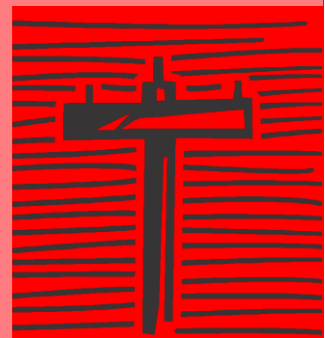
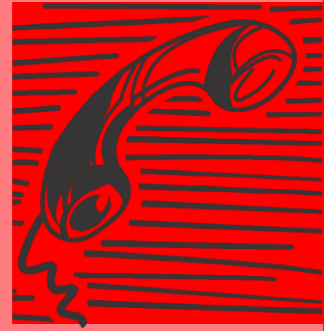
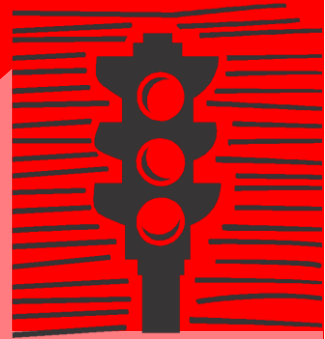


**UTILITY PROVIDERS**

**CODE OF PRACTICE**

FOR WESTERN AUSTRALIA



## **UTILITY PROVIDERS CODE OF PRACTICE**

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**Copies of the Utility Providers Code of Practice including subsequent amendments can be obtained from:**

Hard copies:

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The UPSC Code of Practice for Western Australia can be located via the website:

[www.byda.com.au](http://www.byda.com.au)

Should you have difficulty locating this content please email:

[bydawa@byda.com.au](mailto:bydawa@byda.com.au)

### **Keeping Code of Practice up to date**

The Code of Practice is a living document reviewed and updated periodically by the Utility Providers Services Committee to meet the evolving needs of industry. Between editions amendments may be issued. Readers of the Code of Practice are to ensure they are reading the latest version and any amendments that are issued since the latest published version. To assist in this endeavour the Committee would appreciate feedback on any aspects of this manual including inaccuracies, ambiguities, and suggestions for improvements.

### **Disclaimer**

Every reasonable effort has been made to ensure this document is accurate at the time of printing and the Committee disclaim any and all liability to any person in respect of anything done or omitted to be done in reliance upon the whole or any part of this document.

# **UTILITY PROVIDERS CODE OF PRACTICE FOR WESTERN AUSTRALIA**



Produced by the Utility Providers Services Committee.

Applicable from 01 September 2021

Supersedes all previous Information Manuals and Codes of Practice.

## Utility Providers Services Charter

### Who we are

The Utility Providers Services Committee has been in place in Western Australia since 22 June 1923. Since that time, it has been a model of cooperation between Utilities and other bodies interested in sharing Public Land to provide utility services to the Community.

### What we do

The UPSC meet regularly to discuss servicing issues and to maintain the UPSC Code of Practice for Western Australia. The Code of Practice documents current industry best practice for Utility interactions and provides essential information and guidance in managing and undertaking works associated with the provision of utility services in Western Australia.

### Our commitment

The organisation leaders fully support the Utility Providers Services Committee and the Code of Practice and commit their Organisation to complying wherever practicable with the Code of Practice. They further commit to supporting the Committee by providing authorised representatives and agree to raise any issues with the Code of Practice through the Committee so that they can be resolved in the best interests of the Community.

### UPSC Member Organisations:



<b>INDEX</b>		<b>Page No.</b>
<b>1</b>	<b>INTRODUCTION</b>	<b>5</b>
<b>2</b>	<b>HISTORY</b>	<b>5</b>
<b>3</b>	<b>TERMS OF REFERENCE AND ACCOUNTABILITY</b>	<b>5</b>
<b>4</b>	<b>ORGANISATIONS REPRESENTED ON THE UTILITY PROVIDERS SERVICES COMMITTEE (UPSC)</b>	<b>8</b>
<b>5</b>	<b>STANDARD UTILITY SPACE ALLOCATION IN ROAD RESERVES AND LOT ENTRY ARRANGEMENTS</b>	<b>8</b>
<b>6</b>	<b>STANDARD PROCEDURES PRIOR TO COMMENCING SERVICES INSTALLATION</b>	<b>10</b>
<b>7</b>	<b>PROJECT CONSTRUCTION</b>	<b>20</b>
<b>8</b>	<b>MINIMUM STANDARD OF COVER FOR UNDERGROUND UTILITY SERVICES AND CLEARANCE OF OVERHEAD POWER LINES AND TELECOMMUNICATION CABLES</b>	<b>21</b>
<b>9</b>	<b>STANDARD RESTORATION AND REINSTATEMENT OF INFRASTRUCTURE</b>	<b>25</b>
<b>10</b>	<b>ENVIRONMENT AND HERITAGE</b>	<b>26</b>
<b>11</b>	<b>SPECIAL NOTES</b>	<b>29</b>
<b>APPENDIX A – LOT ENTRY ARRANGEMENTS</b>		<b>32</b>
<b>APPENDIX B – ROAD RESERVE ALLOCATIONS FOR UTILITY PROVIDERS</b>		<b>37</b>
<b>APPENDIX C – TRAFFIC CONTROL AND SAFETY</b>		<b>54</b>
<b>APPENDIX D – UTILITY SERVICES LOCATED IN THE DAMPIER TO BUNBURY NATURAL GAS PIPELINE (DBNGP) CORRIDOR</b>		<b>56</b>
<b>APPENDIX E – UTILITY SERVICES LOCATED IN THE RAIL RESERVE</b>		<b>59</b>
<b>APPENDIX F – ENVIRONMENT CHECKLIST</b>		<b>62</b>
<b>EMERGENCY PROCEDURES AND CONTACTS</b>		<b>63</b>

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# 1 INTRODUCTION

The Utility Providers Code of Practice is published by the Utility Providers Services Committee to document industry best practice and provide essential information and guidance in managing and undertaking street works associated with the provision of underground utility services in public road reserves. The Code of Practice is an authoritative reference for utility services providers, local governments, developers, and their contractors throughout WA.

This document includes:

- Allocation of space for underground utility services
- Pre-construction planning including locating existing services
- Environmental and heritage compliance requirements
- Installation and reinstatement requirements.
- Recording of as constructed information.
- Emergency contact details of all utility service providers.

# 2 HISTORY

The Public Utilities Services Committee (PUSC) was founded on 22 June 1923 when a meeting of representatives of the Perth City Council, various Government Departments and public utility providers met in the Council Chambers, Town Hall, Hay Street, Perth.

Following a period between mid-1994 and the end of 1996 in which the PUSC did not meet, the PUSC was reconstituted at a meeting on 11 February 1997, with Main Roads WA providing the new role of Chairperson and Coordinator of the Committee.

The Committee was chaired and coordinated by the Department for Planning and Infrastructure between 2003 and 2006. This role was transferred back to Main Roads WA between 2006 and 2009.

During 2009, the Committee appointed a representative from Western Power as Chairman/Coordinator.

On 4 March 2016, the Committee appointed a representative from the Water Corporation as Chairman.

Due to the commercialisation and privatisation of Utility owners, the PUSC was changed to the Utility Providers Services Committee (UPSC).

# 3 TERMS OF REFERENCE AND ACCOUNTABILITY

The UPSC operates as an independent entity is focused on establishing standards for operational issues including the co-ordination of utility service works, site work safety, environment, allocation of alignments and corridors for utility services within road reserves and services lot entry arrangements.

The Utility Providers Code of Practice is referenced in *Liveable Neighbourhoods* produced by the Western Australian Planning Commission, Commission for Occupational Health and Safety Code of Practice – Excavation and Electricity (Supply Standards and System Safety) Regulations 2001 – Schedule 2.

Telecommunication Carriers are defined in and subject to Commonwealth legislation under the *Telecommunications Act (1997)* (Cth) and the Telecommunications Code of Practice (1997) (Cth), including subsequent amendments.

Licensed Telecommunications Carriers are exempt from some State or Territory laws. Where these laws are not consistent with the Telecommunications Act, the Commonwealth legislation will apply.

In addition, there may be a requirement for telecommunication service providers to obtain development approvals and building licences from Local Governments for works other than those defined as 'low impact' facilities in the *Telecommunications (Low-impact Facilities) Determination 1997* and subsequent amendments.

Based on this framework, the aims of the UPSC are:

- (a) To secure the co-operation of all authorities concerned to co-ordinate the use of space within road reserves and assist in the approval of utility services located within rail reserves;
- (b) To develop and issue Codes of Practice agreed in principle by the authorities concerned;
- (c) To determine methods of control and to co-ordinate the use of agreed Codes of Practice;
- (d) To facilitate coordinated works-programs to achieve maximum efficiency and to minimise costs to communities through the mutual co-operation of the authorities concerned;
- (e) To develop and implement guidelines for activities within environmentally sensitive areas, to minimise impact on streetscapes and to maintain acceptable safety standards;
- (f) To enable authorities concerned to share information on technological 'best practices'.

Although the above compliance obligations have been established for the UPSC, investigation is being done to determine the most appropriate framework, be that legislative or otherwise, to provide Main Roads WA and Local Government with clear jurisdiction to manage services within road reserves in a consistent and fair manner.

Roads in WA are managed by the relevant Local Government, Main Roads WA or the Department of Parks and Wildlife (within National Parks). However, land within dedicated road reserves is Crown land subject to the *Land Administration Act 1997 (LAA)*. The Department of Planning, Lands and Heritage (DPLH) administers the LAA and has a key role in relation to policy, legal and land management issues impacting on roads. The DPLH also manages the use of the DBNGP Corridor under the *Dampier to Bunbury Pipeline Act 1997 (DBP Act)*

**Notes:**

- (a) In this Code of Practice 'road authority' refers to Main Roads WA and Local Governments.
- (b) Refer also to Main Roads WA documents 'Utility Services in Road Reserves - Policy Statement; Application Guidelines; Approval Guidelines; Technical Guidelines; and Administration Guidelines' regarding location of utility services in road reserves, including structures, managed by Main Roads WA. In particular note Policy and Guidelines applicable to declared Control of Access road reserves and rural/regional road reserves outside urban/town site areas.
- (c) Maps of State Roads and Local Roads managed by Main Roads WA and Local Governments, including those declared Control of Access, are located on Main Roads WA website.



The following publications are relevant to this Code of Practice:

- *Main Roads WA Act 1930*
- *Road Traffic Code 2000*
- *Occupational Health and Safety Act 1984*
- *Disability Services Act 1993*
- *Land Administration Act 1997*
- *Dampier to Bunbury Pipeline Act 1997*
- *Petroleum Pipelines Act 1969*
- *Heritage Act 2018*
- *Aboriginal Heritage Act 1972*
- *Environmental Protection (Noise) Regulations 1997*
- *Telecommunications Act 1997 (Cth)*
- *Telecommunications (Low-impact Facilities) Determination 1997*
- *Telecommunications Code of Practice 1997 (Cth)*
- Utility Services in Road Reserves Policy [Application Guidelines; Approval Guidelines; Technical Guidelines; and Administration Guidelines] (Main Roads WA)
- Telecommunications within Road Reserves Guidelines (Austroads)
- Traffic Management for Works on Roads Code of Practice (Main Roads WA)
- Local Government Restoration and Reinstatement Guidelines in Western Australia (IPWEA and WALGA)
- Railway Crossing Control in Western Australia Policy and Guidelines (Main Roads WA)
- Partnership Agreement between WALGA and the Public Transport Authority – Defining the Roles and Responsibilities for the Planning, Installation and Maintenance of Bus Stop Infrastructure (Public Transport Authority and WALGA)

## 4 ORGANISATIONS REPRESENTED ON THE UTILITY PROVIDERS SERVICES COMMITTEE (UPSC)

- |   |   |
|---|---|
| <ul style="list-style-type: none"><li>• Water Corporation (Chairman)</li><li>• Before You Dig Australia (BYDA)</li><li>• Western Power</li><li>• ATCO (Gas Distribution)</li><li>• Main Roads WA</li><li>• Australian Gas Infrastructure Group (AGIG)</li><li>• APA Group</li><li>• Western Australian Local Government Association (WALGA)</li></ul> | <ul style="list-style-type: none"><li>• Telstra</li><li>• NBN Co</li><li>• Optus</li><li>• Horizon Power</li><li>• Public Transport Authority</li><li>• City of Perth</li><li>• Civil Contractors Federation (WA)</li><li>• Urban Development Institute of Australia (UDIA)</li></ul> |
|---|---|

### Stakeholder organisations not represented on the UPSC

- |   |  |
|---|--|
| <ul style="list-style-type: none"><li>• WA Police Force</li><li>• Worksafe WA</li><li>• Department of Water and Environmental Regulation</li><li>• Energy Safety WA</li><li>• City of Fremantle</li></ul> | <ul style="list-style-type: none"><li>• Department of Planning, Lands and Heritage</li><li>• WA Planning Commission</li><li>• Institute of Public Works Engineering Australia (WA)</li><li>• Roadside Conservation Committee</li></ul> |
|---|--|

## 5 STANDARD UTILITY SPACE ALLOCATION IN ROAD RESERVES AND LOT ENTRY ARRANGEMENTS

### 5.1 Road reserve

#### 5.1.1 Application

This Code of Practice applies to both urban (town site and built-up areas) and rural/regional road reserves (outside town sites and built-up areas). Applications of this Code of Practice apply to standard service alignments, green field developments, utilities located in narrow road reserves (nominally 14-16 metres) and paved laneways, but not to services within private property, although developers may consider applying these guidelines in some applications, such as survey strata developments.

Utilities may require easements over their services located outside of road reserves.

In rural/regional road reserves utility providers are to refer to either Main Roads WA or the Local Government for advice, as urban type standard allocations may not apply. In the case of main roads, it is policy to locate utility services outside the road reserve unless there are exceptional circumstances that preclude this position. Special easements may be required for these cases. It is also recommended that utility services are located outside of Local Government road reserves where this minimises the impact on native vegetation.

In the case of road reserves with declared Control of Access, location of utility services is generally not permitted. Refer to Clause 3, **Notes** (b) regarding Main Roads WA Policy and Guidelines for 'Utility Services in Road Reserves'.

Co-location of similar utility services is most desirable and encouraged.

### **5.1.2 Service allocation principles**

In developed road reserves the previously agreed alignments already occupied may continue to apply, but for green field developments, narrow road reserves and paved laneways present Code of Practice alignments will be adhered to for all new utility services including non-active utility services for future use. Alteration to standard positions may be made following negotiation between engineers or qualified officers of the road authority concerned and the utility provider and between affected utility providers. Refer to Special Notes, Clause 11.1 and 11.2. When alteration from allocated alignments is made, a written agreement is required for future reference.

### **5.1.3 Services allocation diagrams**

Diagrams showing the standard location of utility services in the road reserve together with associated notes are detailed in Appendix B.

### **5.1.4 Impact of environmental considerations**

Although standard allocation of space in road reserves is provided as a desirable practice, environmental considerations described in Clause 10 may impact on these standard allocations.

The provision of reduced verge width adjacent to parks/public open space may require services to be located within the parks/public open space with the approval of the Local Government. A special easement may be required.

### **5.1.5 Road reserve management**

Unless otherwise directed, road authorities are responsible for the management of the total road reserve and associated structures e.g. bridges and tunnels.

### **5.1.6 Signage in road reserves**

Signage installations shall not impact on existing services and be positioned to minimise impact on existing and future utility services.

Signage is all types of signs that require footings or any form of ground penetration to erect.

Sign positions shall be agreed with the road authority. The following is recommended:

Permission to be obtained from the appropriate road authority and affected (adjacent or above proposed footing) utility owner.

Installers undertake a Before You Dig Australia enquiry to ascertain location of existing recorded services.

Plan, prepare, pothole, protect and proceed in accordance with section 6.3.

Signage with deep support footings that adjacent to services shall have frangible or breakaway posts to prevent footing movement damaging adjacent services.

## 5.2 Lot entry services arrangement

Services interface arrangements between the utilities in road reserves and lot owner connections are detailed in Appendix A for both front of lot and rear laneway access arrangements. Laneway access is not preferred and must be agreed between developers, local government authorities and utility providers considering difficulties of servicing from the front of lots such as high retaining walls, facing public open space and no vehicle access.

# 6 STANDARD PROCEDURES PRIOR TO COMMENCING SERVICES INSTALLATION

Prior to commencing any work involving excavation, trenchless drilling, boring or ground works in the road reserve or on private land, appropriate planning shall be undertaken including obtaining approvals from appropriate authorities, liaising with utilities, and obtaining as detailed in the Code of Practice.

Note that Before You Dig Australia information generally does not cover private installations except utility services that extend into these lands.

## 6.1 Project planning – Utility providers and road authorities

### 6.1.1 Services to be installed in their standard alignment

- (a) Obtain information on the location of all other utility providers' plant throughout the length of the proposed route.

Refer to Before You Dig Australia (6.2).

- (b) Check for potential environmental and heritage impacts and obtain approvals from Regulatory Agencies (e.g. Heritage Council of WA, Department of Environment Regulation Department of Aboriginal Affairs, Local Government, etc.).
- (c) Where applicable walk the route of proposed works with the road authority representative to identify native vegetation, possible locations of conflict and alternative routes.
- (d) Any parties doing work in the road reserve must submit a notification of works to the relevant road authority. Approval to do works may be required; therefore, parties must consult with the relevant road authority. Local Governments will have a local law and/or a policy governing third parties undertaking works in the local road reserve. Notifications shall be at least ten working days before commencing work. The Application must include a completed Environmental Checklist (as detailed in Appendix E or equivalent) applicable to the proposed works. This is a mandatory requirement.

#### **Note:**

A clearing permit is likely to be required from the Department of Water and Environmental Regulation where any clearing of native vegetation (herbs, shrubs, trees [dead or alive]) occurs and can take several months to complete the process.

In the case of Main Roads WA, utility providers are required to submit an application form, which includes an Environmental Checklist advising Main

Roads WA of the proposed works and reference to any current Agreement or Memorandum of Understanding between Main Roads WA and the Utility Provider. These documents can be accessed from the Main Roads WA website ([www.mainroads.wa.gov.au](http://www.mainroads.wa.gov.au)).

