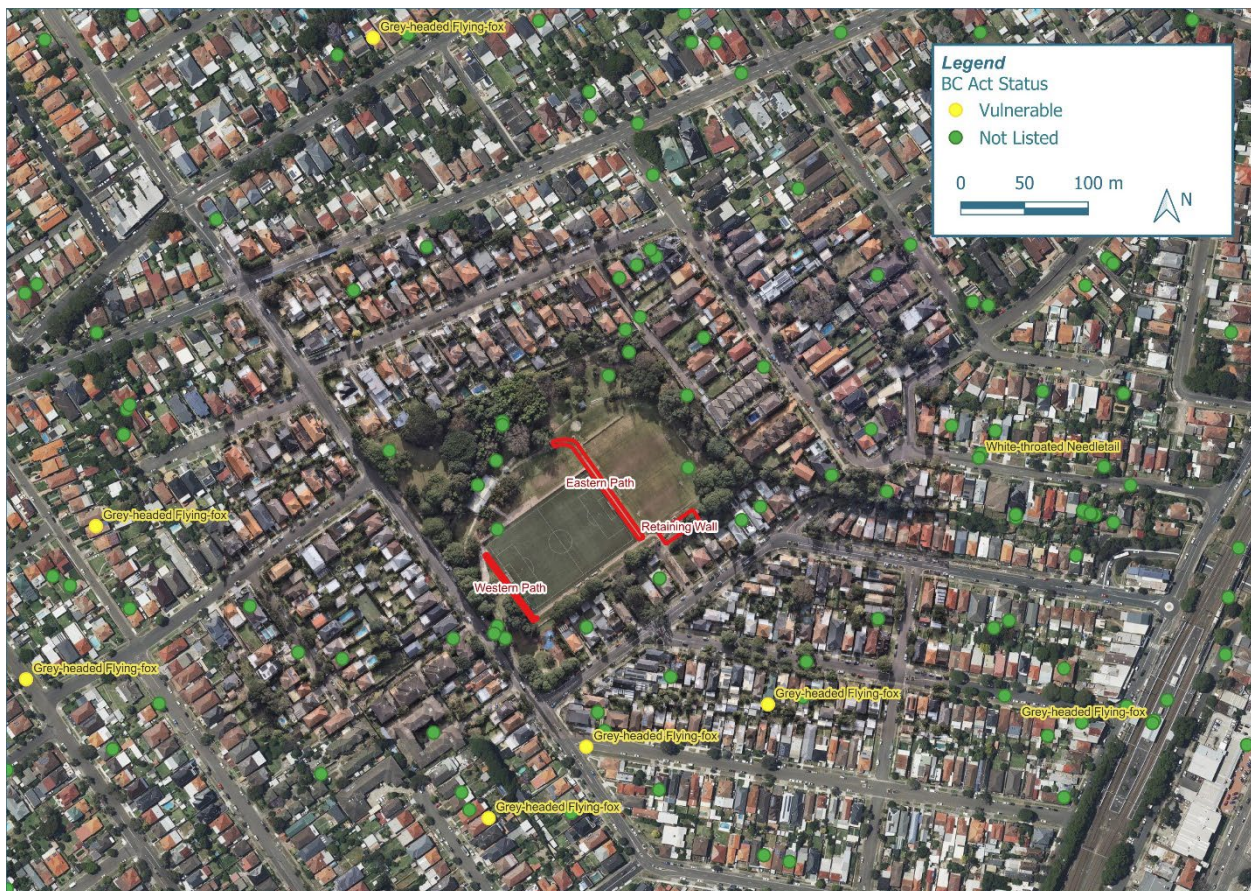


Figure 4-10: Validated flora and fauna sighting on the ALA database

Additionally, no other MNES such as Wetlands of International Importance or Commonwealth Marine Areas were identified as potentially occurring in or nearby the proposal areas.

4.6.2 Potential Impacts

As noted above, the likelihood of encountering threatened faunal species during construction activities is considered low, albeit possible based on historical sightings in proximity to Gardiner Park (e.g., Grey-headed Flying-foxes). It is noted that no threatened plants or ecological communities have been recorded onsite. Furthermore, encountering non-threatened fauna during construction activities is also considered unlikely due to the limited habitat and foraging area at ground level where works are proposed, with the exception of insects and subsurface organisms. Any animals foraging the proposal area such as birds would be deterred by the construction activities to other parts of the parkland.

Potential impacts to the trees located within the proposed retaining wall construction and site compound areas are possible based on the intrusive nature of the works. This includes the possibility of disturbing the trunks and lower canopy during plant movements and the root systems during excavations. However, implementation of the Tree Protections Zones shown in the **Figure 4-11** provided as part of the Arboricultural Development Impact Assessment Report (Birds Tree Consulting, 2024) (refer to **Appendix B**), and relevant environmental control measures recommended as part of this REF would mitigate any impacts to a negligible level.



Figure 4-11: Proposed retaining wall Tree Protection Zones (TPZs)

Trees observed within the proposed pathway construction areas (refer to **Figure 4-8**) and overhanging branches would be subject to potential disturbance during construction plant movements. However, any impacts would be limited to overhanging branches and not the trunks, main limbs and root systems, and appropriately mitigated with controls provided as part of this REF.

Based on the nature of the works and limited interaction with potential habitat and foraging areas for fauna, and with appropriate control measures identified as part of this REF, the proposed would not impact the habitat of protected species (within the meaning of the *NP&W Act*) nor will the works result in the endangering of any species of animal or plant. This includes the protection of prominent trees and their root systems identified within the proposal areas.

There would be no impacts to biodiversity onsite during the operation of the retaining wall and pathways.

4.6.3 Recommended Control Measures

Recommended control measures for potential impacts to biodiversity are provided in **Table 4-5**.

Table 4-6: Recommended control measures for biodiversity protection

Potential Impact	Impact Assessment Rating without Control	Control Measure	Final Impact	Timing
Disturbance of trees within the retaining wall proposal area ONLY	Moderate	General All tree protection works shall be carried out before excavation, grading and site works commence. Tree protection works shall be inspected and approved by a Consulting Arborist meeting AQF Level 5 prior to construction works commencing.	Negligible	Pre-construction and construction
	Moderate	Site Access Sufficient access is required to enable efficient construction. It is essential to delineate access zones or corridors which will provide suitable access without damaging the existing trees to be retained or causing compaction to the root zone.	Negligible	Pre-construction
	Moderate	Site Compound Area Construction storage and management proposed within the TPZ of Trees 4, 5, 6, 7, and 8 is allowable with the appropriate Tree Protection Fencing, Trunk and Branch Protection and Ground Protection procedures recommended below and following approval by the Project Arborist.	Negligible	Pre-construction
	Moderate	Protective Fencing Fencing is to be erected around existing trees to be retained prior to any construction works including bringing materials onsite. In addition to this protective fencing within the site, protective fencing is to be installed to the full extent of the TPZs within the site. Where the TPZ is encroached by proposed construction works and construction areas, ground protection is required in accordance with AS4970-2009 and as detailed below.	Negligible	Pre-construction
	Moderate	Signage Prior to works commencing, tree protection signage is to be attached to each tree protection zone, displayed in a prominent position and the sign repeated	Negligible	Pre-construction

Potential Impact	Impact Assessment Rating without Control	Control Measure	Final Impact	Timing
		<p>at 10 metre intervals or closer where the fence changes direction. Each sign shall contain in a clearly legible form, the following information:</p> <ul style="list-style-type: none"> • Tree protection zone. • This fence has been installed to prevent damage to the trees and their growing environment both above and below ground and access is restricted. • No unauthorised access within Tree Protection Zone. • Name, address, and telephone number of the developer. • Name and telephone number of the Site Arborist. 		
	Minor	<p>Mulching Install mulch to the extent of all tree protection fencing within the site on non-hardstand ground where excavation for the footings is not required. Use a leaf mulch conforming to AS 4454.</p>	Negligible	Pre-construction
	Moderate	<p>Trunk and Branch Protection Where a tree is to be retained and a Tree Protection Zone cannot be adequately established due to restricted access, the trunk and branches in the lower crown will be protected by wrapping 2 layers of hessian or carpet underfelt around the trunk and branches for a minimum of 2 m or as lower branches permit, then metal strapping secures 38x50 x2000 mm timber battens together around the trunk (do not nail or screw to the trunk or branches). The number of battens to be used is as required to encircle the trunk and the battens are to extend to the base of the tree (AS4970 2009 Protection of trees on development sites. Do not attach stays, guys and the like to trees. Figure 4-12 provides an example of trunk and branch protection.</p>	Negligible	Pre-construction
	Moderate	<p>Ground Protection No pedestrian or plant access is permissible to the TPZ other than to areas of ground protection. Where works encroach on the TPZs where there is not currently a hardstand surface (e.g., the concrete footpaths), appropriate ground protection measures comprising either rumble boards strapped over</p>	Negligible	Pre-construction

Potential Impact	Impact Assessment Rating without Control	Control Measure	Final Impact	Timing
		mulch or aggregate or steel plates (or equivalent) over mulch. Figure 4-12 provides an example of ground protection.		
	Moderate	Excavation All excavation within TPZ to be carried out using non-destructive excavation such as manual excavation, air spade or vacuum truck operating at less than 1000 Psi under the supervision of the Project arborist.	Negligible	Construction
	Moderate	Piling Works Location of piles to be determined by root mapping using non-destructive excavation methods such as vacuum truck operating at less than 1000 Psi under the supervision of the Project Arborist. No structural roots greater than 25mm are to be damaged	Negligible	Construction
	Moderate	Storage of Possible Contaminants Do not store or otherwise place bulk materials and harmful materials under or near trees. Do not place spoil from excavations within the TPZs. Prevent wind-blown materials such as cement from harming trees. All possible contaminants are to be stored in a designated and appropriate area with secure chemical spill measures such as a bund in place.	Negligible	Construction
	Minor	Irrigation/ Watering The contractor is to ensure that soil moisture levels are adequately maintained. Apply water at an appropriate rate suitable for the species during periods of little or no rainfall.	Negligible	Construction
Disturbance of overhanging branches within the pathway proposal areas ONLY	Minor	Damage to overhanging branches within the construction area would be avoided. Where required, trimming of branches would be undertaken by a qualified arborist.	Negligible	Construction
	Moderate	Workers should be informed of the potential impacts to flora and fauna identified above and measures in place to mitigate these impacts. Workers	Negligible	Construction

Potential Impact	Impact Assessment Rating without Control	Control Measure	Final Impact	Timing
Disturbance of flora and fauna occupying the proposal areas		should also be informed of their obligations and possible offences under the <i>NSW National Parks and Wildlife Act</i> .		
	Minor	An effective spill and leakage procedure should be implemented in accordance with control measures outlined for water quality protection.	Negligible	Construction
	Moderate	The Contractor should cease work activities and notify Council if fauna species are observed to persistently occupy areas in the immediate vicinity of work zones. If native fauna is injured, immediate contact should be made with a wildlife rescue service or a veterinary surgeon.	Negligible	Construction

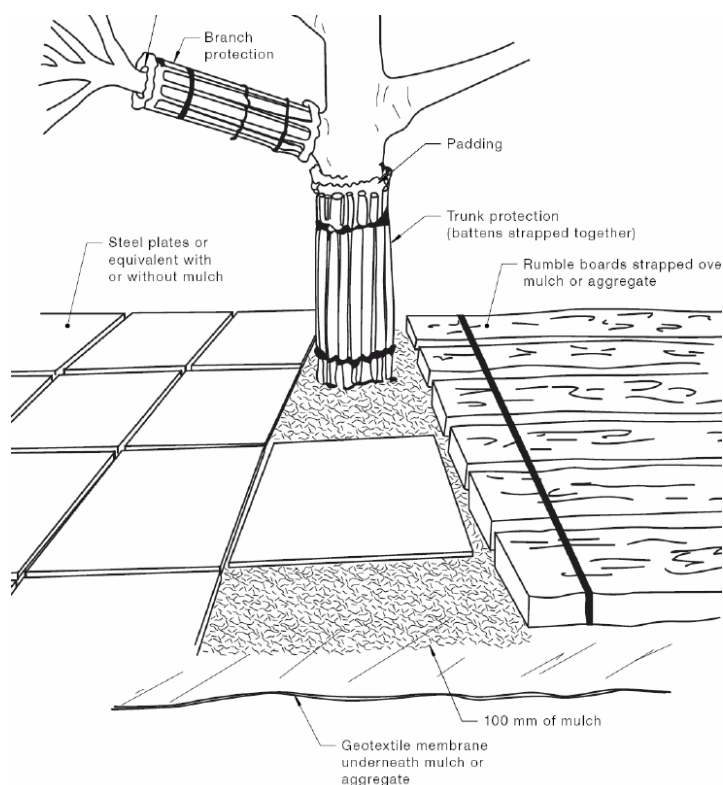


Figure 4-12: Trunk, branch and ground protection

4.7 Air Quality

4.7.1 Existing Conditions

The existing air quality at Gardiner Park is primarily influenced by emissions from motor vehicles and residential activities. Other sources of pollution which affect air quality include house wood-fires (in winter) and bush fires (in summer). The air quality is also influenced by the prevailing weather and climatic conditions, and other natural factors such as pollen.

4.7.2 Potential Impacts

The proposed works would have a minimal effect on air quality, which would be limited to the short-term duration of the works. The main pollutants emitted will be those associated with the operation of construction equipment and the generation of dust during excavations, transporting and storage of spoil. Temporary generation of dust has the potential to have localised impacts on park users and neighbouring residents during windy conditions. However, implementation of the control measures provided as part of this REF would appropriately mitigate such impacts to a Negligible level.

4.7.3 Recommended Control Measures

Recommended control measures for potential impacts to air quality are provided in **Table 4-7**.

Table 4-7: Recommended control measures for air quality

Potential Impact	Impact Assessment Rating without Control	Control Measure	Final Impact	Timing
Emission production from plant and equipment	Negligible	All plant used by the Contractor should be in good operating condition and free of excessive emissions, in accordance with the manufacturers specification to comply with all relevant regulations.	Negligible	Constructio n
		All plant equipment and vehicles should not idle for extended periods of time; they should be switched off if not in operation.		Constructio n
Generation of airborne dust and particulates from excavation, material transport and storage	Minor	Dust suppression techniques should be implemented during excavation and earth moving in high wind conditions.	Negligible	Constructio n
		Stockpiles spoil should be covered prior to reuse or disposal offsite.		
		Sealed areas (i.e., driveways, pathways) should be kept free of soil/dust through sweeping.		
		Cleaning of any machinery and vehicle carrying sand/ soil in their undercarriage and tyre tracks should be conducted in a designated washdown area prior to demobilisation from site.		

4.8 Non-Aboriginal Heritage

4.8.1 Existing Conditions

Bayside Council engaged Sue Rosen Associates to undertake a Heritage Impact Statement (HIS) for the proposed remediation of the collapsed Depression-era sandstone retaining wall at Gardiner Park. Gardiner Park is listed as heritage item 173 in the BLEP (formerly item 179 in the Rockdale LEP (2011)). Due to the local heritage significance of the park, its continued management is subject a Conservation Management Plan (CMP) (Britten & Jackson, 2015), which was reviewed as part of the HIS and includes a comprehensive historical background for the site. The HIS is provided in **Appendix D**.

The proposed pathways were included as part of the project following the completion of the HIS. The western pathway is located next to a sandstone retaining that buffers the site from a mature Port Jackson Fig tree (refer to **Section 4.6**). The eastern pathway proposal area is not located near any items of heritage value as documented in the CMP.

4.8.2 Potential Impacts

The HIS assessment methodology adopted by Sue Rosen Associated included a site inspection and the review of conservation policies set out in the Conservation Management Plan (CMP) for Gardiner Park (Britton & Jackson, 2013) to facilitate an assessment of heritage impact of against them.

The findings of this assessment indicated that the proposed retaining wall remediation would not impact the heritage fabric, setting or heritage significance of the site and is compliant with the relevant CMP conservation policies, namely #73; essential repair to highly significant stonework at the park. The HIS provided recommendations to ensure any heritage impact from remediation works (refer below), including the discovery of unknown historical archaeological material or heritage items during excavation, albeit considered unlikely.

The addition of the concrete pathways is not expected to impact the non-aboriginal heritage value of the park subject to implementation of control measures provided as part of this REF, specifically relating to the protection of the sandstone retaining wall located along the proposed western pathway during construction.

4.8.3 Recommended Control Measures

Recommended control measures for potential impacts to air quality are provided in **Table 4-8**.

Table 4-8: Recommended control measures for air quality

Potential Impact	Impact Assessment Rating without Control	Control Measure	Final Impact	Timing
Disturbance of heritage fabric/ setting/ significance of the retaining wall (Retaining Wall ONLY)	Moderate	Secure/brace adjoining standing stone wall sections stone to ensure no further damage.	Negligible	Construction
		Careful removal and secure storage of the fallen stone blocks. The stone must be reinstalled in situ, with no opportunity for theft, vandalism or accidental damage.		Construction
		The adjacent stairs and low stone retaining walls in the vicinity of the works to be covered and protected for the duration of the works to avoid accidental damage from plant (e.g., excavator).		Construction
		Commission a stonemason experienced in similar projects to rebuild collapsed wall to its pre-collapsed form. Use era-appropriate mortars and match colours to existing.		Construction
		Do not replace the raised garden bed next to the retaining wall.		Construction
Disturbance of historical archaeological material or heritage items	Minor	If during the course of the works, previously unknown historical archaeological material or heritage items are discovered, all work in the area of the item(s) should cease immediately and senior Council staff and Council's heritage advisor should be notified in order to assess the nature of the find before allowing work to recommence.	Negligible	Construction
Disturbance of the sandstone retaining wall adjacent to the western pathway (Pathways ONLY)	Minor	The sandstone wall should be segmented off from construction to avoid damage from the excavator during construction.	Negligible	Construction

4.9 Aboriginal Heritage

4.9.1 Existing Conditions

Gardiner Park is located on the traditional lands of the Gadigal people of the Eora Nation. A review of potential cultural and heritage locations using the Aboriginal Heritage Information Management System (AHIMS) search tool ([Aboriginal Heritage Information Management System | NSW Environment and Heritage](#)) indicated there are no known sites or places of Aboriginal significance within the proposal areas declared under Section 84 of the *NP&W Act*. The 'AHIMS Basic Search' is provided in **Appendix E**.

4.9.2 Potential Impacts

Considering the absence of recorded Aboriginal heritage sites it is unlikely that an Aboriginal feature will be harmed, destroyed, defaced, or damaged during construction of the works. However, there is always the potential for unknown or undiscovered finds on any site, particularly in areas of undisturbed ground such as the bottom side of the retaining wall where footing excavations are proposed. Standard good practice management and control measures provided as part of this REF would be implemented when necessary.

There would be no impacts to aboriginal heritage onsite during the operation of the retaining wall and pathways.

4.9.3 Recommended Control Measures

Recommended control measures for potential impacts to Aboriginal heritage are provided in **Table 4-9**.

Table 4-9: Recommended control measures for Aboriginal heritage

Potential Impact	Impact Assessment Rating without Control	Control Measure	Final Impact	Timing
Disturbance of an item of aboriginal significance during excavation	Minor	All persons should be made aware that it is an offence under Section 86 of the National Parks and Wildlife Act 1975 to harm or desecrate an Aboriginal object unless that harm or desecration is the subject of an approved Aboriginal Heritage Impact Permit (AHIP).	Negligible	Construction
		In the unlikely event that an Aboriginal object is identified whilst carrying out works during construction, works in the vicinity of the find should cease immediately and a senior member of Council staff and Council's Aboriginal heritage advisor should be notified in order to assess the nature of the find before allowing work to recommence.		Construction
		Should any skeletal material be uncovered during construction, works in the vicinity would cease immediately and the Contractor would contact Council's Superintendent, DPE and the NSW Police.		Construction

4.10 Traffic, Parking, Pedestrian Access and Safety

4.10.1 Existing Conditions

Residential roads adjacent to the proposed project site include Gardiner Avenue to the south and Wollie Creek Road to the west. All day street carparking is present on Gardiner Avenue and Wollie Creek Road with parking spaces regularly available as indicated by a review of Nearmaps imagery between February 2023 and October 2024. This is likely due to the availability of off-street parking for the majority of neighbouring residents. Two public car spaces are also available on Atkinson Lane to the parks north.

There are several pedestrian pathways within the park, namely around the perimeter of the park and to the northwest of the synthetic sporting field. Park access via concrete stairways is available at two locations along Gardiner Avenue and at the top of the park via Atkinson Lane. Disabled access to the park is provided at the main entrance off Wollie Creek Road.

A map showing the key traffic and pedestrian access ways for Gardiner Park and the proposal area is provided in **Figure 4-13**.



Figure 4-13: Roads, parking, pedestrian pathways and access to Gardiner Park showing proposal areas

4.10.2 Potential Impacts

Proposed construction works are expected to have a Negligible impact on traffic along Gardiner Avenue and Wollie Creek Road given the relatively quiet residential setting. Any large vehicles such as concrete trucks entering the park may cause minor temporary traffic and pedestrian congestion when entering the site, particularly off Gardiner Avenue as they may need to reverse into the site compound area. However, this would be infrequent and appropriately managed by the controls provided as part of this REF.

Select parking spaces along Gardiner Avenue and Wollie Creek would be occupied by construction workers. However, given the small scale of the works and limited number of workers required onsite at any one time and availability of street parking, the impact to parking for Gardiner Park is considered Negligible.

Pedestrian access from the eastern most access point off Gardiner Avenue (refer to **Figure 4-13**) would be temporarily blocked during the short-term construction period to facilitate safe and efficient construction movements within a small and restricted compound area (refer to **Figure 1-9**). Moreover, given similar access is available 200 m to the southwest on Gardiner Avenue, the impact of impeding pedestrian access in this location is considered Negligible. Pedestrian access along the concrete pathway along the base of the retaining wall would also be blocked at the eastern edge of the works area for the same reasons. Restricting access in this area would not block any backyard gates entrances to the park, therefore the impact to park users is considered Negligible. Some minor impact to pedestrian access around and within the park is expected along pathways that intersect driveways where construction vehicles may be entering site and informal walking areas where vehicles and plant may be tracking to the construction areas (e.g., from the proposed pathway site compound west of the synthetic sporting field to the eastern pathways proposal area). However, this would be short-term, infrequent and appropriately managed with control measures provided as part of this REF.

Overall, the remediation of the retaining wall and construction of the concrete pathways is expected to have a positive impact on pedestrian access and safety within Gardiner Park. This is namely through the restoration of the collapsed wall which currently poses a safety hazard to park users, albeit blocked off with temporary fencing. The proposed pathways would also have a positive impact on pedestrian connectivity within the park and facilitate disability access around the synthetic sporting field.

There would be no impacts to traffic and parking during the operation of the retaining wall and pathways.

4.10.3 Recommended Control Measures

Recommended control measures for potential impacts to traffic, parking, pedestrian access and safety are provided in **Table 4-10**.

Table 4-10: Recommended control measures for Traffic, Parking Pedestrian Access and Safety

Potential Impact	Impact Assessment Rating without Control	Control Measure	Final Impact	Timing
Construction site hazards to pedestrians accidentally or unlawfully entering	Negligible	Prior to commencement of works, boundaries of the construction area and access points should be marked with temporary barrier fencing and signage. The fencing should be monitored regularly by the site supervisor and damaged areas replaced when required.	Negligible	Construction

Potential Impact	Impact Assessment Rating without Control	Control Measure	Final Impact	Timing
Increase in local traffic when trucks are entering the site	Negligible	The contractor would prepare a Vehicle Management Plan for the proposed works as applicable to delivery of construction materials and plant to and from site.	Negligible	Pre-construction
Risks to pedestrian safety from construction movements outside of the works area	Minor	The contractor would prepare a Pedestrian Management Plan as applicable to pedestrian access and appropriate safety control measures such as barricades and signage.	Negligible	Pre-construction
	Minor	Machinery should only access the defined work site via clearly defined routes. A spotter should be used when tracking the excavator in areas open to the public.	Negligible	Construction

4.11 Visual Amenity and Landscape Character

4.11.1 Existing Conditions

The existing visual amenity of the area is characterised by two turfed fields to the northeast and a newly developed synthetic field to the southwest. The northern corner features a grassed area with scattered trees and a picnic bench, while the southern and western corners respectively feature a playground and public toilets. The parks perimeter is surrounded by trees that largely keep it hidden from Wollie Creek Rd and Gardiner Ave. Suburban houses line the northwest, northeast and southeast sides and mostly face away from the park. Notable features include extensive 1930s stonework, sandstone shelves and cliffs, and a variety of plantings, including native and exotic species. Formal concrete pedestrian pathways run along the perimeter of the park and the northwest and southeast sides of the synthetic field (**Figure 4-13**).

4.11.2 Potential Impacts

Impacts to the landscape are expected during the construction phase with the presence of workers, mobile plants, and associated works infrastructure. However, this is a time-limited impact which would occur during the construction phase only.

The reconstruction of the retaining wall in the proposed area will provide a positive visual impact during the operational phase of the wall. The proposed construction methodology is expected to improve visual amenity by restoring the wall to its original aesthetic in accordance with the CMP (Brittain and Jackson, 2015). This includes the use of the existing sandstone blocks and like-for-like blocks where necessary to rebuild the wall and the removal of the raised pine-log garden bed identified as an intrusive area, as detailed in **Section 4.8** (Non-Aboriginal Heritage).

The proposed concrete pathways would result in the removal of grassed areas on the western and eastern sides of the synthetic sporting field. This change in landscape is related to CMP conservation policy #44; ensuring conservation of the intrinsic landscape character of the park. Considering concrete pathways are an “intrinsic” feature of urban parks and given the added benefits of providing improved

pedestrian connectivity and disabled access within the park, this is expected to have an overall positive impact.

4.11.3 Recommended Control Measures

Recommended control measures for potential impacts to visual amenity and landscape character are provided in **Table 4-11**.

Table 4-11: Recommended control measures for landscape and visual character

Potential Impact	Impact Assessment Rating without Control	Control Measure	Final Impact	Timing
Disturbance of the landscape and visual character from construction activities	Minor	Following the works, areas surrounding the extent of works would be returned to their pre-construction condition where altered. If areas used for the construction compound area are grassed, these would be re-turfed.	Negligible	Construction

4.12 Services and Utilities

4.12.1 Existing Conditions

A preliminary Before You Dig Australia (BYDA) enquiry for the proposal areas was undertaken as part of this REF to provide an understanding of potential services within and in proximity to the proposal areas.

Underground stormwater, sewage and communication services have been identified within the immediate proposed excavation areas for the retaining wall, with power connecting to a light pole located immediately adjacent to the proposal area.

Underground stormwater and sewage have been identified within the proposed eastern pathway construction area and underground electricity in proximity to the western pathway construction area.

A copy of the BYDA reports for each proposal area is provided in **Appendix F**.

4.12.2 Potential Impacts

No overhead services (e.g., power/ communication lines) are located within the proposal areas and site compound and access areas, therefore, no impacts are expected.

The likelihood of excavation for the proposed concrete pathways impacting underground services/ utilities is considered low as the adopted pathway design requires excavation to a depth of approximately 0.4 m, and most services and utilities are typically deeper than 0.5 m. The retaining wall excavation footprint is deeper than 0.5 m and is located within known underground stormwater, sewage and communication services, which have the potential to be impacted by the proposed works.

Service and utility strike during construction phase intrusive activities (i.e., excavation) can carry several moderate to severe impacts including service interruptions, repair costs, injury and even death.

There would be no impacts to services and utilities during the operation of the retaining wall and pathways.

4.12.3 Recommended Control Measures

Recommended control measures for potential impacts to services and utilities are provided in **Table 4-12**.

Table 4-12: Recommended Control Measures for Services and Utilities

Potential Impact	Impact Assessment Rating without Control	Control Measure	Final Impact	Timing
Service and Utility Strike	Moderate	Appropriate clearance should be maintained to existing services, including review of available site service plans and current Before you Dig Australia (BYDA) plans, followed by physical service clearance by an accredited service locator, which would include ground penetrating radar (GPR) and may include non-destructive digging (NDD) techniques.	Negligible	Construction
		Consultation with utilities companies should be undertaken to confirm the presence of any unidentified services and if digging within 1 metre of an asset, a Quality Level A assessment in accordance with the Australian standards (AS5488 – 2013) for utilities should be undertaken. A Quality Level B (QLB) assessment will be required for all assets within 5 metres of the work site.	Negligible	Construction

4.13 Spoil and Waste Management

4.13.1 Existing conditions

There is limited garbage or other forms of waste generally present within the park and proposed area. The site is typically clean and free of waste issues. Waste inputs would most likely be confined to that left by recreational users.

As outlined in **Section 4.3** (Soils and Geology) the 2018 contamination investigation conducted for the synthetic sporting field development indicated that soil in proximity to the retaining wall comprises varying layers of compacted sandy fill material with some construction rubble (brick fragments, gravel and crushed sandstone). Soil within the proposed pathway excavation footprint is expected to be either reworked sandy

fill obtained from the park or imported clean fill similar in composition used for levelling works of the synthetic field.

4.13.2 Potential Impacts

The generation of waste during construction is unavoidable and should be managed appropriately in accordance with relevant NSW EPA waste guidance. Waste streams from construction activities are likely to include excavation spoil and general construction wastes such as materials packaging and food/drink packaging produced by workers.

The mismanagement of construction wastes can lead to the pollution of the surrounding area and to the unnecessary contribution to landfill. It may also lead to costly disposal fees if materials aren't appropriately classified for re-use or disposal.

There would be no impacts regarding waste generation during the operation of the retaining wall and pathways.

4.13.3 Recommended Control Measures

Recommended control measures to ensure effective waste management are provided in **Table 4-13**.

Table 4-13: Recommended control measures for waste management

Potential Impact	Impact Assessment Rating without Control	Control Measure	Final Impact	Timing
Improper classification and re-use/ disposal of spoil	Moderate	A UFP should be prepared and implemented as part of the CEMP to facilitate effective management of contaminated material found during excavation works.	Minor	Construction
	Moderate	Excavated materials and demolition rubble should be appropriately classified prior to either re-use on site or disposal at a licensed waste facility in accordance with NSW Waste Classification Guidelines (NSW EPA, 2014).	Minor	Construction
Production of waste and pollution of the surrounding environment	Minor	Any temporary stockpiles of waste should be appropriately covered and/ or contained to ensure no waste is washed or blown back into the environment.	Negligible	Construction
	Minor	General waste bins should be available for use onsite and disposed of at a license facility frequently.	Negligible	Construction
	Minor	Washout of trucks and cleaning of equipment and/ or vehicles used during the works should not be undertaken in locations that permit flow of untreated wastewater directly to the open drainage system.	Negligible	Construction
	Minor	Upon completion of the works, the site should be cleared of all surplus materials and any remaining waste created by the works.	Negligible	Construction

4.14 Cumulative Impacts

The works are not expected to not have any subsequent effects on land use planning at a local or regional scale as they are being undertaken on an existing retaining wall. No other major construction works are proposed to coincide within the project footprint, and construction activities.

During the construction phase a minor cumulative increase in traffic, noise and dust may arise from concurrent activity such as private development in neighbouring residential lots. However, provided that the mitigation measures identified within this REF are adhered to, the cumulative impact would be minimal.

Positive cumulative environmental and social impacts would result from the completion of the works including improved public safety, amenities, and disability access.

The assessment indicates that the activity is not likely to have a significant effect on the environment. A range of environmental factors as listed in Section 171 of the Environmental Planning and Assessment Regulation 2021 and Commonwealth Matters of National Environmental Significance have been considered as discussed in **Section 6**.

5 Environmental Management

5.1 Environmental Management Plan

A site-specific CEMP should be prepared by the Contractor and approved by Council prior to commencement of construction. The Contractor would implement the CEMP during the works and would be responsible for selecting appropriate control measures for the potential impacts identified in this REF. The CEMP should be compliant with the Contract technical specifications.

The CEMP would ensure that:

- appropriate control measures for the potential impacts are implemented on site for the duration of works;
- activities are carried out with due diligence; and,
- all activities comply with relevant environmental legislation including conditions of approval, Acts and Regulations, and Standards and Best Management Practices.

With the implementation of the CEMP environmental controls detailed as part of this REF there is not expected to be significant environmental impacts during construction.

5.2 Summary of Environmental Control Measures

Table 5-1 provides a summary of the recommended environmental control measures detailed in **Section 4**, that would be implemented to avoid or mitigate potential impacts from the proposed works described in **Section 1.5**.

Table 5-1: Summary of Control Measures

Number	Potential Impact	Impact Assessment Rating without Control	Control Measure	Final Impact	Timing
Soils and Geology – Section 4.3					
1.	Exposure of contaminated material during excavation works	Minor	The CEMP should include an Unexpected Finds Protocol (UFP) for potential incidental subsurface contamination impacts or potential source finds during excavation.	Negligible	Construction
2.		Minor	Any excavated material would require testing and a final waste classification during construction prior to re-use or disposal at a licensed facility.	Negligible	Construction
3.	Contamination of subsurface soils by construction plant and machinery	Minor	Implementation of the environmental control measures for water quality protection, specifically those pertaining to the impacts identified above (e.g., spills and leaks from machinery, construction and general waste).	Negligible	Construction
4.	Tracking of soil offsite	Minor	Cleaning of any machinery in a designated washdown area prior to demobilisation from site.	Negligible	Construction
Environmental Flows and Water Quality – Section 4.4					
5.	Overland flows (Retaining Wall Only)	Minor	Stormwater diversion equipment (e.g., silt sock or similar) should be installed on the upgradient side of the embankment and excavation footprint to divert overland flows into the adjacent stormwater pit to the southwest.	Negligible	Construction
6.	Disturbed sediment entering the stormwater	Minor	An Erosion and Sediment Control Plan (ESCP) should be prepared prior to construction and integrated into the CEMP in accordance with Council's requirements and the guideline Managing Urban Stormwater, Soils and Construction (known as the 'Blue Book') (Landcom, 2004). The ESCP is to incorporate measures to prevent the discharge of soil and waterborne pollutants beyond the extent of work during construction. The following control measures should be implemented as a minimum:	Negligible	Pre-construction and construction

Number	Potential Impact	Impact Assessment Rating without Control	Control Measure	Final Impact	Timing
			<ul style="list-style-type: none"> Implementation of filters / soil traps at all drainage inlets and the removal of any residual soil that has accumulated following removal of the equipment. Installation of soil fencing along the extent of excavation works. Covering soil stockpile areas. Additional soil controls (e.g., curtains, silt socks etc.) to be held onsite for the duration of the works and used for any unforeseen sedimentation issues. <p>Returfing of disturbed areas as soon as practical to promote soil stabilisation.</p>		
7.	Impact to water quality from construction plant leaks and spills	Moderate	<p>The following spill and leak procedures should be adopted as a minimum:</p> <ul style="list-style-type: none"> Emergency spill kits should be kept on-site at all times and maintained throughout the construction work for use as required by trained Contractor personnel. The contractor should ensure that all plant is maintained in good working order with regular servicing. Refuelling should be undertaken off site. However, if refuelling on site is required, due care should be taken to avoid spilling fuel and a tray should be used to catch any accidentally spilt fuel. Plant refuelling/servicing activities should be completed on-land and away from waterway areas. No major maintenance of equipment should be undertaken on-site. 	Negligible	Construction
Noise and Vibration - 4.5					
8.	Negative affects to nearby sensitive	Minor	Works should be undertaken during the standard construction hours where practicable (i.e., 7.00 am to 6.00 pm Monday to Friday and 8.00 am to 1.00 pm Saturdays, with no work to be	Negligible	Construction

Number	Potential Impact	Impact Assessment Rating without Control	Control Measure	Final Impact	Timing
	receptors from noisy plant		undertaken on Sundays and Public Holidays), in accordance with the NSW Interim Construction Noise Guideline (ICNG) (DECC, 2009). Given the proximity to residential areas, only non-noisy works (i.e. site shutdown and clean up) are permitted after 5:00 pm on weekdays. Contractors should have the site completely closed off before 6pm. Where works are required outside of the standard hours, notification would need to be provided to local residents by Council.		
9.		Minor	Noise levels and management should be maintained in accordance with NSW ICNG (2009) guidelines. No noise monitoring is required based on the proposed construction methodology and low levels of noise expected	Negligible	Construction
10.		Minor	Construction personnel should be informed of the location of sensitive receptors, and the need to minimise noise from the work, through the site induction and regular toolbox talks.	Negligible	Construction
11.		Minor	Community groups and surrounding residences should be notified of the proposed works and hours of operation. A Council contact should be provided for the works in the event of any complaints.	Negligible	Construction
12.		Minor	Appropriate and practical noise reduction methods should be implemented by the contractor, including but not limited to: <ul style="list-style-type: none"> Plant should be turned off when not in use (i.e., not left idling). Noisy plant and equipment should be oriented away from sensitive receivers where possible. The use of horns and alarms should be minimised to the highest extent possible while satisfying legislative requirements.	Negligible	Construction

Biodiversity – Section 4.6

Number	Potential Impact	Impact Assessment Rating without Control	Control Measure	Final Impact	Timing
13.	Disturbance of trees within the retaining wall proposal area ONLY	Moderate	General All tree protection works shall be carried out before excavation, grading and site works commence. Tree protection works shall be inspected and approved by a Consulting Arborist meeting AQF Level 5 prior to construction works commencing.	Negligible	Pre-construction and construction
14.		Moderate	Site Access Sufficient access is required to enable efficient construction. It is essential to delineate access zones or corridors which will provide suitable access without damaging the existing trees to be retained or causing compaction to the root zone.	Negligible	Pre-construction
15.		Moderate	Site Compound Area Construction storage and management proposed within the TPZ of Trees 4, 5, 6, 7, and 8 is allowable with the appropriate Tree Protection Fencing, Trunk and Branch Protection and Ground Protection procedures recommended below and following approval by the Project Arborist.	Negligible	Pre-construction
16.		Moderate	Protective Fencing Fencing is to be erected around existing trees to be retained prior to any construction works including bringing materials onsite. In addition to this protective fencing within the site, protective fencing is to be installed to the full extent of the TPZs within the site. Where the TPZ is encroached by proposed construction works and construction areas, ground protection is required in accordance with AS4970-2009 and as detailed below.	Negligible	Pre-construction
17.		Moderate	Signage Prior to works commencing, tree protection signage is to be attached to each tree protection zone, displayed in a prominent position and the sign repeated at 10 metre intervals or closer where the fence changes direction. Each sign shall contain in a clearly legible form, the following information:	Negligible	Pre-construction

Number	Potential Impact	Impact Assessment Rating without Control	Control Measure	Final Impact	Timing
	Disturbance of trees within the retaining wall proposal area ONLY		<ul style="list-style-type: none"> Tree protection zone. This fence has been installed to prevent damage to the trees and their growing environment both above and below ground and access is restricted. No unauthorised access within Tree Protection Zone. Name, address, and telephone number of the developer. Name and telephone number of the Site Arborist.		
18.		Minor	Mulching Install mulch to the extent of all tree protection fencing within the site on non-hardstand ground where excavation for the footings is not required. Use a leaf mulch conforming to AS 4454.	Negligible	Pre-construction
19.		Moderate	Trunk and Branch Protection Where a tree is to be retained and a Tree Protection Zone cannot be adequately established due to restricted access, the trunk and branches in the lower crown will be protected by wrapping 2 layers of hessian or carpet underfelt around the trunk and branches for a minimum of 2 m or as lower branches permit, then metal strapping secures 38x50 x2000 mm timber battens together around the trunk (do not nail or screw to the trunk or branches). The number of battens to be used is as required to encircle the trunk and the battens are to extend to the base of the tree (AS4970 2009 Protection of trees on development sites. Do not attach stays, guys and the like to trees. Figure 4-12 provides an example of trunk and branch protection.	Negligible	Pre-construction
20.		Moderate	Ground Protection No pedestrian or plant access is permissible to the TPZ other than to areas of ground protection. Where works encroach on the TPZs where there is not currently a hardstand surface (e.g., the concrete footpaths), appropriate ground protection measures comprising either rumble boards strapped over mulch or aggregate or steel	Negligible	Pre-construction

Number	Potential Impact	Impact Assessment Rating without Control	Control Measure	Final Impact	Timing
	Disturbance of trees within the retaining wall proposal area ONLY		plates (or equivalent) over mulch. Figure 4-12 provides an example of ground protection.		
21.		Moderate	Excavation All excavation within TPZ to be carried out using non-destructive excavation such as manual excavation, air spade or vacuum truck operating at less than 1000 Psi under the supervision of the Project arborist.	Negligible	Construction
22.		Moderate	Piling Works Location of piles to be determined by root mapping using non-destructive excavation methods such as vacuum truck operating at less than 1000 Psi under the supervision of the Project Arborist. No structural roots greater than 25mm are to be damaged	Negligible	Construction
23.		Moderate	Storage of Possible Contaminants Do not store or otherwise place bulk materials and harmful materials under or near trees. Do not place spoil from excavations within the TPZs. Prevent wind-blown materials such as cement from harming trees. All possible contaminants are to be stored in a designated and appropriate area with secure chemical spill measures such as a bund in place.	Negligible	Construction
24.		Minor	Irrigation/ Watering The contractor is to ensure that soil moisture levels are adequately maintained. Apply water at an appropriate rate suitable for the species during periods of little or no rainfall.	Negligible	Construction
25.	Disturbance of overhanging branches within the pathway proposal areas ONLY	Minor	Damage to overhanging branches within the construction area would be avoided. Where required, trimming of branches would be undertaken by a qualified arborist.	Negligible	Construction

Number	Potential Impact	Impact Assessment Rating without Control	Control Measure	Final Impact	Timing
26.	Disturbance of flora and fauna occupying the proposal areas	Moderate	Workers should be informed of the potential impacts to flora and fauna identified above and measures in place to mitigate these impacts. Workers should also be informed of their obligations and possible offences under the <i>NSW National Parks and Wildlife Act</i> .	Negligible	Construction
27.		Minor	An effective spill and leakage procedure should be implemented in accordance with control measures outlined for water quality protection.	Negligible	Construction
28.	Unlikely disturbance of flora and fauna occupying the proposal areas	Moderate	The Contractor should cease work activities and notify Council if fauna species are observed to persistently occupy areas in the immediate vicinity of work zones. If native fauna is injured, immediate contact should be made with a wildlife rescue service or a veterinary surgeon.	Negligible	Construction
29.		Minor	An effective spill and leakage procedure should be implemented in accordance with control measures outlined for water quality protection.	Negligible	Construction
30.		Moderate	The Contractor should cease work activities and notify Council if fauna species are observed to persistently occupy areas in the immediate vicinity of work zones. If native fauna is injured, immediate contact should be made with a wildlife rescue service or a veterinary surgeon.	Negligible	Construction
Air Quality – Section 4.7					
31.	Emission production from plant and equipment	Negligible	All plant used by the Contractor should be in good operating condition and free of excessive emissions, in accordance with the manufacturers specification to comply with all relevant regulations.	Negligible	Construction
32.			All plant equipment and vehicles should not idle for extended periods of time; they should be switched off if not in operation.		

Number	Potential Impact	Impact Assessment Rating without Control	Control Measure	Final Impact	Timing
33.	Generation of airborne dust and particulates from excavation, material transport and storage	Minor	Dust suppression techniques should be implemented during excavation and earth moving in high wind conditions.	Negligible	Construction
34.			Stockpiles spoil should be covered prior to reuse or disposal offsite.		
35.			Sealed areas (i.e., driveways, pathways) should be kept free of soil/dust through sweeping.		
36.			Cleaning of any machinery and vehicle carrying sand/ soil in their undercarriage and tyre tracks should be conducted in a designated washdown area prior to demobilisation from site.		
Non-Aboriginal Heritage – Section 4.8					
37.	Disturbance of heritage fabric/ setting/ significance of the retaining wall (Retaining Wall ONLY)	Moderate	Secure/brace adjoining standing stone wall sections stone to ensure no further damage.	Negligible	Construction
38.		Moderate	Careful removal and secure storage of the fallen stone blocks. The stone must be reinstalled in situ, with no opportunity for theft, vandalism or accidental damage.		
39.		Moderate	The adjacent stairs and low stone retaining walls in the vicinity of the works to be covered and protected for the duration of the works to avoid accidental damage from plant (e.g., excavator).		
40.		Moderate	Commission a stonemason experienced in similar projects to rebuild collapsed wall to its pre-collapsed form. Use era-appropriate mortars and match colours to existing.		
41.		Moderate	Do not replace the raised garden bed next to the retaining wall.		
42.	Disturbance of historical archaeological	Minor	If during the course of the works, previously unknown historical archaeological material or heritage items are discovered, all work in the area of the item(s) should cease immediately and senior	Negligible	Construction

Number	Potential Impact	Impact Assessment Rating without Control	Control Measure	Final Impact	Timing
	material or heritage items		Council staff and Council's heritage advisor should be notified in order to assess the nature of the find before allowing work to recommence.		
43.	Disturbance of the sandstone retaining wall adjacent to the western pathway (Pathways ONLY)	Minor	The sandstone wall should be segmented off from construction to avoid damage from the excavator during construction.	Negligible	Construction
Aboriginal Heritage – Section 4.9					
44.	Disturbance of an item of aboriginal significance during excavation	Minor	All persons should be made aware that it is an offence under Section 86 of the National Parks and Wildlife Act 1975 to harm or desecrate an Aboriginal object unless that harm or desecration is the subject of an approved Aboriginal Heritage Impact Permit (AHIP).	Negligible	Construction
45.		Minor	In the unlikely event that an Aboriginal object is identified whilst carrying out works during construction, works in the vicinity of the find should cease immediately and a senior member of Council staff and Council's Aboriginal heritage advisor should be notified in order to assess the nature of the find before allowing work to recommence.	Negligible	Construction
46.		Minor	Should any skeletal material be uncovered during construction, works in the vicinity would cease immediately and the Contractor would contact Council's Superintendent, DPE and the NSW Police.	Negligible	Construction
Traffic, Parking, Pedestrian Access and Safety – Section 4.10					
47.	Construction site hazards to pedestrians	Negligible	Prior to commencement of works, boundaries of the construction area and access points should be marked with temporary barrier	Negligible	Construction

Number	Potential Impact	Impact Assessment Rating without Control	Control Measure	Final Impact	Timing
	accidentally or unlawfully entering		fencing and signage. The fencing should be monitored regularly by the site supervisor and damaged areas replaced when required.		
48.	Increase in local traffic when trucks are entering the site	Negligible	The contractor would prepare a Vehicle Management Plan for the proposed works as applicable to delivery of construction materials and plant to and from site.	Negligible	Pre-construction
49.	Risks to pedestrian safety from construction	Minor	The contractor would prepare a Pedestrian Management Plan as applicable to pedestrian access and appropriate safety control measures such as barricades and signage.	Negligible	Pre-construction
50.	movements outside of the works area	Minor	Machinery should only access the defined work site via clearly defined routes. A spotter should be used when tracking the excavator in areas open to the public.	Negligible	Construction
Visual Amenity and Landscape Character – Section 4.11					
51.	Disturbance of the landscape and visual character from construction activities	Minor	Following the works, areas surrounding the extent of works would be returned to their pre-construction condition where altered. If areas used for the construction compound area are grassed, these would be re-turfed.	Negligible	Construction
Services and Utilities – Section 4.12					
52.	Service and Utility Strike	Moderate	Appropriate clearance should be maintained to existing services, including review of available site service plans and current Before you Dig Australia (BYDA) plans, followed by physical service clearance by an accredited service locator, which would include ground penetrating radar (GPR) and may include non-destructive digging (NDD) techniques.	Negligible	Construction
53.		Moderate	Consultation with utilities companies should be undertaken to confirm the presence of any unidentified services and if digging within 1 meter of an asset, a Quality Level A	Negligible	Construction

Number	Potential Impact	Impact Assessment Rating without Control	Control Measure	Final Impact	Timing
			assessment in accordance with the Australian standards (AS5488 – 2013) for utilities should be undertaken. A QLB assessment will be required for all assets within 5 meters of the work site.		
Waste Management – Section 4.13					
54.	Improper classification and re-use/ disposal of spoil	Moderate	A UFP should be prepared and implemented as part of the CEMP to facilitate effective management of contaminated material found during excavation works.	Minor	Construction
55.		Moderate	Excavated materials and demolition rubble should be appropriately classified prior to either re-use on site or disposal at a licensed waste facility in accordance with NSW Waste Classification Guidelines (NSW EPA, 2014).	Minor	Construction
56.	Production of waste and pollution of the surrounding environment	Minor	Any temporary stockpiles of waste should be appropriately covered and/ or contained to ensure no waste is washed or blown back into the environment.	Negligible	Construction
57.		Minor	General waste bins should be available for use onsite and disposed of at a license facility frequently.	Negligible	Construction
58.		Minor	Washout of trucks and cleaning of equipment and/ or vehicles used during the works should not be undertaken in locations that permit flow of untreated wastewater directly to the open drainage system.	Negligible	Construction
59.		Minor	Upon completion of the works, the site should be cleared of all surplus materials and any remaining waste created by the works.	Negligible	Construction

6 Environmental Factors Considered

6.1 Consideration of Factors in Clause 171 of the EP&A Regulation

Clause 171 of the *EP&A Regulation* provides a list of factors that must be considered in determining the likely impacts of an activity on the natural and built environment and therefore the possible necessity for an EIS.

Table 6-1 provides a summary of factors requiring consideration based on the impact assessment detailed in this report.

Table 6-1: Summary of key environmental factors considered in accordance with Clause 171 of the EP&A Regulation

Factor	Impact	Addressed in this REF
<p>a. Any environmental impact on a community? Negligible short-term impacts to noise, biodiversity, traffic, parking, access, and visual amenity during construction with recommended control measures implemented. Overall positive impact on community through improved safety, connectivity and access within the park.</p>	Construction – Negligible Operation – Positive	<p>Section 4.5 Section 4.6 Section 4.10 Section 4.11</p>
<p>b. Any transformation of a locality? Removal of grassed areas on the western and eastern sides of the synthetic sporting field for the pathways. Considered positive given the pathways align with the CMP and added benefits of providing improved pedestrian connectivity and disabled access within the park.</p>	Net positive	Section 4.11
<p>c. Any environmental impact on the ecosystems of the locality? Negligible impacts to ecosystems with recommended control measures implemented.</p>	Negligible	Section 4.6
<p>d. Any reduction of the aesthetic, recreational, scientific or other environmental quality or value of a locality? Negligible reduction scientific or other environmental quality during construction with recommended control measures implemented. Overall improvement in aesthetic and recreational value given the remediation of the collapsed wall and the pathway's improved pedestrian connectivity and disabled access within the park.</p>	Construction – Negligible Operation – Positive	<p>Section 4.3 Section 4.5 Section 4.6 Section 4.7 Section 4.10 Section 4.11</p>
<p>e. Any effect on a locality, place or building having aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific or social significance or other special value for present or future generations? Positive effect on the heritage value of the park by restoring the collapsed retaining wall to its pre-collapsed state with improved structural integrity.</p>	Positive	Section 4.8
<p>f. Any impact on the habitat of protected fauna (within the meaning of the <i>National Parks and Wildlife Act 1974</i>)?</p>	Nil	Section 4.6

Factor	Impact	Addressed in this REF
Nil impact		
g. Any endangering of any species of animal, plant or other form of life whether living on land, in water or in the air? Considered unlikely with recommended control measures implemented.	Negligible	Section 4.6
h. Any long-term effects on the environment? Nil effects	Nil	All
i. Any degradation of the quality of the environment? Enhancement in the quality of the environmental by remediating the retaining wall with improved structural integrity.	Positive	Section 4.10
j. Any risk to the safety of the environment? General construction work poses a safety risk to both the human and ecological environment. However, these risks are considered Negligible with the recommended control measures implemented.	Negligible	Section 4.6 Section 4.10
k. Any reduction in the range of beneficial uses of the environment? Negligible short-term impacts to pedestrian access during construction with the recommended control measures implemented.	Negligible	Section 4.10
l. Any pollution of the environment? Negligible short-term impacts pertaining to pollution during construction with the recommended control measures implemented.	Negligible	Section 4.3 Section 0 Section 4.13
m. Any environmental problems associated with the disposal of waste? Negligible problems regarding waste disposal with the recommended control measures implemented.	Negligible	Section 4.13
n. Any increased demands on resources (natural or otherwise) that are or are likely to become in short supply? Nil increase on resources	Nil	N/A
o. Any cumulative environmental effect with other existing or likely future activities? Nil effects	Nil	Section 4.14
p. Any impact on coastal processes and coastal hazards, including those under projected climate change conditions? Nil impact	Nil	N/A

Following a review of key environmental factors considered, the proposed works are not considered to result in significant impacts either onsite or to the surrounding environment. Therefore, it is concluded that an EIS is not required, and this REF is considered an appropriate environmental assessment.

6.2 Consideration of Matters of National Environmental Significance

Matters of National Environmental Significance must be considered under the environmental assessment provisions of the *EPBC Act*. No matters of National Environmental Significance would be impacted by the proposed works, as set out in **Table 6-2** below.

Table 6-2: Summary of matters of National Environmental Significance relevant to the proposed works

Matters of National Environmental Significance	Impact	Section in this REF
a. Any environmental impact on a world heritage property?	Nil	4.8
b. Any Environmental Impact on a National Heritage place?	Nil	4.8
c. Any Environmental Impact on Ramsar Wetlands of international importance?	Nil	4.6
d. Any environmental impact on Commonwealth listed threatened species and ecological communities?	Nil	4.6
e. Any environmental impact on Commonwealth listed migratory species?	Nil	4.6
f. Does any part of the project involve a nuclear action?	Nil	1.5
g. Any environmental impact on the Commonwealth marine environment?	Nil	4.6
h. Any impact on Commonwealth land?	Nil	2.2

7 Conclusion

This REF is a written statement prepared for Bayside Council that considers the impact of the proposed Gardiner Park retaining wall remediation and pathway upgrades on the natural and built environment, and the proposed methods of mitigating any adverse effects. This REF has been prepared in order to address the requirements of Section 5.5(1) and section 5.7(1) of the *EP&A Act* and clause 171(2) of the *EP&A Regulation*. Key conclusions from this REF are summarised as follows:

- The activity is permissible without development consent pursuant to Part 5 of the EP&A Act, through the provisions of Clause 2.73 of SEPP (T&I) 2021 which permits development for the purposes of “landscaping, including landscaping structures” (i.e., the landscaped retaining wall) and “pedestrian pathways” (i.e., proposed pathways) to be carried out by or on behalf of a public authority without consent on land owned or controlled by the public authority.
- Council has shared this REF with relevant internal Council teams during the draft review process. Council has also placed the REF on public display for comment. Additionally, as the proposed works require approval under the Transport and Infrastructure SEPP (2021), an assessment of clause 2.15, relating to consultation with public authorities other than councils was conducted and demonstrated that statutory consultation is not required.
- The proposed retaining wall is expected to have a positive impact on the heritage value and pedestrian safety of the park by remediation of the wall to its pre-collapsed state within improved structural integrity and drainage.
- The proposed pathways are expected to have a positive impact on the community and recreational value of the park by providing connectivity between existing pathways and improving disability access around the synthetic sporting field.
- Potential environmental impacts most relevant to the proposal including the protection of existing trees and wildlife, preservation of heritage value, pedestrian access/ safety, stormwater and sewage underground services and pollution of the environment (e.g., noise, air, water, soils) are considered to be Negligible in accordance with Council’s impact assessment matrix with the implementation of control measures provided in this REF.
- Following a review of key environmental factors considered under Clause 171 of the *EP&A Regulation*, the proposed works are not considered to result in significant impacts either onsite or to the surrounding environment. Therefore, it is concluded that an EIS is not required, and this REF is considered an appropriate environmental assessment.
- No matters of National Environmental Significance under the environmental assessment provisions of the EPBC Act 1999 would be impacted by the proposed works.
- The proposed works will not have a significant effect on threatened species, populations, ecological communities and as such a SIS and/or BDAR is not required.

8 Certification

This Review of Environmental Factors (REF) provides a true and fair review of the Proposal in relation to its potential effects on the environment. It addresses to the fullest extent possible all matters affecting or likely to affect the environment as a result of the Proposal.

Name:



Signature:

Position: Principal Environmental Engineer

Company name: Haskoning Australia

Date:

I certify that I have reviewed and endorsed the contents of this REF document and, to the best of my knowledge, it is in accordance with the EP&A Act, the EP&A Regulation and the Guidelines approved under clause 170 of the EP&A Regulation, and the information it contains is neither false nor misleading.

Name:

Signature:

Position:

Council name:

Date:

9 References

AS5488-2013. Classification of Subsurface Utility Information (SUI). Standards Australia.

Birds Tree Consulting. (2024). Arboricultural Development Impact Assessment Report

Department of Environment and Climate Change (DECC). (2009). Interim Construction Noise Guideline.

██████████ (2018a). Contamination Delineation Investigation: Proposed Synthetic Field, Gardiner Park, 15A Wollli Creek Road, Banksia.

██████████. (2018b). Contamination Investigation: Proposed Synthetic Playing Field, 15A Wollli Creek Road, Banksia. Prepared for Bayside Council.

██████████ (2018c). Report on Geotechnical Investigation Proposed Synthetic, 15A Wollli Creek Road, Banksia. Prepared for Bayside Council.

██████████ Environmental Design & Heritage Consultant, & ██████████, Historian. (2013, Updated 2015). Rockdale Parks Conservation Management Plan – Arncliffe, Gardiner and Bexley Parks.

██████████ (2004). Managing Urban Stormwater: Soils and Construction (the 'Blue Book').

NSW Environmental Protection Authority (NSW EPA). (2014). Waste Classification Guidelines.

Roads and Maritime Services (RMS). (2016b). Construction Noise and Vibration Guideline. NSW Government.

██████████ ██████████ ██████████ (2024). Heritage Impact Statement. Prepared for Bayside Council.

WMA Water. (2024). Updated Flood Risk Assessment for Gardiner Park, memorandum prepared for Bayside Council.

Appendix A – Retaining Wall Design Drawings

DOCUMENT TRANSMITTAL



PROJECT No: 24078
 PROJECT: GARDINER PARK, BANKSIA
 RETAINING WALL UPGRADE

DATE OF ISSUE

DAY	20	11	17											
MONTH	05	06	10											
YEAR	24	24	24											
INITIALS	V.G	V.G	V.G											
REASON FOR ISSUE	C	C	C											
METHOD OF ISSUE	E	E	E											

Reason: P=Prelim CC=Construction Certificate A=Approval T=Tender C=Construction I=Information AB=As Built
 Method: E=Email A=Aconex

DISTRIBUTION LIST

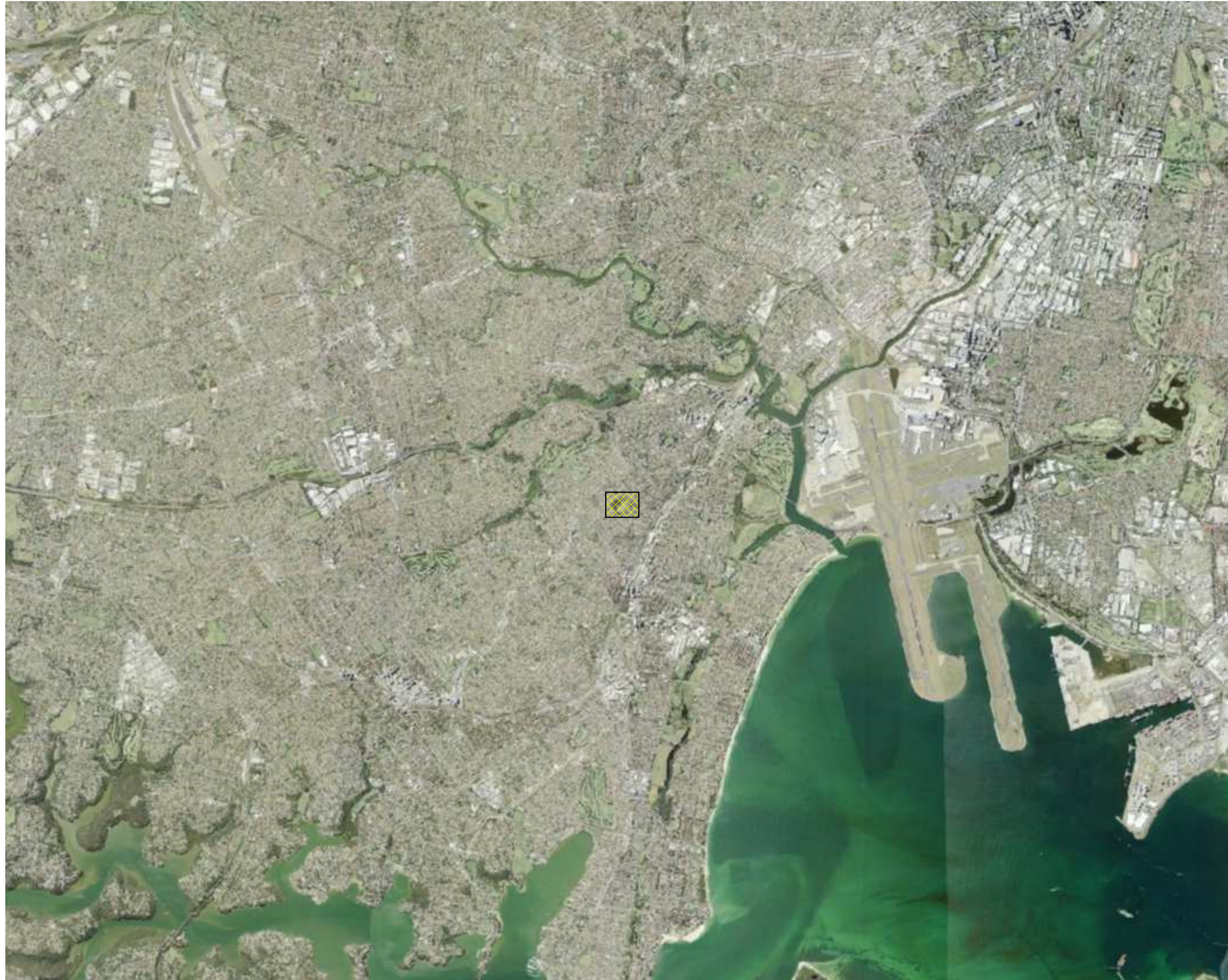
ISSUED TO														
BAYSIDE COUNCIL	•	•	•											

DOCUMENTATION LIST

No.	TITLE	REVISION												
S0003	GENERAL ARRANGEMENT PLAN AND DETAILS	B	C	D										

GARDINER PARK, BANKSIA RETAINING WALL UPGRADE

DRAWING LIST	
DRAWING NUMBER	DRAWING NAME
S0000	COVER SHEET & DRAWING LIST
S0001	STRUCTURAL NOTES - SHEET 1
S0002	STRUCTURAL NOTES - SHEET 2
S0003	GENERAL ARRANGEMENT PLAN



LOCATION PLAN
SCALE: NTS



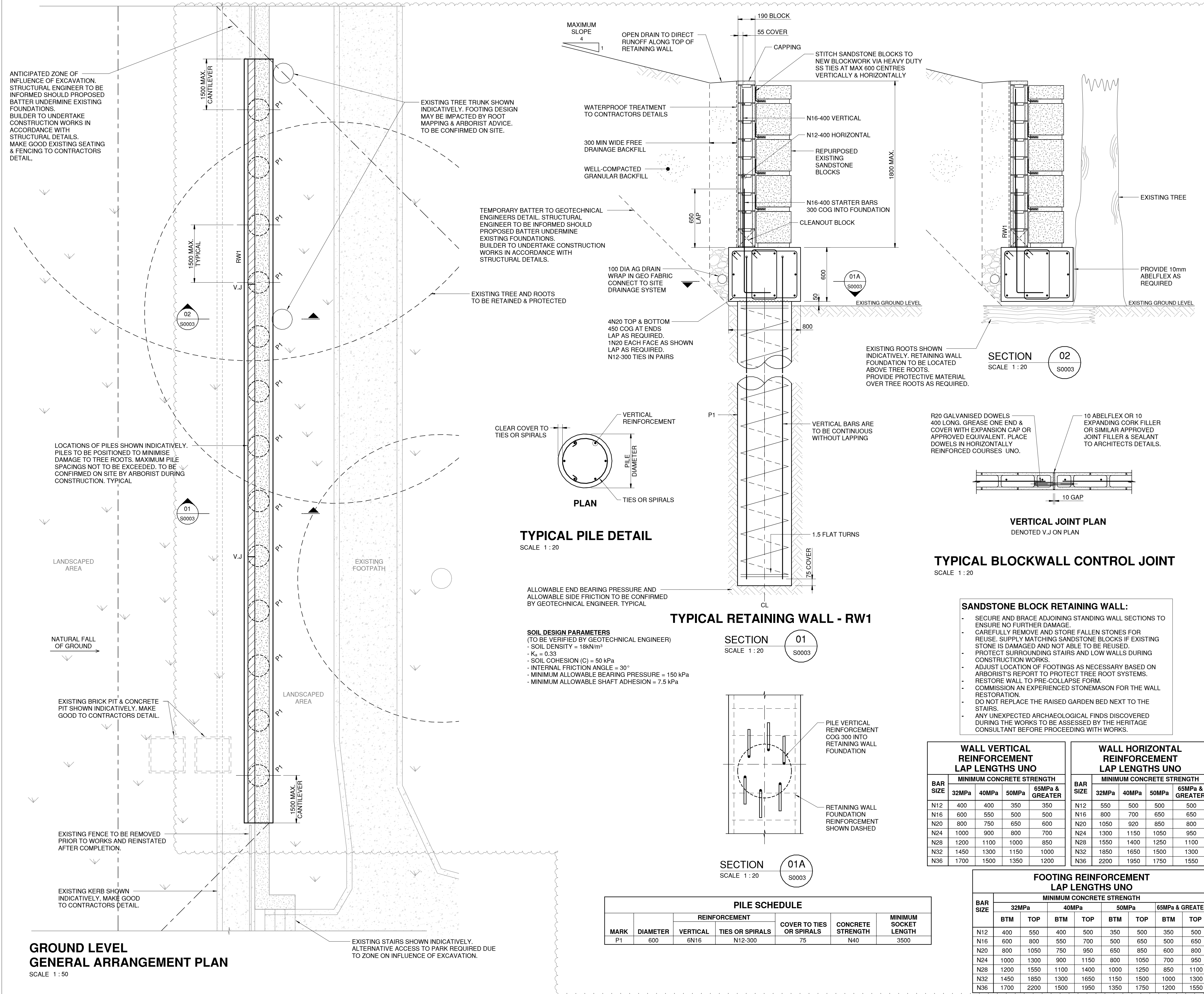
SITE PLAN
SCALE: NTS

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300mm
200mm
100
50
10mm

A	ISSUED FOR CONSTRUCTION	V.G	01.05.2024
Revision	Amendment	Issued By	Revision Date
SYDNEY L4, 116 Devonshire St Surry Hills 2010 P. 02 8317 4775		DUNNINGS CONSULTING ENGINEERS ABN 63 604 478 908	
BYRON BAY 37/5 Easy St Byron Bay NSW 2481		DunningsCE.com.au	
Project GARDINER PARK, BANKSIA RETAINING WALL UPGRADE			
Title COVER SHEET & DRAWING LIST			
Status FOR INFORMATION			
Drawn	Designed	Project No.	24078
Scale	AS NOTED	Sheet No.	S0000
Approved	Approved Date	Revision	A
		Project North	

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NOTES:

- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH GENERAL NOTES SHEETS S0001 & S0002.
- ALL BLOCKS TO BE GRADE 20-H BLOCKS OR OPEN ENDED DOUBLE-U BLOCKS UNLESS APPROVED OTHERWISE.
- FOR UNREINFORCED CORE-FILLED BLOCKWORK, PROVIDE CLEAN-OUT OPENINGS IN BOTTOM COURSE OF ALL CORES.
- ALL CORES TO BE RODDED TO DISLODGE MORTAR PROTRUSIONS.
- ALL CORES TO BE FLUSHED OUT WITH WATER AND MORTAR DROPPINGS TO BE CLEANED OFF PRIOR TO SHUTTING OFF CLEAN-OUT OPENINGS.
- CORES TO BE CONTINUOUSLY FILLED BETWEEN FLOORS AND NOT FILLED BY BLOCK LAYER AS THE BLOCKS ARE LAID.
- FILL CORES WITH 20MPa CONCRETE, 150mm SLUMP AT THE TIME OF PLACEMENT, USING 10mm AGGREGATE.
- ALTERNATE MASONRY TIES MAY BE USED SUBJECT TO DUNNINGS CONSULTING ENGINEERS APPROVAL.

REINFORCED MASONRY CONTROL JOINTS:

- PROVIDE VERTICAL CONTROL JOINTS WHEN THE HEIGHT OF RETAINING WALL CHANGES ABRUPTLY BY MORE THAN 20% OF ITS LESSER HEIGHT.
- PROVIDE VERTICAL CONTROL JOINTS AT CHANGES IN WALL THICKNESS (IN PLAN).
- PROVIDE VERTICAL CONTROL JOINTS AT CONSTRUCTION JOINTS IN THE FOOTING.
- PROVIDE VERTICAL CONTROL JOINTS AT JUNCTIONS TO DIFFERENT MASONRY OR OTHER MATERIALS.
- PROVIDE VERTICAL CONTROL JOINTS AT 4000mm MAXIMUM CENTRES FOR WALLS LESS THAN 1000mm HIGH.
- PROVIDE VERTICAL CONTROL JOINTS AT 800mm MAXIMUM SPACING FOR WALLS LESS THAN 200mm HIGH.
- PROVIDE VERTICAL CONTROL JOINTS AT INTERSECTIONS WITH CHANGE IN MATERIAL.

CONSTRUCTION STAGING & SEQUENCING:

1. BUILDER TO ESTABLISH SITE SAFETY AND UNDERTAKE DEMOLITION WORKS IN ACCORDANCE WITH COUNCIL RECOMMENDATIONS.
2. BUILDER TO CAREFULLY REMOVE EXISTING SANDSTONE BLOCKS AND CAREFULLY STORE FOR REUSE.
3. BUILDER TO UNDERTAKE A 'DIAL' BEFORE YOU DIG TO FOUND BELOW OF ADJACENT TO THE EXISTING WALL. BUILDER MUST ADVISE THE STRUCTURAL ENGINEER IMMEDIATELY FOR REVIEW & ADVICE.
4. BUILDER TO EXCAVATE EXISTING MATERIAL BEHIND THE SANDSTONE RETAINING WALL TO AN EXTENT TO ALLOW FOR SAFE CONSTRUCTION. BUILDER LAISE WITH A GEOTECHNICAL FOR APPROPRIATE TEMPORARY BATTER. STRUCTURAL ENGINEER TO BE INFORMED SHOULD PROPOSED BATTER UNDERMINE EXISTING FOUNDATIONS. BUILDER TO UNDERTAKE CONSTRUCTION WORKS IN ACCORDANCE WITH STRUCTURAL DETAILS.
5. BUILDER TO ARRANGE INSPECTION WITH STRUCTURAL ENGINEER FOR BLOCKWORK CONSTRUCTION PRIOR TO CONCRETE PLACEMENT & CORE-FILLING WORKS. REPEAT INSPECTIONS MAY BE REQUIRED SUBJECT TO STAGING OF WORKS.
6. ONCE APPROVED, BUILDER TO COMMENCE CORE-FILLING OF BLOCKWORK & ALLOW TO CURE.
7. BUILDER TO INSTALL WATERPROOFING MEMBRANE TO SUPPLIERS DETAILS.
8. BUILDER TO INSTALL AG PIPE, FREE DRAINING MATERIAL AND BACKFILL BEHIND WALL AND COMPACT.
9. BUILDER TO INSTALL NEW BALUSTRADE SYSTEM TO FENCING CONTRACTORS DETAILS.
10. BUILDER TO REINSTATE SANDSTONE BLOCKS TO ACHIEVE COMPLIANCE WITH NATIONAL CONSTRUCTION CODE.

APPROXIMATE BILL OF QUANTITIES:

- APPROXIMATELY 20M OF SANDSTONE WALL TO BE REINSTATED.
- APPROXIMATELY 25M OF KERB, GUTTER AND FENCE TO BE REINSTATED.
- EXISTING BRICK PIT, CONCRETE PIT AND DRAINAGE TO BE REINSTATED.
- VARIOUS HARDSTANDS TO BE REINSTATED.

