The Policy and associated Guidelines below have been developed for information applicable to Utility Service Providers and other organisations undertaking utility service works in road reserves managed by Main Roads WA. Main Roads WA reserves the right to update this information at any time without notice. If you have any questions or comments regarding these documents, please contact David Brown, Senior Project Manager Operational Services, on Ph: (08) 9323 4389; or E-mail: david.brown@mainroads.wa.gov.au.

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### Document Amendment Register

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### Documents

1. Policy Statement and Detail.
2. Application and Approval Guidelines.
UTILITY SERVICES IN ROAD RESERVES

POLICY STATEMENT

Policy Statement

‘The primary function of road reserves is to provide a dedicated route for road alignments. Additionally, in some cases, they can provide for the accommodation of utility service facilities.

Main Roads will work with the community, utility service providers and private developers to locate services (including electricity, gas, water, sewerage and telecommunications) within existing and future road reserves, where such location does not adversely impact on the ability of the road reserve to fulfil its primary function.

Utility services will not be located within Control of Access reserves or non built-up Regional reserves unless there is no other alternative available.

The utility service provider shall meet all costs associated with the installation and maintenance of these services.

Should a future relocation of a utility service be required due to roadworks, Main Roads will consider the merits of seeking a contribution towards the cost from the utility service provider on a case by case basis.’

Policy Detail

1. Roads other than Control of Access Road Reserves and Reserves in Non Built-up Regional Areas

In the Metropolitan area and Regional built-up areas, Main Roads will allow utility service providers to locate utility services within road reserves that are not classified as Control of Access subject to the following:

- The management of utility services conform to the current edition of the Utility Providers Code of Practice for Western Australia.
- The utility service provider obtains all necessary environmental and other clearances required.
- Installation and future maintenance of the utility service is undertaken in accordance with the ‘Application Kit for Utility Service Providers Undertaking Works Within the Road Reserve’ (refer to Main Roads WA Website: Traffic > Roadworks > Working on Main Roads > State Roads - Applications to undertake Works).
- The utility services do not restrict the use of the road reserve for future roadworks.
- The utility service provider agrees to meet the costs of installation and any future maintenance, repair or modification of the utility service. However, Main Roads will consider the merits of seeking a contribution from the utility service provider towards the cost of a future relocation, should this be required, on a case by case basis.
- The utility service provider agrees to accept all liabilities associated with the installation, maintenance and operation of the utility service.
• All damage to Main Roads’ assets, attributed to any utility service works, shall be immediately restored by the utility service provider, at their cost, to the satisfaction of Main Roads.
• The utility service provider agrees to all the above conditions in writing prior to undertaking any works.

2. Control of Access Road Reserves and Reserves in Non Built-up Regional Areas

Main Roads will not allow utility service providers to locate services in Control of Access road reserves and reserves in non built-up Regional areas unless no other alternative is available to the utility service provider. If such a situation arises, approval will only be granted on the following basis:

• The utility service provider demonstrates in writing to the satisfaction of Main Roads that no other alternative is available.
• All conditions outlined in Section 1 are met.
• Where above-ground infrastructure is being proposed, the utility service provider has:
  ➢ demonstrated to Main Roads’ satisfaction that underground utility services are not viable;
  ➢ agreed with Main Roads on the location of the infrastructure within the road reserve; and
  ➢ provided, to Main Roads’ satisfaction, appropriate safety measures to ensure the protection of road users and amenity.

• A formal Agreement (Utility Service Management Agreement - refer to Section 3.7 of the attached Guidelines for example Agreement) with the utility service provider, signed by the Commissioner of Main Roads or delegated Executive Director, is prepared covering the rights and responsibilities of all parties.
• The utility service provider includes in the formal Agreement with Main Roads appropriate traffic management plans or arrangements (to the satisfaction of Main Roads) for access to the utility service for maintenance purposes.

Main Roads does not, at this stage, charge utility service providers a fee for utility services located within the road reserve (or easements) in Regional areas (refer also to Section 3 regarding telecommunication infrastructure).

Main Roads reserves the right to charge utility service providers a fee for utility services located within road reserves in the Metropolitan area and Regional built-up areas, depending on the scale of the utility service and the level of disruption to the road network and existing levels of service during installation and expected maintenance of the utility service (refer also to Section 3 regarding telecommunication infrastructure).

3. Telecommunication Infrastructure

Main Roads will adhere to the Austroads Operational (also produced as an equivalent Communications Alliance Ltd document) and Administrative Guidelines for Telecommunication Facilities in Road Reserves (2002 - with subsequent amendments) in conjunction with the current edition of the Utility Providers Code of Practice for WA. In addition, the following will also apply:

• All telecommunication service facilities located within road reserves must be subject to a formal Agreement or Memorandum of Understanding outlining conditions applicable to all parties (including traffic management for maintenance
and emergency purposes) in accordance with the relevant legislation.

- Telecommunication Carriers must reach agreement with Main Roads on the location of underground (longitudinal and transverse) services.
- All mobile phone telecommunication structures (low and high impact) located within road reserves must be subject to a formal Agreement and all Telecommunication Carriers will be charged an appropriate rental fee for use of the Main Road’s asset.