In the case of telecommunication carriers, for activities that are defined as 'low-impact facilities' in accordance with the Telecommunications (Low-impact Facilities) Determination 1997, the use of the application form and other approval processes (e.g. Environmental Checklist) set out in Clause 6.1.1(d) are not applicable. Unless otherwise agreed (within an MOU or other formal Agreement), the telecommunication carriers will provide 10 business days notification to road authorities, in accordance with the Telecommunications Code of Practice 1997, using a standard Land Access and Activity Notice. The road authority may object to the proposed activity in accordance with the *Telecommunications Act 1997* (Cth) and Telecommunications Code of Practice 1997 (e.g. incomplete information and environmental assessment)

Notwithstanding, it is in the best interest of all concerned that in most cases, telecommunications carriers and other utility providers that have exemptions or other access instruments abide with the requirements of Local Government to mutually manage and maintain safety in the road reserve for the benefit of all users.

- (e) Obtain an agreement with the road authority on restoration and reinstatement requirements in the road reserve and any other area under the control and management of the road authority. (See the Local Government Guidelines for Restoration and Reinstatement in Western Australia 2020 endorsed by the Institute of Public Works Engineering, Australasia and WALGA). Refer to Clause 9 of this document.
- (f) Prior to commencing the works, a traffic management plan (if required) shall be submitted to the road authority for approval. The road authority must respond in a timely manner. This does not apply to emergency works; however, the road authority must be informed as soon as practicable. (Refer to Appendix C, Traffic Management of the Traffic Management for Works on Roads Code of Practice, available on the Main Roads WA website)
- (g) It is the responsibility of road authorities and utility providers and their contractors or subcontractors to be fully conversant with all relevant Codes, Regulations, Policies and Acts that apply to their work. Consultation with relevant road authorities and utility providers may be necessary to obtain this information (e.g. notification of proposed works, environmental assessment, traffic management plans, reinstatements, etc.).
- (h) Telecommunications within Road Reserves - Austroads Guidelines and subsequent amendments: Austroads has produced two documents for use by road authorities when Telecommunication Carriers plan to install 'Low-impact Facilities' (particularly cables/conduits) in road reserves:
  - Operational Guidelines (2007) – also equivalent document produced by the Communication Alliance for use by Carriers; and
  - Administrative Guidelines (2007).

Regarding facilities that are not 'Low-impact Facilities', planning approvals are required in addition to established policies in Main Roads WA, Local Government and the Western Australian Planning Commission.

Main Roads WA owns and manages highways and main roads in WA. Local roads are managed by the relevant Local Government. Land in dedicated road reserves is, however, Crown land owned by the State of WA. The Department of Planning, Lands and Heritage (DLP) administers Crown land on behalf of the State.

Note: There is a Memorandum of Understanding (MOU) between DLP and Telstra, which avoids the need for specific Land Access Notifications of most 'Low- impact Facilities' to be installed in roads.

Note: There is a MOU between Main Roads WA and Telstra, that assists in the management of Telstra facilities in Main Roads WA road reserves and applies to activities for which Telstra is required to give notices under the *Telecommunications Act 1997* (Cth) and the Telecommunications Code of Practice 1997 and subsequent amendments.

### **6.1.2 Services to be installed outside standard alignments**

- (a) The conditions for services within the standard alignments shall apply in addition to the following clauses.
- (b) Obtain information on the location of other utility providers' plant and proposed street alignments throughout the length of the proposed route in consultation with all authorities concerned. Consult with affected landowners if applicable, the appropriate land use planning authority for long term planning if necessary and ensure all land matters are in order before proceeding.

Refer to Before You Dig Australia Clause (6.2). A 'Notice of Intent' or 'Preliminary to Works' (in accordance with Land and Planning Acts) may not be adequate in all cases.

- (c) There may be instances where plant is located in existing and/or future reserves or easements that may impact on adjoining property as identified in Special Note Clause 10.8.
- (d) Formally notify all utility providers and appropriate road authorities at least ten working days in advance of proposed work including provision of a route plan showing street alignments. Approvals must be obtained, or notifications undertaken in accordance with Clause 6.1.1(d) prior to proceeding with the works. This is a mandatory requirement.
- (e) Obtain an agreement with the road authority on restoration and reinstatement requirements in the road reserve. Refer to Clause 6.1.1 (e).
- (f) Refer to 6.1.1 (f) and Appendix C regarding Traffic Management.
- (g) Refer Special Notes Clause 11.2 for additional requirements.

### **6.1.3 Services maintenance work in road reserve**

- (a) Notify any utility provider or road authority that may be affected (e.g. excavation in a busy street or footpath) to expedite reinstatement. Refer to Before You Dig Australia (Clause 6.2).
- (b) Utility providers must obtain an agreement with the road authority on the restoration and reinstatement requirements in the road reserve. Refer to Clause 6.1.1 (e). This is a mandatory requirement.
- (c) Refer to Clause 6.1.1 (f) and Appendix C regarding Traffic Management.

### **6.1.4 Special precautions**

In areas where special conditions apply, such as excavation of busy streets and pedestrian ways, appropriate preparations, notifications, and agreements are to be made by the utility provider undertaking the work to minimise inconvenience to the public and to comply with legal requirements.

### **6.1.5 Road construction notification**

The road constructing authority proposing new road works is to notify and consult all utility providers in advance including a plan showing extent of earthworks and finished levels of the proposed construction. This consultation process should allow for delays in obtaining appropriate information and approvals. As a mandatory requirement service relocation issues, including cost, shall be resolved before proceeding with any works.

In the case of rural/regional areas, where services may not be on allocated alignments, it is essential to resolve relocation issues prior to proceeding with any works.

Where a road authority is proposing to do work that will affect utility services they must consult with the effected utilities in a timely manner. The service provider shall respond in a timely manner.

### **6.1.6 Connection of a utility service to a street main**

The utility providers concerned shall be responsible for determining the exact location of existing plant in the road reserve before starting work e.g. 'pot-holing' by hand. The utility provider shall provide as much guidance and control as possible, particularly when contractors and sub-contractors are involved. Refer to Standard Procedures Prior to Commencing Work in Clauses 6.2 and 6.3 with emphasis on PLAN, PREPARE, POTHOLE, PROTECT then PROCEED.

### **6.1.7 Subsurface works not for service connections**

For sub-surface works in the road reserve other than for service connection.

- (a) Obtain information on the location of all utility provider plant in the area affected. Refer to Before You Dig Australia (Clause 6.2).
- (b) The design of the work shall consider the existing plant in the road reserve, shall conform to this Code of Practice and the road authority advised of proposed works.

### **6.1.8 Rural/Regional areas**

Traditionally most utility services in rural areas have been located within the road reserve. They may be located outside road reserves, particularly those managed by Main Roads WA. However, road reserves often contain important native vegetation and thus every effort should be made to avoid the placement of new utility services in the road reserve. Should it be necessary to install utility services in the road reserves, trenchless methods such as horizontal directional drilling, micro-tunnelling or thrust boring should be considered to minimise the disturbance to vegetation. In these situations, and undertaking vegetation maintenance within the utility service corridor, consultation with both the road authority and other utility service providers (as applicable) is mandatory.

For information on utility services in regional locations, lodge a Before You Dig Australia enquiry. Note that not all asset owners are members of Before You Dig Australia and therefore are not associated with the Before You Dig Australia service. Refer Clause 6.2.

### **6.1.9 Attachment of non-visible utility services to road authority bridges and structures**

Generally, these are Main Roads WA managed.

Non-visible utility services include conduits, pipes, etc., but exclude microwave dishes, mobile phone antennae, etc.

The Utility Provider shall consult with Main Roads WA or the relevant road authority and obtain a Utility Service Management Agreement prior to the installation and attachment of a utility service facility to existing or new traffic bridges, traffic structures, tunnels, and other road service structures. Refer to Section 3.4.3 of Main Roads WA 'Utility Services Application and Approval Guidelines' located on Main Roads WA Website (refer to Page 2).

### **6.1.10 Redundant or abandoned utility services**

When utility services have become redundant, decommissioned from service, or abandoned, the utility provider must either remove the service from the road reserve or make the service safe regarding interference to adjacent infrastructure and the environment.

Upon the complete removal of the service and any associated infrastructure from the ground or structure, the utility provider may remove the service from its records, otherwise it must retain records of these abandoned services indicating that the assets have been decommissioned and ensure that the information is provided to Before You Dig Australia as required.

If the utility provider chooses to leave the service in place and alter the normal operating parameters of the service, such as filling a steel pipeline with concrete, then this alteration must be noted and included in any information is provided to Before You Dig Australia.

In some cases, abandoned assets may have been repurposed to a third party via rental or leasing arrangements, where the service acts as a conduit, sleeve, or casing to another service. In this situation the owner of the original service that is acting as a conduit, sleeve, or casing, is required to identify that the service is being utilised in



such a manner and include any notation in the information provided to Before You Dig Australia. The owner of the service using the service as a conduit, sleeve, or casing is not required to provide information on the leased asset (but may choose to), however it is required to provide details on the service that it owns and is using the conduit, sleeve, or casing, to Before You Dig Australia as required.

In the situation where a service has been sold to another party, then it is recommended the utility provider supply all relevant records to the purchaser to enable the purchaser to continue to provide information on the service to Before You Dig Australia as required.

In the case of utility services attached to bridges or other structures managed by road authorities, detail of managing redundant services, including the removal of the service from the structure, is included in a Service Management Agreement (refer to Main Roads WA Application and Approval Guidelines, Section 3.4.3).

#### 6.1.11 Organisations other than utility providers and road authorities

For those organisations other than utility providers and road authorities planning to work in road reserves, obtain approval in writing from the road authority before commencing work. This is a mandatory requirement.

## 6.2 BEFORE YOU DIG AUSTRALIA



### Digging Without Disasters

Before You Dig Australia provides a single Australia wide point of contact to obtain information (including plans) for utility infrastructure. These assets can include buried pipes and cables, as well as aboveground poles and wires. This service makes it easier and safer for people undertaking activities in proximity to this infrastructure by enabling them to determine what services exist in the area of proposed work

**Note:** This service does not include all railway infrastructure in rail reserves for which information should be sought from Public Transport Authority (Rail).

To use the Before You Dig Australia service simply lodge your enquiry a day in advance of the commencement of the activity. Enquiries are lodged at:

**Website:** [www.byda.com.au](http://www.byda.com.au)

The enquiry information shall clearly identify the precise location where the activity is proposed.

If you have not received your requested information from Before You Dig Australia members after two business days from the date of your request, contact the member directly as listed on your Before You Dig Australia Request Confirmation.

### **Note:**

(a) No work is to commence until all relevant information has been received. Refer also to WorkSafe WA *Occupational Safety and Health Regulations 1996* section 3.21. It is a

requirement of section 3.21 that all underground assets are located (potholed) in a job site prior to excavation. Utility maps MUST be on site.

(b) If you have received information from Before You Dig Australia and require further data and/or other information, it can be obtained by telephoning the contacts listed on the Confirmation response.

(c) Be aware that not all owners of underground assets are members of Before You Dig Australia. Provision of Before You Dig Australia information depends on membership type and the information provided is indicative only.

Those underground asset owners who choose not to register with Before You Dig Australia make it difficult for the excavator/contractor to be aware of the underground assets and to take precautionary measures to avoid damaging those assets.

(d) For further information on Before You Dig Australia, visit the Website: [www.byda.com.au](http://www.byda.com.au)

(e) Contact the relevant road authority. Note that Main Roads WA is not a member of Before You Dig Australia.

(f) **Why you should use:**

## Before You Dig Australia

Refer to the following pictures of events that caused major damage and injury which could have been avoided if the worker had lodged a Before You Dig Australia enquiry:



### 6.3 Duty of care and prevention of damage to services

To assist a person(s) or Agency proposing to undertake excavation work in meeting their duty of care and to prevent or minimise damage to services, the following actions shall be implemented as a minimum requirement:

- Plan
- Prepare
- Pothole
- Protect – and only then
- Proceed

## **PLAN**

Obtain all applicable plan or drawings available by lodging a Before You Dig Australia enquiry.

In addition, contact the relevant road authority as Before You Dig Australia does not represent all asset owners.

Contact utility providers for their recommended safe digging practices to protect their plant and comply with any specific requirements.

For services intended to enter or cross rail reserves in the Metropolitan Area, which are usually fenced with gates, contact Public Transport Authority (Rail) for advice on accessing the rail reserve even for preliminary reconnaissance. Where a road authority proposes to do work that will affect utility services they must consult with the effected parties.

## **PREPARE**

Prepare for your works by reviewing the utility plans and contacting the utility if you need assistance. Look for onsite asset and infrastructure clues such as pit lids, marker posts and meters. These onsite clues will assist you to identify the potential location of assets on site from the utility plans and identify any other infrastructure that may not be marked on utility plans or where the utility may not be a Before You Dig Australia member.

It is then recommended, unless advised otherwise by a utility, to engage a DBYD Certified Locator who can:

- Interpret plans
- Identify and locate assets
- Where possible identify and locate any unrecorded assets existing on site (e.g. domestic gas or /power lead-ins are generally not recorded on Before You Dig Australia utility plans)
- Provide results / maps / information on located services to AS5488:2019 specifications
- Provide locating assistance during potholing

## **POTHOLE**

Potholing is the practice of digging a test hole to expose underground utilities to ascertain the horizontal and vertical location of the facility.

- (a) Potholing is to be carried out prior to drilling or excavating to establish the exact location of all underground assets. (Always visually sight the service or utility)
- (b) Prior to any potholing being carried out, you must implement the Prepare step by reading the Before You Dig Australia plans and utilising electronic methods and ground penetrating radar to fully understand what utilities are in the vicinity and also the required safe Minimum Approach Distance (MAD). Contact the respective utility for MAD values and safety requirements. It is necessary to pothole to determine the accuracy of any non-invasive methods.

For instance, you are not permitted to excavate within:

- 15 meters of a high-pressure gas main without prior consultation and approval from the relevant gas asset owner.
- 3 meters of water mains greater than 300mm (unless they are Asbestos Cement (AC), or Reinforced Concrete (RC), if they are either of these materials then an Asset Damage Risk Assessment (ADRA) is required). Any size sewer pressure main requires an ADRA if within 3m of it.

- Electrical reticulation approach distances provided with requested Before You Dig Australia package and information available from utility website.
- (c) Potholing can be carried out with a hand shovel or by vacuum extraction. Water jetting while vacuuming has the potential to damage buried assets. Care should be taken if water jetting and water pressures limited to 1500 psi (100 bar) to avoid damage.
- (d) Potholing should never be carried out with a mechanical excavator.
- (e) If you are unable to locate the service by potholing, contact the utility provider and your supervisor and do NOT precede with any drilling or excavation works.
- (f) It is mandatory that potholing be carried out for identified assets however safe digging practices should be implemented as not all asset owners are registered with Before You Dig Australia:
- at every location where an existing utility crosses the proposed excavation or drilling including the installation of poles and stay wires
  - at spacings determined by risk assessment for all existing utilities running parallel to the proposed excavation or drilling to fully determine the alignment and depth of the existing services
  - to locate existing utilities within 2 meters of the start and finish locations of any excavation or drilling and at every excavation required for drilling entry and exit points
  - safe Minimum Approach Distance (MAD) and exclusion zones noted by each utility within the Before You Dig Australia plans and notes
- (g) Always **visually** sight the service or utility.
- (h) When working in areas that have a hard surface such as concrete, bitumen or any other non-moveable surface you may mark out the location of existing utilities with non-permanent spray paint. As a guide you could utilise different colours such as:

Gas	Yellow
Power	Orange / Red
Water	Blue
Telecommunications	White
Drainage	Green

*Note – These colours are an acknowledged deviation from AS5488:2019 deemed by the UPSC as acceptable practice in WA.*

- (i) It is also recommended that visual markers be placed above the pothole position. White PVC pipe or a white stake directly over the existing service to record the depth, alignment and direction is widely used for this purpose. If you are unable to install the marker directly over the existing utility and you need to offset the marker, then you shall install 2 pegs as offsets and record the offset on the pegs. We also suggest that you use a thick black marking pen and record the depths of existing services in mm. Please note that the depth and position markings recorded on PVC pipe or stakes is for information only and must be confirmed by potholing.
- (j) If you are unable to locate the service, contact the utility provider and your supervisor and **DO NOT proceed with any drilling or excavation.**

**Notes:**

*No digging shall be done over high pressure gas transmission mains, or within the easement set aside for high pressure gas transmission mains (or laterals), without written permission from the owner or manager of the pipeline, or in the case of activities and works in the DBNGP Corridor written approval is required from, Department of Planning, Lands and Heritage (DPLH) on behalf of the DBNGP Land Access Minister.*

- (a) The table below lists the major Pipelines and Managers.

<b>Pipeline</b>	<b>Manager</b>
DBNGP Corridor	Department of Planning, Lands and Heritage
Dampier Bunbury Natural Gas Pipeline	AGIG - Land Management
Burrup Extension Pipeline (BEP)	AGIG - Land Management
Wheatstone Ashburton West Pipeline	AGIG - Land Management
Fortescue River Gas Pipeline (FRGP)	AGIG - Land Management
Ashburton Onslow Gas Pipeline (AOGP)	AGIG - Land Management
Tubridgi Gas Storage Facility (TGS)	AGIG - Land Management
Gorgon Onshore Gas Pipeline	AGIG - Land Management
Karratha to Port Hedland Gas Pipeline	APA Group
Pilbara to Goldfields Gas Pipeline	APA Group
Cape Lambert Gas Pipeline	APA Group
Parmelia Pipeline (Dongara to Pinjarra)	APA Group
Mid-West Gas Pipeline (Geraldton to	APA Group
Port Hedland to Telfer Gas Pipeline	APA Group
Kambalda to Esperance Gas Pipeline	WorleyParsons Asset Mgt P/L
Eastern Goldfield Gas Pipeline	APA Group

*Table: Pipeline Owners*

- (b) Warning: These pipelines should be treated with extreme caution. If fractured, gas will escape with an explosive force with a high risk of ignition.
- (c) For railway crossings, buried signals and communications services need to be located or exposed by Arc Infrastructure or PTA (Rail) staff

**PROTECT**

Protecting and supporting exposed utilities is the responsibility of the excavator as unsupported utilities can be damaged or collapse, burst or break.

- (a) Always assess the soil type to determine if erosion may occur that will potentially lead to collapse of the utility or trench.
- (b) Ensure that there are no loose objects including rocks that could potentially damage exposed utilities.
- (c) Erect signs, safety barriers or cones to protect workers, pedestrians, or vehicles from entering the excavated area.
- (d) Never use an uncovered pipe or cable as a step ladder.