LEGEND:

- ☞ DENOTES PILE FOUNDATION. REFER TYPICAL DETAIL
- RW# DENOTES RETAINING WALL TYPE. REFER TYPICAL DETAIL
- V.J DENOTES CONTROL JOINT. REFER TYPICAL DETAIL

Revision	Amendment	Issued By	Revision Date
D		V.G	17.10.2024
C		V.G	11.06.2024
B		V.G	20.05.2024
A		V.G	01.05.2024

SYDNEY
 L4, 116 Devonshire St
 Surry Hills 2010
 P: 02 8317 4775
DUNNINGS
 CONSULTING ENGINEERS
 ABRN 59 604 478 958

BYRON BAY
 37/5 Easy St
 Byron Bay NSW 2481
DunningsCE.com.au

Project: **GARDINER PARK, BANKSIA RETAINING WALL UPGRADE**
 Title: **GENERAL ARRANGEMENT PLAN AND DETAILS**

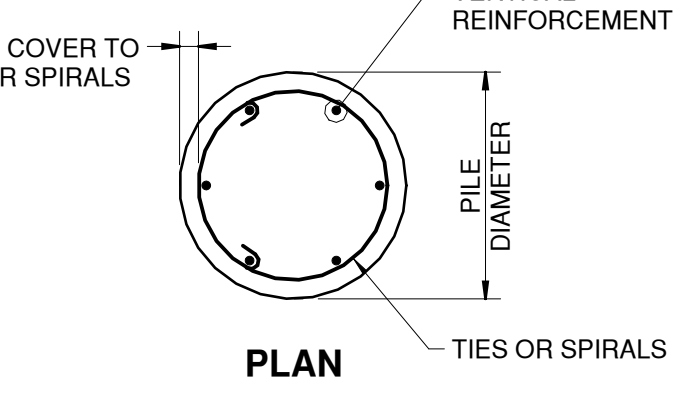
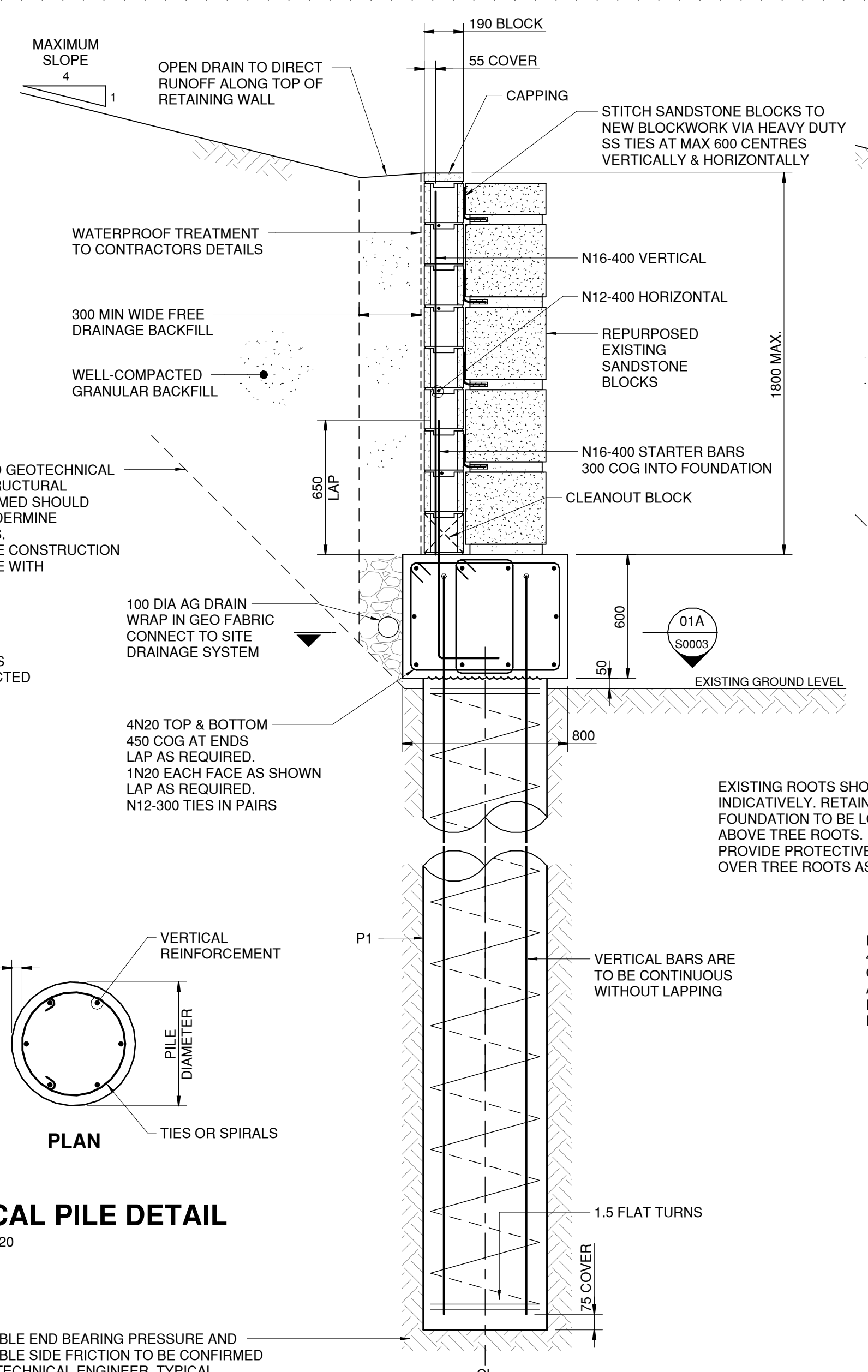
Status: **FOR CONSTRUCTION**

Drawn: [Redacted]
 Designed: [Redacted]
 Scale: **AS NOTED**
 Approved: [Redacted]

Project No: **24078**
 Sheet No: **S0003**
 Revision: **D**

Approved Date: **MAY 2024**
 Project North

Original sheet size: A1(594x868) Plot date: 17/10/2024 4:54:40 PM



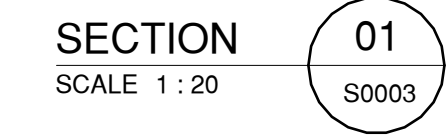
TYPICAL PILE DETAIL
SCALE 1:20

ALLOWABLE END BEARING PRESSURE AND ALLOWABLE SIDE FRICTION TO BE CONFIRMED BY GEOTECHNICAL ENGINEER, TYPICAL

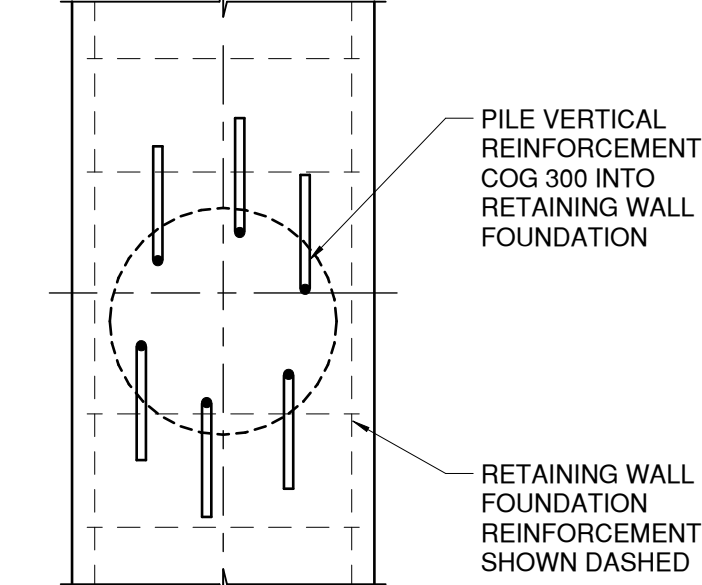
SOIL DESIGN PARAMETERS
(TO BE VERIFIED BY GEOTECHNICAL ENGINEER)

- SOIL DENSITY = 18kN/m³
- $K_0 = 0.33$
- SOIL COHESION (C) = 50 kPa
- INTERNAL FRICTION ANGLE = 30°
- MINIMUM ALLOWABLE BEARING PRESSURE = 150 kPa
- MINIMUM ALLOWABLE SHAFT ADHESION = 7.5 kPa

TYPICAL RETAINING WALL - RW1



SECTION 01
SCALE 1:20
S0003



SECTION 01A
SCALE 1:20
S0003

PILE SCHEDULE

MARK	DIAMETER	REINFORCEMENT		COVER TO TIES OR SPIRALS	CONCRETE STRENGTH	MINIMUM SOCKET LENGTH
		VERTICAL	TIES OR SPIRALS			
P1	600	6N16	N12-300	75	N40	3500

SANDSTONE BLOCK RETAINING WALL:

- SECURE AND BRACE ADJOINING STANDING WALL SECTIONS TO ENSURE NO FURTHER DAMAGE.
- CAREFULLY REMOVE AND STORE FALLEN STONES FOR REUSE. SUPPLY MATCHING SANDSTONE BLOCKS IF EXISTING STONE IS DAMAGED AND NOT ABLE TO BE REUSED.
- PROTECT SURROUNDING STAIRS AND LOW WALLS DURING CONSTRUCTION WORKS.
- ADJUST LOCATION OF FOOTINGS AS NECESSARY BASED ON ARBORIST'S REPORT TO PROTECT TREE ROOT SYSTEMS.
- RESTORE WALL TO PRE-COLLAPSE FORM.
- COMMISSION AN EXPERIENCED STONEMASON FOR THE WALL RESTORATION.
- DO NOT REPLACE THE RAISED GARDEN BED NEXT TO THE STAIRS.
- ANY UNEXPECTED ARCHAEOLOGICAL FINDS DISCOVERED DURING THE WORKS TO BE ASSESSED BY THE HERITAGE CONSULTANT BEFORE PROCEEDING WITH WORKS.

WALL VERTICAL REINFORCEMENT LAP LENGTHS UNO

BAR SIZE	MINIMUM CONCRETE STRENGTH			
	32MPa	40MPa	50MPa	65MPa & GREATER
N12	400	400	350	350
N16	600	550	500	500
N20	800	750	650	600
N24	1000	900	800	700
N28	1200	1100	1000	850
N32	1450	1300	1150	1000
N36	1700	1500	1350	1200

WALL HORIZONTAL REINFORCEMENT LAP LENGTHS UNO

BAR SIZE	MINIMUM CONCRETE STRENGTH			
	32MPa	40MPa	50MPa	65MPa & GREATER
N12	550	500	500	500
N16	800	700	650	650
N20	1050	920	850	800
N24	1300	1150	1050	950
N28	1550	1400	1250	1100
N32	1850	1650	1500	1300
N36	2200	1950	1750	1550

FOOTING REINFORCEMENT LAP LENGTHS UNO

BAR SIZE	MINIMUM CONCRETE STRENGTH							
	32MPa		40MPa		50MPa		65MPa & GREATER	
	BTM	TOP	BTM	TOP	BTM	TOP	BTM	TOP
N12	400	550	400	500	350	500	350	500
N16	600	800	550	700	500	650	500	650
N20	800	1050	750	950	650	850	600	800
N24	1000	1300	900	1150	800	1050	700	950
N28	1200	1550	1100	1400	1000	1250	850	1100
N32	1450	1850	1300	1650	1150	1500	1000	1300
N36	1700	2200	1500	1950	1350	1750	1200	1550

GROUND LEVEL GENERAL ARRANGEMENT PLAN
SCALE 1:50

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GENERAL

- G1. THESE STRUCTURAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANTS' DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ANY DISCREPANCY OR VARIATION SHALL BE REFERRED TO *DUNNINGS CONSULTING ENGINEERS* BEFORE PROCEEDING WITH THE WORK.
- G2. THESE STRUCTURAL DRAWINGS HAVE BEEN PREPARED FROM THE INFORMATION AVAILABLE AT THE TIME OF ISSUE. AS THIS INFORMATION MAY BE SUBJECT TO CHANGE PRIOR TO, OR DURING CONSTRUCTION, THE BUILDER IS TO ADVISE *DUNNINGS CONSULTING ENGINEERS* WHERE DISCREPANCIES OCCUR.
- G3. ALL CODES REFERRED TO IN THESE NOTES ARE THE CURRENT EDITIONS WITH THE LATEST AMENDMENTS.
- G4. ALL MATERIALS AND WORKMANSHIP SHALL BE, AS A MINIMUM, IN ACCORDANCE WITH THE RELEVANT CURRENT STANDARDS AUSTRALIA CODES, THE BUILDING CODE OF AUSTRALIA, AND STATUTORY O.H.S.&R. REQUIREMENTS, EXCEPT WHERE VARIED BY THE CONTRACT. WHERE EXISTING STRUCTURAL ELEMENTS ARE INDICATED TO BE RE-USED, *DUNNINGS CONSULTING ENGINEERS* HAVE CONSIDERED THEIR ADEQUACY BASED ON REASONABLE ENGINEERING ASSESSMENT (I.E. EXCLUDING MATERIAL TESTING), THE CONTRACTOR IS TO ADVISE THE ENGINEER UPON DISCOVERY OF LATENT CONDITIONS WHEREBY EXISTING STRUCTURAL ELEMENTS DO NOT MEET STRUCTURAL REQUIREMENTS.
- G5. DURING CONSTRUCTION THE STRUCTURE SHALL BE MAINTAINED IN A STABLE CONDITION AND NO PART SHALL BE OVERLOADED. TEMPORARY BRACING SHALL BE PROVIDED BY THE BUILDER IN ORDER TO KEEP THE BUILDING WORKS AND EXCAVATIONS STABLE AT ALL TIMES.
- G6. THE CONTRACTOR IS TO OBTAIN DESIGN ADVICE FROM A SUITABLY QUALIFIED STRUCTURAL ENGINEER REGARDING DEMOLITION, RETROFITTING, TEMPORARY WORKS, HEALTH & SAFETY AND NUISANCE.
- G7. PRIOR TO THE COMMENCEMENT OF WORKS, THE CONTRACTOR IS TO IDENTIFY ALL EXISTING SERVICES. ANY SERVICES SHOWN ON *DUNNINGS CONSULTING ENGINEERS* DRAWINGS ARE SHOWN INDICATIVELY ONLY.
- G8. WHERE STRUCTURAL CERTIFICATION IS REQUIRED, INSPECTIONS ARE TO BE PERFORMED BY A DULY APPOINTED INSPECTOR FROM *DUNNINGS CONSULTING ENGINEERS*. THE INSPECTOR IS TO BE GIVEN A MINIMUM OF 24 HOURS NOTICE FOR INSPECTIONS AND CONCRETE SHALL NOT BE DELIVERED UNTIL FINAL APPROVAL HAS BEEN OBTAINED.
- G9. THESE STRUCTURAL DRAWINGS SHALL NOT BE USED FOR SETOUT UNLESS SPECIFICALLY STATED ON THE DRAWINGS. ALL DIMENSIONS RELEVANT TO SETTING OUT AND OFF-SITE WORK SHALL BE VERIFIED BY THE BUILDER BEFORE CONSTRUCTION AND FABRICATION IS COMMENCED. DIMENSIONS SHALL NOT BE OBTAINED BY SCALING DRAWINGS.
- G10. UNLESS NOTED OTHERWISE ALL DIMENSIONS ARE IN MILLIMETRES AND ALL LEVELS ARE IN METRES.
- G11. ALL WATERPROOF TREATMENT MEMBRANES, FLASHING & WEEPHOLES SHALL BE TO THE ARCHITECT'S OR MANUFACTURER'S SPECIFICATIONS.
- G12. REFER TO GENERAL ARRANGEMENT PLANS FOR DESIGN LOADS. THE STRUCTURAL ELEMENTS HAVE BEEN DESIGNED FOR LOADINGS IN ACCORDANCE WITH THE RELEVANT AUSTRALIAN STANDARDS AND FOR USAGE AS INDICATED ON THE ARCHITECTURAL DRAWINGS.
- G13. THE STRUCTURE HAS BEEN DESIGNED FOR IN-SERVICE LOADS ACTING WHEN THE CONSTRUCTION PHASE OF THE PROJECT IS COMPLETE. LOADS OR ACTIONS DUE TO CONSTRUCTION AND INSTALLATION METHODOLOGIES AND/OR EQUIPMENT HAVE NOT BEEN CONSIDERED UNLESS CLEARLY STATED OTHERWISE.
- G14. STRUCTURE HAS BEEN DESIGNED FOR A DESIGN LIFE OF FIFTY (50) YEARS.
- G15. WIND LOADS HAVE BEEN DETERMINED IN ACCORDANCE WITH AS/NZS 1170.2, BASED ON THE FOLLOWING DESIGN CRITERIA:
ANNUAL PROBABILITY OF EXCEEDANCE - N/A
REGION - N/A
TERRAIN CATEGORY - N/A
REGIONAL WIND SPEED -
Vs = -- m/s (SERVICEABILITY)
Vu = -- m/s (ULTIMATE)
SHIELDING FACTOR - N/A
TOPOGRAPHIC FACTOR - N/A
- G16. SEISMIC LOADS HAVE BEEN DETERMINED IN ACCORDANCE WITH AS 1170.4, BASED ON THE FOLLOWING DESIGN CRITERIA:
BCA STRUCTURAL IMPORTANCE LEVEL -
ANNUAL PROBABILITY OF EXCEEDANCE -
PROBABILITY FACTOR -
HAZARD FACTOR - N/A
SITE SUB-SOIL CLASS - N/A
STRUCTURAL DUCTILITY FACTOR -
STRUCTURAL PERFORMANCE FACTOR -
EARTHQUAKE DESIGN CATEGORY -
- G17. THE GEOTECHNICAL ENGINEERING INVESTIGATION HAS BEEN PERFORMED BY:
COMPANY -
REPORT No. - N/A
DATE -
- G18. ALL ARCHITECTURAL FITMENTS (GLAZING, PARTITIONS, CEILINGS AND THE LIKE) SHALL ALLOW FOR SHORT AND LONG TERM MOVEMENTS OF THE STRUCTURE IN ACCORDANCE WITH THE LATEST REVISION OF AS/NZS 1170.0. THE BUILDER SHALL CONSULT *DUNNINGS CONSULTING ENGINEERS* FOR THE EXTENT OF ALLOWANCE TO BE MADE.
- G19. ALL NON-LOAD BEARING ELEMENTS SHALL BE KEPT CLEAR OF THE STRUCTURE SOFFIT BY AN ALLOWANCE DETERMINED FROM SPAN/250 OR CANTILEVER/125 BUT NOT LESS THAN 20mm, UNLESS NOTED OTHERWISE ON THE DRAWINGS.
- G20. PROPRIETARY ITEMS SPECIFIED ON THE STRUCTURAL DRAWINGS SHALL BE INSTALLED STRICTLY IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
- G21. UNLESS THESE DRAWINGS ARE SPECIFICALLY LABELLED FOR CONSTRUCTION, THEY SHALL NOT BE USED FOR ANY CONSTRUCTION PURPOSES WITHOUT WRITTEN APPROVAL FROM *DUNNINGS CONSULTING ENGINEERS*.



DEMOLITION WORKS

- DM1. ALL DEMOLITION WORK TO COMPLY WITH ALL WORK COVER REQUIREMENTS, AS 2601 AND REQUIREMENTS OF ALL AUTHORITIES HAVING JURISDICTION OVER INSPECTION AND APPROVAL OF DEMOLITION WORKS.
- DM2. THE BUILDER SHALL ENGAGE A SUITABLY QUALIFIED ENGINEER TO ACT AS THE 'BUILDER'S ENGINEER' DURING THE COURSE OF ALL WORKS.
- DM3. THE BUILDER SHALL ALLOW FOR IN HIS PRICE ALL COSTS ASSOCIATED WITH ALL WORKS PERTAINING TO THE DEMOLITION AND REMOVAL OF THE EXISTING STRUCTURE.
- DM4. IT IS THE BUILDER'S RESPONSIBILITY TO DETERMINE THE DEMOLITION SEQUENCE, DEMOLITION METHODOLOGY AND TEMPORARY PROPPING REQUIREMENTS DURING DEMOLITION. THE DEMOLITION SEQUENCE MUST BE IN ACCORDANCE WITH ALL REQUIREMENTS SHOWN ON THE STRUCTURAL DRAWINGS.
- DM5. THE BUILDER IS TO PROVIDE THE BUILDER'S ENGINEER AND THE DEMOLITION CONTRACTOR WITH THE STRUCTURAL ENGINEERING DRAWINGS FOR INFORMATION.
- DM6. IT IS THE BUILDER'S RESPONSIBILITY TO ENSURE THE OVERALL STABILITY OF THE STRUCTURE WHILST DEMOLITION WORKS OCCUR. THE STRUCTURE SHALL BE FULLY SUPPORTED AND RESTRAINED TO AVOID ALL VERTICAL AND HORIZONTAL DISPLACEMENTS AND DEFORMATIONS DURING DEMOLITION.
- DM7. IT IS THE BUILDER'S RESPONSIBILITY TO SECURE ALL LOOSE AND UNSTABLE BUILDING COMPONENTS DURING THE DEMOLITION PROCESS.
- DM8. THE BUILDER IS TO HAVE A CONSTRUCTION METHODOLOGY PREPARED WITH APPROPRIATE ADVICE FROM THE 'BUILDER'S ENGINEER'. THIS IS TO BE SUBMITTED TO THE CLIENT FOR GENERAL REVIEW TO ENSURE IT IS IN ACCORDANCE WITH THE DESIGN INTENT FOR PERMANENT WORKS AS DOCUMENTED ON THE STRUCTURAL DRAWINGS.
- DM9. THE DEMOLITION CONTRACTOR TO PROVIDE THE FOLLOWING INFORMATION FOR REVIEW AND APPROVAL PRIOR TO COMMENCEMENT OF WORK ON SITE:

1. COMPREHENSIVE AND FULLY DETAILED SAFE WORK METHOD STATEMENT AND SEQUENCE OF WORK.
2. DETAILS OF ALL PROPOSED DEMOLITION PLANT AND EQUIPMENT TO BE USED ON EXISTING FLOORS. FOR EACH ITEM OF PLANT AND EQUIPMENT, PROVIDE GROSS OPERATING WEIGHT, SIZE AND DIMENSIONS, PATH OF TRAVEL AND POSITION ON THE FLOOR, WHEEL LOADS OF TIPPING OR LOADING VEHICLES.
3. METHOD OF PROTECTION AND SUPPORT FOR ADJACENT PROPERTY.
4. DETAILS AND METHOD OF STOCKPILING OF DEMOLISHED MATERIALS ON THE FLOORS. PROPPING UNDER THE EXISTING FLOORS WILL NOT BE PERMITTED UNLESS SPECIFICALLY APPROVED OTHERWISE BY *DUNNINGS CONSULTING ENGINEERS*.
5. DETAILS AND METHOD OF DISPOSAL AND ANY PROPOSED RECYCLING OF DEMOLISHED MATERIALS.
6. PROPOSED METHOD AND DETAILS TO MINIMISE DUST, NOISE AND VIBRATION DURING DEMOLITION.
7. WORK METHOD TO ENSURE THAT EXISTING SERVICES OR STRUCTURES TO BE RETAINED ARE NOT DAMAGED OR ADVERSELY AFFECTED.
8. MAKE GOOD ANY DAMAGE ARISING OUT OF DEMOLITION WORK. IMPLSION METHODS ARE NOT PERMITTED.

TEMPORARY WORKS

- TW1. THE BUILDER SHALL ALLOW FOR IN HIS PRICING ALL COSTS ASSOCIATED WITH THE DESIGN, SUPPLY, INSTALLATION AND REMOVAL OF ALL TEMPORARY BACK PROPPING, SAFETY SCREENS, SCAFFOLDING AND OTHER REQUIREMENTS OF THE CONSTRUCTION PROCESS. THE BUILDER SHALL ENGAGE A SUITABLY QUALIFIED ENGINEER, REFERRED TO AS THE 'BUILDER'S ENGINEER' TO DESIGN, INSPECT AND CERTIFY ALL TEMPORARY WORKS AND DEMOLITION WORKS.
- TW2. THE CONTRACTOR IS TO PROVIDE ALL TEMPORARY WORKS CONTRACTOR ENGINEERING DRAWINGS TO *DUNNINGS CONSULTING ENGINEERS* FOR INFORMATION.
- TW3. IT IS THE BUILDER'S RESPONSIBILITY TO ENSURE THE OVERALL STABILITY OF THE STRUCTURE AND NO PART IS OVERSTRESSED DUE TO CONSTRUCTION AND INSTALLATION METHODOLOGIES AND / OR EQUIPMENT DURING CONSTRUCTION. THE BUILDER SHALL OBTAIN ADVICE FROM THE CONTRACTORS ENGINEER.
- TW4. THE BUILDER IS TO HAVE CONSTRUCTION METHODOLOGY STATEMENTS PREPARED AND SUBMITTED FOR GENERAL REVIEW TO ENSURE IT IS IN ACCORDANCE WITH THE DESIGN INTENT.
- TW5. ALL VERTICAL DISPLACEMENTS AND MOVEMENTS ARE TO BE LIMITED TO ENSURE THE STRUCTURE IS NOT SUBJECTED TO LOADS OR MOVEMENTS CAUSING STRUCTURAL DISTRESS TO ANY ELEMENT WHILE THE STRUCTURE IS BEING TEMPORARILY SUPPORTED.
- TW6. DEPENDING ON THE CONTRACTOR'S PREFERRED CONSTRUCTION SEQUENCE, PRE-LOADING OF STRUCTURAL ELEMENTS MAY BE REQUIRED TO LIMIT TOTAL VERTICAL DISPLACEMENTS.
- TW7. STRUCTURE TO BE ADEQUATELY BRACED IN THE TEMPORARY CONDITION TO PREVENT ANY HORIZONTAL MOVEMENT OR DEFLECTIONS.

RETAINING WALLS

- RW1. DO NOT BACKFILL RETAINING WALLS (OTHER THAN CANTILEVER WALLS) UNTIL FLOOR CONSTRUCTION AT TOP AND BOTTOM IS COMPLETED.
- RW2. ENSURE FREE DRAINING BACKFILL AND DRAINAGE IS IN PLACE BEHIND ALL RETAINING WALLS.
- RW3. PROVIDE WATERPROOF TREATMENT TO BACK OF WALL AS REQUIRED. WATERPROOF TREATMENT BY OTHERS.
- RW4. FOR ALL TEMPORARY BATTERS, REFER TO GEOTECHNICAL ENGINEERS ADVICE.
- RW5. REFER EARTHWORKS NOTES & THE GEOTECHNICAL ENGINEERING REPORT IN THE GENERAL NOTES FOR COMPACTION REQUIREMENTS BEHIND RETAINING WALLS.

CONCRETE

- GENERAL
ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH CURRENT EDITIONS OF AS 3600 AND AS 3610, EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.
- C1. PRE-MIXED CONCRETE SUPPLY SHALL COMPLY WITH AS 1379.
- C2. CONCRETE COMPONENTS AND QUALITY SHALL CONFORM TO AS 1379 AND ALL REQUIREMENTS OF THE LATEST EDITION OF ASCE CONCRETE SPECIFICATIONS DOCUMENT 1, UNLESS NOTED OTHERWISE, AS FOLLOWS:

GRADE	CHARACTERISTIC COMPRESSIVE STRENGTH AT 28-DAYS (MPa)	SLUMP (mm)	MAXIMUM AGGREGATE SIZE (mm)	CEMENT TYPE	MAXIMUM DRYING SHRINKAGE STRAIN (µm)	AVERAGE ELASTIC MODULUS (MPa)
N25	25	80	20	GP	650	26000
N32	32	80	20	GP	650	30100
N40	40	80	20	GP	650	32800
N50	50	80	20	GP	650	34800
N65	65	80	20	GP	650	37400

- C3. CEMENT TO BE TYPE GP GENERAL PURPOSE PORTLAND CEMENT IN ACCORDANCE WITH AS 3972. MAXIMUM PERMISSIBLE DRYING SHRINKAGE STRAIN AT 56 DAYS TO BE IN ACCORDANCE WITH AS 1012. ANY PROPOSED CHANGES TO THE CONCRETE MIX ARE TO BE APPROVED BY *DUNNINGS CONSULTING ENGINEERS*
- C4. PROJECT CONTROL TESTING SHALL BE CARRIED OUT IN ACCORDANCE WITH AS 1379. ALL CONCRETE SHALL BE SAMPLED AND TESTED IN ACCORDANCE WITH AS 1012.
- C5. NO ADMIXTURES SHALL BE USED IN CONCRETE UNLESS APPROVED IN WRITING BY *DUNNINGS CONSULTING ENGINEERS*.
- C6. CONCRETE CURING SHALL BE IN ACCORDANCE WITH AS 3600.
- C7. FOR STANDARD FORMWORK AND COMPACTION. CLEAR CONCRETE COVER TO REINFORCEMENT FOR DURABILITY SHALL BE AS FOLLOWS UNLESS SPECIFICALLY NOTED OTHERWISE:-

EXPOSURE CLASSIFICATION TO AS 3600	CONCRETE GRADE		
A1	N32	N40	>N50
A2	20mm	20mm	20mm
B1	25mm	20mm	20mm
B2	40mm	30mm	25mm
B2	(65mm)	45mm	35mm

- NOTE:
(i) VALUES IN BRACKETS APPLY ONLY WHEN ONE SURFACE OF THE CONCRETE ELEMENT IS SUBJECT TO B1 OR B2 EXPOSURE CLASSIFICATION.
(ii) COVER REQUIREMENTS MAY NEED TO BE INCREASED TO SUIT FIRE RATING.
(iii) EXPOSURE CLASSIFICATION SHALL BE AS INDICATED IN NOTE C8 OR ON THE STRUCTURAL DRAWINGS.
(iv) THE SURFACES OF MEMBERS PROTECTED FROM THE GROUND BY A DAMP-PROOF MEMBRANE HAVE EXPOSURE CLASSIFICATION A1, UNLESS NOTED OTHERWISE.
(v) WHERE CONCRETE IS CAST AGAINST GROUND, THE CLEAR CONCRETE COVERS DETERMINED FROM THESE NOTES SHALL BE INCREASED BY 10mm IF THE CONCRETE SURFACE IS PROTECTED BY A DAMP PROOF MEMBRANE (D.P.M.), OTHERWISE BY 20mm.
- C8. THE CONCRETE WORK SHOWN ON THESE DRAWINGS HAS BEEN DESIGNED FOR THE FOLLOWING EXPOSURE CLASSIFICATIONS FOR DURABILITY IN ACCORDANCE WITH AS 3600:
INTERNAL - A1
EXTERNAL - B1
IN-CONTACT WITH GROUND - A2

MINIMUM CLEAR COVER TO REINFORCEMENT OF ELEMENT IN mm (INCLUDING REBATES, CHAMFERS, ETC.)	EXPOSURE	
	INTERNAL	EXTERNAL
SLAB AND SLABBANDS	TOP	20
	SOFFIT, SIDES	20
BEAMS	TOP	25
	SOFFIT, SIDES	30 (UNO.)
WALLS		20
		40
COLUMNS		40
		50
FOOTINGS	FORMED	50
	CAST AGAINST GROUND	75
MEMBERS OTHER THAN FOOTINGS CAST AGAINST GROUND		
		50
SLABS/BEAMS CAST AGAINST D.P.M. ON GROUND		
		40

- NOTE: COVERS MAY NEED TO BE INCREASED TO SUIT FIRE RATING OR BAR SIZE.
- C10. CONCRETE STRENGTH GRADES SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE:
WALLS - N40
FOUNDATIONS - N40
- AFTER CONCRETE PLACEMENT, NO ADDITIONAL PENETRATIONS (E.G. CORE HOLES) ARE TO BE COMPLETED WITHOUT THE WRITTEN APPROVAL OF *DUNNINGS CONSULTING ENGINEERS*.
- C11. CONCRETE SIZES SHOWN DO NOT INCLUDE THICKNESS OF APPLIED FINISHES.
- C12. ALL CONCRETE THICKNESSES SHOWN ARE MINIMUM STRUCTURAL REQUIREMENTS. NO REDUCTION IN THICKNESS DUE TO FALLS OR TOPPING IS PERMITTED. REFER TO ARCHITECTURAL DRAWINGS FOR ALL SLAB FALLS AND CONFIRMATION OF SLAB STEPS.
- DEPTH OF BEAMS ARE GIVEN FIRST AND INCLUDE SLAB THICKNESS, IF ANY.
- C14. UNLESS A GROOVE LINE ALLOWANCE HAS BEEN NOTED ON THE DRAWINGS, NO GROOVE LINES ARE PERMITTED, EXCEPT AT SLAB LINES. ALL GROOVE LINES ARE TO BE SUBMITTED TO *DUNNINGS CONSULTING ENGINEERS* FOR APPROVAL.
- C15. FOR CHAMFERS, DRIP GROOVES, REGLETS, ETC. REFER TO PROJECT ARCHITECT'S DETAILS. MAINTAIN COVER TO REINFORCEMENT AT THESE DETAILS.
- C16. NO HOLES, CHASES OR EMBEDMENT OF PIPES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS, SHALL BE MADE IN CONCRETE MEMBERS WITHOUT THE PRIOR WRITTEN APPROVAL OF *DUNNINGS CONSULTING ENGINEERS*.
- C17.

CONCRETE (CONT'D)

- C18. NO PENETRATION THAN GREATER 150mm DIAMETER, OR EMBEDMENT OF PIPES GREATER THAN 40mm DIAMETER OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE SLABS, CONDUITS, PIPES, ETC. SHALL ONLY BE LOCATED WITHIN THE MIDDLE THIRD OF THE SLAB DEPTH. FOR ALL OTHER CONCRETE MEMBERS NO PENETRATIONS, CHASES OR EMBEDMENTS SHALL BE MADE WITHOUT PRIOR APPROVAL BY *DUNNINGS CONSULTING ENGINEERS*.
- C19. CONDUITS GREATER THAN 25mm DIAMETER CAST INTO CONCRETE MEMBERS SHALL BE SPACED AT A MAXIMUM DISTANCE POSSIBLE AND UNDER NO CIRCUMSTANCES CLOSER THAN A CLEAR SPACING OF THREE TIMES THE LARGER CONDUIT DIAMETER FROM PARALLEL REINFORCEMENT OR ANY OTHER CONDUIT.
- C20. WHERE NOT SHOWN ON THE STRUCTURAL DRAWINGS, CONSTRUCTION JOINTS WITHIN HORIZONTAL ELEMENTS SHALL BE LOCATED TO THE APPROVAL OF *DUNNINGS CONSULTING ENGINEERS*.
- C21. THE FACE OF ALL CONCRETE AGAINST WHICH NEW CONCRETE IS TO BE CAST IS TO BE THOROUGHLY MECHANICALLY SCABbled, FULLY EXPOSING THE AGGREGATE MATRIX. CONSTRUCTION JOINTS SHALL BE PROPERLY FORMED, SCABbled AND CLEANED, AND LOCATED ONLY WHERE SHOWN OR EXPRESSLY APPROVED BY *DUNNINGS CONSULTING ENGINEERS*.
- C22. THE FINISHED CONCRETE SHALL BE A DENSE HOMOGENEOUS MASS, COMPLETELY FILLING THE FORMWORK, THOROUGHLY EMBEDDING THE REINFORCEMENT AND FREE OF STONE POCKETS. ALL CONCRETE INCLUDING FOOTINGS AND SLABS ON GROUND SHALL BE COMPACTED WITH MECHANICAL VIBRATORS.
- C23. CONSTRUCTION SUPPORT PROPPING IS TO BE LEFT IN PLACE WHERE NEEDED TO AVOID OVER-STRESSING THE STRUCTURE DUE TO CONSTRUCTION LOADING. DO NOT CONSTRUCT MASONRY WALLS ON SUSPENDED SLABS OR BEAMS UNTIL ALL PROPPING HAS BEEN REMOVED AND THE MINIMUM 28-DAY STRENGTH OF THE SLAB CONCRETE HAS BEEN ACHIEVED.
- C24. PROVIDE UPWARD CAMBER TO CANTILEVERS OF L/120 AT THEIR OUTER EDGE, WHERE 'L' IS THE SHORTEST PROJECTION BEYOND COLUMN OR WALL FACE, PROVIDE ALSO CAMBERS TO SLABS WHERE INDICATED ON PLAN, MAINTAIN SLAB AND BEAM DEPTHS AS SHOWN.
- PLACING
C25. PLACE CONCRETE IN LAYERS OF LESS THAN 300mm THICK. COMPACT SUCCEEDING LAYER INTO PREVIOUS LAYER BEFORE PREVIOUS LAYER HAS TAKEN INITIAL SET.
- C26. USE IMMERSION AND SCREED VIBRATORS ACCOMPANIED BY HAND METHODS AS APPROPRIATE TO REMOVE ENTRAPPED AIR AND TO FULLY COMPACT THE MIX.
- C27. DO NOT ALLOW VIBRATORS TO CONTACT THE SET CONCRETE. REINFORCEMENT OR ITEMS INCLUDING PIPES AND CONDUITS EMBEDDED IN THE CONCRETE. DO NOT USE VIBRATORS TO MOVE CONCRETE ALONG THE FORMWORK. AVOID CAUSING SEGREGATION BY OVER-VIBRATION.
- C28. THE BUILDER IS TO ENSURE THAT THE ELAPSED TIME BETWEEN THE WETTING OF THE CONCRETE MIX AND THE DISCHARGE OF THE CONCRETE MIX AT THE SITE CONFORMS TO THE ELAPSED DELIVERY TIME TABLE BELOW:

CONCRETE TEMPERATURE AT TIME OF DISCHARGE (°C)	MAXIMUM ELAPSED TIME (MINUTES)
10 - 24	120
24 - 27	90
27 - 30	60
30 - 32	45
- C29. CONCRETE IS NOT TO BE DISCHARGED AT AMBIENT TEMPERATURES BELOW 10°C OR ABOVE 30°C UNLESS APPROVED HEATING OR COOLING MEASURES ARE TAKEN TO DELIVERED CONCRETE WITHIN THE RANGE 5°C TO 35°C.
- C30. ADDITION OF WATER TO PRE-MIXED CONCRETE IS TO CONFORM TO AS 1379 CLAUSE 4.2.3.
- C31. MAXIMUM LIFT OF CONCRETE POUR AT ANY ONE TIME FOR ALL CONCRETE ELEMENTS SHALL BE 3000mm AND FREE DROPPING OF CONCRETE FROM A HEIGHT GREATER THAN 1000mm IS NOT PERMITTED UNLESS THE METHOD OF PLACEMENT HAS BEEN APPROVED BY *DUNNINGS CONSULTING ENGINEERS*.
- C32. ALL CONCRETE, INCLUDING IN FOOTINGS AND SLABS, TO BE COMPACTED IN THE FORM USING MECHANICAL VIBRATORS, TO ACHIEVE FULL COMPACTION WITHOUT CONCRETE SEGREGATION, COMPLETELY FILLING THE FORMWORK, THOROUGHLY EMBEDDING THE REINFORCEMENT AND FREE OF STONE POCKETS.
- C33. PLACE CONCRETE CONTINUOUSLY BETWEEN CONSTRUCTION JOINTS SHOWN ON DRAWINGS. DO NOT BREAK OR INTERRUPT SUCCESSIVE POURS SUCH THAT COLD JOINTS OCCUR. ANY REVISIONS OR ADDITIONS TO CONSTRUCTION JOINTS SHOWN ON DRAWINGS ARE TO BE SUBMITTED TO *DUNNINGS CONSULTING ENGINEERS* FOR APPROVAL.
- C34. SURFACES RECEIVING GROUT AND SURFACES AT CONSTRUCTION JOINTS SHALL BE LEFT ROUGH AND FREE OF LAITANCE.
CURING
C35. CURING OF ALL CONCRETE IS TO BE ACHIEVED BY KEEPING SURFACES CONTINUOUSLY WET. SEE FOLLOWING NOTES FOR CURING TIME PERIODS.
C36. CURE CONTINUOUSLY FROM COMPLETION OF FINISHING UNTIL THE TOTAL CUMULATIVE NUMBER OF DAYS OR FRACTION OF DAYS, DURING WHICH THE AIR TEMPERATURE IN CONTACT WITH THE CONCRETE IS ABOVE 10°C, CONFORMS TO THE FOLLOWING, UNLESS ACCELERATED CURING IS ADOPTED:
 - FULLY ENCLOSED INTERNAL SURFACES/EARLY AGE CONCRETE: 3 DAYS
 - OTHER CONCRETE SURFACES: 7 DAYS
- C37. APPROVED SPRAY-ON CURING COMPOUNDS THAT COMPLY WITH AS 3799 MAY BE USED WHERE FLOOR FINISHES WILL NOT BE AFFECTED (REFER MANUFACTURERS SPECIFICATIONS). POLYTHENE SHEETING OR WET HESSIAN MAY BE USED TO RETAIN CONCRETE MOISTURE WHERE PROTECTED FROM WIND AND TRAFFIC.
- TESTING & SAMPLING
C38. METHOD OF CONCRETE TEST SAMPLING ARE TO BE IN ACCORDANCE WITH AS 1012.1.
C39. CONCRETE TEST SAMPLING LOCATIONS ARE TO BE IN ACCORDANCE WITH AS 1012.1.
C40. FREQUENCY OF CONCRETE TEST SAMPLING IS TO BE IN ACCORDANCE WITH AS 1379.
C41. A MINIMUM OF ONE (1) SLUMP TEST IS TO BE TAKEN FROM EACH CONCRETE BATCH.
C42. THE MAKING AND CURING OF CONCRETE TEST SAMPLES ARE TO BE IN ACCORDANCE WITH AS 1012.8.1 AND AS 1012.8.2.

REINFORCEMENT

- GENERAL
R1. THE REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY AND IS NOT NECESSARILY TRUE IN PROJECTION.
- R2. REINFORCEMENT IS TO BE MANUFACTURED IN ACCORDANCE WITH AS 4671 AND SHALL BE FIXED AS SHOWN ON THE STRUCTURAL DRAWINGS.
- R3. COVER SHALL BE AS NOTED ON THE STRUCTURAL DRAWINGS.
- R4. CONCRETE COVERS ARE MEASURED FROM THE FORMWORK OR GROUND FACE TO THE OUTERMOST REINFORCEMENT COMPONENT (I.E. IN COLUMNS OR BEAMS TO THE OUTSIDE OF TIES OR LIGATURES).
- R5. MAINTAIN CONCRETE COVER TO ALL PIPES, CONDUITS, REGLETS, DRIP GROOVES, ETC.
- R6. CONCRETE COVER TO BE MAINTAINED DURING CONCRETE PLACEMENT BY THE USE OF PLASTIC CHAIRS, MILD STEEL PLASTIC TIPPED CHAIRS OR CONCRETE CHAIRS.
- R7. MILD STEEL PLASTIC TIPPED CHAIRS, PLASTIC CHAIRS OR CONCRETE CHAIRS ARE TO BE SPACED AT CENTRES NOT GREATER THAN 1000mm BOTH WAYS FOR BARS OR 750mm BOTH WAYS FOR FABRIC/MESH. IN EXPOSURE CONDITION B2 OR C, USE ONLY PLASTIC OR CONCRETE CHAIRS. BARS SHALL BE TIED AT ALTERNATE INTERSECTIONS.
- R8. WHERE NO REINFORCEMENT IS SHOWN ON THE STRUCTURAL DRAWING AT RIGHT ANGLES TO THE PRIMARY REINFORCEMENT, DISTRIBUTION REINFORCEMENT IS TO BE PROVIDED.
R9. ALL COGS TO BE STANDARD COGS TO AS 3600 SECTION 13 UNLESS NOTED OTHERWISE.
R10. REINFORCEMENT SPACING NOMINATED ON THE STRUCTURAL DRAWINGS IS TO ASSIST THE SCHEDULER AND STEEL FIXER TO ASSESS THE TOTAL NUMBER OF BARS REQUIRED. WHERE BARS ARE PLACED IN ACCORDANCE WITH THE SPACING NOMINATED AND THEY FOUL WITH OTHER STRUCTURAL REQUIREMENTS, PREFERENCE IS TO BE GIVEN TO RELOCATING THE REINFORCEMENT BY LOCALLY ADJUSTING THE BAR SPACING TO ENABLE ASSEMBLY OF REINFORCEMENT TO BE COMPLETED. IN THE EVENT THAT THE REINFORCEMENT NEEDS TO BE CLIPPED ON SITE PRIOR TO CASTING, *DUNNINGS CONSULTING ENGINEERS* ARE TO BE CONTACTED FOR APPROVAL.
- R11. REINFORCEMENT SPlice LOCATIONS SHALL BE LOCATED AS SHOWN ON THE STRUCTURAL DRAWINGS. WRITTEN APPROVAL FROM *DUNNINGS CONSULTING ENGINEERS* SHALL BE OBTAINED FOR ANY OTHER SPlice LOCATIONS.
- R12. REINFORCEMENT BAR JOGGLES SHALL BE ONE (1) BAR DIAMETER OVER A LENGTH OF TWELVE (12) BAR DIAMETERS.
- R13. THE STRUCTURAL ENGINEER SHALL BE GIVEN MINIMUM 48 HOURS NOTICE FOR REINFORCEMENT INSPECTIONS AND CONCRETE SHALL NOT BE DELIVERED UNTIL FINAL APPROVAL HAS BEEN OBTAINED.
- R14. REINFORCEMENT IS INDICATED BY THE FOLLOWING SYMBOLS:-

SYMBOL	DEFINITION
R	DENOTES GRADE 250R HOT ROLLED PLAIN BARS TO AS/NZS 4671
Y	DENOTES GRADE D400Y BAR TO AS 1302
N	DENOTES GRADE D500N DEFORMED BAR TO AS/NZS 4671
SL OR RL	DENOTES SQUARE OR RECTANGULAR GRID DEFORMED REINFORCING FABRIC/MESH GRADE D500L TO AS/NZS 4671
L...TM	DENOTES TRENCH MESH GRADE D500L TO AS/NZS 4671
- R15. REINFORCEMENT NOTATION:
NUMBER OF BARS IN GROUP
BAR GRADE AND TYPE
BAR SPACING (IN mm)
BAR DIAMETER
- R16. UNLESS NOTED OTHERWISE, REINFORCEMENT LAYERS DENOTED THUS:-

SYMBOL	DEFINITION
(4)	DENOTES TOP BARS LAID LAST
(3)	DENOTES TOP BARS LAID FIRST
(2)	DENOTES BOTTOM BARS LAID SECOND
(1)	DENOTES BOTTOM BARS LAID FIRST
- R17. UNLESS NOTED OTHERWISE ON THE STRUCTURAL DRAWINGS, LAP LENGTHS TO REINFORCEMENT BARS ARE TO BE AS FOLLOWS:-

BAR SIZE	MINIMUM CONCRETE STRENGTH (MPa)				
	25MPa	32MPa	40MPa	50MPa	65MPa OR GREATER
N12	600	550	500	450	450
N16	900	800	700	650	600
N20	1200	1050	950	850	750
N24	1450	1300	1150	1050	900
N28	1750	1550	1400	1250	1100
N32	2100	1850	1650	1500	1300
N36	2450	2150	1950	1750	1550
- R18. FABRIC/MESH IS TO BE LAPPED BY A MINIMUM OF 2 CROSS WIRES, SEE BELOW DIAGRAM FOR FURTHER DETAILS:
- R19. A MAXIMUM OF THREE SHEETS OF FABRIC/MESH SHALL BE LAPPED AT ANY POINT.
- R20. FABRIC/MESH SHALL BE LAPPED SUCH THAT THE TWO OUTERMOST WIRES OF ONE SHEET OVERLAP THE TWO OUTERMOST WIRES OF THE OTHER SHEET BY MINIMUM 25mm.
COLD BENDING
R21. BARS ARE NOT TO BE COLD BENT WITHOUT WRITTEN APPROVAL FROM *DUNNINGS CONSULTING ENGINEERS*. COLD BENDING IS TO BE IN ACCORDANCE WITH CLAUSE 17.2 OF AS3600

REINFORCEMENT (CONT'D)

- R22. HOT BENDING
HOT BENDING MAY ONLY BE CONDUCTED WITH THE WRITTEN APPROVAL OF *DUNNINGS CONSULTING ENGINEERS*. HOT BENDING IS TO BE IN ACCORDANCE WITH CLAUSE 17.2 OF AS 3600. HOT BENDING CAN ONLY BE PERFORMED BY A CERTIFIED WELDER. A TEST CERTIFICATE OF THE AFFECTED AREA WILL NEED TO BE PROVIDED TO *DUNNINGS CONSULTING ENGINEERS*.
- STRAIGHTENING
R23. WHEN RE-STRAIGHTENING PARTIALLY EMBEDDED BARS, DO NOT BEND OVER FORMERS OF SMALLER DIAMETER THAN PERMITTED IN AS 3600. DO NOT SUBJECT REINFORCEMENT BARS TO IMPACT IN ORDER TO STRAIGHTEN.
- WELDING
R24. WELDING OF REINFORCEMENT BARS IS NOT PERMITTED WITHOUT WRITTEN APPROVAL FROM *DUNNINGS CONSULTING ENGINEERS*.
- R25. ALL WELDING SHALL BE CARRIED OUT IN ACCORDANCE WITH THE LATEST REVISION OF AS/NZS 1554.3.
- R26. THE EXTENT OF NON-DESTRUCTIVE WELD EXAMINATION SHALL BE AS NOTED BELOW. RADIOGRAPHIC OR ULTRASONIC EXAMINATION SHALL BE TO AS/NZS 1554.1, AS 2177.1 AND AS 2207 AS APPROPRIATE AND CARRIED OUT BY AN INDEPENDENT NATA REGISTERED/CERTIFIED WELDING INSPECTOR.

NON-DESTRUCTIVE WELD TESTING TABLE

WELD CATEGORY	VISUAL	VISUAL MAGNETIC TEST	ULTRASONIC TEST
GP	100%	100%	50%
SP	100%	100%	50%

- R27. A REPORT APPROVING ALL WELDING SHALL BE FORWARDED TO *DUNNINGS CONSULTING ENGINEERS* PRIOR TO CONCRETE PLACEMENT.

EARTHWORKS

- E1. REFER TO THE GEOTECHNICAL ENGINEERING REPORT SPECIFIED IN THE GENERAL NOTES FOR SITE SPECIFIC EARTHWORKS NOTES.
- E2. STRIP SITE OF ALL TOPSOIL, VEGETATION, FILL, RUBBLE & BUILDING DEBRIS TO A MINIMUM DEPTH OF 150mm.
- E3. PROOF ROLL THE EXPOSED SURFACE WITH A SMOOTH DRUM ROLLER OF NOT LESS THAN TEN TONNE DEAD WEIGHT. MINIMUM SIX PASSES. ALL SOFT SPOTS ARE TO BE REMOVED & REPLACED WITH CLEAN FILL. PLACE IN LAYERS OF NOT MORE THAN 200mm LOOSE THICKNESS AND COMPACT TO 98% STANDARD COMPACTION IN ACCORDANCE WITH AS1289 WITHIN +2% OR -2% OF OPTIMUM MOISTURE CONTENT.
- E4. MATERIAL WON FROM THE SITE IS TO BE INSPECTED BY THE GEOTECHNICAL ENGINEER FOR APPROVAL PRIOR TO USE AS FILL.
- E5. ANY IMPORTED FILL IS TO HAVE A MINIMUM CBR VALUE OF 15% UNLESS RECOMMENDED OTHERWISE BY THE GEOTECHNICAL ENGINEER.
- E6. ALL FILL TO BE COMPACTED TO 98% STANDARD COMPACTION (AS1289 E1.1) WITHIN +2% OR -2% OF OPTIMUM MOISTURE CONTENT USING A TEN-TONNE ROLLER. MINIMUM SIX PASSES. APPLY 200mm MAXIMUM THICK LAYERS IN ACCORDANCE WITH AS1289 UNLESS RECOMMENDED OTHERWISE BY THE GEOTECHNICAL ENGINEER.
- E7. TEST CERTIFICATES ON THE FILL MATERIAL SHALL BE SUPPLIED TO THE BUILDER FOR APPROVAL PRIOR TO THE USE OF THE FILL MATERIAL.
- E8. PLACE SPECIFIED SUB-BASE MATERIALS CONFORMING TO CEMENT & CONCRETE ASSOCIATION RECOMMENDATIONS & COMPACT TO A MINIMUM DENSITY RATIO OF 98% BASED ON MODIFIED COMPACTION (TO AS1289 E1.1)
- E9. CONTAMINATION OF THIS SITE WAS INVESTIGATED AS PART OF THE GEOTECHNICAL INVESTIGATION. REFER TO THE GEOTECHNICAL ENGINEER FOR GUIDANCE.
- E10. REFER TO GEOTECHNICAL ENGINEER REPORT FOR OTHER RELEVANT SPECIFICATIONS & RECOMMENDATIONS OR OTHER SPECIAL COMPACTION DETAILS.

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MASONRY GENERAL

- M1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN COMPLIANCE WITH THE CURRENT EDITION OF AS 3700. ALL MASONRY UNITS SHALL BE STRUCTURAL GRADE 15 AND SHALL COMPLY WITH THE CURRENT EDITION OF AS/NZS 4455.
 - M2. ALL BONDING AND FIXING OF MASONRY SHALL COMPLY WITH CLAUSE 4.11 OF AS 3700.
 - M3. ALL MASONRY IS TO BE CONSTRUCTED IN CONVENTIONAL STRETCHER BOND UNLESS APPROVED OTHERWISE IN WRITING BY *DUNNINGS CONSULTING ENGINEERS*.
 - M4. THE MINIMUM SALT ATTACK RESISTANCE GRADE FOR THE MASONRY UNITS ARE TO BE IN ACCORDANCE WITH TABLE 5.1 OF AS 3700.
 - M5. EXTERNAL SINGLE-LEAF WALLS AND SOLID WALLS SHALL BE PROTECTED ON THE OUTSIDE FACE BY A SUITABLE WEATHER-RESISTANT COATING IN ACCORDANCE WITH CLAUSE 4.7.4 OF AS3700.
 - M6. THE CHARACTERISTIC LATERAL MODULUS OF RUPTURE (f_{ut}) FOR THE MASONRY UNITS SHALL BE 0.8MPa.
 - M7. ALL LOAD BEARING CONCRETE MASONRY WALLS SHALL HAVE ALL CORES FILLED WITH CONCRETE GROUT UNLESS NOTED OTHERWISE.
 - M8. ALL CORE FILLED BLOCK WALLS SHALL BE CONSTRUCTED WITH H-BLOCKS OR OPEN-ENDED DOUBLE ENDED U-BLOCKS UNLESS APPROVED OTHERWISE BY *DUNNINGS CONSULTING ENGINEERS*.
 - M9. ALL NON-LOAD BEARING WALLS SHALL BE SEPARATED FROM CONCRETE SOFFIT AND AT VERTICAL CONCRETE FACES BY 15mm THICK APPROVED COMPRESSIBLE MATERIAL.
 - M10. DO NOT CONSTRUCT MASONRY WALLS ON SUSPENDED CONCRETE FLOORS UNTIL ALL PROPPING HAS BEEN REMOVED AND THE MINIMUM 28-DAY STRENGTH OF CONCRETE HAS BEEN ACHIEVED.
 - M11. TEMPORARY PROPPING OR BRACING TO ALL MASONRY WALLS SHALL BE PROVIDED BY THE BUILDER TO KEEP THE STRUCTURE STABLE DURING CONSTRUCTION.
 - M12. MASONRY SHALL NOT BE SUBJECTED TO ANY LOAD UNTIL IT HAS GAINED SUFFICIENT STRENGTH TO CARRY THE LOAD SAFELY.
 - M13. ALL MASONRY SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE TOLERANCES OUTLINED IN CLAUSE 12.5 OF AS 3700.
 - M14. NO CHASES, RECESSES, RAKING OR TOOLING OF JOINTS ARE PERMITTED IN ALL MASONRY CONSTRUCTION WITHOUT WRITTEN APPROVAL FROM *DUNNINGS CONSULTING ENGINEERS*.
 - M15. MEMBRANE DAMP-PROOF COURSES AND FLASHING MATERIALS SHALL BE IN ACCORDANCE WITH AS/NZS 2904.
 - M16. DAMP-PROOFING AND FLASHING MATERIALS SHALL NOT BE BREACHED OR PUNCTURED DURING CONSTRUCTION, EXCEPT THAT THEY MAY BE PIERCED WHERE STEEL STARTER BARS ARE REQUIRED TO PASS THROUGH.
 - M17. ANY RENDER FINISH SUBSEQUENTLY APPLIED TO THE SURFACE SHALL NOT BE ALLOWED TO BRIDGE A DAMP-PROOF COURSE OR MAKE INEFFECTIVE ANY OTHER MOISTURE-PROTECTION MEASURES.
 - M18. WEEPHOLES OR DRAINAGE PIPES SHALL BE PROVIDED TO DRAIN MOISTURE FROM, OR THROUGH, THE MASONRY CONSTRUCTION. WHERE FLASHINGS ARE INCORPORATED IN THE MASONRY, WEEPHOLES SHALL BE PROVIDED IN THE MASONRY COURSE IMMEDIATELY ABOVE THE FLASHING, AT CENTRES NOT EXCEEDING 1200mm. BUILDER TO CO-ORDINATE LOCATIONS OF WEEPHOLES & DRAINAGE PIPES WITH THE ARCHITECT.
 - M19. WATERPROOF TREATMENT / WATERPROOFING OF MASONRY WALLS & COMPONENTS ARE TO THE ARCHITECT'S OR HEAD CONTRACTOR'S DETAILS.
 - M20. WHERE CONCRETE SLABS & BEAMS BEAR ON MASONRY, TOP COURSE SHALL BE LEVEL, SMOOTH AND COVERED WITH A PREGREASED GALVANISED STEEL SLIDING JOINT MATERIAL. REFER *DUNNINGS CONSULTING ENGINEERS* TYPICAL MASONRY DETAILS.
 - M21. DURING CONSTRUCTION, MASONRY & BUILT-IN COMPONENTS SHALL BE PROTECTED TO AVOID DAMAGE AND SURFACE CONTAMINATION.
 - M22. DURING CONSTRUCTION, THE TOP OF SURFACE OF THE MASONRY SHALL BE COVERED TO PREVENT THE ENTRY OF RAINWATER.
 - M23. FOR MASONRY RETAINING WALLS, REFER TO RETAINING WALL GENERAL NOTES FOR ADDITIONAL PROJECT REQUIREMENTS.
- BUILT-IN COMPONENTS**
- M24. BUILT-IN COMPONENTS SHALL COMPLY WITH THE LATEST REVISION OF AS/NZS 2699.1, AS/NZS 2699.2 AND AS/NZS 2699.3 WITH THE EXCEPTION OF STRUCTURAL STEEL MULLIONS THAT SHALL COMPLY WITH AS 4100 OR AS 4600.
 - M25. ALL WALL TIES SHALL BE STAINLESS STEEL GRADE 316 OR 316L.
 - M26. ALL STEELWORK BUILT INTO EXPOSED MASONRY TO BE HOT DIPPED GALVANISED.
 - M27. FOR STANDARD FACADE CONSTRUCTION, ALL WALL TIES ARE TO BE HEAVY DUTY (TYPE A) UNLESS APPROVED OTHERWISE BY THE FACADE CONSULTANT.
 - M28. FOR MASONRY WALLS USED AS SEISMIC LATERAL BRACING WALLS, ALL WALL TIES ARE TO BE HEAVY DUTY (TYPE B) UNLESS APPROVED OTHERWISE BY *DUNNINGS CONSULTING ENGINEERS*.
 - M29. WALL TIES ARE TO BE INSTALLED IN ACCORDANCE WITH CLAUSE 4.10 OF AS3700. MAXIMUM SPACING TO BE 600mm IN EACH DIRECTION UNO ON PLAN OR IN CLAUSE 4.10 OF AS 3700.
 - M30. THE DURABILITY CLASS OF BUILT-IN COMPONENTS, SUCH AS MASONRY TIES & LINTELS, IS TO BE IN ACCORDANCE WITH TABLE 5.1 OF AS 3700.
- CONTROL JOINTS**
- M31. VERTICAL CONTROL JOINTS ARE TO BE INSTALLED IN ACCORDANCE WITH CLAUSE 4.8 OF AS 3700 UNLESS NOTED OTHERWISE ON THE STRUCTURAL DRAWINGS. REFER *DUNNINGS CONSULTING ENGINEERS* TYPICAL MASONRY DETAILS FOR JOINT DETAILING. LOCATION OF JOINTS TO BE CO-ORDINATED WITH THE ARCHITECT.
 - M32. MASONRY SUPPORTING, OR SUPPORTED BY, CONCRETE FLOORS SHALL BE CONSTRUCTED WITH VERTICAL CONTROL JOINTS TO MATCH ANY CONTROL JOINTS IN THE CONCRETE FLOORS.
 - M33. THE BUILDER SHALL SUBMIT THE PROPOSED CONTROL JOINT LAYOUT FOR THE MASONRY WALLS TO *DUNNINGS CONSULTING ENGINEERS* AND THE ARCHITECT FOR REVIEW & APPROVAL.

300mm

200mm

100

50

10mm

0

MORTAR

M34. MASONRY STRENGTHS AND MORTAR TYPES, SHALL BE AS FOLLOWS-

ELEMENT	BLOCK TYPE	CHARACTERISTIC UNCONFINED COMPRESSIVE STRENGTH (f _{uc})	MORTAR TYPE CEMENT:LIME:SAND
BLOCKWORK	CONCRETE	15 MPa (MINIMUM)	1 : 0.25 : 3
BRICKWORK	BURNT CLAY / CONCRETE	20 MPa (MINIMUM)	1 : 1 : 6

MORTAR SHALL BE FRESHLY PREPARED, UNIFORMLY MIXED AND ALLOWED TO CURE FOR MINIMUM OF THREE DAYS BEFORE GROUTING. ALL ADDITIVES ARE TO BE APPROVED IN WRITING BY *DUNNINGS CONSULTING ENGINEERS*. 'BRICKIES LOAM' SHALL NOT BE USED.

- M35. BUILDING LIME SHALL BE IN ACCORDANCE WITH AS 1672.1.
- M36. MORTAR CEMENT SHALL BE TYPE GP OR GB AND IN ACCORDANCE WITH AS 3972.
- M37. BEDDING OF MASONRY SHALL BE FULL FACE WITH CROSS JOINTS COMPLETELY FILLED. JOINT THICKNESS SHALL BE 10mm WITH A CONSTRUCTION TOLERANCE OF ±2mm.
- M38. RAKING OR TOOLING OF JOINTS IS NOT PERMITTED WITHOUT PRIOR APPROVAL FROM *DUNNINGS CONSULTING ENGINEERS*.
- M39. MORTAR IN WHICH INITIAL SET HAS OCCURRED PRIOR TO APPLICATION SHALL NOT BE USED.

M40. ALL PERPENDS, EXCEPT WHERE REQUIRED FOR WEEPHOLES, ARE TO BE FULLY FILLED WITH MORTAR. LAY BOTTOM COURSE OF BLOCKS ON MORTAR BED.

CONCRETE GROUTING

M41. CORE FILLING CONCRETE GROUT SHALL BE THOROUGHLY COMPACTED. CONCRETE GROUT TO BE IN ACCORDANCE WITH AS 3700 AND AS FOLLOWS -

ELEMENT	F _{cg} (MPa)	SLUMP (mm)	MAXIMUM AGGREGATE SIZE (mm)
GROUT	20	150	10

THE CONCRETE GROUT COMPRESSIVE STRENGTH NOMINATED IN THE TABLE ABOVE IS AT 28-DAYS. TESTING & SAMPLING OF CONCRETE GROUT IS TO BE IN ACCORDANCE WITH AS 3860.

- M42. CONCRETE GROUTING SHALL NOT COMMENCE UNTIL GROUT SPACES HAVE BEEN CLEANED OUT AND THE MORTAR JOINTS HAVE ATTAINED SUFFICIENT STRENGTH TO RESIST BLOW OUTS.
- M43. CONCRETE GROUT SHALL HAVE A GB OR BP CEMENT CONTENT OF NO LESS THAN 300kg/m³.
- M44. CONCRETE GROUT SHALL NOT BE POURED INTO CORES FROM ANY HEIGHT GREATER THAN 2600mm FREE DROP. STOP POUR 50mm BELOW TOP OF BLOCK TO PROVIDE KEY FOR THE NEXT POUR.
- M45. WET ALL CORES PRIOR TO POURING CONCRETE GROUT.
- M46. COMPACTION OF CONCRETE GROUT SHALL BE BY VIBRATION OR BY RODDING WITH A PLAIN ROUND BAR.

UNREINFORCED

- M47. WALL STIFFENERS SHALL BE PROVIDED IN UNREINFORCED MASONRY WALLS AS REQUIRED. REFER TO *DUNNINGS CONSULTING ENGINEERS* TYPICAL MASONRY DETAILS.
- M48. WHERE PENETRATIONS ARE REQUIRED, THE BUILDER / ARCHITECT SHALL SUBMIT SIZES AND LOCATIONS TO *DUNNINGS CONSULTING ENGINEERS* FOR REVIEW & APPROVAL.

M49. UNREINFORCED MASONRY OVER OPENINGS SHALL BE SUPPORTED BY ARCHES, LINTELS OR FRAMES. REFER *DUNNINGS CONSULTING ENGINEERS* LINTEL SCHEDULE & TYPICAL MASONRY DETAILS.

M50. OPENINGS FOR CLEANOUT AND INSPECTION ARE TO BE PROVIDED AT THE BOTTOM COURSE OF EACH POUR OF WALL FOR ALL CORES. MORTAR PROTRUSION FROM ALL SUCH CORES ARE TO BE CLEANED OUT BEFORE GROUTING.

REINFORCED

- M51. ALL REINFORCED BLOCK WALLS SHALL HAVE ALL CORES FILLED WITH CONCRETE GROUT. CORE FILLING GROUT TO BE IN ACCORDANCE WITH CONCRETE GROUTING NOTES ABOVE.
- M52. COVER TO VERTICAL REINFORCEMENT TO BE 55mm FROM EXTERNAL FACE OF BLOCK UNLESS NOTED OTHERWISE.
- M53. ALL REINFORCEMENT TO BE LAPPED MINIMUM 40 x BAR DIAMETER UNLESS NOTED OTHERWISE.
- M54. REFER TO THE REINFORCEMENT GENERAL NOTES FOR PROJECT REQUIREMENTS.
- M55. EXTREME CARE MUST BE TAKEN TO CORRECTLY POSITION WALL STARTER BARS IN SLABS OR FOOTINGS.
- M56. ALL WALL INTERSECTIONS SHALL BE FULLY BONDED OR TIED UNLESS NOTED OTHERWISE.

M57. VERTICAL WALL REINFORCEMENT SHALL BE TIED TO THE STARTER BARS AND RESTRAINED AT THE TOP OF THE WALL IN ITS REQUIRED LOCATION IN ACCORDANCE WITH THE MASONRY DETAILS, TO AVOID DISPLACEMENT DURING GROUT FILLING OF THE WALL.

M58. OPENINGS FOR CLEANOUT AND INSPECTION ARE TO BE PROVIDED AT THE BOTTOM COURSE OF EACH POUR OF WALL FOR ALL CORES. MORTAR PROTRUSIONS FROM ALL SUCH CORES ARE TO BE CLEANED OUT PRIOR TO PLACING VERTICAL REINFORCEMENT.

CLEANING

M59. MASONRY SHALL BE CLEANED AND STAINS REMOVED, IN SUCH A MANNER THAT THE WORK IS NOT DAMAGED. PARTICULAR CARE SHALL BE TAKEN TO PROTECT ADJACENT WORK FROM THE EFFECTS OF ANY ACID USED IN CLEANING.

M60. CLEANING WITH HIGH-PRESSURE WATER EQUIPMENT SHALL BE CARRIED OUT SUCH THAT MORTAR JOINTS AND MASONRY UNITS ARE NOT DAMAGED.

CERTIFICATION

- M61. AT THE COMPLETION OF THE MASONRY WORKS, THE BUILDER SHALL PROVIDE RECORDS OR A COMPLIANCE STATEMENT THAT DEMONSTRATES THAT MASONRY UNITS, MORTAR SPECIFICATION, GROUTING WORKS, REINFORCEMENT, CONTROL JOINTS, DAMP-PROOF COURSES, WEEP HOLES, BUILT-IN COMPONENTS AND WALL STIFFENERS HAVE BEEN INSTALLED IN ACCORDANCE WITH THE STRUCTURAL DRAWINGS AND PROJECT SPECIFICATIONS.
- M62. THIRD-PARTY CERTIFICATES AND COMPLIANCE STATEMENTS ARE TO BE PROVIDED BY PROPRIETARY SUPPLIERS.

DRILLED IN ANCHORS

- DA1. DRILLED ANCHORS SHALL BE USED WHERE SHOWN ON THE DRAWINGS, OR WHERE PERMITTED IN WRITING BY THE STRUCTURAL ENGINEER. SUBMIT DETAILS OF PROPOSED ANCHORS BEFORE USE IN WRITING TO THE STRUCTURAL ENGINEER FOR REVIEW.
- DA2. MINIMUM EDGE DISTANCES, SPACINGS AND EMBEDMENTS OF THE ANCHORS ARE NOMINATED ON THESE DRAWINGS. IF THE INSTALLED DISTANCES ARE LESS THAN NOMINATED, NOTIFY THE STRUCTURAL ENGINEER
- DA3. ALTERNATIVE CHEMICAL ANCHORS MAY BE SUBSTITUTED WITH THE STRUCTURAL ENGINEERS PERMISSION
- DA4. ALL DRILLED-IN ANCHORS ARE TO BE STRICTLY INSTALLED TO THE MANUFACTURERS SPECIFICATION.
- DA5. DIAMETER OF THE HOLES TO MATCH MANUFACTURERS SPECIFICATION FOR NOMINATED BOLT/BAR DIAMETER. DRILL HOLES USING A ROTARY PERCUSSION DRILL. DO NOT CORE DRILL HOLES.
- DA6. FOR CHEMICAL ANCHORS, ENSURE CHEMICAL IS ALLOWED TO FULLY CURE IN ACCORDANCE WITH MANUFACTURERS SPECIFICATION PRIOR TO LOADING.

DRILLED IN ANCHOR TESTING

DA7. TESTING LOADS TO BE 150% OF SAFE WORKING LOAD OR 100% OF ULTIMATE LOAD TO MANUFACTURERS PRODUCT SPECIFICATION. TESTS TO BE CARRIED OUT BY N.A.T.A. REGISTERED LABORATORY AT THE CONTRACTORS EXPENSE.

QUANTITY OF ANCHORS TO BE TESTED IS AS FOLLOWS -

CHEMICAL ANCHORS: 20% OF THE TOTAL NUMBER TO EACH STRUCTURAL ELEMENT

MECHANICAL ANCHORS: 10% OF THE TOTAL NUMBER TO EACH STRUCTURAL ELEMENT

ALL ANCHOR TYPES IN DIRECT TENSION: 100% OF THE TOTAL NUMBER

FAILURE

IF ONE ANCHOR IN A GROUP FAILS UNDER TESTING THEN ALL ANCHORS SHALL BE TESTED AS SPECIFIED ABOVE AT THE CONTRACTORS EXPENSE. ALL ANCHORS THAT FAIL ARE TO BE REPLACED AND RETESTED. FORWARD CERTIFICATES OF ALL TEST RESULTS TO *DUNNINGS CONSULTING ENGINEERS*.

A	ISSUED FOR CONSTRUCTION	V.G	01.05.2024
Revision	Amendment	Issued By	Revision Date

SYDNEY
 L4, 116 Devonshire St
 Surry Hills 2010
 P. 02 8317 4775



BYRON BAY
 37/5 Easy St
 Byron Bay NSW 2481

DunningsCE.com.au

Project
**GARDINER PARK, BANKSIA
 RETAINING WALL UPGRADE**

Title
**STRUCTURAL NOTES
 SHEET 2**

Status FOR INFORMATION		Project No. 24078
Drawn [Redacted]	Sheet No. S0002	
Designed [Redacted]		
Scale AS NOTED		
Approved		Revision A
Approved Date		



NOTES

REFER TO SURVEYERS DRAWINGS FOR LEVELS.

SURVEYER TO CONFIRM EXTENT OF EARTHWORK, DRAINAGE, LOCATION OF SERVICES. CO-ORDINATE WORKS AS REQUIRED.

SCHEDULES SHALL BE READ IN CONJUNCTION WITH THE PLANS. REFER TO WRITTEN SPECIFICATION FOR FURTHER INFORMATION INCLUDING EXTENT OR WORKS, FINISHES, QUANTITIES AND STANDARD OF WORK.

LEGEND

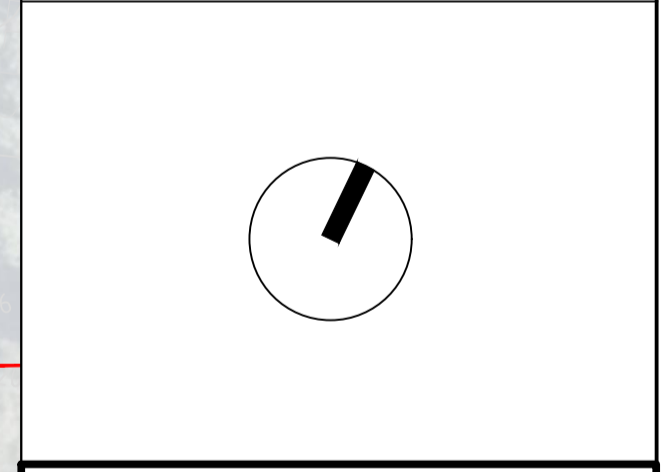
- PARK PROPERTY BOUNDAR
- NEW CONCRETE PATH
- NEW TURF

REVISION

REV	DATE	APP	NOTES
A	12.12.2024		CONCEPT ISSUE FOR INFORMATION

Project Title: **Gardiner Park, Banksia Playspace Renewal**

Drawing Title: **PARK PATHWAYS PLAN**



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Do not scale from drawings. Work to given dimensions. Check all given on site prior to commencing construction.

Scale: 1:400 @ A3	Date: 12.12.2024
Project ID: F23/723	Drawn: Checked:
Drawing No.: F23-723_LS_02	Issue
Sheet No.:	A

Appendix B – Arboricultural Development Impact Assessment Report

Birds Tree Consultancy

Consulting Arborist AQF5 • Expert Witness • Environmental Arboriculture • Resistograph Testing



ARBORICULTURAL DEVELOPMENT IMPACT ASSESSMENT REPORT

**Gardiner Park
Gardiner Park, Banksia**

25th October 2024

**Prepared for
RHDHV**

Prepared by

Birds Tree Consultancy

██████████ Grad Cert Arboriculture Uni Melb (AQF8) Dip. Hort (Arboriculture) (AQF5)

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Executive Summary

This Arboricultural Development Impact Assessment Report has been commissioned by RHDHV to report on trees within the site of Gardiner Park, Banksia. The subject trees are adjacent to an existing sandstone retaining wall which has recently collapsed. This retaining wall is proposed to be repaired including the construction of engineered concrete footings, reinforced masonry walling and sandstone facing wall. This report has been commissioned to outline the health, condition and stability of these trees as well as their viability for retention within the scope of the proposed retaining wall rectification works. The scope of this report includes all trees within the site that are potentially impacted by the development.

The subject Trees are preserved under Section 4.1.7 of Rockdale Development Control Plan 2011.

Trees 1 and 6 have evidence of decay within the trunk which places these trees at increased risk of failure. If these trees are proposed for retention, we recommend an ISA (TRAQ) Level 3 Risk Assessment be conducted including internal diagnostic testing to determine the viability of these trees to be retained.

The proposed development includes the rectification and reconstruction of the existing sandstone retaining wall including footings and engineering as shown in Dunning General arrangement Plan and Details S0003 Rev D Dated 17/10/2024. Wall reconstruction requires the construction of walling and engineered footings within the Tree Protection Zone and Structural Root Zones(SRZ). Conventional construction methods would require excavation for footings and supporting structures within the TPZ and SRZ and damage and remove structural roots, impacting the viability of Trees 1 , 2 and 3 to be retained.

The engineering and construction detail has been amended as shown in Dunning General arrangement Plan and Details S0003 Rev D Dated 17/10/2024 to raise the footing beam above the existing ground level, ensuring that existing roots will not be damaged. This footing beam is to be supported on piles as detailed. The location of the piles are to be coordinated with the Project Arborist and all excavation within the TPZ of the retained subject trees is required to be conducted by non destructive methods such as Air Spade or vacuum truck operating at less than 1000Psi under the direct supervision of the Project Arborist. No structural roots greater than 25mm are to be damaged. On this basis, trees 1, 2, and 3 will remain viable for retention.

Construction storage and management is proposed within the TPZ of Trees 4, 5, 6, 7, and 8. In order for these trees to remain viable, Tree Protection Fencing, Trunk and Branch Protection and Ground Protection is required in accordance with 8.0.

All other trees are viable to be retained and are to be protected as defined below.

Recommendations for tree retention or removal are summarised as follows:

Tree no.	Species	Recommendations	Comments
1.	<i>Lophostemon confertus</i>	Retain	Viable to be retained and protected. Recommend a TRAQ Level 3 risk assessment to

			determine the viability for retention.
2.	<i>Brachychiton acerifolius</i>	Retain	Viable to be retained and protected.
3.	<i>Ulmus parvifolia</i>	Retain	Viable to be retained and protected.
4.	<i>Fraxinus pennsylvanica</i>	Retain	Viable to be retained and protected.
5.	<i>Fraxinus pennsylvanica</i>	Retain	Viable to be retained and protected.
6.	<i>Lophostemon confertus</i>	Retain	Viable to be retained and protected.
7.	<i>Lophostemon confertus</i>	Retain	Viable to be retained and protected.
8.	<i>Ulmus parvifolia</i>	Retain	Viable to be retained and protected. Viable to be retained and protected. Recommend a TRAQ Level 3 risk assessment to determine the viability for retention.

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1.0 Scope of Works

This Arboricultural Development Impact Assessment Report has been commissioned by RHDHV to report on trees within the site of Gardiner Park, Banksia. It has been commissioned to outline the health, condition and stability of these trees as well as their viability for retention within the scope of the proposed retaining wall rectification works. The scope of this report includes all trees within the site that are potentially impacted by the development.

On the 25th September 2024, [REDACTED] of Birds Tree Consultancy attended site and inspected the subject trees from the ground. There was no aerial inspection carried out. A Visual Tree Assessment was undertaken in accordance with Visual Tree Assessment (VTA) guidelines (Mattheck and Breloer, 1994). Tree heights were measured using a Nikon Forestry 550 Heightmeter.

2.0 Site Analysis

2.1 Site

The subject site is Gardiner Park Gardiner Park, Banksia. The subject trees are adjacent to an existing sandstone retaining wall which has recently collapsed. This retaining wall is proposed to be repaired including the construction of engineered concrete footings, reinforced masonry walling and sandstone facing wall.

2.2 Documentation

This Development Impact Assessment Report has been compiled based on the following documentation provided:

1. Dunning General arrangement Plan and Details S0003 Rev D Dated 17/10/2024.

2.3 Topography

The site is relatively flat. The subject trees are immediately adjacent to a retaining wall. Refer to detailed survey for detailed levels.

2.4 Identification

Trees are as identified in the attached inspection forms in Appendix C and shown in Tree location Plan A01 in Appendix D.

2.5 Soils

Soil material and horizons were not tested for this report.

3.0 Existing Trees

The following trees were inspected from the ground and the following items identified. Please refer also to the attached inspection data in Appendix C.

3.1. Tree 1. *Lophostemon confertus*

This mature tree is approximately 15m tall with a crown spread of 13m. It has a single trunk with a DBH of 830mm. This tree is in good health, with minimal deadwood and epicormic growth. There is evidence of decay at the base of a leaning trunk. Drummy resonance is produced on sounding with acoustic mallet. We recommend a TRAQ level 3 risk assessment to determine the viability of this tree to be retained.



Figure 1 - Wound and evidence of decay at base of Tree 1

3.2. Tree 2. *Brachychiton acerifolius*

This mature tree is approximately 13m tall with a crown spread of 8m. It has a single trunk with a DBH of 530mm. This tree is in good health, with minimal deadwood and epicormic growth.