Main Roads does not, at this stage, apply rental fees to underground service facilities within road reserves.

4. Unauthorised Utility Services in Road Reserves

When unauthorised utility services have been identified in road reserves, Main Roads will assess the situation on a case by case basis prior to implementing appropriate action.

5. Utility Providers Services Committee

Main Roads shall be a member of the WA Utility Providers Services Committee, whose role is the management of the Utility Providers Code of Practice for Western Australia and the resolution of issues associated with the location of utility services within road reserves.
UTILITY SERVICES in ROAD RESERVES
APPLICATION AND APPROVAL GUIDELINES

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1. DEFINITIONS AND REFERENCES

Refer to Main Roads WA Glossary of Terms accessed by searching for ‘Glossary of Terms’ on Main Roads WA Website. The definitions listed below are not listed in or are different to those listed in the ‘Glossary of Terms’.

Clear Zone - Refer to MRWA Glossary of Terms.

Commissioner - Commissioner of Main Roads.

Control of Access Road – Road Proclaimed and Gazetted in accordance with Clause 28A of the Main Roads Act (1930).

Federal Telecommunications Act 1997 - includes subsequent amendments.

Federal Telecommunications (Low-Impact Facilities) Determination 1997 - includes subsequent amendments.

Intrusive Activity - is an inspection, installation or maintenance activity that:
- Disturbs the roadway, roadside median, or footpath;
- Involves attachment to a road bridge or structure;
- Requires traffic management;
- Reduces road or public safety;
- Reduces road efficiency; or
- Reduces the viability of future roadworks or bridgeworks.


Main Roads or Main Roads WA or MRWA - Main Roads Western Australia.

Operational Guideline No 100 - Main Roads requirements for Installation of Underground Services within Road Reserves. Note: This document is for internal use only.

State Road / Reserve - Existing and planned roads / reservations under the control of the Commissioner of Main Roads, including roads under Control of Access. Refer to Main Roads WA Website for State Roads and roads under Control of Access: (About Us > Corporate Information > State Road Network Maps); for Planned State Roads contact the Department for Planning and Infrastructure (DPI).

TNC - Term Network Contract (Main Roads WA road maintenance contracts).

UPCoP - Utility Providers Code of Practice for Western Australia - current edition eg 2007 including subsequent amendments. (Main Roads WA Website: Traffic > Roadworks > Working on Main Roads > State and Local Roads).

Utility Provider (Principal Agency) - Principal Organisation such as Western Power, Water Corporation, Telstra and Alinta and not their contractors, sub-contractors or other organisation undertaking work on behalf of the Principal Agency.
2. PURPOSE

This Guideline sets out Main Roads’ requirements for Application (that is, acceptability of utility services subject to technical and operational conditions) and Approval of Utility Provider services in existing and future State road reserves.

3. APPLICATION

3.1. GENERAL

All Utility Providers which operate under WA State Acts, have a ‘right’ to install their service facilities in road reserves that do not have Control of Access declared under Section 28A of the Main Roads Act 1930. The ‘right’ is for the Utility Provider to undertake non-intrusive activities without notice to the road authority; and, to seek and comply with road authority requirements for intrusive activities (refer to Definition in 1. above).

The Federal Telecommunications Act 1997 empowers Telecommunication Carriers:

- To enter any road reserve to undertake a ‘low-impact activity’ provided they have issued a notice of the work to the road authority and after the expiration of 10 business days the road authority has not lodged an objection to the activity; and

- To enter any road reserve to undertake an activity that is not a ‘low-impact activity’ provided they have obtained development application approval and made reasonable effort to reach agreement with the road authority on the road authority’s terms, and the road authority has not lodged an objection to the proposed activity.

‘Low-impact facilities are those considered essential to maintaining telecommunication networks, but do not have a high visual impact and are unlikely to cause significant disruption to the movement of traffic during installation or operation’ [refer to the Telecommunications (low-impact facilities) Determination 1997].

All Telecommunication Carriers’ intrusive activities are those considered likely to have a high visual impact or are likely to cause significant disruption to the movement of traffic during installation or operation, due to high speed or volume of traffic on State roads. Thus Telecommunication Carriers are expected, for all intrusive activities on State roads, to seek and comply with Main Roads’ conditions.

To determine if an existing road is a State road and if it has been declared Control of Access, contact Main Roads on 13 81 38 or access Main Roads WA Website: About Us > Corporate Information > State Road Network Maps.

3.2 OVERHEAD POWER LINES

Clearance of overhead power lines above the ground in road reserves is to be in accordance with Western Power’s or Horizon Power’s requirements. For clearances above road pavements, the organisation responsible for the overhead power line is to obtain from Main Roads the maximum combined vehicle and load height for the road, and forward this, together with the overhead power line route data, to Western Power or Horizon Power for determination of the clearance requirement.