- (e) Any utility or industry regulated No Go Zones or Exclusion Zones must be adhered to and enforced on site.
- (f) Ensure Supervision or monitoring of the operator of the trenching or boring machine when near plant.
- (g) Advise ALL personnel working on site of existing hazards.

## **PROCEED**

When ALL checks have been completed - then **proceed with care**. Ensure you have verified that all the information in the preceding steps is still current. If the use by date of Before You Dig Australia plans have expired, you will need to obtain current plans and if necessary, re-validate any changes that may have occurred.

For **emergencies** refer to the 'Emergency Procedures and Contacts' page.

### **6.4 'As Constructed' detail of works.**

Any agency or contractor constructing works shall ensure that adequate 'as constructed' detail of the works is recorded. The 'as constructed' information shall be submitted to the appropriate agency in a form acceptable to them for inclusion in their records. This is a mandatory requirement and shall include equipment and plant in and (if approved) outside the designated alignments. Also refer Clause 11.2 'Plant proposed outside allocated alignment'.

When an agency or contractor receives 'as constructed' information from a Before You Dig Australia member that proves to be inaccurate, they shall provide the accurate information to the appropriate agency for updating of their records or through the Before You Dig Australia website [www.byda.com.au](http://www.byda.com.au).

# **7 PROJECT CONSTRUCTION**

## **7.1 Duty of Care**

Constructing authorities and others operating in the public road reserve or rail reserve have a duty of care to protect the existing service assets of utility providers, the infrastructure of road authorities, the infrastructure of Public Transport Authority (PTA) and the adjacent environment in addition to the duty of care to protect the safety of employees and public in the vicinity of the work area (refer to Clause 6.1.1 (f) and Appendix C).

It is essential to determine the location of existing assets by obtaining plans and proving the exact location prior to commencement of excavation. Location plans of utility services are obtained in the first instance upon lodgment of a request to Before You Dig Australia (refer to Section 6.2).

Note that buried earth grids may exist around utility equipment, for example Water Corporation pipeline valves are not indicated on Before You Dig Australia drawings that may extend into adjacent alignments. If required to be disturbed by construction works liaise with the appropriate utility to ensure safe work procedure and reinstatement requirements are undertaken.

Failure to exercise this duty of care may result in a utility provider or road authority taking action to halt works and to recover the full cost of damages.

Where it is not practical to comply with safety clearance and services allocation requirements of this Code, approval shall be obtained from the utility provider

Any damage to underground services, however minor, shall be reported to the utility provider.

Refer to standard procedures prior of commencing work outlined in Sections 6.2 and 6.3 with emphasis on PLAN, PREPARE, POTHOLE, PROTECT then PROCEED.

## 7.2 Emergency procedures and contacts

In an event of damage to a utility provider's, Main Roads WA, Local Government or PTA (Rail) asset, the person/Agency responsible for causing the damage shall immediately advise all asset owners affected. Refer to the 'Emergency Procedures and Contacts' page for asset owner's emergency contact details. It is good practice to have these numbers readily available on site should an incident occur.

## 7.3 Closure of roads or major interference to traffic

When project construction requires closure of roads or major interference to vehicular or pedestrian traffic, detailed discussion/liaison is to be initiated and maintained with WA Police and approval obtained from the road authority not less than 30 working days prior to the proposed road closure or interference to traffic. Consideration shall be given to the effect of temporary closure of high load routes. Also notify Department of Fire and Emergency Services, St John Ambulance Association, Transperth (Department of Transport) and the Taxi Council of WA.

All traffic management must comply with Australian Standard 1742.3-2009, Road Traffic Code 2000, Occupational Health and Safety Act 1984, Disability Services Act 1993, and Traffic Management for Works on Roads Code of Practice (Appendix C).

## 7.4 Use of long-term contractors and sub-contractors

The use of Contractors or Sub-Contractors on a long-term basis by both the road authority and utility providers is a common method of service delivery on behalf of the Principal Agency. It is emphasised that it is the Principal Agency's responsibility to ensure that contractors and sub-contractors acting on their behalf are fully conversant with the requirements of this Code of Practice and obligation to consult relevant parties prior to proceeding with the works.

# 8 MINIMUM STANDARD OF COVER FOR UNDERGROUND UTILITY SERVICES AND CLEARANCE OF OVERHEAD POWER LINES AND TELECOMMUNICATION CABLES

## 8.1 Minimum cover for underground utility services

Although utility providers have a commitment to comply with allocated alignments and depths, **no assurance can be given that the depths of cover stated will exist for all existing utilities.** Before any excavation is planned or commenced you must lodge a Before Your Dig Australia request for the appropriate procedure and information (refer to Clause 6).

The minimum depths of cover required for new services buried in Rail Reserves are defined in AS4799-2000.

All hardware located across the road reserve which is controlled by Main Roads WA, shall be installed by trenchless technology (such as directional drilling) and placed perpendicular to

and at grade to a minimum depth of 1.5m cover (to overt) for the full width of the road crossing or unless otherwise agreed with Main Roads WA.

It is emphasised that utility providers and associated contractors have a Duty of Care whilst undertaking service works. Refer to Clause 6.3 and 7.1.

**Note:**

- (a) Refer to Appendix A for pipe colours. These pipe colours relate only to PVC and polyethylene pipe. Other materials could be used, particularly in older established areas unless otherwise stated. Some services can be buried directly in the ground and not in conduits.
- (b) All buried service assets should be treated as 'Live' unless otherwise confirmed.
- (b) The term 'under road surface means under the road pavement surface', that is, the area of the road reserve upon which motor vehicles travel.

### 8.1.1 Gas

**Gas** (Yellow Pipe or Yellow Striped Pipe)

**(a) Distribution Mains (ATCO Gas Australia)**

*Street mains:* 750 mm in road reserve (verge or under road surface)

*Consumer services:* 600 mm in road reserve (verge or under road surface)

**(b) High Pressure Distribution Pipelines (ATCO Gas Australia)**

*Street mains:* 1200 mm in road reserve (verge or under road surface)

*Consumer services:* 1200 mm in road reserve (verge or under road surface)

**(c) High Pressure Transmission Pipelines**

*For specific details applicable to ATCO Gas, AGIG, or APA contact these utility providers or relevant pipeline managers direct.*

### 8.1.2 Electricity

**Electricity** (Orange pipe or Orange Striped Black Poly Pipe (historical only) or Orange Electrical Tape for directly buried black cable).

Some underground cables installed by directional drilling **may not** have tape above and are **black**.

**CAUTION**

**It is possible that power cables may be in multiple layers.**

Most mains and services (Western Power and Horizon Power)

- 750 mm minimum cover in verge and under road surface. Installation depths to be in accordance with Western Power and Horizon Power standards or as otherwise agreed between Western Power/Horizon Power and the road authority.
- Non-Western Power and Horizon Power Street Light and low voltage private cables shall be buried at a minimum depth of 600mm. Refer to Appendix B, Figure B3 Note 19 of service allocations applied to green field developments.



## **WARNING**

Western Power supplies service connection points in road reserves and public open spaces to customers such as Local Governments and other third parties (often for streetlights, illuminated signs, parks, etc). These services are typically service pillars or cable pits and are required to be shown on Western Power Plans. Cabling beyond these service connection points are the customer's assets, the recording of which is their responsibility.

### **8.1.3 Telecommunications**

**Telecommunications** (White telecommunications pipe)

*Street mains:*

- 450 mm for excavation installations
- 600 mm for trench less installations

*Consumer services*

- 450 mm for excavation installations
- 600 mm for trench less installations

Note: There may be multi-Carriers with separate plant located within the allocated telecommunications alignment.

### **8.1.4 Water**

**Water** (Blue Pipe, Blue Striped or Black Pipe)

*Distribution mains:* 750 mm in road reserve (verge or under road surface)

*Reticulation mains:* 600 mm in road reserve (verge or under road surface)

*Consumer services:* 450 mm in road reserve (verge or under road surface).

### **8.1.5 Sewerage**

**Sewerage** (Cream Pipe or Grey Pipe or Cream/Grey Striped Pipe)

*Sewer mains:* 900 mm in road reserve (verge or under road surface)

*Consumer services:* 900 mm in road reserve (verge or under road surface).

### **8.1.6 Main Drainage**

**Main Drainage** (Water Corporation)

*Stormwater mains*

- 750 mm in verge
- 900 mm under road surface.

### **8.1.7 Street Drainage**

**Street Drainage** (Main Roads WA or Local Government)

*Street Mains:* 600 mm in road reserve (verge or under road surface)

*Consumer services:* 600 mm in road reserve (verge or under road surface).

### **8.1.8 Main Roads WA (MRWA) Traffic Signals, Roadway Lighting and Intelligent Transport Systems (ITS) Cables**

(a) Traffic Signals MRWA Specification 712

*Street mains (Orange Pipe)*

- 600 - 800 mm in verge and under road surface.

*Detectors (Orange Pipe or White Pipe)*

- 35 mm in carriageway asphalt
- 300 mm in verge encased in PVC conduit.

(b) Roadway Lighting MRWA Specification 701 (Orange Pipe)

- 600 mm in verge and under road surface.

(c) ITS Cable Conduits MRWA Specification 704 (Orange Pipe for power source) and (White Pipe for communications)

- 600 mm in verge.

## **8.2 Clearance from overhead power lines and telecommunications cables**

Clearance of overhead power lines and telecommunications cables above the ground in road reserves is to be in accordance with Western Power, Horizon Power, Telecommunications Carrier, and Worksafe WA requirements. For clearances above road surfaces, the organisation responsible for the overhead power lines or telecommunications cables is to obtain from the applicable road authority the maximum combined vehicle and load height for the road, and together with the overhead power line or telecommunication cable route data determine the clearance requirement.

# **9 STANDARD RESTORATION AND REINSTATEMENT OF INFRASTRUCTURE**

## **9.1 General**

Restorations and reinstatements are to be carried out as soon as practicable following work by a utility provider in a road reserve or rail reserve as agreed with the road authority, Public Transport Authority, or relevant rail infrastructure manager. Refer to the Local Government Guidelines for Restoration and Reinstatement in Western Australia 2020 endorsed by the Institute of Public Works Engineering Australasia Western Australia Incorporated and WALGA.

The specification for restoration and reinstatement work and backfill of trenches including approval of works undertaken and maintenance period shall be obtained from the road or rail authority. Refer to Clause 6.1.1(e).

The utility provider or contractor is responsible for the Duty of Care in ensuring the safety of the public as well as employees during all works and reinstatement, until the site is accepted

as satisfactory by the road authority, Public Transport Authority or relevant rail infrastructure manager.

## 9.2 Cost of reinstatement

The utility provider or contractor is responsible for the cost of the reinstatement, inspections and any subsequent related work required during the maintenance period of the road, footpath, verge and other applicable infrastructure or damaged plant and property in accordance with any agreement between the utility provider and the road authority, Public Transport Authority or relevant rail infrastructure manager.

# 10 ENVIRONMENT AND HERITAGE

## 10.1 Native vegetation

Native vegetation has been extensively cleared from much of the southwest of WA. As a result, special attention and specific actions are required when works may impact on remaining native vegetation, particularly in verge areas of road reserves.

### (a) Declared Rare Flora

The Department of Water and Environment Regulation (DWER) should be contacted during the planning phases of the proposed works to ensure that no rare flora or threatened ecological communities will be affected by the works.

Fines for illegally taking rare flora are significant.

Further information is available from the Department of Water and Environmental Regulation.

### (b) Clearing native vegetation

If any clearing of native vegetation is anticipated, the Department of Water and Environmental Regulation must be contacted to determine if a clearing permit is required. It is recommended that this is done during early stages of planning the proposed works. Exemptions do not apply in environmentally sensitive areas.

Large projects with extensive environmental impacts may require referral to the Environmental Protection Authority.

**Clearing should be avoided** wherever possible by installing utility services in already cleared land or use of horizontal directional drilling or thrust boring and other trenchless technology.

If clearing is necessary, rehabilitation must use local species. The Department of Water and Environmental Regulation can provide advice regarding appropriate and successful rehabilitation of cleared areas.

**Note:** Fines for illegally clearing native vegetation are significant.

Refer to the Department of Water and Environmental Regulation website:  
[www.dwer.wa.gov.au](http://www.dwer.wa.gov.au) or contact them for more information regarding clearing regulations.

### **(c) Dieback and weeds**

Dieback, caused by *Phytophthora cinnamomi* (Pc), results in irreversible damage to natural environments and some tree crops.

To prevent the spread of dieback caused by Pc all machinery, equipment and vehicles must be cleaned on entry and exit from site. Dieback-free fill should be used, and site activities should be planned for dryer months.

Further information is available from the Roadside Conservation Committee (email [rcc@dpaw.wa.gov.au](mailto:rcc@dpaw.wa.gov.au) ) and Department of Water and Environmental Regulation.

Weeds displace native vegetation and once established are difficult to control. Good hygiene practices of clean on entry and clean on exit from the site and the use of weed-free fill will minimise the spread of weeds.

It is recommended that utility service providers and local governments use the Environmental Checklist (or equivalent) provided in Appendix D.

### **10.2 Environmental considerations in Main Roads WA road reserves**

Utility providers and their Contractors/Sub-Contractors are required to be aware of Main Roads WA environmental requirements when undertaking works in the road reserve. Refer to Clause 6.1.1 (d).

### **10.3 Environmental considerations in railway reserves**

Rail land can also include important native vegetation. The Public Transport Authority maintains a Land and Transport Information System database (LATIS) that includes the location of any rare flora in railway reserve that has been advised by the Department of Environmental Regulation. This shall be checked as part of the approval process for any works in railway reserves.

Refer also to Arc Infrastructure for environmental information within their rail reserves.

### **10.4 Impact upon heritage nominated and listed places**

References should be made to both the Heritage Council of WA (Heritage Register) and relevant Local Government (Municipal Heritage Inventory) to assess potential impacts upon heritage listed sites. This also includes the impact of machinery causing vibration when working in close proximity to heritage-listed sites.

Penalties for damage to places listed under the *Heritage of Western Australia Act 1990* are significant.

In pedestrian and heritage areas, particularly within the CBD, utility providers are to ensure that pit covers do not detract from the area and are level with the footpath surface.

### **10.5 Aboriginal heritage sites**

Aboriginal sites are protected under the *Aboriginal Heritage Act 1972 (WA)*. A check must be made with the Department of Planning, Lands and Heritage for any registered sites and the potential for the existence of any unregistered sites must also be investigated.

## 10.6 Existing and planned streetscape amenity (Street trees)

Whilst it is acknowledged there will or may be conflict with existing streetscape amenity, particularly street trees when installing or upgrading infrastructure in established areas, preservation of mature flora where possible is encouraged. Liaison and consultation with the relevant Local Government (policy and specification), other utility providers and the community is required. In some circumstances this may require Utility Providers to be responsible for tree replacement and possible compensation for the loss of mature trees. In emergency situations, the safety of people is however the paramount consideration.

Refer to the WA Planning Commission publication *Liveable Neighbourhoods*, particularly for green field developments. In addition, refer to [www.watercorporation.com.au](http://www.watercorporation.com.au) for waterwise and utility sensitive tree species.

## 10.7 Impacts of pollutants

Utility providers and their Contractors/Sub-Contractors are responsible for the use, control and impact of potentially polluting substances and any associated spills. Use of any classified material should be in accordance with the relevant manufacturer's specification and Dangerous Goods Act and Regulations. Consideration should also be given to impact on and protection of the underlying water table.

Responsibility for the impact of pollutants applies to any site remediation work required as a result of discharge from any existing infrastructure, i.e. leaking oil pipes or sewer pressure mains. Liaison with other utility providers will be necessary in most instances.

## 10.8 Impact on adjoining lands and impact of noise

Consideration must be given to the impact on adjoining lands when working in the road reserve. This extends from discharging and dumping on adjoining land that may result in impact on drainage, watercourses, wetlands, and water protection areas.

Noise impacts may require restricted hours of work permitted under the *Environmental Protection (Noise) Regulations 1997* and requirements of the Local Government. Refer also to WA Planning Commission Noise Policies which may also apply.

Utility providers and their contractors are actively encouraged to pursue sustainable work practices through material reuse and recycling wherever practicable.

# 11 SPECIAL NOTES

## 11.1 Provision of As Constructed records

Utility providers agree to co-operate in providing details of buried services plant that may be affected by the operations of others proposing to do work in the vicinity of the plant. It is the responsibility of the organisation that proposes to do work in the vicinity of other plant to seek this information (refer to Clause 6.2 Before You Dig Australia).

## **11.2 Plant proposed outside allocated alignment**

Utility providers agree to construct their new plant within the allocated corridor and under the conditions stipulated and will consult the other utility providers concerned when this is impractical. When plant is not located on allocated alignments, it is mandatory for records to be kept by the Utility Provider which provide details of plant alignment and includes the agreement of the other utility providers that may be affected by the adjusted alignment. Refer to Road Reserve Allocations, Appendix B.

‘As constructed’ drawings and details shall be kept by the Utility Provider for all new plant that occupies a non-standard alignment.

Junction pits, access chambers, poles, valve boxes, etc. should be constructed within the allocated corridor if practical. These corridors shown in diagrams in Appendix B have been allocated with respect to distances from the property line on the cross-section of the road reserve.

Should encroachment beyond allocated corridors be required, the agreement of the affected utility providers must be obtained prior to installation of the plant.

It is not practical to always specify the location of trees, poles and underground structures such as junction pits, boxes, etc., within the allocated corridor on a longitudinal basis. The utility providers concerned are expected to locate their plant in positions that avoid existing entrances to properties and other obstacles and to provide for future developments.

## **11.3 Road and footpath crossings**

Underground crossings of roads and footpaths should be made at right angles and the position of consumer’s meter (if any) should be indicative of the service route (does not apply to electrical meters). Refer to the Guidelines and Specifications for Residential Crossovers (2017) on the WALGA website. ([www.walga.asn.au](http://www.walga.asn.au): Policy Advice and Advocacy > Infrastructure > Roads > Guidelines and Specifications for Residential Crossovers.) (Refer also to the Local Government Guidelines for Restoration and Reinstatement in Western Australia 2020.)