Figure 2 - Leaning trunk Tree 2

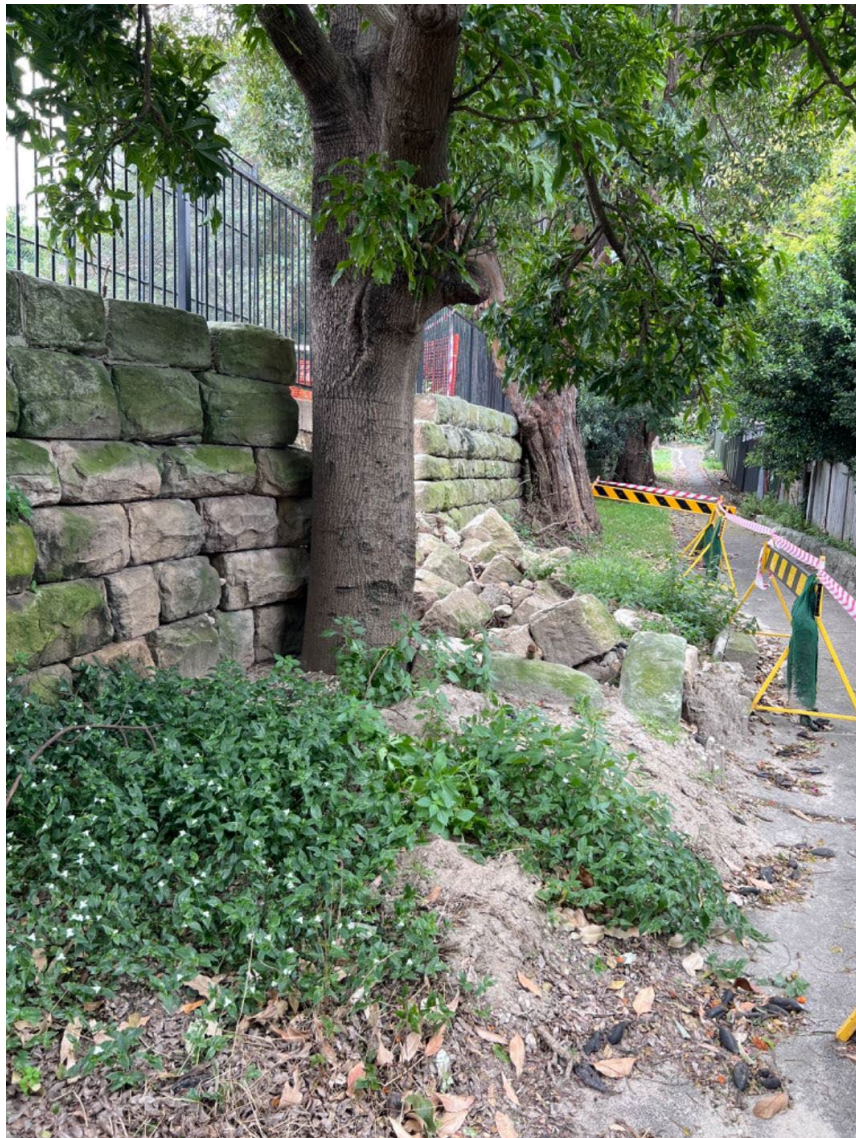


Figure 3 - Tree 2 proximity to wall

- 3.3. Tree 3. *Ulmus parvifolia***
This mature tree is approximately 10m tall with a crown spread of 15m. It has a Multiple Stems trunk with a DBH of 390.5mm. This tree is in good health, with minimal deadwood and epicormic growth. Located on adjacent neighbouring property
- 3.4. Tree 4. *Fraxinus pennsylvanica***
This mature tree is approximately 8m tall with a crown spread of 6m. It has a single trunk with a DBH of 390.5mm. This tree is in good health, with minimal deadwood and epicormic growth.
- 3.5. Tree 5. *Fraxinus pennsylvanica***
This mature tree is approximately 6m tall with a crown spread of 3m. It has a single trunk with a DBH of 130mm. This tree is in good health, with minimal deadwood and epicormic growth.
- 3.6. Tree 6. *Lophostemon confertus***

This mature tree is approximately 17m tall with a crown spread of 14m. It has a single trunk with a DBH of 850mm. This tree is in good health, with minimal deadwood and epicormic growth.

3.7. Tree 7. *Lophostemon confertus*

This mature tree is approximately 17m tall with a crown spread of 14m. It has a single trunk with a DBH of 810mm. This tree is in good health, with minimal deadwood and epicormic growth.

3.8. Tree 8. *Ulmus parvifolia*

This mature tree is approximately 8m tall with a crown spread of 12m. It has a single trunk with a DBH of 560mm. This tree is in fair health, with minimal deadwood and epicormic growth. This tree has a failed leader. There is evidence of decay throughout trunk. We recommend a TRAQ level 3 risk assessment to determine the viability of this tree to be retained.

4.0 Landscape Significance of Trees

4.1 Landscape Significance

The significance of a tree within the landscape is a factor of the health and condition of the tree, vitality, the form of the tree, environmental, cultural, amenity and heritage value.

4.2 Methodology of Determining Landscape Significance

For the purpose of this report, the Significance of a Tree, Assessment Rating System (STARS) as developed by the Institute of Australian Consulting Arborists (IACA) has been implemented. Please refer to Appendix A for greater detail of this assessment system. This system defines Landscape Significance for individual trees as High, Medium or Low Significance.

4.3 Landscape Significance of Subject Trees

Based on our assessment of the subject trees and implementation of the IACA Significance of a Tree, Assessment Rating System, the Landscape Significance of the Subject Trees was determined as shown in Table 1.

Tree no.	Species	Landscape Significance
1.	<i>Lophostemon confertus</i>	Medium
2.	<i>Brachychiton acerifolius</i>	Medium
3.	<i>Ulmus parvifolia</i>	Medium
4.	<i>Fraxinus pennsylvanica</i>	Medium
5.	<i>Fraxinus pennsylvanica</i>	Medium
6.	<i>Lophostemon confertus</i>	High
7.	<i>Lophostemon confertus</i>	High
8.	<i>Ulmus parvifolia</i>	Medium

Table 1 - Landscape Significance

5.0 Subject Tree Retention Value

5.1 Tree Retention Value Methodology

For the purpose of this report, the Tree Retention Values have been assessed by incorporating Landscape Significance Values as determined in 4.0 with the Useful Life Expectancy of the subject trees and assessing the retention values based on the Tree Retention Value Priority Matrix as developed by the Institute of Australian Consulting Arborists (IACA). Please refer to Appendix B for greater detail on this Tree Retention Value Priority Matrix. This matrix defines Landscape Significance for individual trees as High, Medium or Low Retention Value as well as Priority for Removal.

5.2 Retention Value of Subject Trees

Based on our assessment of the subject trees and implementation of the IACA Tree Retention Value Priority Matrix, the Retention Values of the Subject Trees were determined as shown in Table 2.

Tree no.	Species	Retention Value
1.	<i>Lophostemon confertus</i>	Medium
2.	<i>Brachychiton acerifolius</i>	Medium
3.	<i>Ulmus parvifolia</i>	Medium
4.	<i>Fraxinus pennsylvanica</i>	Medium
5.	<i>Fraxinus pennsylvanica</i>	Medium
6.	<i>Lophostemon confertus</i>	High
7.	<i>Lophostemon confertus</i>	High
8.	<i>Ulmus parvifolia</i>	Medium

Table 2 – Tree Retention Value

6.0 Impact of Development

6.1 Tree Protection Zone

Tree Protection Zones (TPZs) have been defined for the subject trees in order to define the encroachment of the proposed development in accordance with AS4970-2009. The TPZs required have been taken as a circular area with a radius 12 x the diameter at breast height of the tree. This requirement is in line with Australian Standard AS 4970-2009 Protection of Trees on Development Sites. This standard defines a maximum of 10% encroachment to be minimal encroachment. Any encroachment over 10% requires the site arborist to give consideration as to the viability of the tree due to the proposed development.

6.2 Structural Root Zone

Structural Root Zone (SRZs) are defined by AS4970-2009 as the area of root development required for the structural stability of the tree. The SRZ is required to be assessed only when an encroachment greater than 10% is considered.

Tree no.	Species	TPZ Radius (m)	Encroachment	SRZ Radius (m)
1.	<i>Lophostemon confertus</i>	9.96	0	3.31
2.	<i>Brachychiton acerifolius</i>	6.36	0	2.67
3.	<i>Ulmus parvifolia</i>	4.69	0	2.37
4.	<i>Fraxinus pennsylvanica</i>	3	0	1.94
5.	<i>Fraxinus pennsylvanica</i>	2	0	1.68
6.	<i>Lophostemon confertus</i>	10.2	0	3.31
7.	<i>Lophostemon confertus</i>	9.72	0	3.24
8.	<i>Ulmus parvifolia</i>	6.72	0	2.93

7.0 Recommendations

The subject Trees are preserved under Section 4.1.7 of Rockdale Development Control Plan 2011.

Trees 1 and 6 have evidence of decay within the trunk which places these trees at increased risk of failure. If these trees are proposed for retention, we recommend an ISA (TRAQ) Level 3 Risk Assessment be conducted including internal diagnostic testing to determine the viability of these trees to be retained.

The proposed development includes the rectification and reconstruction of the existing sandstone retaining wall including footings and engineering as shown in Dunning General arrangement Plan and Details S0003 Rev D Dated 17/10/2024. Wall reconstruction requires the construction of walling and engineered footings within the Tree Protection Zone and Structural Root Zones(SRZ). Conventional construction methods would require excavation for footings and supporting structures within the TPZ and SRZ and damage and remove structural roots, impacting the viability of Trees 1 , 2 and 3 to be retained.

The engineering and construction detail has been amended as shown in Dunning General arrangement Plan and Details S0003 Rev D Dated 17/10/2024 to raise the footing beam above the existing ground level, ensuring that existing roots will not be damaged. This footing beam is to be supported on piles as detailed. The location of the piles are to be coordinated with the Project Arborist and all excavation within the TPZ of the retained subject trees is required to be conducted by non destructive methods such as Air Spade or vacuum truck operating at less than 1000Psi under the direct supervision of the Project Arborist. No structural roots greater than 25mm are to be damaged. On this basis, trees 1, 2, and 3 will remain viable for retention.

Construction storage and management is proposed within the TPZ of Trees 4, 5, 6, 7, and 8. In order for these trees to remain viable, Tree Protection Fencing, Trunk and Branch Protection and Ground Protection is required in accordance with 8.0.

All other trees are viable to be retained and are to be protected as defined below.

Recommendations for tree retention or removal are summarised as follows:

Tree no.	Species	Recommendations	Comments
1.	<i>Lophostemon confertus</i>	Retain	Viable to be retained and protected. Recommend a TRAQ Level 3 risk assessment to determine the viability for retention.
2.	<i>Brachychiton acerifolius</i>	Retain	Viable to be retained and protected.
3.	<i>Ulmus parvifolia</i>	Retain	Viable to be retained and protected.
4.	<i>Fraxinus pennsylvanica</i>	Retain	Viable to be retained and protected.
5.	<i>Fraxinus pennsylvanica</i>	Retain	Viable to be retained and protected.
6.	<i>Lophostemon confertus</i>	Retain	Viable to be retained and protected.
7.	<i>Lophostemon confertus</i>	Retain	Viable to be retained and protected.
8.	<i>Ulmus parvifolia</i>	Retain	Viable to be retained and protected. Recommend a TRAQ Level 3 risk assessment to determine the viability for retention.

8.0 Pre-Construction Tree Protection Measures

8.1 General

All tree protection works shall be carried out before excavation, grading and site works commence. Tree protection works shall be inspected and approved by a Consulting Arborist meeting AQF Level 5 prior to construction works commencing.

Storage of materials, mixing of materials, vehicle parking, disposal of liquids, machinery repairs and refueling, site office and sheds, and the lighting of fires, stockpiling of soil, rubble or any debris shall not be carried out within the TPZ of existing trees. No backfilling shall occur within the TPZ of existing trees. Trees shall not be removed or lopped unless specific instruction is given in writing by the Superintendent.

8.2 Identification

All trees to be protected shall be clearly identified and all TPZs surveyed.

8.3 Site Arborist

Prior to all site works commencing, a Site Arborist is to be appointed with the responsibility of implementing all Tree Protection Measures in this report as well as compliance with AS4970-2009 Protection of Trees on Development Sites. The Site Arborist is to hold qualifications equivalent of AQF Level 5.

8.4 Protective Fence

Fencing is to be erected around existing trees to be retained. In addition to this protective fencing within the site, Protective Fencing is to be installed to the full extent of the TPZs within the site. This fencing is to be erected prior to any materials being brought on site or before any site, civil works or construction works commence. The fence shall enclose a sufficient area so as to prevent damage to the TPZ as defined in 5.1 above. Fence to comprise 1800mm high chain wire mesh fixed to 50mm diameter Galvanised steel posts. Panels should be securely fixed top and bottom to avoid separation. No storage of building materials, tools, paint, fuel or contaminants and the like shall occur within the fenced area. Where the TPZ is encroached by proposed construction works and construction areas, ground protection is required in accordance with AS4970-2009.

8.5 Mulching

Install mulch to the extent of all tree protection fencing within the construction boundary on non-hardstand ground where excavation for the footings is not required. Use a leaf mulch conforming to AS 4454 which is free of deleterious and extraneous matter such as soil, weeds, sticks and stones and consisting of a minimum of 90% recycled content compliant with AS 4454 (1999) and AS 4419 (1998). All trees marked as to be removed on the proposed development are to be chipped and reused for this purpose. Place mulch evenly and to a depth of 100mm.

8.6 Signage

Prior to works commencing, tree protection signage is to be attached to each tree protection zone, displayed in a prominent position and the sign repeated at 10 metres intervals or closer where the fence changes direction. Each sign shall contain in a clearly legible form, the following information:

Tree protection zone.

- This fence has been installed to prevent damage to the trees and their growing environment both above and below ground and access is restricted.
- No Access within Tree Protection Zone
- The name, address, and telephone number of the developer.

The name and telephone number of the Site Arborist.

8.7 Trunk and Branch Protection

Where a tree is to be retained and a Tree Protection Zone cannot be adequately established due to restricted access, the trunk and branches in the lower crown will be protected by wrapping 2 layers of hessian or carpet underfelt around the trunk and branches for a minimum of 2 m or as lower branches permit, then metal strapping secures 38x50 x2000 mm timber battens together around the trunk (do not nail or screw to the trunk or branches). The number of battens to be used is as required to encircle the trunk and the battens are to extend to the base of the tree (AS4970 2009 Protection of trees on development sites, Figure 3 Examples of Trunk, Branch and ground protection). Where the trunk of the tree is in close proximity to the proposed stone wall, the trunk is to be wrapped and protected to the satisfaction of the Project Arborist

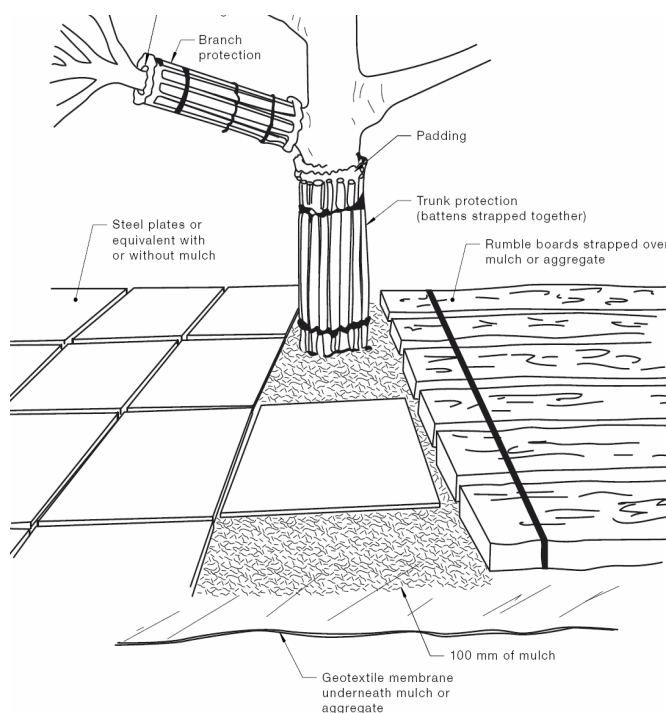


Figure 4 - Trunk Protection

9.0 Site Management Issues

9.1 Soil Compaction

Plant and pedestrian traffic during the construction period will cause significant soil compaction. This will be exacerbated by increased water expected on these soils as result of adjacent construction and weather. Compaction of the soil within the TPZ will reduce the voids between soil peds or particles therefore will reduce the gaseous exchange capacity of the root system which will slow critical metabolic processes. No pedestrian or plant access is permissible to the TPZ other than to areas of ground protection.

9.2 Site Access

Sufficient access is required to enable efficient construction. It is essential to delineate access zones or corridors which will provide suitable access without damaging the existing trees to be retained or causing compaction to the root zone.

9.3 Excavation within Tree Protection Area

No excavation is to be carried out within the TPZs of retained trees without the permission and supervision of the Site Arborist (AQF5)

9.4 Possible Contamination / Storage of Materials

The construction site will require the use of many chemicals and materials that are possible contaminants which if not managed will pose a risk to the existing trees. These possible contaminants include fuels, herbicides, solvents and the like. A site-specific Environmental Management Plan shall be provided, and this specific risk identified and addressed.

10.0 Tree Protection Measures During Construction

10.1 Maintenance of Pre-Construction Tree Protection Measures

The Pre-Construction Tree Protection Measures identified in 5.0 above are to be maintained in good and serviceable condition throughout the construction period.

10.2 Possible Contaminants

Do not store or otherwise place bulk materials and harmful materials under or near trees. Do not place spoil from excavations within the TPZs. Prevent wind-blown materials such as cement from harming trees. All possible contaminants are to be stored in a designated and appropriate area with secure chemical spill measures such as a bund in place.

10.3 Physical Damage

Prevent damage to tree. Do not attach stays, guys and the like to trees. No personnel, plant, machinery or materials are to be allowed within the tree protection fencing.

10.4 Compaction

No filling or compaction shall occur over tree roots zones within tree protection fenced areas. Where construction occurs close to or the TPZ of trees to be retained it shall be necessary to install protection to avoid compaction of the ground surface. This protection is to be planks supported clear of the ground fixed to scaffolding.

10.5 Trenching

No Trenching should be necessary within the TPZs or within tree protection fencing. No further trenching is to be carried out without the approval of the Site Arborist. Should any further trenching be required within the TPZs identified, this work is to be carried out by hand and under the supervision of a qualified Arborist.

10.6 Irrigation/Watering

Contractor is to ensure that soil moisture levels are adequately maintained. Apply water at an appropriate rate suitable for the species during periods of little or no rainfall.

10.7 Site Sheds / Amenities/ Storage

Site sheds, site amenities, ablutions and site storage shall be in the area clear of all TPZ. Chemicals and potential contaminants are to be stored appropriately and this

storage area is to be enclosed by a chemical spill bund to prevent the potential run off of contaminants in the event of a spillage or accident.

11.0 References

Mattheck, C. Breloer, K. 1993, The Body Language of Trees: A Handbook for Failure Analysis, 12th Impression 2010 The Stationery Office.
AS4970-2009 Protection of Trees on Development Sites: Standards Australia

12.0 Disclaimer

This Appraisal has been prepared for the exclusive use of the Client and Birds Tree Consultancy.

Birds Tree Consultancy accepts no responsibility for its use by other persons. The Client acknowledges that this Appraisal, and any opinions, advice or recommendations expressed or given in it, are based on the information supplied by the Client and on the data inspections, measurements and analysis carried out or obtained Birds Tree Consultancy and referred to in the Appraisal. The Client should rely on the Appraisal, and on its contents, only to that extent.

Every effort has been made in this report to include, assess and address all defects, structural weaknesses, instabilities and the like of the subject trees. All inspections were made from ground level using only visual means and no intrusive or destructive means of inspection were used. For many structural defects such as decay and inclusions, internal inspection is required by means of Resistograph or similar. No such investigation has been made in this case. Trees are living organisms and are subject to failure through a variety of causes not able to be identified by means of this inspection and report.

IACA Significance of a Tree, Assessment Rating System (STARS) © (IACA 2010) ©

In the development of this document IACA acknowledges the contribution and original concept of the Footprint Green Tree Significance & Retention Value Matrix, developed by Footprint Green Pty Ltd in June 2001.

The landscape significance of a tree is an essential criterion to establish the importance that a particular tree may have on a site. However, rating the significance of a tree becomes subjective and difficult to ascertain in a consistent and repetitive fashion due to assessor bias. It is therefore necessary to have a rating system utilising structured qualitative criteria to assist in determining the retention value for a tree. To assist this process all definitions for terms used in the *Tree Significance - Assessment Criteria* and *Tree Retention Value - Priority Matrix*, are taken from the IACA Dictionary for Managing Trees in Urban Environments 2009.

This rating system will assist in the planning processes for proposed works, above and below ground where trees are to be retained on or adjacent a development site. The system uses a scale of *High*, *Medium* and *Low* significance in the landscape. Once the landscape significance of an individual tree has been defined, the retention value can be determined.

Tree Significance - Assessment Criteria



1. High Significance in landscape

- The tree is in good condition and good vigour;
- The tree has a form typical for the species;
- The tree is a remnant or is a planted locally indigenous specimen and/or is rare or uncommon in the local area or of botanical interest or of substantial age;
- The tree is listed as a Heritage Item, Threatened Species or part of an Endangered ecological community or listed on Councils significant Tree Register;
- The tree is visually prominent and visible from a considerable distance when viewed from most directions within the landscape due to its size and scale and makes a positive contribution to the local amenity;
- The tree supports social and cultural sentiments or spiritual associations, reflected by the broader population or community group or has commemorative values;
- The tree's growth is unrestricted by above and below ground influences, supporting its ability to reach dimensions typical for the taxa *in situ* - tree is appropriate to the site conditions.

2. Medium Significance in landscape

- The tree is in fair-good condition and good or low vigour;
- The tree has form typical or atypical of the species;
- The tree is a planted locally indigenous or a common species with its taxa commonly planted in the local area
- The tree is visible from surrounding properties, although not visually prominent as partially obstructed by other vegetation or buildings when viewed from the street,
- The tree provides a fair contribution to the visual character and amenity of the local area,
- The tree's growth is moderately restricted by above or below ground influences, reducing its ability to reach dimensions typical for the taxa *in situ*.

3. Low Significance in landscape

- The tree is in fair-poor condition and good or low vigour;
- The tree has form atypical of the species;
- The tree is not visible or is partly visible from surrounding properties as obstructed by other vegetation or buildings,
- The tree provides a minor contribution or has a negative impact on the visual character and amenity of the local area,
- The tree is a young specimen which may or may not have reached dimension to be protected by local Tree Preservation orders or similar protection mechanisms and can easily be replaced with a suitable specimen,
- The tree's growth is severely restricted by above or below ground influences, unlikely to reach dimensions typical for the taxa *in situ* - tree is inappropriate to the site conditions,
- The tree is listed as exempt under the provisions of the local Council Tree Preservation Order or similar protection mechanisms,
- The tree has a wound or defect that has potential to become structurally unsound.


Environmental Pest / Noxious Weed Species

- The tree is an Environmental Pest Species due to its invasiveness or poisonous/ allergenic properties,
 - The tree is a declared noxious weed by legislation.
- Hazardous/irreversible Decline**
- The tree is structurally unsound and/or unstable and is considered potentially dangerous,
 - The tree is dead, or is in irreversible decline, or has the potential to fail or collapse in full or part in the immediate to short term.

The tree is to have a minimum of three (3) criteria in a category to be classified in that group.

Note: The assessment criteria are for individual trees only, however, can be applied to a monocultural stand in its entirety e.g. hedge.

Appendix B Tree Retention Values

		Significance				
		1. High	2. Medium	3. Low		
		Significance in Landscape	Significance in Landscape	Significance in Landscape	Environmental Pest / Noxious Weed Species	Hazardous / Irreversible Decline
Estimated Life Expectancy	1. Long >40 years					
	2. Medium 15-40 Years					
	3. Short <1-15 Years					
	Dead					
<p><u>Legend for Matrix Assessment</u></p> 						
	<p>Priority for Retention (High) - These trees are considered important for retention and should be retained and protected. Design modification or re-location of building/s should be considered to accommodate the setbacks as prescribed by the Australian Standard AS4970 <i>Protection of trees on development sites</i>. Tree sensitive construction measures must be implemented e.g. pier and beam etc if works are to proceed within the Tree Protection Zone.</p>					
	<p>Consider for Retention (Medium) - These trees may be retained and protected. These are considered less critical; however their retention should remain priority with removal considered only if adversely affecting the proposed building/works and all other alternatives have been considered and exhausted.</p>					
	<p>Consider for Removal (Low) - These trees are not considered important for retention, nor require special works or design modification to be implemented for their retention.</p>					
	<p>Priority for Removal - These trees are considered hazardous, or in irreversible decline, or weeds and should be removed irrespective of development.</p>					

REFERENCES

Australia ICOMOS Inc. 1999, *The Burra Charter – The Australian ICOMOS Charter for Places of Cultural Significance*, International Council of Monuments and Sites, www.icomos.org/australia

Draper BD and Richards PA 2009, *Dictionary for Managing Trees in Urban Environments*, Institute of Australian Consulting Arboriculturists (IACA), CSIRO Publishing, Collingwood, Victoria, Australia.

Footprint Green Pty Ltd 2001, *Footprint Green Tree Significance & Retention Value Matrix*, Avalon, NSW Australia, www.footprintgreen.com.au

Appendix C - Tree Inspection Data

Birds Tree Consultancy

Consulting Arborist • Project Management • Horticultural Consultancy • Landscape Management

Client RHDHV
Inspection Data

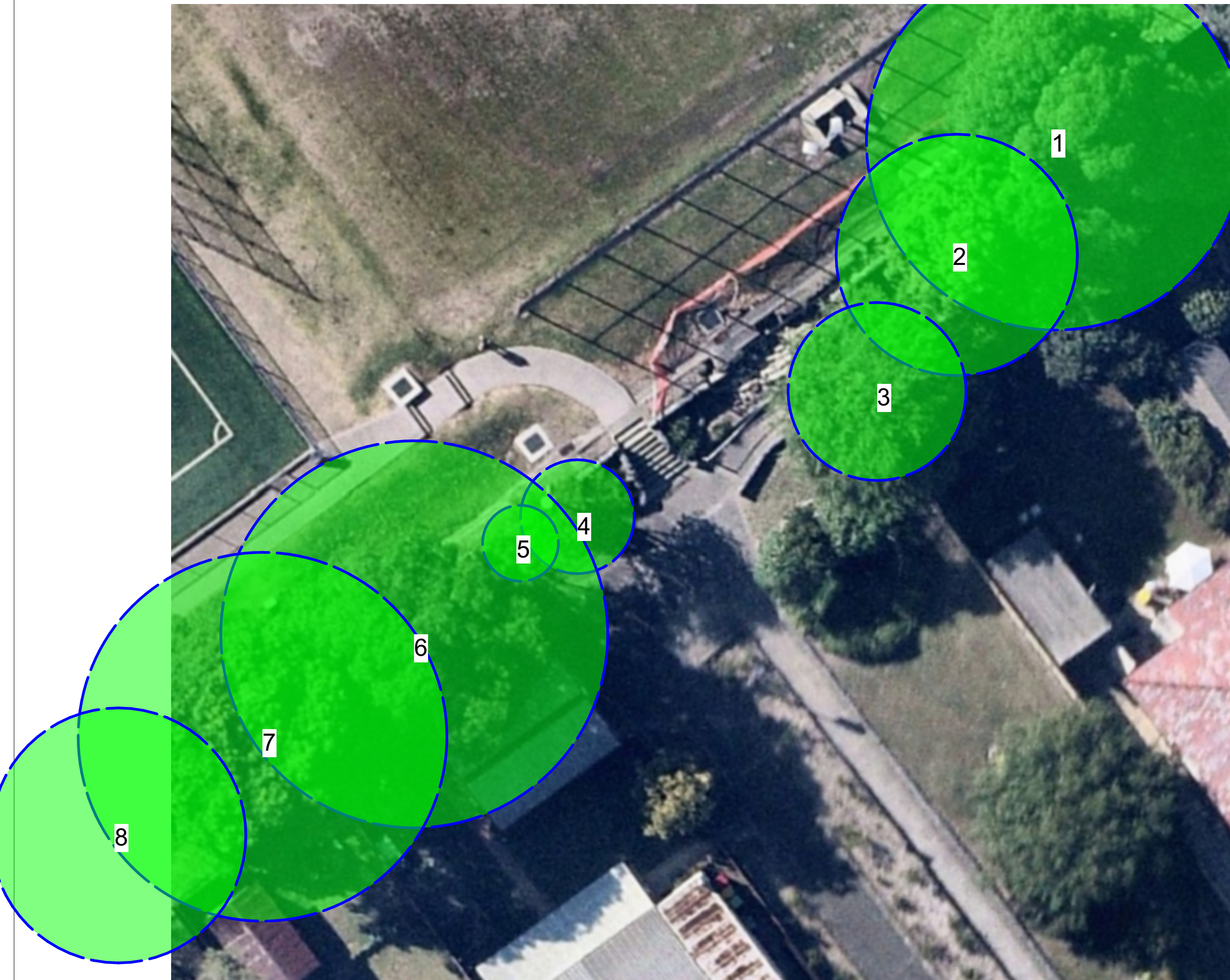
25th September 2024





Project name Gardiner Park

Address Gardiner Park,
Banksia

Tree no.	Species	Common Name	Height	Spread(m)	Trunk (single, twin, multiple @)	DBH (mm)	TPZ Radius (m)	Diameter at Root Flare (DRF) (mm)	SRZ radius (m)	Trunk lean	Tree Age	Overall Health & Vigour	Crown Distribution	Structure	Pruning History	Defects	Pest Infestation	Canopy Density	Deadwood	Epicormic Growth	Life expectancy	Env. & Landscape significance	Retention Value	Notes
1	Lophostemon confertus	Brushbox	15	13	1	830	9.96	1000	3.31	Slight NW	Mature	Good (70-79)	Symmetrical	Good	No Evidence	Decay Evidence	No Evidence	Normal	<5%	<5%	21-40 years	Medium	Medium	Evidence of decay at base of leaning trunk. Crummy resonance on sounding with acoustic mallet. Recommend TRAQ level 3 risk assessment
2	Brachychiton acerifolius	Illawarra Flame Tree	13	8	1	530	6.36	600	2.67	Nil	Mature	Good (70-79)	Symmetrical	Good	No Evidence	No Evidence	No Evidence	Normal	<5%	<5%	21-40 years	Medium	Medium	
3	Ulmus parvifolia	Chinese Elm	10	15	Multiple Stems	390.5	4.69	450	2.37	Nil	Mature	Good (70-79)	Symmetrical	Good	No Evidence	No Evidence	No Evidence	Normal	<5%	<5%	21-40 years	Medium	Medium	Located on adjacent neighbouring property
4	Fraxinus pennsylvanica	Green Ash, Red Ash	8	6	1	250	3	280	1.94	Nil	Mature	Good (70-79)	Symmetrical	Good	No Evidence	No Evidence	No Evidence	Normal	<5%	<5%	21-40 years	Medium	Medium	
5	Fraxinus pennsylvanica	Green Ash, Red Ash	6	3	1	130	2	200	1.68	Nil	Mature	Good (70-79)	Symmetrical	Good	No Evidence	No Evidence	No Evidence	Normal	<5%	<5%	21-40 years	Medium	Medium	
6	Lophostemon confertus	Brushbox	17	14	1	850	10.2	1000	3.31	Slight NW	Mature	Good (70-79)	Symmetrical	Good	No Evidence	No Evidence	No Evidence	Normal	<5%	<5%	21-40 years	High	High	
7	Lophostemon confertus	Brushbox	17	14	1	810	9.72	950	3.24	Nil	Mature	Good (70-79)	Symmetrical	Good	No Evidence	No Evidence	No Evidence	Normal	<5%	<5%	21-40 years	High	High	
8	Ulmus parvifolia	Chinese Elm	8	12	1	560	6.72	750	2.93	Nil	Mature	Fair (60-69)	Symmetrical	Poor	No Evidence	No Evidence	No Evidence	Normal	<5%	<5%	21-40 years	Medium	Medium	Failed leader. Evidence of decay throughout trunk. Recommend TRAQ level 3 risk assessment

Appendix D - Tree Location Plan



- Legend**
-  Tree to be Retained and Protected
 -  Tree to be Removed
 -  Tree Not Viable to be Retained due to Proposed Development
 -  Tree Protection Zone (TPZ) in accordance with AS4970-2009

Birds Tree Consultancy

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www.birdstrees.com.au

Project: Gardnier Park Banksia
Client: RHDHV
DWG: A01
Plan: Tree Location Plan
Date: 25 Oct 2024 Scale : 1:200 @ A3

Appendix C – PMST Species Search Report



Australian Government

Department of Climate Change, Energy,
the Environment and Water

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 01-Oct-2024

[Summary](#)

[Details](#)

[Matters of NES](#)

[Other Matters Protected by the EPBC Act](#)

[Extra Information](#)

[Caveat](#)

[Acknowledgements](#)

Summary

Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the [Administrative Guidelines on Significance](#).

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance (Ramsar)	1
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	6
Listed Threatened Species:	51
Listed Migratory Species:	14

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at <https://www.dcceew.gov.au/parks-heritage/heritage>

A [permit](#) may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Lands:	1
Commonwealth Heritage Places:	None
Listed Marine Species:	26
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None
Habitat Critical to the Survival of Marine Turtles:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have

State and Territory Reserves:	None
Regional Forest Agreements:	None
Nationally Important Wetlands:	None
EPBC Act Referrals:	6
Key Ecological Features (Marine):	None
Biologically Important Areas:	None
Bioregional Assessments:	1
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

Wetlands of International Importance (Ramsar Wetlands)

[[Resource Information](#)]

Ramsar Site Name

[Towra point nature reserve](#)

Proximity

Within 10km of
Ramsar site

Listed Threatened Ecological Communities

[[Resource Information](#)]

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Status of Vulnerable, Disallowed and Ineligible are not MNES under the EPBC Act.

Community Name

[Coastal Swamp Oak \(Casuarina glauca\) Forest of New South Wales and South East Queensland ecological community](#)

Threatened Category

Endangered

Presence Text

Community may occur
within area

[Coastal Swamp Sclerophyll Forest of New South Wales and South East Queensland](#)

Endangered

Community may occur
within area

[Coastal Upland Swamps in the Sydney Basin Bioregion](#)

Endangered

Community may occur
within area

[Eastern Suburbs Banksia Scrub of the Sydney Region](#)

Critically Endangered

Community may occur
within area

[River-flat eucalypt forest on coastal floodplains of southern New South Wales and eastern Victoria](#)

Critically Endangered

Community likely to
occur within area

[Western Sydney Dry Rainforest and Moist Woodland on Shale](#)

Critically Endangered

Community may occur
within area

Listed Threatened Species

[[Resource Information](#)]

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.

Number is the current name ID.

Scientific Name

BIRD

[Anthochaera phrygia](#)

Regent Honeyeater [82338]

Threatened Category

Critically Endangered

Presence Text

Species or species
habitat known to
occur within area

Scientific Name	Threatened Category	Presence Text
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat known to occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Callocephalon fimbriatum Gang-gang Cockatoo [768]	Endangered	Species or species habitat likely to occur within area
Calyptorhynchus lathami lathami South-eastern Glossy Black-Cockatoo [67036]	Vulnerable	Species or species habitat likely to occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area
Climacteris picumnus victoriae Brown Treecreeper (south-eastern) [67062]	Vulnerable	Species or species habitat likely to occur within area
Dasyornis brachypterus Eastern Bristlebird [533]	Endangered	Species or species habitat may occur within area
Erythrotriorchis radiatus Red Goshawk [942]	Endangered	Species or species habitat may occur within area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat likely to occur within area
Grantiella picta Painted Honeyeater [470]	Vulnerable	Species or species habitat likely to occur within area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area
Melanodryas cucullata cucullata South-eastern Hooded Robin, Hooded Robin (south-eastern) [67093]	Endangered	Species or species habitat likely to occur within area
Neophema chrysogaster Orange-bellied Parrot [747]	Critically Endangered	Species or species habitat may occur within area
Neophema chrysostoma Blue-winged Parrot [726]	Vulnerable	Species or species habitat may occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Pycnoptilus floccosus Pilotbird [525]	Vulnerable	Species or species habitat may occur within area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area
Stagonopleura guttata Diamond Firetail [59398]	Vulnerable	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Sternula nereis nereis Australian Fairy Tern [82950]	Vulnerable	Species or species habitat may occur within area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area
FISH		
Macquaria australasica Macquarie Perch [66632]	Endangered	Species or species habitat may occur within area
FROG		
Heleioporus australiacus Giant Burrowing Frog [1973]	Vulnerable	Species or species habitat may occur within area
Litoria aurea Green and Golden Bell Frog [1870]	Vulnerable	Species or species habitat likely to occur within area
MAMMAL		
Chalinolobus dwyeri Large-eared Pied Bat, Large Pied Bat [183]	Endangered	Species or species habitat likely to occur within area
Dasyurus maculatus maculatus (SE mainland population) Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184]	Endangered	Species or species habitat likely to occur within area
Isoodon obesulus obesulus Southern Brown Bandicoot (eastern), Southern Brown Bandicoot (south-eastern) [68050]	Endangered	Species or species habitat may occur within area
Notamacropus parma Parma Wallaby [89289]	Vulnerable	Species or species habitat may occur within area
Petauroides volans Greater Glider (southern and central) [254]	Endangered	Species or species habitat likely to occur within area
Petaurus australis australis Yellow-bellied Glider (south-eastern) [87600]	Vulnerable	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
<u>Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)</u>		
Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Endangered	Species or species habitat known to occur within area
<u>Pseudomys novaehollandiae</u>		
New Holland Mouse, Pookila [96]	Vulnerable	Species or species habitat likely to occur within area
<u>Pteropus poliocephalus</u>		
Grey-headed Flying-fox [186]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
PLANT		
<u>Acacia pubescens</u>		
Downy Wattle, Hairy Stemmed Wattle [18800]	Vulnerable	Species or species habitat known to occur within area
<u>Acacia terminalis subsp. Eastern Sydney (G.P.Phillips 126) listed as Acacia terminalis subsp. terminalis MS</u>		
Sunshine Wattle (Sydney region) [91564]	Endangered	Species or species habitat may occur within area
<u>Caladenia tessellata</u>		
Thick-lipped Spider-orchid, Daddy Long-legs [2119]	Vulnerable	Species or species habitat likely to occur within area
<u>Cryptostylis hunteriana</u>		
Leafless Tongue-orchid [19533]	Vulnerable	Species or species habitat likely to occur within area
<u>Eucalyptus camfieldii</u>		
Camfield's Stringybark [15460]	Vulnerable	Species or species habitat likely to occur within area
<u>Genoplesium baueri</u>		
Yellow Gnat-orchid, Bauer's Midge Orchid, Brittle Midge Orchid [7528]	Endangered	Species or species habitat likely to occur within area
<u>Leucopogon exolasius</u>		
Woronora Beard-heath [14251]	Vulnerable	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Melaleuca deanei Deane's Melaleuca [5818]	Vulnerable	Species or species habitat may occur within area
Persicaria elatior Knotweed, Tall Knotweed [5831]	Vulnerable	Species or species habitat likely to occur within area
Rhodamnia rubescens Scrub Turpentine, Brown Malletwood [15763]	Critically Endangered	Species or species habitat likely to occur within area
Rhodomyrtus psidioides Native Guava [19162]	Critically Endangered	Species or species habitat may occur within area
Syzygium paniculatum Magenta Lilly Pilly, Magenta Cherry, Daguba, Scrub Cherry, Creek Lilly Pilly, Brush Cherry [20307]	Vulnerable	Species or species habitat likely to occur within area
Thesium australe Austral Toadflax, Toadflax [15202]	Vulnerable	Species or species habitat may occur within area

REPTILE

Hoplocephalus bungaroides Broad-headed Snake [1182]	Endangered	Species or species habitat may occur within area
--	------------	--

Listed Migratory Species [Resource Information]

Scientific Name	Threatened Category	Presence Text
Migratory Marine Birds		
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area

Migratory Terrestrial Species

Cuculus optatus Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat may occur within area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area

Scientific Name	Threatened Category	Presence Text
Motacilla flava Yellow Wagtail [644]		Species or species habitat likely to occur within area
Migratory Wetlands Species		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat likely to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Pandion haliaetus Osprey [952]		Species or species habitat likely to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area

Other Matters Protected by the EPBC Act

Commonwealth Lands

[\[Resource Information \]](#)

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

Commonwealth Land Name

State

Communications, Information Technology and the Arts - Telstra Corporation Limited

Commonwealth Land - Australian Telecommunications Commission [14381]NSW

Listed Marine Species

[\[Resource Information \]](#)

Scientific Name

Threatened Category

Presence Text

Bird

[Actitis hypoleucos](#)

Common Sandpiper [59309]

Species or species habitat may occur within area

[Apus pacificus](#)

Fork-tailed Swift [678]

Species or species habitat likely to occur within area overfly marine area

[Bubulcus ibis as Ardea ibis](#)

Cattle Egret [66521]

Species or species habitat may occur within area overfly marine area

[Calidris acuminata](#)

Sharp-tailed Sandpiper [874]

Vulnerable

Species or species habitat may occur within area

[Calidris canutus](#)

Red Knot, Knot [855]

Vulnerable

Species or species habitat may occur within area overfly marine area

[Calidris ferruginea](#)

Curlew Sandpiper [856]

Critically Endangered

Species or species habitat may occur within area overfly marine area

[Calidris melanotos](#)

Pectoral Sandpiper [858]

Species or species habitat may occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat likely to occur within area overfly marine area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area overfly marine area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area overfly marine area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area overfly marine area
Motacilla flava Yellow Wagtail [644]		Species or species habitat likely to occur within area overfly marine area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area overfly marine area
Neophema chrysogaster Orange-bellied Parrot [747]	Critically Endangered	Species or species habitat may occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Neophema chrysostoma Blue-winged Parrot [726]	Vulnerable	Species or species habitat may occur within area overfly marine area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Pandion haliaetus Osprey [952]		Species or species habitat likely to occur within area
Pterodroma cervicalis White-necked Petrel [59642]		Species or species habitat may occur within area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat likely to occur within area overfly marine area
Rostratula australis as Rostratula benghalensis (sensu lato) Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area overfly marine area
Sterna striata White-fronted Tern [799]		Migration route may occur within area
Symposiachrus trivirgatus as Monarcha trivirgatus Spectacled Monarch [83946]		Species or species habitat may occur within area overfly marine area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area overfly marine area

Extra Information

EPBC Act Referrals [[Resource Information](#)]

Title of referral	Reference	Referral Outcome	Assessment Status
Controlled action			
Sand Reclamation to Towra Beach	2003/1085	Controlled Action	Post-Approval
Not controlled action			
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed
INDIGO Central Submarine Telecommunications Cable	2017/8127	Not Controlled Action	Completed
Shipment of Spent Nuclear Fuel to USA	2007/3672	Not Controlled Action	Completed
Sydney Desalination Plant	2005/2331	Not Controlled Action	Completed
Not controlled action (particular manner)			
INDIGO Marine Cable Route Survey (INDIGO)	2017/7996	Not Controlled Action (Particular Manner)	Post-Approval

Bioregional Assessments [[Resource Information](#)]

SubRegion	BioRegion	Website
Sydney	Sydney Basin	BA website

Caveat

1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data are available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance

3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions

4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

- [-Office of Environment and Heritage, New South Wales](#)
- [-Department of Environment and Primary Industries, Victoria](#)
- [-Department of Primary Industries, Parks, Water and Environment, Tasmania](#)
- [-Department of Environment, Water and Natural Resources, South Australia](#)
- [-Department of Land and Resource Management, Northern Territory](#)
- [-Department of Environmental and Heritage Protection, Queensland](#)
- [-Department of Parks and Wildlife, Western Australia](#)
- [-Environment and Planning Directorate, ACT](#)
- [-Birdlife Australia](#)
- [-Australian Bird and Bat Banding Scheme](#)
- [-Australian National Wildlife Collection](#)
- Natural history museums of Australia
- [-Museum Victoria](#)
- [-Australian Museum](#)
- [-South Australian Museum](#)
- [-Queensland Museum](#)
- [-Online Zoological Collections of Australian Museums](#)
- [-Queensland Herbarium](#)
- [-National Herbarium of NSW](#)
- [-Royal Botanic Gardens and National Herbarium of Victoria](#)
- [-Tasmanian Herbarium](#)
- [-State Herbarium of South Australia](#)
- [-Northern Territory Herbarium](#)
- [-Western Australian Herbarium](#)
- [-Australian National Herbarium, Canberra](#)
- [-University of New England](#)
- [-Ocean Biogeographic Information System](#)
- [-Australian Government, Department of Defence](#)
- [Forestry Corporation, NSW](#)
- [-Geoscience Australia](#)
- [-CSIRO](#)
- [-Australian Tropical Herbarium, Cairns](#)
- [-eBird Australia](#)
- [-Australian Government – Australian Antarctic Data Centre](#)
- [-Museum and Art Gallery of the Northern Territory](#)
- [-Australian Government National Environmental Science Program](#)
- [-Australian Institute of Marine Science](#)
- [-Reef Life Survey Australia](#)
- [-American Museum of Natural History](#)
- [-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania](#)
- [-Tasmanian Museum and Art Gallery, Hobart, Tasmania](#)
- Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the [Contact us](#) page.

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Department of Climate Change, Energy, the Environment and Water

GPO Box 3090

Canberra ACT 2601 Australia

+61 2 6274 1111

Appendix D – Heritage Impact Statement

16 May 2024

Bayside Council
444-446 Princes Highway
ROCKDALE NSW 2216

To Whom It May Concern:

Heritage Impact Statement: Gardiner Park, 15A Wollie Creek Road Banksia, NSW 2216

This **Heritage Impact Statement** has been undertaken to assess the heritage impact of repair works required to rebuild a section of collapsed Depression-era sandstone retaining wall at Gardiner Park, Banksia; heritage item 179 in the *Rockdale Local Environmental Plan (RLEP) 2011*.

METHODOLOGY

I have inspected the park on multiple occasions in the past five years and am familiar with the section of wall that has collapsed. I have examined the documentation provided by Council, including the proposed engineering plans to establish the scope of the works proposed. I have reviewed the conservation policies set out in Britton & Jackson's 2013 (updated 2015) Conservation Management Plan for the site and have considered and assessed the impact of the proposal items against them.

Given the limited and defined scope of the proposal and its being a repair/reconstruction, this document focuses on the impact assessment of the proposal and the resulting conclusions and recommendations. The CMP contains a comprehensive historical background for the site, which does not warrant replication here.

The methodology employed in this study conforms to the principles and guidelines of *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance 1999*. The assessment presented is in accordance with the criteria and guidelines prepared by Heritage NSW for the preparation of Heritage Impact Statements.



Figure 1 | Plan marked up with the location of the collapsed section of Depression-era stone retaining wall on the SE side of the sporting field, near Gardiner Avenue. [Bayside Council]



Figure 2 | Aerial of Gardiner Park indicating up with the approximate location of the collapsed wall for repair. [SIX Maps]



Figure 12 | Looking N at the blocks that have collapsed between the trees. Arborist to consult on the tree roots and tree protection.

THE PROPOSAL

The works proposed are to repair a section of stone retaining wall that collapsed following a prolonged period of heavy rain. New concrete footings and an additional (concealed) retaining wall will be added for structural support. The stone wall will be restored using the existing blocks. Works will include:

- Careful removal and secure storage of the fallen stone blocks;
- Remove and store aluminium fence from high side of wall and store;
- Demolition of the pine log raised garden bed;
- Secure adjoining stone wall;
- Arborist to advise on tree root mapping to ensure footings have no impact on the 2 trees;
- Excavations/earthworks to clear the space ready for construction of footings;
- Construction of 4 concrete footings for the wall: where no trees, on low (Gardiner Avenue) side of the wall, where 2 trees, on the high (sports field) side of the wall;
- under supervision of structural engineers Construction of a concrete blockwork retaining wall behind the existing line of the stone wall; core fill the blocks with concrete;
- Application of waterproof membrane to blockwork wall;
- Install ag pipe, free draining material and backfill behind blockwork wall. Compact and make good surface to match surrounding;
- Re-build stone wall using the salvaged stone. Tie in to the blockwork wall in the mortar joints for added bracing;
- Conceal concrete footings with soil/mulch;
- Make good works to the surround area;
- Re-install aluminium fence to high side of retained ground.

See appended plans for details.

ASSESSMENT OF HERITAGE IMPACT

The works have been considered in the light of the conservation policies contained in the CMP for the site and the heritage impact of the proposal on the significant fabric and setting of the Park has been evaluated. The relevant policies are as follows

Conservation Policy	Compliance comments
<p>Policy 44 Ensure the conservation of the layout and fabric of Gardiner Park in order to maintain the cultural significance and intrinsic landscape character of the park</p>	<p>Compliant The works seek to conserve the layout and fabric of the park by repairing the collapsed section of retaining wall</p>
<p>Policy 58 Ensure all new services, infrastructure and facilities proposed within and adjoining Gardiner Park are planned and designed on the basis of this CMP taking into account the cultural significance of the park and the need to ensure that significance is not compromised. For any new buildings within the park, ensure they are also planned and designed to make a positive contribution to the character of the park while respecting that the site is highly valued by its local community</p>	<p>Compliant The works propose to construct an additional blockwork retaining wall behind the stone wall, which will take the load of the retained earth. There will be additional drainage works installed behind that new wall to drain groundwater away from the wall</p> <p>A new concrete footing will be laid under both the new blockwork wall and the re-laid stone wall. The stone wall will be tied in to the blockwork wall for additional structural support. The ties will be concealed by the mortar</p> <p>The blockwork wall will not be visible and will have the stone wall re-laid in front of it to maintain the high significance of this element of the park</p> <p>The works have been planned to consider the health of the medium-high significance trees in the immediate vicinity of the works, the siting of the concrete footings has been adjusted accordingly to accommodate for the presence of the trees and the works will be supervised by an arborist</p>
<p>Policy 60 In the event of archaeological material being found during any future construction work at the park, the work in that area should cease and the appropriate senior Council staff and Council’s heritage advisor should be notified in order to assess the nature of the find before allowing work to recommence</p>	<p>The works have been designed to require the least amount of excavation as possible in this respect, with the majority of footings being on the low side of the wall</p> <p>All personnel involved in the delivering the works should be made aware of this policy</p> <p>An expected finds procedure is included in the recommendations below</p>
<p>Policy 71 Ensure the conservation of Gardiner Park’s fabric of high cultural significance by carrying out maintenance and repair work where required including stonework and concrete step repairs, Crossling memorial reconstruction, plantation thinning, weed removal, routine arboricultural monitoring and limited embankment redesign and reconstruction. While the removal of the 1960s clubhouse is desirable, if this necessarily entails the simultaneous removal of the 1930s change room structure then ensure there is an archival record of the latter and consider interpreting it by way of a new lightweight shelter structure in the same location</p>	<p>Compliant The works comprise essential repair works</p> <p>The stone retaining wall is an element of high significance and the affected section is going to be restored to its former state using the existing stone blocks</p>
<p>Policy 73 Remove, replace, redesign or otherwise reduce the intrusiveness of the various elements within Gardiner Park that detract from an appreciation of its cultural significance</p>	<p>Compliant The works will remove the raised pine-log garden bed in front of the affected section of wall as it has been graded as an intrusive</p>

CONCLUSIONS

The stone wall is a highly significant element in the park and requires essential repairs. The new additional retaining wall behind the restored stone wall will take the retaining load rather than the stone wall, and works will add in additional drainage works to better manage the free draining of the ground water which was the cause of the wall collapse. The stone wall will be relaid with the salvaged blocks and the new additions concealed by earth and the restored the stone wall; the new works will not be visible and will not detract from the appreciation of the restored Depression-era stone wall.

The works will remove an intrusive raised garden bed. The surrounding area will be made good to match the existing surfaces and fittings.

In all, I am satisfied that the proposal is compliant with the CMP conservation policies, namely #73 above; essential repair to highly significant stonework at the park. The works respect the cultural significance of the Park, and the approach does not compromise any built or natural elements which contribute to the heritage significance of the site.

With all due care and practical protective measures installed for the duration of the works, there is considered to be no impact to the heritage fabric, setting, or heritage significance of the site.

RECOMMENDATIONS

It is recommended that the works as proposed be **approved**, subject to the following:

- Secure/brace adjoining standing stone wall sections stone to ensure no further damage.
- Careful removal and secure storage of the fallen stone blocks. The stone must be reinstalled in situ, and no opportunity for theft, vandalism or accidental damage should be allowed.
- All surrounding stairs, and low stone retaining walls etc in the vicinity of the works to be covered and protected for the duration of the works against accidental damage from machinery.
- Adjust siting/design of footings as necessary per Arborist's advice to ensure protection of tree root systems.
- Tree protection to be installed per Arborists advice for the duration of the works.
- Restore stone wall to its pre-collapse form (see photo earlier in report).
- Commission a stonemason experienced in similar projects to rebuild collapsed wall. Use era-appropriate mortars and match colours to existing.
- Do not replace the raised garden bed next to the stairs.
- All personnel working on the project should be made aware of the following unexpected archaeological finds protocol:

In terms of archaeological potential generally, all contractors involved in the construction works should be briefed on the possibility of relics being present and advised of their legal responsibilities.

- Historical archaeological features and deposits are afforded statutory protection by the 'relics provision' Section 4(1) of the *Heritage Act 1977* defines 'relic' as any deposit, artefact, object or material that relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and is of State or Local heritage significance. The 'relics provision' requires that no archaeological relics be disturbed or destroyed without prior consent from the Heritage Council of NSW; and
- The *National Parks and Wildlife Act 1974* protects Aboriginal cultural heritage in NSW. It is an offence to knowingly (or otherwise) harm or desecrate an Aboriginal object or Aboriginal place. Harm is defined to mean destroying, defacing, damaging or moving an object from the land. An Aboriginal object is legally protected irrespective of land tenure, the significance of the object and whether or not it has been recorded. The penalties for harming or desecrating Aboriginal objects and or places in NSW include significant monetary fines and the potential for imprisonment.

There are statutory protections in place for ALL archaeological features, deposits, relics and Aboriginal places; in the case that it is suspected that works have uncovered any of these, **work should cease in that area immediately and, in the first instance, Council should be notified**. Works may only recommence when relevant permits have been obtained from Heritage NSW and an appropriate and approved management strategy are in place.

Do not hesitate to contact me if clarification of the above is required.

Sincerely,

A handwritten signature in black ink, appearing to read 'E. Gorman', written in a cursive style.

Elizabeth Gorman B.A., M.A., M.ICOMOS
Associate Director
Sue Rosen Associates

Appendix E – AHIMS Basic Search Report

Royal HaskoningDHV
 Level 15, 99 Mount Street
 North Sydney New South Wales 2060

Date: 02 October 2024

Attention: [REDACTED]

Email: [REDACTED]@rhdhv.com

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lat, Long From : -33.946, 151.132 - Lat, Long To : -33.9415, 151.1397, conducted by [REDACTED] on 02 October 2024.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of Heritage NSW AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

	0 Aboriginal sites are recorded in or near the above location.
	0 Aboriginal places have been declared in or near the above location. *

If your search shows Aboriginal sites or places what should you do?

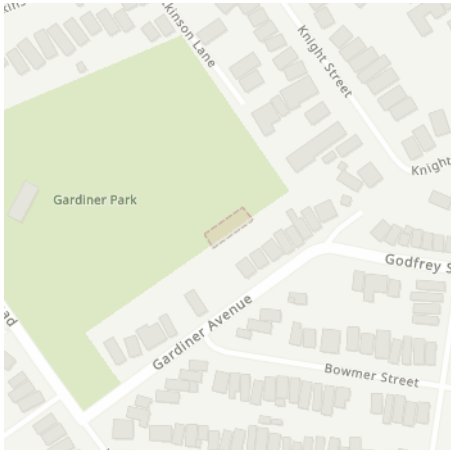
- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the [NSW Government Gazette \(https://www.legislation.nsw.gov.au/gazette\)](https://www.legislation.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Heritage NSW upon request

Important information about your AHIMS search

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not to be made available to the public.
- AHIMS records information about Aboriginal sites that have been provided to Heritage NSW and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date. Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.

Appendix F – BYDA Reports

[Review responses online](#) ↗



Received 6 of 6 responses
All responses received

11 Gardiner Avenue, Banksia NSW 2216

Job dates
06/01/2025 → 31/01/2025

These plans expire on
6 Nov 2024

Lodged by
[REDACTED]

Authority	Status	Page
✉ BYDA Confirmation		2
🏠 Ausgrid	Received	4
🏠 Bayside Council	Received	21
🏠 Jemena Gas South	Received	24
🏠 NBN Co NswAct	Received	30
🏠 Sydney Water	Received	41
🏠 Telstra NSW Central	Received	49



Contact Details

Contact [Redacted]	Contact number [Redacted]	Company Royal HaskingDHV	Enquirer ID 3477134
Email [Redacted]		Address Level 15 99 Mount Street North Sydney NSW 2060	

Job Site and Enquiry Details

WARNING: The map below only displays the location of the proposed job site and does not display any asset owners' pipe or cables. The area highlighted has been used only to identify the participating asset owners, who will send information to you directly.

Enquiry date 10/10/2024	Start date 06/01/2025	End date 31/01/2025	On behalf of Utility Bayside Council	Job purpose Design	Locations Road Reserve Footpath	Onsite activities Planning & Design
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Check that the location of the job site is correct. If not, you must submit a new enquiry.

If the scope of works change or plan validity dates expire, you must submit a new enquiry.

Do NOT dig without plans. Safe excavation is your responsibility. If you don't understand the plans or how to proceed safely, please contact the relevant asset owners.

User Reference REF	Address 11 Gardiner Avenue Banksia NSW 2216	Notes/description -
------------------------------	--	-------------------------------

Your Responsibility and Duty of Care

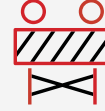
- **Lodging an enquiry does not authorise project commencement.** Before starting work, you must obtain all necessary information from all affected asset owners.
- If you don't receive plans within 2 business days, contact the asset owner & quote their sequence number.
- Always follow the 5Ps of Safe Excavation (page 2), and locate assets before commencing work.
- Ensure you comply with State legislative requirements for Duty of Care and safe digging.
- If you damage an underground asset, you MUST advise the asset owner immediately.
- By using the BYDA service, you agree to the [Privacy Policy](#) and [Term of Use](#).
- For more information on safe digging practices, visit www.byda.com.au

Asset Owner Details

Below is a list of asset owners with underground infrastructure in and around your job site. It is your responsibility to identify the presence of these assets. Plans issued by Members are indicative only unless specified otherwise. Note: not all asset owners are registered with BYDA. You must contact asset owners not listed here directly.

Referral ID (Seq. no)	Authority Name	Phone	Status
245788685	Ausgrid	(02) 4951 0899	NOTIFIED
245788686	Bayside Council	-	NOTIFIED
245788688	Jemena Gas South	1300 880 906	NOTIFIED
245788684	NBN Co NswAct	1800 687 626	NOTIFIED
245788687	Sydney Water	13 20 92	NOTIFIED
245788689	Telstra NSW Central	1800 653 935	NOTIFIED

END OF UTILITIES LIST



Plan

Plan your job. Use the BYDA service at least one day before your job is due to begin, and ensure you have the correct plans and information required to carry out a safe project.

Prepare

Prepare by communicating with asset owners if you need assistance. Look for clues onsite. Engage a skilled Locator.

Pothole

Potholing is physically sighting the asset by hand digging or hydro vacuum extraction.

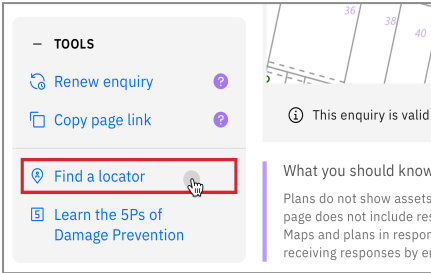
Protect

Protecting and supporting the exposed infrastructure is the responsibility of the excavator. Always erect safety barriers in areas of risk and enforce exclusion zones.

Proceed

Only proceed with your excavation work after planning, preparing, potholing (unless prohibited), and having protective measures in place.

Engage a skilled Locator



When you lodge an enquiry you will see skilled Locators to contact

Visit the Certified Locator website directly and search for a locator near you

bydlocator.com/certified-locating-organisation

Book a FREE BYDA Session



BYDA offers two different sessions to suit you and your organisation's needs. The free sessions are offered in two different formats - online and face-to-face:

1. **Awareness Session:** Understand the role of BYDA, safe excavation practices, complying with asset-owner instructions, and the consequences of damages. Learn how to mitigate and avoid potential damage and harm and ensure a safe work environment.
2. **Plan Reading Session:** Develop the skills to interpret asset owners' plans, legends, and symbols effectively. Understand the complexities of plan interpretation to ensure smooth project execution.

To book a session, visit:

byda.com.au/contact/education-awareness-enquiry-form/

BOOK NOW

Referral
245788685

Member Phone
(02) 4951 0899

Responses from this member

Response received Thu 10 Oct 2024 6.41am

File name	Page
Response Body	5
Important Information.pdf	6
Assets Affected Letter.pdf	7
How To Read AusGrid Plans.pdf	8
S_245788685_GMLA3_1.pdf	14
Working Near AusGrid Cables.pdf	15

Thank you for contacting Dial Before You Dig (DBYD) prior to engaging in work or activities which may affect the infrastructure of Ausgrid.

**WARNING : AUSGRID ASSETS FOUND
YOU MUST READ AND UNDERSTAND ALL ATTACHED FILES IN THIS EMAIL BEFORE
PROCEEDING WITH ANY WORKS**

Please pay special attention to the attached file 'Assets Affected Letter.pdf'

Job number - 37779030

Sequence number - 245788685

Dig site location -
11 Gardiner Avenue
Banksia
NSW 2216

Attention - [REDACTED]

Attached are the files containing information relating to your Dial Before You Dig request. For further enquiries or assistance with interpretation of plans and search content please contact our DBYD support team via email dbyd.ops@ausgrid.com.au or phone 02 4951 0899.

Please **DO NOT SEND A REPLY** to this email address as it has been generated by an automated system and replies are not monitored.

If you are unable to launch any of the files for viewing and printing, you may need to download and install free viewing and printing software such as-

Adobe Acrobat Reader (for PDF files).

<http://get.adobe.com/reader/>

This e-mail may contain confidential or privileged information. If you have received it in error, please notify the sender immediately via return e-mail and then delete the original e-mail. If you are the intended recipient, please note the change of sender email address to @ausgrid.com.au. Ausgrid has collected your business contact details for dealing with you in your business capacity. More information about how we handle your personal information, including your right of access is contained at <http://www.ausgrid.com.au/>

IMPORTANT INFORMATION

YOU MUST BE AWARE THAT:

1. There may be underground cables owned by other utilities, in the vicinity of your work, about which Ausgrid has no information.
2. Ausgrid does not usually keep plans of privately owned underground cables or its underground service cables on private property. (Refer NS 156 for further information.)

YOU MUST MAKE YOUR OWN ENQUIRIES IN RESPECT OF THESE CABLES.

YOU MUST UNDERSTAND THAT:

1. Ausgrid takes all reasonable care in providing details of its underground cables. However, owing to changes in road and footway alignments and levels, and the age and incompleteness of some records, it is not possible to conclusively specify the location of all of Ausgrid's underground cables. The accuracy and completeness of the information provided to you cannot be guaranteed. It is intended to be indicative only. It must not be **solely** relied upon when undertaking underground works.
2. Except to the extent that liability may not be capable of lawful exclusion, Ausgrid, its servants and agents will be under no liability whatsoever to any person for loss or damage (including indirect or consequential loss or damage) however caused (including without limitation, for breach of contract, negligence and breach of statute) which may be suffered or incurred from or in connection with the advice provided.
3. Due to the inherent dangers associated with **excavation, under boring and directional drilling** in the vicinity of underground cables, precautions must always be taken when undertaking any underground works. Ausgrid's Network Standard NS 156 specifies standards for working in the vicinity of underground cables. It is deemed to be part of this Advice, and it must be read by you.
4. Due to the inherent risk of compromising the stability of Ausgrid's power poles during excavation which could lead to pole movement or collapse, precautions must always be taken. If excavation is to be carried out within 1m from a power pole, Ausgrid must be contacted at construction.works@ausgrid.com.au for advice. Do not proceed until you have received such advice from Ausgrid.

YOU MUST READ [NETWORK STANDARD NS 156](#), *WORKING NEAR OR AROUND UNDERGROUND CABLES*. IT IS PART OF THIS ADVICE.

If further information is required, please contact:

Ausgrid BYDA
Phone: (02) 4951 0899
Fax: (02) 4951 0729



Emergency Phone Number 131388

der r d b e
e r d e
rd e e ed

To:	[REDACTED] Royal HaskingDHV Level 15,99 Mount Street North Sydney NSW 2060	Phone No:	+ [REDACTED]
		Issue Date:	10/10/2024

In response to your enquiry, Sequence No: 245788685 the records of Ausgrid disclose that there **are** Ausgrid underground cables in the defined search location and relevant Ausgrid plans have been provided.

This search is based on the geographical position of the dig site as denoted in the Before You Dig Australia caller confirmation sheet and an overview is provided:

Address:	11 Gardiner Avenue Banksia NSW 2216
Job #:	37779030



****Important****

- All information provided to you is **ONLY VALID FOR 30 DAYS** from the date of issue
- You must keep Ausgrid plans on site during excavation works. If the people actually performing the excavation works do not know how to read and interpret Ausgrid's plans, then the work must be directed by a person who knows how to read and interpret plans.
- If you require a full size print of A0 plans and don't have the resources to do so please contact our office on 49510899 to request a hard copy to be posted. **Please allow 3 working days for delivery.**
- Please note you will **ONLY** receive portions of your search area that contain Ausgrid Underground Assets

YOU MUST READ AND UNDERSTAND THE SUPPLEMENTARY MATERIAL CONTAINED IN THIS ADVICE BEFORE PROCEEDING WITH ANY WORKS.

Summary of Supplementary Information:

Material	Purpose	Location
Important Information.pdf	Details important information	Attached
Working near Ausgrid Cables.pdf	Summary of NS156	Attached
COMN0119 How to Read Ausgrid Plans.pdf	Details how to read Ausgrid plans	Attached
SafeWork NSW "Work near underground assets: Guide"	To assist you in deciding appropriate measures to eliminate or control risks when working near underground assets.	Web Link [Click Here]
Ausgrid's Network Standard NS156	For important information for work near or around underground cables	Web Link [Click Here]
Ausgrid's Network Standard NS199	This Network Standard applies to specific work on Ausgrid Low Voltage Underground Assets and associated Hazards	Web Link [Click Here]
Working in Confined Spaces	For important information when working in confined spaces	Web Link [Click Here]

Reading Ausgrid Plans

COMN0119

1 Property Lines

“property line” (PL), sometimes referred to as “building line” (BL), is the standard dimensioning reference point on all Ausgrid plans and represents property boundaries.

Typically, the PL is the boundary between private property and local council’s footpath area or nature reserve. Most residential fences and office blocks are erected along the PL.

“kerb line” (KL) is less frequently referred to on Ausgrid plans, and where used will be identified clearly as KL.

Numbers listed within property boundaries should correspond to recognised “street numbers” (refer to figure 1).



Figure 1

2 Datum References

“datum references” identify distances (in metres) from significant features (such as corners of property boundaries) to reference points such as Ausgrid assets (eg: “conduits”, “cables”, “joints”) (refer to figure 2).

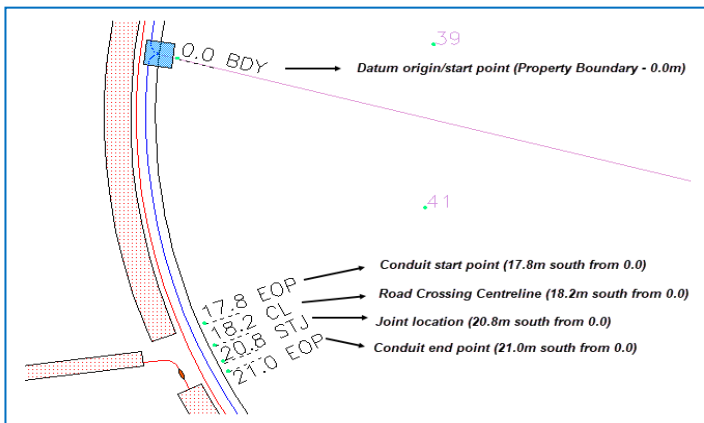


Figure 2

3 Cross Sections

A “cross sections” displayed on Ausgrid plans detail information relating to the relative position (ie: distance from the “property line”, and the depth of “cover”) of Ausgrid assets.

“Cover” is a term used to refer to the depth of cables underground.

A “cross section” leader line will be drawn indicating the location of the displayed “cable” or “conduit” information on Ausgrid plans.

The distance from “property line” (in metres) and depth of “cover” (in metres) references are displayed as; ie: 0.6 metres from PL and 0.5 metres underground.

Where distance and cover are not recorded, they will be clearly marked as “NR”.

NOTE: Distance and cover where indicated may be different to the actual position of the cables (eg: fill may have been placed at site that has changed the ground level).

“PL” distance shown in cross sections is an indicative measure to the centre of the trench allocation from the adjacent property line.

On some plans the “cross sections” may also be shown with a specific number (eg: HR1). This number will match with a cross section detail found in the border of the plot or on a separate plot page (refer to figures 3 and 4).

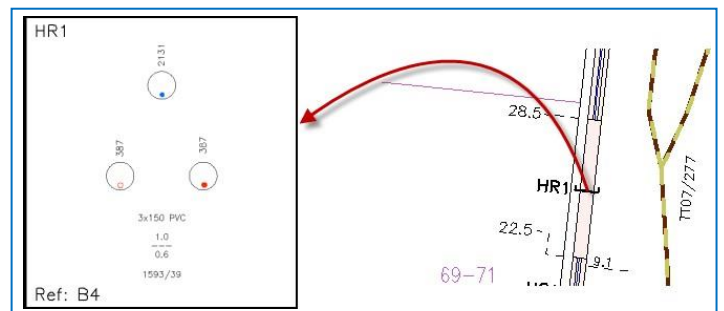


Figure 3

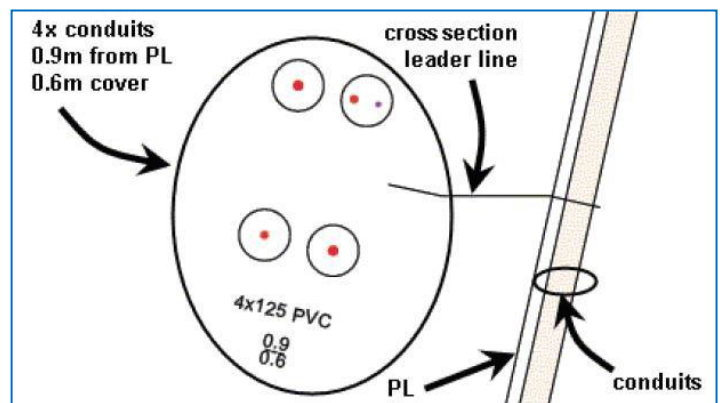


Figure 4

4 Cable Joints and Joint Reports

“cable joints” (numbered individually) and “joint reports” (attached to Ausgrid plans) can provide information relating to the relative position of Ausgrid assets, distance from the “property line” (in metres), and the depth of “cover” (in metres) (refer to figures 5 and 6).

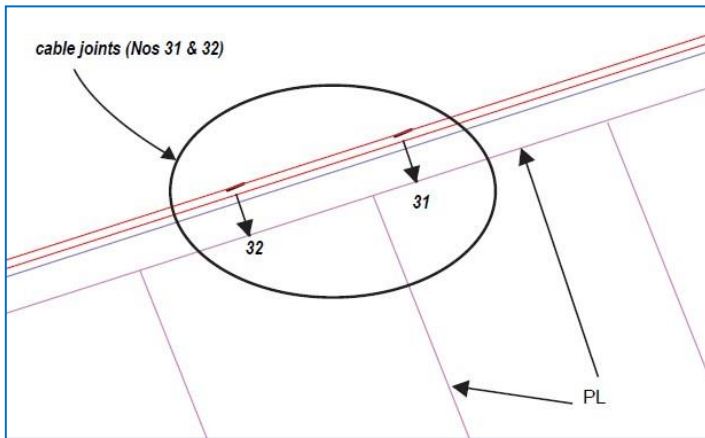


Figure 5

JOINT DETAIL REPORT			
No.	Bk-Pg	PI/Cvt	Joint Location
Map: 31	LE912 524-24	1.14/0.69	61.7 E of Pearl Lane EPL
32	524-24	1.14/0.69	57.6 E of Pearl Lane EPL

joint location
(61.7m east of Pearl Lane East PL)

joint position
(1.14m from PL, 0.69 cover)

Figure 6

5 Cross Section Detail Boxes

“cross section” detail boxes on the sides of an Ausgrid plan are used when there is insufficient room to display “cable” and/or “conduit” information on the Ausgrid plan.

Ausgrid plans (refer to figure 7) are bordered by numeric identifiers along the top and bottom borders and alpha identifiers along the side borders.

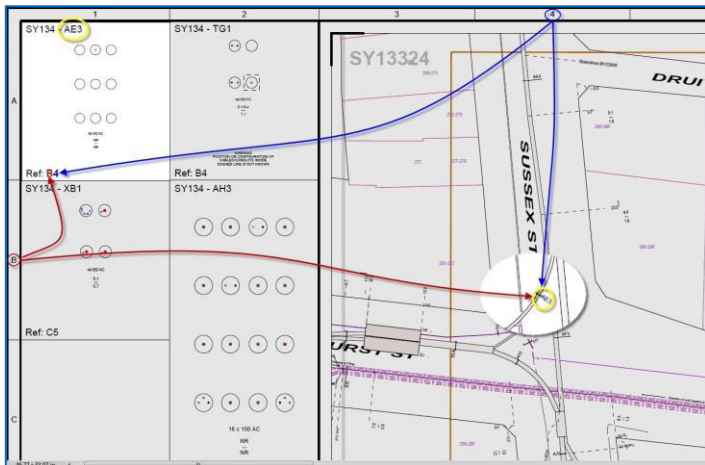


Figure 7

“Cross section” leader line and annotation is drawn on the Ausgrid plan for a reference to “cable” and/or “conduit” information in the “cross

6 Pits

Underground “pits” are numbered on Ausgrid plans, positioned relative to the “property line” (PL), and can be found on either the footpath (nature strip) or the road (refer figure 8).

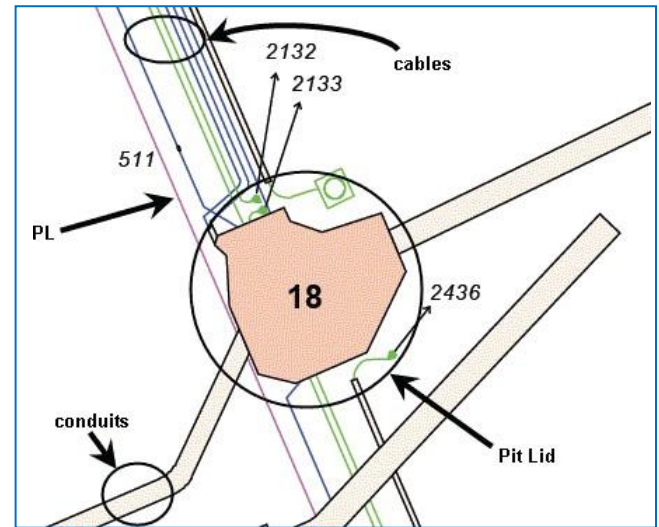


Figure 8

7 Proposal Areas

“section” detail boxes. There are areas where underground work may have been issued for construction by Ausgrid, but details are not yet completely displayed on Ausgrid plans. In such cases a shaded “proposal area” is displayed on the Ausgrid plan, indicating underground work may have commenced in the vicinity but is not yet complete.

In some instances, cables and other assets within the shaded “proposal area” will be shown in a **bright magenta** colour, indicating that the proposed new work displayed within the shaded area is based on initial planning documentation (refer to figure 9).

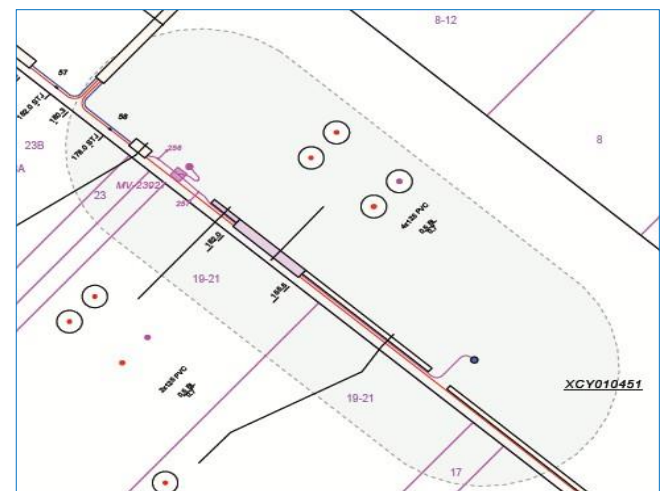


Figure 9

In other instances, the shaded “proposal area” itself may be shown as a blue colour, indicating that the new work displayed within the shaded area on the Ausgrid plan is yet to include details regarding final depths and dimensioning (refer to figure 10).