3.3 ACCESS CONTROL AND RESTRICTED WORKING HOURS FOR INTRUSIVE ACTIVITIES

3.3.1 Non-Emergency Intrusive Activities
Daylight Work (Daylight hours) – Excluding emergencies, work requiring a reduction in road speed limit, road capacity or vehicle access to the road, where practical, should not be undertaken on urban commuter routes on work days (Monday to Friday, excluding public holidays) between 6.00am and 9.00am or between 3.00pm and 7.00pm and Mother’s Day between 9:00am and 7:00pm. Utility Providers should also check with Main Roads Regional Offices to ensure that Daylight Work is undertaken in accordance with TNC requirements as these may be different to the hours stated above.

Local Events - Work should be programmed to minimise the impact on the Public’s social activities and to avoid conflict with any community or major events. Utility Providers should also check with the Local Government.

Night Work - Directly adjacent residents shall be advised by letter drop and work at any location shall not involve more than two consecutive nights. Utility Providers should also check requirements of the Local Government.

Public Holiday Weekends and School Holiday Weekends - Work requiring a reduction in road speed limit, road capacity or vehicle access on roads out of Perth (ie Perth – Lancelin Road, Brand Highway, Great Northern Highway, Great Eastern Highway, Albany Highway and roads between Perth and major south-west holiday destinations) shall not be undertaken between 3.00pm on the day preceding the holiday weekend and 5.00am on the day following the holiday weekend.

Major Events - For major events such as AFL football, cricket test matches and the like, charity fun runs, parades, protest marches, etc, the Utility Provider shall not undertake any works, other than emergency works, during such periods preceding and following the event as agreed with the event organiser where the works may impact on the event, or vehicle or pedestrian access routes to the event.

Notice to Main Roads of Proposed Works - Prior to the commencement of approved works, the Utility Provider shall provide 24 hours notice to the Main Roads Traffic Operations Centre - phone 08-9428 2222 and obtain a Possession of Site Work Permit from the relevant Regional Office.

3.3.2 Emergency Intrusive Work

Emergency Intrusive Work - Shall be restricted to those utility service works where the Utility Provider has determined the event to be hazardous and requires immediate attention. The Utility Provider must advise Main Roads Traffic Operations Centre - phone 08-9428 2222 as soon as practicable when undertaking any emergency work.

3.4 ROAD RESERVES WITHOUT CONTROL OF ACCESS

3.4.1 Metropolitan and Regional Townsite Areas

The UPCoP Sections 3, 4, 5, 6, 8 and Appendix B shall apply to all Utility Providers for all activities regarding utility services within State road reserves in Metropolitan and Regional townsite areas.

3.4.2 Regional Non-Townsite Areas

The following requirements shall apply to all Utility Providers for all activities regarding utility services located within State road reserves in Regional non-townsite areas:

- Utility services are to be located outside of the road reserve, unless it can be demonstrated, to the satisfaction of Main Roads, that there are mitigating circumstances that would be detrimental to the Service Provider and/or State
interests. If service facilities are to be located within the road reserve, they are to be located on or as close and parallel to the road reserve boundary as practicably possible and have defined access locations to the satisfaction of Main Roads.

3.4.3 Bridges and Structures

3.4.3.1 General

The following requirements shall apply to all Utility Providers for all activities regarding utility services attached to or proposed to be attached to an existing or new traffic bridge, traffic structure or other road service structure within a State road reserve:

- Utility Providers are required to consult with Main Roads during the planning stage for utility services proposed to be attached to existing or new traffic bridges, traffic structures and other road service structures; and
- Prior to commencement of installation, a long term Utility Provider (Principal Agency) Service Management Agreement (refer to Section 3.7 below) is required with Main Roads detailing maintenance of the utility service facility, future removal or relocation, responsibility of costs in removal or relocation and responsibility of costs in the case of future bridge works requiring removal or relocation of the utility service. Main Roads is to be indemnified against all claims that may result from the attachment and presence of the utility service on the bridge or structure.

3.4.3.2 Main Roads Bridges and Structures on which Visible Telecommunication Facilities are Not Permitted

Attachment of visible telecommunication facilities (eg microwave dishes, mobile phone antennae, etc) is not permitted on the following Main Roads structures:

- Camera poles;
- High Mast Road Lighting Poles;
- Pedestrian Bridges; and
- Road Bridges.

Attachment of microwave dishes or antennae to Gantry Variable Message Signs is not permitted.

3.4.3.3 Main Roads Structures on which Visible Telecommunication Facilities are Permitted


3.5 ROAD RESERVES WITH CONTROL OF ACCESS THAT CONTAIN A SINGLE CARRIAGEWAY ROAD

For the purpose of this Section, ‘Road reserves with Control of Access’ include such roads planned by Main Roads WA and DPI to be built in the future.

The requirements for Utility Provider services within regional road reserves with Control of Access containing a single carriageway road are the same as those for utility services within road reserves without Control of Access that are located in regional non-townsite areas (refer to Section 3.4.2 above). In the case of single carriageway roads in the Metropolitan area, conditions in Section 3.6 would apply.
3.6 ROAD RESERVES WITH CONTROL OF ACCESS THAT CONTAIN A DUAL CARRIAGEWAY ROAD WITH AT-GRADE INTERSECTIONS

For the purpose of this Section, ‘Road reserves with Control of Access’ include existing roads and roads planned by Main Roads WA and DPI to be built in the future.