## **11.4 Minimising road and rail formation damage**

All attempts shall be made to minimise damage to the road surface or railway formation. Alternatives to open trenching such as horizontal directional drilling or thrust boring and other trenchless technology should be considered in preference to open trenching. Consultation regarding the proposed method should occur with the road authority, Public Transport Authority or relevant rail infrastructure manager and the method agreed by both parties prior to commencement of work. When trenching is necessary, service providers should liaise and try to co-locate cables/conduits and share trench space to minimise disruption to traffic and reinstatements. Refer to the Railway Crossing Control in Western Australia Policy and Guidelines on the Main Roads WA website ([www.mainroads.wa.gov.au](http://www.mainroads.wa.gov.au)). Refer also to the Local Government Guidelines for Restoration and Reinstatement in Western Australia 2020.

## **11.5 Fire hydrant boxes**

Fire hydrants must be clear to operate at all times. Particular care must be taken in carrying out work on the road reserve to prevent interference with the access to or operation of fire hydrants. Refer to local water authority for location of plant and reporting damage to plant.

## **11.6 Safety precautions – Utility services structures in road reserves**

All appropriate structures (except utility power supply structures) within the road reserve and subjected to traffic are to be designed for a loading in accordance with the appropriate Austroads Standards. Approval to erect such structures is to be obtained from the applicable road authority.

## **11.7 Non-Utility installations in Road Reserves**

Non-utility assets are permitted to be installed the road or rail reserves subject to the following conditions:

- Approval from the road or rail operator must be obtained before planning to place anything in these reserves.
- The request for approval shall contain a description of what is planned to be installed as well as its function. The request should contain how it is to be installed, what maintenance is/may be required and what happens when it becomes redundant.
- The request for approval must contain a design drawing showing specific location (Longitude and Latitude), depth and alignment and above ground features with enough detail to be able to be mapped effectively.
- If the location of the proposed asset interferes with an existing utility provider's asset, then that utility provider can reject the proposal.
- Information of owner/operator or person responsible for the maintenance, repair, or removal of the asset to be installed must be included in the request.
- Ideally the requestor should be member of Before You Dig Australia so that the location and description of the assets can be made available to other users of the reserve.
- In the absence of the installer/proposer being a Before You Dig Australia member then by arrangement with another utility provider or reserve authority the proposed assets can be mapped via that organisation's maps.

## **11.8 Rail Reserves**

If any works are proposed to be undertaken within or adjacent to rail reserves contact the relevant rail infrastructure manager to obtain requirements for permission and compliance. Refer to the Railway Crossing Control in Western Australia Policy and Guidelines (current version) on the Main Roads WA website ([www.mainroads.wa.gov.au](http://www.mainroads.wa.gov.au)). For telecommunications carriers a Maintenance Notice or Land Access and Activity Notice will be issued which requires telecommunication carriers to adhere to AS4799-2000 for construction standards. Alternatively, the telecommunication carrier and rail authority may establish a separate agreement. Further information is detailed in Appendix E.

## **11.9 Children's crossings**

Children's crossings in Western Australia are installed under the approval of a State Government appointed committee known as the Children's Crossings and Road Safety Committee. Once approved, the children's crossing infrastructure is installed to strict guidelines by Main Roads WA and the relevant Local Government. Unless in an emergency, under no circumstances shall a children's crossing be closed, moved or interfered with for the purpose of any works without seeking advice from the Children's Crossings and Road Safety Committee. Advice can be sought from the Committee by contacting the Children's Crossing Unit (WA Police) on telephone 6274 8767 or email [childrenscrossingsunit@police.wa.gov.au](mailto:childrenscrossingsunit@police.wa.gov.au).

## 11.10 Bus stops

Reinstatement of bus stop infrastructure shall be executed with due regard to the *Partnership Agreement between WALGA and the Public Transport Authority – Defining the Roles and Responsibilities for the Planning, Installation and Maintenance of Bus Stop Infrastructure* (current version). Core bus stop infrastructure is the responsibility of the Public Transport Authority and ancillary bus stop infrastructure is the responsibility of the Local Government. The relevant party shall be consulted as soon as possible for approval of all works affecting such infrastructure. The relevant party will issue instruction regarding the management of disruptions, reinstatement specifications and upgrading requirements that may be triggered to comply with Disability Standards.



# APPENDIX A

## LOT ENTRY ARRANGEMENTS

*Drawings showing typical utility services front of lot and laneway lot entry arrangements*









SERVICES DEPTHS

SERVICES	SERVICE CONNECTION	
	COVER DEPTH	TYPICAL MATERIALS AND DIAMETER
GAS	600mm	YELLOW PIPE OR YELLOW STRIPED PIPE
ELECTRICITY	750mm MIN.	ORANGE PIPE OR ORANGE STRIPED PE PIPE OR ORANGE TAPE OVER BARE CABLE.
TELECOMMUNICATIONS	450mm (NOTE 2)	WHITE TELECOMMUNICATIONS PIPE
DRINKING WATER	600mm	20mm COPPER, DN25 OR DN32 BLUE STRIPED PE
NON DRINKING WATER	600mm	DN25 OR DN32 FULL COLOUR LILAC PE
SEWERAGE	900mm	150/225mm PVC

LIST OF DRAWINGS:-

- FIG. A1 TYPICAL LOT ENTRY ARRANGEMENTS - INFORMATION DRAWING
- FIG. A2 TYPICAL LOT ENTRY ARRANGEMENTS - NORMAL ARRANGEMENT
- FIG. A3 TYPICAL LOT ENTRY ARRANGEMENTS - LANEWAY ARRANGEMENT
- FIG. A4 TYPICAL LOT ENTRY ARRANGEMENTS - FRONT STAIRWAY ARRANGEMENT

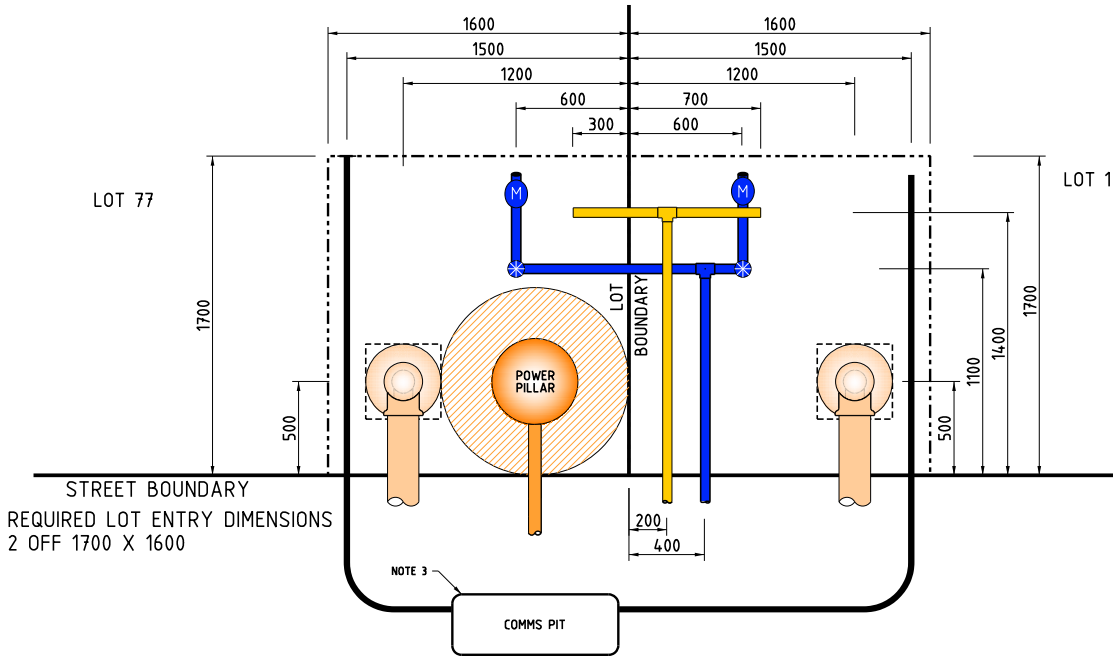
SERVICES LEGEND

-  COMMUNICATIONS
-  ELECTRICITY
-  GAS
-  SEWER
-  DRINKING WATER
-  SEWER CONNECTION
-  WATER METERS
-  POWER PILLAR OR PIT AND SERVICES EXCLUSION ZONE (1000mmØ)

GENERAL NOTES:-

1. SERVICES SEPARATION SHALL COMPLY WITH THE MINIMUM CLEARANCES REQUIRED BY EACH AFFECTED UTILITY.
2. MAY REQUIRE ADDITIONAL COVER UNDER ROADS, AS DIRECTED BY TELECOM AUTHORITY.
3. WHERE PRACTICAL SERVICES SHALL BE SPLIT TO LIMIT THE CLOSE PROXIMITY TO OTHER SERVICES. FOR EXAMPLE, SPLIT SERVICES BETWEEN "FRONT LEFT" AND "FRONT RIGHT", OR BETWEEN PRIMARY FRONTAGE AND LANEWAY.
4. WHERE A SERVICE IS NOT PRESENT, ENSURE ADAQUATE SPACE IS KEPT TO ALLOW FUTURE SERVICE INSTALLATION IN LINE WITH STANDARD ARRANGEMENT AND MIN SERVICE CLEARANCES & DEPTHS.
5. REFER UTILITY STANDARDS FOR DETAILED SERVICES REQUIREMENTS.

				TITLE			UTILITY PROVIDERS		CODE OF PRACTICE		FOR WESTERN AUSTRALIA
				TYPICAL LOT ENTRY ARRANGEMENTS INFORMATION DRAWING			DRAWN: ABC		DATE: 01-05-2015		DRG. No.
							CHECKED: ABC		DESIGNED:		
						EXAMINED:				SCALE	
						APPROVED:		ABC		DATE: 01-05-2015	
REV. No	DATE	DESCRIPTION	APPROD.								
E	XXX	NOTES AND TABLE REVISED	ABC								
0	01.05.2015	PUBLICATION ISSUE	ABC								



PLAN 1

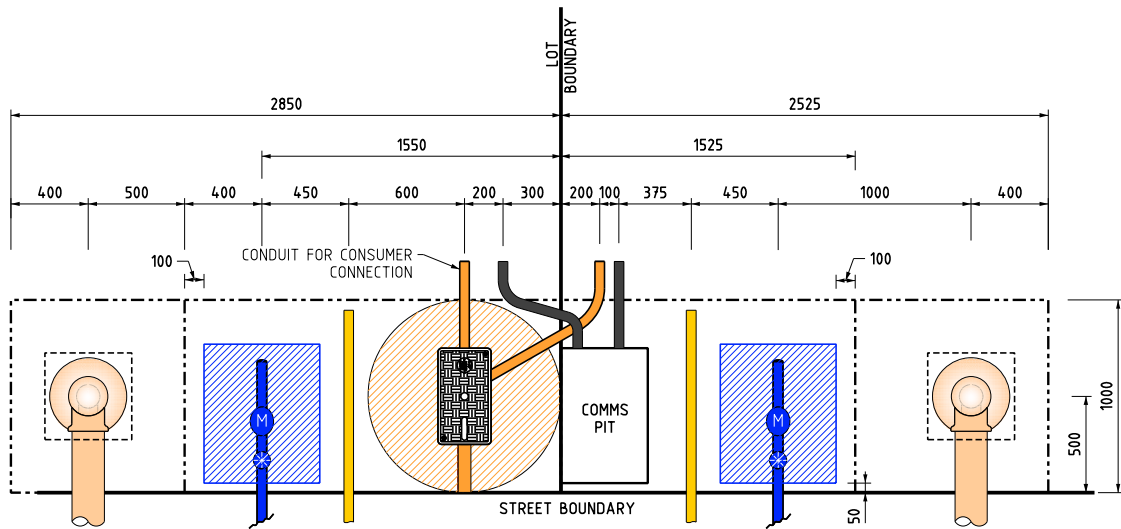
NOTES:-

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
2. REFER FIG. A1 FOR SERVICES LEGEND AND DETAILS.
3. COMMS PIT TO BE INSTALLED IN TELECOMMUNICATION ALIGNMENT.
4. THESE ENTRY ARRANGEMENTS DO NOT PRECLUDE THE POSITIONING OF THE SEWER AT OTHER LOCATIONS ON THE LOT.

REV. No	DATE	DESCRIPTION	APPRD.
E	XXX	NON-DRINKING WATER DELETED AND NOTES REVISED	ABC
0	01-05-15	PUBLICATION ISSUE	ABC

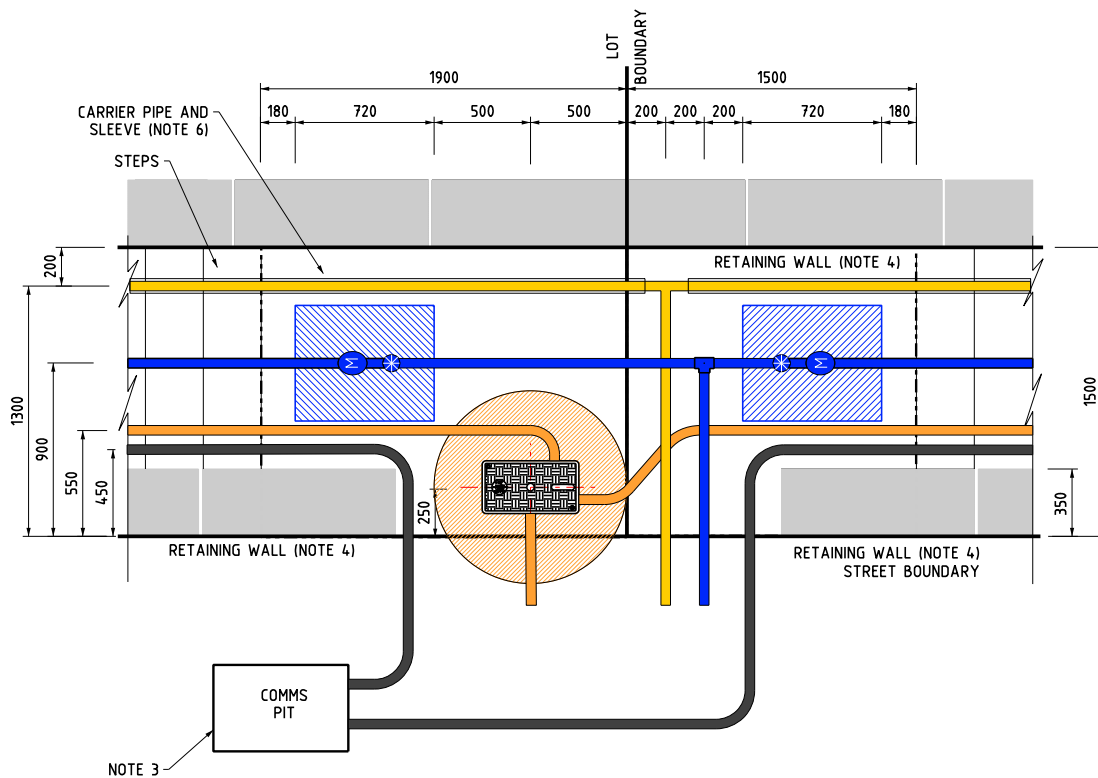
TITLE	TYPICAL LOT ENTRY ARRANGEMENTS NORMAL ARRANGEMENT
-------	--

UTILITY PROVIDERS	CODE OF PRACTICE	FOR WESTERN AUSTRALIA
DRAWN: ABC	DATE: 01-05-2015	DRG. No.
CHECKED: ABC	DESIGNED:	FIG A2
EXAMINED:		SCALE
APPROVED: ABC		0 500mm
	DATE: 01-05-2015	



- NOTES:-
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
  2. REFER FIG. A1 FOR SERVICES LEGEND AND DETAILS.

REV. No.	DATE	DESCRIPTION	APPRD.	TITLE	UTILITY PROVIDERS	CODE OF PRACTICE	FOR WESTERN AUSTRALIA
D	XXX	PLAN REVISED TO SUIT NEW PROPOSAL	ABC	TYPICAL LOT ENTRY ARRANGEMENTS LANEWAY ARRANGEMENT	DRAWN: ABC	DATE: 01-05-2015	DRG. No.
0	01-05-15	PUBLICATION ISSUE	ABC		CHECKED: ABC	DESIGNED:	FIG A3
					EXAMINED:		SCALE
					APPROVED:	ABC	0 500mm
						DATE: 01-05-2015	



**NOTES:-**

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
2. REFER FIG. A1 FOR SERVICES LEGEND AND DETAILS.
3. COMMS PIT TO BE INSTALLED IN TELECOMMUNICATION ALIGNMENT.
4. ALL RETAINING WALLS TO BE TO A DEPTH OF AT LEAST 850mm BELOW FINAL GROUND LEVEL.
5. CONFIGURATION IS ONLY VALID WHEN SEWER CONNECTION PROVIDED AT REAR LANEWAY IN ACCORDANCE WITH FIGURE A3 AND WATER CORPORATION DS50. ALTERNATIVE SEWER LOCATIONS MAY BE PERMITTED, AT THE UTILITY'S DISCRETION.
6. SLEEVE AND CARRIER PIPE FOR GAS PIPEWORK INSTALLED BY DEVELOPER TO ATCO STANDARDS FOR ALL PIPEWORK DOWNSTREAM OF TEE.
7. WATER SERVICE TO BE MINIMUM 500mm FROM RETAINING WALL.
8. WATER METER PIT CAN BE SHIFTED CLOSER TO LOT BOUNDARY IN CASES WHERE THE POWER PIT IS LOCATED ELSEWHERE, E.G. OPPOSITE CORNER OF LOT OR REAR LANEWAY.