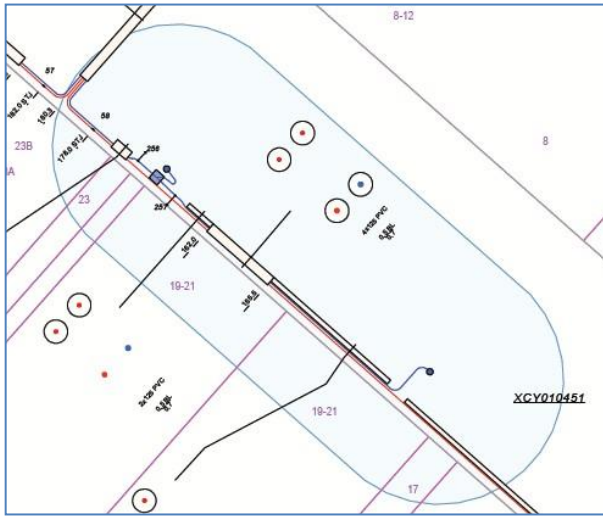


Figure 10

NOTE: In cases where these shaded “proposal areas” are displayed on Ausgrid plans.

“Ausgrid’s design plans showing the proposed position of its underground cables, overhead lines and structures have been prepared solely for Ausgrid’s own planning use. They show the proposed position of such underground cables, overhead lines and structures as proposed at the time of planning and have not necessarily been corrected to take into account any changes to road widths, road levels, fences and buildings subsequent to proposed installation.

Actual installations may vary from proposed installations as it may be necessary to take account of unforeseen above ground or subterranean constructions. Therefore, Ausgrid does not hold out that the design plans show more than the proposed presence or absence of its underground cables, overhead lines and structures in the street and will accept no liability for inaccuracies in the information shown on such design plans from any cause whatsoever.”

Any further information regarding information displayed for “proposal areas” can be obtained by contacting the Ausgrid Before You Dig Australia (BYDA) office at the number indicated on the response to your BYDA enquiry for further information.

8 Ausgrid Maps

Depending on the size of the BYDA request, the response will either be a **single map area** or a **cover sheet** and several standard maps.

8.1 Single Map Area Response

The single map area response will have a buffer area shown on the plan that should relate to the original Before You Dig Australia request.

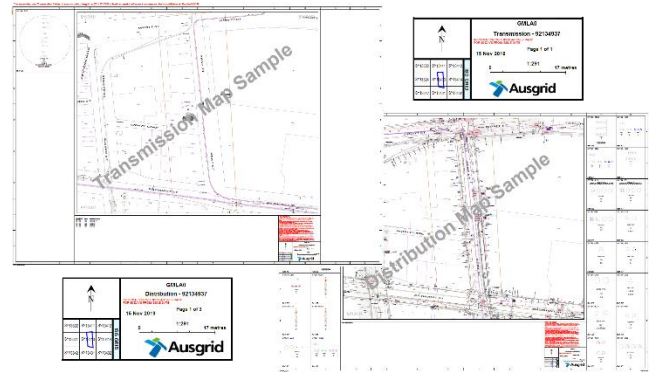


Figure 11

The **map grid index box** on Ausgrid plans should be used when reading the “**joint report**” (see part 4 of this document for more detail) to accurately locate underground cables. The buffer area will display on the grid index box for single map area responses

There are two different size maps that can be produced – A3 will be issued if there are no cross sections in the area, and an A0 will be issued if there are cross sections that are required to be displayed in the detail boxes on the side.

A single map area response could include two maps in the Sydney region. Ausgrid plans are separately labelled as “**Distribution – nnnnnnn**” and “**Transmission – nnnnnnn**”, where “**nnnnnn**” refers to the BYDA sequence number quoted. If the request does not include any Transmission assets, then only one Distribution map will be issued.

In the Hunter region, the Ausgrid plans show combined “**distribution**” and “**transmission**” voltage assets, are clearly labelled as “**Distr + Trans – nnnnnnn**” where “**nnnnnn**” refers to the BYDA sequence number.

Some Hunter plans may have transmission cables in the area, when these cables are present there will be a warning printed at the top of the plan supplied: “**“You are working near Transmission Cables. You must contact Ausgrid on (02) 4951 9200 at least two weeks before work commences. See Ausgrid Network Standard NS156”**

8.2 Cover Sheet Response

On a response that includes a cover sheet, the buffer area will only be shown on the cover sheet and it will not appear on the standard maps. The cover sheet will indicate which standard maps have been included and provide a high-level view of the location of the underground details (Figure 12). The standard maps will have the detail of the underground assets (Figure 13).

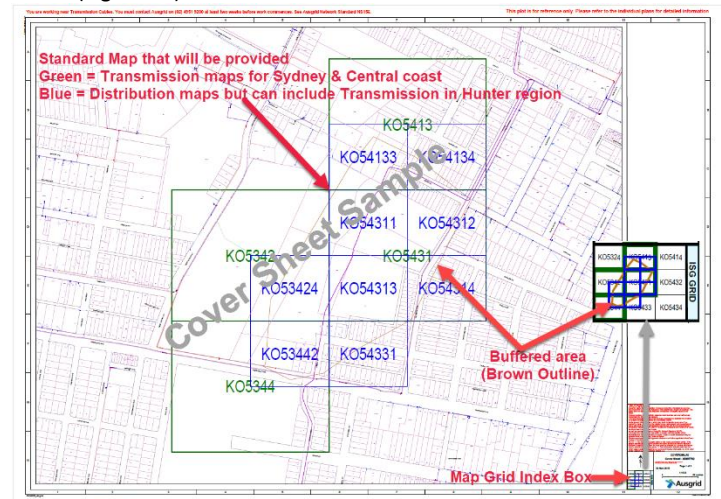


Figure 12

A **map grid index box** has been included in the cover sheet and on the standard maps. The buffer area will only display on the grid index box on the cover sheet and not on standard maps (Figure 12 + Figure 13).

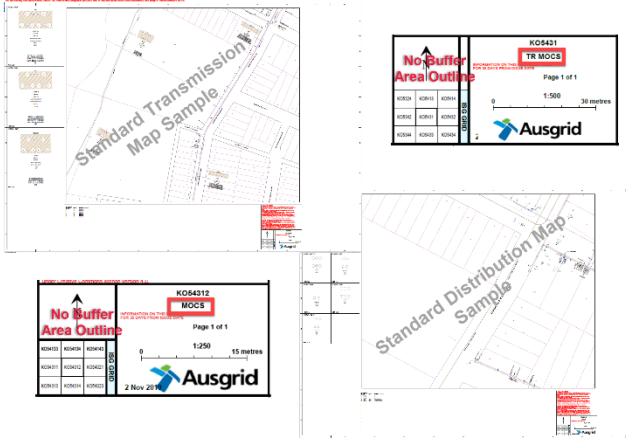


Figure 13

9. Shifting Land Base” on Ausgrid Distribution and Transmission Plans

In some instances, the plans supplied may indicate road or property outlines that appear to have shifted in relation to the Ausgrid assets displayed (refer to figure 14).

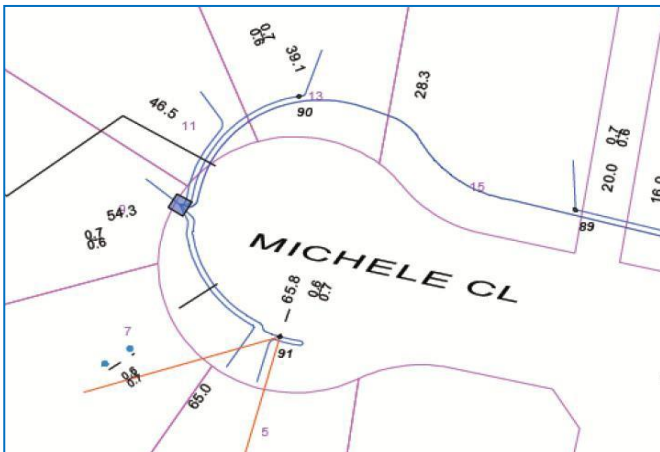


Figure 14

In such instances, always refer to the **“property line”** (in metres) and depth of **“cover”** (in metres) references displayed on the nearest relevant **“cross sections”** to obtain Ausgrid asset location information (see Reading Ausgrid Plans, clause 3, Cross Sections for more detail).

10. “Underground Earthing Infrastructure”

In some instances, the plans supplied may also indicate the presence of underground earthing infrastructure associated with underground and/or overhead Ausgrid assets.

The **“Earth Point”** symbol (refer to figure 15) will be shown on plans to minimize risk of disturbance or damage to any Ausgrid underground earthing infrastructure in the vicinity.

Figure 15



11. Hazardous Cables – Specific Excavation Hazard

Certain low voltage cables are susceptible to deterioration or defects that may pose a risk of electric shock when working near them particularly in damp ground. Other low voltage cables may have an exposed conductive sheath or armour which may, under certain conditions, become energised. These cables may pose a significant risk and will be illustrated as in figures 15 and 16 below. For all work on or near Ausgrid’s network where workers have been trained in Ausgrid’s “Working near or around underground cables” course the work practices outlined in NS156 “Working near or around underground cables”, NS199 “Safe Electrical Work on Low Voltage Underground Assets” for low voltage cables susceptible to deterioration and the Electrical Safety Rules for low voltage exposed conductive sheath or armoured cables must be adhered to. All other persons must contact Ausgrid before excavating near or accessing areas where these cables are present to arrange for appropriate precautions to be applied.

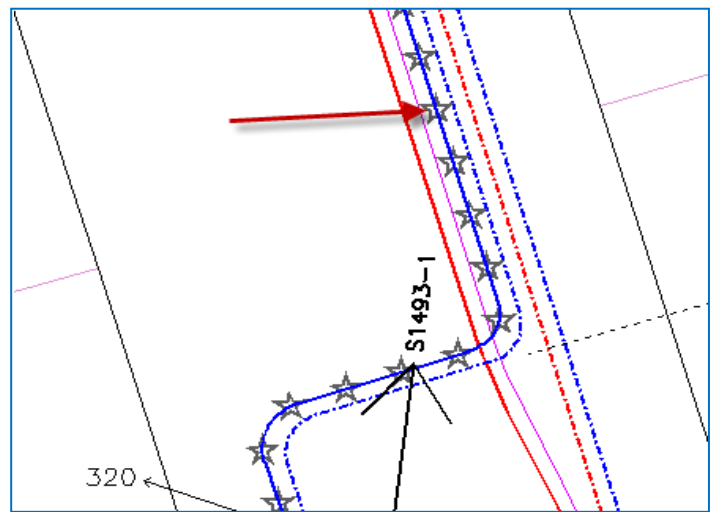


Figure 15

The **“star”** symbols over the cable indicates that it may be susceptible to deterioration or defects or the cable may contain an exposed conductive sheath or armour which could pose an electrical risk to workers.

Cables that are in duct lines have this symbology covered so an at-risk cable is indicated only within a cross section by a **“#”** appended to its cable code as illustrated below.

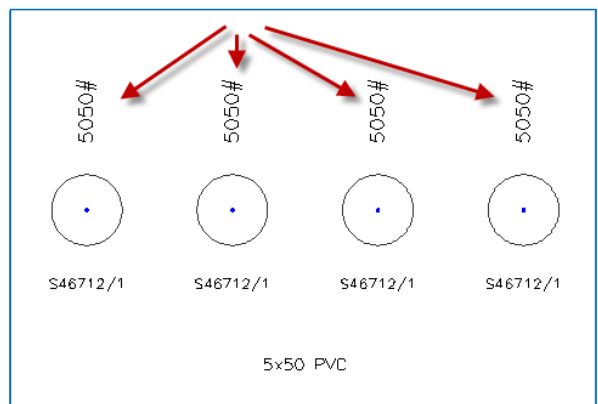


Figure 16



Ausgrid Underground Map Symbology

NOTE: Please note symbology is subject to change. This document provides underground (UG) related objects only. In cases where you are unsure of the data presented, please contact Ausgrid's BYDA for clarification *prior* to any planning/excavation works.

Object		Symbol
HV Cable	HV (High Voltage) 5kV-22kV	In Service
		Out of Service
	TR (Transmission) 33kV – 330kV	In Service
		Out of Service
LV Cable (Low Voltage)	Mains (Dark blue)	In Service
		Out of Service
	Street Lighting (Green) Note: Mains Connector also used as Street Lighting (dark blue)	In Service
		Out of Service
	Service (Light blue)	In Service
	Out of Service 	
	Stars are used to highlight At Risk cables	In Service Risk
		In Service Risk
		In Service Risk
		In Service Risk
	Unknown	
Auxiliary Cable	Data	
	Comms	In Service
	Telco	
	Protection	
	Fibre Optic Pilot	Out of Service

Object		Symbol
HV UG Joint	Straight Through, Parallel Branch or Tee	
	Switchgear, End Box or Transition	
HV UG Termination	Sealed end	
	Pot End	
	UGOH	
HV Cable Repair	5kV-330kV (HV & TR)	
LV UG Joint	Straight Through, Parallel Branch, Tee or Service	
	Network Box	
LV UG Termination	Switchgear, End Box or Transition	
	Sealed end	
	Pot End	
	UGOH	

Object		Symbol
Auxiliary Fix	Pilot Window	
Auxiliary Joint	Straight Through, Parallel Branch or Tee	
Auxiliary Termination	UGOH or Pole Termination	
	Pilot	
	UGOP-ADSS Termination	
Cable Pit (Can be various shapes)	Auxiliary	
	Distribution	
	Transmission	
LV Pillar	Distribution	
	Switch	
	SL Pillar	
	SL Cubicle	
	Fargo	
	Private	
LV Auxiliary Pillar	All Types	
LV Link Box	2 Way & 4 Way	

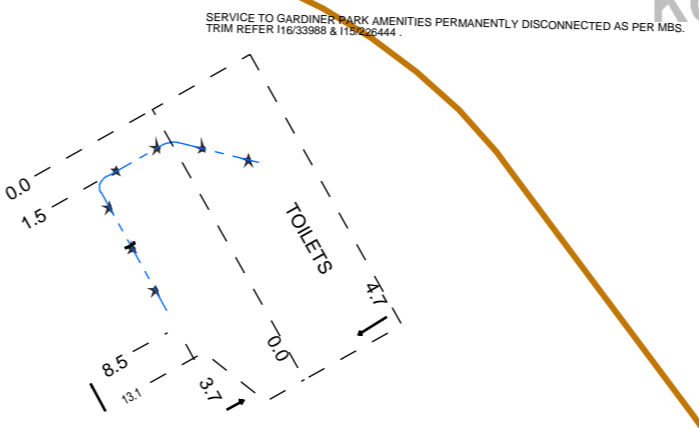
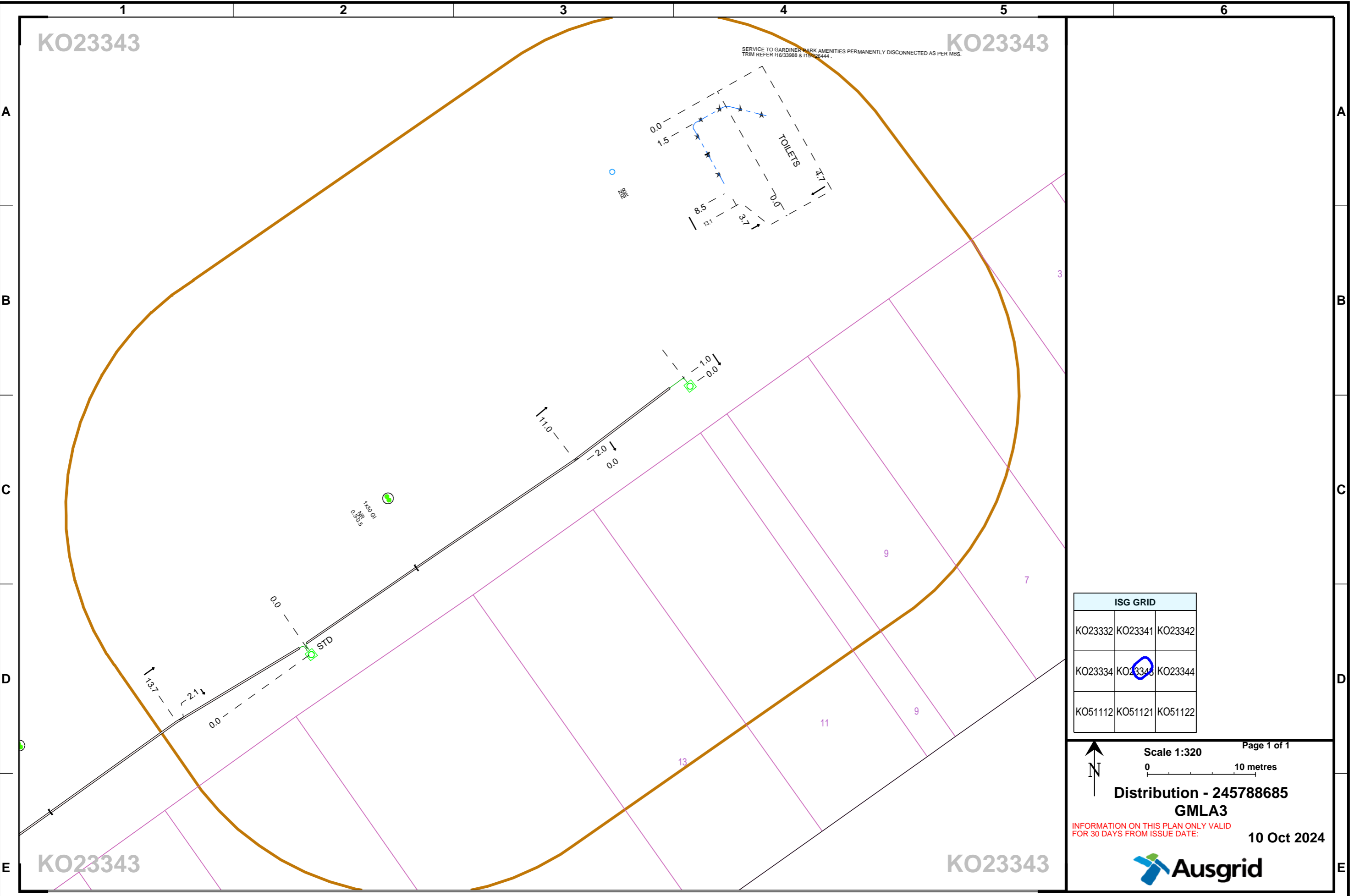
Ausgrid Underground Map Symbology

Object	Symbol	
Substation	Cottage & Chamber	
	Ground & Subtransmission Ground	
	Kiosk & Subtransmission Kiosk	
	Zone	
	Transmission	
	Bulk Supply Point	
	Metering Station & Subtransmission Metering	
	Switching Station	Isolating & Earth
Other – OH & UG		
Ring Main Unit		
Earthing	UG Earth Cable	
	Earth Point	
Frequency Marker	Distribution and Transmission Power Ball or Disc Type Marker	
	Auxiliary Communications Ball or Disc Type Marker	
	Distribution and Transmission Power Tape Marker	
	Auxiliary Communications Tape Marker	

Object	Symbol	
Trench	Centreline	
Conduit (Can be various shapes)	Coverage (Distribution)	
	Coverage (Transmission)	
	Coverage (Underbore – cross hatched)	
Cross Section	Marker (Staple)	
	User Line	
Measurement Point		
Miscellaneous Point Feature	Cable Clamp	
	Cable Core split (Trifurcation)	
	Cable Marker	
	Electrolysis Point	
	End Of Pipe	
Frequency Injection Unit		
Gas Charger		
Gas Control Cabinet		
Gas Control Kiosk		
Gas Control Point		
Gas Control Valve		
Gatic Pit lid		

Object	Symbol	
Miscellaneous Point Feature	Inspection Box	
	Link point	
	Oil Control Valve	
	Oil Gauge	
	Oil Tank	
	Sniffer Box	
	Thermocouple Box	
	Transmission Cable Marker	
Transmission Link Point		
Miscellaneous Linear Feature	All Geometries	
	Map Note	Text about note
Dimension Feature	Placement Change	
Lead Cable	Oil/Gas/Thermocouple	
	Bonding	
	Electrolysis	

S:245788685_GMLA3_1.hpg2



ISG GRID		
KO23332	KO23341	KO23342
KO23334	KO23343	KO23344
KO51112	KO51121	KO51122

Page 1 of 1

Scale 1:320
0 10 metres

Distribution - 245788685
GMLA3

INFORMATION ON THIS PLAN ONLY VALID FOR 30 DAYS FROM ISSUE DATE: **10 Oct 2024**

W A R N I N G : Ausgrid's plans show the position of assets at the time of installation and may not account for subsequent changes to road alignments, fences or buildings. The plans show no more than the presence or absence of Ausgrid assets in the street. Persons working near electricity networks must exercise care and will be held responsible for any damage caused. You must excavate by hand or use vacuum excavation to establish the location of Ausgrid underground cables and associated assets. Underground: Working near a cable may result in electric shock even if no contact is made. Any work in the vicinity of any cable should only be performed using safe work methods developed in accordance with the recommendations included in Safework NSW Code of Practice for Excavation and Safework NSW Guide for Work Near Underground Assets as well as recommendations of Ausgrid's Network Standard NS156. Overhead: Do not excavate near poles or towers until the stability of the foundation has been assessed by Ausgrid. Cables or earth conductors may be present close to substations, poles or towers. Workers must maintain safe approach distances and follow applicable Safework NSW Codes of Practice. NOTE: 1. You must keep Ausgrid plans on site during excavation works. If the people actually performing the excavation works do not know how to read and interpret Ausgrid's plans, then the work must be directed by a person who knows how to read and interpret the plans. 2. This information includes data from the NSW Digital Cadastral Database by Land and Property Information (c) 2016, used under Creative Commons licence version 4.0.

Working near Ausgrid cables

Finding out what's below the surface can save your life.
Contact Before You Dig Australia @ www.byda.com.au or call 1100



Changes in the Law.

NSW legislation now requires people who are planning to do excavation work to obtain copies of underground electricity cable plans through Before You Dig Australia (Phone 1100) and to make sure that the plans are no more than 30 days old when excavation commences.

The aim of the legislation is to ensure that when workers dig near electricity cables, they will establish the exact location of the cables and thus avoid coming into contact with them or damaging them. This will ensure worker safety and also prevent disruption to Ausgrid's electricity network.

This brochure gives you a brief overview of how to prepare for excavation works near or around electricity cables. It is important that you also consult our guide How to Read Ausgrid Plans and make sure that workers engaged in excavation works fully understand how to read the plan. If the people actually doing the digging can't read the plans, it is essential that the work is directed by a person who has been trained to read Ausgrid's plans.

You must also consult Ausgrid's Network Standard NS156, which contains comprehensive information concerning all the issues that arise when excavating near underground cables (such as safety hazards from asbestos conduits and organochlorine pesticides).

Excavating near transmission cables.

If any cable plan you receive says "You are working near transmission cables" it is compulsory to notify Ausgrid two weeks before work is scheduled to begin. Ausgrid will then arrange for an Ausgrid representative to attend the site during excavation work.

Phone the Ausgrid Transmission enquiries line on (02) 4951 9200 to arrange for an Ausgrid representative in your region.



Be prepared. Wise words for safety at work.

Here are some simple precautions you and your workers need to follow to be as safe as possible.

- Make sure that your Before You Dig Australia (BYDA) plan is less than 30 days old
- Keep a copy of the cable plan on site at all times
- Make sure the excavation work is conducted or directed by staff who are trained to read the plan
- Hand dig until the exact location of the cable has been established
- Have on site at all times a first aid kit and a person trained in resuscitation
- Wear protective clothing, including safety footwear and safety helmet
- Have emergency contact numbers on site
- Set up safety barriers, witches hats and warning lights to reduce the risk of injury to the general public
- Comply with all SafeWork NSW requirements and codes.

See also:

- **SafeWork NSW Guidelines: Work Near Underground Assets**
- **SafeWork NSW Code of Practice: Excavation Work**
- **SafeWork NSW Code of Practice: Work Near Overhead Powerlines (if applicable).**

Before you start. Complete the checklist. Stop and look around.

Before you start excavating, consult the flow chart and fill in the checklist at the end of this brochure.

Then, be sure to look for clues where cables might be located on the site: for example, pits, distribution pillars (green and other colours), cables attached to the side of poles, street lights without overhead wires.



Do all power cables look the same?

No. Power cables come in different sizes, colours and coverings. They may be covered in black plastic sheath, steel wires in a sticky bitumen like material, or even a simple lead or steel wire/tape sheath.

What else should I look for below ground level?

Cables may also be buried in orange PVC or PE conduits or even in earthenware or steel pipes. A bank of cables may be covered with electrical bricks, plastic warning markers or protective covers, or they may not be covered at all. If they have been buried close to the surface, they may be covered by concrete slabs or steel plates.

When in doubt, ask Ausgrid.

If you have any questions about excavating near Ausgrid cables, read **NS156** (available at ausgrid.com.au). For further information call 13 13 65.

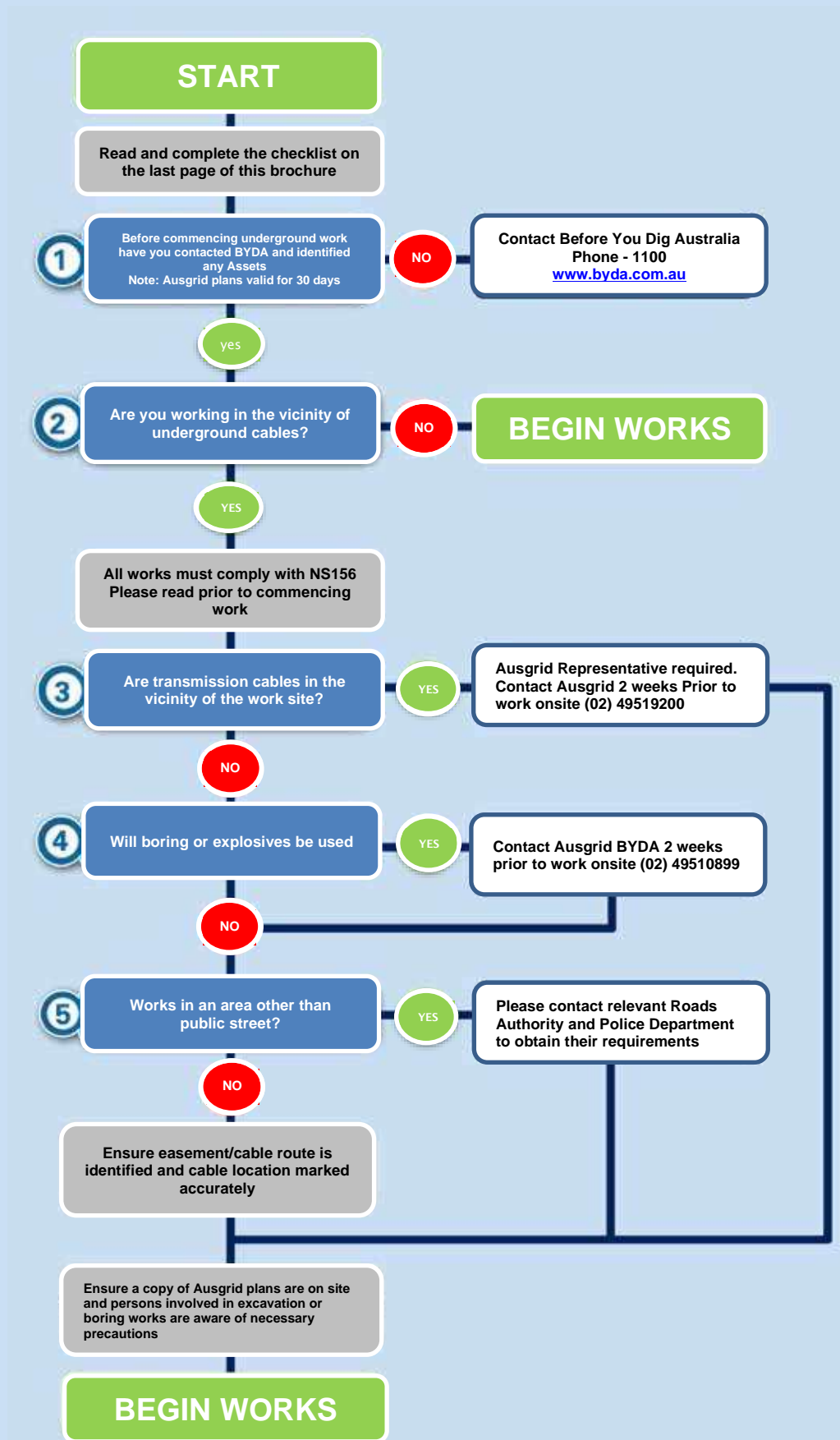
You've taken every precaution, but accidents still happen. What now?

If you damage an electricity cable, it is compulsory to notify Ausgrid on **13 13 88**.

Striking power cables can cause serious damage to the cables and endanger the lives of anyone who comes in contact with them. Machinery and hand operated plant such as jack hammers can become alive if it is in contact with electrical cables or equipment. Keep people well away from machinery and the work site if contact is made with a cable.



Flow Chart for work near Ausgrid Cables



Ausgrid Checklist for work near or around underground cables

It is the responsibility of the Constructor to ensure that underground pits, ducts and cables are not damaged as a result of construction work. It is also your duty to protect your workers from harm or injury. This Checklist is intended to be used as a guide to what Constructors should do to make sure they have satisfied the minimum requirements to minimise damage to underground networks.

PLANS, LOCATION and NOTIFICATIONS	Completed
All relevant utilities plans obtained from Before You Dig Australia? (call 1 100 – allow at least 5 working days for plans).	
Checked issue date on all the above plans to ensure issue was within the last 30 days?	
Examined plans and assessed all possible impacts on Ausgrid’s network?	
Do you have both Underground Distribution and Transmission Plans (if applicable), on site at all times?	
All cables and conduits shown on the Ausgrid plans been located and marked on the ground?	
If you are planning to use a bore, have you ensured that the equipment is calibrated?	
Have you read and understood the requirements of NS 156? (For copies of NS 156 visit Ausgrid’s Website or phone Ausgrid BYDA Office (02) 4951 0899) www.ausgrid.com.au	
Have you notified Ausgrid as specified by NS 0156 and complied with requirements? Where an Ausgrid representative is required, two weeks notice is required before work commencing on site. Contact phone number for Transmission cable enquiries is (02) 4951 9200. For all other cases contact Ausgrid BYDA Office: (02) 4951 0899.	
INSPECTION OF WORK BY Ausgrid’s REPRESENTATIVE	
Is the Ausgrid representative on site for any work near or around any transmission cable before you start? (Refer to NS 156.)	
For proposed work near or around cables other than transmission and/or conduits, are any requirements specified by Ausgrid’s representative clearly understood and ready to be applied before you start the work? (Refer to NS 156.)	
PROTECTION	
Check that all people on-site have been made aware of the presence and location of ALL Ausgrid underground cables and/or conduits; especially boring, drilling and trenching machine operators?	
Is there any asbestos or asbestos containing material in Ausgrid’s underground network assets?	
Have you checked for the presence of any Organo-Chloride Pesticides (OCP) in transmission trenches?	
Is the site supervisor monitoring all machine operators working near or around Ausgrid’s underground cables and/or conduits?	
Are the requirements specified by Ausgrid’s representative being followed?	
Are Ausgrid’s requirements in place for any exposed cables and/or conduits to be supported and protected?	
Have you marked all exposed underground cables and/or conduits with flags that are clearly visible from within all machinery used on-site?	
Have safety barriers, fencing or para-webbing been erected to protect staff and the public as well underground cables and/or conduits in areas that are at risk?	
Have safety barriers, fencing or para-webbing been erected to protect staff and the public as well underground cables and/or conduits in areas that are at risk?	

**In the event of DAMAGE to Ausgrid’s cable or conduits, call 13 13 88 immediately.
PROCEED with CAUTION**

It is your responsibility to protect Ausgrid’s cables and conduits from damage and your Duty of Care to protect your workers from harm or injury.

Signed: _____ Date: ____ / ____ / ____
Responsible person on site

For more information call 13 13 65 or visit www.ausgrid.com.au

Referral
245788686

Member Phone
-

Responses from this member

Response received Thu 10 Oct 2024 6.38am

File name	Page
Response Body	22
ASSET 245788686.pdf	23

Attention: [REDACTED] [REDACTED]

Thank you for your Before You Dig Australia (BYDA) enquiry.

Job Number: **37779030**

Sequence Number: **245788686**

Dig Site Location: **11 Gardiner Avenue Banksia NSW 2216**

According to our records, your enquiry with the following details **impacts our infrastructure**. Please ensure that you read the attached documents, it contains important information including essential steps that must be undertaken prior to commencing construction activities.

This enquiry is valid for **30 days** from the enquiry date.

If you require further information or assistance with interpretation of plans, please contact **Bayside Council** on [REDACTED]

This enquiry response, including any associated documentation, has been assessed and compiled from the information detailed within the BYDA enquiry outlined above. Please ensure that the BYDA enquiry details and this response accurately reflect your proposed works.

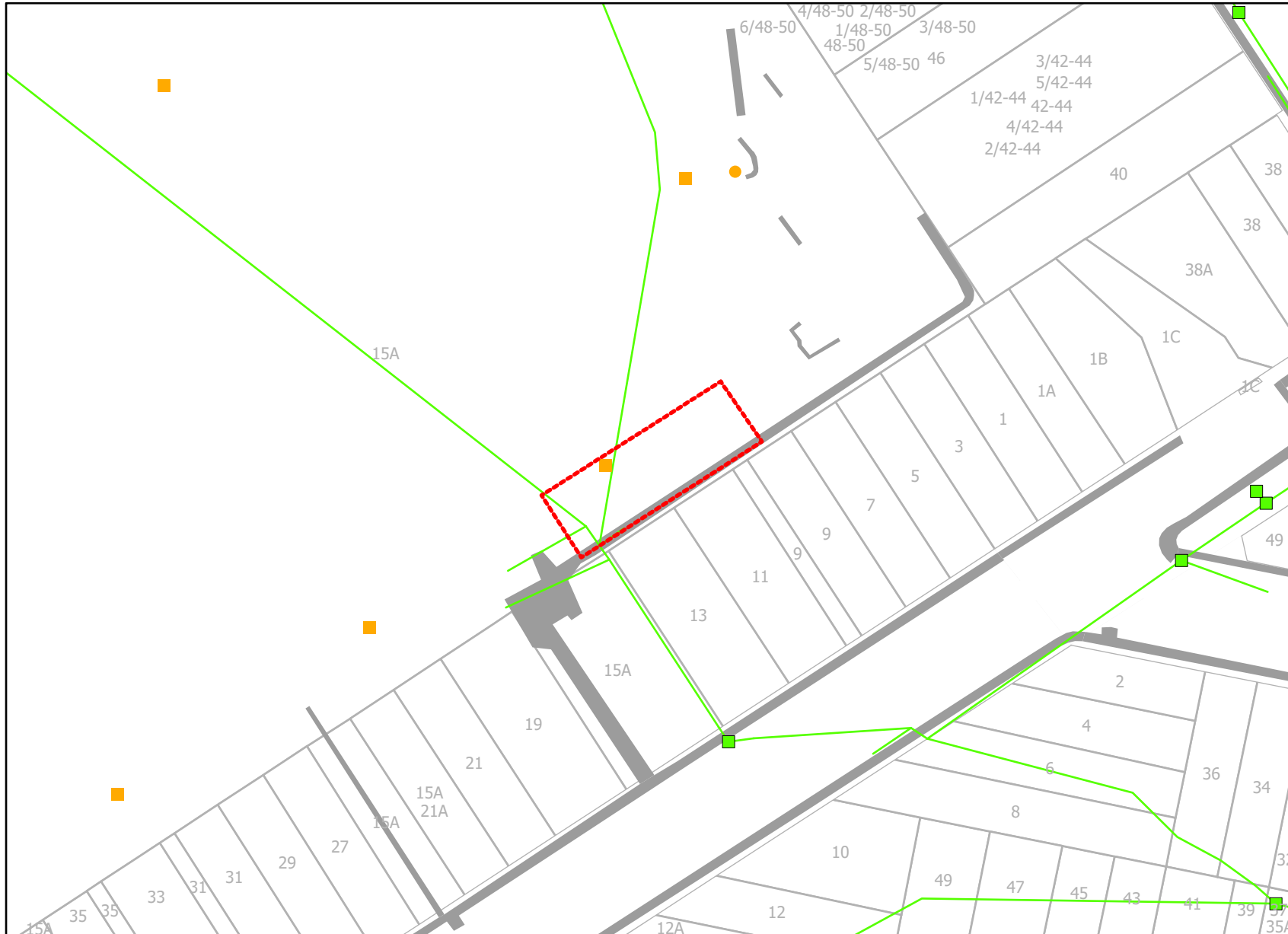
You may also view the response with an interactive web map below:

[View web map](#)

[Download spatial data](#)



Job # 37779030
Seq # 245788686
 Provided by Bayside Council



Legend

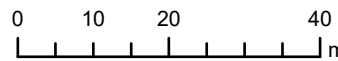
- BYD Enquiry
- Stormwater**
 - Stormwater Pit
 - Stormwater Pipe
- Electrical**
 - Lighting
 - Other Electrical
- Other**
 - Footpaths

Disclaimer: The Plan is provided in response to a Before You Dig request. While all reasonable care has been taken to ensure the accuracy of the information on this plan, its purpose is to provide a general indication of the location of Bayside Council infrastructure. The information provided may contain errors or omissions and the accuracy may not suit all users. A site inspection and investigation is recommended before commencement of any project based on this data.

In an emergency contact Bayside Council on 93663529

10/10/24 (valid for 30 days)

Plans generated by SmarterWX™ Automate



Scale 1:1,000

Referral
245788688

Member Phone
1300 880 906

Responses from this member

Response received Thu 10 Oct 2024 11.00am

File name	Page
Response Body	25
Standard_Gas_Coversheet_Jemena.pdf	26
image1	Excluded
Jemena_BYDAResponse_STD_37779030_245788688.pdf	28

Dear [REDACTED]

REF: BYDA JOB:37779030 SEQ:245788688 - 11 Gardiner Avenue Banksia NSW 2216

Thank you for your BYDA inquiry. For a detailed response from Jemena, please refer to the attached documents.

Please follow the excavation guidelines attached.

For your safety and to further reduce the risk of accidental hit to Jemena's services, the attached plans will now show lines from the mains to the serviced properties, representing Jemena's Gas Service Pipes. This new detail is explained further on the attached legend.

This information is valid for 28 days from the date of enquiry.

Regards

BYDA Admin, Jemena

Level 14, 99 Walker Street North Sydney, NSW
2060

PO Box 1220, North Sydney, NSW 2059

1300 880 906

www.jemena.com.au |

www.gonaturalgas.com.au



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ASSETS AFFECTED

This information is only valid for 28 days from the date of issue

Please note that there are **Gas Mains or Services** in the vicinity of your intended work, as generally illustrated on the attached map. There may also be other mains or services at the location. For an explanation of the map, please see the legend attachment and read the important information below.

Please note that you have duty of care to ensure that Jemena's assets are not compromised or damaged during any digging, future development or construction work.

Excavation Guidelines:

It is essential that the location of gas pipe/s are confirmed by carefully pot-holing by hand excavation prior to proceeding with mechanical excavation in the vicinity of gas pipes. If you cannot locate the pipe, contact the local depot.

Important Information:

1. The enclosed plans have been prepared solely for the use of Jemena Gas Networks (NSW) Ltd and Jemena Asset Management Pty Ltd (together "Jemena") and show the position of Jemena's underground gas mains and installations in public gazetted roads. If the enclosed plans show gas assets located on private property or other third party property, these are approximate locations.
2. There may be underground assets owned by other utilities in the vicinity of your work and it is your responsibility to identify and locate such assets.
3. The plans may show the position of underground mains and installations relative to fences, buildings and other structures, as they existed at the time the assets were installed and may not have been updated to take account of any subsequent change in the location or style of those features. Depth of underground assets may also vary as a result of changes to road, footpath or surface levels subsequent to installation.
4. While Jemena takes all reasonable care to ensure the accuracy and completeness of the information provided, it makes no warranty as to the accuracy or completeness of the enclosed plans and does not assume any duty of care to you nor any responsibility for the accuracy, adequacy, suitability or completeness of the plans or for any error or omission. It is intended to be indicative only and must not be solely relied upon when undertaking underground works.
5. Except to the extent that liability may not be capable of being lawfully excluded, Jemena, its employees, agents, officers and contractors will not be liable to any person for loss or damage (including indirect and consequential loss or damage) which may be suffered or incurred in connection with the provision of this information.
6. Persons excavating or carrying out other earthworks will be held responsible for any damage caused to Jemena's underground mains, service lines and equipment. In accordance with the *Work Near Underground Assets – Guide* published in 2007 by Work Cover Authority*, Jemena recommends that you carry out potholing by hand to accurately confirm the location of gas mains and installation prior to commencing excavations.

Network Mains

- Proposed New Main (coloured as per kPa)
- Proposed Isolate (coloured as per kPa)
- Unknown kPa
- 2kPa Low Pressure gas main
- 7kPa Low Pressure gas main
- 30kPa Medium pressure gas main
- 100kPa Medium Pressure gas main
- 210kPa Medium Pressure gas main
- 300kPa Medium Pressure gas main
- 400kPa Medium Pressure gas main
- 1050kPa High Pressure gas main
- 3500kPa High Pressure gas main
- 7000kPa High Pressure gas main
- >7000kPa Transmission pipeline
- Isolated Service - Former Med/High Pressure
- Isolated Steel Main - **Treat as High Pressure**
- Conduit or Casing
100 PVC Size & Material (see conduit material codes)
- Critical Main - **Treat as High Pressure**
(Main coloured as per kPa)
- Exposed Main section
EXPOSED
- Shallow Main section: see Protection Code below, no code assume no protection
SHALLOW-SP

SP	Steel Plate	CE	Concrete Encased
PP	PE Plate	UNK	Unknown Type
CS	Concrete Slab		
- Warning** - Blue Jacket Coated gas main
(Main coloured and styled as per kPa)

Gas Services

- Gas service – coloured by kPa
- Serviced Site indicator

Jemena has created service pipe features programmatically based on known pipe characteristics and cartographic principles. They may provide guidance to identify assets whilst in the field in addition to existing processes.

Network Assets

- Siphon
- Network Valve
- High Pressure Main Line Valve ($\geq 1050\text{kPa}$)
- High Pressure Automatic Line Break Valve ($> 1050\text{kPa}$)
- Boundary Regulator Set ($\leq 1050\text{kPa}$)
- Distribution Regulator Set ($\leq 1050\text{kPa}$)
- High Pressure Regulating Station ($> 1050\text{kPa}$)

Annotations

Pipe and Conduit Material Codes

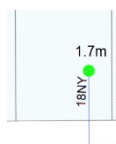
NY	Nylon	NB	Nominal Bore – Cast Iron
PE	Polyethylene	ST	Steel
P/PL	Plastic (undefined)	C/CO	Copper
PVC	Polyvinyl Chloride		

Pipe code combinations and dimension references

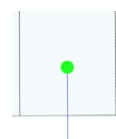
- 6 NB 50MM NY** 50mm Nylon main inserted into 6 inch (Nominal Bore) Cast Iron pipe
- 50MM 32MM NY** 32mm Nylon main inserted into 50mm Steel pipe

~1.5 Distance (in metres) of main from Boundary Line (MBL)

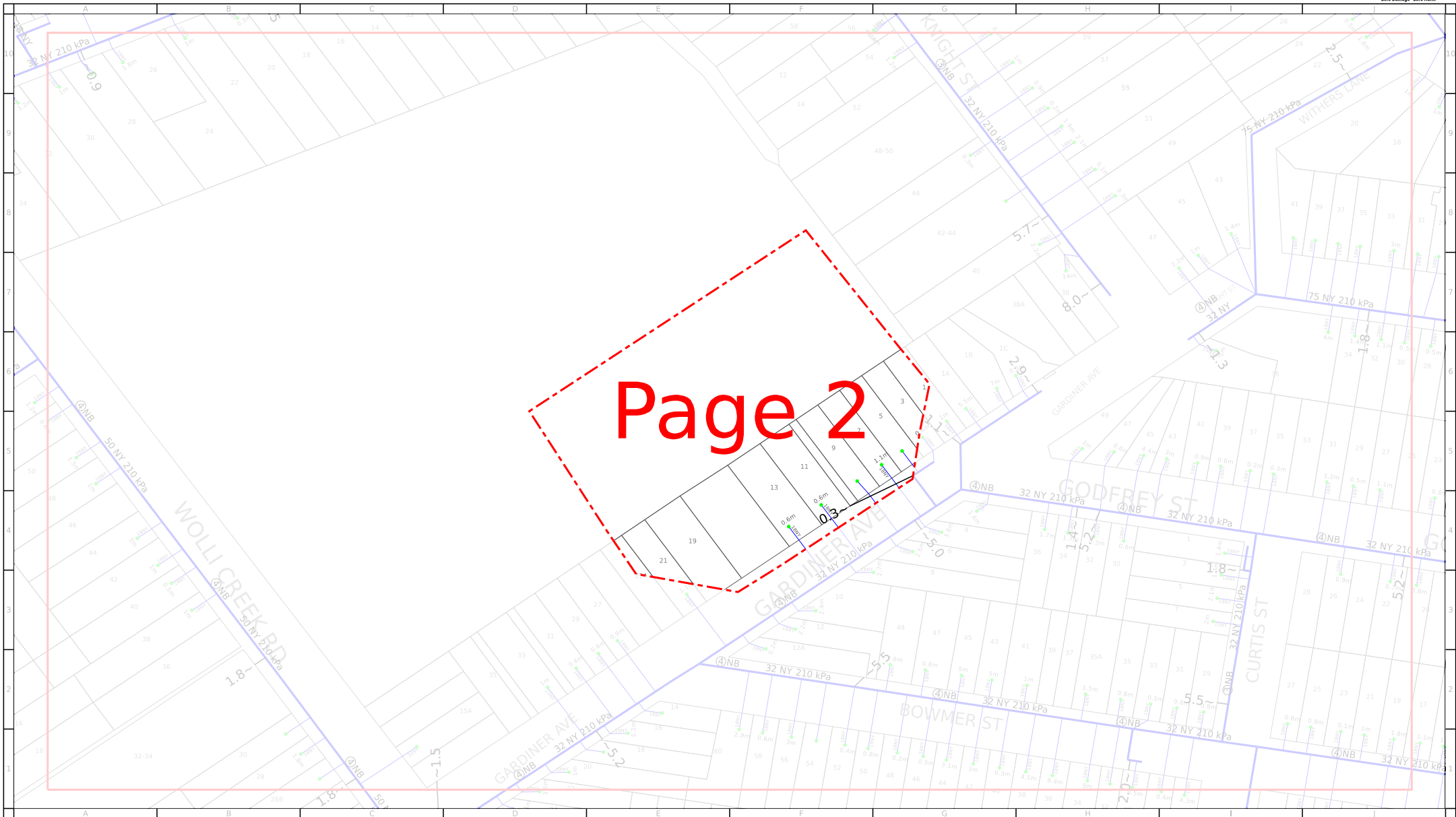
MBK	Distance in Metres Back of Kerb
MKL	Distance in Metres from Kerb Line
MEBL	Distance in Metres from Eastern Boundary Line (North/South/West)
MCL	Distance in Metres from Centre Line of Road
MFL	Distance in Metres from Fence Line



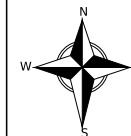
Distance (in metres) of service from side Boundary where the service pipe crosses from the road reserve into the private lot
Service placed towards left or right boundary
Service pipe size & material where known



For connected sites with insufficient asset details, service is shown down the centre of the lot with no attributes plotted



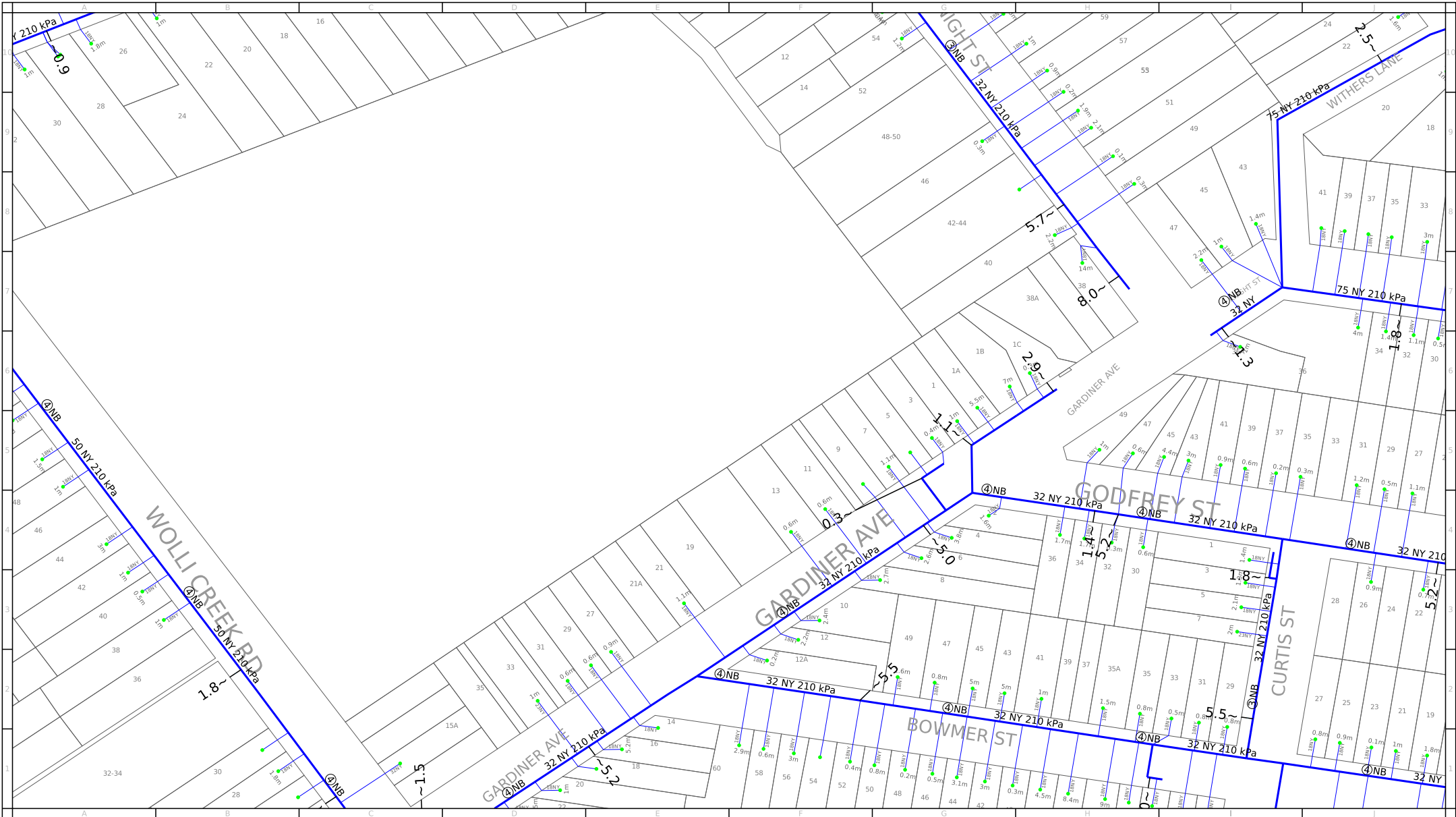
For legend details, please refer to the Coversheet attachment provided as part of this BYDA response.



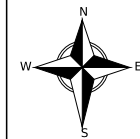
Scale: 1:2101

Issue Date: 10/10/2024
 BYDA Seq No: 245788688
 BYDA Job No: 37779030
 Overview Page:

WARNING: This is a representation of Jemena Gas Networks underground assets only and may not indicate all assets in the area. It must not be used for the purpose of exact asset location in order to undertake any type of excavation. Please read all conditions and information on the attached information sheet. This extract is subject to those conditions. The information contained on this plan is only valid for 28 days from the date of issue.



For legend details, please refer to the Coversheet attachment provided as part of this BYDA response.



Scale: 1:2000

Issue Date: 10/10/2024
 BYDA Seq No: 245788688
 BYDA Job No: 37779030

0m 10m 20m 30m 40m 50m 60m 70m80m



WARNING: This is a representation of Jemena Gas Networks underground assets only and may not indicate all assets in the area. It must not be used for the purpose of exact asset location in order to undertake any type of excavation. This plan is diagrammatic only, and distances scaled from this plan may not be accurate. Please read all conditions and information on the attached information sheet. This extract is subject to those conditions. The information contained on this plan is only valid for 28 days from the date of issue.

Referral
245788684

Member Phone
1800 687 626

Responses from this member

Response received Thu 10 Oct 2024 6.40am

File name	Page
Response Body	31
4678_NBN_Dial_Before_You_Dig_Poster_20170517.pdf	32
245788684_20241009_193935131879_1.pdf	34
Disclaimer_245788684_20241009_193935131879.pdf	37

Hi [REDACTED],

Please find attached the response to your DBYD referral for the address mentioned in the subject line. The location shown in our DBYD response is assumed based off the information you have provided. If the location shown is different to the location of the excavation then this response will consequently be rendered invalid.

Take the time to read the response carefully and note that this information is only valid for 28 days after the date of issue.

If you have any further enquiries, please do not hesitate to contact us.

Regards,
Network Services and Operations
NBN Co Limited
P: 1800626329
E: dbyd@nbnco.com.au
www.nbnco.com.au

Confidentiality and Privilege Notice

This e-mail is intended only to be read or used by the addressee. It is confidential and may contain legally privileged information. If you are not the addressee indicated in this message (or responsible for delivery of the message to such person), you may not copy or deliver this message to anyone, and you should destroy this message and kindly notify the sender by reply e-mail. Confidentiality and legal privilege are not waived or lost by reason of mistaken delivery to you. Any views expressed in this message are those of the individual sender, except where the sender specifically states them to be the views of NBN Co Limited

Please Do Not Reply To This Mail



Working near nbn™ cables

nbn has partnered with Dial Before You Dig to give you a single point of contact to get information about **nbn** underground services owned by **nbn** and other utility/service providers in your area including communications, electricity, gas and other services. Contact with underground power cables and gas services can result in serious injury to the worker, and damage and costly repairs. You must familiarise yourself with all of the Referral Conditions (meaning the referral conditions referred to in the DBYD Notice provided by **nbn**).

Practice safe work habits

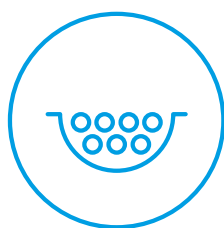
Once the DBYD plans are reviewed, the Five P's of Excavation should be adopted in conjunction with your safe work practices (which must be compliant with the relevant state Electrical Safety Act and Safe Work Australia "Excavation Work Code of Practice", as a minimum) to ensure the risk of any contact with underground **nbn** assets are minimised.



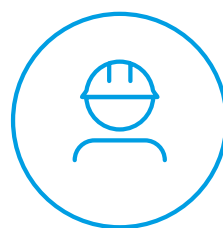
Plan: Plan your job by ensuring the plans received are current and apply to the work to be performed. Also check for any visual cues that may indicate the presence of services not covered in the DBYD plans.



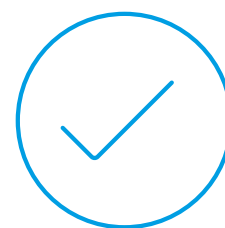
Prepare: Prepare for your job by engaging a DBYD Certified Plant Locator to help interpret plans and identify on-site assets. Contact **nbn** should you require further assistance.



Pothole: Non-destructive potholing (i.e. hand digging or hydro excavation) should be used to positively locate **nbn** underground assets with minimal risk of contact and service damage.

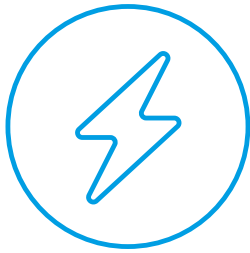


Protect: Protecting and supporting the exposed **nbn** underground asset is the responsibility of the worker. Exclusion zones for **nbn** assets are clearly stated in the plan and appropriate controls must be implemented to ensure that encroachment into the exclusion zone by machinery or activities with the potential to damage the asset is prevented.

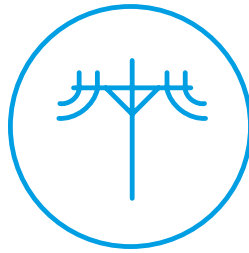


Proceed: Proceed only when the appropriate planning, preparation, potholing and protective measures are in place.

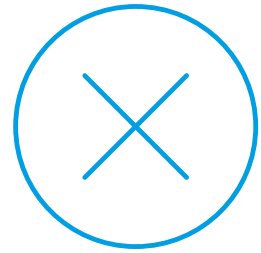
Working near **nbn**TM cables



Identify all electrical hazards, assess the risks and establish control measures.



When using excavators and other machinery, also check the location of overhead power lines.



Workers and equipment must maintain safety exclusion zones around power lines.

Once all work is completed, the excavation should be re-instated with the same type of excavated material unless specified by **nbn**. Please note:

- Construction Partners of **nbn** may require additional controls to be in place when performing excavation activities.
- The information contained within this pamphlet must be used in conjunction with other material supplied as part of this request for information to adequately control the risk of potential asset damage.

Contact

All **nbn**TM network facility damages must be reported online [here](#).
For enquiries related to your DBYD request please call 1800 626 329.

Disclaimer


This brochure is a guide only. It does not address all the matters you need to consider when working near our cables. You must familiarise yourself with other material provided (including the Referral Conditions) and make your own inquiries as appropriate.

nbn will not be liable or responsible for any loss, damage or costs incurred as a result of reliance on this brochure.

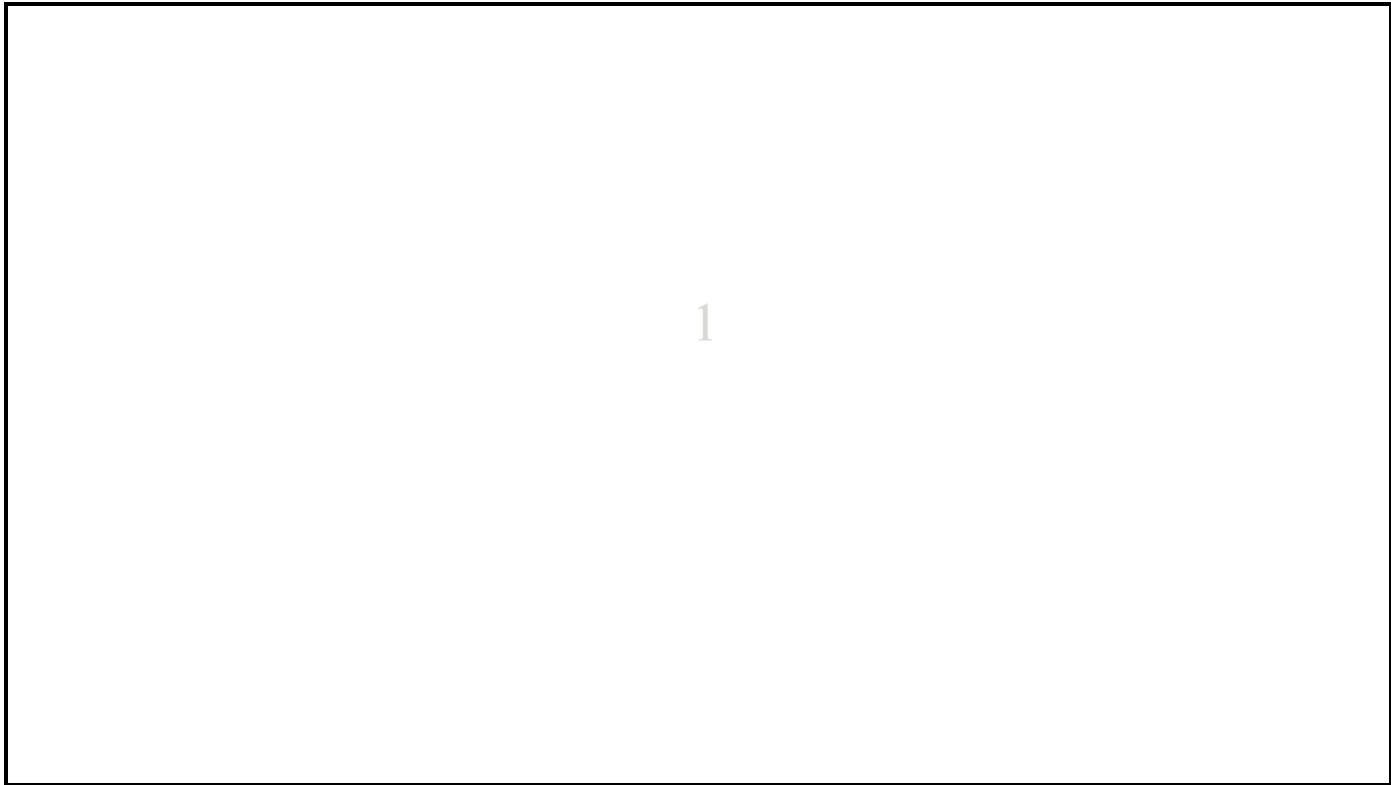
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To: [REDACTED]
Phone: Not Supplied
Fax: Not Supplied
Email: [REDACTED]

Dial before you dig Job #:	37779030	
Sequence #	245788684	
Issue Date:	09/10/2024	
Location:	11 Gardiner Avenue , Banksia , NSW , 2216	

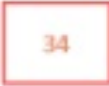




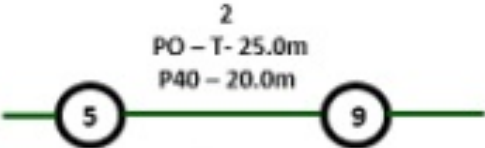






Indicative Plans are tiled below to demonstrate how to layout and read nbn asset plans

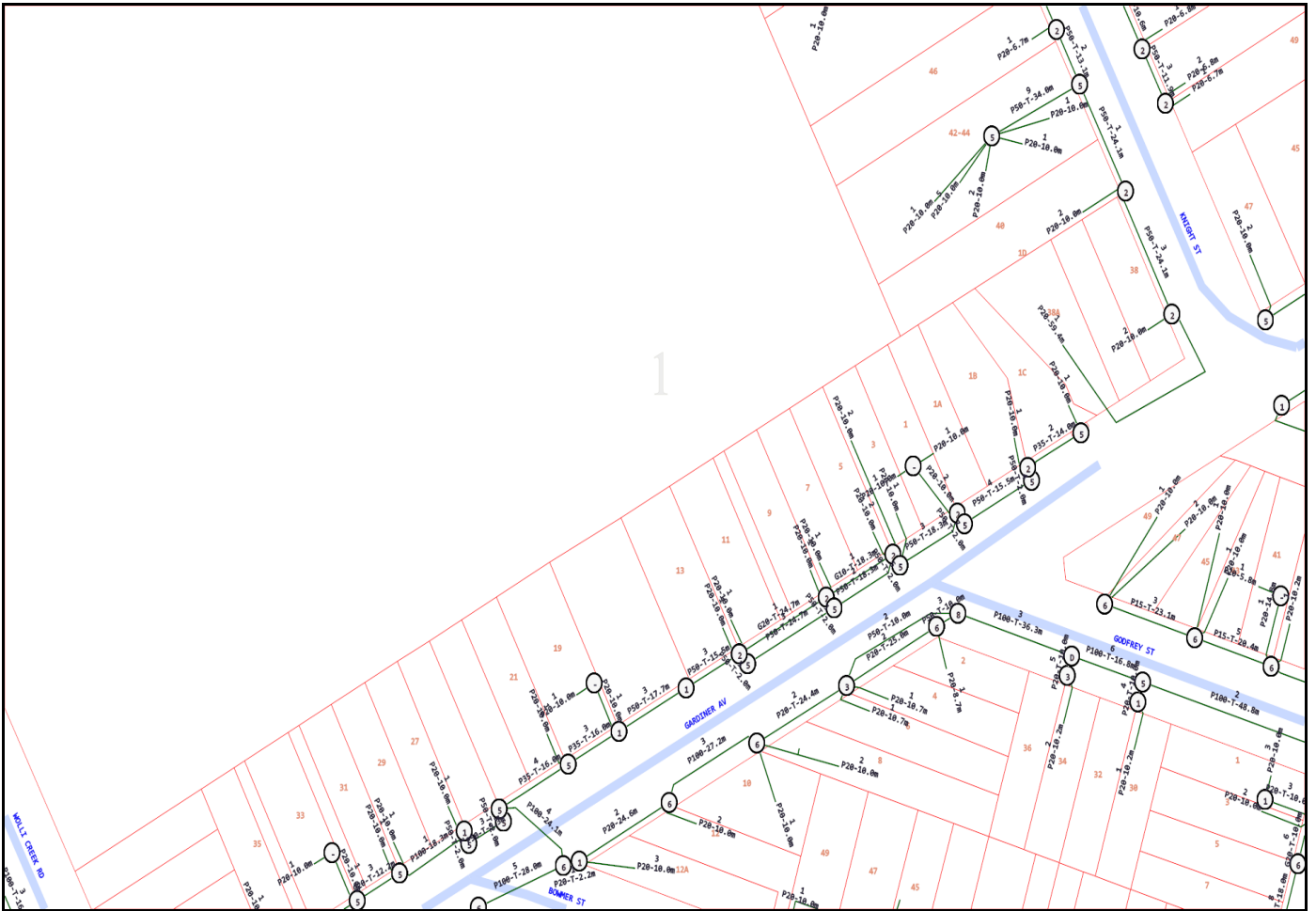




LEGEND




	Parcel and the location
	Pit with size "5"
	Power Pit with size "2E". Valid PIT Size: e.g. 2E, 5E, 6E, 8E, 9E, E, null.
	Manhole
	Pillar
	Cable count of trench is 2. One "Other size" PVC conduit (PO) owned by Telstra (-T-), between pits of sizes, "5" and "9" are 25.0m apart. One 40mm PVC conduit (P40) owned by NBN, between pits of sizes, "5" and "9" are 20.0m apart.
	2 Direct buried cables between pits of sizes, "5" and "9" are 10.0m apart.
	Trench containing any INSERVICE/CONSTRUCTED (Copper/RF/Fibre) cables.
	Trench containing only DESIGNED/PLANNED (Copper/RF/Fibre/Power) cables.
	Trench containing any INSERVICE/CONSTRUCTED (Power) cables.
	Road and the street name "Broadway ST"
Scale	0 20 40 60 Meters 1:2000 1 cm equals 20 m 



Emergency Contacts

You must immediately report any damage to the **nbn™** network that you are/become aware of. Notification may be by telephone - 1800 626 329.

To: [REDACTED]
Phone: Not Supplied
Fax: Not Supplied
Email: [REDACTED]@RHDHV.com

Dial before you dig Job #:	37779030	
Sequence #	245788684	
Issue Date:	09/10/2024	
Location:	11 Gardiner Avenue , Banksia , NSW , 2216	

Information

The area of interest requested by you contains one or more assets.

nbn™ Assets	Search Results
Communications	Asset identified
Electricity	No assets

In this notice **nbn™ Facilities** means *underground fibre optic, telecommunications and/or power facilities, including but not limited to cables, owned and controlled by nbn™*

Location of nbn™ Underground Assets

We thank you for your enquiry. In relation to your enquiry at the above address:

- **nbn's** records indicate that there **ARE nbn™** Facilities in the vicinity of the location identified above ("Location").
- **nbn** indicative plan/s are attached with this notice ("Indicative Plans").
- The Indicative Plan/s show general depth and alignment information only and are not an exact, scale or accurate depiction of the location, depth and alignment of **nbn™** Facilities shown on the Plan/s.
- In particular, the fact that the Indicative Plans show that a facility is installed in a straight line, or at uniform depth along its length cannot be relied upon as evidence that the facility is, in fact, installed in a straight line or at uniform depth.
- You should read the Indicative Plans in conjunction with this notice and in particular, the notes below.
- You should note that, at the present time, the Indicative Plans are likely to be more accurate in showing location of fibre optics and telecommunications cables than power cables. There may be a variation between the line depicted on the Indicative Plans and the location of any power cables. As such, consistent with the notes below, particular care must be taken by you to make your own enquiries and investigations to precisely locate any power cables and manage the risk arising from such cables accordingly.
- The information contained in the Indicative Plan/s is valid for 28 days from the date of issue set out above. You are expected to make your own inquiries and perform your own investigations (including engaging appropriately qualified plant locators, e.g DBYD Certified Locators, at your cost to locate **nbn™** Facilities during any activities you carry out on site).

We thank you for your enquiry and appreciate your continued use of the Dial Before You Dig Service. For any enquiries related to moving assets or Planning and Design activities, please visit the [nbn Commercial Works](#) website to complete the online application form. If you are planning to excavate and require further information, please email dbyd@nbnco.com.au or call 1800 626 329.

Notes:

1. You are now aware that there are **nbn™** Facilities in the vicinity of the above property that could be damaged as a result activities carried out (or proposed to be carried out) by you in the vicinity of the Location.
2. You should have regard to section 474.6 and 474.7 of the *Criminal Code Act 1995* (CoA) which deals with the consequences of interfering or tampering with a telecommunications facility. Only persons authorised by **nbn** can interact with **nbn's** network facilities.
3. Any information provided is valid only for **28 days** from the date of issue set out above.

Referral Conditions

The following are conditions on which **nbn** provides you with the Indicative Plans. By accepting the plans, you are agreeing to these conditions. These conditions are in addition, and not in replacement of, any duties and obligations you have under applicable law.

1. **nbn** does not accept any responsibility for any inaccuracies of its plans including the Indicative Plans. You are expected to make your own inquiries and perform your own investigations (including engaging appropriately qualified plant locators, e.g DBYD Certified Locators, at your cost to locate **nbn™** Facilities during any activities you carry out on site).
2. You acknowledge that **nbn** has specifically notified you above that the Indicative Plans are likely to be more accurate in showing location of fibre optics and telecommunications cables than power cables. There may be a variation between the line depicted on the Indicative Plans and the location of any power cables.
3. You should not assume that **nbn™** Facilities follow straight lines or are installed at uniformed depths

along their lengths, even if they are indicated on plans provided to you. Careful onsite investigations are essential to locate the exact position of cables.

4. In carrying out any works in the vicinity of **nbn**™ Facilities, you must maintain the following minimum clearances:
 - 300mm when laying assets inline, horizontally or vertically.
 - 500mm when operating vibrating equipment, for example: jackhammers or vibrating plates.
 - 1000mm when operating mechanical excavators.
 - Adherence to clearances as directed by other asset owner's instructions and take into account any uncertainty for power cables.
5. You are aware that there are inherent risks and dangers associated with carrying out work in the vicinity of underground facilities (such as **nbn**™ fibre optic, copper and coaxial cables, and power cable feed to **nbn**™ assets). Damage to underground electric cables may result in:
 - Injury from electric shock or severe burns, with the possibility of death.
 - Interruption of the electricity supply to wide areas of the city.
 - Damage to your excavating plant.
 - Responsibility for the cost of repairs.
6. You must take all reasonable precautions to avoid damaging **nbn**™ Facilities. These precautions may include but not limited to the following:
 - All excavation sites should be examined for underground cables by careful hand excavation. Cable cover slabs if present must not be disturbed. Hand excavation needs to be undertaken with extreme care to minimise the likelihood of damage to the cable, for example: the blades of hand equipment should be aligned parallel to the line of the cable rather than digging across the cable.
 - If any undisclosed underground cables are located, notify **nbn** immediately.
 - All personnel must be properly briefed, particularly those associated with the use of earth-moving equipment, trenching, boring and pneumatic equipment.
 - The safety of the public and other workers must be ensured.
 - All excavations must be undertaken in accordance with all relevant legislation and regulations.
7. You will be responsible for all damage to **nbn**™ Facilities that are connected whether directly, or indirectly with work you carry out (or work that is carried out for you or on your behalf) at the Location. This will include, without limitation, all losses expenses incurred by **nbn** as a result of any such damage.
8. You must immediately report any damage to the **nbn**™ network that you are/become aware of. Notification may be by telephone - 1800 626 329.
9. Except to the extent that liability may not be capable of lawful exclusion, **nbn** and its servants and agents and the related bodies corporate of **nbn** and their servants and agents shall be under no liability whatsoever to any person for any loss or damage (including indirect or consequential loss or damage) however caused (including, without limitation, breach of contract negligence and/or breach of statute) which may be suffered or incurred from or in connection with this information sheet or any plans (including Indicative Plans) attached hereto. Except as expressly provided to the contrary in this information sheet or the attached plans (including Indicative Plans), all terms, conditions, warranties, undertakings or representations (whether expressed or implied) are excluded to the fullest extent permitted by law.

All works undertaken shall be in accordance with all relevant legislations, acts and regulations applicable to the particular state or territory of the Location. The following table lists all relevant documents that shall be considered and adhered to.

State/Territory	Documents
National	Work Health and Safety Act 2011
	Work Health and Safety Regulations 2011
	Safe Work Australia - Working in the Vicinity of Overhead and Underground Electric Lines (Draft)

	Occupational Health and Safety Act 1991
NSW	Electricity Supply Act 1995
	Work Cover NSW - Work Near Underground Assets Guide
	Work Cover NSW - Excavation Work: Code of Practice
VIC	Electricity Safety Act 1998
	Electricity Safety (Network Asset) Regulations 1999
QLD	Electrical Safety Act 2002
	Code of Practice for Working Near Exposed Live Parts
SA	Electricity Act 1996
TAS	Tasmanian Electricity Supply Industry Act 1995
WA	Electricity Act 1945
	Electricity Regulations 1947
NT	Electricity Reform Act 2005
	Electricity Reform (Safety and Technical) Regulations 2005
ACT	Electricity Act 1971

Thank You,

nbn DBYD

Date: 09/10/2024

This document is provided for information purposes only. This document is subject to the information classification set out on this page. If no information classification has been included, this document must be treated as UNCLASSIFIED, SENSITIVE and must not be disclosed other than with the consent of nbn co. The recipient (including third parties) must make and rely on their own inquiries as to the currency, accuracy and completeness of the information contained herein and must not use this document other than with the consent of nbn co.