The following requirements shall apply to all Utility Providers:

- **Existing longitudinal or transverse utility services**
  These utility services shall be located such that:
  - They meet all ‘clear zone’ (refer to Definition in Section 1. above) widths or provision of frangible protection or safety barrier protection;
  - The area for any maintenance work is at least 3.0m clear of the nearest seal edge or kerb;
  - Above ground elements of a utility service are set back at least 4.5m from the nearest seal edge for un-kerbed roads and 3.0m for kerbed roads and such that they do not present a physical or visual hazard to road users;
  - Overhead road crossings are to be supported by a bridge or structure (approved by Main Roads), the supports of which are located at least 9.0m outside the pavement and satisfy standards for clearance of utility services above the road; and
  - When existing longitudinal or transverse utility services are due for renewal or conflict with future roadworks, then:
    - Non-trunk utility services are to be removed;
    - Longitudinal trunk utility services are to be relocated outside the road reserve unless, to the satisfaction of Main Roads, this is impractical or cost prohibitive; and
    - The costs involved in the relocation of these utility services are the responsibility of the Service Provider (Principal Agency).
  - Existing utility services that do not meet these requirements and will not affect the safe operation of the existing or future road, may remain provided that maintenance of the utility service can be carried out without disruption to road traffic flow.
  - Existing utility services that do not meet these requirements and will affect the safe operation of the existing or future road (as determined by Main Roads WA), need appropriate action to be taken by the Utility Provider to either meet these requirements or relocate the service outside the road reserve with all associated costs being the responsibility of the Utility Service Provider.

- **Access for construction and maintenance of existing and new utility services**
  Access shall be from perimeter gates abutting side roads or ramp shoulders/breakdown lanes that are at least 2.4m wide, ducts or tunnels to the satisfaction of Main Roads.

- **Existing and new overhead utility services at intersections**
  These services shall meet all ‘clear zone’ widths or provision of frangible protection or safety barrier protection. They will be located such that they have at least 6.0m lateral clearance to the edge of the road shoulder or kerbline and road user sight distances are not impaired.

- **New longitudinal trunk utility services**
  These services should be located in service roads or adjacent to dedicated service easements outside the road reserve. If in a service road, the utility service
facility may be located beneath the pavement if the verge space is inadequate. Where service roads or service easements do not exist, Utility Providers should arrange for a dedicated service easement. If it is assessed, to the satisfaction of Main Roads, that a service road, service easement or alternative service route is impractical or cost prohibitive, then the longitudinal trunk utility service may be permitted within the State road reserve with approval by the Commissioner or delegated Executive Director.

- **New transverse crossings of overhead trunk utility services**
  These services are permitted. They should be carried by a structure on supports located outside the Control of Access road reserve and satisfy clearance standards of the utility service above the road. When this is not practical, supports shall be at least 9.0m clear of the edges of shoulders or kerbs and not within medians less than 24.0m wide. The design, location and operation of utility services shall be such that they do not affect the safe operation of the road; maintenance of the utility service can be carried out without disruption to road traffic flow and access to utility services for maintenance is from routes approved by Main Roads: from perimeter gates abutting side roads or ramp shoulders/breakdown lanes that are at least 2.4m wide, ducts or tunnels.

3.7 **ROAD RESERVES WITH CONTROL OF ACCESS THAT CONTAIN A DUAL CARRIAGEWAY ROAD WITH GRADE-SEPARATED INTERSECTIONS**

For the purpose of this Section, ‘Road reserves with Control of Access’ include existing roads and those roads planned by Main Roads WA and DPI to be built in the future.

The following requirements shall apply to all Utility Providers:

- **Non-Trunk Utility Services**
  Existing non-trunk utility services shall be removed and new utility services are not permitted.

- **Existing Trunk Utility Services, other than Overhead Lines**
  Existing trunk utility services (except overhead lines) may remain provided:
  - They do not affect the safe operation of the existing and future road;
  - Maintenance of the utility service can be carried out without disruption to road traffic flow; and
  - Access to utility services for maintenance is from routes approved by Main Roads: from perimeter gates abutting side roads or ramp shoulders/breakdown lanes that are at least 2.4m wide, ducts or tunnels.

- **New Trunk Utility Services, other than Overhead Lines**
  New trunk utility services (except overhead lines) are permitted provided:
  - Continuous longitudinal utility services are placed underground and are located as close as possible to the reserve boundary or within a specific dedicated easement. Multiple utility services are to be located within common trenches, ducts or tunnels. New longitudinal trunk utility services are not to affect the design, safety or operation of the existing or future road;
  - All alternative routes/sites are impractical, unreasonably costly or other mitigating circumstances acceptable to Main Roads; or, the Utility Provider (Principal Agency) obtains a written agreement with Main Roads that if the utility service conflicts with future roadwork they will, within the timeframe set by Main Roads, modify or remove the utility service at no cost to Main Roads;
  - The utility services do not affect the safe operation of the existing and future road;
  - Installation and maintenance of the utility services can be carried out without
disruption to road traffic flow, in particular junction pits and access chambers required for any maintenance work are to be located at least 5.0m clear of the edge of road shoulder or kerbline;
- Access to utility service sites for installation and maintenance is from routes approved by Main Roads: from perimeter gates abutting side roads or ramp shoulders/breakdown lanes that are at least 2.4m wide, ducts or tunnels; and
- When a utility service is proposed to be accommodated on a traffic bridge or structure, its location and attachment is to comply with Main Roads aesthetic and structural requirements and the Utility Provider is to have a Utility Service Management Agreement (refer to examples in Appendix 2 below) with Main Roads.