REV. No	DATE	DESCRIPTION	APPRD.
C	XXX	COMMS PIT LOCATION CHANGED	ABC
0	01-05-15	PUBLICATION ISSUE	ABC

TITLE
TYPICAL LOT ENTRY ARRANGEMENTS FRONT STAIRWAY ARRANGEMENT

UTILITY PROVIDERS	CODE OF PRACTICE	FOR WESTERN AUSTRALIA
DRAWN: ABC	DATE: ##-##-####	DRG. No.
CHECKED: ABC	DESIGNED:	
EXAMINED:		
APPROVED:		
ABC		
		FIG A4
		SCALE 0 500mm

# **APPENDIX B**

## **ROAD RESERVE ALLOCATIONS FOR UTILITY PROVIDERS**

**Figures showing utility services allocation in:**

**Standard Alignment (pre 2001)**

**Green Field Development (After 2001)**

**Narrow Road Reserves**

**Paved Laneways**

**Figures showing recommended utility services set out practices**

# ILLUSTRATION OF TYPICAL ROADWAY UTILITY SERVICES ARRANGEMENTS

FIGURE B1

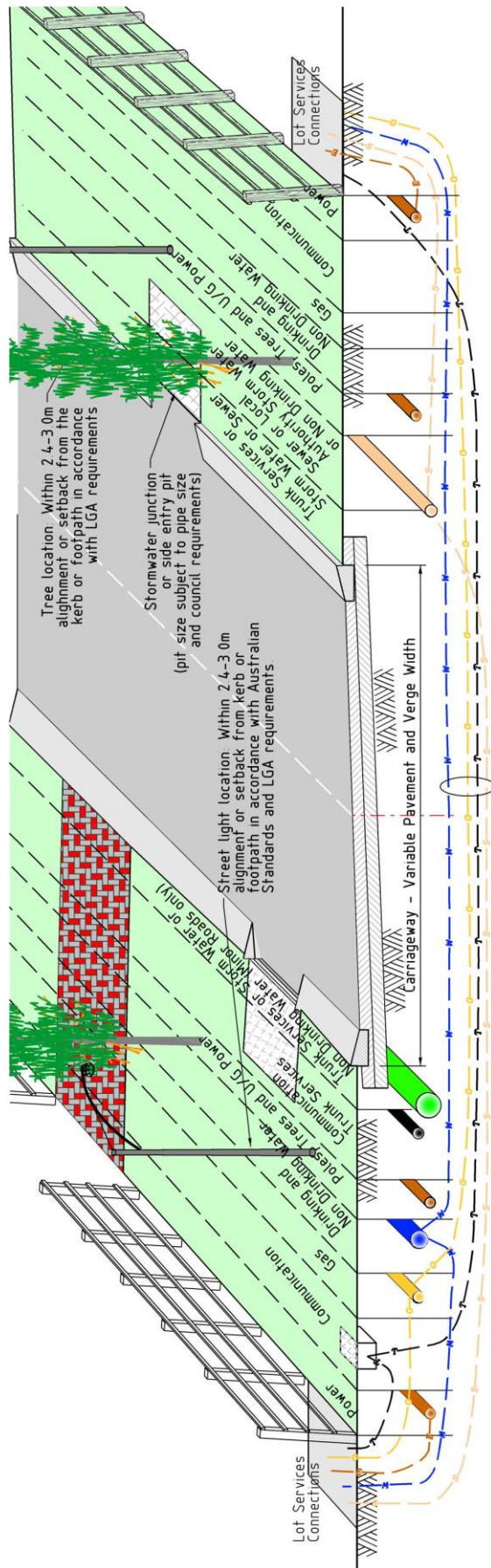


FIGURE B1  
NTS

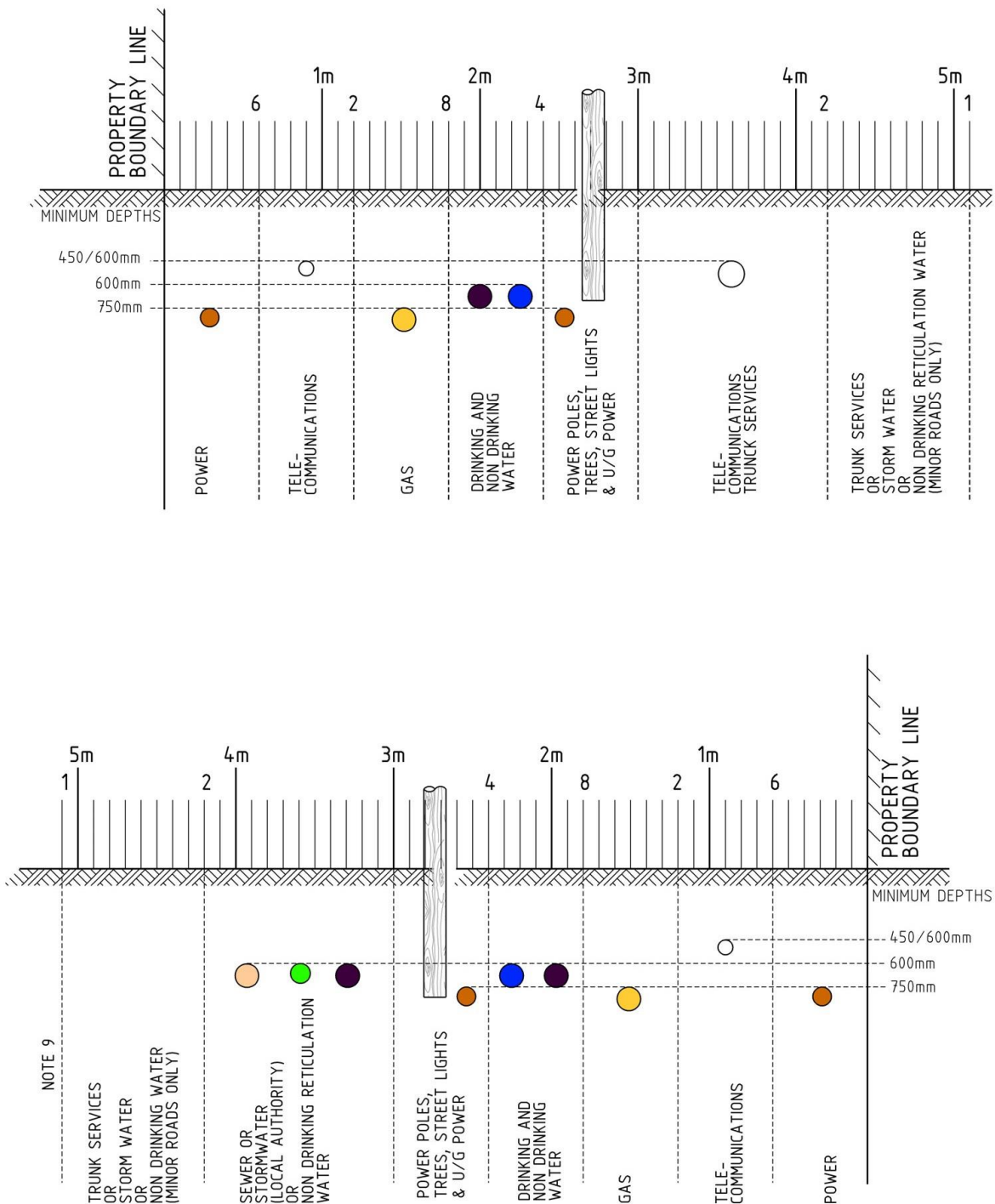
REFER FIGURES B2 AND B3 FOR SERVICE ALLOCATION DIMENSIONS

# ROAD RESERVE ALLOCATION FOR UTILITY SERVICE PROVIDERS WHEN USING STANDARD ALIGNMENTS

(Applicable PRIOR to June 2001 and not applicable to new 'Green Field' Developments)

FIGURE B2

ROAD RESERVE ALLOCATION FOR UTILITY SERVICES *PRIOR* TO JUNE 2001





## Notes:

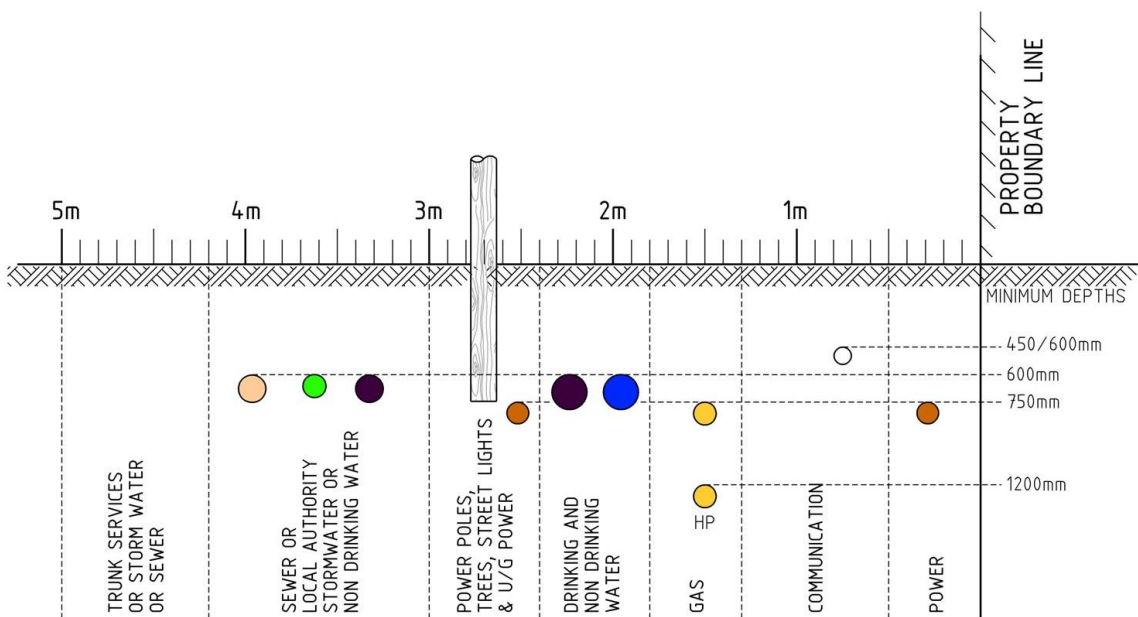
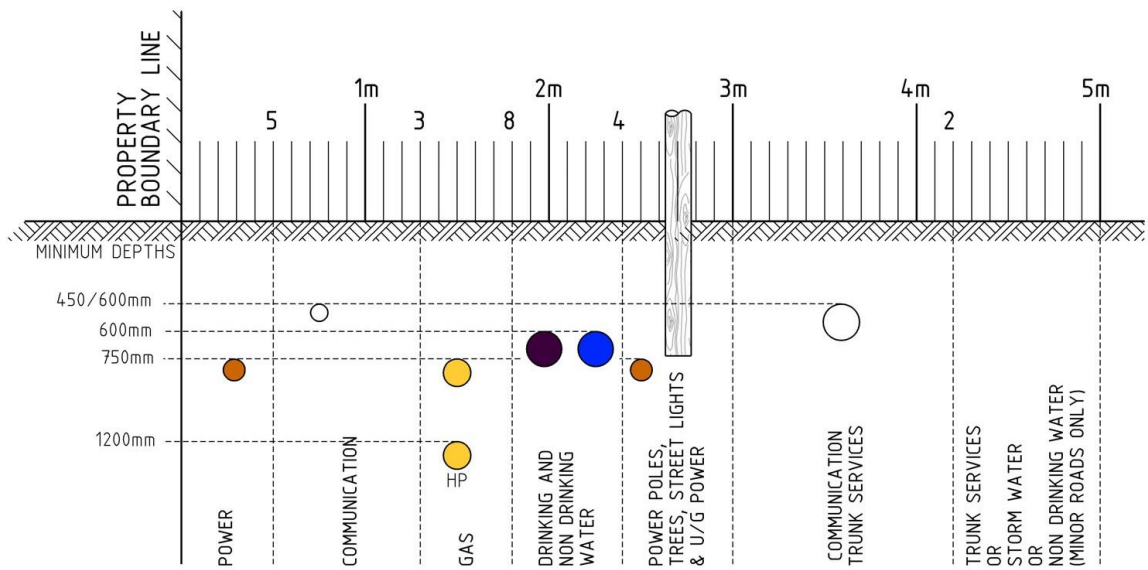
- 1 All measurements relate to distance from the boundary line on each side of the road reserve unless otherwise specified.
- 2 Junction pits and access chambers may extend into the 2.4 - 3.0 metre corridor.
- 3 Trunk services allocations may be interchanged with approval from all affected utility providers.
- 4 Traffic light installation cables for synchronising systems to be located in verge by arrangement.
- 5 Under established footpaths some variations may be necessary to Western Power and Telecommunications cable alignments following negotiation and approval from other affected utility providers.
- 6 In general, no underground utility service shall exceed a nominal 300mm diameter in the 0 to 3.0 metre alignment. Larger utility services may be located within this alignment following negotiation and approval from other utility providers.
- 7 Local Government reticulation, rising irrigation or non-drinking water mains location options indicated as non-potable water pipes in Figure B2. Agreement must be obtained from relevant water utility prior to works commencing.
- 8 The planting of street trees should be of a type and variety to have a minimal interference to utility services (Refer to the applicable Utility or Local Government for policy and specification). The Water Corporation maintains a Register of Waterwise and Utility Sensitive trees. [www.watercorporation.com.au](http://www.watercorporation.com.au)
- 9 Utility services may, in special circumstances, be located beneath the carriageway where verge space is insufficient. Approval must be sought from all utility providers and road authority.
- 10 In established localities where overhead power cables have been located underground, power cables may exist in the 2.4 - 3.0 metre corridor. Beware that in many instances power cable 'tape' has not been installed.
- 11 Verge widths may vary. Refer to current version of the *Liveable Neighbourhoods* produced by the WA Planning Commission for acceptable verge widths, particularly if trees are to be planted in the verge. Also consult appropriate Local Government.
- 12 Access points may extend partly into adjacent allocations, particularly in Common Trenching.
- 13 Refer Special Notes 11.2.
- 14 In established areas (Bright Telecommunications) pit and pipe installation is on the 2.7 metre alignment.
- 15 Where overhead power is being undergrounded or where there are problems with the 0 to 0.6 metre alignment, power may be installed on the 2.4 – 3.0 metre alignment, subject to approval by Western Power or Horizon Power.
- 16 For stormwater pipes, minimum cover may be reduced to 600 mm.
- 17 Cover, bedding and backfill requirements to be in accordance with appropriate utility provider's requirements (e.g. water reticulation in accordance with Water Corporation's Drawing BD62-1-1) and the road authority's reinstatement specification requirements or the Local Government Guidelines for Restoration and Reinstatement in Western Australia 2020.
- 18 Service allocation in the 3.0 – 4.2 alignment shall be by agreement with nominated utility providers.

# ROAD RESERVE ALLOCATION FOR UTILITY SERVICE PROVIDERS IN NEW 'GREEN FIELD' DEVELOPMENTS

(Applicable AFTER May 2001) and supersedes **ALL** allocations shown in previous codes

FIGURE B3

ROAD RESERVE ALLOCATION FOR UTILITY SERVICES *AFTER* MAY 2001



## Notes:

- 1 All measurements relate to distance from the Property Line on each side of the road reserve unless otherwise specified.
- 2 Although the diagrams show a single utility service within each corridor, these may be multiple services of similar utilities.
- 3 Junction pits and access chambers may extend into the 2.4 - 3.0 metre corridor by agreement with the electricity network provider.
- 4 Alignments in the 4.2 - 5.0 metre corridor may be used by arrangement between utility providers.
- 5 Traffic light installation cables for synchronising systems to be located in the verge by arrangement with utility providers. Similarly, under established footpaths some variations may be necessary to electrical and telecommunication cable alignments following negotiation and approval from other affected utility providers.
- 6 In new developments Power and Communications distribution cables are to be laid in locations shown. Under established footpaths some variations may be necessary following negotiation and approval from other affected utility providers and the road authority.
- 7 In general, no underground utility service shall exceed a nominal 300mm diameter within the 0 - 3.0 metre corridor. Larger utility services may be located within this corridor following negotiation and approval of other utility providers.
- 8 Local Government reticulation, rising irrigation or non-drinking water mains location options indicated as non-potable water pipes in Figure B3. Agreement must be obtained from relevant water utility prior to works commencing.
- 9 The planting of street trees should be of a type and variety to cause minimal interference to utility services. (Refer to the applicable Local Government for policy and specification).
- 10 Utility services may be located beneath the carriageway where verge space is insufficient. Consultation must be made, and agreements obtained with all relevant utility providers and road authorities.
- 11 Verge widths may vary. Refer to the current version of the *Liveable Neighbourhoods* produced by the Western Australian Planning Commission for acceptable verge widths, particularly if trees are to be planted in the verge. Also consult appropriate Local Government.
- 12 Electricity cables and conduits to pass under gas and water.
- 13 Gas to pass under water at reticulation crossings.
- 14 Gas services (lead ins) connecting to the property shall pass under communications and over underground power cables and water mains.
- 15 Where overhead power is being undergrounded or where there are problems with the 0 to 0.6 metre alignment, power may be installed on the 2.4 – 3.0 metre alignment, subject to approval by Western Power or Horizon Power.
- 16 A minimum clearance of 300mm is required between gas and other utility services. If 300mm clearance cannot be achieved, approval of the gas provider shall be obtained.