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Referral
245788687

Member Phone
13 20 92

Responses from this member

Response received Thu 10 Oct 2024 6.38am

File name	Page
Response Body	42
MAP_24578868737779030.pdf	43
Important_Information_Sydney_Water_DBYD_Plans.pdf	44
Guide_to_Sydney_Water_DBYD_Plans.pdf	47

Asset Name: 80210

Date of enquiry: 9/10/2024 7:37:00 PM

Notification No: 37779030 (Job No)

Sequence No: 245788687

Customers Name: [REDACTED]

Customers Phone No: [REDACTED]

Address supplied for dig site location

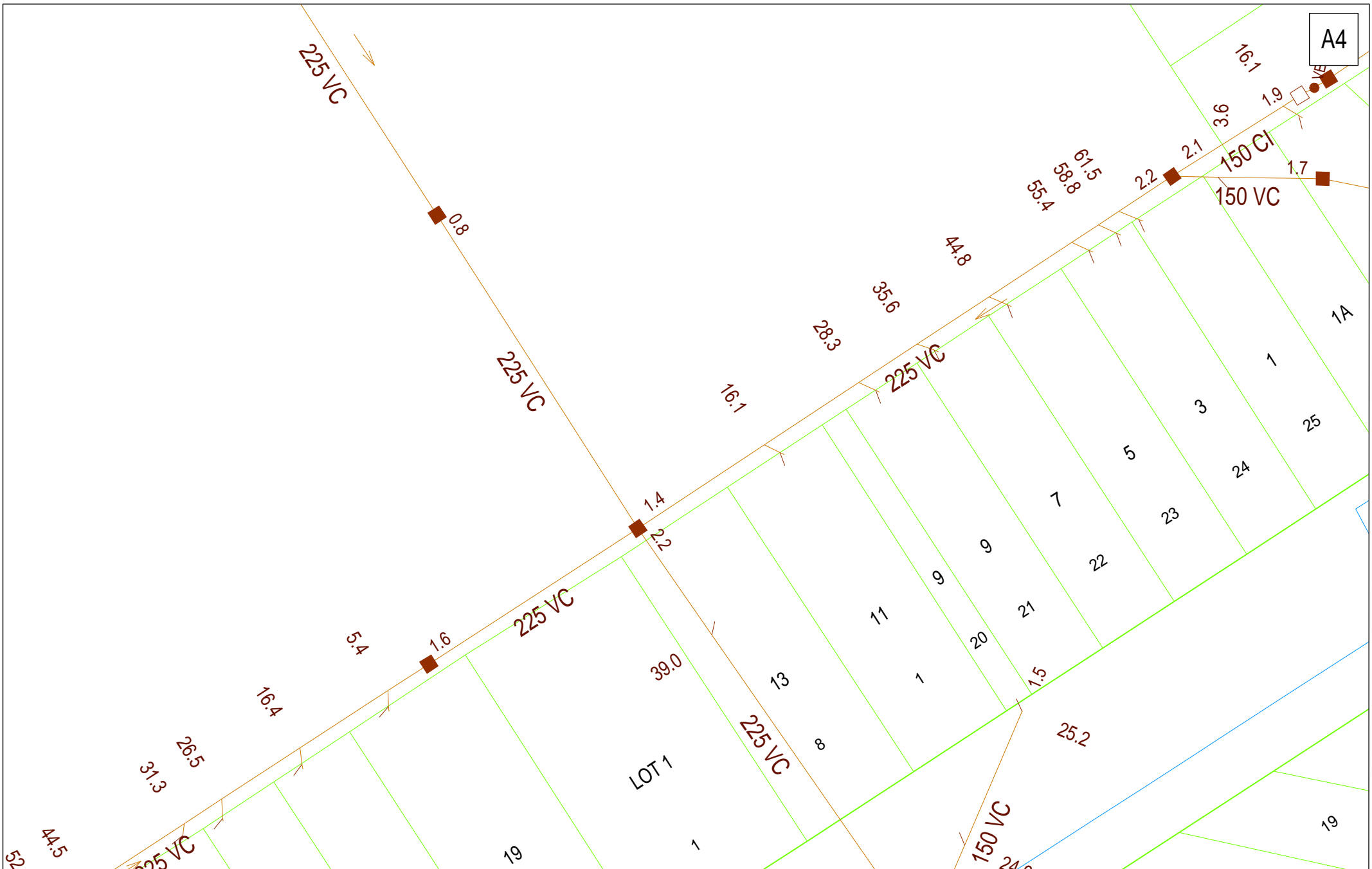
11 Gardiner Avenue, Banksia, NSW

Notice: Please DO NOT REPLY TO THIS EMAIL as it has been automatically generated and replies are not monitored. Should you wish to advise Dial Before You Dig of any issues with this enquiry, please Call 13 20 92.

[Facebook] [Twitter] [YouTube] [Instagram]

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NOTICE: This email is confidential. If you are not the nominated recipient, please immediately delete this email, destroy all copies and inform the sender. Sydney Water Corporation (Sydney Water) prohibits the unauthorised copying or distribution of this email. This email does not necessarily express the views of Sydney Water. Sydney Water does not warrant nor guarantee that this email communication is free from errors, virus, interception or interference.



A4

DBYD Address:
11 Gardiner Avenue
Banksia NSW 2216

DBYD Job No: 37779030
DBYD Sequence No: 245788687

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No warranty is given that the information shown is complete or accurate.
SYDNEY WATER CORPORATION

Scale: 1:500
Date of Production: 10/10/2024

Plan 1 of 1

0m 2m 4m 6m 8m 10m

Important information about Before You Dig

The material provided or made available to you by Sydney Water (including on the Sydney Water website) in relation to your Before You Dig enquiry (Information) is provided on each of the following conditions, which you are taken to have accepted by using the Information:

- 1 The Information has been generated by an automated system based on the area highlighted in the “Locality Indication Only” window on your Confirmation Email. It is your responsibility to ensure that the dig site is properly defined when submitting your Before You Dig enquiry and, if the Information does not match the dig site, to resubmit your enquiry for the correct dig site.
- 2 Neither Sydney Water nor Before You Dig make any representation or give any guarantee, warranty or undertaking (express or implied) as to the currency, accuracy, completeness, effectiveness or reliability of the Information. The Information, including Sydney Water plans and work-as-executed diagrams, amongst other things:
 - (a) may not show all existing structures, including Sydney Water’s pipelines, particularly in relation to newer developments and in relation to structures owned by parties who do not participate in the Before You Dig service;
 - (b) may be out of date and not show changes to surface levels, road alignments, fences, buildings and the like;
 - (c) is approximate only and is therefore not suitable for scaling purposes; and
 - (d) does not show locations of property services (often called house service lines) belonging to or servicing individual customers, which are usually connected to Sydney Water’s structures.
- 3 You are responsible for, amongst other things:
 - (a) exposing underground structures, including Sydney Water’s pipelines, by pot-holing using hand-held tools or vacuum techniques so as to determine the precise location and extent of structures before any mechanical means of excavation are used;
 - (b) the safe and proper excavation of and for underground works and structures, including having regard to the fact that asbestos cement pipelines, which can pose a risk to health, may form part of Sydney Water’s water and sewerage reticulation systems;
 - (c) protecting underground structures, including Sydney Water’s pipelines, from damage and interference;
 - (d) maintaining minimum clearances between Sydney Water’s structures and structures belonging to others;
 - (e) ensuring that backfilling of excavation work in the vicinity of Sydney Water’s structures complies with Sydney Water’s standards contained on its website or otherwise communicated to you;
 - (f) notifying Sydney Water immediately of any damage caused or threat of damage to Sydney Water’s structures;
 - (g) ensuring that plans are approved by Sydney Water (usually signified by stamping) prior to landscaping or building over or in the vicinity of any Sydney Water structure;
 - (h) ensuring that the Information is used only for the purposes for which Sydney Water and Before You Dig intended.

- 4 You acknowledge that you use the Information at your own risk. In consideration for the provision of the Before You Dig service and the Information by Sydney Water and Before You Dig, to the fullest extent permitted by law
- (a) all conditions and guarantees concerning the Information (whether as to quality, outcome, fitness, care, skill or otherwise) expressed or implied by statute, common law, equity, trade, custom or usage or otherwise are expressly excluded and to the extent that those statutory guarantees cannot be excluded, the liability of Sydney Water and Before You Dig to you is limited to either of the following as nominated by Sydney Water in its discretion, which you agree is your only remedy:
 - (i) the supplying of the Information again; or
 - (ii) payment of the cost of having the Information supplied again;
 - (b) in no event will Sydney Water or Before You Dig be liable for, and you release Sydney Water and Before You Dig from, any Loss arising from or in connection with the Information, including the use of or inability to use the Information and delay in the provision of the Information:
 - (i) whether arising under statute or in contract, tort or any other legal doctrine, including any negligent act, omission or default (including willful default) by Sydney Water or Before You Dig; and
 - (ii) regardless of whether Sydney Water or Before You Dig are or ought to have been aware of, or advised of, the possibility of such loss, costs or damages;
 - (c) you will indemnify Sydney Water and Before You Dig against any Loss arising from or in connection with Sydney Water providing incorrect or incomplete information to you in connection with the Before You Dig service; and
 - (d) you assume all risks associated with the use of the Before You Dig and Sydney Water websites, including risk to your computer, software or data being damaged by any virus, and you release and discharge Sydney Water and Before You Dig from all Loss which might arise in respect of your use of the websites.
- 5 **“Sydney Water”** means Sydney Water Corporation and its employees, agents, representatives and contractors. **“Before You Dig”** means Before You Dig Australia and its employees, agents, representatives and contractors. References to **“you”** include references to your employees, agents, representatives, contractors and anyone else using the Information. References to **“Loss”** include any loss, cost, expense, claim, liability or damage (including arising in connection with personal injury, death or any damage to or loss of property and economic or consequential loss, lost profits, loss of revenue, loss of management time, opportunity costs or special damages). To the extent of any inconsistency, the conditions in this document will prevail over any other information provided to you by Sydney Water and Before You Dig.

In an emergency, or to notify Sydney Water of damage or threats to its structures, call 13 20 90 (24 hours, 7 days)

Further information and guidance is available in the 'Plumbing, building and developing' section of Sydney Water's website at www.sydneywater.com.au, where you will find the following under 'Before You Dig':

- Essential references
 - Guide to Reading Sydney Water BYDA Plans
 - Avoid Damaging Water and Sewer Pipelines
 - Technical guidelines: Building over and adjacent to pipe assets
- See Also
 - Building over or next to assets, section of Sydney Water's website at www.sydneywater.com.au

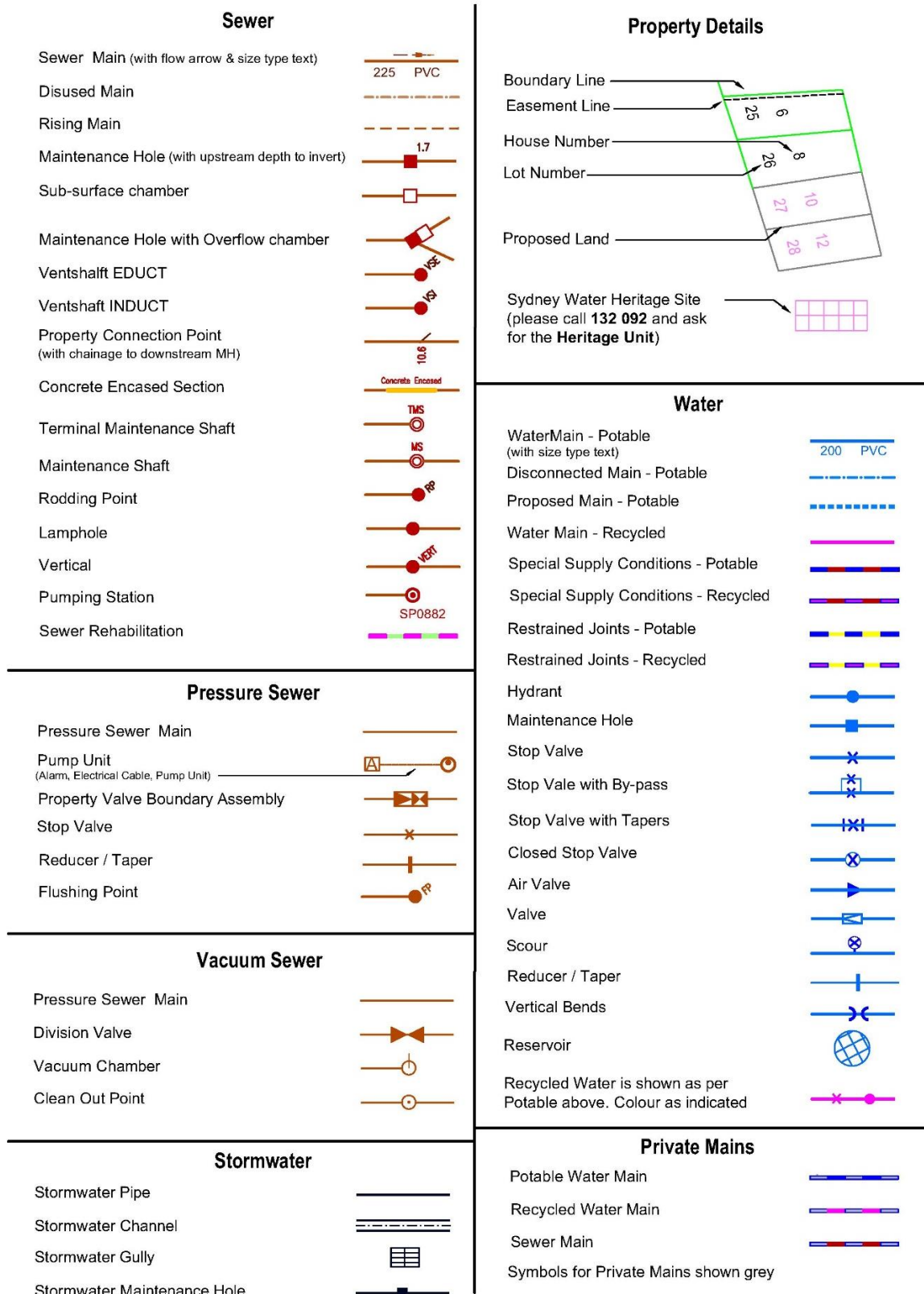
Or call **13 20 92** for Customer Enquiries.

Note: The lodging of enquiries via www.byda.com.au will enable you to receive, via email, colour plans in PDF format 24 hours a day, 7 days a week.

This communication is confidential. If you are not the intended recipient, please destroy all copies immediately. Sydney Water Corporation prohibits unauthorised copying or distribution of this communication.

Guide to reading Sydney Water Before You Dig Plans

This guide will help you understand our plans and what our services are.



Pipe types

ABS	Acrylonitrile Butadiene Styrene	AC	Asbestos Cement
BRICK	Brick	CI	Cast Iron
CICL	Cast Iron Cement Lined	CONC	Concrete
COPPER	Copper	DI	Ductile Iron
DICL	Ductile Iron Cement (mortar) Lined	DIPL	Ductile Iron Polymeric Lined
EW	Earthenware	FIBG	Fibreglass
FL BAR	Forged Locking Bar	GI	Galvanised Iron
GRP	Glass Reinforced Plastics	HDPE	High Density Polyethylene
MS	Mild Steel	MSCL	Mild Steel Cement Lined
PE	Polyethylene	PC	Polymer Concrete
PP	Polypropylene	PVC	Polyvinylchloride
PVC - M	Polyvinylchloride, Modified	PVC - O	Polyvinylchloride, Oriented
PVC - U	Polyvinylchloride, Unplasticised	RC	Reinforced Concrete
RC-PL	Reinforced Concrete Plastics Lined	S	Steel
SCL	Steel Cement (mortar) Lined	SCL IBL	Steel Cement Lined Internal Bitumen
SGW	Salt Glazed Ware	SPL	Steel Polymeric Lined
SS	Stainless Steel	STONE	Stone
VC	Vitrified Clay	WI	Wrought Iron
WS	Woodstave		

In an emergency, or to notify Sydney Water of damage or threats to its structures, call 13 20 90 (24 hours, 7 days)

Further information and guidance is available in the 'Plumbing, building and developing' section of Sydney Water's website at www.sydneywater.com.au, where you will find the following under 'Before You Dig':

- Essential references
 - Avoid Damaging Water and Sewer Pipelines
 - Important Information about Before You Dig
 - Technical guidelines: Building over and adjacent to pipe assets
- See Also
 - Building over or next to assets, section of Sydney Water's website at www.sydneywater.com.au

Or call **13 20 92** for Customer Enquiries.

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This communication is confidential. If you are not the intended recipient, please destroy all copies immediately. Sydney Water Corporation prohibits unauthorised copying or distribution of this communication.

Referral
245788689

Member Phone
1800 653 935

Responses from this member

Response received Thu 10 Oct 2024 6.42am

File name	Page
Response Body	50
245788689.pdf	51
Telstra Map Legend 4.0b.pdf	53
Telstra Duty of Care v32.0b.pdf	54
AccreditedPlantLocators 2024-09-13a.pdf	56

Attention: [REDACTED] [REDACTED]

Site Location: 11 Gardiner Avenue, Banksia, NSW 2216

Your Job Reference: REF

Please do not reply to this email, this is an automated message -

Thank you for requesting Telstra information via Before You Dig Australia (BYDA).

This response contains Telstra information relating to your recent BYDA request.

Information for opening Telstra Asset Plans as well as some other useful contact information is listed in the attached **Telstra Map Legend attached.**

Please refer to all enclosed attachments for more information.

Please Report Damage to Telstra Equipment: [Report damages to Telstra equipment - Telstra](#)

Please note:

When working in the vicinity of telecommunications plant you have a 'Duty of Care' that must be observed. Please ensure you read the 'Telstra Duty of Care' document (attached) - it contains important information including essential steps that must be undertaken prior to commencing construction activities.

WARNING: Telstra plans and location information conform to Quality Level 'D' of the Australian Standard AS 5488 - Classification of Subsurface Utility Information. As such, Telstra supplied location information is indicative only. Spatial accuracy is not applicable to Quality Level D. Refer to AS 5488 for further details. The exact position of Telstra assets can only be validated by physically exposing them. Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy. Further on site investigation is required to validate the exact location of Telstra assets prior to commencing work. A Certified Locating Organisation is an essential part of the process to validate the exact location of Telstra assets and to ensure the assets are protected during construction works. See the [Steps - Working Near Telecommunications Assets \(attached Telstra Duty of Care\)](#).

Please note that:

- it is a criminal offence under the *Criminal Code Act 1995* (Cth) to tamper or interfere with telecommunications infrastructure.
- Telstra will take action to recover compensation for damage caused to property and assets, and for interference with the operation of Telstra's networks and customers' services.

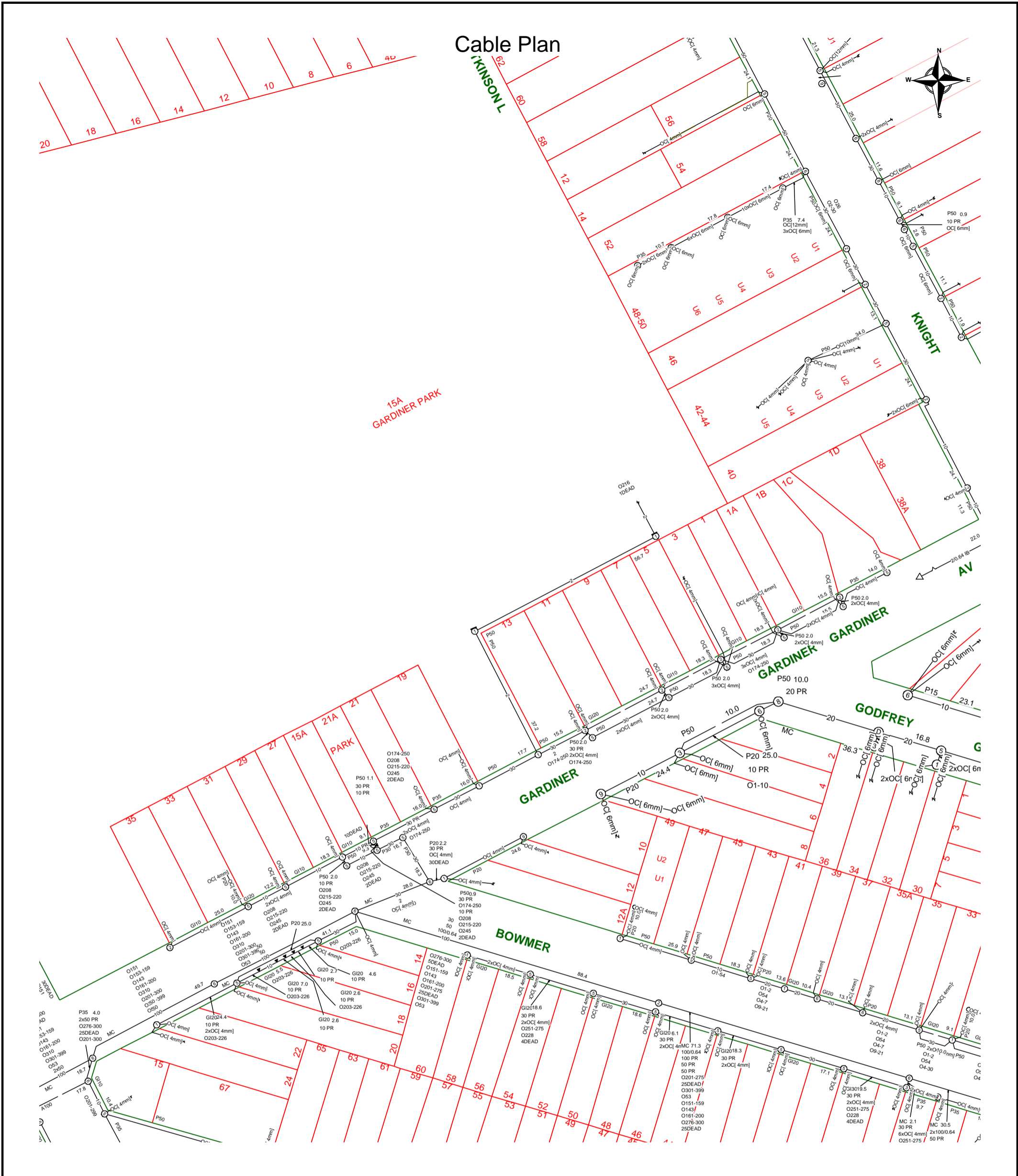
Telstra's plans contain Telstra's confidential information and are provided on the basis that they are used solely for identifying the location or vicinity of Telstra's infrastructure to avoid damage to this infrastructure occurring as part of any digging or other excavation activity. You must not use Telstra's plans for any other purpose or in a way that will cause Telstra loss or damage and you must comply with any other terms of access to the data that have been provided to you by Telstra (including Conditions of Use or Access).

(See attached file: Telstra Duty of Care v32.0b.pdf)

(See attached file: Telstra Map Legend 4.0b.pdf)

(See attached file: AccreditedPlantLocators 2024-09-13a.pdf)

(See attached file: 245788689.pdf)




 Report Damage: <https://service.telstra.com.au/customer/general/forms/report-damage-to-telstra-equipment>
 Ph - 13 22 03
 Email - Telstra.Plans@team.telstra.com
 Planned Services - ph 1800 653 935 (AEST bus hrs only) General Enquiries
TELSTRA LIMITED A.C.N. 086 174 781
 Generated On 10/10/2024 06:42:17

Sequence Number: 245788689
Please read Duty of Care prior to any excavating

The above plan must be viewed in conjunction with the Mains Cable Plan on the following page

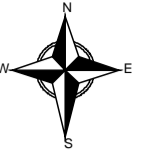
WARNING

Telstra plans and location information conform to Quality Level "D" of the Australian Standard AS 5488-Classification of Subsurface Utility Information. As such, Telstra supplied location information is indicative only. Spatial accuracy is not applicable to Quality Level D. Refer to AS 5488 for further details. The exact position of Telstra assets can only be validated by physically exposing it. Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy. Further on site investigation is required to validate the exact location of Telstra plant prior to commencing construction work. A Certified Locating Organisation is an essential part of the process to validate the exact location of Telstra assets and to ensure the asset is protected during construction works.

See the Steps- Telstra Duty of Care that was provided in the email response.

Mains Cable Plan

KINSON L



Report Damage: <https://service.telstra.com.au/customer/general/forms/report-damage-to-telstra-equipment>
 Ph - 13 22 03
 Email - Telstra.Plans@team.telstra.com
 Planned Services - ph 1800 653 935 (AEST bus hrs only) General Enquiries

Sequence Number: 245788689

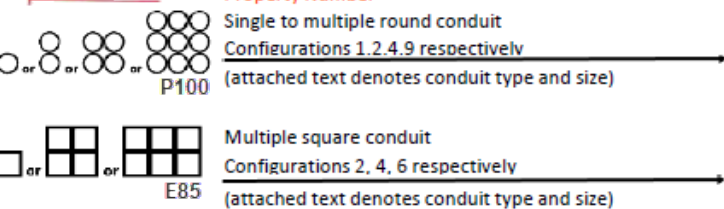
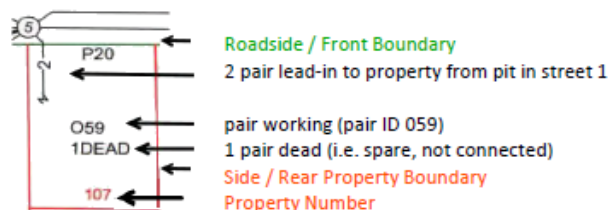
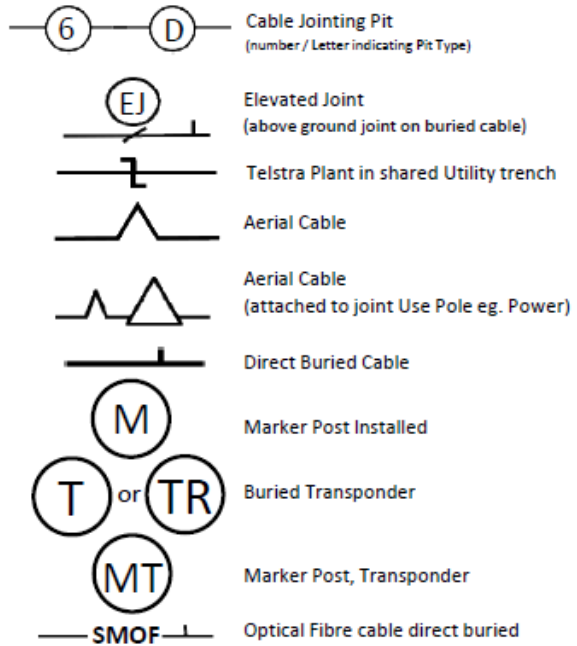
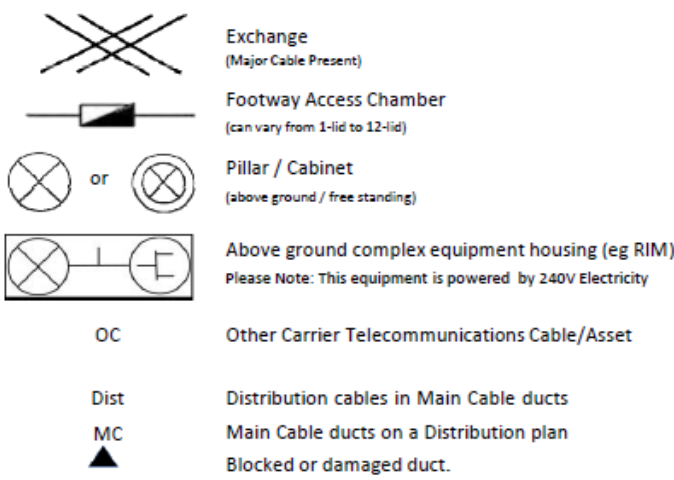
Please read Duty of Care prior to any excavating

TELSTRA LIMITED A.C.N. 086 174 781

Generated On 10/10/2024 06:42:19

WARNING
 Telstra plans and location information conform to Quality Level "D" of the Australian Standard AS 5488-Classification of Subsurface Utility Information. As such, Telstra supplied location information is indicative only. Spatial accuracy is not applicable to Quality Level D. Refer to AS 5488 for further details. The exact position of Telstra assets can only be validated by physically exposing it. Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy. Further on site investigation is required to validate the exact location of Telstra plant prior to commencing construction work. A Certified Locating Organisation is an essential part of the process to validate the exact location of Telstra assets and to ensure the asset is protected during construction works.
 See the Steps- Telstra Duty of Care that was provided in the email response.

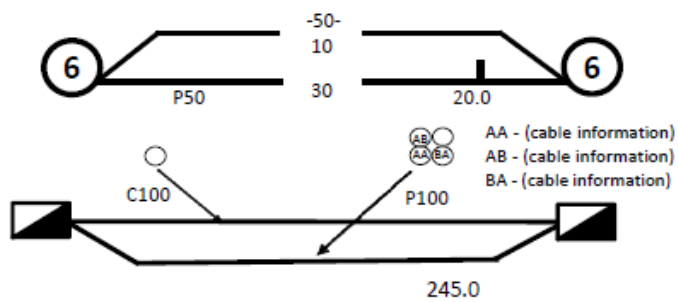
LEGEND



Some examples of conduit type and size:

A - Asbestos cement, P - PVC / Plastic, C - Concrete,
GI - Galanised iron, E - Earthenware
Conduit sizes *nominally* range from 20mm to 100mm
P50 50mm PVC conduit
P100 100mm PVC conduit
A100 100mm asbestos cement conduit

Some Examples of how to read Telstra Plans



One 50mm PVC conduit (P50) containing a 50-pair and a 10-pair cable between two 6-pits. approximately 20.0m apart, with a direct buried 30-pair cable along the same route

Two separate conduit runs between two footway access chambers (manholes) approximately 245m apart A nest of four 100mm PVC conduits (P100) containing assorted cables in three ducts (one being empty) and one empty 100mm concrete duct (C100) along

Protect our Network:

by maintaining the following distances from our assets:

- 1.0m Mechanical Excavators, Farm Ploughing, Tree Removal
- 500mm Vibrating Plate or Wacker Packer Compactor
- 600mm Heavy Vehicle Traffic (over 3 tonnes) not to be driven across Telstra ducts or plant.
- 1.0m Jackhammers/Pneumatic Breakers
- 2.0m Boring Equipment (in-line, horizontal and vertical)

For more info contact a [CERTLOC Certified Locating Organisation \(CLO\)](#) or Telstra Location Intelligence Team 1800 653 935

Before You Dig Australia

Think before you dig

This document has been sent to you because you requested plans of the Telstra network through Before You Dig Australia (BYDA).

If you are working or excavating near telecommunications cables, or there is a chance that cables are located near your site, you are responsible to avoid causing damage to the Telstra network.

Please read this document carefully. Taking your time now and following the steps below can help you avoid damaging our network, interrupting services, and potentially incurring civil and criminal penalties.

Our network is complex and working near it requires expert knowledge. Do not attempt these activities if you are not qualified to do so.

Disclaimer and legal details



*Telstra advises that the accuracy of the information provided by Telstra conforms to Quality Level D as defined in AS5488-2013.

It is a criminal offence under the Criminal Code Act 1995 (Cth) to tamper or interfere with telecommunications infrastructure.

Telstra will also take action to recover costs and damages from persons who damage assets or interfere with the operation of Telstra's networks.

By receiving this information including the indicative plans that are provided as part of this information package you confirm that you understand and accept the risks of working near Telstra's network and the importance of taking all the necessary steps to confirm the presence, alignments and various depths of Telstra's network. This in addition to, and not in replacement of, any duties and obligations you have under applicable law.

When working in the vicinity of a telecommunications plant you have a "Duty of Care" that must be observed. Please read and understand all the information and disclaimers provided below.

The Telstra network is complex and requires expert knowledge to interpret information, to identify and locate components, to pothole underground assets for validation and to safely work around assets without causing damage. If you are not an expert and/or qualified in these areas, then you must not attempt these activities. Telstra will seek compensation for damages caused to its property and losses caused to Telstra and its customers. Construction activities and/or any activities that potentially may impact on Telstra's assets must not commence without first undertaking these steps. Construction activities can include anything that involves breaking ground, potentially affecting Telstra assets.

If you are designing a project, it is recommended that you also undertake these steps to validate underground assets prior to committing to your design.

This Notice has been provided as a guide only and may not provide you with all the information that is required for you to determine what assets are on or near your site of interest. You will also need to collate and understand all information received from other Utilities and understand that some Utilities are not a part of the BYDA program and make your own enquiries as appropriate. It is the responsibility of the entities undertaking the works to protect Telstra's network during excavation / construction works.

Telstra owns and retains the copyright in all plans and details provided in conjunction with the applicant's request. The applicant is authorised to use the plans and details only for the purpose indicated in the applicant's request. The applicant must not use the plans or details for any other purpose.

Telstra plans or other details are provided only for the use of the applicant, its servants, agents, or CERTLOC Certified Locating Organisation (CLO). The applicant must not give the plans or details to any parties other than these and must not generate profit from commercialising the plans or details.

Telstra, its servants or agents shall not be liable for any loss or damage caused or occasioned by the use of plans and or details so supplied to the applicant, its servants and agents, and the applicant agrees to indemnify Telstra against any claim or demand for any such loss or damage.

Please ensure Telstra plans and information provided always remains on-site throughout the inspection, location, and construction phase of any works.

Telstra plans are valid for 60 days after issue and must be replaced if required after the 60 days.

Data Extraction Fees

In some instances, a data extraction fee may be applicable for the supply of Telstra information. Typically, a data extraction fee may apply to large projects, planning and design requests or requests to be supplied in non-standard formats. For further details contact Telstra Planned Services.

Telstra does not accept any liability or responsibility for the performance of or advice given by a CERTLOC Certified Locating Organisation (CLO). Certification is an initiative taken by Telstra towards the establishment and maintenance of competency standards. However, performance and the advice given will always depend on the nature of the individual engagement.

Neither the Certified Locating Organisation nor any of its employees are an employee or agent for Telstra. Telstra is not liable for any damage or loss caused by the Certified Locating Organisation or its employees.

Once all work is completed, the excavation should be reinstated with the same type of excavated material unless specified by Telstra.

The information contained within this pamphlet must be used in conjunction with other material supplied as part of this request for information to adequately control the risk of potential asset damage.

When using excavators and other machinery, also check the location of overhead power lines.

Workers and equipment must maintain safety exclusion zones around power lines

WARNING: Telstra plans and location information conform to Quality Level 'D' of the Australian Standard AS 5488 - Classification of Subsurface Utility Information. As such, Telstra supplied location information is indicative only. Spatial accuracy is not applicable to Quality Level D. Refer to AS 5488 for further details. Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy shown on the plans. **FURTHER ON SITE INVESTIGATION IS REQUIRED TO VALIDATE THE EXACT LOCATION OF TELSTRA PLANT PRIOR TO COMMENCING CONSTRUCTION WORK.** A plant location service is an essential part of the process to validate the exact location of Telstra assets and to ensure the assets are protected during construction works. The exact position of Telstra assets can only be validated by physically exposing them. Telstra will seek compensation for damages caused to its property and losses caused to Telstra and its customers.

Privacy Note

Your information has been provided to Telstra by BYDA to enable Telstra to respond to your BYDA request. Telstra keeps your information in accordance with its privacy statement. You can obtain a copy at www.telstra.com.au/privacy or by calling us at 1800 039 059 (business hours only).

OPENING ELECTRONIC MAP ATTACHMENTS –

Telstra Cable Plans are generated automatically in either PDF or DWF file types.
Dependent on the site address and the size of area selected.
You may need to download and install free viewing software from the internet e.g.



DWF Map Files (all sizes over A3)
Autodesk Viewer (Internet Browser) <https://viewer.autodesk.com/> or
Autodesk Design Review <http://usa.autodesk.com/design-review/> for
DWF files. (Windows PC)



PDF Map Files (max size A3)
Adobe Acrobat Reader <http://get.adobe.com/reader/>



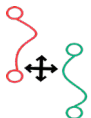
Telstra BYDA map related enquiries email
Telstra.Plans@team.telstra.com
1800 653 935 (AEST Business Hours only)



REPORT ANY DAMAGE TO THE TELSTRA NETWORK IMMEDIATELY
Report online - <https://www.telstra.com.au/forms/report-damage-to-telstra-equipment>
Ph: 13 22 03
If you receive a message asking for a phone or account number say:
“I don’t have one” then say “Report Damage” then press 1 to speak
to an operator.



Telstra New Connections / Disconnections
13 22 00



Telstra asset relocation enquiries: 1800 810 443 (AEST business
hours only).
NetworkIntegrity@team.telstra.com
<https://www.telstra.com.au/consumer-advice/digging-construction>



Telstra Aerial Assets Group (overhead network)
1800 047 909



CERTLOC Certified Locating Organisation (CLO)
certloc.com.au/locators/



End of document

i This document may exclude some files (eg. DWF or ZIP files)

This document was automatically generated at a point-in-time. Be aware that the source information from which this document was created may have changed since it was produced. This document may contain incomplete or out-of-date information. Always check your enquiry details in the BYDA Referral Service for the most recent information. For copyright information refer to individual responses.

[Review responses online](#) ↗



Received 6 of 6 responses

All responses received

19 Gardiner Avenue, Banksia NSW 2216

Job dates
06/01/2025 → 31/01/2025

These plans expire on
6 Nov 2024

Lodged by



Authority	Status	Page
✉ BYDA Confirmation		2
🏢 Ausgrid	Received	4
🏢 Bayside Council	Received	21
🏢 Jemena Gas South	Received	24
🏢 NBN Co NswAct	Received	30
🏢 Sydney Water	Received	41
🏢 Telstra NSW Central	Received	49

Contact Details

Contact [REDACTED]	Contact number [REDACTED]	Company Royal HaskingDHV	Enquirer ID 3477134
Email [REDACTED]		Address Level 15 99 Mount Street North Sydney NSW 2060	

Job Site and Enquiry Details

WARNING: The map below only displays the location of the proposed job site and does not display any asset owners' pipe or cables. The area highlighted has been used only to identify the participating asset owners, who will send information to you directly.

Enquiry date 10/10/2024	Start date 06/01/2025	End date 31/01/2025	On behalf of Utility Bayside Council	Job purpose Design	Locations Road Reserve Footpath	Onsite activities Planning & Design
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Check that the location of the job site is correct. If not, you must submit a new enquiry.

If the scope of works change or plan validity dates expire, you must submit a new enquiry.

Do NOT dig without plans. Safe excavation is your responsibility. If you don't understand the plans or how to proceed safely, please contact the relevant asset owners.

User Reference REF - Eastern Path	Address 19 Gardiner Avenue Banksia NSW 2216	Notes/description -
---	--	-------------------------------

Your Responsibility and Duty of Care

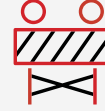
- **Lodging an enquiry does not authorise project commencement.** Before starting work, you must obtain all necessary information from all affected asset owners.
- If you don't receive plans within 2 business days, contact the asset owner & quote their sequence number.
- Always follow the 5Ps of Safe Excavation (page 2), and locate assets before commencing work.
- Ensure you comply with State legislative requirements for Duty of Care and safe digging.
- If you damage an underground asset, you MUST advise the asset owner immediately.
- By using the BYDA service, you agree to the [Privacy Policy](#) and [Term of Use](#).
- For more information on safe digging practices, visit www.byda.com.au

Asset Owner Details

Below is a list of asset owners with underground infrastructure in and around your job site. It is your responsibility to identify the presence of these assets. Plans issued by Members are indicative only unless specified otherwise. Note: not all asset owners are registered with BYDA. You must contact asset owners not listed here directly.

Referral ID (Seq. no)	Authority Name	Phone	Status
245788735	Ausgrid	(02) 4951 0899	NOTIFIED
245788736	Bayside Council	-	NOTIFIED
245788738	Jemena Gas South	1300 880 906	NOTIFIED
245788734	NBN Co NswAct	1800 687 626	NOTIFIED
245788737	Sydney Water	13 20 92	NOTIFIED
245788739	Telstra NSW Central	1800 653 935	NOTIFIED

END OF UTILITIES LIST



Plan

Plan your job. Use the BYDA service at least one day before your job is due to begin, and ensure you have the correct plans and information required to carry out a safe project.

Prepare

Prepare by communicating with asset owners if you need assistance. Look for clues onsite. Engage a skilled Locator.

Pothole

Potholing is physically sighting the asset by hand digging or hydro vacuum extraction.

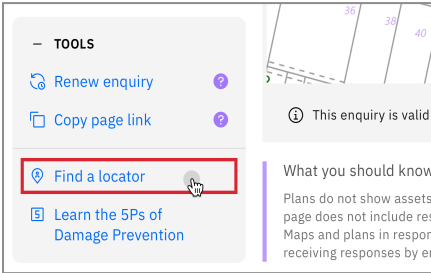
Protect

Protecting and supporting the exposed infrastructure is the responsibility of the excavator. Always erect safety barriers in areas of risk and enforce exclusion zones.

Proceed

Only proceed with your excavation work after planning, preparing, potholing (unless prohibited), and having protective measures in place.

Engage a skilled Locator



When you lodge an enquiry you will see skilled Locators to contact

Visit the Certified Locator website directly and search for a locator near you

bydlocator.com/certified-locating-organisation

Book a FREE BYDA Session



BYDA offers two different sessions to suit you and your organisation's needs. The free sessions are offered in two different formats - online and face-to-face:

- 1. Awareness Session:** Understand the role of BYDA, safe excavation practices, complying with asset-owner instructions, and the consequences of damages. Learn how to mitigate and avoid potential damage and harm and ensure a safe work environment.
- 2. Plan Reading Session:** Develop the skills to interpret asset owners' plans, legends, and symbols effectively. Understand the complexities of plan interpretation to ensure smooth project execution.

To book a session, visit:

byda.com.au/contact/education-awareness-enquiry-form/

BOOK NOW

Referral
245788735

Member Phone
(02) 4951 0899

Responses from this member

Response received Thu 10 Oct 2024 6.44am

File name	Page
Response Body	5
Important Information.pdf	6
How To Read AusGrid Plans.pdf	7
Assets Affected Letter.pdf	13
Working Near AusGrid Cables.pdf	14
S_245788735_GMLA3_1.pdf	20

Thank you for contacting Dial Before You Dig (DBYD) prior to engaging in work or activities which may affect the infrastructure of Ausgrid.

**WARNING : AUSGRID ASSETS FOUND
YOU MUST READ AND UNDERSTAND ALL ATTACHED FILES IN THIS EMAIL BEFORE
PROCEEDING WITH ANY WORKS**

Please pay special attention to the attached file 'Assets Affected Letter.pdf'

Job number - 37779040

Sequence number - 245788735

Dig site location -
19 Gardiner Avenue
Banksia
NSW 2216

Attention - [REDACTED] [REDACTED]

Attached are the files containing information relating to your Dial Before You Dig request. For further enquiries or assistance with interpretation of plans and search content please contact our DBYD support team via email dbyd.ops@ausgrid.com.au or phone 02 4951 0899.

Please **DO NOT SEND A REPLY** to this email address as it has been generated by an automated system and replies are not monitored.

If you are unable to launch any of the files for viewing and printing, you may need to download and install free viewing and printing software such as-

Adobe Acrobat Reader (for PDF files).

<http://get.adobe.com/reader/>

This e-mail may contain confidential or privileged information. If you have received it in error, please notify the sender immediately via return e-mail and then delete the original e-mail. If you are the intended recipient, please note the change of sender email address to @ausgrid.com.au. Ausgrid has collected your business contact details for dealing with you in your business capacity. More information about how we handle your personal information, including your right of access is contained at <http://www.ausgrid.com.au/>

IMPORTANT INFORMATION

YOU MUST BE AWARE THAT:

1. There may be underground cables owned by other utilities, in the vicinity of your work, about which Ausgrid has no information.
2. Ausgrid does not usually keep plans of privately owned underground cables or its underground service cables on private property. (Refer NS 156 for further information.)

YOU MUST MAKE YOUR OWN ENQUIRIES IN RESPECT OF THESE CABLES.

YOU MUST UNDERSTAND THAT:

1. Ausgrid takes all reasonable care in providing details of its underground cables. However, owing to changes in road and footway alignments and levels, and the age and incompleteness of some records, it is not possible to conclusively specify the location of all of Ausgrid's underground cables. The accuracy and completeness of the information provided to you cannot be guaranteed. It is intended to be indicative only. It must not be **solely** relied upon when undertaking underground works.
2. Except to the extent that liability may not be capable of lawful exclusion, Ausgrid, its servants and agents will be under no liability whatsoever to any person for loss or damage (including indirect or consequential loss or damage) however caused (including without limitation, for breach of contract, negligence and breach of statute) which may be suffered or incurred from or in connection with the advice provided.
3. Due to the inherent dangers associated with **excavation, under boring and directional drilling** in the vicinity of underground cables, precautions must always be taken when undertaking any underground works. Ausgrid's Network Standard NS 156 specifies standards for working in the vicinity of underground cables. It is deemed to be part of this Advice, and it must be read by you.
4. Due to the inherent risk of compromising the stability of Ausgrid's power poles during excavation which could lead to pole movement or collapse, precautions must always be taken. If excavation is to be carried out within 1m from a power pole, Ausgrid must be contacted at construction.works@ausgrid.com.au for advice. Do not proceed until you have received such advice from Ausgrid.

YOU MUST READ [NETWORK STANDARD NS 156](#), *WORKING NEAR OR AROUND UNDERGROUND CABLES*. IT IS PART OF THIS ADVICE.

Reading Ausgrid Plans

COMN0119

1 Property Lines

“property line” (PL), sometimes referred to as “building line” (BL), is the standard dimensioning reference point on all Ausgrid plans and represents property boundaries.

Typically, the PL is the boundary between private property and local council’s footpath area or nature reserve. Most residential fences and office blocks are erected along the PL.

“kerb line” (KL) is less frequently referred to on Ausgrid plans, and where used will be identified clearly as KL.

Numbers listed within property boundaries should correspond to recognised “street numbers” (refer to figure 1).



Figure 1

2 Datum References

“datum references” identify distances (in metres) from significant features (such as corners of property boundaries) to reference points such as Ausgrid assets (eg: “conduits”, “cables”, “joints”) (refer to figure 2).

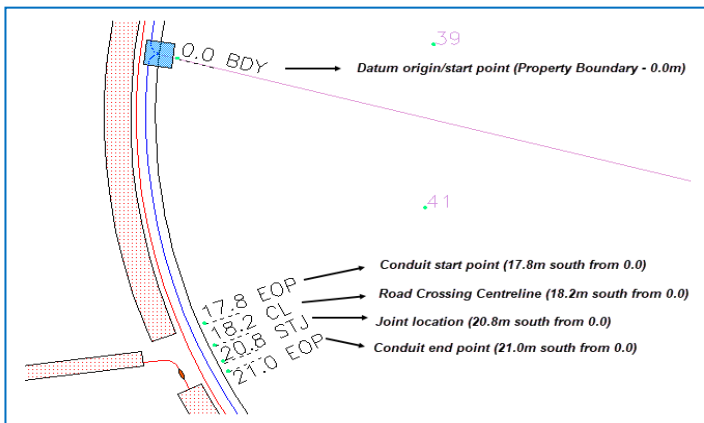


Figure 2

3 Cross Sections

A “cross sections” displayed on Ausgrid plans detail information relating to the relative position (ie: distance from the “property line”, and the depth of “cover”) of Ausgrid assets.

“Cover” is a term used to refer to the depth of cables underground.

A “cross section” leader line will be drawn indicating the location of the displayed “cable” or “conduit” information on Ausgrid plans.

The distance from “property line” (in metres) and depth of “cover” (in metres) references are displayed as; ie: 0.6 metres from PL and 0.5 metres underground.

Where distance and cover are not recorded, they will be clearly marked as “NR”.

NOTE: Distance and cover where indicated may be different to the actual position of the cables (eg: fill may have been placed at site that has changed the ground level).

“PL” distance shown in cross sections is an indicative measure to the centre of the trench allocation from the adjacent property line.

On some plans the “cross sections” may also be shown with a specific number (eg: HR1). This number will match with a cross section detail found in the border of the plot or on a separate plot page (refer to figures 3 and 4).

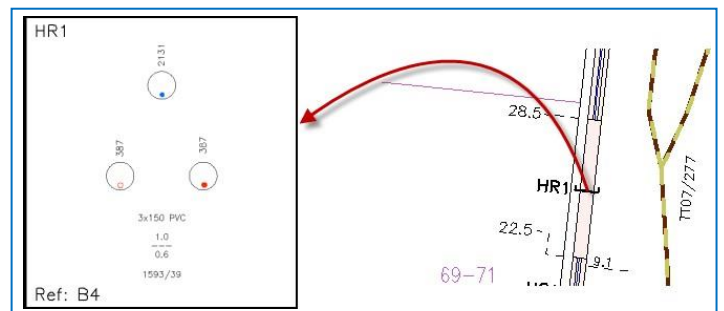


Figure 3

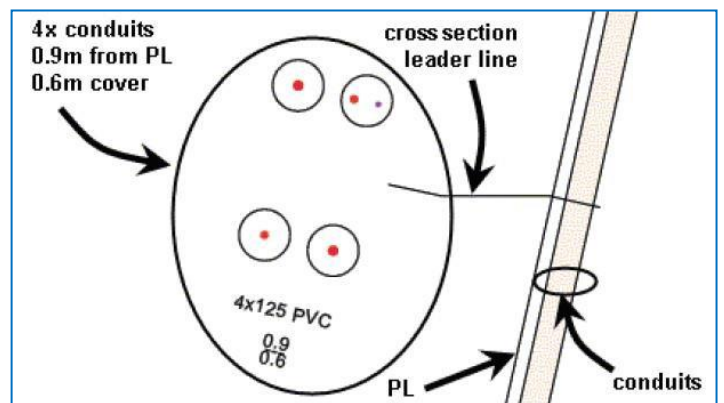


Figure 4

4 Cable Joints and Joint Reports

“cable joints” (numbered individually) and “joint reports” (attached to Ausgrid plans) can provide information relating to the relative position of Ausgrid assets, distance from the “property line” (in metres), and the depth of “cover” (in metres) (refer to figures 5 and 6).

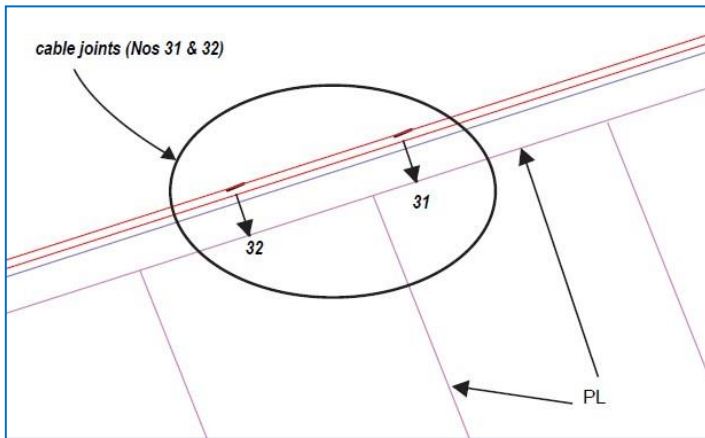


Figure 5

JOINT DETAIL REPORT			
No.	Bk-Pg	PI/Cvt	Joint Location
Map: 31	LE912 524-24	1.14/0.69	61.7 E of Pearl Lane EPL
32	524-24	1.14/0.69	57.6 E of Pearl Lane EPL

joint location
(61.7m east of Pearl Lane East PL)

joint position
(1.14m from PL, 0.69 cover)

Figure 6

5 Cross Section Detail Boxes

“cross section” detail boxes on the sides of an Ausgrid plan are used when there is insufficient room to display “cable” and/or “conduit” information on the Ausgrid plan.

Ausgrid plans (refer to figure 7) are bordered by numeric identifiers along the top and bottom borders and alpha identifiers along the side borders.

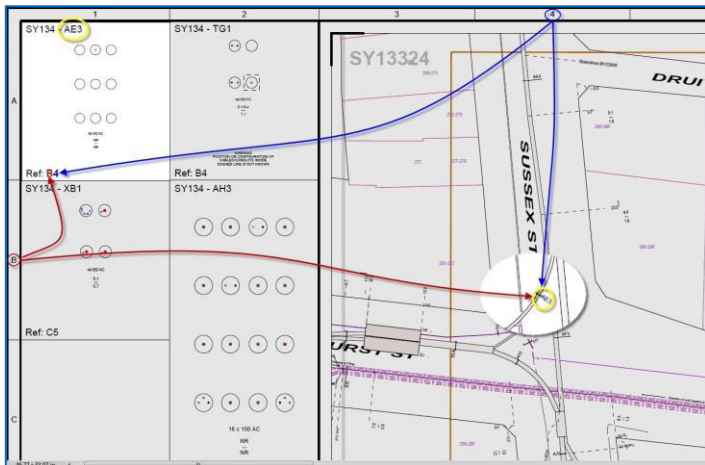


Figure 7

“Cross section” leader line and annotation is drawn on the Ausgrid plan for a reference to “cable” and/or “conduit” information in the “cross

6 Pits

Underground “pits” are numbered on Ausgrid plans, positioned relative to the “property line” (PL), and can be found on either the footpath (nature strip) or the road (refer figure 8).

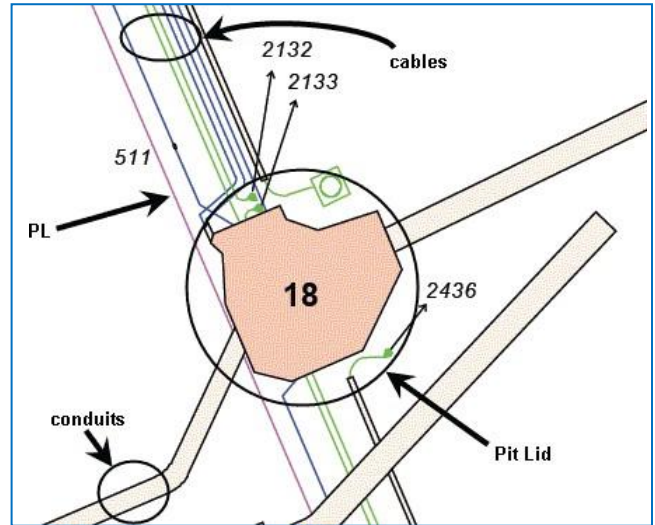


Figure 8

7 Proposal Areas

“section” detail boxes. There are areas where underground work may have been issued for construction by Ausgrid, but details are not yet completely displayed on Ausgrid plans. In such cases a shaded “proposal area” is displayed on the Ausgrid plan, indicating underground work may have commenced in the vicinity but is not yet complete.

In some instances, cables and other assets within the shaded “proposal area” will be shown in a **bright magenta** colour, indicating that the proposed new work displayed within the shaded area is based on initial planning documentation (refer to figure 9).



Figure 9

In other instances, the shaded “proposal area” itself may be shown as a blue colour, indicating that the new work displayed within the shaded area on the Ausgrid plan is yet to include details regarding final depths and dimensioning (refer to figure 10).

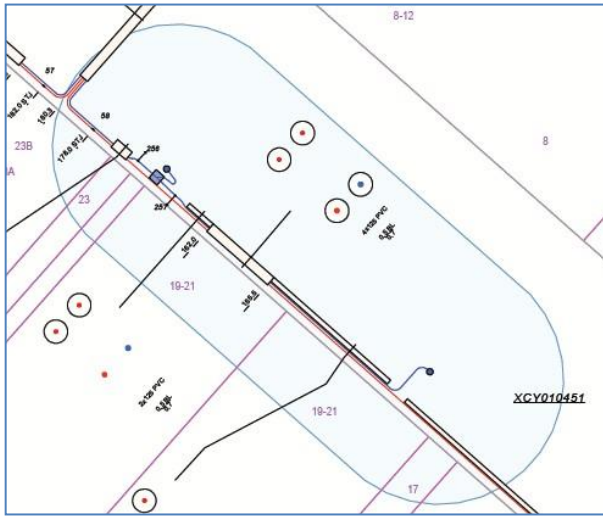


Figure 10

NOTE: In cases where these shaded “proposal areas” are displayed on Ausgrid plans.

“Ausgrid’s design plans showing the proposed position of its underground cables, overhead lines and structures have been prepared solely for Ausgrid’s own planning use. They show the proposed position of such underground cables, overhead lines and structures as proposed at the time of planning and have not necessarily been corrected to take into account any changes to road widths, road levels, fences and buildings subsequent to proposed installation.

Actual installations may vary from proposed installations as it may be necessary to take account of unforeseen above ground or subterranean constructions. Therefore, Ausgrid does not hold out that the design plans show more than the proposed presence or absence of its underground cables, overhead lines and structures in the street and will accept no liability for inaccuracies in the information shown on such design plans from any cause whatsoever.”

Any further information regarding information displayed for “proposal areas” can be obtained by contacting the Ausgrid Before You Dig Australia (BYDA) office at the number indicated on the response to your BYDA enquiry for further information.

8 Ausgrid Maps

Depending on the size of the BYDA request, the response will either be a **single map area** or a **cover sheet** and several standard maps.

8.1 Single Map Area Response

The single map area response will have a buffer area shown on the plan that should relate to the original Before You Dig Australia request.

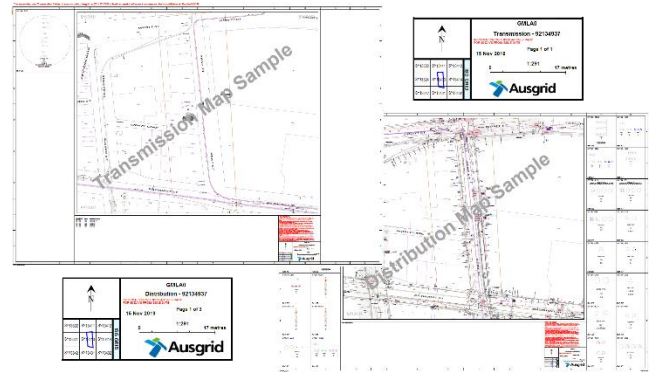


Figure 11

The **map grid index box** on Ausgrid plans should be used when reading the “joint report” (see part 4 of this document for more detail) to accurately locate underground cables. The buffer area will display on the grid index box for single map area responses

There are two different size maps that can be produced – A3 will be issued if there are no cross sections in the area, and an A0 will be issued if there are cross sections that are required to be displayed in the detail boxes on the side.

A single map area response could include two maps in the Sydney region. Ausgrid plans are separately labelled as “**Distribution – nnnnnnn**” and “**Transmission – nnnnnnn**”, where “**nnnnnn**” refers to the BYDA sequence number quoted. If the request does not include any Transmission assets, then only one Distribution map will be issued.

In the Hunter region, the Ausgrid plans show combined “**distribution**” and “**transmission**” voltage assets, are clearly labelled as “**Distr + Trans – nnnnnnn**” where “**nnnnnn**” refers to the BYDA sequence number.

Some Hunter plans may have transmission cables in the area, when these cables are present there will be a warning printed at the top of the plan supplied: “**You are working near Transmission Cables. You must contact Ausgrid on (02) 4951 9200 at least two weeks before work commences. See Ausgrid Network Standard NS156**”

8.2 Cover Sheet Response

On a response that includes a cover sheet, the buffer area will only be shown on the cover sheet and it will not appear on the standard maps. The cover sheet will indicate which standard maps have been included and provide a high-level view of the location of the underground details (Figure 12). The standard maps will have the detail of the underground assets (Figure 13).

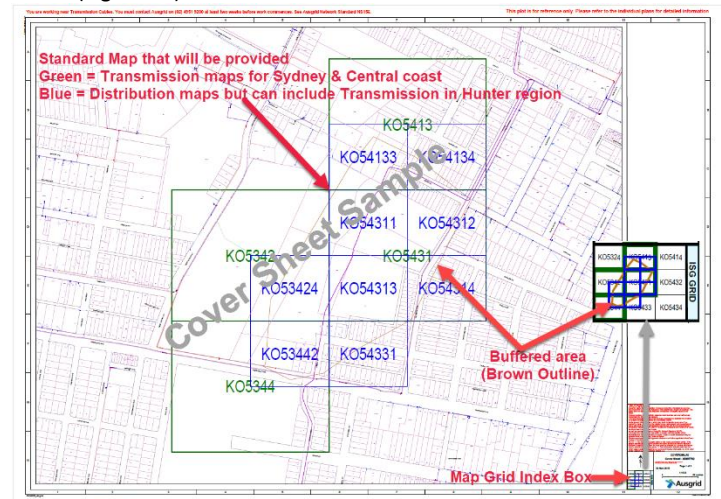


Figure 12

A **map grid index box** has been included in the cover sheet and on the standard maps. The buffer area will only display on the grid index box on the cover sheet and not on standard maps (Figure 12 + Figure 13).

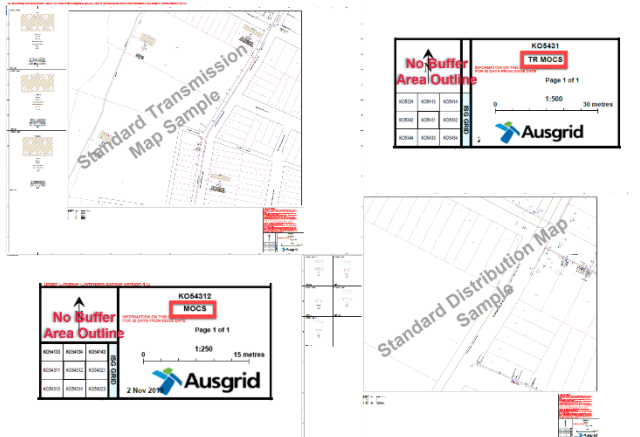


Figure 13

9. Shifting Land Base” on Ausgrid Distribution and Transmission Plans

In some instances, the plans supplied may indicate road or property outlines that appear to have shifted in relation to the Ausgrid assets displayed (refer to figure 14).

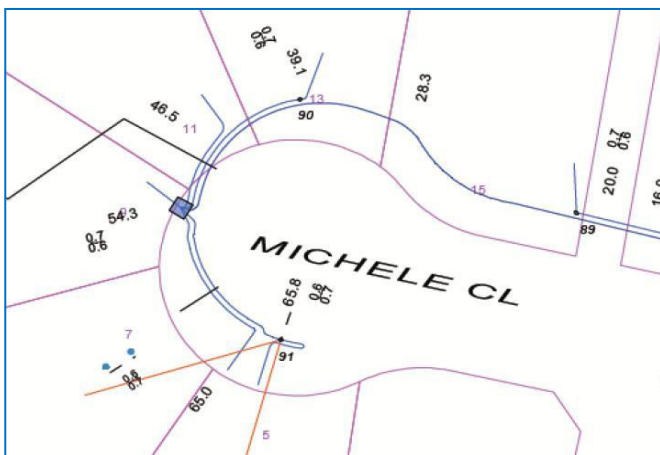


Figure 14

In such instances, always refer to the **“property line”** (in metres) and depth of **“cover”** (in metres) references displayed on the nearest relevant **“cross sections”** to obtain Ausgrid asset location information (see Reading Ausgrid Plans, clause 3, Cross Sections for more detail).

10. “Underground Earthing Infrastructure”

In some instances, the plans supplied may also indicate the presence of underground earthing infrastructure associated with underground and/or overhead Ausgrid assets.

The **“Earth Point”** symbol (refer to figure 15) will be shown on plans to minimize risk of disturbance or damage to any Ausgrid underground earthing infrastructure in the vicinity.

Figure 15



11. Hazardous Cables – Specific Excavation Hazard

Certain low voltage cables are susceptible to deterioration or defects that may pose a risk of electric shock when working near them particularly in damp ground. Other low voltage cables may have an exposed conductive sheath or armour which may, under certain conditions, become energised. These cables may pose a significant risk and will be illustrated as in figures 15 and 16 below. For all work on or near Ausgrid’s network where workers have been trained in Ausgrid’s “Working near or around underground cables” course the work practices outlined in NS156 “Working near or around underground cables”, NS199 “Safe Electrical Work on Low Voltage Underground Assets” for low voltage cables susceptible to deterioration and the Electrical Safety Rules for low voltage exposed conductive sheath or armoured cables must be adhered to. All other persons must contact Ausgrid before excavating near or accessing areas where these cables are present to arrange for appropriate precautions to be applied.

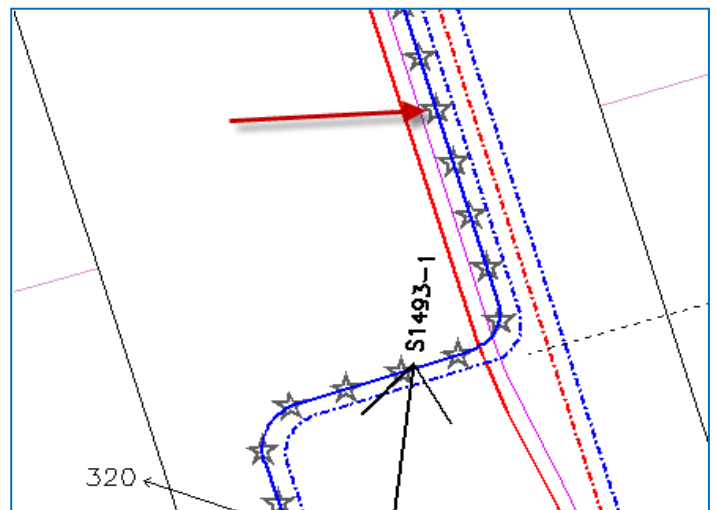


Figure 15

The **“star”** symbols over the cable indicates that it may be susceptible to deterioration or defects or the cable may contain an exposed conductive sheath or armour which could pose an electrical risk to workers.

Cables that are in duct lines have this symbology covered so an at-risk cable is indicated only within a cross section by a **“#”** appended to its cable code as illustrated below.

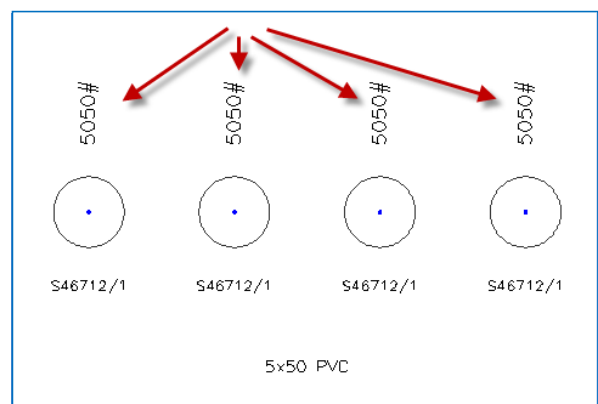


Figure 16



Ausgrid Underground Map Symbology

NOTE: Please note symbology is subject to change. This document provides underground (UG) related objects only. In cases where you are unsure of the data presented, please contact Ausgrid's BYDA for clarification *prior* to any planning/excavation works.

Object		Symbol
HV Cable	HV (High Voltage) 5kV-22kV	In Service
		Out of Service
	TR (Transmission) 33kV – 330kV	In Service
		Out of Service
LV Cable (Low Voltage)	Mains (Dark blue)	In Service
		Out of Service
	Street Lighting (Green) Note: Mains Connector also used as Street Lighting (dark blue)	In Service
		Out of Service
	Service (Light blue)	In Service
	Out of Service 	
	Stars are used to highlight At Risk cables	In Service Risk
		In Service Risk
		In Service Risk
		In Service Risk
	Unknown	
Auxiliary Cable	Data	In Service
	Comms	
	Telco	
	Protection	
	Fibre Optic	
	Pilot	Out of Service

Object		Symbol
HV UG Joint	Straight Through, Parallel Branch or Tee	
	Switchgear, End Box or Transition	
HV UG Termination	Sealed end	
	Pot End	
	UGOH	
HV Cable Repair	5kV-330kV (HV & TR)	
LV UG Joint	Straight Through, Parallel Branch, Tee or Service	
	Network Box	
LV UG Termination	Switchgear, End Box or Transition	
	Sealed end	
	Pot End	
	UGOH	

Object		Symbol
Auxiliary Fix	Pilot Window	
Auxiliary Joint	Straight Through, Parallel Branch or Tee	
Auxiliary Termination	UGOH or Pole Termination	
	Pilot	
	UGOP-ADSS Termination	
Cable Pit (Can be various shapes)	Auxiliary	
	Distribution	
	Transmission	
LV Pillar	Distribution	
	Switch	
	SL Pillar	
	SL Cubicle	
	Fargo	
	Private	
LV Auxiliary Pillar	All Types	
LV Link Box	2 Way & 4 Way	

Ausgrid Underground Map Symbology

Object	Symbol	
Substation	Cottage & Chamber	
	Ground & Subtransmission Ground	
	Kiosk & Subtransmission Kiosk	
	Zone	
	Transmission	
	Bulk Supply Point	
	Metering Station & Subtransmission Metering	
	Switching Station	Isolating & Earth
Other – OH & UG		
Ring Main Unit		
Earthing	UG Earth Cable	
	Earth Point	
Frequency Marker	Distribution and Transmission Power Ball or Disc Type Marker	
	Auxiliary Communications Ball or Disc Type Marker	
	Distribution and Transmission Power Tape Marker	
	Auxiliary Communications Tape Marker	

Object	Symbol	
Trench	Centreline	
Conduit (Can be various shapes)	Coverage (Distribution)	
	Coverage (Transmission)	
	Coverage (Underbore – cross hatched)	
Cross Section	Marker (Staple)	
	User Line	
Measurement Point		
Miscellaneous Point Feature	Cable Clamp	
	Cable Core split (Trifurcation)	
	Cable Marker	
	Electrolysis Point	
End Of Pipe		
Frequency Injection Unit		
Gas Charger		
Gas Control Cabinet		
Gas Control Kiosk		
Gas Control Point		
Gas Control Valve		
Gatic Pit lid		

Object	Symbol	
Miscellaneous Point Feature	Inspection Box	
	Link point	
	Oil Control Valve	
	Oil Gauge	
	Oil Tank	
	Sniffer Box	
	Thermocouple Box	
	Transmission Cable Marker	
Transmission Link Point		
Miscellaneous Linear Feature	All Geometries	
	Map Note	
Dimension Feature	Placement Change	
Lead Cable	Oil/Gas/Thermocouple	
	Bonding	
	Electrolysis	

If further information is required, please contact:

Ausgrid BYDA
 Phone: (02) 4951 0899
 Fax: (02) 4951 0729



Emergency Phone Number 131388

A U S G R I D
I S A N C E
I N F O R M O R E

To:	[REDACTED] [REDACTED] Royal HaskingDHV Level 15,99 Mount Street North Sydney NSW 2060	Phone No:	[REDACTED]
		Issue Date:	10/10/2024

In response to your enquiry, Sequence No: 245788735 the records of Ausgrid disclose that there **are** Ausgrid underground cables in the defined search location and relevant Ausgrid plans have been provided.

This search is based on the geographical position of the dig site as denoted in the Before You Dig Australia caller confirmation sheet and an overview is provided:

Address:	19 Gardiner Avenue Banksia NSW 2216
Job #:	37779040



****Important****

- All information provided to you is **ONLY VALID FOR 30 DAYS** from the date of issue
- You must keep Ausgrid plans on site during excavation works. If the people actually performing the excavation works do not know how to read and interpret Ausgrid's plans, then the work must be directed by a person who knows how to read and interpret plans.
- If you require a full size print of A0 plans and don't have the resources to do so please contact our office on 49510899 to request a hard copy to be posted. **Please allow 3 working days for delivery.**
- Please note you will **ONLY** receive portions of your search area that contain Ausgrid Underground Assets

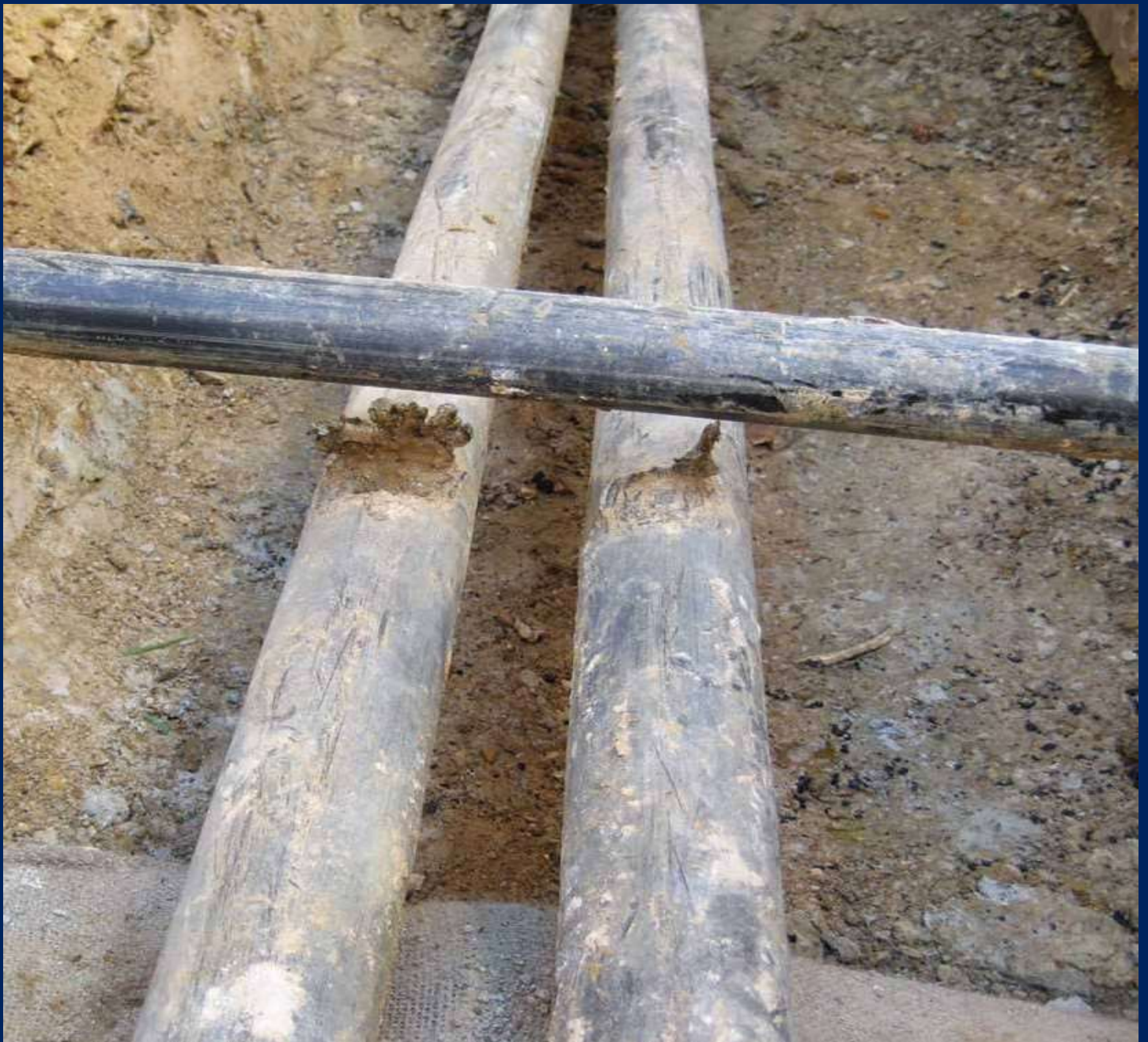
YOU MUST READ AND UNDERSTAND THE SUPPLEMENTARY MATERIAL CONTAINED IN THIS ADVICE BEFORE PROCEEDING WITH ANY WORKS.

Summary of Supplementary Information:

Material	Purpose	Location
Important Information.pdf	Details important information	Attached
Working near Ausgrid Cables.pdf	Summary of NS156	Attached
COMN0119 How to Read Ausgrid Plans.pdf	Details how to read Ausgrid plans	Attached
SafeWork NSW "Work near underground assets: Guide"	To assist you in deciding appropriate measures to eliminate or control risks when working near underground assets.	Web Link [Click Here]
Ausgrid's Network Standard NS156	For important information for work near or around underground cables	Web Link [Click Here]
Ausgrid's Network Standard NS199	This Network Standard applies to specific work on Ausgrid Low Voltage Underground Assets and associated Hazards	Web Link [Click Here]
Working in Confined Spaces	For important information when working in confined spaces	Web Link [Click Here]

Working near Ausgrid cables

Finding out what's below the surface can save your life.
Contact Before You Dig Australia @ www.byda.com.au or call 1100



Changes in the Law.

NSW legislation now requires people who are planning to do excavation work to obtain copies of underground electricity cable plans through Before You Dig Australia (Phone 1100) and to make sure that the plans are no more than 30 days old when excavation commences.

The aim of the legislation is to ensure that when workers dig near electricity cables, they will establish the exact location of the cables and thus avoid coming into contact with them or damaging them. This will ensure worker safety and also prevent disruption to Ausgrid's electricity network.

This brochure gives you a brief overview of how to prepare for excavation works near or around electricity cables. It is important that you also consult our guide How to Read Ausgrid Plans and make sure that workers engaged in excavation works fully understand how to read the plan. If the people actually doing the digging can't read the plans, it is essential that the work is directed by a person who has been trained to read Ausgrid's plans.

You must also consult Ausgrid's Network Standard NS156, which contains comprehensive information concerning all the issues that arise when excavating near underground cables (such as safety hazards from asbestos conduits and organochlorine pesticides).

Excavating near transmission cables.

If any cable plan you receive says "You are working near transmission cables" it is compulsory to notify Ausgrid two weeks before work is scheduled to begin. Ausgrid will then arrange for an Ausgrid representative to attend the site during excavation work.

Phone the Ausgrid Transmission enquiries line on (02) 4951 9200 to arrange for an Ausgrid representative in your region.



Be prepared. Wise words for safety at work.

Here are some simple precautions you and your workers need to follow to be as safe as possible.

- Make sure that your Before You Dig Australia (BYDA) plan is less than 30 days old
- Keep a copy of the cable plan on site at all times
- Make sure the excavation work is conducted or directed by staff who are trained to read the plan
- Hand dig until the exact location of the cable has been established
- Have on site at all times a first aid kit and a person trained in resuscitation
- Wear protective clothing, including safety footwear and safety helmet
- Have emergency contact numbers on site
- Set up safety barriers, witches hats and warning lights to reduce the risk of injury to the general public
- Comply with all SafeWork NSW requirements and codes.

See also:

- **SafeWork NSW Guidelines: Work Near Underground Assets**
- **SafeWork NSW Code of Practice: Excavation Work**
- **SafeWork NSW Code of Practice: Work Near Overhead Powerlines (if applicable).**

Before you start. Complete the checklist. Stop and look around.