- **Overhead Line Trunk Utility Services**
  Existing trunk utility services may remain and new utility services installed, provided:
  - The trunk utility service is in an easement specifically for the trunk utility service; and
  - The trunk utility service meets all other requirements of this Guideline for New Trunk Utility Services (refer above).

- **Utility Services along a Cross Road**
  Utility services along a side road passing under or over the grade separated road should be located along the standard street alignment for that utility service and maintained by access from the side road. The maintenance work area shall not extend into any trafficable area on a Local road or within 5.0m of any trafficable area of a State road or a grade separated intersection ramp.

- **Irrigation and water channel crossings**
  Irrigation and water channel crossings are permitted within the road reserve where, to the satisfaction of Main Roads, no alternative route/location is available. The crossings shall be siphon, culvert or bridge over the whole portion within the road reserve and the design shall meet Main Roads requirements for traffic and maintenance equipment loading, traffic safety and maintenance operations and maintenance worker safety.

4. **APPROVAL**

4.1 **APPLICATIONS**

4.1.1 **General**

Utility Providers are required to submit an Application to Main Roads for all intrusive activities (refer to Definition in 1. above) in existing and planned State road reserves.

Applications for emergency work by a Utility Provider are not required as they have statutory exemption. However, the Utility Provider is expected to advise Main Roads of the emergency work as soon as practicable (refer to Section 3.3 above) and where appropriate comply with the requirements in this Guideline.

**Note** - The Telecommunications Act 1997 requires Telecommunication Carriers, for facilities that are not low-impact, to submit development applications for these facilities in accordance with the requirements of the relevant State planning authority. Approval of development applications is the responsibility of the relevant Local Government. Local Governments are required to seek comment from Main Roads if the proposal impacts on a State road and to include appropriate conditions requested by Main Roads in approval notices. A Schedule of Telecommunication ‘Low-impact Facilities’ is given in the
Telecommunications Act 1997 - Telecommunications (Low-Impact Facilities) Determination 1997. In particular the Determination states that the following are not low-impact facilities:

- Designated overhead lines;
- A tower that is not attached to a building;
- A tower attached to a building and is more than 5 metres high;
- An extension to a tower that has previously been extended; and
- An extension to a tower, if the extension is more than 5 metres high.

4.1.2 Submission of Applications

Applications are to be in accordance with the UPCoP Sections 4.3.1(d), 4.3.2 and 4.3.3 and submitted on a MRWA Application Form (refer to Main Roads WA Website: Traffic > Roadworks > Working on Main Roads > State Roads - Applications to Undertake Works - Utility Service Providers).

Applications should be submitted to the relevant Director Metropolitan Operations, Regional Manager or Project Manager (associated with Major Projects).

4.2 APPROVALS

Approval of an application by a Utility Provider, that meets Main Roads’ conditions for works within a State road reserve that is not declared Control of Access, shall be provided by the relevant Project Manager or delegated officer.

Approval of utility services in State roads with declared Control of Access, including a Utility Service Management Agreement (refer to Section 2. of the Policy and Section 3.7 of these Guidelines above) shall be provided by the Commissioner or delegated Executive Director.

Main Roads’ endorsement of a Telecommunication Carrier development application for a facility that is not a low-impact facility, shall include a request that the Local Government include in its conditions for approval of the facility that ‘The Telecommunication Carrier is to have a Lease Agreement (refer below) with Main Roads’.

Notes on Lease Agreements:

1. The Telecommunication Carrier is to forward a Lease Agreement proposal, together with a $1,000.00 application fee (cheque or money order payable to the Commissioner of Main Roads) to Main Roads Manager Legal and Commercial Services for registration and forwarding to the relevant Director Metropolitan Operations, Regional Manager or Project Manager for evaluation and recommendations. A checklist of items that may need to be considered is provided in Appendix 1 (refer below). The Director Metropolitan Operations, Regional Manager or Project Manager shall respond within 21 business days. The Manager Legal and Commercial Services shall negotiate finalisation of the Lease Agreement, including signatures, and advise the relevant Director or Manager.

2. The Lease Agreement is to include a requirement that before any physical work is undertaken on site, the Telecommunication Carrier is required to submit traffic control plans and procedures for approval by Main Roads, including those plans and procedures associated with installation, routine maintenance and emergency maintenance works, prior to the commencement of works.
Appendix 1

Telecommunications Service Facility
ASSESSMENT CHECKLIST

Site: ...........................................................................................................................
Applicant: ...................................................................................................................
File Reference: ........................................................................................................
Date Received: ..........................................................................................................