## Notes:

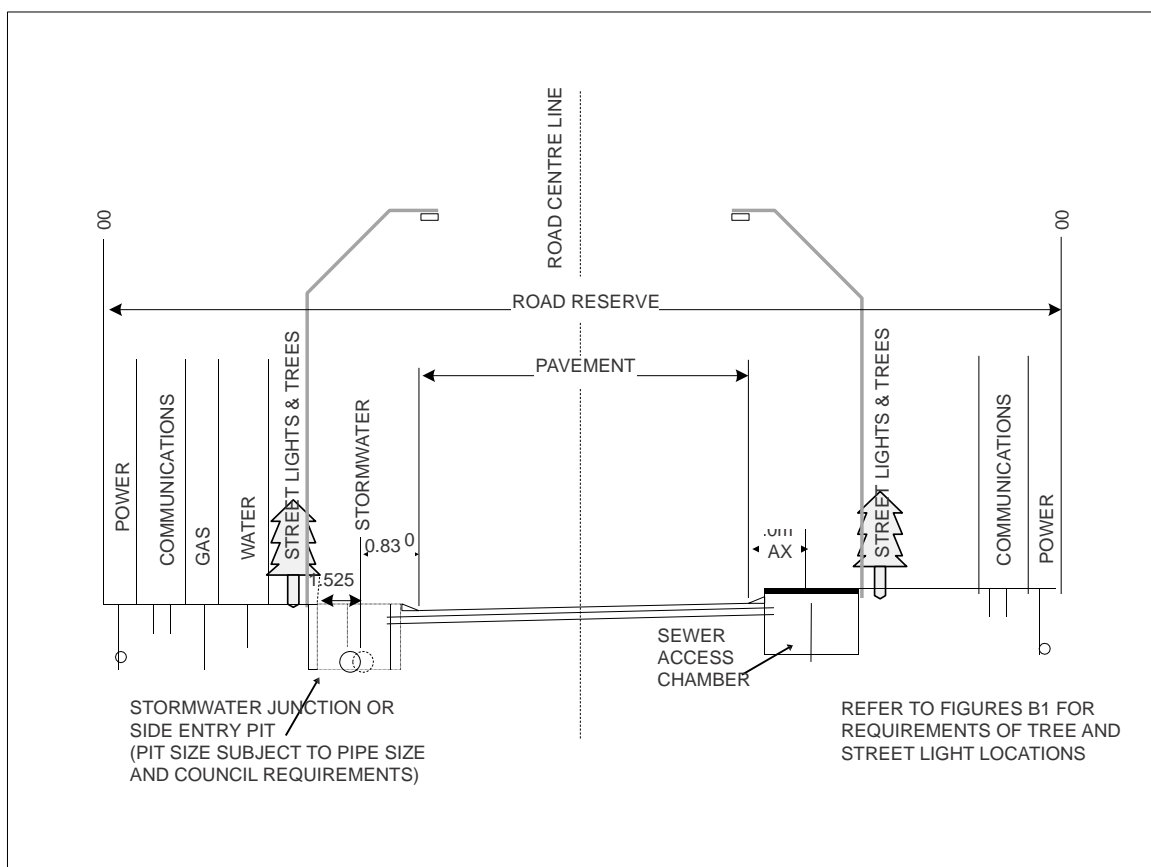
- 17 A minimum clearance of 150mm is required between sewer main and other utility services and between water main and other utility services. (Note clearance of reticulation services may vary from this value). Refer also to Table B1, Clearance Zones Guide regarding minimum clearances between utility services when undertaking works within the road reserve.
- 18 Cover, bedding and backfill are to be in accordance with utility provider's requirements (e.g. water reticulation in accordance with Water Corporation's Drawing BD62-1-1) and road authority's reinstatement specification requirements.
- 19 All reticulation to be laid within +/-100mm wherever practicable of the indicated centre line and secured against movement with initial backfill. Some utility practices may vary from this requirement particularly for multiple utility services.
- 20 Low voltage cables used by non-network provider for street lighting shall be installed in the 2.4 - 3.0 metre service allocation. Cabling outside of the alignment including streetlight and unmetered supply consumers mains cabling shall be run at right angles to the services corridors including road crossings. Streetlight cabling in median strips shall be installed directly between poles but installation under roadways shall be avoided. Refer also to Section 8.1.2 of this Code.
- 21 Different alignment corridors may apply to green field developments in Narrow Road Reserves with widths of 14.0 - 16.0 metres. **Refer to Figure B4.**
- 22 Where there are problems with the 0 - 0.5 metre alignment, power may be installed on the 2.4 – 3.0 metre alignment subject to approval by Western Power or Horizon Power.
- 23 Services allocation in the 3.0 – 4.2 metre alignment shall be by agreement with nominated utility providers.

## ROAD RESERVE ALLOCATION FOR UTILITY SERVICE PROVIDERS IN NARROW ROAD RESERVES (NOMINALLY 14.0 – 16.0 METRES)

These allocated alignments apply to all new developments after October 2002 and supersedes all allocations shown in previous Codes of Practice, including Standard and Common Trenching. All affected utility service providers must agree to proposed variations to these allocations.

All previous utility services allocation notes apply except where varied below.

**Figure B4 Narrow road typical services installation arrangement.**



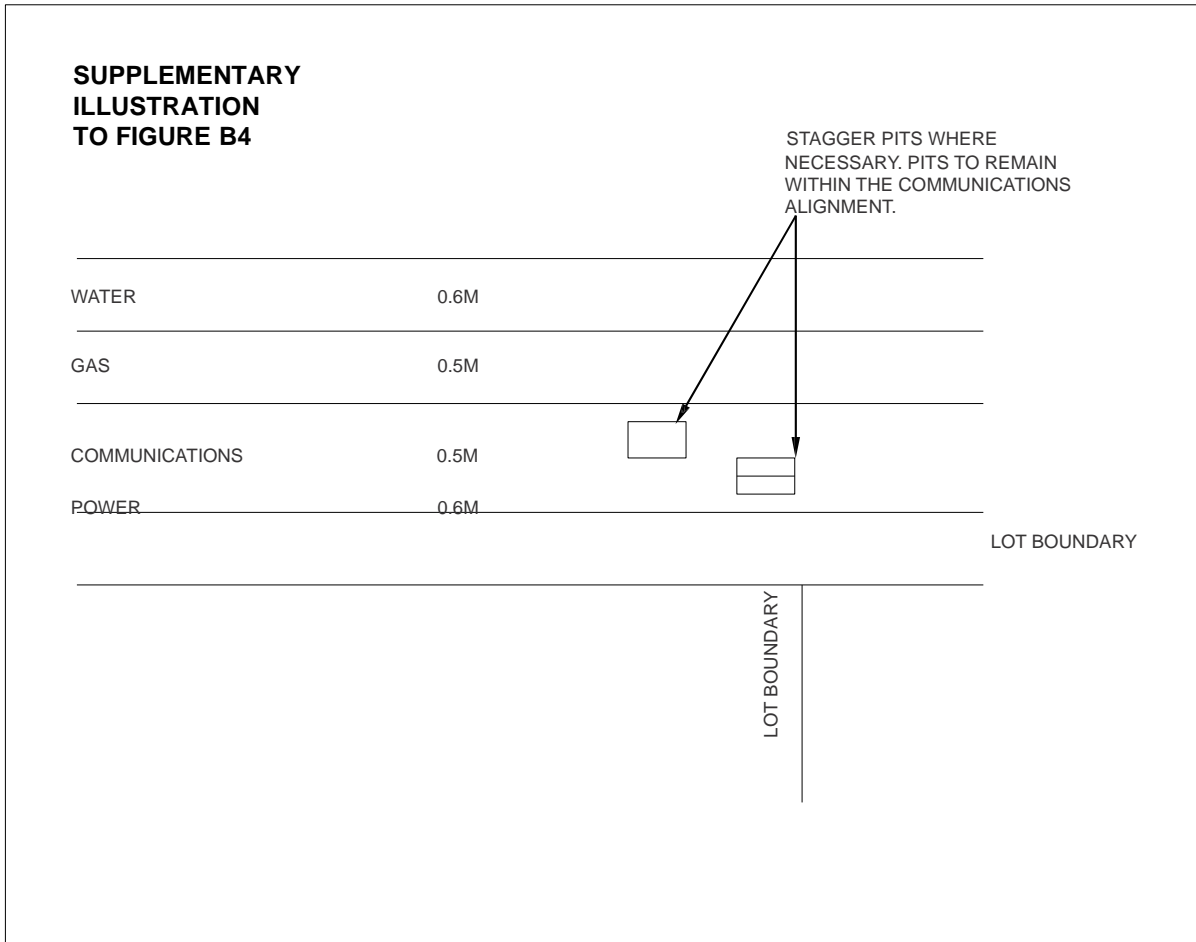
### Notes:

- 1 The designers of narrow road reserves are obliged to consider the relationship of all utility services, surfaces, and furniture with each other. The corridors shown in this diagram can only be varied with approval from all affected utility service providers.
- 2 All measurements generally relate to the distance from the property line on each side of the road reserve unless otherwise specified.
- 3 Access chambers may extend into the trees and lights corridor.

- 4 In general, no underground utility service shall exceed a nominal 300 mm diameter within the 0 - 3.0 metre corridor. Larger utility services may be located within this corridor only after negotiation with all utility providers.
- 5 Local Government reticulation or irrigation pressure mains are to be located beyond the 3.0 metre alignment by arrangement.
- 6 For narrow reserves with a wide road surface, the verge space available may be insufficient for trees while maintaining minimum clearances from other utility services. (Refer to current version of the Western Australian Planning Commission *Liveable Neighbourhoods* and applicable Local Government for Policy and Specification).
- 7 Provision of an alignment for water distribution mains and other 'trunk' services can be negotiated on the verge adjacent to the sewer in 16 metre reserves.
- 8 Verge widths may vary. Refer to the current version of *Liveable Neighbourhoods* produced by the Western Australian Planning Commission for acceptable verge widths, particularly if trees are to be planted in the verge. Also consult appropriate Local Government.
- 9 Cover, bedding and backfill requirements to be in accordance with appropriate utility provider's requirements (e.g. water reticulation in accordance with Water Corporation's Drawing BD62-1-1) and road authority's reinstatement specification requirements.
- 10 For sewers in curved streets:

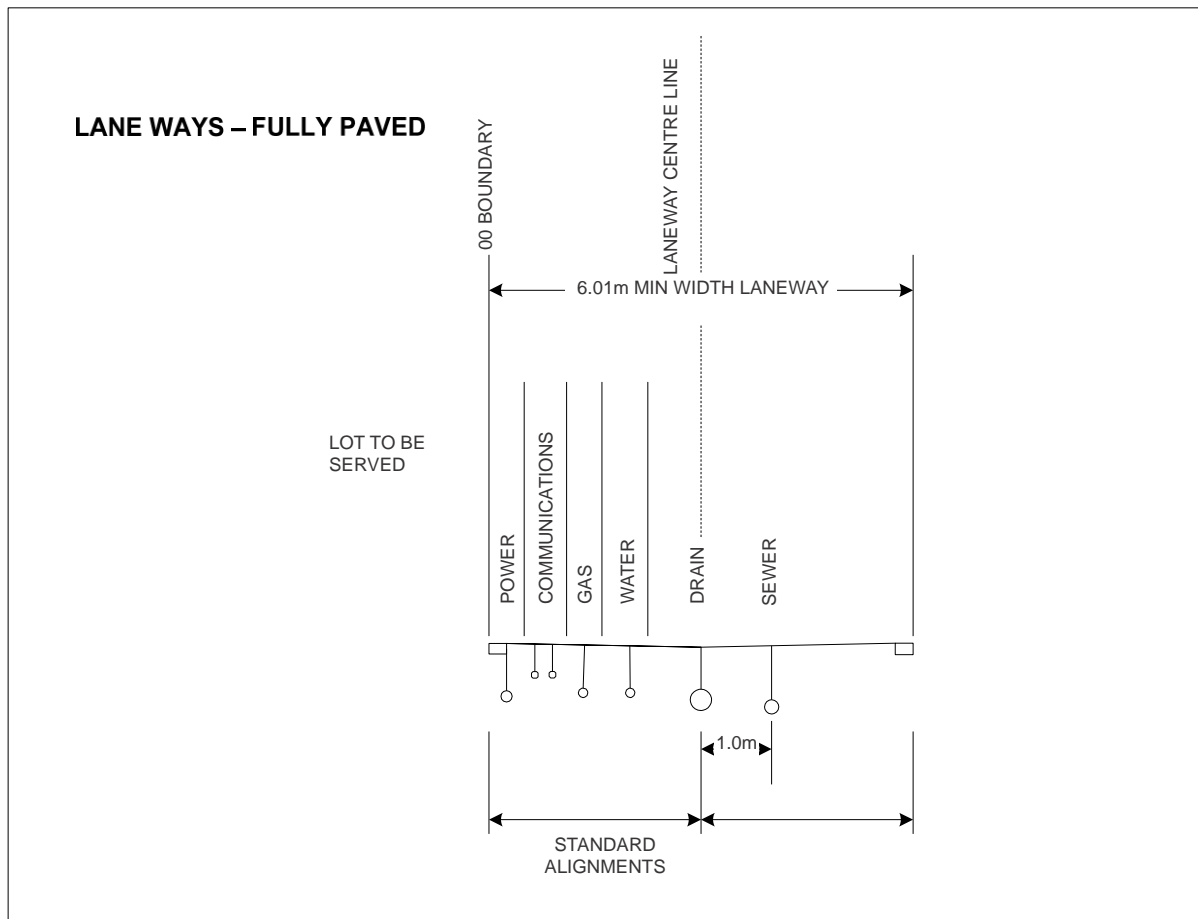
Access chambers and maintenance shafts should be positioned in the sewer corridor. Alternatively, they may need to be positioned in the surface. The minimum distance from the sewer to the property boundary shall be 1.0 metres. Access chambers and maintenance shafts should be clear of the curb. The minimum cover to the sewer shall be 0.9 metre. A similar approach shall apply to stormwater pipe work.
- 11 All pits shall be totally contained within the utility service corridor except if approved by the utility service provider whose alignment is encroached upon. This may require staggering of pits as shown in the following Supplementary Diagram to Figure B4.
- 12 Underground power cables may be installed on the 2.4 – 3.0 metre alignment, where there are installation and maintenance issues adjacent to retaining walls in the 0-0.5 metre corridor provided it is acceptable to other Utility Service Providers and doesn't interfere with street trees.
- 13 Service allocation in the 3.0 – 4.2 alignment shall be by agreement with nominated utility providers.

**'GREEN FIELD' DEVELOPMENTS IN NARROW ROAD RESERVES  
(NOMINALLY 14.0 – 16.0 METRES) SUPPLEMENTARY DIAGRAM TO FIGURE B4**



## ROAD RESERVE ALLOCATION FOR UTILITY SERVICES IN LANEWAYS (AS DEFINED IN THE PLANNING AND DEVELOPMENT ACT)

**Figure B5**



**Notes:**

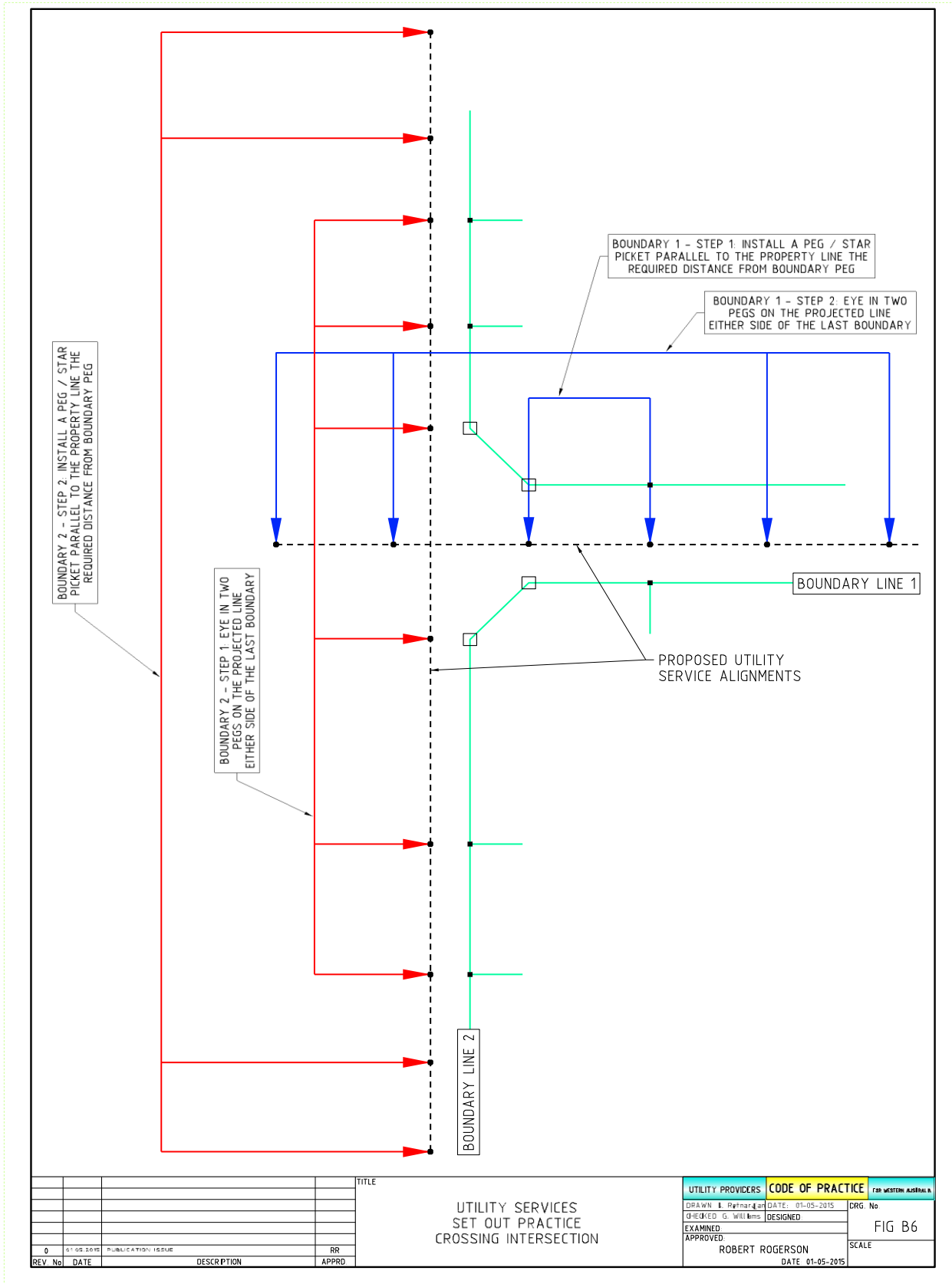
- 1 Cover to utility services to be the same as for roadways.
- 2 Where a laneway lot fronts a primary street the location of utility services shall be in the primary street, except where building setbacks and/or topography constrains the provision of utility services in the primary street, i.e. natural or altered land environment, including retaining walls.
- 3 Where a laneway lot fronts Public Open Space, consideration should be given to relocating some of the utility services to the Public Open Space, e.g. sewer.
- 4 Utility Services are to be placed on the side of the laneway servicing the greatest number of lots, unless there are topographical constraints.
- 5 Street lights to be positioned to suit Local Government requirements and to minimise the effect on the other utility services.
- 6 For all laneway widths, utility services are to remain in their relative positions.
- 7 Proposed variations to these allocations must be agreed by all affected utility service providers.