Before you start excavating, consult the flow chart and fill in the checklist at the end of this brochure.

Then, be sure to look for clues where cables might be located on the site: for example, pits, distribution pillars (green and other colours), cables attached to the side of poles, street lights without overhead wires.



Do all power cables look the same?

No. Power cables come in different sizes, colours and coverings. They may be covered in black plastic sheath, steel wires in a sticky bitumen like material, or even a simple lead or steel wire/tape sheath.

What else should I look for below ground level?

Cables may also be buried in orange PVC or PE conduits or even in earthenware or steel pipes. A bank of cables may be covered with electrical bricks, plastic warning markers or protective covers, or they may not be covered at all. If they have been buried close to the surface, they may be covered by concrete slabs or steel plates.

When in doubt, ask Ausgrid.

If you have any questions about excavating near Ausgrid cables, read **NS156** (available at ausgrid.com.au). For further information call 13 13 65.

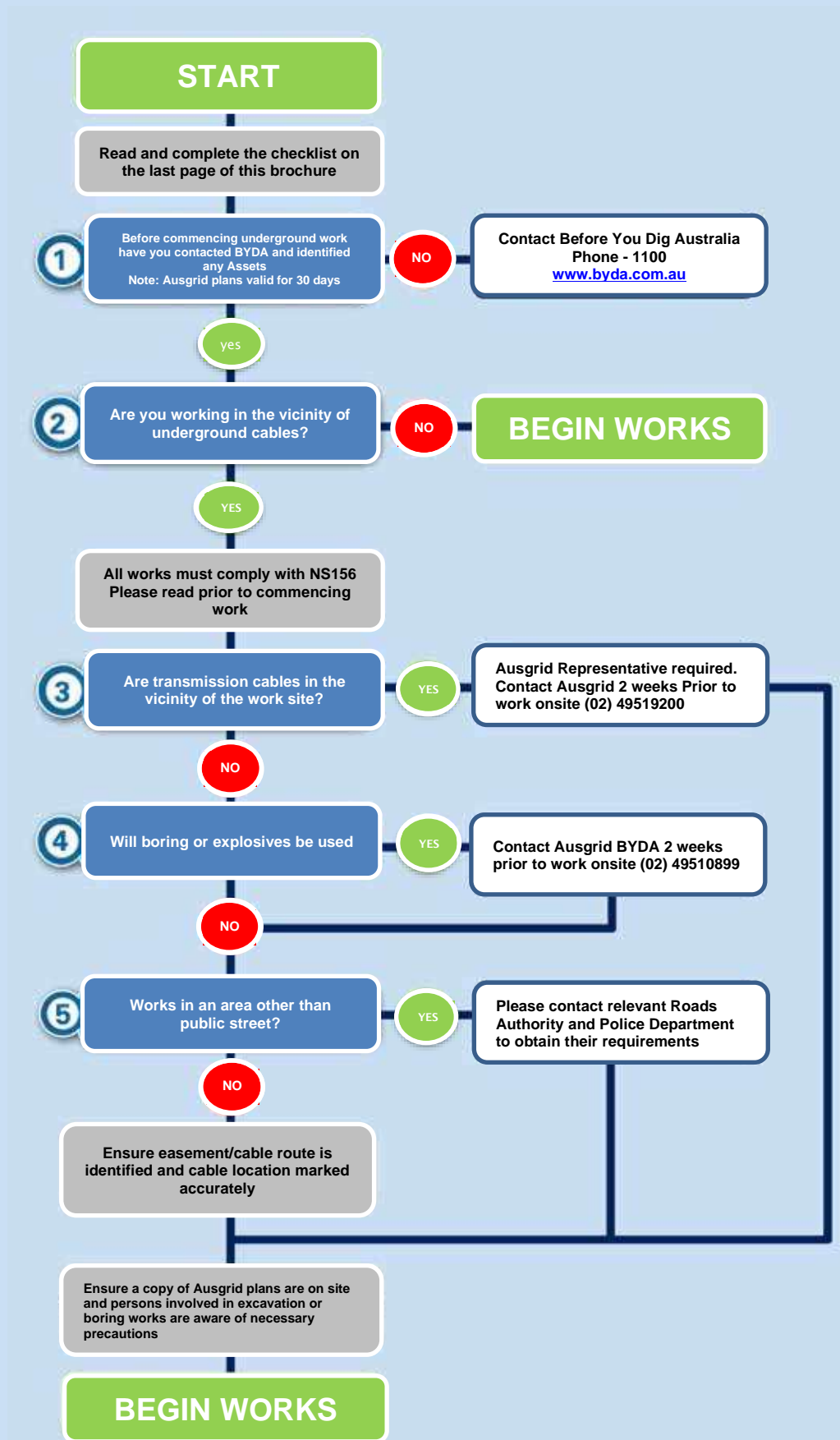
You've taken every precaution, but accidents still happen. What now?

If you damage an electricity cable, it is compulsory to notify Ausgrid on **13 13 88**.

Striking power cables can cause serious damage to the cables and endanger the lives of anyone who comes in contact with them. Machinery and hand operated plant such as jack hammers can become alive if it is in contact with electrical cables or equipment. Keep people well away from machinery and the work site if contact is made with a cable.



Flow Chart for work near Ausgrid Cables



Ausgrid Checklist for work near or around underground cables

It is the responsibility of the Constructor to ensure that underground pits, ducts and cables are not damaged as a result of construction work. It is also your duty to protect your workers from harm or injury. This Checklist is intended to be used as a guide to what Constructors should do to make sure they have satisfied the minimum requirements to minimise damage to underground networks.

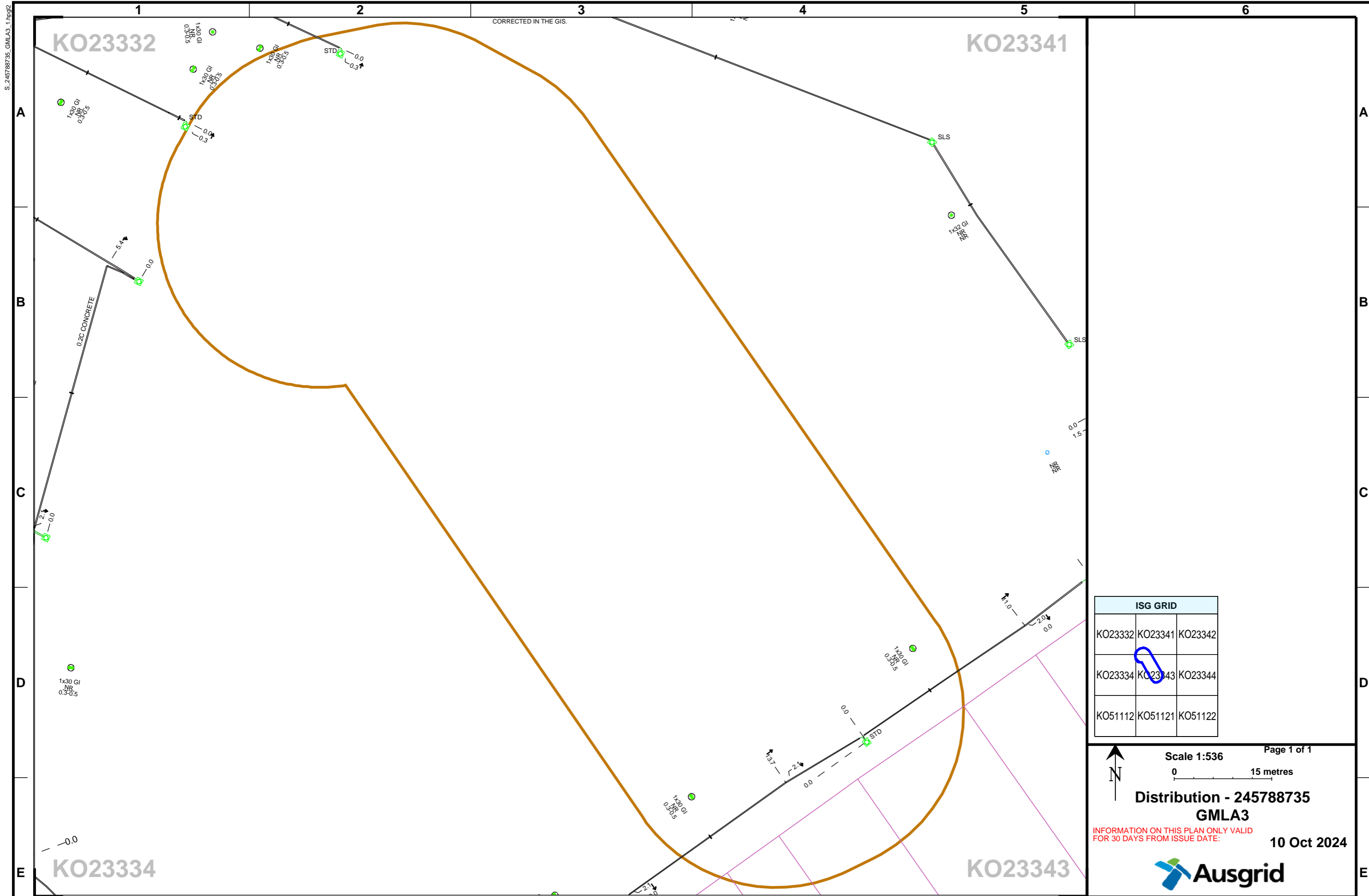
PLANS, LOCATION and NOTIFICATIONS	Completed
All relevant utilities plans obtained from Before You Dig Australia? (call 1 100 – allow at least 5 working days for plans).	
Checked issue date on all the above plans to ensure issue was within the last 30 days?	
Examined plans and assessed all possible impacts on Ausgrid’s network?	
Do you have both Underground Distribution and Transmission Plans (if applicable), on site at all times?	
All cables and conduits shown on the Ausgrid plans been located and marked on the ground?	
If you are planning to use a bore, have you ensured that the equipment is calibrated?	
Have you read and understood the requirements of NS 156? (For copies of NS 156 visit Ausgrid’s Website or phone Ausgrid BYDA Office (02) 4951 0899) www.ausgrid.com.au	
Have you notified Ausgrid as specified by NS 0156 and complied with requirements? Where an Ausgrid representative is required, two weeks notice is required before work commencing on site. Contact phone number for Transmission cable enquiries is (02) 4951 9200. For all other cases contact Ausgrid BYDA Office: (02) 4951 0899.	
INSPECTION OF WORK BY Ausgrid’s REPRESENTATIVE	
Is the Ausgrid representative on site for any work near or around any transmission cable before you start? (Refer to NS 156.)	
For proposed work near or around cables other than transmission and/or conduits, are any requirements specified by Ausgrid’s representative clearly understood and ready to be applied before you start the work? (Refer to NS 156.)	
PROTECTION	
Check that all people on-site have been made aware of the presence and location of ALL Ausgrid underground cables and/or conduits; especially boring, drilling and trenching machine operators?	
Is there any asbestos or asbestos containing material in Ausgrid’s underground network assets?	
Have you checked for the presence of any Organo-Chloride Pesticides (OCP) in transmission trenches?	
Is the site supervisor monitoring all machine operators working near or around Ausgrid’s underground cables and/or conduits?	
Are the requirements specified by Ausgrid’s representative being followed?	
Are Ausgrid’s requirements in place for any exposed cables and/or conduits to be supported and protected?	
Have you marked all exposed underground cables and/or conduits with flags that are clearly visible from within all machinery used on-site?	
Have safety barriers, fencing or para-webbing been erected to protect staff and the public as well underground cables and/or conduits in areas that are at risk?	
Have safety barriers, fencing or para-webbing been erected to protect staff and the public as well underground cables and/or conduits in areas that are at risk?	

**In the event of DAMAGE to Ausgrid’s cable or conduits, call 13 13 88 immediately.
PROCEED with CAUTION**

It is your responsibility to protect Ausgrid’s cables and conduits from damage and your Duty of Care to protect your workers from harm or injury.

Signed: _____ Date: ____ / ____ / ____
Responsible person on site

For more information call 13 13 65 or visit www.ausgrid.com.au



ISG GRID		
KO23332	KO23341	KO23342
KO23334	KO23343	KO23344
KO51112	KO51121	KO51122

Page 1 of 1

Scale 1:536

0 15 metres

Distribution - 245788735
GMLA3

INFORMATION ON THIS PLAN ONLY VALID FOR 30 DAYS FROM ISSUE DATE:

10 Oct 2024

W A R N I N G : Ausgrid's plans show the position of assets at the time of installation and may not account for subsequent changes to road alignments, fences or buildings. The plans show no more than the presence or absence of Ausgrid assets in the street. Persons working near electricity networks must exercise care and will be held responsible for any damage caused. You must excavate by hand or use vacuum excavation to establish the location of Ausgrid underground cables and associated assets. Underground: Working near a cable may result in electric shock even if no contact is made. Any work in the vicinity of any cable should only be performed using safe work methods developed in accordance with the recommendations included in Safework NSW Code of Practice for Excavation and Safework NSW Guide for Work Near Underground Assets as well as recommendations of Ausgrid's Network Standard NS156. Overhead: Do not excavate near poles or towers until the stability of the foundation has been assessed by Ausgrid. Cables or earth conductors may be present close to substations, poles or towers. Workers must maintain safe approach distances and follow applicable Safework NSW Codes of Practice. NOTE: 1. You must keep Ausgrid plans on site during excavation works. If the people actually performing the excavation works do not know how to read and interpret Ausgrid's plans, then the work must be directed by a person who knows how to read and interpret the plans. 2. This information includes data from the NSW Digital Cadastral Database by Land and Property Information (c) 2016, used under Creative Commons licence version 4.0.

Referral

245788736

Member Phone

-

Responses from this member

Response received Thu 10 Oct 2024 6.41am

File name

Page

Response Body

22

ASSET 245788736.pdf

23

Attention: [REDACTED] [REDACTED]

Thank you for your Before You Dig Australia (BYDA) enquiry.

Job Number: **37779040**

Sequence Number: **245788736**

Dig Site Location: **19 Gardiner Avenue Banksia NSW 2216**

According to our records, your enquiry with the following details **impacts our infrastructure**. Please ensure that you read the attached documents, it contains important information including essential steps that must be undertaken prior to commencing construction activities.

This enquiry is valid for **30 days** from the enquiry date.

If you require further information or assistance with interpretation of plans, please contact **Bayside Council** on [REDACTED]

This enquiry response, including any associated documentation, has been assessed and compiled from the information detailed within the BYDA enquiry outlined above. Please ensure that the BYDA enquiry details and this response accurately reflect your proposed works.

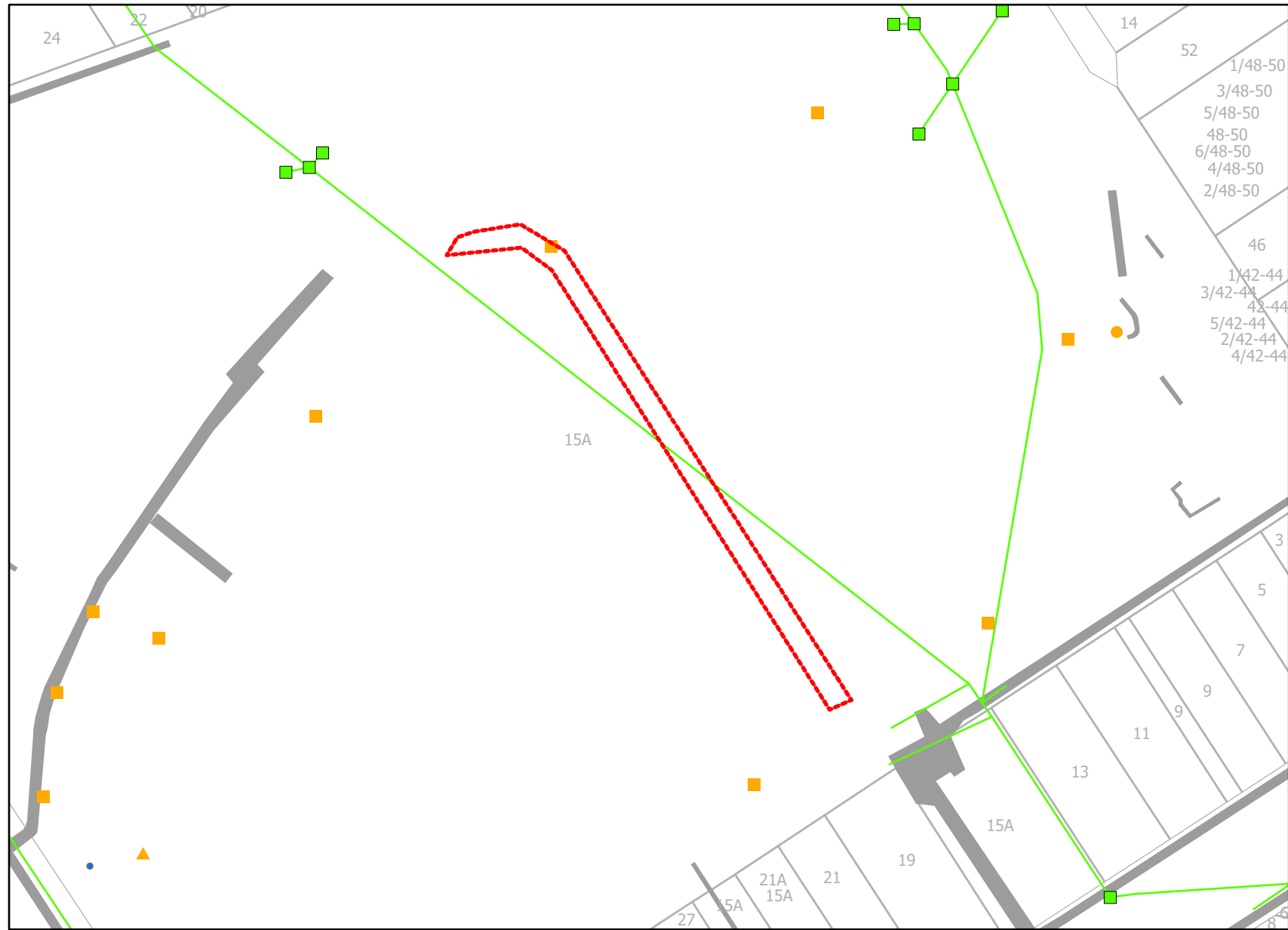
You may also view the response with an interactive web map below:

[View web map](#)

[Download spatial data](#)



Job # 37779040
Seq # 245788736
 Provided by Bayside Council

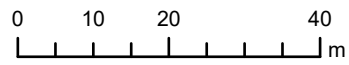


Legend

- BYD Enquiry
- Stormwater**
 - Stormwater Pit
 - Stormwater Pipe
- Other**
 - Irrigation_System
- Electrical**
 - Utility Meters
 - Lighting
 - Other Electrical
- Other**
 - Footpaths

Disclaimer: The Plan is provided in response to a Before You Dig request. While all reasonable care has been taken to ensure the accuracy of the information on this plan, its purpose is to provide a general indication of the location of Bayside Council infrastructure. The information provided may contain errors or omissions and the accuracy may not suit all users. A site inspection and investigation is recommended before commencement of any project based on this data.

In an emergency contact Bayside Council on 93663529
10/10/24 (valid for 30 days)
 Plans generated by SmarterWX™ Automate



Scale 1:1,000

Referral
245788738

Member Phone
1300 880 906

Responses from this member

Response received Thu 10 Oct 2024 11.01am

File name	Page
Response Body	25
No_Gas_Coversheet_Jemena.pdf	26
image1	Excluded
Jemena_BYDAResponse_NoGas_37779040_245788738.pdf	28

Dear [REDACTED]

REF: BYDA JOB:37779040 SEQ:245788738 - 19 Gardiner Avenue Banksia NSW 2216

Thank you for your BYDA inquiry. Our records indicate that we do not have any assets in your area. For a detailed response from Jemena, please refer to the attached documents.

For your safety and to further reduce the risk of accidental hit to Jemena's services, the attached plans will now show lines from the mains to the serviced properties, representing Jemena's Gas Service Pipes. This new detail is explained further on the attached legend.

Please note that a duty of care exists to ensure that Jemena gas mains are not compromised or damaged during any future development or construction work.

This information is valid for 28 days from the date of enquiry.

Regards

BYDA Admin, Jemena

Level 14, 99 Walker Street North Sydney, NSW
2060

PO Box 1220, North Sydney, NSW 2059

1300 880 906

www.jemena.com.au |

www.gonaturalgas.com.au



Please **DO NOT SEND A REPLY** to this email as it has been automatically generated and replies are not monitored.

This message is intended for the named recipient and may contain personal information of individuals, and subject to Commonwealth and/or State privacy laws in Australia. If you have received this e-mail in error, you must not read, print, store, copy, forward or use the message and request that the message is permanently deleted. No warranty is given in relation to the contents (including accuracy, reliability, completeness, currency or suitability) and the contents should not be considered as any more than indicative only. Any use of the contents for the performance of works is at your own risk. Jemena accepts no liability (including without limitation, liability in negligence) for any loss, damage or costs (including consequential loss or damage) relating to any use of the contents. If you have received this email in error, please call 1300 880 906.

This is a confidential message intended for the named recipient(s) only. The contents herein are privileged to the sender and the use thereof is restricted to the intended purpose. If you have received this e-mail in error, please do not use, disclose, distribute, copy, print or relay on this email. If receipt is in error, please advise the sender by reply email. Thank you.

NO ASSETS AFFECTED

This information is only valid for 28 days from the date of issue

Please note that there are **No Gas Mains or Services** in the vicinity of your intended work, as generally illustrated on the attached map. For an explanation of the map, please see the legend attached and read the important information below.

Please note that you have duty of care to ensure that Jemena's assets are not compromised or damaged during any digging, future development or construction work.

Excavation Guidelines:

It is essential that the location of gas pipe/s are confirmed by carefully pot-holing by hand excavation prior to proceeding with mechanical excavation in the vicinity of gas pipes. If you cannot locate the pipe, contact the local Jemena depot.

Important Information:

1. The enclosed plans have been prepared solely for the use of Jemena Gas Networks (NSW) Ltd and Jemena Asset Management Pty Ltd (together "Jemena") and show the position of Jemena's underground gas mains and installations in public gazetted roads. If the enclosed plans show gas assets located on private property or other third party property, these are approximate locations.
2. There may be underground assets owned by other utilities in the vicinity of your work and it is your responsibility to identify and locate such assets.
3. The plans may show the position of underground mains and installations relative to fences, buildings and other structures, as they existed at the time the assets were installed and may not have been updated to take account of any subsequent changes in the location or style of those features. Depth of underground assets may also vary as a result of changes to road, footpath or surface levels subsequent to asset installation.
4. While Jemena takes all reasonable care to ensure the accuracy and completeness of the information provided, it makes no warranty as to the accuracy or completeness of the enclosed plans and does not assume any duty of care to you nor any responsibility for the accuracy, adequacy, suitability or completeness of the plans or for any error or omission. It is intended to be indicative only and must not be solely relied upon when undertaking underground works.
5. Except to the extent that liability may not be capable of being lawfully excluded, Jemena, its employees, agents, officers and contractors will not be liable to any person for loss or damage (including indirect and consequential loss or damage) which may be suffered or incurred in connection with the provision of this information.
6. Persons excavating or carrying out other earthworks will be held responsible for any damage caused to Jemena's underground mains, service lines and equipment. In accordance with the *Work Near Underground Assets – Guide* published in 2007 by Work Cover Authority*, Jemena recommends that you carry out potholing by hand to accurately confirm the location of gas mains and installations prior to commencing excavations.

Network Mains

- Proposed New Main (coloured as per kPa)
- Proposed Isolate (coloured as per kPa)
- Unknown kPa
- 2kPa Low Pressure gas main
- 7kPa Low Pressure gas main
- 30kPa Medium pressure gas main
- 100kPa Medium Pressure gas main
- 210kPa Medium Pressure gas main
- 300kPa Medium Pressure gas main
- 400kPa Medium Pressure gas main
- 1050kPa High Pressure gas main
- 3500kPa High Pressure gas main
- 7000kPa High Pressure gas main
- >7000kPa Transmission pipeline
- Isolated Service - Former Med/High Pressure
- Isolated Steel Main - **Treat as High Pressure**
- Conduit or Casing
100 PVC Size & Material (see conduit material codes)
- Critical Main - **Treat as High Pressure**
(Main coloured as per kPa)
- Exposed Main section
EXPOSED
- Shallow Main section: see Protection Code below, no code assume no protection
SHALLOW-SP

SP	Steel Plate	CE	Concrete Encased
PP	PE Plate	UNK	Unknown Type
CS	Concrete Slab		
- Warning** - Blue Jacket Coated gas main
(Main coloured and styled as per kPa)

Gas Services

- Gas service – coloured by kPa
- Serviced Site indicator

Jemena has created service pipe features programmatically based on known pipe characteristics and cartographic principles. They may provide guidance to identify assets whilst in the field in addition to existing processes.

Network Assets

- Siphon
- Network Valve
- High Pressure Main Line Valve ($\geq 1050\text{kPa}$)
- High Pressure Automatic Line Break Valve ($> 1050\text{kPa}$)
- Boundary Regulator Set ($\leq 1050\text{kPa}$)
- Distribution Regulator Set ($\leq 1050\text{kPa}$)
- High Pressure Regulating Station ($> 1050\text{kPa}$)

Annotations

Pipe and Conduit Material Codes

NY	Nylon	NB	Nominal Bore – Cast Iron
PE	Polyethylene	ST	Steel
P/PL	Plastic (undefined)	C/CO	Copper
PVC	Polyvinyl Chloride		

Pipe code combinations and dimension references

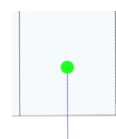
- 6 NB 50MM NY** 50mm Nylon main inserted into 6 inch (Nominal Bore) Cast Iron pipe
- 50MM 32MM NY** 32mm Nylon main inserted into 50mm Steel pipe

~1.5 Distance (in metres) of main from Boundary Line (MBL)

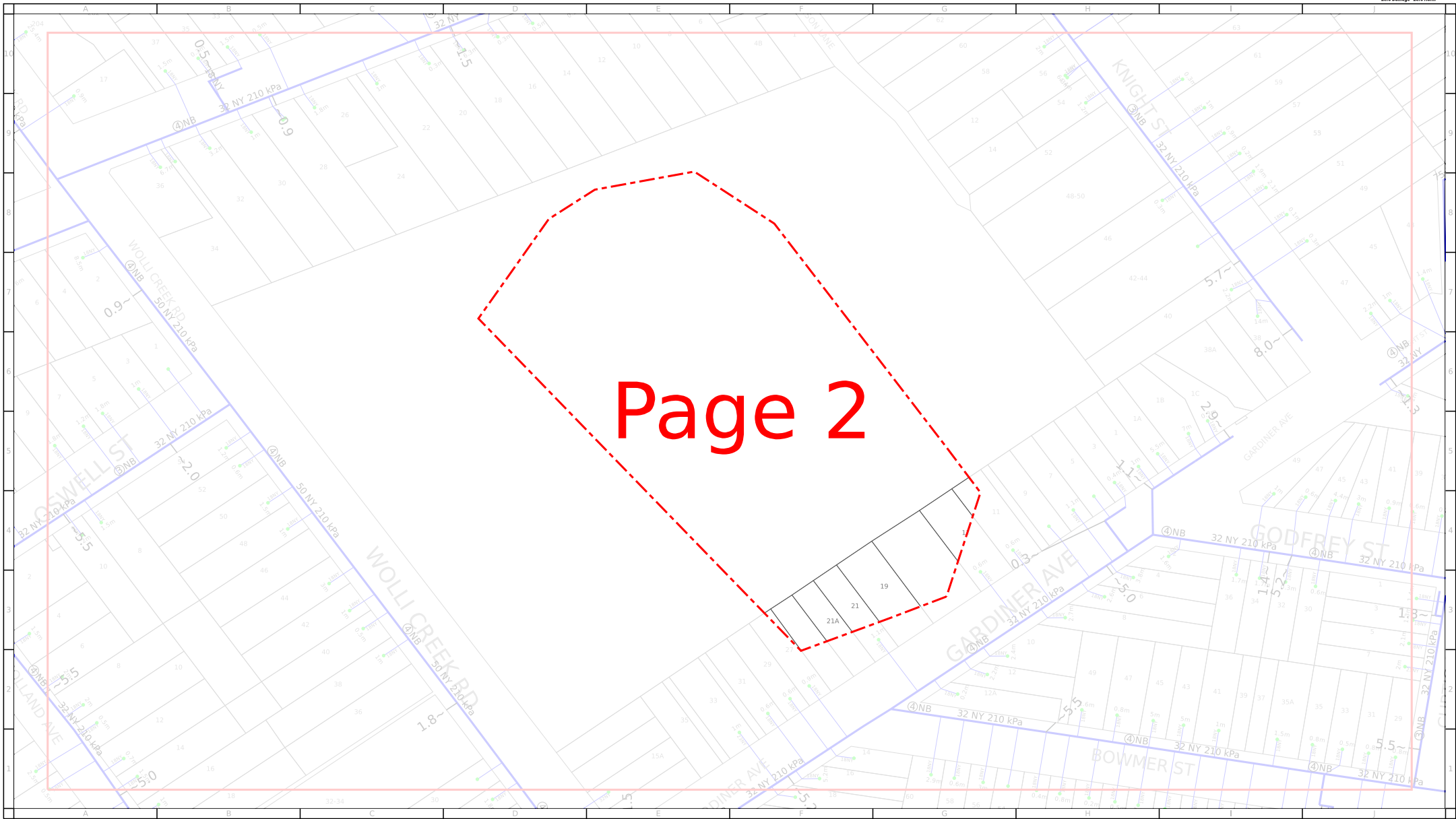
MBK	Distance in Metres Back of Kerb
MKL	Distance in Metres from Kerb Line
MEBL	Distance in Metres from Eastern Boundary Line (North/South/West)
MCL	Distance in Metres from Centre Line of Road
MFL	Distance in Metres from Fence Line



Distance (in metres) of service from side Boundary where the service pipe crosses from the road reserve into the private lot
Service placed towards left or right boundary
Service pipe size & material where known



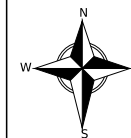
For connected sites with insufficient asset details, service is shown down the centre of the lot with no attributes plotted



Page 2



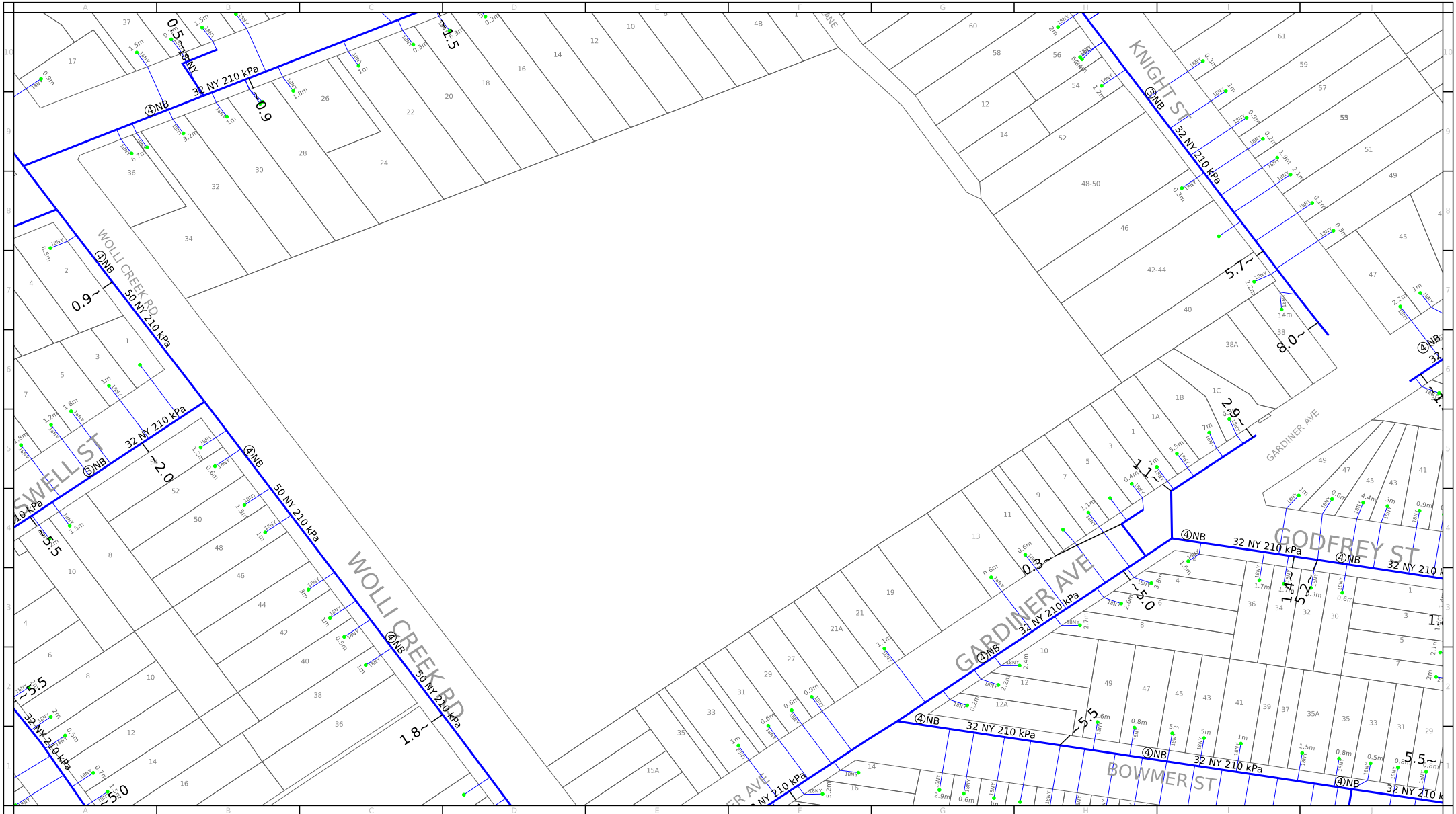
For legend details, please refer to the Coversheet attachment provided as part of this BYDA response.



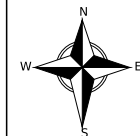
Scale: 1:2101

Issue Date: 10/10/2024
 BYDA Seq No: 245788738
 BYDA Job No: 37779040
 Overview Page:

WARNING: This is a representation of Jemena Gas Networks underground assets only and may not indicate all assets in the area. It must not be used for the purpose of exact asset location in order to undertake any type of excavation. Please read all conditions and information on the attached information sheet. This extract is subject to those conditions. The information contained on this plan is only valid for 28 days from the date of issue.

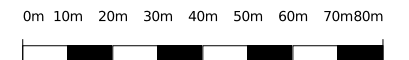


For legend details, please refer to the Coversheet attachment provided as part of this BYDA response.



Scale: 1:2000

Issue Date: 10/10/2024
 BYDA Seq No: 245788738
 BYDA Job No: 37779040



WARNING: This is a representation of Jemena Gas Networks underground assets only and may not indicate all assets in the area. It must not be used for the purpose of exact asset location in order to undertake any type of excavation. This plan is diagrammatic only, and distances scaled from this plan may not be accurate. Please read all conditions and information on the attached information sheet. This extract is subject to those conditions. The information contained on this plan is only valid for 28 days from the date of issue.

Referral
245788734

Member Phone
1800 687 626

Responses from this member

Response received Thu 10 Oct 2024 6.44am

File name	Page
Response Body	31
245788734_20241009_194335726259_1.pdf	32
Disclaimer_245788734_20241009_194335726259.pdf	35
4678_NBN_Dial_Before_You_Dig_Poster_20170517.pdf	39

Hi [REDACTED],

Please find attached the response to your DBYD referral for the address mentioned in the subject line. The location shown in our DBYD response is assumed based off the information you have provided. If the location shown is different to the location of the excavation then this response will consequently be rendered invalid.

Take the time to read the response carefully and note that this information is only valid for 28 days after the date of issue.

If you have any further enquiries, please do not hesitate to contact us.


Regards,
Network Services and Operations
NBN Co Limited
P: 1800626329
E: dbyd@nbnco.com.au
www.nbnco.com.au

Confidentiality and Privilege Notice

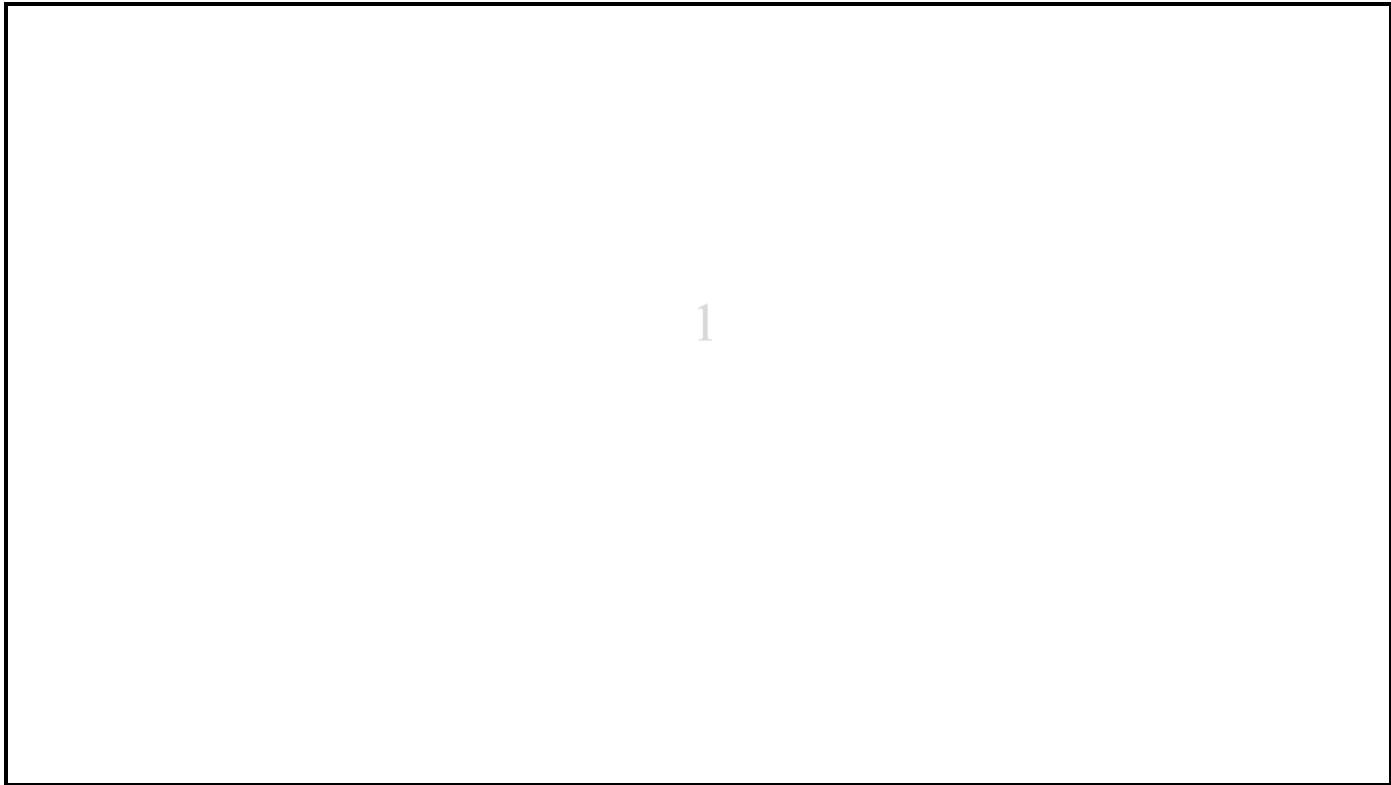
This e-mail is intended only to be read or used by the addressee. It is confidential and may contain legally privileged information. If you are not the addressee indicated in this message (or responsible for delivery of the message to such person), you may not copy or deliver this message to anyone, and you should destroy this message and kindly notify the sender by reply e-mail. Confidentiality and legal privilege are not waived or lost by reason of mistaken delivery to you. Any views expressed in this message are those of the individual sender, except where the sender specifically states them to be the views of NBN Co Limited

Please Do Not Reply To This Mail

To: [REDACTED]
Phone: Not Supplied
Fax: Not Supplied
Email: [REDACTED]

Dial before you dig Job #:	37779040	 BEFORE YOU DIG www.byda.com.au Zero Damage - Zero Harm
Sequence #	245788734	
Issue Date:	09/10/2024	
Location:	19 Gardiner Avenue , Banksia , NSW , 2216	

Indicative Plans are tiled below to demonstrate how to layout and read nbn asset plans

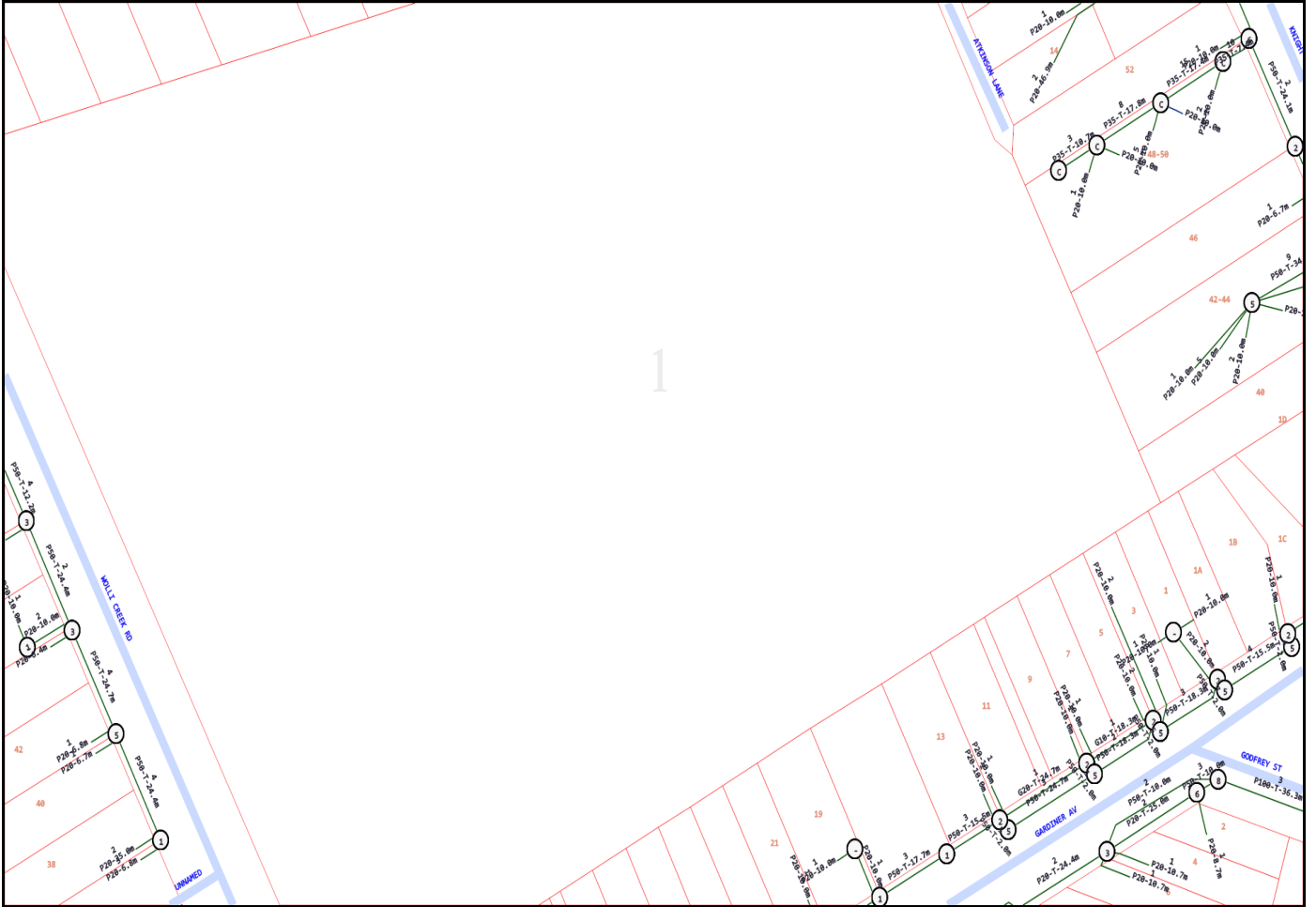




LEGEND




	Parcel and the location
	Pit with size "5"
	Power Pit with size "2E". Valid PIT Size: e.g. 2E, 5E, 6E, 8E, 9E, E, null.
	Manhole
	Pillar
	Cable count of trench is 2. One "Other size" PVC conduit (PO) owned by Telstra (-T-), between pits of sizes, "5" and "9" are 25.0m apart. One 40mm PVC conduit (P40) owned by NBN, between pits of sizes, "5" and "9" are 20.0m apart.
	2 Direct buried cables between pits of sizes, "5" and "9" are 10.0m apart.
	Trench containing any INSERVICE/CONSTRUCTED (Copper/RF/Fibre) cables.
	Trench containing only DESIGNED/PLANNED (Copper/RF/Fibre/Power) cables.
	Trench containing any INSERVICE/CONSTRUCTED (Power) cables.
	Road and the street name "Broadway ST"
Scale	0 20 40 60 Meters 1:2000 1 cm equals 20 m



Emergency Contacts

You must immediately report any damage to the **nbn**™ network that you are/become aware of. Notification may be by telephone - 1800 626 329.

To: [REDACTED]
Phone: Not Supplied
Fax: Not Supplied
Email: [REDACTED]

Dial before you dig Job #:	37779040	
Sequence #	245788734	
Issue Date:	09/10/2024	
Location:	19 Gardiner Avenue , Banksia , NSW , 2216	

Information

The area of interest requested by you contains one or more assets.

nbn™ Assets	Search Results
Communications	Asset identified
Electricity	No assets

In this notice **nbn™ Facilities** means *underground fibre optic, telecommunications and/or power facilities, including but not limited to cables, owned and controlled by nbn™*

Location of nbn™ Underground Assets

We thank you for your enquiry. In relation to your enquiry at the above address:

- **nbn's** records indicate that there **ARE nbn™** Facilities in the vicinity of the location identified above ("Location").
- **nbn** indicative plan/s are attached with this notice ("Indicative Plans").
- The Indicative Plan/s show general depth and alignment information only and are not an exact, scale or accurate depiction of the location, depth and alignment of **nbn™** Facilities shown on the Plan/s.
- In particular, the fact that the Indicative Plans show that a facility is installed in a straight line, or at uniform depth along its length cannot be relied upon as evidence that the facility is, in fact, installed in a straight line or at uniform depth.
- You should read the Indicative Plans in conjunction with this notice and in particular, the notes below.
- You should note that, at the present time, the Indicative Plans are likely to be more accurate in showing location of fibre optics and telecommunications cables than power cables. There may be a variation between the line depicted on the Indicative Plans and the location of any power cables. As such, consistent with the notes below, particular care must be taken by you to make your own enquiries and investigations to precisely locate any power cables and manage the risk arising from such cables accordingly.
- The information contained in the Indicative Plan/s is valid for 28 days from the date of issue set out above. You are expected to make your own inquiries and perform your own investigations (including engaging appropriately qualified plant locators, e.g DBYD Certified Locators, at your cost to locate **nbn™** Facilities during any activities you carry out on site).

We thank you for your enquiry and appreciate your continued use of the Dial Before You Dig Service. For any enquiries related to moving assets or Planning and Design activities, please visit the [nbn Commercial Works](#) website to complete the online application form. If you are planning to excavate and require further information, please email dbyd@nbnco.com.au or call 1800 626 329.

Notes:

1. You are now aware that there are **nbn™** Facilities in the vicinity of the above property that could be damaged as a result activities carried out (or proposed to be carried out) by you in the vicinity of the Location.
2. You should have regard to section 474.6 and 474.7 of the *Criminal Code Act 1995* (CoA) which deals with the consequences of interfering or tampering with a telecommunications facility. Only persons authorised by **nbn** can interact with **nbn's** network facilities.
3. Any information provided is valid only for **28 days** from the date of issue set out above.

Referral Conditions

The following are conditions on which **nbn** provides you with the Indicative Plans. By accepting the plans, you are agreeing to these conditions. These conditions are in addition, and not in replacement of, any duties and obligations you have under applicable law.

1. **nbn** does not accept any responsibility for any inaccuracies of its plans including the Indicative Plans. You are expected to make your own inquiries and perform your own investigations (including engaging appropriately qualified plant locators, e.g DBYD Certified Locators, at your cost to locate **nbn™** Facilities during any activities you carry out on site).
2. You acknowledge that **nbn** has specifically notified you above that the Indicative Plans are likely to be more accurate in showing location of fibre optics and telecommunications cables than power cables. There may be a variation between the line depicted on the Indicative Plans and the location of any power cables.
3. You should not assume that **nbn™** Facilities follow straight lines or are installed at uniformed depths

along their lengths, even if they are indicated on plans provided to you. Careful onsite investigations are essential to locate the exact position of cables.

4. In carrying out any works in the vicinity of **nbn**™ Facilities, you must maintain the following minimum clearances:
 - 300mm when laying assets inline, horizontally or vertically.
 - 500mm when operating vibrating equipment, for example: jackhammers or vibrating plates.
 - 1000mm when operating mechanical excavators.
 - Adherence to clearances as directed by other asset owner's instructions and take into account any uncertainty for power cables.
5. You are aware that there are inherent risks and dangers associated with carrying out work in the vicinity of underground facilities (such as **nbn**™ fibre optic, copper and coaxial cables, and power cable feed to **nbn**™ assets). Damage to underground electric cables may result in:
 - Injury from electric shock or severe burns, with the possibility of death.
 - Interruption of the electricity supply to wide areas of the city.
 - Damage to your excavating plant.
 - Responsibility for the cost of repairs.
6. You must take all reasonable precautions to avoid damaging **nbn**™ Facilities. These precautions may include but not limited to the following:
 - All excavation sites should be examined for underground cables by careful hand excavation. Cable cover slabs if present must not be disturbed. Hand excavation needs to be undertaken with extreme care to minimise the likelihood of damage to the cable, for example: the blades of hand equipment should be aligned parallel to the line of the cable rather than digging across the cable.
 - If any undisclosed underground cables are located, notify **nbn** immediately.
 - All personnel must be properly briefed, particularly those associated with the use of earth-moving equipment, trenching, boring and pneumatic equipment.
 - The safety of the public and other workers must be ensured.
 - All excavations must be undertaken in accordance with all relevant legislation and regulations.
7. You will be responsible for all damage to **nbn**™ Facilities that are connected whether directly, or indirectly with work you carry out (or work that is carried out for you or on your behalf) at the Location. This will include, without limitation, all losses expenses incurred by **nbn** as a result of any such damage.
8. You must immediately report any damage to the **nbn**™ network that you are/become aware of. Notification may be by telephone - 1800 626 329.
9. Except to the extent that liability may not be capable of lawful exclusion, **nbn** and its servants and agents and the related bodies corporate of **nbn** and their servants and agents shall be under no liability whatsoever to any person for any loss or damage (including indirect or consequential loss or damage) however caused (including, without limitation, breach of contract negligence and/or breach of statute) which may be suffered or incurred from or in connection with this information sheet or any plans (including Indicative Plans) attached hereto. Except as expressly provided to the contrary in this information sheet or the attached plans (including Indicative Plans), all terms, conditions, warranties, undertakings or representations (whether expressed or implied) are excluded to the fullest extent permitted by law.

All works undertaken shall be in accordance with all relevant legislations, acts and regulations applicable to the particular state or territory of the Location. The following table lists all relevant documents that shall be considered and adhered to.

State/Territory	Documents
National	Work Health and Safety Act 2011
	Work Health and Safety Regulations 2011
	Safe Work Australia - Working in the Vicinity of Overhead and Underground Electric Lines (Draft)

	Occupational Health and Safety Act 1991
NSW	Electricity Supply Act 1995
	Work Cover NSW - Work Near Underground Assets Guide
	Work Cover NSW - Excavation Work: Code of Practice
VIC	Electricity Safety Act 1998
	Electricity Safety (Network Asset) Regulations 1999
QLD	Electrical Safety Act 2002
	Code of Practice for Working Near Exposed Live Parts
SA	Electricity Act 1996
TAS	Tasmanian Electricity Supply Industry Act 1995
WA	Electricity Act 1945
	Electricity Regulations 1947
NT	Electricity Reform Act 2005
	Electricity Reform (Safety and Technical) Regulations 2005
ACT	Electricity Act 1971

Thank You,

nbn DBYD

Date: 09/10/2024

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Working near nbn™ cables

nbn has partnered with Dial Before You Dig to give you a single point of contact to get information about **nbn** underground services owned by **nbn** and other utility/service providers in your area including communications, electricity, gas and other services. Contact with underground power cables and gas services can result in serious injury to the worker, and damage and costly repairs. You must familiarise yourself with all of the Referral Conditions (meaning the referral conditions referred to in the DBYD Notice provided by **nbn**).

Practice safe work habits

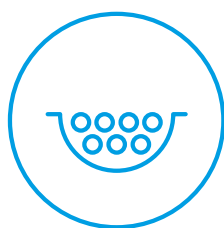
Once the DBYD plans are reviewed, the Five P's of Excavation should be adopted in conjunction with your safe work practices (which must be compliant with the relevant state Electrical Safety Act and Safe Work Australia "Excavation Work Code of Practice", as a minimum) to ensure the risk of any contact with underground **nbn** assets are minimised.



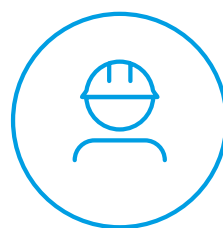
Plan: Plan your job by ensuring the plans received are current and apply to the work to be performed. Also check for any visual cues that may indicate the presence of services not covered in the DBYD plans.



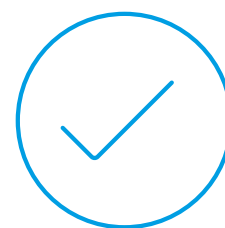
Prepare: Prepare for your job by engaging a DBYD Certified Plant Locator to help interpret plans and identify on-site assets. Contact **nbn** should you require further assistance.



Pothole: Non-destructive potholing (i.e. hand digging or hydro excavation) should be used to positively locate **nbn** underground assets with minimal risk of contact and service damage.

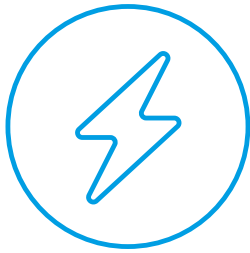


Protect: Protecting and supporting the exposed **nbn** underground asset is the responsibility of the worker. Exclusion zones for **nbn** assets are clearly stated in the plan and appropriate controls must be implemented to ensure that encroachment into the exclusion zone by machinery or activities with the potential to damage the asset is prevented.

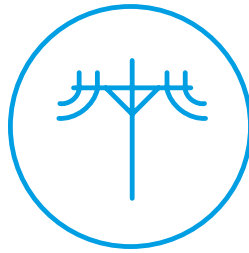


Proceed: Proceed only when the appropriate planning, preparation, potholing and protective measures are in place.

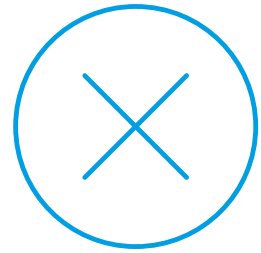
Working near **nbn**[™] cables



Identify all electrical hazards, assess the risks and establish control measures.



When using excavators and other machinery, also check the location of overhead power lines.



Workers and equipment must maintain safety exclusion zones around power lines.

Once all work is completed, the excavation should be re-instated with the same type of excavated material unless specified by **nbn**. Please note:

- Construction Partners of **nbn** may require additional controls to be in place when performing excavation activities.
- The information contained within this pamphlet must be used in conjunction with other material supplied as part of this request for information to adequately control the risk of potential asset damage.

Contact

All **nbn**[™] network facility damages must be reported online [here](#).
For enquiries related to your DBYD request please call 1800 626 329.

Disclaimer

This brochure is a guide only. It does not address all the matters you need to consider when working near our cables. You must familiarise yourself with other material provided (including the Referral Conditions) and make your own inquiries as appropriate.

nbn will not be liable or responsible for any loss, damage or costs incurred as a result of reliance on this brochure.

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Referral

245788737

Member Phone

13 20 92

Responses from this member

Response received Thu 10 Oct 2024 6.42am

File name

Page

Response Body

42

Important_Information_Sydney_Water_DBYD_Plans.pdf

43

MAP_24578873737779040.pdf

46

Guide_to_Sydney_Water_DBYD_Plans.pdf

47

Asset Name: 80210

Date of enquiry: 9/10/2024 7:41:00 PM

Notification No: 37779040 (Job No)

Sequence No: 245788737

Customers Name: [REDACTED]

Customers Phone No: [REDACTED]

Address supplied for dig site location

19 Gardiner Avenue, Banksia, NSW

Notice: Please **DO NOT REPLY TO THIS EMAIL** as it has been automatically generated and replies are not monitored. Should you wish to advise Dial Before You Dig of any issues with this enquiry, please Call 13 20 92.

[Facebook] [Twitter] [YouTube] [Instagram]

— — — — —

NOTICE: This email is confidential. If you are not the nominated recipient, please immediately delete this email, destroy all copies and inform the sender. Sydney Water Corporation (Sydney Water) prohibits the unauthorised copying or distribution of this email. This email does not necessarily express the views of Sydney Water. Sydney Water does not warrant nor guarantee that this email communication is free from errors, virus, interception or interference.

Important information about Before You Dig

The material provided or made available to you by Sydney Water (including on the Sydney Water website) in relation to your Before You Dig enquiry (Information) is provided on each of the following conditions, which you are taken to have accepted by using the Information:

- 1 The Information has been generated by an automated system based on the area highlighted in the “Locality Indication Only” window on your Confirmation Email. It is your responsibility to ensure that the dig site is properly defined when submitting your Before You Dig enquiry and, if the Information does not match the dig site, to resubmit your enquiry for the correct dig site.
- 2 Neither Sydney Water nor Before You Dig make any representation or give any guarantee, warranty or undertaking (express or implied) as to the currency, accuracy, completeness, effectiveness or reliability of the Information. The Information, including Sydney Water plans and work-as-executed diagrams, amongst other things:
 - (a) may not show all existing structures, including Sydney Water’s pipelines, particularly in relation to newer developments and in relation to structures owned by parties who do not participate in the Before You Dig service;
 - (b) may be out of date and not show changes to surface levels, road alignments, fences, buildings and the like;
 - (c) is approximate only and is therefore not suitable for scaling purposes; and
 - (d) does not show locations of property services (often called house service lines) belonging to or servicing individual customers, which are usually connected to Sydney Water’s structures.
- 3 You are responsible for, amongst other things:
 - (a) exposing underground structures, including Sydney Water’s pipelines, by pot-holing using hand-held tools or vacuum techniques so as to determine the precise location and extent of structures before any mechanical means of excavation are used;
 - (b) the safe and proper excavation of and for underground works and structures, including having regard to the fact that asbestos cement pipelines, which can pose a risk to health, may form part of Sydney Water’s water and sewerage reticulation systems;
 - (c) protecting underground structures, including Sydney Water’s pipelines, from damage and interference;
 - (d) maintaining minimum clearances between Sydney Water’s structures and structures belonging to others;
 - (e) ensuring that backfilling of excavation work in the vicinity of Sydney Water’s structures complies with Sydney Water’s standards contained on its website or otherwise communicated to you;
 - (f) notifying Sydney Water immediately of any damage caused or threat of damage to Sydney Water’s structures;
 - (g) ensuring that plans are approved by Sydney Water (usually signified by stamping) prior to landscaping or building over or in the vicinity of any Sydney Water structure;
 - (h) ensuring that the Information is used only for the purposes for which Sydney Water and Before You Dig intended.

- 4 You acknowledge that you use the Information at your own risk. In consideration for the provision of the Before You Dig service and the Information by Sydney Water and Before You Dig, to the fullest extent permitted by law
- (a) all conditions and guarantees concerning the Information (whether as to quality, outcome, fitness, care, skill or otherwise) expressed or implied by statute, common law, equity, trade, custom or usage or otherwise are expressly excluded and to the extent that those statutory guarantees cannot be excluded, the liability of Sydney Water and Before You Dig to you is limited to either of the following as nominated by Sydney Water in its discretion, which you agree is your only remedy:
 - (i) the supplying of the Information again; or
 - (ii) payment of the cost of having the Information supplied again;
 - (b) in no event will Sydney Water or Before You Dig be liable for, and you release Sydney Water and Before You Dig from, any Loss arising from or in connection with the Information, including the use of or inability to use the Information and delay in the provision of the Information:
 - (i) whether arising under statute or in contract, tort or any other legal doctrine, including any negligent act, omission or default (including willful default) by Sydney Water or Before You Dig; and
 - (ii) regardless of whether Sydney Water or Before You Dig are or ought to have been aware of, or advised of, the possibility of such loss, costs or damages;
 - (c) you will indemnify Sydney Water and Before You Dig against any Loss arising from or in connection with Sydney Water providing incorrect or incomplete information to you in connection with the Before You Dig service; and
 - (d) you assume all risks associated with the use of the Before You Dig and Sydney Water websites, including risk to your computer, software or data being damaged by any virus, and you release and discharge Sydney Water and Before You Dig from all Loss which might arise in respect of your use of the websites.
- 5 **“Sydney Water”** means Sydney Water Corporation and its employees, agents, representatives and contractors. **“Before You Dig”** means Before You Dig Australia and its employees, agents, representatives and contractors. References to **“you”** include references to your employees, agents, representatives, contractors and anyone else using the Information. References to **“Loss”** include any loss, cost, expense, claim, liability or damage (including arising in connection with personal injury, death or any damage to or loss of property and economic or consequential loss, lost profits, loss of revenue, loss of management time, opportunity costs or special damages). To the extent of any inconsistency, the conditions in this document will prevail over any other information provided to you by Sydney Water and Before You Dig.

In an emergency, or to notify Sydney Water of damage or threats to its structures, call 13 20 90 (24 hours, 7 days)

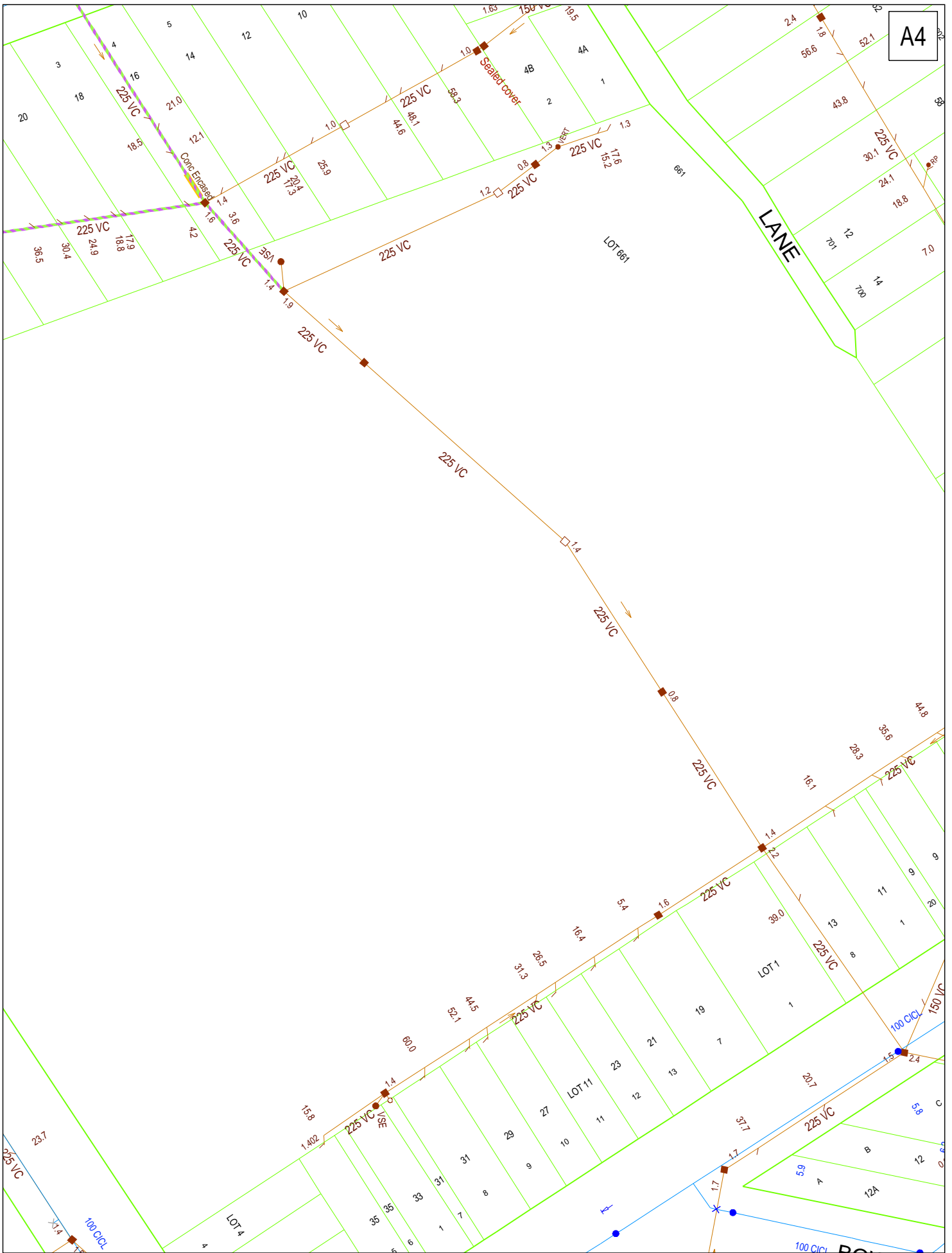
Further information and guidance is available in the 'Plumbing, building and developing' section of Sydney Water's website at www.sydneywater.com.au, where you will find the following under 'Before You Dig':

- Essential references
 - Guide to Reading Sydney Water BYDA Plans
 - Avoid Damaging Water and Sewer Pipelines
 - Technical guidelines: Building over and adjacent to pipe assets
- See Also
 - Building over or next to assets, section of Sydney Water's website at www.sydneywater.com.au

Or call **13 20 92** for Customer Enquiries.

Note: The lodging of enquiries via www.byda.com.au will enable you to receive, via email, colour plans in PDF format 24 hours a day, 7 days a week.

This communication is confidential. If you are not the intended recipient, please destroy all copies immediately. Sydney Water Corporation prohibits unauthorised copying or distribution of this communication.



DBYD Address:
 19 Gardiner Avenue
 Banksia NSW 2216

DBYD Job No: 37779040
 DBYD Sequence No: 245788737

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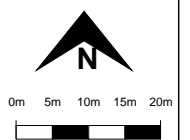
No warranty is given that the information shown is complete or accurate.

SYDNEY WATER CORPORATION

Scale: 1:1000

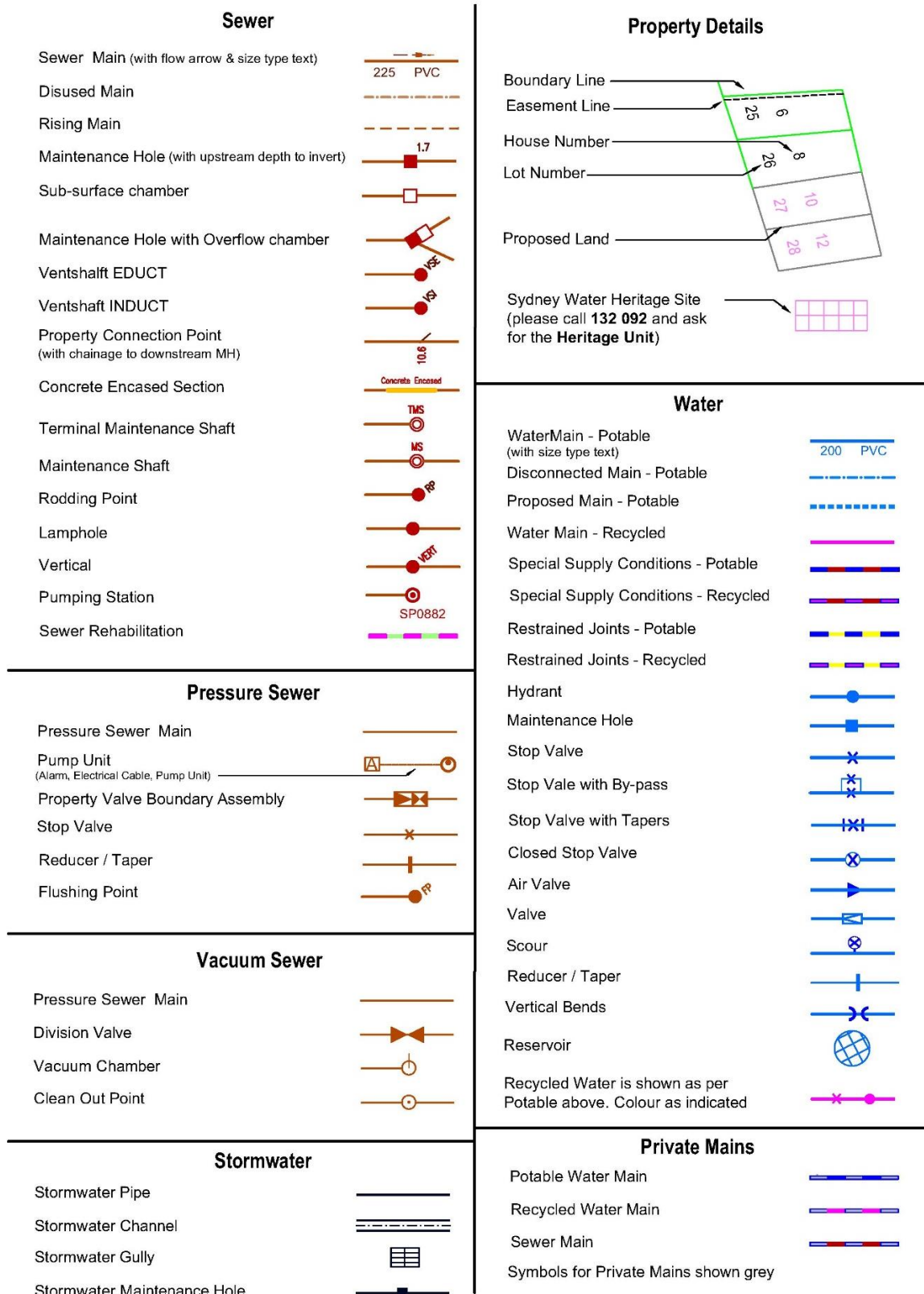
Date of Production: 10/10/2024

Plan 1 of 1



Guide to reading Sydney Water Before You Dig Plans

This guide will help you understand our plans and what our services are.



Pipe types

ABS	Acrylonitrile Butadiene Styrene	AC	Asbestos Cement
BRICK	Brick	CI	Cast Iron
CICL	Cast Iron Cement Lined	CONC	Concrete
COPPER	Copper	DI	Ductile Iron
DICL	Ductile Iron Cement (mortar) Lined	DIPL	Ductile Iron Polymeric Lined
EW	Earthenware	FIBG	Fibreglass
FL BAR	Forged Locking Bar	GI	Galvanised Iron
GRP	Glass Reinforced Plastics	HDPE	High Density Polyethylene
MS	Mild Steel	MSCL	Mild Steel Cement Lined
PE	Polyethylene	PC	Polymer Concrete
PP	Polypropylene	PVC	Polyvinylchloride
PVC - M	Polyvinylchloride, Modified	PVC - O	Polyvinylchloride, Oriented
PVC - U	Polyvinylchloride, Unplasticised	RC	Reinforced Concrete
RC-PL	Reinforced Concrete Plastics Lined	S	Steel
SCL	Steel Cement (mortar) Lined	SCL IBL	Steel Cement Lined Internal Bitumen
SGW	Salt Glazed Ware	SPL	Steel Polymeric Lined
SS	Stainless Steel	STONE	Stone
VC	Vitrified Clay	WI	Wrought Iron
WS	Woodstave		

In an emergency, or to notify Sydney Water of damage or threats to its structures, call 13 20 90 (24 hours, 7 days)

Further information and guidance is available in the 'Plumbing, building and developing' section of Sydney Water's website at www.sydneywater.com.au, where you will find the following under 'Before You Dig':

- Essential references
 - Avoid Damaging Water and Sewer Pipelines
 - Important Information about Before You Dig
 - Technical guidelines: Building over and adjacent to pipe assets
- See Also
 - Building over or next to assets, section of Sydney Water's website at www.sydneywater.com.au

Or call **13 20 92** for Customer Enquiries.

Note: The lodging of enquiries via www.byda.com.au will enable you to receive, via email, colour plans in PDF format 24 hours a day, 7 days a week.

This communication is confidential. If you are not the intended recipient, please destroy all copies immediately. Sydney Water Corporation prohibits unauthorised copying or distribution of this communication.

Referral
245788739

Member Phone
1800 653 935

Responses from this member

Response received Thu 10 Oct 2024 6.47am

File name	Page
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Telstra Duty of Care v32.0b.pdf	51
AccreditedPlantLocators 2024-09-13a.pdf	53
Telstra Map Legend 4.0b.pdf	54
245788739.pdf	55

Attention: [REDACTED]

Site Location: 19 Gardiner Avenue, Banksia, NSW 2216

Your Job Reference: REF - Eastern Path

Please do not reply to this email, this is an automated message -

Thank you for requesting Telstra information via Before You Dig Australia (BYDA).

This response contains Telstra information relating to your recent BYDA request.

Information for opening Telstra Asset Plans as well as some other useful contact information is listed in the attached **Telstra Map Legend attached.**

Please refer to all enclosed attachments for more information.

Please Report Damage to Telstra Equipment: [Report damages to Telstra equipment - Telstra](#)

Please note:

When working in the vicinity of telecommunications plant you have a 'Duty of Care' that must be observed. Please ensure you read the 'Telstra Duty of Care' document (attached) - it contains important information including essential steps that must be undertaken prior to commencing construction activities.

WARNING: Telstra plans and location information conform to Quality Level 'D' of the Australian Standard AS 5488 - Classification of Subsurface Utility Information. As such, Telstra supplied location information is indicative only. Spatial accuracy is not applicable to Quality Level D. Refer to AS 5488 for further details. The exact position of Telstra assets can only be validated by physically exposing them. Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy. Further on site investigation is required to validate the exact location of Telstra assets prior to commencing work. A Certified Locating Organisation is an essential part of the process to validate the exact location of Telstra assets and to ensure the assets are protected during construction works. See the [Steps - Working Near Telecommunications Assets \(attached Telstra Duty of Care\)](#).

Please note that:

- it is a criminal offence under the *Criminal Code Act 1995* (Cth) to tamper or interfere with telecommunications infrastructure.
- Telstra will take action to recover compensation for damage caused to property and assets, and for interference with the operation of Telstra's networks and customers' services.

Telstra's plans contain Telstra's confidential information and are provided on the basis that they are used solely for identifying the location or vicinity of Telstra's infrastructure to avoid damage to this infrastructure occurring as part of any digging or other excavation activity. You must not use Telstra's plans for any other purpose or in a way that will cause Telstra loss or damage and you must comply with any other terms of access to the data that have been provided to you by Telstra (including Conditions of Use or Access).

(See attached file: Telstra Duty of Care v32.0b.pdf)

(See attached file: Telstra Map Legend 4.0b.pdf)

(See attached file: AccreditedPlantLocators 2024-09-13a.pdf)

(See attached file: 245788739.pdf)

Before You Dig Australia

Think before you dig

This document has been sent to you because you requested plans of the Telstra network through Before You Dig Australia (BYDA).

If you are working or excavating near telecommunications cables, or there is a chance that cables are located near your site, you are responsible to avoid causing damage to the Telstra network.

Please read this document carefully. Taking your time now and following the steps below can help you avoid damaging our network, interrupting services, and potentially incurring civil and criminal penalties.

Our network is complex and working near it requires expert knowledge. Do not attempt these activities if you are not qualified to do so.

Disclaimer and legal details



*Telstra advises that the accuracy of the information provided by Telstra conforms to Quality Level D as defined in AS5488-2013.

It is a criminal offence under the Criminal Code Act 1995 (Cth) to tamper or interfere with telecommunications infrastructure.

Telstra will also take action to recover costs and damages from persons who damage assets or interfere with the operation of Telstra's networks.

By receiving this information including the indicative plans that are provided as part of this information package you confirm that you understand and accept the risks of working near Telstra's network and the importance of taking all the necessary steps to confirm the presence, alignments and various depths of Telstra's network. This in addition to, and not in replacement of, any duties and obligations you have under applicable law.