1. IS MRWA AFFECTED?

Is facility inside or outside the existing MRS road reserve?
- INSIDE
  Is proposal affected by funded ten year plan or further out?
  Check Annual Program
  Check (if any) proposed Statutory Planning amendments
  Check latest Road Reserves Review (is the MRS where it is)
  Check (if any) Regional Development Plans or Planning Control Area
- OUTSIDE
  Is it proposed to increase the MRS? eg widening for services corridor, bike path widening or drainage stripping pond.
    • No (MRWA not affected - send response Main Roads has no objections to the proposal.)
    • Yes (continue formal assessment)

2. LAND OWNERSHIP DETAILS PROVIDED

☐ No (request from proponent)
☐ Yes Certificate of Title: Volume ..........Folio ........

3. SITE WITHIN ROAD RESERVE:

☐ No

☐ Yes Road Name: .................................................................
  Control of Access ☐ Yes ☐ No
  Dedicated Road ☐ Yes ☐ No
  Fenced off from main road ☐ Yes ☐ No

(Confirm Vesting Arrangements if Crown Land)
Is CMR the (only) responsible authority? (other agencies?) ☐ Yes ☐ No
Operational agreement prepared? ☐ Yes ☐ No
4. PROPOSED ACCESS TO SITE:

Construction Access to tower footing and pole (inc semitrailer access and cranage)
From adjacent road

☐ Yes  Road Name: .................................................................

☐ No  (Agreement obtained from adjoining owner?)

Maintenance Access to base station compound (number, size of vehicle and frequency of visits)
From MRWA side?  ☐ Yes  ☐ No
From proponent side?  ☐ Yes  ☐ No
Accessible after hours?  ☐ Yes  ☐ No
Control of Access affected?  ☐ Yes  ☐ No

5. UNDERGROUND SERVICES TO SITE

Services require access from MRWA side?  ☐ Yes  ☐ No
Power and fibre optic are underground?  ☐ Yes  ☐ No
Services alignment surveyed?  ☐ Yes  ☐ No
Is diagram ready for lodgement?  ☐ Yes  ☐ No

6. VISIBILITY/AESTHETICS

Monopole or lattice tower?  ☐ Yes  ☐ No
Are cable stays external to the pole?  ☐ Yes  ☐ No
Impact on existing vegetation?  ☐ Yes  ☐ No

7. SERVICES AFFECTING STRUCTURES, INCLUDING BRIDGES

Attachment detail to structure?  ☐ Yes  ☐ No
Abutment detail for connection of service back to road?  ☐ Yes  ☐ No
Service size/detail to enable a structural assessment?  ☐ Yes  ☐ No

8. LOCATION DRAWINGS

Drawings submitted for review?  ☐ Yes  ☐ No
Is Cadastral shown correct?  ☐ Yes  ☐ No
Dimensions checked on site?  ☐ Yes  ☐ No
Is equipment shelter fencing outside safety zone?  ☐ Yes  ☐ No
Does shelter restrict visibility for drivers, pedestrians and cyclists?  ☐ Yes  ☐ No
Is Fencing appropriate for surrounding area?  ☐ Yes  ☐ No
Is a Drainage management plan in place?  ☐ Yes  ☐ No
Are Anti-graffiti measures in place?  ☐ Yes  ☐ No
Is Contact nameplate for gate shown on drawings?  ☐ Yes  ☐ No
8. CO-LOCATION (FACILITATION)

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<td>Is adjacent land available for another equipment shelter?</td>
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<td>Is layout suitable (ie. can all access common pole)?</td>
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<tr>
<td>Ensure all carriers can use common access point?</td>
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9. ENVIRONMENT

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<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Check Register of Places (Heritage Council of WA).</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Check also Municipal Inventory (List of Classified Places).</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Check Aboriginal Sites Register.</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Is Section 18 clearance required or obtained?</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Does area have any Declared Rare Flora?</td>
<td>☐</td>
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</tr>
</tbody>
</table>

10. RECOMMENDATION

To Regional Manager or Project Manager Major Projects for signing of Form 1 and forwarding to Manager Legal and Commercial Services for advice to applicant.

List any conditions of approval:

- Details of any special access arrangements.
- The design and construction of the proposed access driveway and parking area to comply with Main Roads standards and specifications and is to be approved before any work is commenced.
- Submission of suitable traffic management plan for both construction and for future maintenance.
- Detailed plans to address any possible drainage issues.
- There is to be minimum impact on vegetation.
- Services shall be underground.
- The facility is to be relocated at no cost if land is required for road works.
- Compliance with MRWA Standard Facilities Agreement
- Other
Appendix 2

Utility Service Management Agreement - Examples

Example 1

28 November 2003

Mr B Hinkler
Manager Transmission Assets
Western Power
GPO Box L 921
PERTH WA 6842

ATTENTION: MR IAN BUCHANAN

Dear Sirs

WESTERN POWER 132KV TRANSMISSION LINE THROUGH BURSWOOD BRIDGE
– CONDITIONS OF ATTACHMENT

You may recall that in October 1999 I wrote to you regarding the installation of the 132kV line circuit, circuit, connections and associated infrastructure (the "132kV Line Circuit") within the Burswood Bridge box girder structure (the Bridge). A copy of that letter is attached. No response to that letter has been received but it is noted that Western Power proceeded with the installation of the 132kV line circuit shortly afterwards.