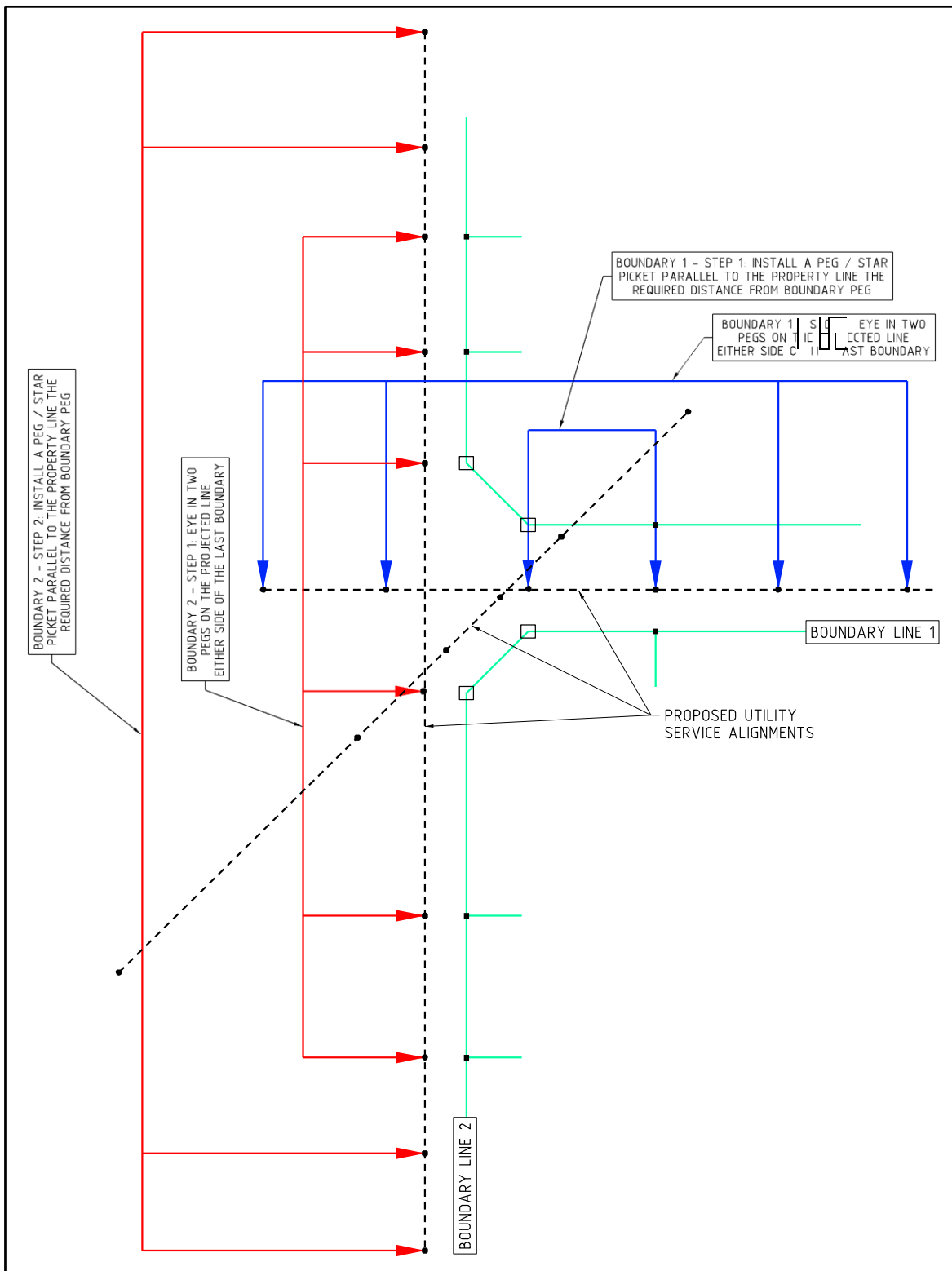


## UTILITY SERVICES SET OUT PRACTICE:

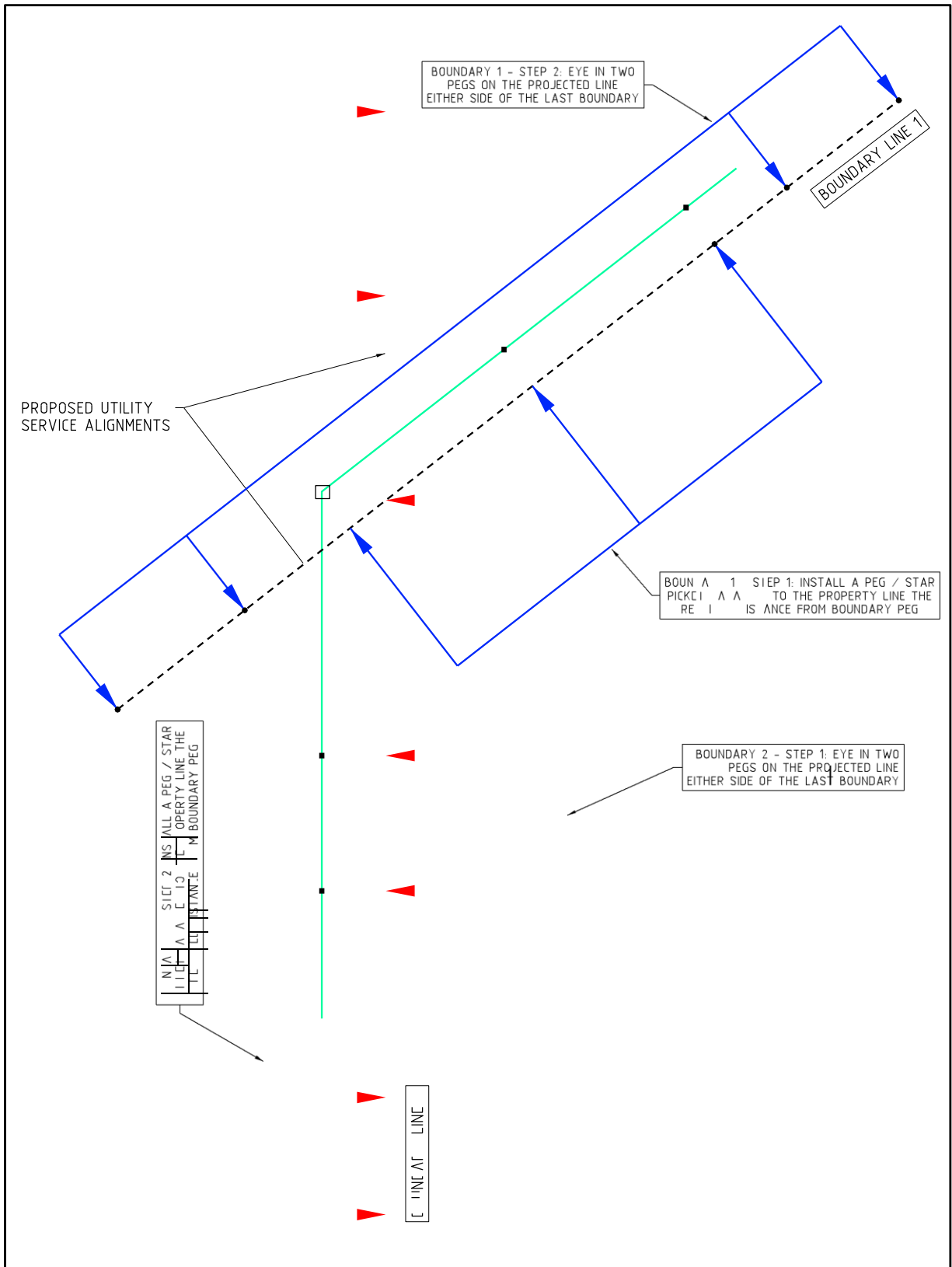
### CROSSING INTERSECTIONS, TURNING AT INTERSECTION AND CHANGE OF STREET ALIGNMENT

The following drawings indicate suggested utility services set out practice drawings to ensure accurate alignment at roadway intersections and truncations.





			TITLE		UTILITY PROVIDERS		CODE OF PRACTICE		FOR WESTERN AUSTRALIA	
			UTILITY SERVICES SET OUT PRACTICE TURNING AT INTERSECTION		DRAWN: I. Retnarajan		DATE: 01-05-2015		DRG No	
					CHECKED: G. Williams		DESIGNED		FIG B7	
					EXAMINED:				SCALE	
					APPROVED:		ROBERT ROGERSON			
							DATE: 01-05-2015			
0	01-05-2015	PUBLICATION ISSUE	RR							
REV No	DATE	DESCRIPTION	APPRD							



REV. No.	DATE	DESCRIPTION	APPRD.
0	01-05-2015	PUBLICATION ISSUE	RR

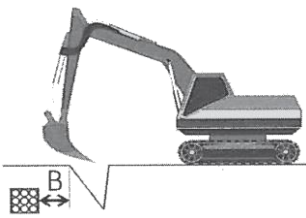
TITLE  
**UTILITY SERVICES  
 SET OUT PRACTICE  
 CHANGE OF STREET ALIGNMENT**

UTILITY PROVIDERS	CODE OF PRACTICE	FOR WESTERN AUSTRALIA
DRAWN: I. Refmanjari	DATE: 01-05-2015	DRG. No.
CHECKED: G. Williams	DESIGNED:	FIG B8
EXAMINED:	APPROVED:	SCALE
ROBERT ROGERSON	DATE: 01-05-2015	

**TABLE B1**

**CLEARANCE ZONES GUIDE - CLEARANCE LIMITS TO UNDERGROUND UTILITY SERVICES WHEN UNDERTAKING WORKS IN ROAD RESERVES**

This Clearance Zone Table provides the minimum approach distance that powered excavating machines may operate before the Controls are applied. Use of this Table provides protection of the utility service and ensures the safety of the excavator and operator. Adoption of this Table will improve site safety and demonstrate Duty of Care by both the utility service provider and excavator operator.

Types of Underground Utility Services	Clearances	Clearance Zone for Powered Excavation	Controls	Typical Depths
<p>Note: The owners of utility services registered with the Before You Dig Australia service are covered by this Guide and require an enquiry through this free service and the compliance with any directive issued with information regarding the utility service.</p>	<p>The minimum approach distance for individuals carrying out work near underground utility services.</p>	<p>Distance B is the minimum approach distance for powered excavating machines</p>  <p>B = the distance from the underground utility service to the break of the surface created by an excavating machine digging away from the underground utility service. The machine will be on the other side of the cut away from the underground utility service.</p> <p>For directional boring across the line of a utility service, a minimum clearance of 300 mm from the utility service will be maintained.</p> <p>For directional boring parallel to the utility service and at the level of the utility service, a clearance of 500mm shall be maintained from the edge of the nearest utility service. Prior to commencing any directional drilling, you must know the exact location of all utilities within the vicinity. Refer to potholing Clause 6.</p>	<p>If the risk assessment identifies a potential risk of making contact with both underground and overhead utility services, two safety observers would be required. One observer to ensure that the machinery maintains a safe distance from underground utility services, the other observer to ensure a safe distance from the overhead utility services e.g. power lines.</p> <p>In the case of gas or electricity utility services, an appropriate fire extinguishing system must be accessible to meet the identified fire risk.</p> <p>If the width and /or depth of the excavation will expose the utility service, the utility service provider must be contacted prior to commencing work.</p>	<p>Below natural ground level or top of road pavement.</p>

<b>Low and Medium Pressure Gas Services.</b>	N/A	<b>300mm</b>	<p>Pot hole to confirm location of utility service.</p> <p>The position of the utility service may not appear on the plans.</p>	<b>300 - 600 mm.</b>
<b>Low and Medium pressure gas mains.</b>	N/A	<b>300mm</b>	<p>Pothole to confirm location of utility service.</p> <p>The Code of Practice for shafts, tunnels and trenches, and the Guideline to dangers of poorly ventilated workplaces.</p> <p>Only one individual at a time should be excavating if hand excavation is being undertaken in a confined space. Another should act as an observer and be able to operate any breathing, escape or fire equipment if required.</p> <p>The elimination of an ignition source in the event of an escape.</p> <p>Excavation below underground utility services should not be undertaken within a distance of 300mm below the utility service located at the lowest level.</p>	<b>600 - 750mm</b>
<b>High Pressure gas services, mains and pipelines.</b>	Refer to utility service provider requirements.	Refer to utility service provider requirements.	<p>If excavation is required within 15 metres of a high-pressure gas pipeline prior approval must be obtained from the relevant gas owner. However, for any excavation in the vicinity of the DBNGP refer Appendix D for approval requirements.</p> <p>Must contact the utility service provider for specific conditions.</p> <p>ATCO Gas conditions:  <a href="http://www.atcogas.com.au/Safety/Working-around-gas-infrastructure">http://www.atcogas.com.au/Safety/Working-around-gas-infrastructure</a></p> <p>Note: All transmission pipelines involving gas (also oil and petrochemical) have separate requirements and the utility service provider should be contacted.</p>	<b>900 - 1200mm</b>

AGIG owned or operated assets	As per approval conditions.	As per approval conditions.	As per approval conditions.	As per approval conditions.
<b>Low Voltage Electricity cables – voltages less than or equal to 1000V (1kV)</b>	Refer to utility service provider requirements.	Refer to utility service provider requirements.	Must contact the utility service provider for specific conditions prior to excavating. Western Power conditions: <a href="http://www.westernpower.com.au/safety-working-near-electricity.html">http://www.westernpower.com.au/safety-working-near-electricity.html</a>	<b>500mm minimum.</b>
<b>High Voltage Electricity cables – voltages from 1000V (1kV) up to 33000 (33kV)</b>	Refer to utility service provider requirement.	Refer to utility service provider requirement.	Must contact the utility service provider for specific conditions prior to excavating. Western Power conditions: <a href="http://www.westernpower.com.au/safety-working-near-electricity.html">http://www.westernpower.com.au/safety-working-near-electricity.html</a>	<b>500mm minimum.</b>
<b>Underground sub-transmission cables 33000V (33kV) up to 132000V (132kV)</b>	Refer to utility service provider requirement.	Refer to utility service provider requirement.	Must contact utility service provider for specific conditions. Western Power conditions: <a href="http://www.westernpower.com.au/safety-working-near-electricity.html">http://www.westernpower.com.au/safety-working-near-electricity.html</a>	<b>750mm minimum.</b>
<b>Telecommunications cables.</b>	Contact utility service provider for specific requirement.	Contact utility service provider for specific conditions prior to excavating.	Must contact utility service provider for specific conditions prior to excavating.	Typically <b>450 – 600mm</b> , other assets to <b>1200mm</b>
<b>Water pipelines.</b>	N/A	<b>300mm</b> (if pipeline is <b>200mm</b> or greater in diameter).	Pothole to confirm location of utility service.	<b>450mm minimum</b>
<b>Sewer pipelines.</b>	N/A	<b>300mm</b> (if pipeline is <b>200mm</b> or greater in diameter).	Pothole to confirm location of utility service.	<b>600mm to 10 (ten) metres</b>

# APPENDIX C

## TRAFFIC MANAGEMENT

### C1 TRAFFIC MANAGEMENT FOR WORKS ON ROADS

The Utility Providers Code of Practice for Western Australia has adopted the following documents (unless otherwise agreed between the utility service provider and Main Roads WA) to be used for all traffic management and safety purposes:

**Traffic Management for Works on Roads Code of Practice (current version) issued by Main Roads Western Australia - defined as 'Code of Practice' in the following text.**

The Code of Practice describes Main Roads Western Australia's requirements for managing traffic at work sites on roads. It requires traffic management for works on roads to be based on AS-1742.3-2009 unless otherwise specified by the Code. In the event there is a conflict between the Code and AS 1742.3-2009, the Code shall take precedence. The underlying principles of the Code are to:

- Ensure the safety of all road users and road workers in line with safe system principles.
- Minimise the disruption and inconvenience to all road users resulting from works on roads.
- Establish uniform procedures for traffic management at work sites that can be easily recognised and understood by road users. (Road users are not limited to motorists – they include pedestrians, such as school children and people with disabilities, cyclists and emergency vehicles.)

The Code is supported by the Australian Standard 1742.3-2009, *Main Roads Act 1930*, *Occupational Safety and Health Act 1984*, *Disability Services Act 1993* and the *Road Traffic Code 2000*.

The Code applies to all works conducted within all road reserves throughout Western Australia and the planning of any proposed works. The prescribed practices are the minimum requirements on which Traffic Management Plans for all Western Australian roads shall be based.

It is expected utility service providers and their contractors will adopt the Code for all works in road reserves under the control of Main Roads WA or Local Government to ensure road users and road workers are protected.

Prior to commencing works, approval shall be obtained from the agency responsible for the care, control, and management of the relevant roads. Care should also be taken to ensure all other required authorisations are obtained prior to the commencement of works.

The enforcement of safe worksite practices to ensure the safety of employees and public is undertaken by **Worksafe WA**.

Any party intending to conduct works that may impact on traffic within any road reserve shall, as a condition of approval by MRWA, Local Government or any other authority responsible for

the road, ensure the persons performing the tasks hold a relevant and current certificate of accreditation issued by MRWA.

Amendments to the Code of Practice may be made from time to time. Users of this document shall ensure they are using the current version, which is available from the Main Roads WA website: [www.mainroads.wa.gov.au](http://www.mainroads.wa.gov.au)

**Note:**

**The Code of Practice is to be used in conjunction with Australian Standards AS1742.3: 2009**

## **C2 ERECTION OF TEMPORARY REGULATORY TRAFFIC SIGNS AND DUTY OF CARE WHEN UNDERTAKING WORKS IN ROAD RESERVES**

Regulation 297(2) of the *Road Traffic Code 2000* provides that the Commissioner of Main Roads may allow an authorised body to erect, establish, display, alter or take down any particular road sign, road marking or traffic-control signal, or road signs, road markings or traffic-control signals of a class or type of classes or types, and in the circumstances (if any), specified in the instrument of authorisation.

Only pursuant to an Instrument of Authorisation issued by the Commissioner of Main Roads under the provisions of regulation 297(2) of the *Road Traffic Code 2000*, can a utility provider or its employees, consultants, agents and contractors erect, establish, display, alter or take down such traffic signs and traffic control devices as may be required for the purpose and duration of any works, survey or inspection associated with the construction, maintenance or repair on a road, any adjoining land or any portion thereof.

A **duty of care** would arise on the part of anybody, whether government or private, who is carrying out operations on a road which is otherwise open to traffic, to take all reasonable measures to prevent accident or injury to persons carrying out those operations and also to members of the public lawfully using the road. Part of this **duty of care** would consist of the erection of warning signs, which would be of a temporary nature, to alert motorists to the impending danger for as long as the operations are being carried out within the road reserve. **This duty of care is the responsibility of those carrying out the works or surveys** within the public road reserve and not upon the Commissioner of Main Roads or the relevant Local Government. These temporary signs would have to be removed from the road or vicinity of the road as soon as the works or survey has been completed.