When working in the vicinity of a telecommunications plant you have a "Duty of Care" that must be observed. Please read and understand all the information and disclaimers provided below.

The Telstra network is complex and requires expert knowledge to interpret information, to identify and locate components, to pothole underground assets for validation and to safely work around assets without causing damage. If you are not an expert and/or qualified in these areas, then you must not attempt these activities. Telstra will seek compensation for damages caused to its property and losses caused to Telstra and its customers. Construction activities and/or any activities that potentially may impact on Telstra's assets must not commence without first undertaking these steps. Construction activities can include anything that involves breaking ground, potentially affecting Telstra assets.

If you are designing a project, it is recommended that you also undertake these steps to validate underground assets prior to committing to your design.

This Notice has been provided as a guide only and may not provide you with all the information that is required for you to determine what assets are on or near your site of interest. You will also need to collate and understand all information received from other Utilities and understand that some Utilities are not a part of the BYDA program and make your own enquiries as appropriate. It is the responsibility of the entities undertaking the works to protect Telstra's network during excavation / construction works.

Telstra owns and retains the copyright in all plans and details provided in conjunction with the applicant's request. The applicant is authorised to use the plans and details only for the purpose indicated in the applicant's request. The applicant must not use the plans or details for any other purpose.

Telstra plans or other details are provided only for the use of the applicant, its servants, agents, or CERTLOC Certified Locating Organisation (CLO). The applicant must not give the plans or details to any parties other than these and must not generate profit from commercialising the plans or details.

Telstra, its servants or agents shall not be liable for any loss or damage caused or occasioned by the use of plans and or details so supplied to the applicant, its servants and agents, and the applicant agrees to indemnify Telstra against any claim or demand for any such loss or damage.

Please ensure Telstra plans and information provided always remains on-site throughout the inspection, location, and construction phase of any works.

Telstra plans are valid for 60 days after issue and must be replaced if required after the 60 days.

Data Extraction Fees

In some instances, a data extraction fee may be applicable for the supply of Telstra information. Typically, a data extraction fee may apply to large projects, planning and design requests or requests to be supplied in non-standard formats. For further details contact Telstra Planned Services.

Telstra does not accept any liability or responsibility for the performance of or advice given by a CERTLOC Certified Locating Organisation (CLO). Certification is an initiative taken by Telstra towards the establishment and maintenance of competency standards. However, performance and the advice given will always depend on the nature of the individual engagement.

Neither the Certified Locating Organisation nor any of its employees are an employee or agent for Telstra. Telstra is not liable for any damage or loss caused by the Certified Locating Organisation or its employees.

Once all work is completed, the excavation should be reinstated with the same type of excavated material unless specified by Telstra.

The information contained within this pamphlet must be used in conjunction with other material supplied as part of this request for information to adequately control the risk of potential asset damage.

When using excavators and other machinery, also check the location of overhead power lines.

Workers and equipment must maintain safety exclusion zones around power lines

WARNING: Telstra plans and location information conform to Quality Level 'D' of the Australian Standard AS 5488 - Classification of Subsurface Utility Information. As such, Telstra supplied location information is indicative only. Spatial accuracy is not applicable to Quality Level D. Refer to AS 5488 for further details. Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy shown on the plans. **FURTHER ON SITE INVESTIGATION IS REQUIRED TO VALIDATE THE EXACT LOCATION OF TELSTRA PLANT PRIOR TO COMMENCING CONSTRUCTION WORK.** A plant location service is an essential part of the process to validate the exact location of Telstra assets and to ensure the assets are protected during construction works. The exact position of Telstra assets can only be validated by physically exposing them. Telstra will seek compensation for damages caused to its property and losses caused to Telstra and its customers.

Privacy Note

Your information has been provided to Telstra by BYDA to enable Telstra to respond to your BYDA request. Telstra keeps your information in accordance with its privacy statement. You can obtain a copy at www.telstra.com.au/privacy or by calling us at 1800 039 059 (business hours only).

OPENING ELECTRONIC MAP ATTACHMENTS –

Telstra Cable Plans are generated automatically in either PDF or DWF file types.
Dependent on the site address and the size of area selected.
You may need to download and install free viewing software from the internet e.g.



DWF Map Files (all sizes over A3)
Autodesk Viewer (Internet Browser) <https://viewer.autodesk.com/> or
Autodesk Design Review <http://usa.autodesk.com/design-review/> for
DWF files. (Windows PC)



PDF Map Files (max size A3)
Adobe Acrobat Reader <http://get.adobe.com/reader/>



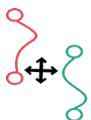
Telstra BYDA map related enquiries email
Telstra.Plans@team.telstra.com
1800 653 935 (AEST Business Hours only)



REPORT ANY DAMAGE TO THE TELSTRA NETWORK IMMEDIATELY
Report online - <https://www.telstra.com.au/forms/report-damage-to-telstra-equipment>
Ph: 13 22 03
If you receive a message asking for a phone or account number say:
“I don’t have one” then say “Report Damage” then press 1 to speak
to an operator.



Telstra New Connections / Disconnections
13 22 00



Telstra asset relocation enquiries: 1800 810 443 (AEST business
hours only).
NetworkIntegrity@team.telstra.com
<https://www.telstra.com.au/consumer-advice/digging-construction>

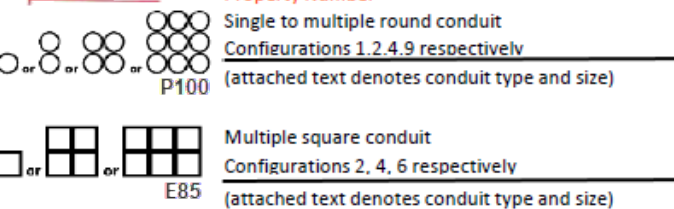
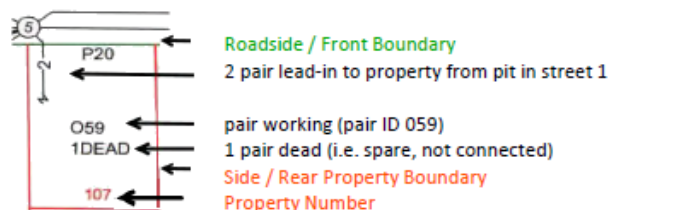
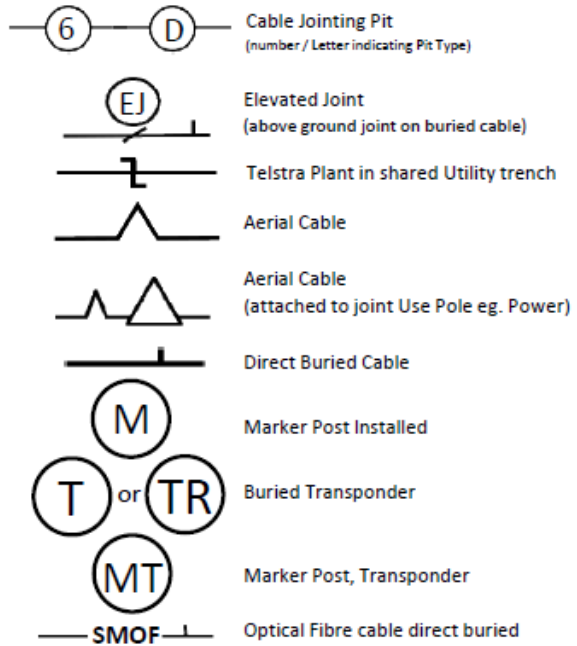
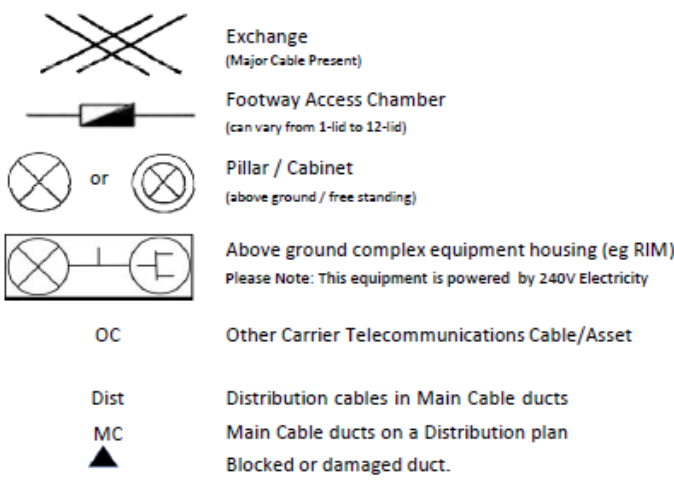


Telstra Aerial Assets Group (overhead network)
1800 047 909



CERTLOC Certified Locating Organisation (CLO)
certloc.com.au/locators/

LEGEND



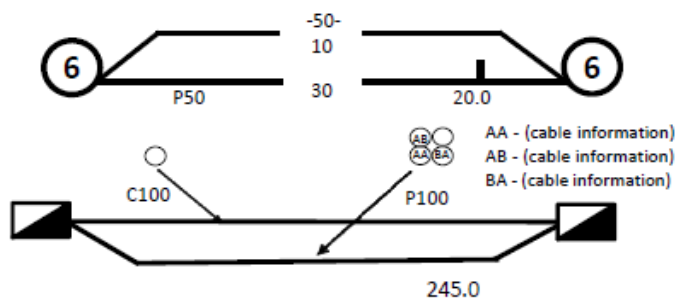
Some examples of conduit type and size:

A - Asbestos cement, P - PVC / Plastic, C - Concrete, GI - Galanised iron, E - Earthenware

Conduit sizes *nominally* range from 20mm to 100mm

P50 50mm PVC conduit
P100 100mm PVC conduit
A100 100mm asbestos cement conduit

Some Examples of how to read Telstra Plans



One 50mm PVC conduit (P50) containing a 50-pair and a 10-pair cable between two 6-pits. approximately 20.0m apart, with a direct buried 30-pair cable along the same route

Two separate conduit runs between two footway access chambers (manholes) approximately 245m apart A nest of four 100mm PVC conduits (P100) containing assorted cables in three ducts (one being empty) and one empty 100mm concrete duct (C100) along

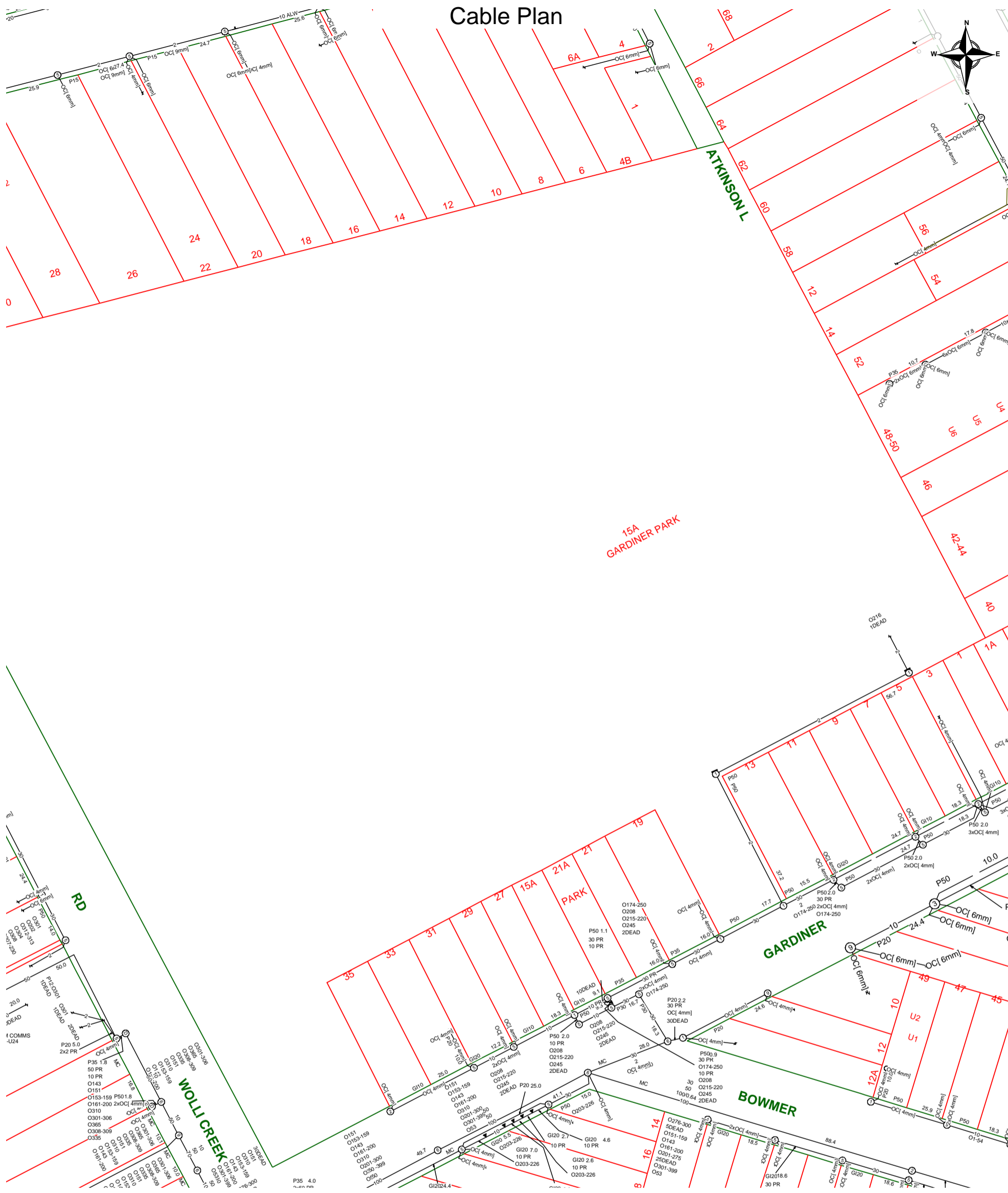
Protect our Network:

by maintaining the following distances from our assets:

- 1.0m Mechanical Excavators, Farm Ploughing, Tree Removal
- 500mm Vibrating Plate or Wacker Packer Compactor
- 600mm Heavy Vehicle Traffic (over 3 tonnes) not to be driven across Telstra ducts or plant.
- 1.0m Jackhammers/Pneumatic Breakers
- 2.0m Boring Equipment (in-line, horizontal and vertical)

For more info contact a [CERTLOC Certified Locating Organisation \(CLO\)](#) or Telstra Location Intelligence Team 1800 653 935

Cable Plan



Report Damage: <https://service.telstra.com.au/customer/general/forms/report-damage-to-telstra-equipment>
 Ph - 13 22 03
 Email - Telstra.Plans@team.telstra.com
 Planned Services - ph 1800 653 935 (AEST bus hrs only) General Enquiries

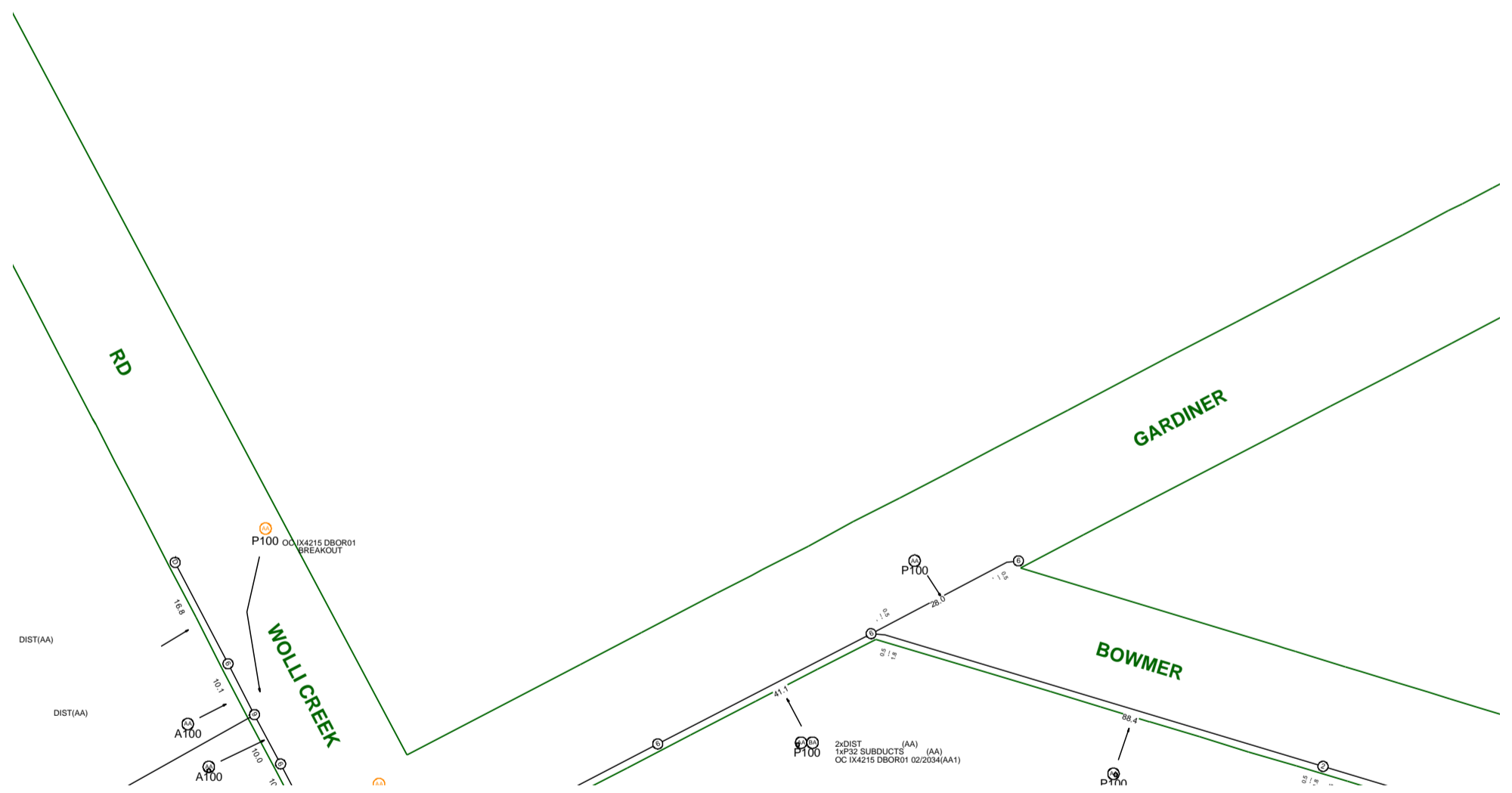
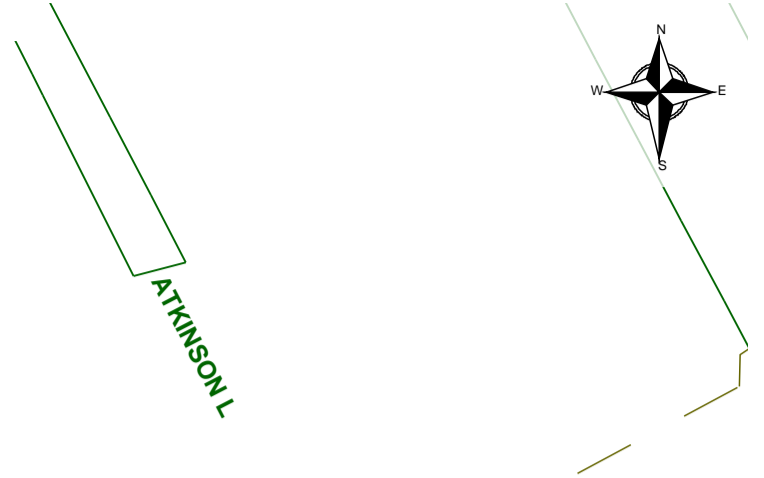
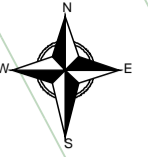
Sequence Number: 245788739
 Please read Duty of Care prior to any excavating

TELSTRA LIMITED A.C.N. 086 174 781
 Generated On 10/10/2024 06:47:11

The above plan must be viewed in conjunction with the Mains Cable Plan on the following page

WARNING
 Telstra plans and location information conform to Quality Level "D" of the Australian Standard AS 5488-Classification of Subsurface Utility Information. As such, Telstra supplied location information is indicative only. Spatial accuracy is not applicable to Quality Level D. Refer to AS 5488 for further details. The exact position of Telstra assets can only be validated by physically exposing it. Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy. Further on site investigation is required to validate the exact location of Telstra plant prior to commencing construction work. A Certified Locating Organisation is an essential part of the process to validate the exact location of Telstra assets and to ensure the asset is protected during construction works.
 See the Steps- Telstra Duty of Care that was provided in the email response.

Mains Cable Plan



Report Damage: <https://service.telstra.com.au/customer/general/forms/report-damage-to-telstra-equipment>
 Ph - 13 22 03
 Email - Telstra.Plans@team.telstra.com
 Planned Services - ph 1800 653 935 (AEST bus hrs only) General Enquiries

Sequence Number: 245788739

Please read Duty of Care prior to any excavating

TELSTRA LIMITED A.C.N. 086 174 781

Generated On 10/10/2024 06:47:13

WARNING
 Telstra plans and location information conform to Quality Level "D" of the Australian Standard AS 5488-Classification of Subsurface Utility Information. As such, Telstra supplied location information is indicative only. Spatial accuracy is not applicable to Quality Level D. Refer to AS 5488 for further details. The exact position of Telstra assets can only be validated by physically exposing it. Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy. Further on site investigation is required to validate the exact location of Telstra plant prior to commencing construction work. A Certified Locating Organisation is an essential part of the process to validate the exact location of Telstra assets and to ensure the asset is protected during construction works.
 See the Steps- Telstra Duty of Care that was provided in the email response.




End of document

i This document may exclude some files (eg. DWF or ZIP files)

This document was automatically generated at a point-in-time. Be aware that the source information from which this document was created may have changed since it was produced. This document may contain incomplete or out-of-date information. Always check your enquiry details in the BYDA Referral Service for the most recent information. For copyright information refer to individual responses.

[Review responses online](#) ↗



Received 6 of 6 responses
All responses received

36 Wollie Creek Road, Banksia NSW 2216

Job dates
06/01/2025 → 31/01/2025

These plans expire on
6 Nov 2024

Lodged by
[REDACTED] [REDACTED]

Authority	Status	Page
✉ BYDA Confirmation		2
🏠 Ausgrid	Received	4
🏠 Bayside Council	Received	21
🏠 Jemena Gas South	Received	24
🏠 NBN Co NswAct	Received	30
🏠 Sydney Water	Received	41
🏠 Telstra NSW Central	Received	49

Contact Details

Contact [REDACTED]	Contact number [REDACTED]	Company Royal HaskingDHV	Enquirer ID 3477134
Email [REDACTED]		Address Level 15 99 Mount Street North Sydney NSW 2060	

Job Site and Enquiry Details

WARNING: The map below only displays the location of the proposed job site and does not display any asset owners' pipe or cables. The area highlighted has been used only to identify the participating asset owners, who will send information to you directly.

Enquiry date 10/10/2024	Start date 06/01/2025	End date 31/01/2025	On behalf of Utility Bayside Council	Job purpose Design	Locations Road Reserve Footpath	Onsite activities Planning & Design
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Check that the location of the job site is correct. If not, you must submit a new enquiry.

If the scope of works change or plan validity dates expire, you must submit a new enquiry.

Do NOT dig without plans. Safe excavation is your responsibility. If you don't understand the plans or how to proceed safely, please contact the relevant asset owners.

User Reference REF - Western Path	Address 36 Wollie Creek Road Banksia NSW 2216	Notes/description -
---	--	-------------------------------

Your Responsibility and Duty of Care

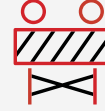
- **Lodging an enquiry does not authorise project commencement.** Before starting work, you must obtain all necessary information from all affected asset owners.
- If you don't receive plans within 2 business days, contact the asset owner & quote their sequence number.
- Always follow the 5Ps of Safe Excavation (page 2), and locate assets before commencing work.
- Ensure you comply with State legislative requirements for Duty of Care and safe digging.
- If you damage an underground asset, you **MUST** advise the asset owner immediately.
- By using the BYDA service, you agree to the [Privacy Policy](#) and [Term of Use](#).
- For more information on safe digging practices, visit www.byda.com.au

Asset Owner Details

Below is a list of asset owners with underground infrastructure in and around your job site. It is your responsibility to identify the presence of these assets. Plans issued by Members are indicative only unless specified otherwise. Note: not all asset owners are registered with BYDA. You must contact asset owners not listed here directly.

Referral ID (Seq. no)	Authority Name	Phone	Status
245788785	Ausgrid	(02) 4951 0899	NOTIFIED
245788786	Bayside Council	-	NOTIFIED
245788788	Jemena Gas South	1300 880 906	NOTIFIED
245788784	NBN Co NswAct	1800 687 626	NOTIFIED
245788787	Sydney Water	13 20 92	NOTIFIED
245788789	Telstra NSW Central	1800 653 935	NOTIFIED

END OF UTILITIES LIST



Plan

Plan your job. Use the BYDA service at least one day before your job is due to begin, and ensure you have the correct plans and information required to carry out a safe project.

Prepare

Prepare by communicating with asset owners if you need assistance. Look for clues onsite. Engage a skilled Locator.

Pothole

Potholing is physically sighting the asset by hand digging or hydro vacuum extraction.

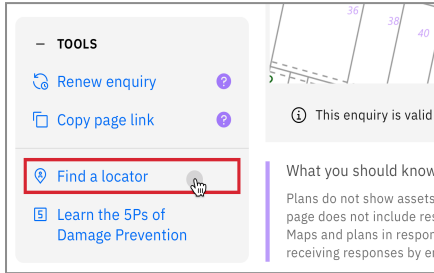
Protect

Protecting and supporting the exposed infrastructure is the responsibility of the excavator. Always erect safety barriers in areas of risk and enforce exclusion zones.

Proceed

Only proceed with your excavation work after planning, preparing, potholing (unless prohibited), and having protective measures in place.

Engage a skilled Locator



When you lodge an enquiry you will see skilled Locators to contact

Visit the Certified Locator website directly and search for a locator near you

bydlocator.com/certified-locating-organisation

Book a FREE BYDA Session



BYDA offers two different sessions to suit you and your organisation's needs. The free sessions are offered in two different formats - online and face-to-face:

- 1. Awareness Session:** Understand the role of BYDA, safe excavation practices, complying with asset-owner instructions, and the consequences of damages. Learn how to mitigate and avoid potential damage and harm and ensure a safe work environment.
- 2. Plan Reading Session:** Develop the skills to interpret asset owners' plans, legends, and symbols effectively. Understand the complexities of plan interpretation to ensure smooth project execution.

To book a session, visit:

byda.com.au/contact/education-awareness-enquiry-form/

BOOK NOW

Referral
245788785

Member Phone
(02) 4951 0899

Responses from this member

Response received Thu 10 Oct 2024 6.45am

File name	Page
Response Body	5
Important Information.pdf	6
S_245788785_GMLA3_Prpsl_1.pdf	7
Assets Affected Letter.pdf	8
How To Read AusGrid Plans.pdf	9
Working Near AusGrid Cables.pdf	15

Thank you for contacting Dial Before You Dig (DBYD) prior to engaging in work or activities which may affect the infrastructure of Ausgrid.

WARNING : AUSGRID ASSETS FOUND

YOU MUST READ AND UNDERSTAND ALL ATTACHED FILES IN THIS EMAIL BEFORE PROCEEDING WITH ANY WORKS

Please pay special attention to the attached file 'Assets Affected Letter.pdf'

Job number - 37779047

Sequence number - 245788785

Dig site location -

36 Wolli Creek Road

Banksia

NSW 2216

Attention - [REDACTED] [REDACTED]

Attached are the files containing information relating to your Dial Before You Dig request.

For further enquiries or assistance with interpretation of plans and search content please contact our DBYD support team via email dbyd.ops@ausgrid.com.au or phone 02 4951 0899.

Please **DO NOT SEND A REPLY** to this email address as it has been generated by an automated system and replies are not monitored.

If you are unable to launch any of the files for viewing and printing, you may need to download and install free viewing and printing software such as-

Adobe Acrobat Reader (for PDF files).

<http://get.adobe.com/reader/>

This e-mail may contain confidential or privileged information. If you have received it in error, please notify the sender immediately via return e-mail and then delete the original e-mail. If you are the intended recipient, please note the change of sender email address to @ausgrid.com.au. Ausgrid has collected your business contact details for dealing with you in your business capacity. More information about how we handle your personal information, including your right of access is contained at <http://www.ausgrid.com.au/>

IMPORTANT INFORMATION

YOU MUST BE AWARE THAT:

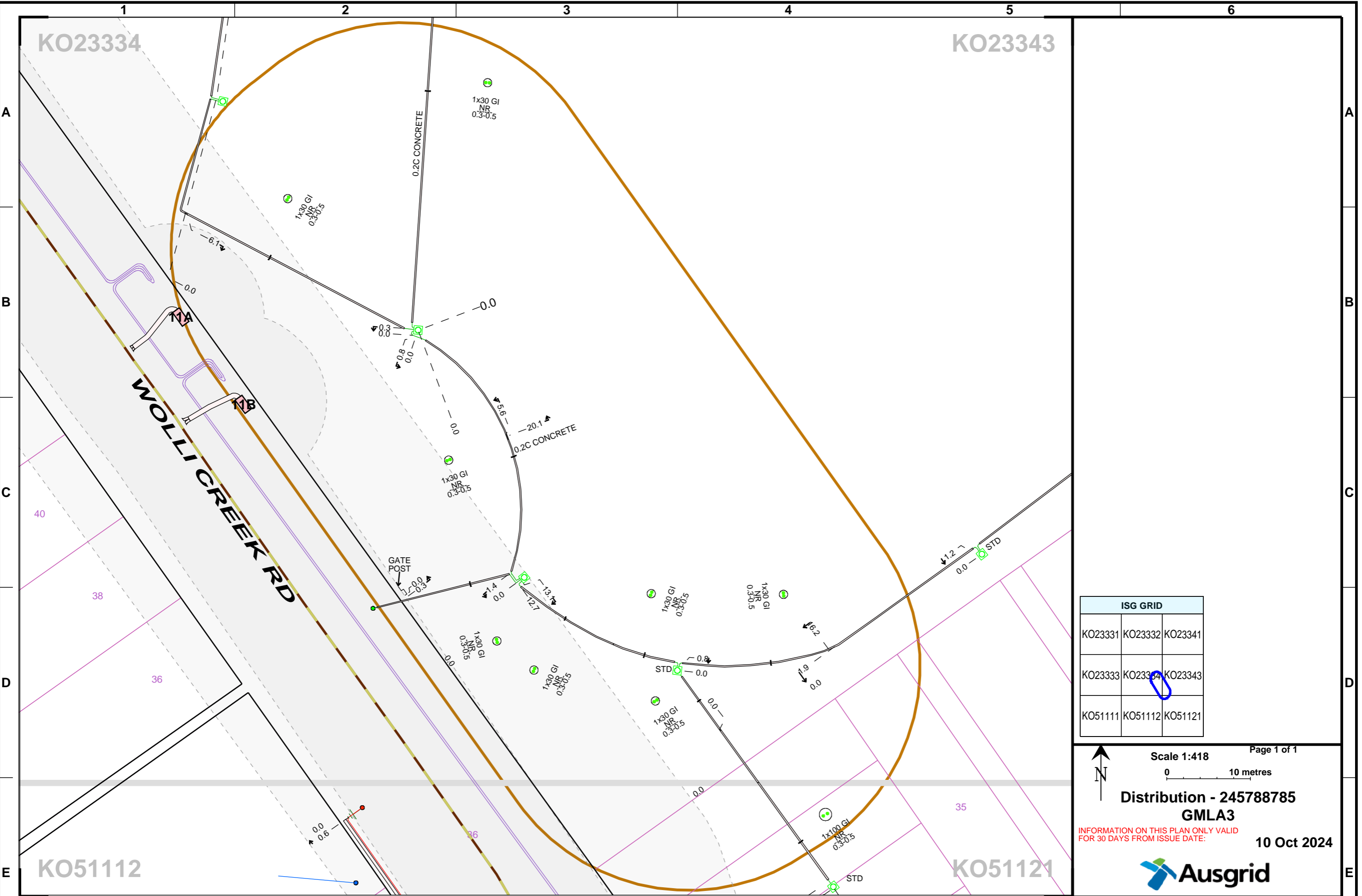
1. There may be underground cables owned by other utilities, in the vicinity of your work, about which Ausgrid has no information.
2. Ausgrid does not usually keep plans of privately owned underground cables or its underground service cables on private property. (Refer NS 156 for further information.)

YOU MUST MAKE YOUR OWN ENQUIRIES IN RESPECT OF THESE CABLES.

YOU MUST UNDERSTAND THAT:

1. Ausgrid takes all reasonable care in providing details of its underground cables. However, owing to changes in road and footway alignments and levels, and the age and incompleteness of some records, it is not possible to conclusively specify the location of all of Ausgrid's underground cables. The accuracy and completeness of the information provided to you cannot be guaranteed. It is intended to be indicative only. It must not be **solely** relied upon when undertaking underground works.
2. Except to the extent that liability may not be capable of lawful exclusion, Ausgrid, its servants and agents will be under no liability whatsoever to any person for loss or damage (including indirect or consequential loss or damage) however caused (including without limitation, for breach of contract, negligence and breach of statute) which may be suffered or incurred from or in connection with the advice provided.
3. Due to the inherent dangers associated with **excavation, under boring and directional drilling** in the vicinity of underground cables, precautions must always be taken when undertaking any underground works. Ausgrid's Network Standard NS 156 specifies standards for working in the vicinity of underground cables. It is deemed to be part of this Advice, and it must be read by you.
4. Due to the inherent risk of compromising the stability of Ausgrid's power poles during excavation which could lead to pole movement or collapse, precautions must always be taken. If excavation is to be carried out within 1m from a power pole, Ausgrid must be contacted at construction.works@ausgrid.com.au for advice. Do not proceed until you have received such advice from Ausgrid.

YOU MUST READ [NETWORK STANDARD NS 156](#), *WORKING NEAR OR AROUND UNDERGROUND CABLES*. IT IS PART OF THIS ADVICE.



ISG GRID		
KO23331	KO23332	KO23341
KO23333	KO23334	KO23343
KO51111	KO51112	KO51121

Page 1 of 1

Scale 1:418

0 10 metres

Distribution - 245788785

GMLA3

INFORMATION ON THIS PLAN ONLY VALID FOR 30 DAYS FROM ISSUE DATE:

10 Oct 2024

W A R N I N G : Ausgrid's plans show the position of assets at the time of installation and may not account for subsequent changes to road alignments, fences or buildings. The plans show no more than the presence or absence of Ausgrid assets in the street. Persons working near electricity networks must exercise care and will be held responsible for any damage caused. You must excavate by hand or use vacuum excavation to establish the location of Ausgrid underground cables and associated assets. Underground: Working near a cable may result in electric shock even if no contact is made. Any work in the vicinity of any cable should only be performed using safe work methods developed in accordance with the recommendations included in Safework NSW Code of Practice for Excavation and Safework NSW Guide for Work Near Underground Assets as well as recommendations of Ausgrid's Network Standard NS156. Overhead: Do not excavate near poles or towers until the stability of the foundation has been assessed by Ausgrid. Cables or earth conductors may be present close to substations, poles or towers. Workers must maintain safe approach distances and follow applicable Safework NSW Codes of Practice. NOTE: 1. You must keep Ausgrid plans on site during excavation works. If the people actually performing the excavation works do not know how to read and interpret Ausgrid's plans, then the work must be directed by a person who knows how to read and interpret the plans. 2. This information includes data from the NSW Digital Cadastral Database by Land and Property Information (c) 2016, used under Creative Commons licence version 4.0.

If further information is required, please contact:
 Ausgrid BYDA
 Phone: (02) 4951 0899
 Fax: (02) 4951 0729



Emergency Phone Number 131388

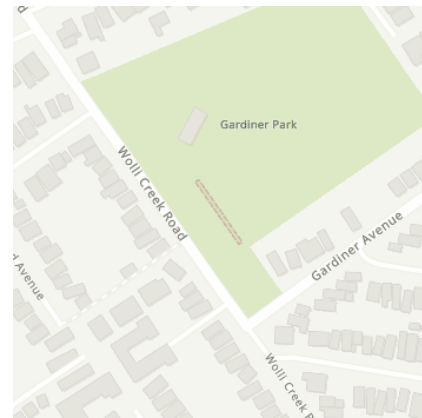
der r d b e
 e r d e
 rd e e ed

To: [Redacted] Royal HaskingDHV Level 15,99 Mount Street North Sydney NSW 2060	Phone No:	+ [Redacted]
	Issue Date:	10/10/2024

In response to your enquiry, Sequence No: 245788785 the records of Ausgrid disclose that there **are** Ausgrid underground cables in the defined search location and relevant Ausgrid plans have been provided.

This search is based on the geographical position of the dig site as denoted in the Before You Dig Australia caller confirmation sheet and an overview is provided:

Address:	36 Wollie Creek Road Banksia NSW 2216
Job #:	37779047



****Important****

- All information provided to you is **ONLY VALID FOR 30 DAYS** from the date of issue
- You must keep Ausgrid plans on site during excavation works. If the people actually performing the excavation works do not know how to read and interpret Ausgrid's plans, then the work must be directed by a person who knows how to read and interpret plans.
- If you require a full size print of A0 plans and don't have the resources to do so please contact our office on 49510899 to request a hard copy to be posted. **Please allow 3 working days for delivery.**
- Please note you will **ONLY** receive portions of your search area that contain Ausgrid Underground Assets

YOU MUST READ AND UNDERSTAND THE SUPPLEMENTARY MATERIAL CONTAINED IN THIS ADVICE BEFORE PROCEEDING WITH ANY WORKS.

Summary of Supplementary Information:

Material	Purpose	Location
Important Information.pdf	Details important information	Attached
Working near Ausgrid Cables.pdf	Summary of NS156	Attached
COMN0119 How to Read Ausgrid Plans.pdf	Details how to read Ausgrid plans	Attached
SafeWork NSW "Work near underground assets: Guide"	To assist you in deciding appropriate measures to eliminate or control risks when working near underground assets.	Web Link [Click Here]
Ausgrid's Network Standard NS156	For important information for work near or around underground cables	Web Link [Click Here]
Ausgrid's Network Standard NS199	This Network Standard applies to specific work on Ausgrid Low Voltage Underground Assets and associated Hazards	Web Link [Click Here]
Working in Confined Spaces	For important information when working in confined spaces	Web Link [Click Here]

Reading Ausgrid Plans

COMN0119

1 Property Lines

“property line” (PL), sometimes referred to as “building line” (BL), is the standard dimensioning reference point on all Ausgrid plans and represents property boundaries.

Typically, the PL is the boundary between private property and local council’s footpath area or nature reserve. Most residential fences and office blocks are erected along the PL.

“kerb line” (KL) is less frequently referred to on Ausgrid plans, and where used will be identified clearly as KL.

Numbers listed within property boundaries should correspond to recognised “street numbers” (refer to figure 1).



Figure 1

2 Datum References

“datum references” identify distances (in metres) from significant features (such as corners of property boundaries) to reference points such as Ausgrid assets (eg: “conduits”, “cables”, “joints”) (refer to figure 2).

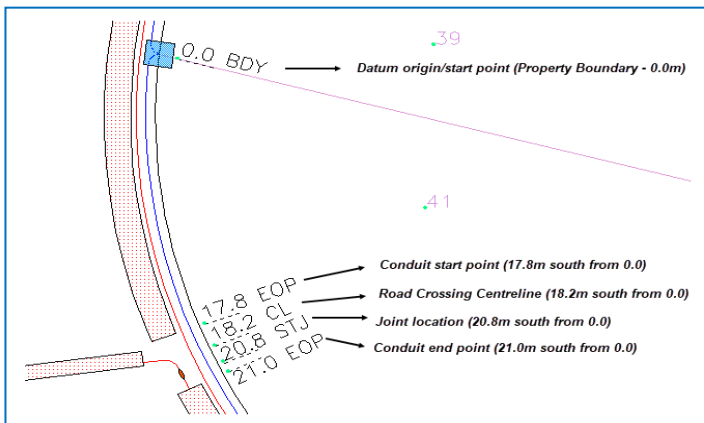


Figure 2

3 Cross Sections

A “cross sections” displayed on Ausgrid plans detail information relating to the relative position (ie: distance from the “property line”, and the depth of “cover”) of Ausgrid assets.

“Cover” is a term used to refer to the depth of cables underground.

A “cross section” leader line will be drawn indicating the location of the displayed “cable” or “conduit” information on Ausgrid plans.

The distance from “property line” (in metres) and depth of “cover” (in metres) references are displayed as; ie: 0.6 metres from PL and 0.5 metres underground.

Where distance and cover are not recorded, they will be clearly marked as “NR”.

NOTE: Distance and cover where indicated may be different to the actual position of the cables (eg: fill may have been placed at site that has changed the ground level).

“PL” distance shown in cross sections is an indicative measure to the centre of the trench allocation from the adjacent property line.

On some plans the “cross sections” may also be shown with a specific number (eg: HR1). This number will match with a cross section detail found in the border of the plot or on a separate plot page (refer to figures 3 and 4).

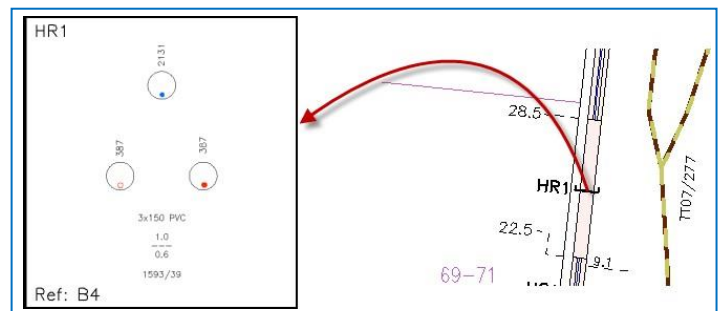


Figure 3

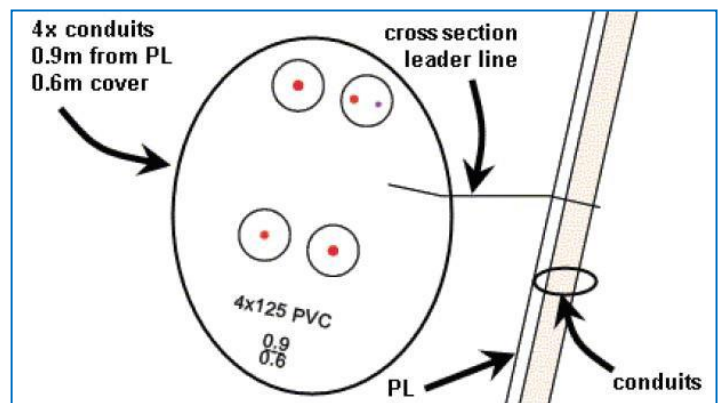


Figure 4

4 Cable Joints and Joint Reports

“cable joints” (numbered individually) and “joint reports” (attached to Ausgrid plans) can provide information relating to the relative position of Ausgrid assets, distance from the “property line” (in metres), and the depth of “cover” (in metres) (refer to figures 5 and 6).

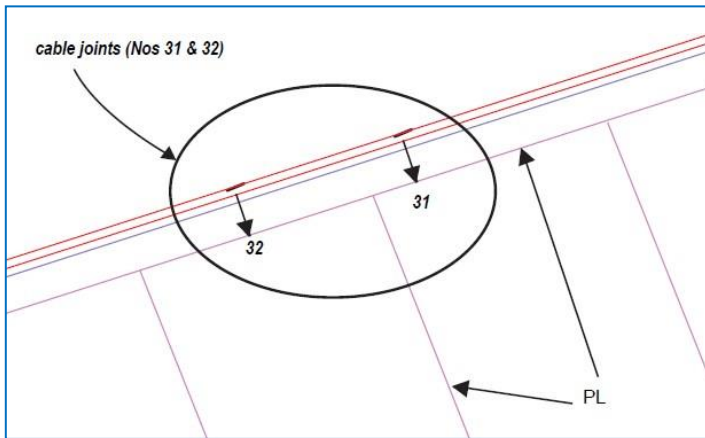


Figure 5

JOINT DETAIL REPORT			
No.	Bk-Pg	PI/Cvt	Joint Location
Map: 31	LE912 524-24	1.14/0.69	61.7 E of Pearl Lane EPL
32	524-24	1.14/0.69	57.6 E of Pearl Lane EPL

joint location
(61.7m east of Pearl Lane East PL)

joint position
(1.14m from PL, 0.69 cover)

Figure 6

5 Cross Section Detail Boxes

“cross section” detail boxes on the sides of an Ausgrid plan are used when there is insufficient room to display “cable” and/or “conduit” information on the Ausgrid plan.

Ausgrid plans (refer to figure 7) are bordered by numeric identifiers along the top and bottom borders and alpha identifiers along the side borders.

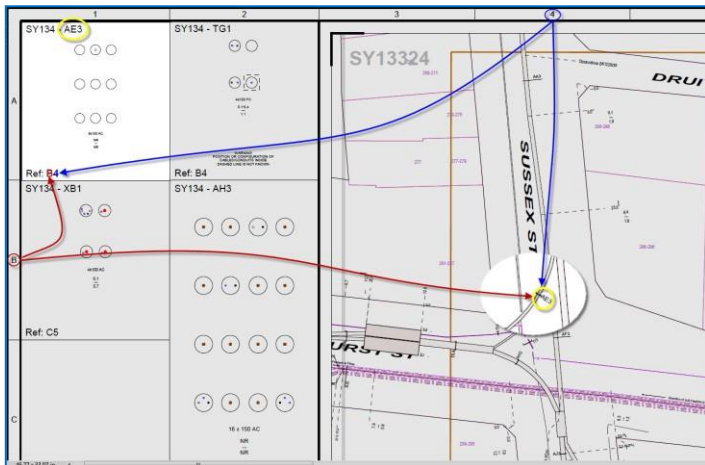


Figure 7

“Cross section” leader line and annotation is drawn on the Ausgrid plan for a reference to “cable” and/or “conduit” information in the “cross

6 Pits

Underground “pits” are numbered on Ausgrid plans, positioned relative to the “property line” (PL), and can be found on either the footpath (nature strip) or the road (refer figure 8).

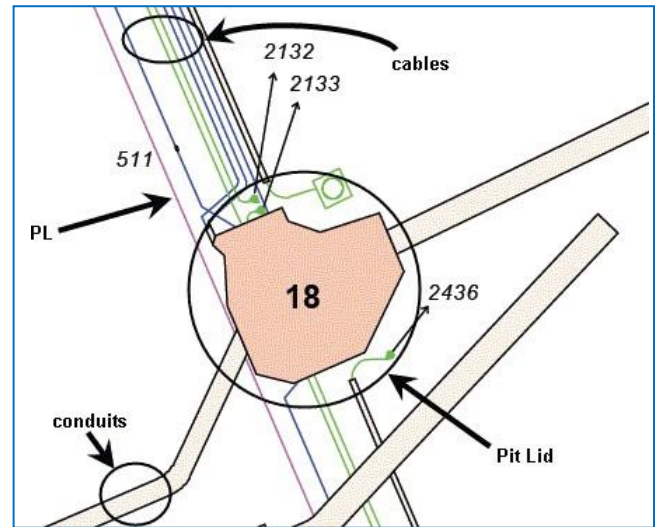


Figure 8

7 Proposal Areas

“section” detail boxes. There are areas where underground work may have been issued for construction by Ausgrid, but details are not yet completely displayed on Ausgrid plans. In such cases a shaded “proposal area” is displayed on the Ausgrid plan, indicating underground work may have commenced in the vicinity but is not yet complete.

In some instances, cables and other assets within the shaded “proposal area” will be shown in a **bright magenta** colour, indicating that the proposed new work displayed within the shaded area is based on initial planning documentation (refer to figure 9).



Figure 9

In other instances, the shaded “proposal area” itself may be shown as a blue colour, indicating that the new work displayed within the shaded area on the Ausgrid plan is yet to include details regarding final depths and dimensioning (refer to figure 10).

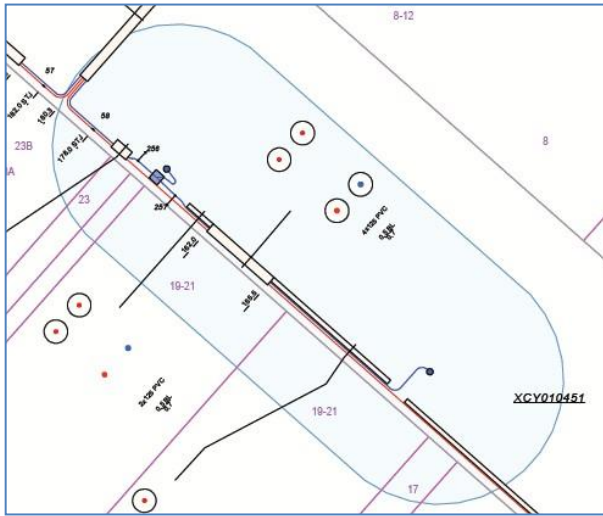


Figure 10

NOTE: In cases where these shaded “proposal areas” are displayed on Ausgrid plans.

“Ausgrid’s design plans showing the proposed position of its underground cables, overhead lines and structures have been prepared solely for Ausgrid’s own planning use. They show the proposed position of such underground cables, overhead lines and structures as proposed at the time of planning and have not necessarily been corrected to take into account any changes to road widths, road levels, fences and buildings subsequent to proposed installation.

Actual installations may vary from proposed installations as it may be necessary to take account of unforeseen above ground or subterranean constructions. Therefore, Ausgrid does not hold out that the design plans show more than the proposed presence or absence of its underground cables, overhead lines and structures in the street and will accept no liability for inaccuracies in the information shown on such design plans from any cause whatsoever.”

Any further information regarding information displayed for “proposal areas” can be obtained by contacting the Ausgrid Before You Dig Australia (BYDA) office at the number indicated on the response to your BYDA enquiry for further information.

8 Ausgrid Maps

Depending on the size of the BYDA request, the response will either be a **single map area** or a **cover sheet** and several standard maps.

8.1 Single Map Area Response

The single map area response will have a buffer area shown on the plan that should relate to the original Before You Dig Australia request.

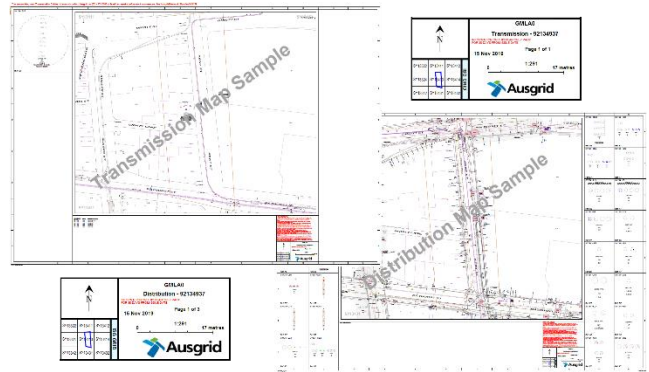


Figure 11

The **map grid index box** on Ausgrid plans should be used when reading the “joint report” (see part 4 of this document for more detail) to accurately locate underground cables. The buffer area will display on the grid index box for single map area responses

There are two different size maps that can be produced – A3 will be issued if there are no cross sections in the area, and an A0 will be issued if there are cross sections that are required to be displayed in the detail boxes on the side.

A single map area response could include two maps in the Sydney region. Ausgrid plans are separately labelled as “**Distribution – nnnnnnn**” and “**Transmission – nnnnnnn**”, where “**nnnnnnn**” refers to the BYDA sequence number quoted. If the request does not include any Transmission assets, then only one Distribution map will be issued.

In the Hunter region, the Ausgrid plans show combined “**distribution**” and “**transmission**” voltage assets, are clearly labelled as “**Distr + Trans – nnnnnnn**” where “**nnnnnnn**” refers to the BYDA sequence number.

Some Hunter plans may have transmission cables in the area, when these cables are present there will be a warning printed at the top of the plan supplied: “**You are working near Transmission Cables. You must contact Ausgrid on (02) 4951 9200 at least two weeks before work commences. See Ausgrid Network Standard NS156**”

8.2 Cover Sheet Response

On a response that includes a cover sheet, the buffer area will only be shown on the cover sheet and it will not appear on the standard maps. The cover sheet will indicate which standard maps have been included and provide a high-level view of the location of the underground details (Figure 12). The standard maps will have the detail of the underground assets (Figure 13).

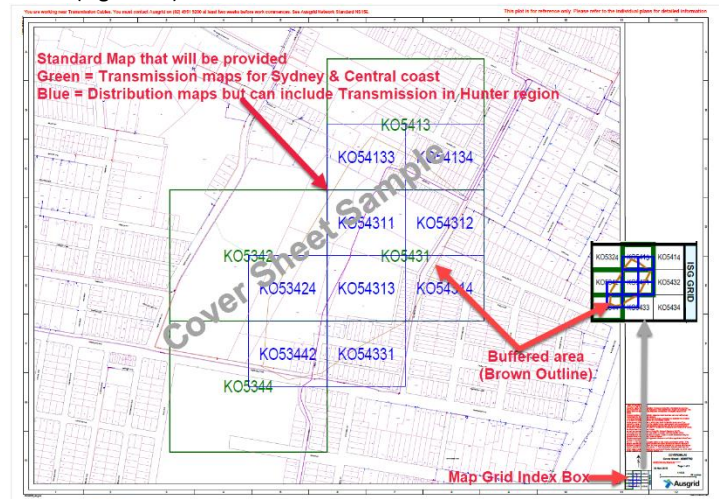


Figure 12

A **map grid index box** has been included in the cover sheet and on the standard maps. The buffer area will only display on the grid index box on the cover sheet and not on standard maps (Figure 12 + Figure 13).

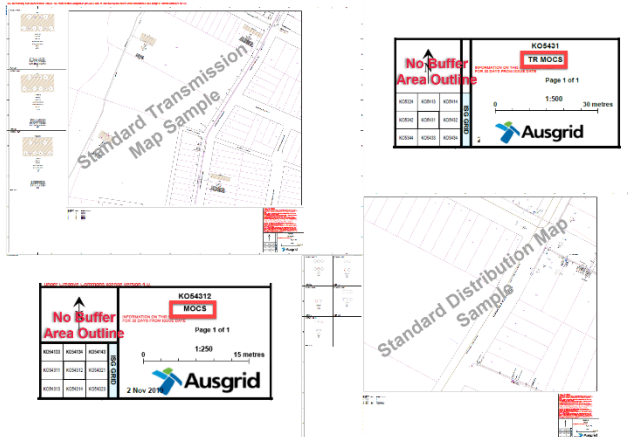


Figure 13

9. Shifting Land Base” on Ausgrid Distribution and Transmission Plans

In some instances, the plans supplied may indicate road or property outlines that appear to have shifted in relation to the Ausgrid assets displayed (refer to figure 14).

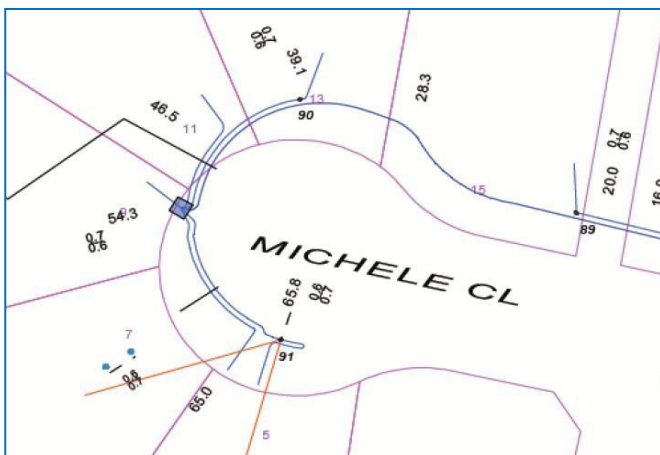


Figure 14

In such instances, always refer to the **“property line”** (in metres) and depth of **“cover”** (in metres) references displayed on the nearest relevant **“cross sections”** to obtain Ausgrid asset location information (see Reading Ausgrid Plans, clause 3, Cross Sections for more detail).

10. “Underground Earthing Infrastructure”

In some instances, the plans supplied may also indicate the presence of underground earthing infrastructure associated with underground and/or overhead Ausgrid assets.

The **“Earth Point”** symbol (refer to figure 15) will be shown on plans to minimize risk of disturbance or damage to any Ausgrid underground earthing infrastructure in the vicinity.

Figure 15



11. Hazardous Cables – Specific Excavation Hazard

Certain low voltage cables are susceptible to deterioration or defects that may pose a risk of electric shock when working near them particularly in damp ground. Other low voltage cables may have an exposed conductive sheath or armour which may, under certain conditions, become energised. These cables may pose a significant risk and will be illustrated as in figures 15 and 16 below. For all work on or near Ausgrid’s network where workers have been trained in Ausgrid’s “Working near or around underground cables” course the work practices outlined in NS156 “Working near or around underground cables”, NS199 “Safe Electrical Work on Low Voltage Underground Assets” for low voltage cables susceptible to deterioration and the Electrical Safety Rules for low voltage exposed conductive sheath or armoured cables must be adhered to. All other persons must contact Ausgrid before excavating near or accessing areas where these cables are present to arrange for appropriate precautions to be applied.

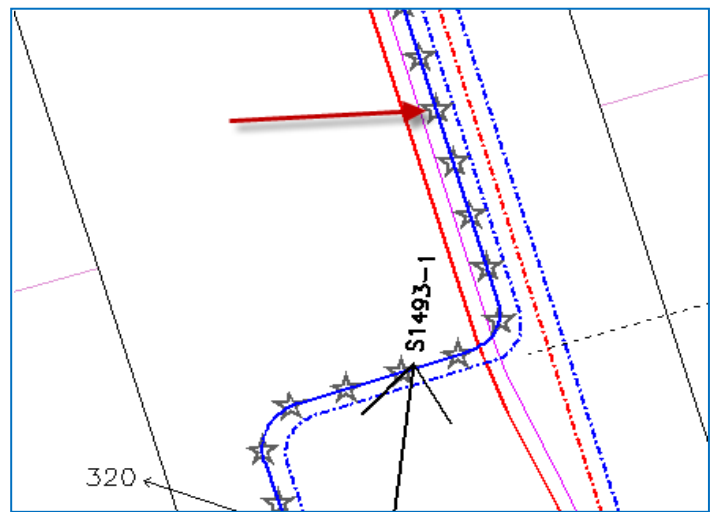


Figure 15

The **“star”** symbols over the cable indicates that it may be susceptible to deterioration or defects or the cable may contain an exposed conductive sheath or armour which could pose an electrical risk to workers.

Cables that are in duct lines have this symbology covered so an at-risk cable is indicated only within a cross section by a **“#”** appended to its cable code as illustrated below.

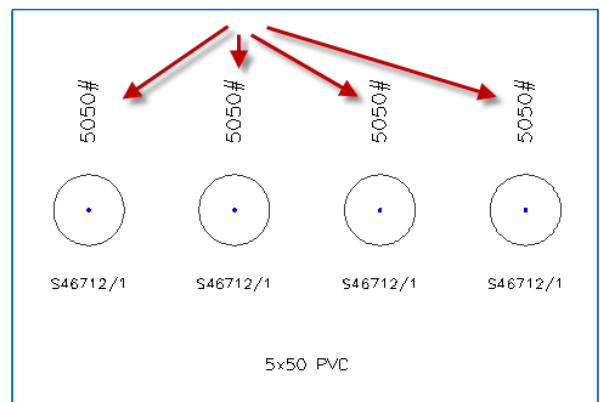


Figure 16



Ausgrid Underground Map Symbology

NOTE: Please note symbology is subject to change. This document provides underground (UG) related objects only. In cases where you are unsure of the data presented, please contact Ausgrid's BYDA for clarification *prior* to any planning/excavation works.

Object		Symbol
HV Cable	HV (High Voltage) 5kV-22kV	In Service
		Out of Service
	TR (Transmission) 33kV – 330kV	In Service
		Out of Service
LV Cable (Low Voltage)	Mains (Dark blue)	In Service
		Out of Service
	Street Lighting (Green) Note: Mains Connector also used as Street Lighting (dark blue)	In Service
		Out of Service
	Service (Light blue)	In Service
	Out of Service 	
	Stars are used to highlight At Risk cables	In Service Risk
		In Service Risk
		In Service Risk
		In Service Risk
	Unknown	
Auxiliary Cable	Data	In Service
	Comms	
	Telco	
	Protection	
	Fibre Optic	
	Pilot	Out of Service

Object		Symbol
HV UG Joint	Straight Through, Parallel Branch or Tee	
	Switchgear, End Box or Transition	
HV UG Termination	Sealed end	
	Pot End	
	UGOH	
HV Cable Repair	5kV-330kV (HV & TR)	
LV UG Joint	Straight Through, Parallel Branch, Tee or Service	
	Network Box	
LV UG Termination	Switchgear, End Box or Transition	
	Sealed end	
	Pot End	
	UGOH	

Object		Symbol
Auxiliary Fix	Pilot Window	
Auxiliary Joint	Straight Through, Parallel Branch or Tee	
Auxiliary Termination	UGOH or Pole Termination	
	Pilot	
	UGOP-ADSS Termination	
Cable Pit (Can be various shapes)	Auxiliary	
	Distribution	
	Transmission	
LV Pillar	Distribution	
	Switch	
	SL Pillar	
	SL Cubicle	
	Fargo	
	Private	
LV Auxiliary Pillar	All Types	
LV Link Box	2 Way & 4 Way	

Ausgrid Underground Map Symbology

Object	Symbol
Substation	Cottage & Chamber
	Ground & Subtransmission Ground
	Kiosk & Subtransmission Kiosk
	Zone
	Transmission
	Bulk Supply Point
	Metering Station & Subtransmission Metering
	Switching Station
Other – OH & UG 	
Ring Main Unit 	
Earthing	UG Earth Cable
	Earth Point
Frequency Marker	Distribution and Transmission Power Ball or Disc Type Marker
	Auxiliary Communications Ball or Disc Type Marker
	Distribution and Transmission Power Tape Marker
	Auxiliary Communications Tape Marker

Object	Symbol
Trench	Centreline
Conduit (Can be various shapes)	Coverage (Distribution)
	Coverage (Transmission)
	Coverage (Underbore – cross hatched)
Cross Section	Marker (Staple)
	User Line
Measurement Point	
Miscellaneous Point Feature	Cable Clamp
	Cable Core split (Trifurcation)
	Cable Marker
	Electrolysis Point
End Of Pipe 	
Frequency Injection Unit 	
Gas Charger 	
Gas Control Cabinet 	
Gas Control Kiosk 	
Gas Control Point 	
Gas Control Valve 	
Gatic Pit lid 	

Object	Symbol
Miscellaneous Point Feature	Inspection Box
	Link point
	Oil Control Valve
	Oil Gauge
	Oil Tank
	Sniffer Box
	Thermocouple Box
	Transmission Cable Marker
Transmission Link Point 	
Miscellaneous Linear Feature	All Geometries
	Map Note Location & Text
Dimension Feature	Placement Change
Lead Cable	Oil/Gas/Thermocouple
	Bonding
	Electrolysis

Working near Ausgrid cables

Finding out what's below the surface can save your life.
Contact Before You Dig Australia @ www.byda.com.au or call 1100



Changes in the Law.

NSW legislation now requires people who are planning to do excavation work to obtain copies of underground electricity cable plans through Before You Dig Australia (Phone 1100) and to make sure that the plans are no more than 30 days old when excavation commences.

The aim of the legislation is to ensure that when workers dig near electricity cables, they will establish the exact location of the cables and thus avoid coming into contact with them or damaging them. This will ensure worker safety and also prevent disruption to Ausgrid's electricity network.

This brochure gives you a brief overview of how to prepare for excavation works near or around electricity cables. It is important that you also consult our guide How to Read Ausgrid Plans and make sure that workers engaged in excavation works fully understand how to read the plan. If the people actually doing the digging can't read the plans, it is essential that the work is directed by a person who has been trained to read Ausgrid's plans.

You must also consult Ausgrid's Network Standard NS156, which contains comprehensive information concerning all the issues that arise when excavating near underground cables (such as safety hazards from asbestos conduits and organochlorine pesticides).

Excavating near transmission cables.

If any cable plan you receive says "You are working near transmission cables" it is compulsory to notify Ausgrid two weeks before work is scheduled to begin. Ausgrid will then arrange for an Ausgrid representative to attend the site during excavation work.

Phone the Ausgrid Transmission enquiries line on (02) 4951 9200 to arrange for an Ausgrid representative in your region.



Be prepared. Wise words for safety at work.

Here are some simple precautions you and your workers need to follow to be as safe as possible.

- Make sure that your Before You Dig Australia (BYDA) plan is less than 30 days old
- Keep a copy of the cable plan on site at all times
- Make sure the excavation work is conducted or directed by staff who are trained to read the plan
- Hand dig until the exact location of the cable has been established
- Have on site at all times a first aid kit and a person trained in resuscitation
- Wear protective clothing, including safety footwear and safety helmet
- Have emergency contact numbers on site
- Set up safety barriers, witches hats and warning lights to reduce the risk of injury to the general public
- Comply with all SafeWork NSW requirements and codes.

See also:

- **SafeWork NSW Guidelines: Work Near Underground Assets**
- **SafeWork NSW Code of Practice: Excavation Work**
- **SafeWork NSW Code of Practice: Work Near Overhead Powerlines (if applicable).**

Before you start. Complete the checklist. Stop and look around.

Before you start excavating, consult the flow chart and fill in the checklist at the end of this brochure.

Then, be sure to look for clues where cables might be located on the site: for example, pits, distribution pillars (green and other colours), cables attached to the side of poles, street lights without overhead wires.



Do all power cables look the same?

No. Power cables come in different sizes, colours and coverings. They may be covered in black plastic sheath, steel wires in a sticky bitumen like material, or even a simple lead or steel wire/tape sheath.

What else should I look for below ground level?

Cables may also be buried in orange PVC or PE conduits or even in earthenware or steel pipes. A bank of cables may be covered with electrical bricks, plastic warning markers or protective covers, or they may not be covered at all. If they have been buried close to the surface, they may be covered by concrete slabs or steel plates.

When in doubt, ask Ausgrid.

If you have any questions about excavating near Ausgrid cables, read **NS156** (available at ausgrid.com.au). For further information call 13 13 65.

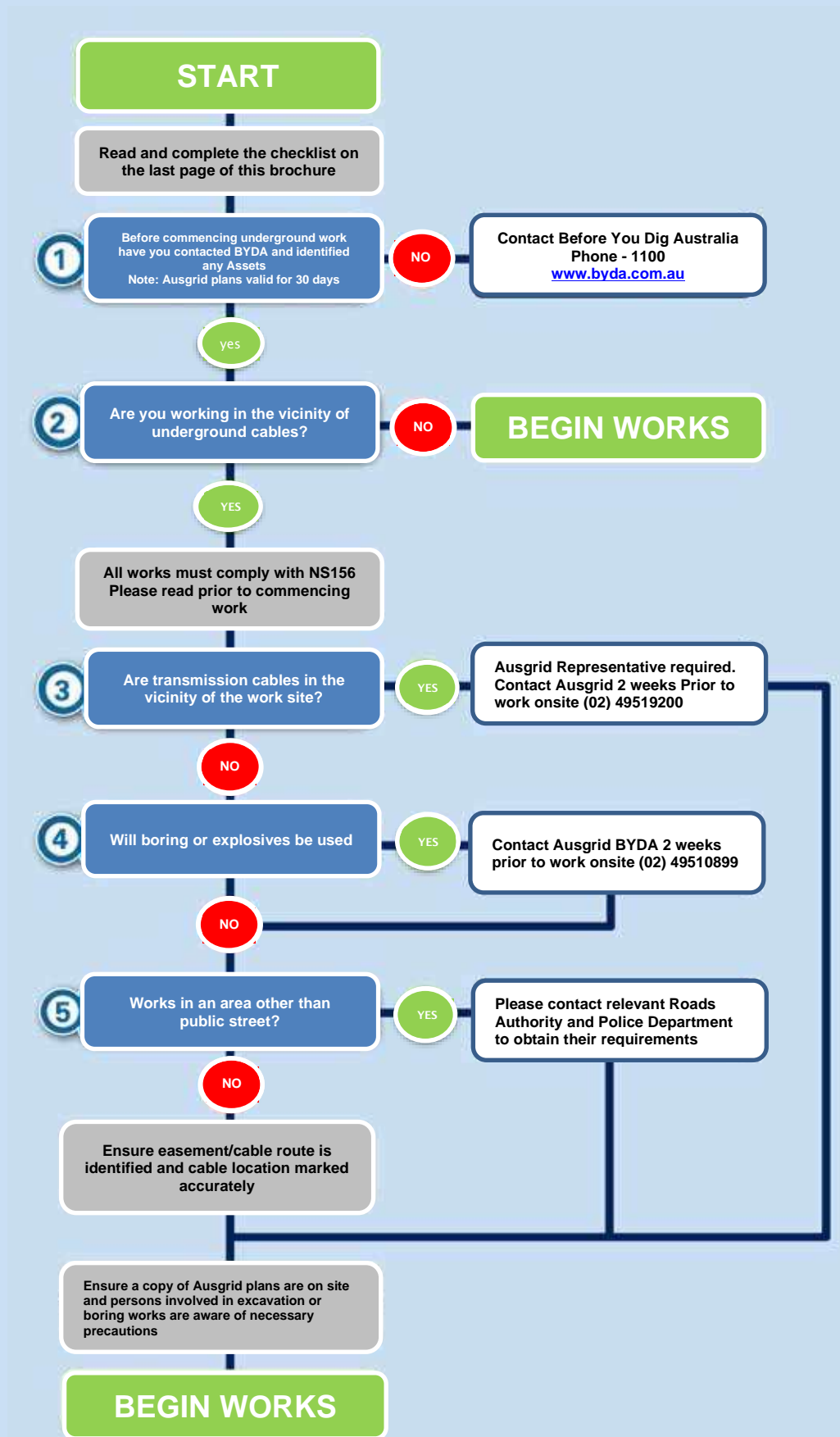
You've taken every precaution, but accidents still happen. What now?

If you damage an electricity cable, it is compulsory to notify Ausgrid on **13 13 88**.

Striking power cables can cause serious damage to the cables and endanger the lives of anyone who comes in contact with them. Machinery and hand operated plant such as jack hammers can become alive if it is in contact with electrical cables or equipment. Keep people well away from machinery and the work site if contact is made with a cable.



Flow Chart for work near Ausgrid Cables



Ausgrid Checklist for work near or around underground cables

It is the responsibility of the Constructor to ensure that underground pits, ducts and cables are not damaged as a result of construction work. It is also your duty to protect your workers from harm or injury. This Checklist is intended to be used as a guide to what Constructors should do to make sure they have satisfied the minimum requirements to minimise damage to underground networks.

PLANS, LOCATION and NOTIFICATIONS	Completed
All relevant utilities plans obtained from Before You Dig Australia? (call 1 100 – allow at least 5 working days for plans).	
Checked issue date on all the above plans to ensure issue was within the last 30 days?	
Examined plans and assessed all possible impacts on Ausgrid’s network?	
Do you have both Underground Distribution and Transmission Plans (if applicable), on site at all times?	
All cables and conduits shown on the Ausgrid plans been located and marked on the ground?	
If you are planning to use a bore, have you ensured that the equipment is calibrated?	
Have you read and understood the requirements of NS 156? (For copies of NS 156 visit Ausgrid’s Website or phone Ausgrid BYDA Office (02) 4951 0899) www.ausgrid.com.au	
Have you notified Ausgrid as specified by NS 0156 and complied with requirements? Where an Ausgrid representative is required, two weeks notice is required before work commencing on site. Contact phone number for Transmission cable enquiries is (02) 4951 9200. For all other cases contact Ausgrid BYDA Office: (02) 4951 0899.	
INSPECTION OF WORK BY Ausgrid’s REPRESENTATIVE	
Is the Ausgrid representative on site for any work near or around any transmission cable before you start? (Refer to NS 156.)	
For proposed work near or around cables other than transmission and/or conduits, are any requirements specified by Ausgrid’s representative clearly understood and ready to be applied before you start the work? (Refer to NS 156.)	
PROTECTION	
Check that all people on-site have been made aware of the presence and location of ALL Ausgrid underground cables and/or conduits; especially boring, drilling and trenching machine operators?	
Is there any asbestos or asbestos containing material in Ausgrid’s underground network assets?	
Have you checked for the presence of any Organo-Chloride Pesticides (OCP) in transmission trenches?	
Is the site supervisor monitoring all machine operators working near or around Ausgrid’s underground cables and/or conduits?	
Are the requirements specified by Ausgrid’s representative being followed?	
Are Ausgrid’s requirements in place for any exposed cables and/or conduits to be supported and protected?	
Have you marked all exposed underground cables and/or conduits with flags that are clearly visible from within all machinery used on-site?	
Have safety barriers, fencing or para-webbing been erected to protect staff and the public as well underground cables and/or conduits in areas that are at risk?	
Have safety barriers, fencing or para-webbing been erected to protect staff and the public as well underground cables and/or conduits in areas that are at risk?	

**In the event of DAMAGE to Ausgrid’s cable or conduits, call 13 13 88 immediately.
PROCEED with CAUTION**

It is your responsibility to protect Ausgrid’s cables and conduits from damage and your Duty of Care to protect your workers from harm or injury.

Signed: _____ Date: ____ / ____ / ____
Responsible person on site

For more information call 13 13 65 or visit www.ausgrid.com.au

Referral
245788786

Member Phone
-

Responses from this member

Response received Thu 10 Oct 2024 6.43am

File name	Page
Response Body	22
ASSET 245788786.pdf	23

Attention: [REDACTED] [REDACTED]

Thank you for your Before You Dig Australia (BYDA) enquiry.

Job Number: **37779047**

Sequence Number: **245788786**

Dig Site Location: **36 Wollie Creek Road Banksia NSW 2216**

According to our records, your enquiry with the following details **impacts our infrastructure**. Please ensure that you read the attached documents, it contains important information including essential steps that must be undertaken prior to commencing construction activities.

This enquiry is valid for **30 days** from the enquiry date.

If you require further information or assistance with interpretation of plans, please contact **Bayside Council** on [REDACTED]

This enquiry response, including any associated documentation, has been assessed and compiled from the information detailed within the BYDA enquiry outlined above. Please ensure that the BYDA enquiry details and this response accurately reflect your proposed works.