In the letter, Main Roads stated that it had no objection to the installation of the 132kV line circuit within the Bridge but specified the conditions governing the installation of the 132kV line circuit.

Main Roads wishes to formally agree those conditions as follows:

a) Western Power agrees that the all connection details of the conduits to the Bridge shall be:
   i) suitable to support the conduits without undue stress or deflection to either conduits or the structure;
   ii) shall be fabricated from durable materials; and
   iii) require minimum maintenance.

b) Western Power agrees to take full responsibility for the erection and subsequent maintenance of the 132kV Line Circuit and to bear all costs associated with doing so. The maintenance is to be to the satisfaction of Main Roads.

c) Western Power agrees to indemnify and keep indemnified the Commissioner of Main Roads for all damage to the structure of the Burswood Bridge arising from the installation of the 132kV Line Circuit and arising as a result of the 132kV Line Circuit’s presence on the bridge.

d) Western Power agrees to indemnify and keep indemnified the Commissioner of Main Roads from and against all actions, suits, proceedings, claims and demands taken, made or brought by any person against the Commissioner of Main Roads in respect of:
i) the injury or death of any person in the course of, or caused directly or indirectly by, the installation of the 132kV Line Circuit or arising as a result of the 132kV Line Circuit’s presence within the Bridge but not by the negligence of the Commissioner of Main Roads, his employees, contractors or agents;

ii) the loss of or damage to property (whether real or personal) in the course of or caused directly or indirectly by the installation of the 132kV Line Circuit within the Bridge but not by the negligence of the Commissioner of Main Roads, his employees, contractors or agents.

e) Western Power agrees to relocate the 132kV Line Circuit at the request of Main Roads where this is necessary for Main Roads future operational requirements and to bear all costs associated with doing so.

Could you please confirm Western Power’s acceptance of these conditions by return letter.

If you require any further information please contact Alastair Burvill on 9323 4562. In reply please quote file reference 93-5326-2.

Yours faithfully

John Fischer
PROJECT DIRECTOR
Dear Sir

SOUTHERN SUBURBS RAILWAY – PACKAGE A
PROPOSED BORE FOR CONSTRUCTION WATER FOR BUNBURY REALIGNMENT WORKS

I refer to the email request of 22 March 2005 from your Mr Brenton Perry to our Mr Rob Arnott concerning the above matter which has been referred to me for response.

I understand that Rail Link is requesting Main Roads approval to construct a bore for construction water (the “Bore”) at the site depicted in the attached diagram. This site is road reserve (the “Road Reserve”) under the care, control and management of Main Roads. RailLink proposes to pump water from this site to Dampier Drive and under Dampier Drive to its worksite in a black polythene pipe (the “Pipe”). I understand that the bore is currently scheduled to be constructed in early May 2005 and the use of the bore will continue until approximately October 2005. The water is to be used for the Bunbury Highway realignment works between Anstey Drive and Dampier Drive as part of the Southern Suburbs Railway project.

I will refer to the proposal described in the paragraph above including, without limitation, the operation of the Bore and the use of the Pipe as the “Works”.

I advise that Main Roads has no objection to the Works proceeding on the following basis:

- RailLink does not commence the Works until Main Roads has approved the site of the Bore and the route for the Pipe.
- RailLink agrees to bear all costs associated with the Works.
- RailLink must obtain all necessary authorisations in respect of the Works including, without limitation, environmental approvals.
- RailLink agrees that at any location where the Pipe will cross under road pavement, RailLink shall use thrust boring technology or other civil construction industry accepted trenchless tunnelling methods and shall minimise any disruption to traffic using that road, and shall promptly restore any affected parts of the road to their condition prior to their disturbance by RailLink at its cost to the satisfaction of Main Roads.
When working on or immediately adjacent to trafficked roads, RailLink shall take appropriate measures for the protection of employees, road users, other persons and property. Any temporary signing shall be in accordance with the current version of Main Roads Western Australia publication “Traffic Management for Works on Roads Code of Practice”.

f) RailLink shall ensure that motorists are protected from any hazard created by the Works at all times. Attention is drawn to the clear zone requirements for roadways.

g) At the conclusion of the Works, RailLink shall cap or remove the Bore and make good at its cost, to the reasonable satisfaction of Main Roads, any damage to the Road Reserve caused by the Works including the reinstatement of vegetation. If, in the reasonable opinion of Main Roads, RailLink has not satisfactorily reinstated the Road Reserve, Main Roads may direct RailLink to do so in writing. If RailLink has not complied with the direction within 10 days, Main Roads may undertake any works necessary to obtain compliance with Main Roads' direction and RailLink shall pay Main Roads costs of doing so within 30 days of receiving an invoice from Main Roads.

h) RailLink agrees to indemnify and keep indemnified the Commissioner of Main Roads for all damage to the Road Reserve and Main Roads' assets within that Road Reserve arising from the Works or as a result of the presence of the Pipe or the Bore in the Road Reserve.