## APPENDIX D

# UTILITY SERVICES LOCATED IN THE DAMPIER TO BUNBURY NATURAL GAS PIPELINE (DBNGP) CORRIDOR

## D1 PROCESS AND INFORMATION

### D1.1 INTRODUCTION

The DBNGP is Australia's longest high-pressure gas pipeline and one of Western Australia's most critical pieces of energy infrastructure. The DBNGP covers more than 1,530km starting from the Burrup Peninsula in the State's Northwest and finishing near Bunbury in the State's Southwest. The DBNGP also includes numerous lateral pipelines at various locations along its length.

The DBNGP is owned, operated, and managed by Dampier Bunbury Pipeline who are part of the Australian Gas Infrastructure Group (AGIG).

The DBNGP corridor is currently managed by Department of Planning, Lands and Heritage (DPLH) on behalf of the Minister.

Management of the DBNGP corridor is an integral part of ensuring transportation of natural gas supplies from the Northwest Shelf to the Southwest of Western Australia. The gas is used for heavy and light industry, power generation and homes.

### D1.2 THE DAMPIER TO BUNBURY PIPELINE ACT 1997 (THE ACT)

In considering this information potential applicants should be mindful of the central requirements of the Act.

Utility providers, landowners, pipeline operators and other third parties cannot use land in the DBNGP Corridor in a way that is inconsistent with anything that is on or is being done on the land in accordance with rights granted to access right holders under Section 34 of the Act.

Utility providers, landowners, pipeline operators and other third parties must seek written approval from the Department of Planning, Lands and Heritage, who administers the DBNGP Corridor on behalf of the Minister, to carry out any work within the DBNGP Corridor. Such approval can be sought only by written application to the Department of Planning, Lands and Heritage.

*Note: For Telecommunications Carriers, as defined by the Telecommunications Act 1997 (Cth) refer to Appendix D2.5.*

Penalties are provided under section 41 of the Act and Regulation 4A of the *Dampier to Bunbury Pipeline (Corridor) Regulations 1998* for unauthorised use of the DBNGP Corridor. A successful criminal prosecution under these provisions can result in a fine of up to \$10,000.

## D2 INFORMATION FOR APPLICATIONS TO UNDERTAKE ACTIVITIES AND WORKS IN THE DBNGP CORRIDOR

### D2.1 INTRODUCTION

The following information provides details for all proponents and organisations seeking to undertake activities and works in the DBNGP Corridor.

Detailed information regarding the DBNGP Corridor, appropriate land use, activities and works, and the section 41 application process can be found in the Department of Planning, Lands and Heritage Land Use Guidelines. Copies can be downloaded from the Department of Planning, Lands and Heritage Website: [www.dplh.wa.gov.au](http://www.dplh.wa.gov.au) or contact the Infrastructure Corridors Branch (contact details below).

### D2.2 LOCATION OF PIPELINE(S)

Where a pipeline is constructed in the DBNGP Corridor, the area is marked by warning signs. Warning signs do not indicate the exact location of a pipeline and should only be used as an indication that a high-pressure gas pipeline exists in the DBNGP Corridor.

The greatest risk to high pressure gas pipelines and to people in the vicinity is damage by persons unfamiliar with the requirements for the safe work around high-pressure gas pipelines.

### D2.3 APPLICATION PROCESS

Before undertaking any works within the DBNGP Corridor, contact **Before You Dig Australia** ([www.byda.com.au](http://www.byda.com.au)).

Prior to commencement of intended works within the DBNGP Corridor, all parties must submit written application for approval from the DBNGP Land Access Minister through the Department of Planning, Lands and Heritage. This is a requirement under section 41 of the Act.

All applications are to be submitted at the earliest possible stage to allow sufficient time for assessment from a technical, social, environmental, and safety-hazard perspective.

Submissions should include the following information:

- Land description and map identifying location of the proposed works.
- Type of works to be carried out.
- Intended future use of the land.
- Type and weight of machinery that will be used.
- Timeframe of the works.
- Any plans or diagrams of the works.

Approval will only be granted to the party responsible for the works.

The approval process should take approximately 3 weeks and includes referral to all relevant section 34 access right holders (gas pipeline owners and/or operators) for comment and technical and safety conditions regarding works in the vicinity of high-pressure gas pipelines.

Indemnification will be sought from the proponent for all proposed works within the DBNGP Corridor and shall be completed by the proponent and returned to Department of Planning, Lands and Heritage prior to commencement of processing the section 41 application.

The section 41 application form can be downloaded from the Department of Planning, Lands and Heritage website (refer to Section 2.1) or contact the Infrastructure Corridors Branch.

When completed, the application form and relevant information to support the application should be forwarded by either email, facsimile or post to:

The Manager Infrastructure Corridors  
Department of Planning, Lands and Heritage  
PO Box 1143  
WEST PERTH WA 6872  
Ph.: +61 8 6552 4400  
Fax: +61 8 6552 4420

If you have any questions that are not covered on the website or in the Land Use Guidelines, please contact the Infrastructure Corridors team at Department of Planning, Lands and Heritage.

#### **D2.4 PERMISSION TO ACCESS LAND**

Please note that any such conditional approval granted under section 41 of the Act does not of itself provide any further approval required from any underlying landowner or other interest holder to access the land concerned.

For example, a third party holding conditional approval under section 41 of the Act should not access the land without appropriate permission from the landowner.

#### **D2.5 TELECOMMUNICATION CARRIERS**

Telecommunication Carriers are defined in and subject to Commonwealth legislation under the *Telecommunications Act 1997* (Cth) and the *Telecommunications Code of Practice 1997* (Cth), including subsequent amendments.

Licensed Telecommunications Carriers are exempt from some State or Territory laws. Where these laws are not consistent with the Telecommunications Act, the Commonwealth legislation will apply.

To ensure compliance with all safety and technical requirements for working in the vicinity of high-pressure gas pipelines it is essential to contact Department of Planning, Lands and Heritage and provide a Land Activity and Access Notice, pursuant to Schedule 3 Part 1 Division 5 Section 17 of the *Telecommunications Act 1997* (Cth), of intended works to enable referral to relevant section 34 access right holders before undertaking any activities or works in the DBNGP corridor. The approval process should take approximately 3 weeks.

#### **D2.6 OTHER ASSETS OWNED BY AGIG**

All work requests around or near other assets owned or operated by AGIG will be managed in a similar manner to the DBNGP approvals process, with a Before You Dig Australia enquiry in the area of these assets commencing the approval process.

# APPENDIX E

## UTILITY SERVICES LOCATED IN THE RAIL RESERVE

### E1 PROCESS AND INFORMATION

#### E1.1 INTRODUCTION

Railway operators accredited in WA under the Rail Safety National Law (WA) 2015 are required to manage the interfaces with service providers utilising railway reserves.

Requirements specific to utilities are contained within AS4292.1 – 2006 Rail Safety Management, AS 4799-2000 Installation of Underground Utility Services and Pipelines within Railway Boundaries and Rail Freight System (Corridor Land) Regulations 2000.

The land on which railways are built falls into the following two (2) categories -

- a) **PTA Rail Reserves** are bound by the requirements of the Government Railways Act 1904 and is generally set aside for passenger rail. This land is managed by the Public Transport Authority (PTA) on behalf of the State Government.
- b) **Rail Corridor Land** is bound by the Rail Freight System Act 2000, leased by Arc Infrastructure (Arc) and contains freight rail.

#### E1.2 APPLYING FOR APPROVAL

All applications (for works within passenger and freight rail) must be submitted to [PTAthirdpartyaccess@pta.wa.gov.au](mailto:PTAthirdpartyaccess@pta.wa.gov.au). However, there are different forms for each railway operator.

The Arc Infrastructure Application form can be found on their website and the PTA Working In and Around Rail Document (8103-400-004) can be requested via the PTA Third Party Access email address above.

The process of obtaining written Approval can take up to six weeks for works within the PTA rail reserve and twelve weeks (depending on the nature of the application) for works within the rail corridor. Additional time must also be taken into consideration for approval of the Safety Management Plan and Track Access.

#### E1.3 THE RELATIONSHIP BETWEEN PTA, THE UTILITY SERVICE PROVIDER AND INSTALLER OF A UTILITY SERVICE

A Utility Service Provider (USP) is required to enter into an agreement with the PTA for its works, long-term use of (air or underground) space and possible removal of the asset should this be required in future.

PTA must be assured through written advice (signed Agreement) from the USP that they take full responsibility for any decisions, representations, commitments or actions by their consultants, agents, contractors and sub-contractors, including on-site negotiations during installation.

## **E1.4 DEPTH REQUIREMENTS**

Due to significant underground rail infrastructure within the reserves at depths between 0.6 and 1.2 metres, it is essential that a utility service is designed to enter and leave the reserve at no less than 2.5 metres below the natural ground level.

USP's must be aware that the presence of 25kv overhead traction equipment raises issues regarding earthing and bonding of equipment, electrical interference and special safety precautions unique to the electrified railway environment.

## **E1.5 RAIL SAFETY MANAGEMENT**

The Rail Safety National Law (WA) Act 2015 is required to ensure that safety of rail infrastructure and operations is adequately addressed by preparation of Safety Management Plans covering Railway Safe working, Occupational Health and Safety, environmental issues and if necessary a formal Risk Assessment of the installer's activities. These plans must be submitted and approved by either PTA or Arc Infrastructure prior to installation. They cannot be submitted with the application.

Guidance on Safety Management Plans can be obtained online from the Public Transport Authority's website at <https://www.pta.wa.gov.au/about-us/working-with-the-pta/safety-resources> or Arcs website <http://www.arcinfra.com/Rail-Network/Network-Safeworking>.

## **E1.6 TRACK CLOSURES AND ISOLATIONS ON ELECTRIFIED LINES**

Contractors activities that will result in plant, personnel or materials coming within three (3) metres of the nearest rail or any live overhead traction equipment may require the track to be closed, the electricity switched off and the site earthed (isolated). This will be in accordance with PTA procedures Working in and Around the Railway Reserve (8103-400-004) and Applying for Access to the PTA Operating Railway Reserve (8110-400-029). Documents can be found via the above PTA link.

In these circumstances the work can only be conducted after the trains cease running in the early morning, at approximately 0100 hours and before the first train at approximately 0430 hours depending on location. The indicative cost for each isolation is \$1,500, regardless of location in the metropolitan area. This cost may be reviewed from time to time.

Slinging above ground cables and suspending crane loads above overhead traction equipment automatically requires isolations.

To minimise disruption to services it is essential that underground crossings of the railway reserve start and end at pits situated outside the reserve surveyed boundary.

Programming of isolations depends on the availability of PTA personnel, train operations and other railway infrastructure maintenance works.

Note: Approval for isolation on a particular date is not guaranteed.

## **E1.7 AS CONSTRUCTED DETAILS**

In addition to the requirements of Clause 2.3.2.1 of AS4799-2000, on completion of installation of a utility service, PTA and Arc Infrastructure require 'as constructed' drawings showing the

surface alignment of the utility service, as well as records of depths such as bore logs. A condition report may also be required.

## **E2 RELEVANT DETAILS FROM THE ACT AND THE LEASE**

### **E2.1 The Act**

The Rail Freight System Act 2000 (the Act) enabled the transfer of management of the Western Australian Government Railway Commission freight business.

The Act also provided for Government railway land (where freight rail operates) to be designated as Corridor Land on 17 December 2000 and control of the land was vested in the Rail Corridor Minister, delegated to the PTA.

The extent of the former Railway Reserve that is now designated Corridor Land is described in the Rail Freight System (Corridor Land) Order 2000 and defined by plans at the PTA.

A person or company cannot construct anything on, under or over Corridor Land unless the PTA under delegation has agreed in writing.

The PTA is restricted by the Act as to the uses that can be approved on Corridor Land. The Land cannot be used in a way that is inconsistent with existing or future uses of the Land. Any application can be refused on any grounds at the discretion of the PTA or Arc.

### **E2.2 The Lease**

The PTA is obliged to work within the contractual details of the lease when assessing applications to carry out work in the corridor, in order to minimise any liability to the State as a result of the proposed works.

The relevant details of the lease are generally based upon the requirements of the Act. Like the Act, the Lease allows use of the Land if it will not unreasonably interfere with the existing or future uses of the Land as determined by the freight operator (Arc).

### **E2.3 Penalties**

The Rail Freight System Act 2000 and the Rail Safety National Law (WA) 2015 contain provisions for penalties that may be issued if written approval is not sought from the PTA, or if the conditions of approval are breached:

- Fines of \$20,000.00
- Removal of the works, at the cost of the proponent.

# APPENDIX F

## ENVIRONMENT CHECKLIST

The following Environmental Checklist is a minimum requirement to be completed by Utility Service Providers for proposed works in road reserves managed by Main Roads WA and Local Governments. Approvals to undertake works may be required from the Department of Water and Environment Regulation, Department of Planning, Lands and Heritage, etc. Refer to Section 8.1 regarding clearing of native vegetation and possible requirement for a clearing permit which could take several months to complete.

Item No.	Item	Yes / No / Not Applicable.
1	<b>Protection of rare flora, fauna or other significant vegetation</b> 1(a) Identified significant vegetation or habitat. 1(b) Alternatives routes and methods considered. 1(c) Obtained approval to disturb this vegetation/habitat.	
2	<b>Clearing of native vegetation</b> 2(a) Routes and methods that do not require clearing considered. 2(b) Obtained all necessary approvals to clear. 2(c) Revegetation/rehabilitation plans prepared.	
3	<b>Phytophthora cinnamomi Dieback</b> 3(a) Work in area with rainfall greater than 600mm per year. 3(b) Hygiene practices will be in place. 3(c) Work to take place during dry periods.	
4	<b>Water protection and Conservation Areas</b> 4(a) Identified wetlands, sensitive water courses, drinking water areas, Swan River Trust management areas, Bush Forever areas, etc. 4(b) Alternatives routes and methods considered. 4(c) Obtained approval to work near sensitive water or conservation areas. 4(d) Obtained approval to undertake dewatering.	
5	<b>Aboriginal heritage</b> 5(a) Identified existing and potential for Aboriginal heritage sites. 5(b) Alternatives routes and methods considered. 5(c) Obtained approval to disturb sites.	
6	<b>Cultural heritage</b> 6(a) Identified existing heritage sites. 6(b) Alternatives routes and methods considered. 6(c) Obtained approval to disturb sites.	
7	<b>Adjoining residential and other sensitive properties</b> 7(a) Identified need to control dust, vibration and noise. 7(b) Obtained approval to do work outside normal hours.	
9	<b>Acid Sulphate Soils (ASS)</b> 9(a) Identified requirement for ASS management. 9(b) Obtained approval for ASS management plan	

# EMERGENCY PROCEDURES AND CONTACTS

In the event of damage to Utility Provider's asset, Main Roads WA asset, Local Government asset or PTA (Rail) asset, the person/Agency responsible for causing the damage shall immediately advise all asset owners affected.

Refer to emergency numbers as follows to be used in Emergency (Hazardous Situations) only:

Fire (Fire, Rescue, Hazardous Material), Police and Ambulance (life threatening) **Dial 000**.

<b>NON-LIFE THREATENING</b>	
Fire and Emergency Services	(08) 9323 9300
Police	131 444
St John Ambulance	(08) 9334 1234
<b>GAS PROVIDERS</b>	
APA	
Goldfields Gas Pipeline	1800 151 016
Parmelia Pipeline	1800 019 966
Pilbara Pipeline System	1800 625 665
ATCO Gas	13 13 52
Dampier Bunbury Pipeline	
DBNGP	1800 019 919
Australian Gas Infrastructure Group	
BEP	1800 019 919
WAWP	1800 019 919
FRGP	1800 019 919
AOGP	1800 019 919
TGS	1800 019 919
Epic Energy	1800 625 665
Esperance Gas Distribution Company	
Office	(08) 9072 1422
Pipeline	1800 010 272
<b>ELECTRICITY PROVIDERS</b>	
Western Power	13 13 51
Horizon Power	13 23 51
<b>LAND AUTHORITY</b>	
Department of Planning, Lands and Heritage	(08) 6552 4400
DBNGP Corridor only: Infrastructure Corridors	0477 723 360



<b>ROAD AUTHORITIES</b>	
Local Governments	<i>(Refer to the relevant Local Government's website)</i>
Main Roads WA	138 138
<b>RAIL AUTHORITIES</b>	
Arc Infrastructure	
Level Crossing Faults	1800 150 107
Midland Train Control	1300 987 246
Avon Train Control	1300 087 246
Public Transport Authority (Metro Rail)	08 9326 2374
Australian Rail Track Corp Ltd	08 8217 4366
United Group Rail Service Ltd (UGL)	08 9442 5852
Hotham Valley Tourist Railway (WA) Inc	08 6278 1114
Pemberton Tramway Co Pty Ltd	08 9776 1322
Kojonup Tourist Railway	08 9831 1686
Golden Mile Loophole	08 9093 3055
Karara Mining Ltd	08 6298 1888
<b>SAFETY AUTHORITIES</b>	
Energy Safety WA	
Office	(08) 9422 5200
Accident Reporting (24 hours)	1800 678 198
Worksafe WA	
Office	(08) 9327 8777
Accident Reporting (24 hours)	1800 305 791
<b>TELECOMMUNICATIONS PROVIDERS</b>	
AAPT Telecommunications	13 88 86
NBN Co	1800 687 626
Nextgen Group	1800 336 886
Optus	1800 505 777
Telstra	13 22 03
Vocus Communications	1800 262 663
<b>WATER PROVIDERS</b>	
AQWEST	
Bunbury Water	(08) 9791 3272
Busselton Water	(08) 9781 0500
Water Corporation	13 13 75

<b>MISCELLANEOUS</b>	
Adshel	
Office	(08) 9387 7444
Mobile	0438 253 557
BP Refinery	(08) 9419 9500
Pilbara Iron Utilities	
Dampier	(08) 9143 5650
Paraburdoo	(08) 9143 4668
Tom Price	(08) 9143 3271
BHP Supply Authority	1800 677 639 or (08) 9175 3303
Coogee Chemicals	1800 800 655
Curtin University	(08) 9266 9266
24hr Security	(08) 9266 4444
Defence, Property Management	(08) 9311 2685 or (08) 9311 2680
24 hour emergency	1300 658 975
Fremantle Ports	(08) 9430 3442 or (08) 9335 1300
University of WA	(08) 6488 2025