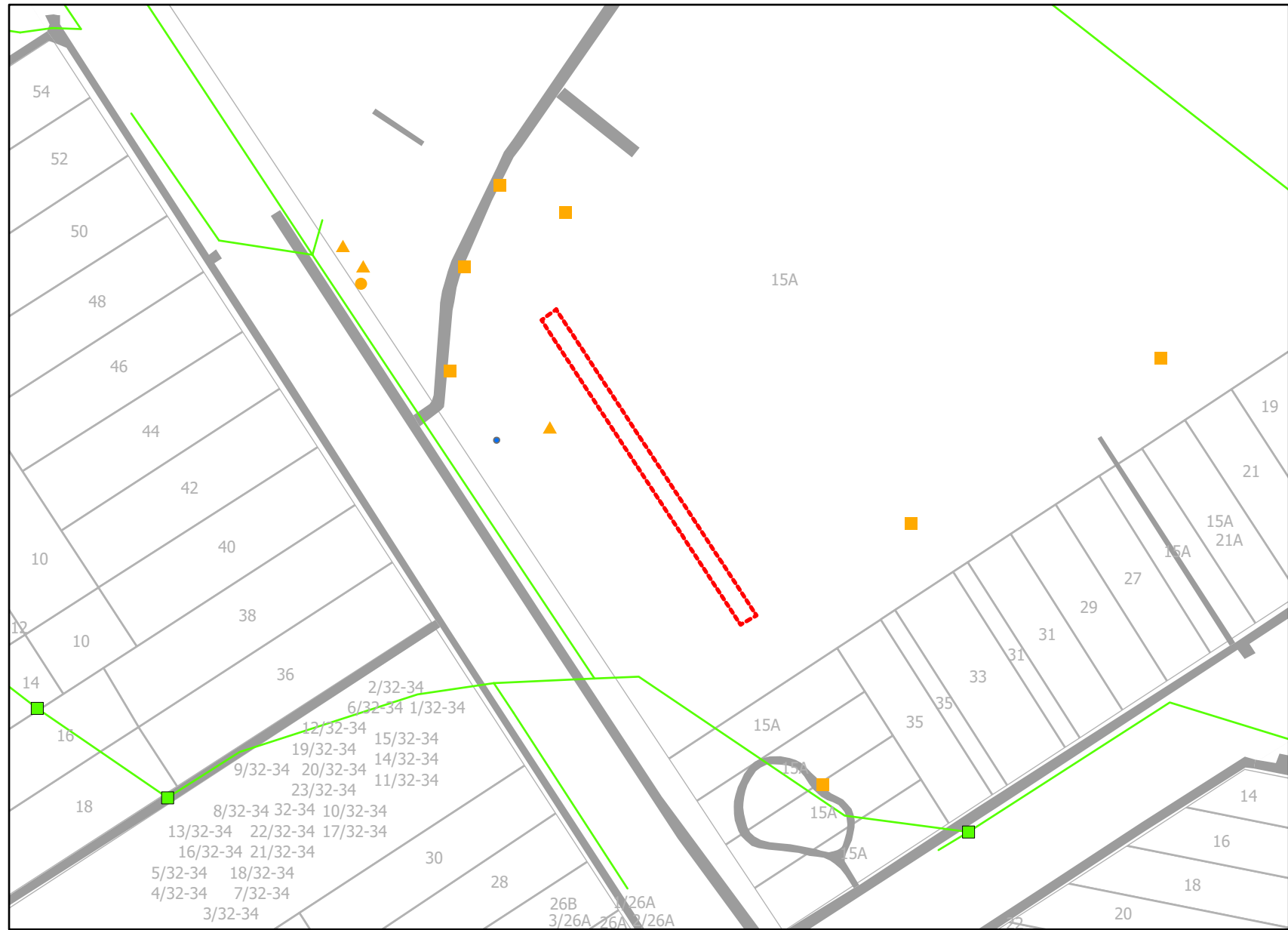
You may also view the response with an interactive web map below:

[View web map](#)

[Download spatial data](#)



Job # 37779047
 Seq # 245788786
 Provided by Bayside Council

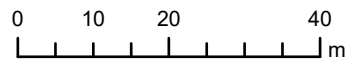


Legend

- BYD Enquiry
- Stormwater**
 - Stormwater Pit
 - Stormwater Pipe
- Other**
 - Irrigation_System
- Electrical**
 - Utility Meters
 - Lighting
 - Other Electrical
- Other**
 - Footpaths

Disclaimer: The Plan is provided in response to a Before You Dig request. While all reasonable care has been taken to ensure the accuracy of the information on this plan, its purpose is to provide a general indication of the location of Bayside Council infrastructure. The information provided may contain errors or omissions and the accuracy may not suit all users. A site inspection and investigation is recommended before commencement of any project based on this data.

In an emergency contact Bayside Council on 93663529
 10/10/24 (valid for 30 days)
 Plans generated by SmarterWX™ Automate



Scale 1:1,000

Jemena Gas South

Referral
245788788

Member Phone
1300 880 906

Responses from this member

Response received Thu 10 Oct 2024 11.17am

File name	Page
Response Body	25
Standard_Gas_Coversheet_Jemena.pdf	26
Jemena_BYDAResponse_STD_37779047_245788788.pdf	28
image1	Excluded

Dear [REDACTED]

REF: BYDA JOB:37779047 SEQ:245788788 - 36 Wollie Creek Road Banksia NSW 2216

Thank you for your BYDA inquiry. For a detailed response from Jemena, please refer to the attached documents.

Please follow the excavation guidelines attached.

For your safety and to further reduce the risk of accidental hit to Jemena's services, the attached plans will now show lines from the mains to the serviced properties, representing Jemena's Gas Service Pipes. This new detail is explained further on the attached legend.

This information is valid for 28 days from the date of enquiry.

Regards

BYDA Admin, Jemena

Level 14, 99 Walker Street North Sydney, NSW
2060

PO Box 1220, North Sydney, NSW 2059

1300 880 906

www.jemena.com.au |

www.gonaturalgas.com.au



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ASSETS AFFECTED

This information is only valid for 28 days from the date of issue

Please note that there are **Gas Mains or Services** in the vicinity of your intended work, as generally illustrated on the attached map. There may also be other mains or services at the location. For an explanation of the map, please see the legend attachment and read the important information below.

Please note that you have duty of care to ensure that Jemena's assets are not compromised or damaged during any digging, future development or construction work.

Excavation Guidelines:

It is essential that the location of gas pipe/s are confirmed by carefully pot-holing by hand excavation prior to proceeding with mechanical excavation in the vicinity of gas pipes. If you cannot locate the pipe, contact the local depot.

Important Information:

1. The enclosed plans have been prepared solely for the use of Jemena Gas Networks (NSW) Ltd and Jemena Asset Management Pty Ltd (together "Jemena") and show the position of Jemena's underground gas mains and installations in public gazetted roads. If the enclosed plans show gas assets located on private property or other third party property, these are approximate locations.
2. There may be underground assets owned by other utilities in the vicinity of your work and it is your responsibility to identify and locate such assets.
3. The plans may show the position of underground mains and installations relative to fences, buildings and other structures, as they existed at the time the assets were installed and may not have been updated to take account of any subsequent change in the location or style of those features. Depth of underground assets may also vary as a result of changes to road, footpath or surface levels subsequent to installation.
4. While Jemena takes all reasonable care to ensure the accuracy and completeness of the information provided, it makes no warranty as to the accuracy or completeness of the enclosed plans and does not assume any duty of care to you nor any responsibility for the accuracy, adequacy, suitability or completeness of the plans or for any error or omission. It is intended to be indicative only and must not be solely relied upon when undertaking underground works.
5. Except to the extent that liability may not be capable of being lawfully excluded, Jemena, its employees, agents, officers and contractors will not be liable to any person for loss or damage (including indirect and consequential loss or damage) which may be suffered or incurred in connection with the provision of this information.
6. Persons excavating or carrying out other earthworks will be held responsible for any damage caused to Jemena's underground mains, service lines and equipment. In accordance with the *Work Near Underground Assets – Guide* published in 2007 by Work Cover Authority*, Jemena recommends that you carry out potholing by hand to accurately confirm the location of gas mains and installation prior to commencing excavations.

Network Mains

- Proposed New Main (coloured as per kPa)
- Proposed Isolate (coloured as per kPa)
- Unknown kPa
- 2kPa Low Pressure gas main
- 7kPa Low Pressure gas main
- 30kPa Medium pressure gas main
- 100kPa Medium Pressure gas main
- 210kPa Medium Pressure gas main
- 300kPa Medium Pressure gas main
- 400kPa Medium Pressure gas main
- 1050kPa High Pressure gas main
- 3500kPa High Pressure gas main
- 7000kPa High Pressure gas main
- >7000kPa Transmission pipeline
- Isolated Service - Former Med/High Pressure
- Isolated Steel Main - **Treat as High Pressure**
- Conduit or Casing
100 PVC Size & Material (see conduit material codes)
- Critical Main - **Treat as High Pressure**
(Main coloured as per kPa)
- Exposed Main section
EXPOSED
- Shallow Main section: see Protection Code below, no code assume no protection
SHALLOW-SP

SP	Steel Plate	CE	Concrete Encased
PP	PE Plate	UNK	Unknown Type
CS	Concrete Slab		
- Warning** - Blue Jacket Coated gas main
(Main coloured and styled as per kPa)

Gas Services

- Gas service – coloured by kPa
- Serviced Site indicator

Jemena has created service pipe features programmatically based on known pipe characteristics and cartographic principles. They may provide guidance to identify assets whilst in the field in addition to existing processes.

Network Assets

- Siphon
- Network Valve
- High Pressure Main Line Valve ($\geq 1050\text{kPa}$)
- High Pressure Automatic Line Break Valve ($> 1050\text{kPa}$)
- Boundary Regulator Set ($\leq 1050\text{kPa}$)
- Distribution Regulator Set ($\leq 1050\text{kPa}$)
- High Pressure Regulating Station ($> 1050\text{kPa}$)

Annotations

Pipe and Conduit Material Codes

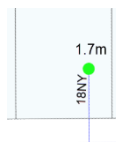
NY	Nylon	NB	Nominal Bore – Cast Iron
PE	Polyethylene	ST	Steel
P/PL	Plastic (undefined)	C/CO	Copper
PVC	Polyvinyl Chloride		

Pipe code combinations and dimension references

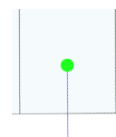
- 6 NB 50MM NY** 50mm Nylon main inserted into 6 inch (Nominal Bore) Cast Iron pipe
- 50MM 32MM NY** 32mm Nylon main inserted into 50mm Steel pipe

~1.5 Distance (in metres) of main from Boundary Line (MBL)

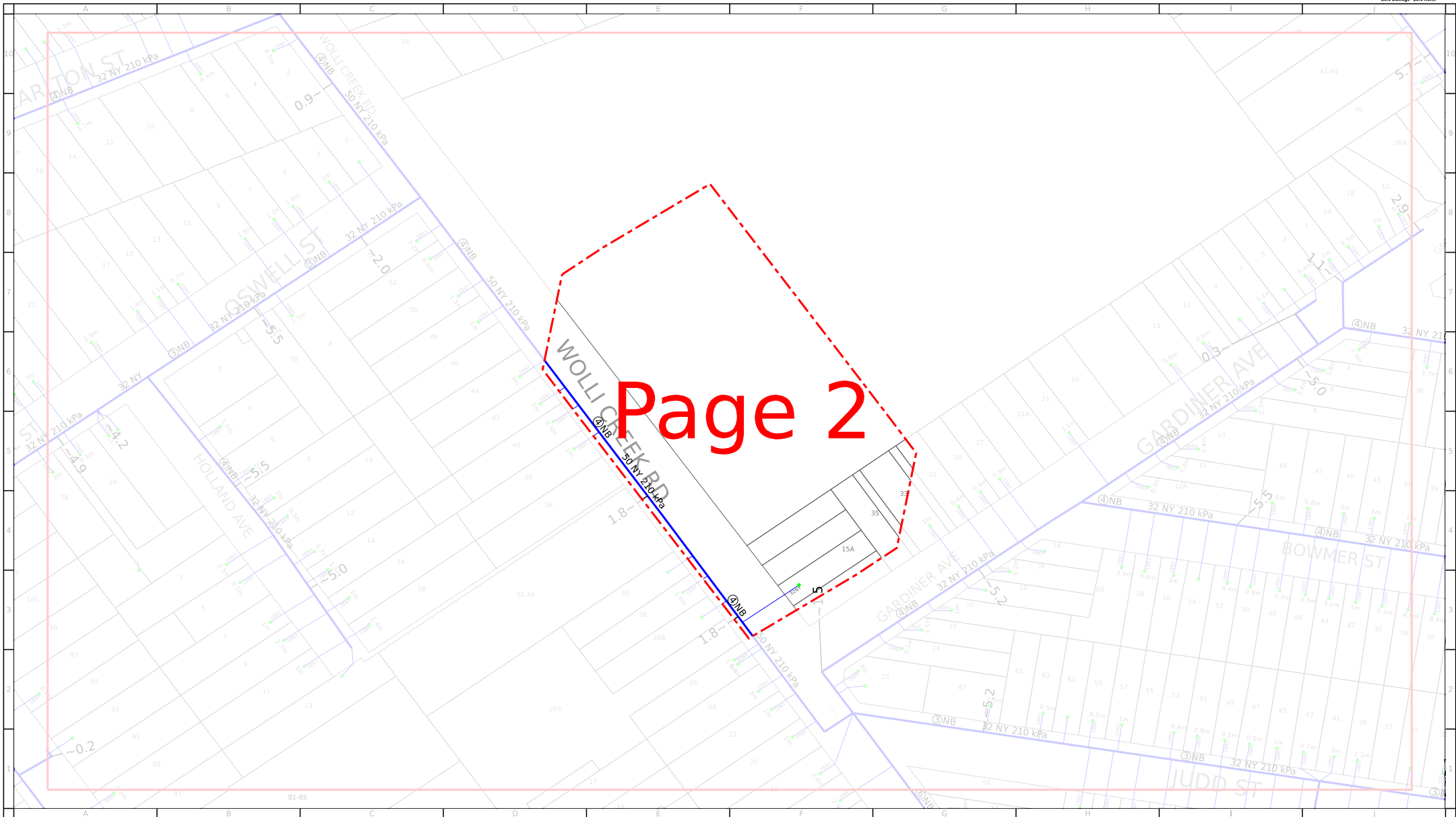
MBK	Distance in Metres Back of Kerb
MKL	Distance in Metres from Kerb Line
MEBL	Distance in Metres from Eastern Boundary Line (North/South/West)
MCL	Distance in Metres from Centre Line of Road
MFL	Distance in Metres from Fence Line



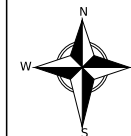
Distance (in metres) of service from side Boundary where the service pipe crosses from the road reserve into the private lot
Service placed towards left or right boundary
Service pipe size & material where known



For connected sites with insufficient asset details, service is shown down the centre of the lot with no attributes plotted



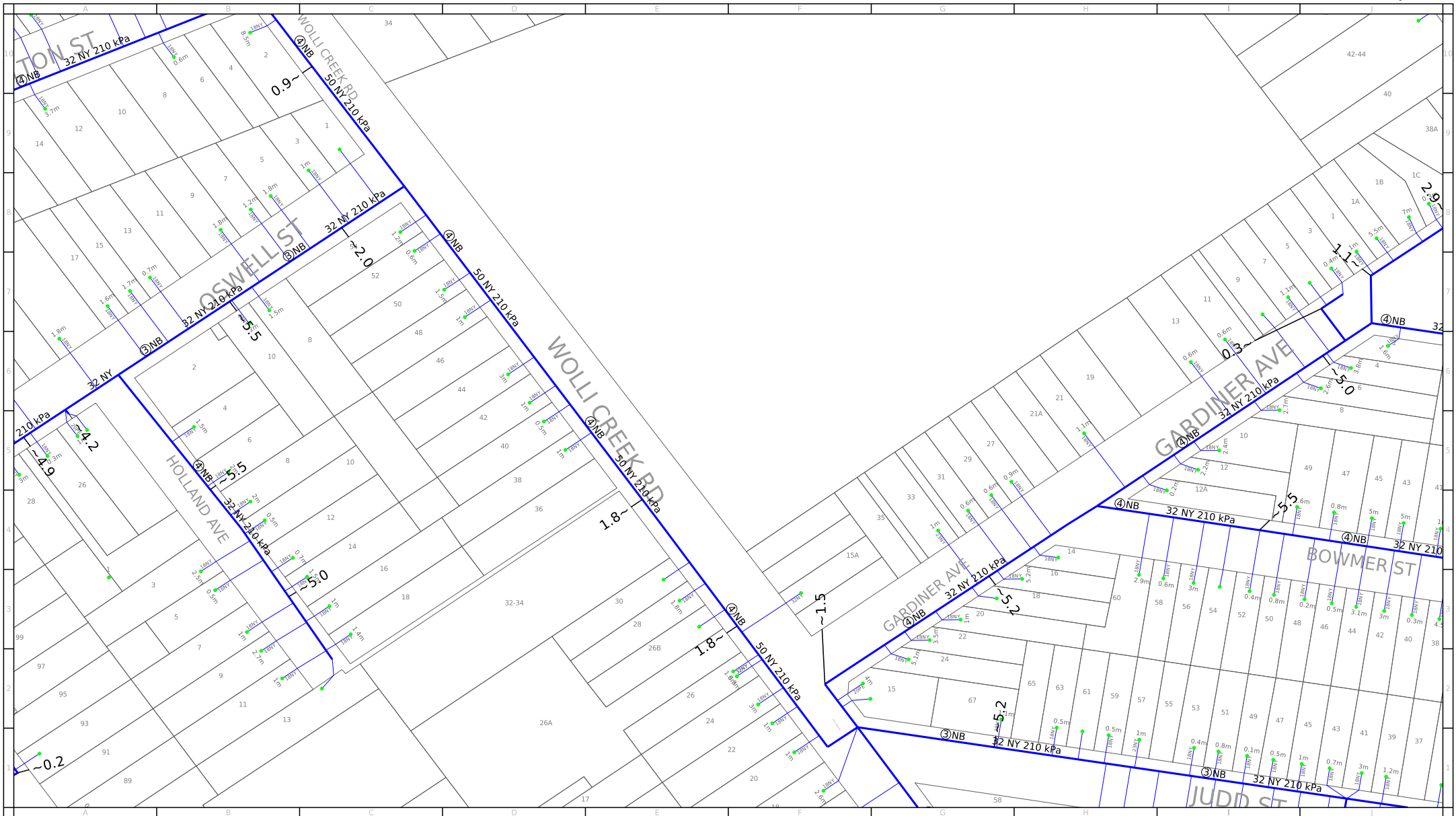
For legend details, please refer to the Coversheet attachment provided as part of this BYDA response.



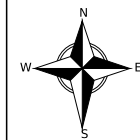
Scale: 1:2101

Issue Date: 10/10/2024
 BYDA Seq No: 245788788
 BYDA Job No: 37779047
 Overview Page:

WARNING: This is a representation of Jemena Gas Networks underground assets only and may not indicate all assets in the area. It must not be used for the purpose of exact asset location in order to undertake any type of excavation. Please read all conditions and information on the attached information sheet. This extract is subject to those conditions. The information contained on this plan is only valid for 28 days from the date of issue.



For legend details, please refer to the Coversheet attachment provided as part of this BYDA response.



Scale: 1:2000

Issue Date: 10/10/2024
 BYDA Seq No: 245788788
 BYDA Job No: 37779047



WARNING: This is a representation of Jemena Gas Networks underground assets only and may not indicate all assets in the area. It must not be used for the purpose of exact asset location in order to undertake any type of excavation. This plan is diagrammatic only, and distances scaled from this plan may not be accurate. Please read all conditions and information on the attached information sheet. This extract is subject to those conditions. The information contained on this plan is only valid for 28 days from the date of issue.

Referral
245788784

Member Phone
1800 687 626

Responses from this member

Response received Thu 10 Oct 2024 6.45am

File name	Page
Response Body	31
4678_NBN_Dial_Before_You_Dig_Poster_20170517.pdf	32
Disclaimer_245788784_20241009_194434146922.pdf	34
245788784_20241009_194434146922_1.pdf	38

Hi [REDACTED],

Please find attached the response to your DBYD referral for the address mentioned in the subject line. The location shown in our DBYD response is assumed based off the information you have provided. If the location shown is different to the location of the excavation then this response will consequently be rendered invalid.

Take the time to read the response carefully and note that this information is only valid for 28 days after the date of issue.

If you have any further enquiries, please do not hesitate to contact us.

Regards,
Network Services and Operations
NBN Co Limited
P: 1800626329
E: dbyd@nbnco.com.au
www.nbnco.com.au

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Please Do Not Reply To This Mail



Working near nbn™ cables

nbn has partnered with Dial Before You Dig to give you a single point of contact to get information about **nbn** underground services owned by **nbn** and other utility/service providers in your area including communications, electricity, gas and other services. Contact with underground power cables and gas services can result in serious injury to the worker, and damage and costly repairs. You must familiarise yourself with all of the Referral Conditions (meaning the referral conditions referred to in the DBYD Notice provided by **nbn**).

Practice safe work habits

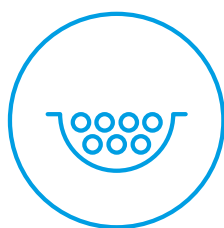
Once the DBYD plans are reviewed, the Five P's of Excavation should be adopted in conjunction with your safe work practices (which must be compliant with the relevant state Electrical Safety Act and Safe Work Australia "Excavation Work Code of Practice", as a minimum) to ensure the risk of any contact with underground **nbn** assets are minimised.



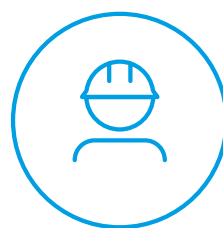
Plan: Plan your job by ensuring the plans received are current and apply to the work to be performed. Also check for any visual cues that may indicate the presence of services not covered in the DBYD plans.



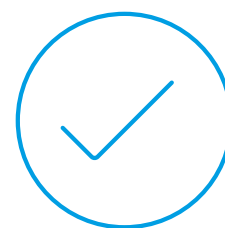
Prepare: Prepare for your job by engaging a DBYD Certified Plant Locator to help interpret plans and identify on-site assets. Contact **nbn** should you require further assistance.



Pothole: Non-destructive potholing (i.e. hand digging or hydro excavation) should be used to positively locate **nbn** underground assets with minimal risk of contact and service damage.

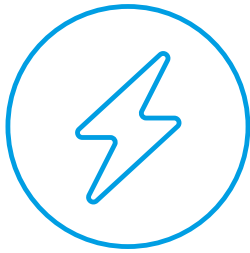


Protect: Protecting and supporting the exposed **nbn** underground asset is the responsibility of the worker. Exclusion zones for **nbn** assets are clearly stated in the plan and appropriate controls must be implemented to ensure that encroachment into the exclusion zone by machinery or activities with the potential to damage the asset is prevented.

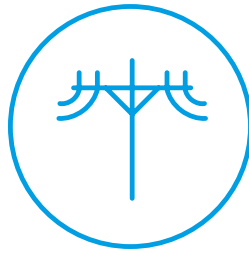


Proceed: Proceed only when the appropriate planning, preparation, potholing and protective measures are in place.

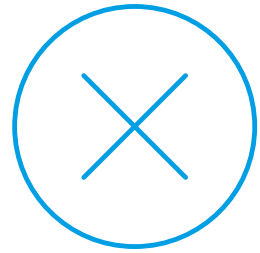
Working near **nbn**TM cables



Identify all electrical hazards, assess the risks and establish control measures.



When using excavators and other machinery, also check the location of overhead power lines.



Workers and equipment must maintain safety exclusion zones around power lines.

Once all work is completed, the excavation should be re-instated with the same type of excavated material unless specified by **nbn**. Please note:

- Construction Partners of **nbn** may require additional controls to be in place when performing excavation activities.
- The information contained within this pamphlet must be used in conjunction with other material supplied as part of this request for information to adequately control the risk of potential asset damage.

Contact

All **nbn**TM network facility damages must be reported online [here](#).
For enquiries related to your DBYD request please call 1800 626 329.

Disclaimer


This brochure is a guide only. It does not address all the matters you need to consider when working near our cables. You must familiarise yourself with other material provided (including the Referral Conditions) and make your own inquiries as appropriate.

nbn will not be liable or responsible for any loss, damage or costs incurred as a result of reliance on this brochure.

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To: [REDACTED]
Phone: Not Supplied
Fax: Not Supplied
Email: [REDACTED]

Dial before you dig Job #:	37779047	
Sequence #	245788784	
Issue Date:	09/10/2024	
Location:	36 Wollie Creek Road , Banksia , NSW , 2216	

Information

The area of interest requested by you contains one or more assets.

nbn™ Assets	Search Results
Communications	Asset identified
Electricity	No assets

In this notice **nbn™ Facilities** means *underground fibre optic, telecommunications and/or power facilities, including but not limited to cables, owned and controlled by nbn™*

Location of nbn™ Underground Assets

We thank you for your enquiry. In relation to your enquiry at the above address:

- **nbn's** records indicate that there **ARE nbn™** Facilities in the vicinity of the location identified above ("Location").
- **nbn** indicative plan/s are attached with this notice ("Indicative Plans").
- The Indicative Plan/s show general depth and alignment information only and are not an exact, scale or accurate depiction of the location, depth and alignment of **nbn™** Facilities shown on the Plan/s.
- In particular, the fact that the Indicative Plans show that a facility is installed in a straight line, or at uniform depth along its length cannot be relied upon as evidence that the facility is, in fact, installed in a straight line or at uniform depth.
- You should read the Indicative Plans in conjunction with this notice and in particular, the notes below.
- You should note that, at the present time, the Indicative Plans are likely to be more accurate in showing location of fibre optics and telecommunications cables than power cables. There may be a variation between the line depicted on the Indicative Plans and the location of any power cables. As such, consistent with the notes below, particular care must be taken by you to make your own enquiries and investigations to precisely locate any power cables and manage the risk arising from such cables accordingly.
- The information contained in the Indicative Plan/s is valid for 28 days from the date of issue set out above. You are expected to make your own inquiries and perform your own investigations (including engaging appropriately qualified plant locators, e.g DBYD Certified Locators, at your cost to locate **nbn™** Facilities during any activities you carry out on site).

We thank you for your enquiry and appreciate your continued use of the Dial Before You Dig Service. For any enquiries related to moving assets or Planning and Design activities, please visit the [nbn Commercial Works](#) website to complete the online application form. If you are planning to excavate and require further information, please email dbyd@nbnco.com.au or call 1800 626 329.

Notes:

1. You are now aware that there are **nbn™** Facilities in the vicinity of the above property that could be damaged as a result activities carried out (or proposed to be carried out) by you in the vicinity of the Location.
2. You should have regard to section 474.6 and 474.7 of the *Criminal Code Act 1995* (CoA) which deals with the consequences of interfering or tampering with a telecommunications facility. Only persons authorised by **nbn** can interact with **nbn's** network facilities.
3. Any information provided is valid only for **28 days** from the date of issue set out above.

Referral Conditions

The following are conditions on which **nbn** provides you with the Indicative Plans. By accepting the plans, you are agreeing to these conditions. These conditions are in addition, and not in replacement of, any duties and obligations you have under applicable law.

1. **nbn** does not accept any responsibility for any inaccuracies of its plans including the Indicative Plans. You are expected to make your own inquiries and perform your own investigations (including engaging appropriately qualified plant locators, e.g DBYD Certified Locators, at your cost to locate **nbn™** Facilities during any activities you carry out on site).
2. You acknowledge that **nbn** has specifically notified you above that the Indicative Plans are likely to be more accurate in showing location of fibre optics and telecommunications cables than power cables. There may be a variation between the line depicted on the Indicative Plans and the location of any power cables.
3. You should not assume that **nbn™** Facilities follow straight lines or are installed at uniformed depths

along their lengths, even if they are indicated on plans provided to you. Careful onsite investigations are essential to locate the exact position of cables.

4. In carrying out any works in the vicinity of **nbn**™ Facilities, you must maintain the following minimum clearances:
 - 300mm when laying assets inline, horizontally or vertically.
 - 500mm when operating vibrating equipment, for example: jackhammers or vibrating plates.
 - 1000mm when operating mechanical excavators.
 - Adherence to clearances as directed by other asset owner's instructions and take into account any uncertainty for power cables.
5. You are aware that there are inherent risks and dangers associated with carrying out work in the vicinity of underground facilities (such as **nbn**™ fibre optic, copper and coaxial cables, and power cable feed to **nbn**™ assets). Damage to underground electric cables may result in:
 - Injury from electric shock or severe burns, with the possibility of death.
 - Interruption of the electricity supply to wide areas of the city.
 - Damage to your excavating plant.
 - Responsibility for the cost of repairs.
6. You must take all reasonable precautions to avoid damaging **nbn**™ Facilities. These precautions may include but not limited to the following:
 - All excavation sites should be examined for underground cables by careful hand excavation. Cable cover slabs if present must not be disturbed. Hand excavation needs to be undertaken with extreme care to minimise the likelihood of damage to the cable, for example: the blades of hand equipment should be aligned parallel to the line of the cable rather than digging across the cable.
 - If any undisclosed underground cables are located, notify **nbn** immediately.
 - All personnel must be properly briefed, particularly those associated with the use of earth-moving equipment, trenching, boring and pneumatic equipment.
 - The safety of the public and other workers must be ensured.
 - All excavations must be undertaken in accordance with all relevant legislation and regulations.
7. You will be responsible for all damage to **nbn**™ Facilities that are connected whether directly, or indirectly with work you carry out (or work that is carried out for you or on your behalf) at the Location. This will include, without limitation, all losses expenses incurred by **nbn** as a result of any such damage.
8. You must immediately report any damage to the **nbn**™ network that you are/become aware of. Notification may be by telephone - 1800 626 329.
9. Except to the extent that liability may not be capable of lawful exclusion, **nbn** and its servants and agents and the related bodies corporate of **nbn** and their servants and agents shall be under no liability whatsoever to any person for any loss or damage (including indirect or consequential loss or damage) however caused (including, without limitation, breach of contract negligence and/or breach of statute) which may be suffered or incurred from or in connection with this information sheet or any plans (including Indicative Plans) attached hereto. Except as expressly provided to the contrary in this information sheet or the attached plans (including Indicative Plans), all terms, conditions, warranties, undertakings or representations (whether expressed or implied) are excluded to the fullest extent permitted by law.

All works undertaken shall be in accordance with all relevant legislations, acts and regulations applicable to the particular state or territory of the Location. The following table lists all relevant documents that shall be considered and adhered to.

State/Territory	Documents
National	Work Health and Safety Act 2011
	Work Health and Safety Regulations 2011
	Safe Work Australia - Working in the Vicinity of Overhead and Underground Electric Lines (Draft)

	Occupational Health and Safety Act 1991
NSW	Electricity Supply Act 1995
	Work Cover NSW - Work Near Underground Assets Guide
	Work Cover NSW - Excavation Work: Code of Practice
VIC	Electricity Safety Act 1998
	Electricity Safety (Network Asset) Regulations 1999
QLD	Electrical Safety Act 2002
	Code of Practice for Working Near Exposed Live Parts
SA	Electricity Act 1996
TAS	Tasmanian Electricity Supply Industry Act 1995
WA	Electricity Act 1945
	Electricity Regulations 1947
NT	Electricity Reform Act 2005
	Electricity Reform (Safety and Technical) Regulations 2005
ACT	Electricity Act 1971

Thank You,


nbn DBYD

Date: 09/10/2024

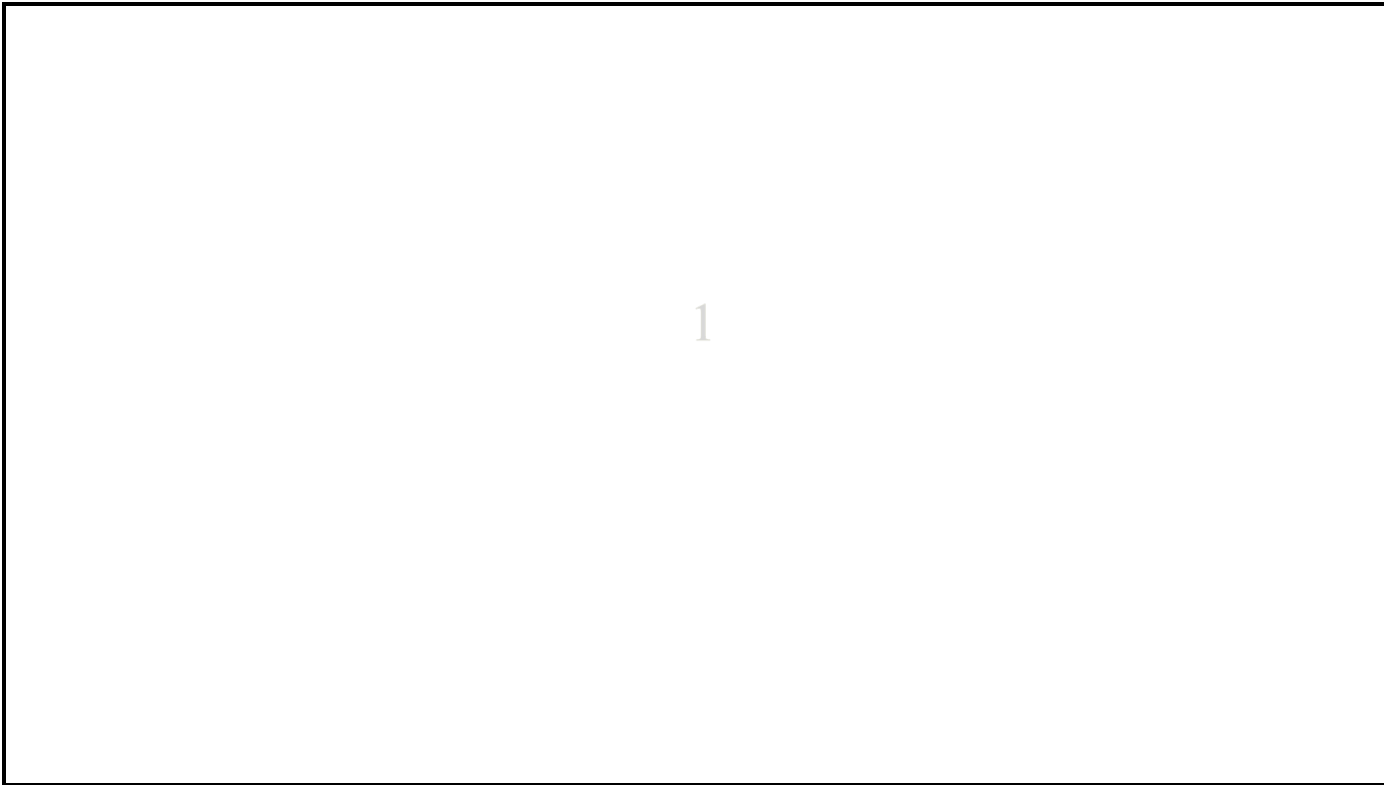
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To: [REDACTED]
Phone: Not Supplied
Fax: Not Supplied
Email: [REDACTED]

Dial before you dig Job #:	37779047	 BEFORE YOU DIG www.byda.com.au Zero Damage - Zero Harm
Sequence #	245788784	
Issue Date:	09/10/2024	
Location:	36 Wollie Creek Road , Banksia , NSW , 2216	

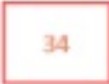




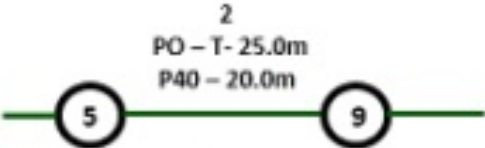






Indicative Plans are tiled below to demonstrate how to layout and read nbn asset plans

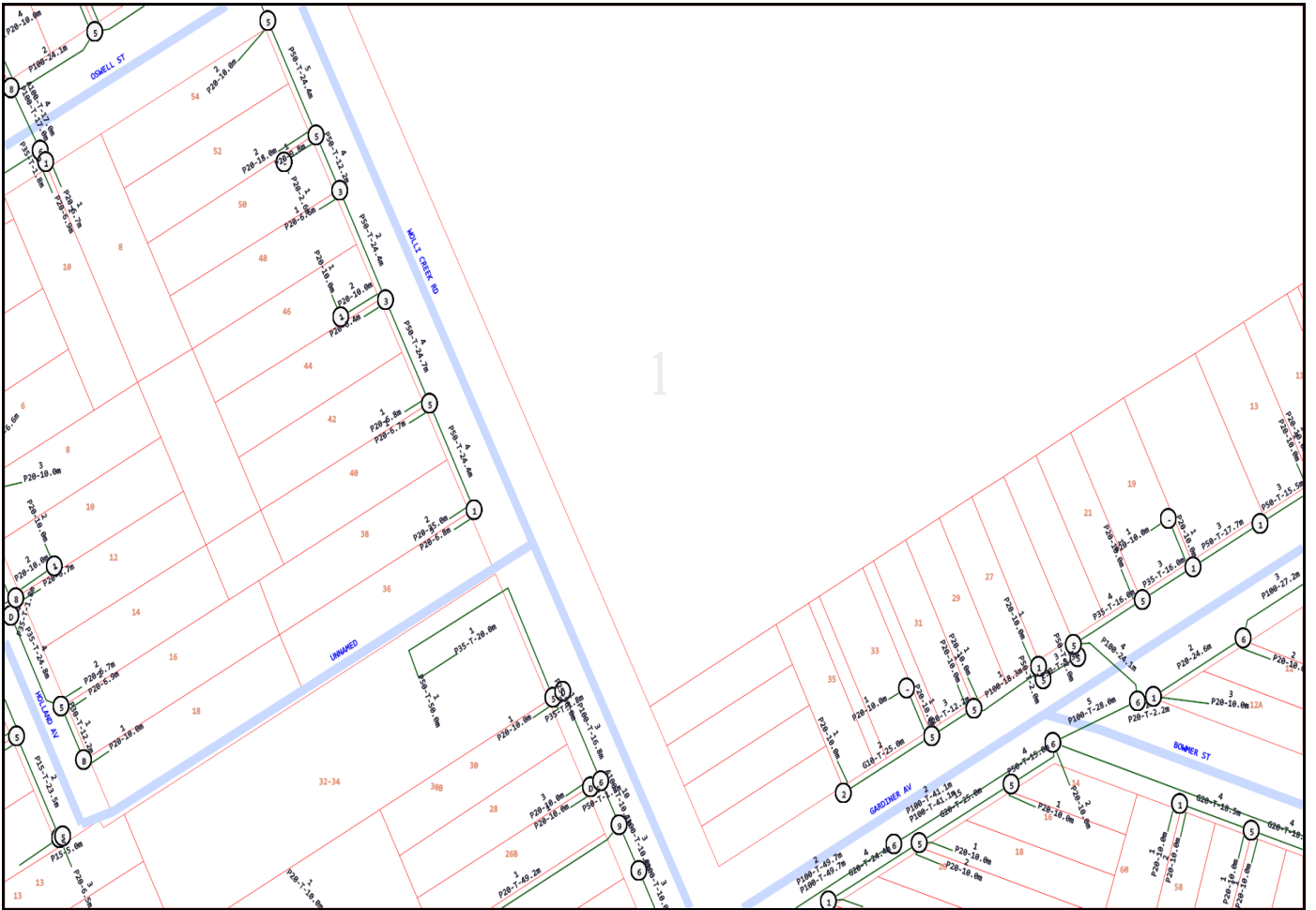




LEGEND



	Parcel and the location
	Pit with size "5"
	Power Pit with size "2E". Valid PIT Size: e.g. 2E, 5E, 6E, 8E, 9E, E, null.
	Manhole
	Pillar
	Cable count of trench is 2. One "Other size" PVC conduit (PO) owned by Telstra (-T-), between pits of sizes, "5" and "9" are 25.0m apart. One 40mm PVC conduit (P40) owned by NBN, between pits of sizes, "5" and "9" are 20.0m apart.
	2 Direct buried cables between pits of sizes, "5" and "9" are 10.0m apart.
	Trench containing any INSERVICE/CONSTRUCTED (Copper/RF/Fibre) cables.
	Trench containing only DESIGNED/PLANNED (Copper/RF/Fibre/Power) cables.
	Trench containing any INSERVICE/CONSTRUCTED (Power) cables.
	Road and the street name "Broadway ST"
Scale	0 20 40 60 Meters 1:2000 1 cm equals 20 m 



Emergency Contacts

You must immediately report any damage to the **nbn**™ network that you are/become aware of. Notification may be by telephone - 1800 626 329.

Referral

245788787

Member Phone

13 20 92

Responses from this member

Response received Thu 10 Oct 2024 6.44am

File name

Page

Response Body

42

Guide_to_Sydney_Water_DBYD_Plans.pdf

43

Important_Information_Sydney_Water_DBYD_Plans.pdf

45

MAP_24578878737779047.pdf

48

Asset Name: 80210

Date of enquiry: 9/10/2024 7:42:00 PM

Notification No: 37779047 (Job No)

Sequence No: 245788787

Customers Name: [REDACTED]

Customers Phone No: [REDACTED]

Address supplied for dig site location

36 Wolli Creek Road, Banksia, NSW

Notice: Please DO NOT REPLY TO THIS EMAIL as it has been automatically generated and replies are not monitored. Should you wish to advise Dial Before You Dig of any issues with this enquiry, please Call 13 20 92.

[Facebook] [Twitter] [YouTube] [Instagram]

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Guide to reading Sydney Water Before You Dig Plans

This guide will help you understand our plans and what our services are.

Sewer		Property Details	
Sewer Main (with flow arrow & size type text)		Boundary Line	
Disused Main		Easement Line	
Rising Main		House Number	
Maintenance Hole (with upstream depth to invert)		Lot Number	
Sub-surface chamber		Proposed Land	
Maintenance Hole with Overflow chamber		Sydney Water Heritage Site (please call 132 092 and ask for the Heritage Unit)	
Ventshaft EDUCT			
Ventshaft INDUCT			
Property Connection Point (with chainage to downstream MH)			
Concrete Encased Section			
Terminal Maintenance Shaft			
Maintenance Shaft			
Rodding Point			
Lamphole			
Vertical			
Pumping Station			
Sewer Rehabilitation			
Pressure Sewer		Water	
Pressure Sewer Main		WaterMain - Potable (with size type text)	
Pump Unit (Alarm, Electrical Cable, Pump Unit)		Disconnected Main - Potable	
Property Valve Boundary Assembly		Proposed Main - Potable	
Stop Valve		Water Main - Recycled	
Reducer / Taper		Special Supply Conditions - Potable	
Flushing Point		Special Supply Conditions - Recycled	
		Restrained Joints - Potable	
		Restrained Joints - Recycled	
		Hydrant	
		Maintenance Hole	
		Stop Valve	
		Stop Valve with By-pass	
		Stop Valve with Tapers	
		Closed Stop Valve	
		Air Valve	
		Valve	
		Scour	
		Reducer / Taper	
		Vertical Bends	
		Reservoir	
		Recycled Water is shown as per Potable above. Colour as indicated	
Vacuum Sewer		Private Mains	
Pressure Sewer Main		Potable Water Main	
Division Valve		Recycled Water Main	
Vacuum Chamber		Sewer Main	
Clean Out Point		Symbols for Private Mains shown grey	
Stormwater			
Stormwater Pipe			
Stormwater Channel			
Stormwater Gully			
Stormwater Maintenance Hole			

Pipe types

ABS	Acrylonitrile Butadiene Styrene	AC	Asbestos Cement
BRICK	Brick	CI	Cast Iron
CICL	Cast Iron Cement Lined	CONC	Concrete
COPPER	Copper	DI	Ductile Iron
DICL	Ductile Iron Cement (mortar) Lined	DIPL	Ductile Iron Polymeric Lined
EW	Earthenware	FIBG	Fibreglass
FL BAR	Forged Locking Bar	GI	Galvanised Iron
GRP	Glass Reinforced Plastics	HDPE	High Density Polyethylene
MS	Mild Steel	MSCL	Mild Steel Cement Lined
PE	Polyethylene	PC	Polymer Concrete
PP	Polypropylene	PVC	Polyvinylchloride
PVC - M	Polyvinylchloride, Modified	PVC - O	Polyvinylchloride, Oriented
PVC - U	Polyvinylchloride, Unplasticised	RC	Reinforced Concrete
RC-PL	Reinforced Concrete Plastics Lined	S	Steel
SCL	Steel Cement (mortar) Lined	SCL IBL	Steel Cement Lined Internal Bitumen
SGW	Salt Glazed Ware	SPL	Steel Polymeric Lined
SS	Stainless Steel	STONE	Stone
VC	Vitrified Clay	WI	Wrought Iron
WS	Woodstave		

In an emergency, or to notify Sydney Water of damage or threats to its structures, call 13 20 90 (24 hours, 7 days)

Further information and guidance is available in the 'Plumbing, building and developing' section of Sydney Water's website at www.sydneywater.com.au, where you will find the following under 'Before You Dig':

- Essential references
 - Avoid Damaging Water and Sewer Pipelines
 - Important Information about Before You Dig
 - Technical guidelines: Building over and adjacent to pipe assets
- See Also
 - Building over or next to assets, section of Sydney Water's website at www.sydneywater.com.au

Or call **13 20 92** for Customer Enquiries.

Note: The lodging of enquiries via www.byda.com.au will enable you to receive, via email, colour plans in PDF format 24 hours a day, 7 days a week.

This communication is confidential. If you are not the intended recipient, please destroy all copies immediately. Sydney Water Corporation prohibits unauthorised copying or distribution of this communication.

Important information about Before You Dig

The material provided or made available to you by Sydney Water (including on the Sydney Water website) in relation to your Before You Dig enquiry (Information) is provided on each of the following conditions, which you are taken to have accepted by using the Information:

- 1 The Information has been generated by an automated system based on the area highlighted in the “Locality Indication Only” window on your Confirmation Email. It is your responsibility to ensure that the dig site is properly defined when submitting your Before You Dig enquiry and, if the Information does not match the dig site, to resubmit your enquiry for the correct dig site.
- 2 Neither Sydney Water nor Before You Dig make any representation or give any guarantee, warranty or undertaking (express or implied) as to the currency, accuracy, completeness, effectiveness or reliability of the Information. The Information, including Sydney Water plans and work-as-executed diagrams, amongst other things:
 - (a) may not show all existing structures, including Sydney Water’s pipelines, particularly in relation to newer developments and in relation to structures owned by parties who do not participate in the Before You Dig service;
 - (b) may be out of date and not show changes to surface levels, road alignments, fences, buildings and the like;
 - (c) is approximate only and is therefore not suitable for scaling purposes; and
 - (d) does not show locations of property services (often called house service lines) belonging to or servicing individual customers, which are usually connected to Sydney Water’s structures.
- 3 You are responsible for, amongst other things:
 - (a) exposing underground structures, including Sydney Water’s pipelines, by pot-holing using hand-held tools or vacuum techniques so as to determine the precise location and extent of structures before any mechanical means of excavation are used;
 - (b) the safe and proper excavation of and for underground works and structures, including having regard to the fact that asbestos cement pipelines, which can pose a risk to health, may form part of Sydney Water’s water and sewerage reticulation systems;
 - (c) protecting underground structures, including Sydney Water’s pipelines, from damage and interference;
 - (d) maintaining minimum clearances between Sydney Water’s structures and structures belonging to others;
 - (e) ensuring that backfilling of excavation work in the vicinity of Sydney Water’s structures complies with Sydney Water’s standards contained on its website or otherwise communicated to you;
 - (f) notifying Sydney Water immediately of any damage caused or threat of damage to Sydney Water’s structures;
 - (g) ensuring that plans are approved by Sydney Water (usually signified by stamping) prior to landscaping or building over or in the vicinity of any Sydney Water structure;
 - (h) ensuring that the Information is used only for the purposes for which Sydney Water and Before You Dig intended.

- 4 You acknowledge that you use the Information at your own risk. In consideration for the provision of the Before You Dig service and the Information by Sydney Water and Before You Dig, to the fullest extent permitted by law
- (a) all conditions and guarantees concerning the Information (whether as to quality, outcome, fitness, care, skill or otherwise) expressed or implied by statute, common law, equity, trade, custom or usage or otherwise are expressly excluded and to the extent that those statutory guarantees cannot be excluded, the liability of Sydney Water and Before You Dig to you is limited to either of the following as nominated by Sydney Water in its discretion, which you agree is your only remedy:
 - (i) the supplying of the Information again; or
 - (ii) payment of the cost of having the Information supplied again;
 - (b) in no event will Sydney Water or Before You Dig be liable for, and you release Sydney Water and Before You Dig from, any Loss arising from or in connection with the Information, including the use of or inability to use the Information and delay in the provision of the Information:
 - (i) whether arising under statute or in contract, tort or any other legal doctrine, including any negligent act, omission or default (including willful default) by Sydney Water or Before You Dig; and
 - (ii) regardless of whether Sydney Water or Before You Dig are or ought to have been aware of, or advised of, the possibility of such loss, costs or damages;
 - (c) you will indemnify Sydney Water and Before You Dig against any Loss arising from or in connection with Sydney Water providing incorrect or incomplete information to you in connection with the Before You Dig service; and
 - (d) you assume all risks associated with the use of the Before You Dig and Sydney Water websites, including risk to your computer, software or data being damaged by any virus, and you release and discharge Sydney Water and Before You Dig from all Loss which might arise in respect of your use of the websites.
- 5 “**Sydney Water**” means Sydney Water Corporation and its employees, agents, representatives and contractors. “**Before You Dig**” means Before You Dig Australia and its employees, agents, representatives and contractors. References to “**you**” include references to your employees, agents, representatives, contractors and anyone else using the Information. References to “**Loss**” include any loss, cost, expense, claim, liability or damage (including arising in connection with personal injury, death or any damage to or loss of property and economic or consequential loss, lost profits, loss of revenue, loss of management time, opportunity costs or special damages). To the extent of any inconsistency, the conditions in this document will prevail over any other information provided to you by Sydney Water and Before You Dig.

In an emergency, or to notify Sydney Water of damage or threats to its structures, call 13 20 90 (24 hours, 7 days)

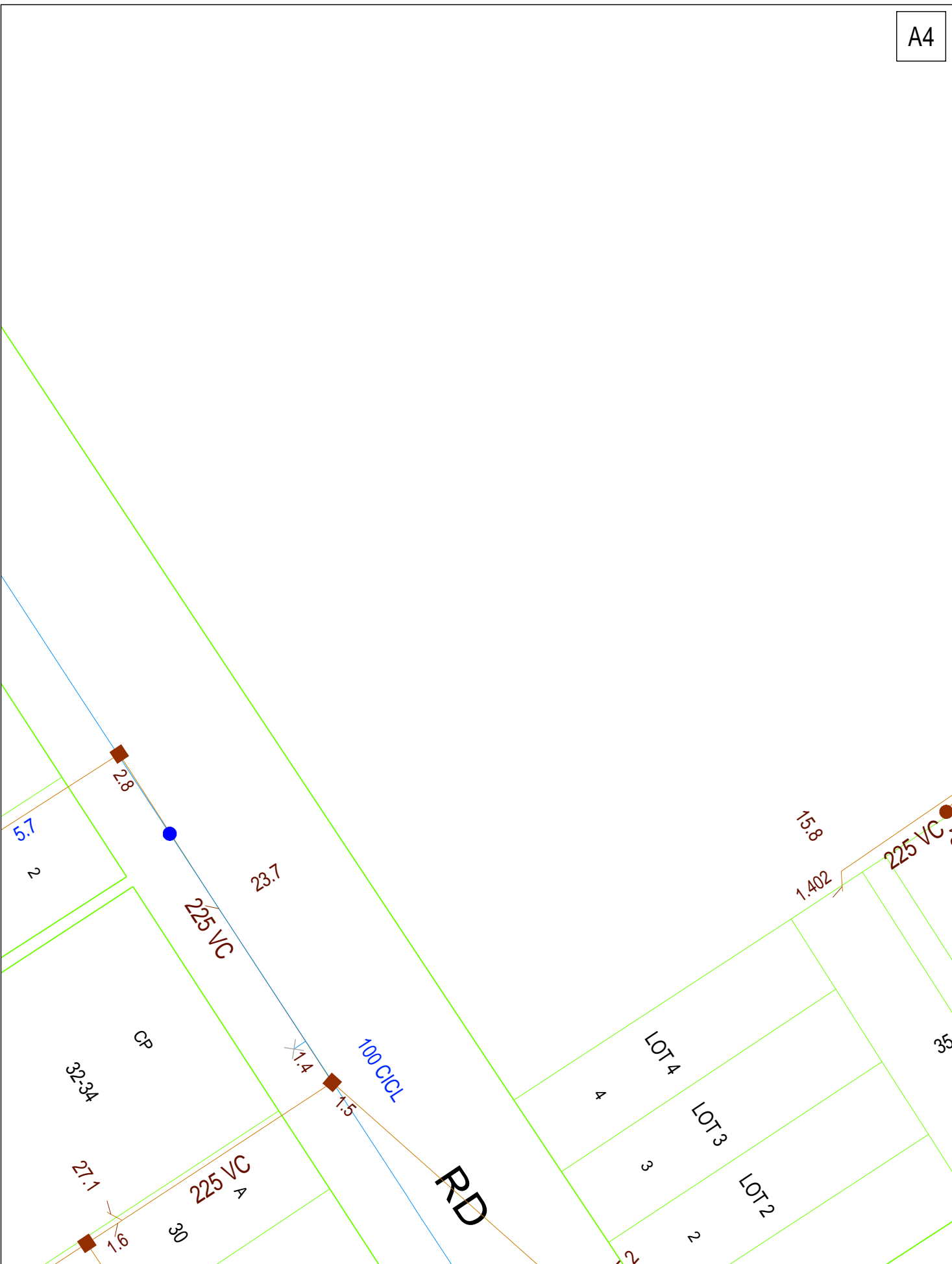
Further information and guidance is available in the 'Plumbing, building and developing' section of Sydney Water's website at www.sydneywater.com.au, where you will find the following under 'Before You Dig':

- Essential references
 - Guide to Reading Sydney Water BYDA Plans
 - Avoid Damaging Water and Sewer Pipelines
 - Technical guidelines: Building over and adjacent to pipe assets
- See Also
 - Building over or next to assets, section of Sydney Water's website at www.sydneywater.com.au

Or call **13 20 92** for Customer Enquiries.

Note: The lodging of enquiries via www.byda.com.au will enable you to receive, via email, colour plans in PDF format 24 hours a day, 7 days a week.

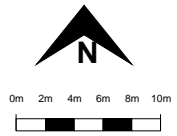
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DBYD Address:
36 Wollie Creek Road
Banksia NSW 2216
DBYD Job No: 37779047
DBYD Sequence No: 245788787

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No warranty is given that the information shown is complete or accurate.
SYDNEY WATER CORPORATION
Scale: 1:500

Date of Production: 10/10/2024
Plan 1 of 1



Referral
245788789

Member Phone
1800 653 935

Responses from this member

Response received Thu 10 Oct 2024 6.47am

File name	Page
Response Body	50
AccreditedPlantLocators 2024-09-13a.pdf	51
Telstra Duty of Care v32.0b.pdf	52
Telstra Map Legend 4.0b.pdf	54
245788789.pdf	55

Attention: [REDACTED] [REDACTED]

Site Location: 36 Wolli Creek Road, Banksia, NSW 2216

Your Job Reference: REF - Western Path

Please do not reply to this email, this is an automated message -

Thank you for requesting Telstra information via Before You Dig Australia (BYDA).

This response contains Telstra information relating to your recent BYDA request.

Information for opening Telstra Asset Plans as well as some other useful contact information is listed in the attached **Telstra Map Legend attached.**

Please refer to all enclosed attachments for more information.

Please Report Damage to Telstra Equipment: [Report damages to Telstra equipment - Telstra](#)

Please note:

When working in the vicinity of telecommunications plant you have a 'Duty of Care' that must be observed. Please ensure you read the 'Telstra Duty of Care' document (attached) - it contains important information including essential steps that must be undertaken prior to commencing construction activities.

WARNING: Telstra plans and location information conform to Quality Level 'D' of the Australian Standard AS 5488 - Classification of Subsurface Utility Information. As such, Telstra supplied location information is indicative only. Spatial accuracy is not applicable to Quality Level D. Refer to AS 5488 for further details. The exact position of Telstra assets can only be validated by physically exposing them. Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy. Further on site investigation is required to validate the exact location of Telstra assets prior to commencing work. A Certified Locating Organisation is an essential part of the process to validate the exact location of Telstra assets and to ensure the assets are protected during construction works. See the [Steps - Working Near Telecommunications Assets \(attached Telstra Duty of Care\)](#).

Please note that:

- it is a criminal offence under the *Criminal Code Act 1995* (Cth) to tamper or interfere with telecommunications infrastructure.
- Telstra will take action to recover compensation for damage caused to property and assets, and for interference with the operation of Telstra's networks and customers' services.

Telstra's plans contain Telstra's confidential information and are provided on the basis that they are used solely for identifying the location or vicinity of Telstra's infrastructure to avoid damage to this infrastructure occurring as part of any digging or other excavation activity. You must not use Telstra's plans for any other purpose or in a way that will cause Telstra loss or damage and you must comply with any other terms of access to the data that have been provided to you by Telstra (including Conditions of Use or Access).

(See attached file: Telstra Duty of Care v32.0b.pdf)

(See attached file: Telstra Map Legend 4.0b.pdf)

(See attached file: AccreditedPlantLocators 2024-09-13a.pdf)

(See attached file: 245788789.pdf)

OPENING ELECTRONIC MAP ATTACHMENTS –

Telstra Cable Plans are generated automatically in either PDF or DWF file types.
Dependent on the site address and the size of area selected.
You may need to download and install free viewing software from the internet e.g.



DWF Map Files (all sizes over A3)
Autodesk Viewer (Internet Browser) <https://viewer.autodesk.com/> or
Autodesk Design Review <http://usa.autodesk.com/design-review/> for
DWF files. (Windows PC)



PDF Map Files (max size A3)
Adobe Acrobat Reader <http://get.adobe.com/reader/>



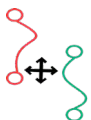
Telstra BYDA map related enquiries email
Telstra.Plans@team.telstra.com
1800 653 935 (AEST Business Hours only)



REPORT ANY DAMAGE TO THE TELSTRA NETWORK IMMEDIATELY
Report online - <https://www.telstra.com.au/forms/report-damage-to-telstra-equipment>
Ph: 13 22 03
If you receive a message asking for a phone or account number say:
“I don’t have one” then say “Report Damage” then press 1 to speak
to an operator.



Telstra New Connections / Disconnections
13 22 00



Telstra asset relocation enquiries: 1800 810 443 (AEST business
hours only).
NetworkIntegrity@team.telstra.com
<https://www.telstra.com.au/consumer-advice/digging-construction>



Telstra Aerial Assets Group (overhead network)
1800 047 909



CERTLOC Certified Locating Organisation (CLO)
certloc.com.au/locators/

Before You Dig Australia

Think before you dig

This document has been sent to you because you requested plans of the Telstra network through Before You Dig Australia (BYDA).

If you are working or excavating near telecommunications cables, or there is a chance that cables are located near your site, you are responsible to avoid causing damage to the Telstra network.

Please read this document carefully. Taking your time now and following the steps below can help you avoid damaging our network, interrupting services, and potentially incurring civil and criminal penalties.

Our network is complex and working near it requires expert knowledge. Do not attempt these activities if you are not qualified to do so.

Disclaimer and legal details



*Telstra advises that the accuracy of the information provided by Telstra conforms to Quality Level D as defined in AS5488-2013.

It is a criminal offence under the Criminal Code Act 1995 (Cth) to tamper or interfere with telecommunications infrastructure.

Telstra will also take action to recover costs and damages from persons who damage assets or interfere with the operation of Telstra's networks.

By receiving this information including the indicative plans that are provided as part of this information package you confirm that you understand and accept the risks of working near Telstra's network and the importance of taking all the necessary steps to confirm the presence, alignments and various depths of Telstra's network. This in addition to, and not in replacement of, any duties and obligations you have under applicable law.

When working in the vicinity of a telecommunications plant you have a "Duty of Care" that must be observed. Please read and understand all the information and disclaimers provided below.

The Telstra network is complex and requires expert knowledge to interpret information, to identify and locate components, to pothole underground assets for validation and to safely work around assets without causing damage. If you are not an expert and/or qualified in these areas, then you must not attempt these activities. Telstra will seek compensation for damages caused to its property and losses caused to Telstra and its customers. Construction activities and/or any activities that potentially may impact on Telstra's assets must not commence without first undertaking these steps. Construction activities can include anything that involves breaking ground, potentially affecting Telstra assets.

If you are designing a project, it is recommended that you also undertake these steps to validate underground assets prior to committing to your design.

This Notice has been provided as a guide only and may not provide you with all the information that is required for you to determine what assets are on or near your site of interest. You will also need to collate and understand all information received from other Utilities and understand that some Utilities are not a part of the BYDA program and make your own enquiries as appropriate. It is the responsibility of the entities undertaking the works to protect Telstra's network during excavation / construction works.

Telstra owns and retains the copyright in all plans and details provided in conjunction with the applicant's request. The applicant is authorised to use the plans and details only for the purpose indicated in the applicant's request. The applicant must not use the plans or details for any other purpose.

Telstra plans or other details are provided only for the use of the applicant, its servants, agents, or CERTLOC Certified Locating Organisation (CLO). The applicant must not give the plans or details to any parties other than these and must not generate profit from commercialising the plans or details.

Telstra, its servants or agents shall not be liable for any loss or damage caused or occasioned by the use of plans and or details so supplied to the applicant, its servants and agents, and the applicant agrees to indemnify Telstra against any claim or demand for any such loss or damage.

Please ensure Telstra plans and information provided always remains on-site throughout the inspection, location, and construction phase of any works.

Telstra plans are valid for 60 days after issue and must be replaced if required after the 60 days.

Data Extraction Fees

In some instances, a data extraction fee may be applicable for the supply of Telstra information. Typically, a data extraction fee may apply to large projects, planning and design requests or requests to be supplied in non-standard formats. For further details contact Telstra Planned Services.

Telstra does not accept any liability or responsibility for the performance of or advice given by a CERTLOC Certified Locating Organisation (CLO). Certification is an initiative taken by Telstra towards the establishment and maintenance of competency standards. However, performance and the advice given will always depend on the nature of the individual engagement.

Neither the Certified Locating Organisation nor any of its employees are an employee or agent for Telstra. Telstra is not liable for any damage or loss caused by the Certified Locating Organisation or its employees.

Once all work is completed, the excavation should be reinstated with the same type of excavated material unless specified by Telstra.

The information contained within this pamphlet must be used in conjunction with other material supplied as part of this request for information to adequately control the risk of potential asset damage.

When using excavators and other machinery, also check the location of overhead power lines.

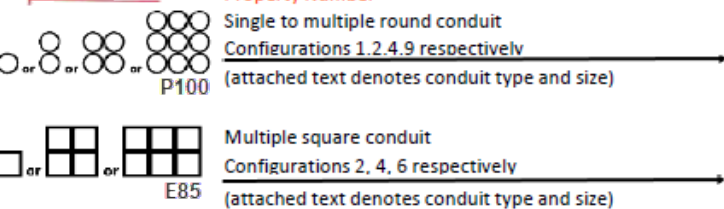
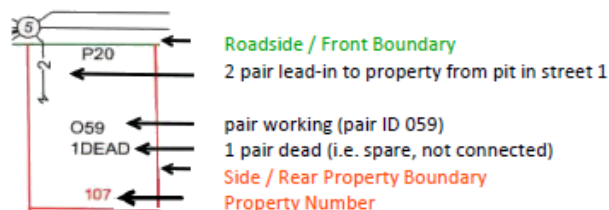
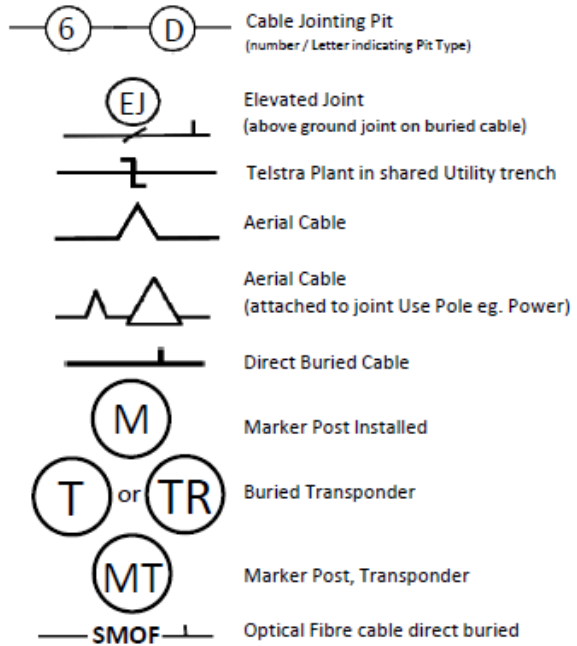
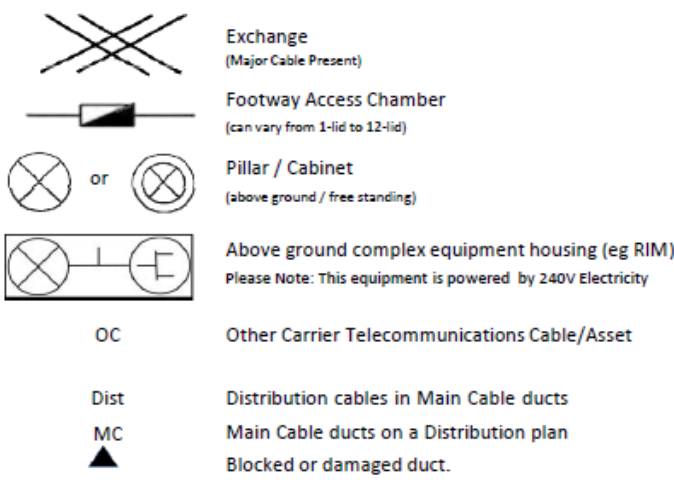
Workers and equipment must maintain safety exclusion zones around power lines

WARNING: Telstra plans and location information conform to Quality Level 'D' of the Australian Standard AS 5488 - Classification of Subsurface Utility Information. As such, Telstra supplied location information is indicative only. Spatial accuracy is not applicable to Quality Level D. Refer to AS 5488 for further details. Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy shown on the plans. **FURTHER ON SITE INVESTIGATION IS REQUIRED TO VALIDATE THE EXACT LOCATION OF TELSTRA PLANT PRIOR TO COMMENCING CONSTRUCTION WORK.** A plant location service is an essential part of the process to validate the exact location of Telstra assets and to ensure the assets are protected during construction works. The exact position of Telstra assets can only be validated by physically exposing them. Telstra will seek compensation for damages caused to its property and losses caused to Telstra and its customers.

Privacy Note

Your information has been provided to Telstra by BYDA to enable Telstra to respond to your BYDA request. Telstra keeps your information in accordance with its privacy statement. You can obtain a copy at www.telstra.com.au/privacy or by calling us at 1800 039 059 (business hours only).

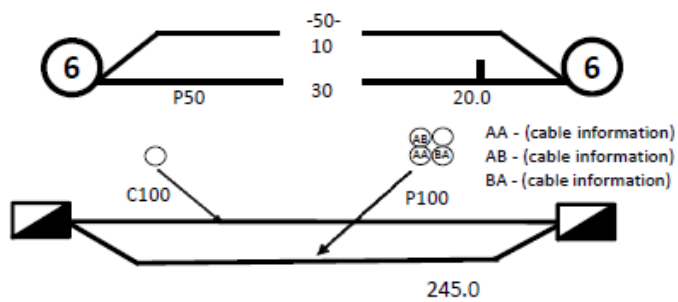
LEGEND



Some examples of conduit type and size:

A - Asbestos cement, P - PVC / Plastic, C - Concrete,
GI - Galanised iron, E - Earthenware
Conduit sizes *nominally* range from 20mm to 100mm
P50 50mm PVC conduit
P100 100mm PVC conduit
A100 100mm asbestos cement conduit

Some Examples of how to read Telstra Plans



One 50mm PVC conduit (P50) containing a 50-pair and a 10-pair cable between two 6-pits, approximately 20.0m apart, with a direct buried 30-pair cable along the same route

Two separate conduit runs between two footway access chambers (manholes) approximately 245m apart A nest of four 100mm PVC conduits (P100) containing assorted cables in three ducts (one being empty) and one empty 100mm concrete duct (C100) along

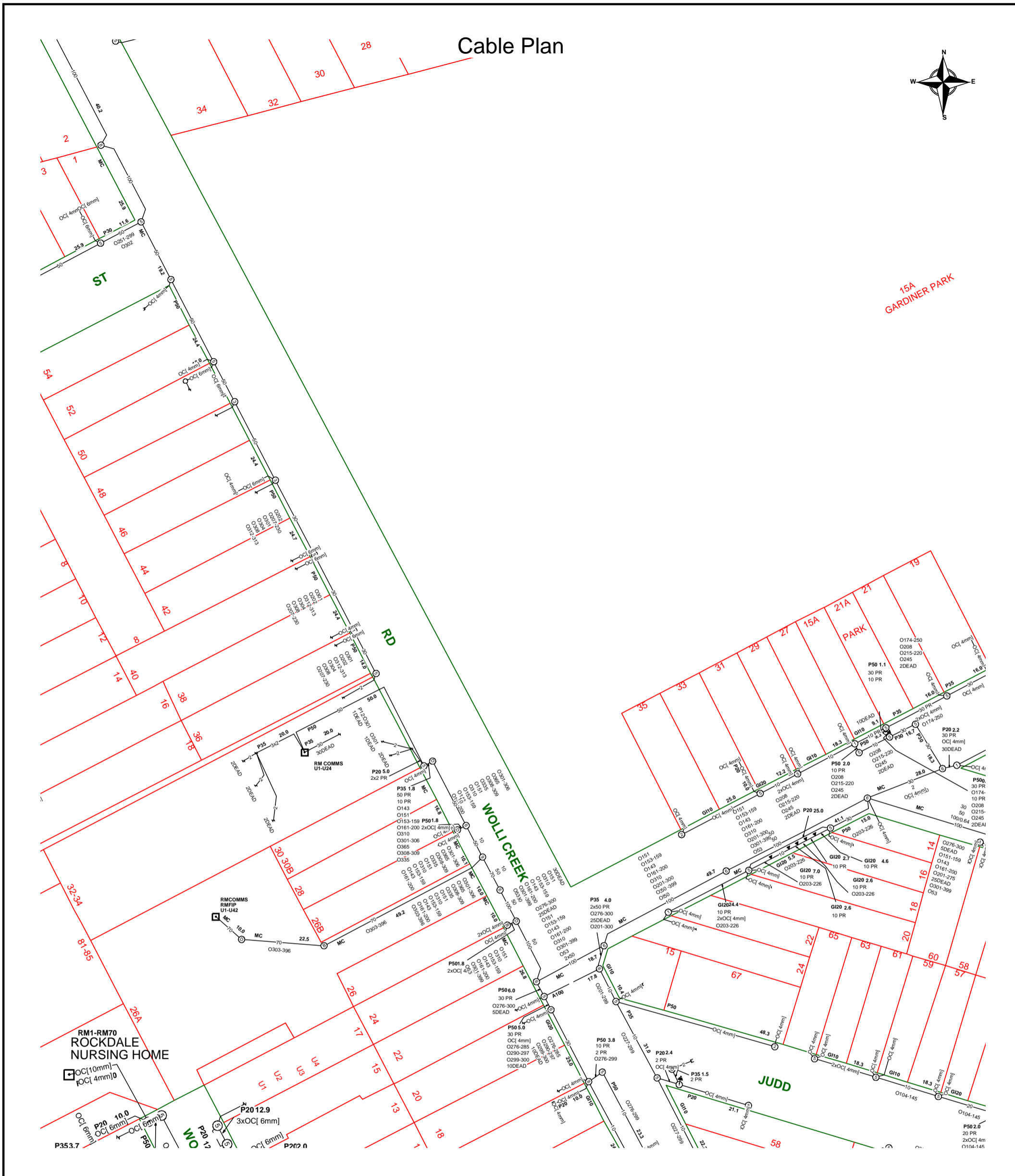
Protect our Network:

by maintaining the following distances from our assets:

- 1.0m Mechanical Excavators, Farm Ploughing, Tree Removal
- 500mm Vibrating Plate or Wacker Packer Compactor
- 600mm Heavy Vehicle Traffic (over 3 tonnes) not to be driven across Telstra ducts or plant.
- 1.0m Jackhammers/Pneumatic Breakers
- 2.0m Boring Equipment (in-line, horizontal and vertical)

For more info contact a [CERTLOC Certified Locating Organisation \(CLO\)](#) or Telstra Location Intelligence Team 1800 653 935

Cable Plan




 Report Damage: <https://service.telstra.com.au/customer/general/forms/report-damage-to-telstra-equipment>
 Ph - 13 22 03
 Email - Telstra.Plans@team.telstra.com
 Planned Services - ph 1800 653 935 (AEST bus hrs only) General Enquiries

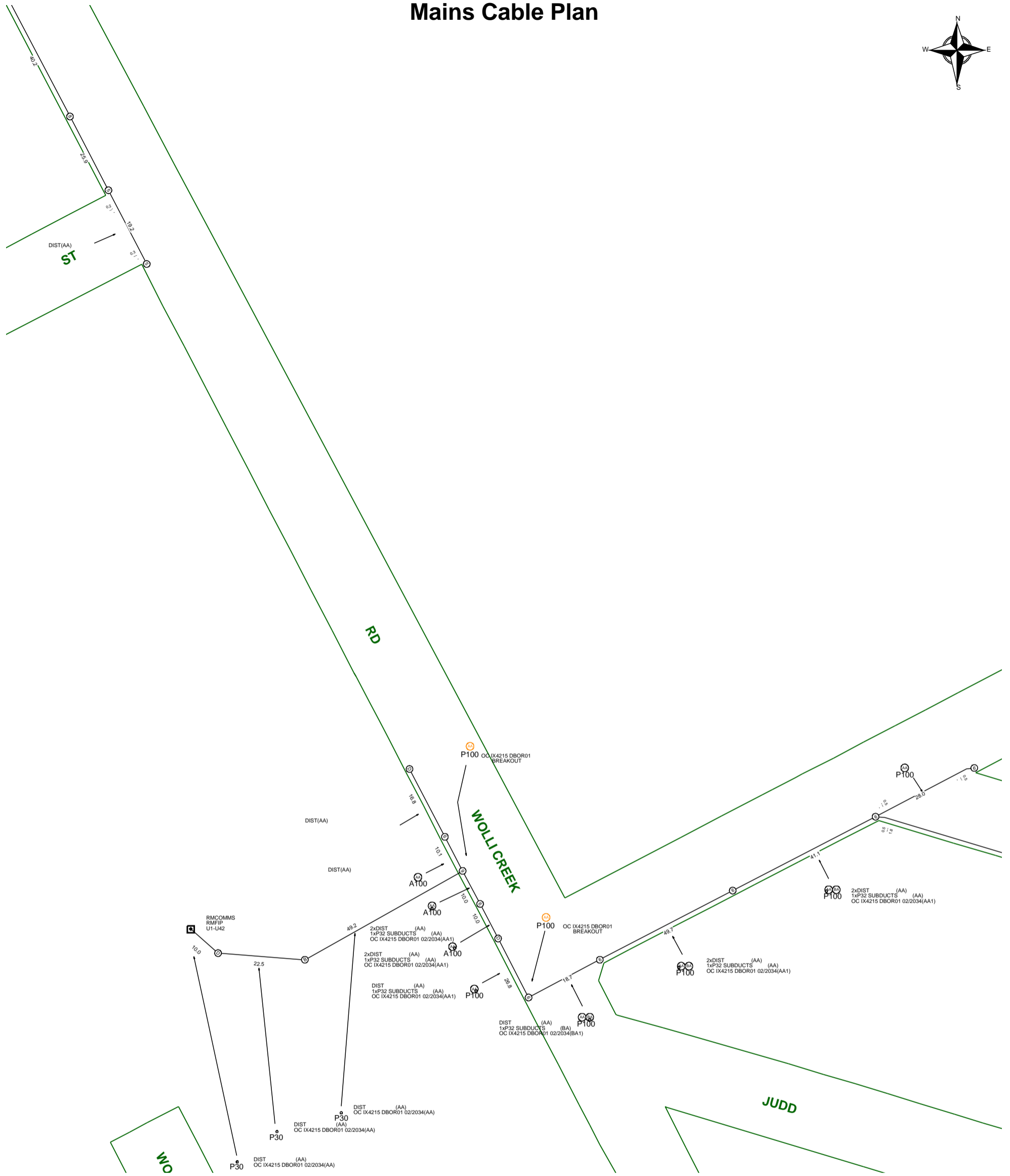
Sequence Number: 245788789
 Please read Duty of Care prior to any excavating

TELSTRA LIMITED A.C.N. 086 174 781
 Generated On 10/10/2024 06:47:16

The above plan must be viewed in conjunction with the Mains Cable Plan on the following page

WARNING
 Telstra plans and location information conform to Quality Level "D" of the Australian Standard AS 5488-Classification of Subsurface Utility Information. As such, Telstra supplied location information is indicative only. Spatial accuracy is not applicable to Quality Level D. Refer to AS 5488 for further details. The exact position of Telstra assets can only be validated by physically exposing it. Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy. Further on site investigation is required to validate the exact location of Telstra plant prior to commencing construction work. A Certified Locating Organisation is an essential part of the process to validate the exact location of Telstra assets and to ensure the asset is protected during construction works. See the Steps- Telstra Duty of Care that was provided in the email response.

Mains Cable Plan



Report Damage: <https://service.telstra.com.au/customer/general/forms/report-damage-to-telstra-equipment>
 Ph - 13 22 03
 Email - Telstra.Plans@team.telstra.com
 Planned Services - ph 1800 653 935 (AEST bus hrs only) General Enquiries

Sequence Number: 245788789

Please read Duty of Care prior to any excavating

TELSTRA LIMITED A.C.N. 086 174 781

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WARNING

Telstra plans and location information conform to Quality Level "D" of the Australian Standard AS 5488-Classification of Subsurface Utility Information. As such, Telstra supplied location information is indicative only. Spatial accuracy is not applicable to Quality Level D. Refer to AS 5488 for further details. The exact position of Telstra assets can only be validated by physically exposing it. Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy. Further on site investigation is required to validate the exact location of Telstra plant prior to commencing construction work. A Certified Locating Organisation is an essential part of the process to validate the exact location of Telstra assets and to ensure the asset is protected during construction works.

See the Steps- Telstra Duty of Care that was provided in the email response.



End of document

i This document may exclude some files (eg. DWF or ZIP files)

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