i) RailLink agrees to indemnify and keep indemnified the Commissioner of Main Roads from and against all actions, suits, proceedings, claims and demands taken, made or brought by any person against the Commissioner of Main Roads in respect of:

i) the injury or death of any person in the course of, or caused directly or indirectly by, the Works, or arising as a result of the presence of the Pipe or the Bore within the Road Reserve but not by the negligence of the Commissioner of Main Roads, his employees, contractors or agents;

ii) the loss of or damage to property (whether real or personal) in the course of or caused directly or indirectly by the Works, or arising as a result of the presence of the Pipe or the Bore within the road reserve but not by the negligence of the Commissioner of Main Roads, his employees, contractors or agents; and

iii) any lowering of the water table and resulting impact on vegetation and private bores in the vicinity of the Bore.

j) Nothing in this letter (including any ambiguity, discrepancy or inconsistency) is to be interpreted against Main Roads on the grounds that Main Roads has prepared it (or any part of it) or on the grounds of Main Roads relying on the provisions of it (or any part of it) to its benefit.

If you wish to proceed, could you please confirm Rail Link's acceptance of these conditions by return letter signed by a person with authority to sign on behalf of all companies comprising the Rail Link Joint Venture.

If you require any further information please contact Rob Arnott on 9323 4413. In reply please quote file reference 02/1408-04[D05#…].
Yours faithfully,

Ray Seman
Regional Manager Metropolitan

enc
UTILITY SERVICES in ROAD RESERVES
TECHNICAL GUIDELINES

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Appendix 1 - Utility Providers Contact Information
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1. DEFINITIONS AND REFERENCES

Unless otherwise defined in these Technical Guidelines, refer to Definitions and References in the 'Utility Services Application and Approval Guidelines', Section 1.

2. DESIGN

2.1 GENERAL

The design and location of utility services should comply with:
- UPCoP Sections 3, 5, 6 and 8; and
- AS 1742.2 Clause 3.6.7.2 (c) - Width markers (D4-3) on poles.

2.2 COMBUSTIBLE LIQUIDS AND FLAMMABLE FLUIDS

The design and location of utility services for combustible liquids and flammable fluids should comply with:
- Operational Guideline 85. Note: Internal use only.

2.3 BRIDGES AND STRUCTURES

The design and location of utility services (eg conduits, pipes, etc, but not visible facilities) attached to traffic bridges, traffic structures and other road service structures should comply with:
- UPCoP Section 4.3.9; and
- ‘Utility Services Application and Approval Guidelines’, Section 3.4.3.

3. INSTALLATION

3.1 GENERAL

Installation of utility services should comply with:
- Operational Guideline No 100: Installation of Underground Services within Road Reserves. Note: Internal use only; and
- UPCoP Sections 3 - 6 and 8.

3.2 TRAFFIC MANAGEMENT

Traffic Management for installation of utility services by Utility Providers shall be in accordance with the requirements of:
- UPCoP Sections 4.4.2 and Appendix C; and
- Operational Guideline No 100, Section 3, Traffic Management. Note: Internal use only.

4. RECORDS

Utility Providers are expected to keep ‘as-constructed’ drawings for all new and modified utility services showing their location in the road reserve, their typical depth of cover or typical height above the roadside ground surface and their actual depth of cover or actual height above the roadway surface at the time of installation or modification.
5. **MAINTENANCE**

Maintenance of utility services should comply with:

- UPCoP Sections 4.2 and 4.3.3.

6. **ABANDONED UTILITY SERVICES**

Abandonment of utility services should comply with the UPCoP Section 4.3.10.

7. **EMERGENCY PROCEDURE**

The procedures for emergencies associated with utility services should be in accordance with the UPCoP Section 7.

8. **RELOCATION OR PROTECTION OF UTILITY SERVICES AFFECTED BY ROADWORKS**

8.1 **GENERAL STANDARDS AND APPLICATION**

This section gives assistance on issues related to designing relocation or protection works required to accommodate road or bridge construction projects.

The relocation or protection of utility services are project specific and the impact to each individual project will need to be assessed on a project by project basis. For example, a Metropolitan or urban intersection may require a much greater level of investigation with regards to utility services relocation or protection than an isolated Regional non-urban project.

Project Managers must be aware that project delivery targets may be affected if inadequate investigation is undertaken.

As relocations or protections are project specific, Utility Providers and Main Roads need to consult as early as practicable during the project development stage to enable issues on relocation or protection of utility services to be resolved.

8.2 **IDENTIFYING AFFECTED UTILITY SERVICES**

8.2.1 **General**

Indicative locations of utility services can be obtained from Dial Before You Dig, Ph 1100 or Website: [www.dialbeforeyoudig.com.au](http://www.dialbeforeyoudig.com.au).

Some Utility Providers can provide electronic copies of plans, which also show the services of other Utility Providers such as Telstra, Alinta, etc. A list of contacts regarding Water Corporation, Western Power and Alinta is given in Appendix 1 of these Guidelines. Further contact information can be obtained from the UPCoP (Appendix A).

It is brought to the Designer's attention that information obtained from Utility Providers may not always be complete and accurate. In some instances, utility services may exist that are not shown on any plans provided by Utility Providers. Obtained utility services information can be of varying accuracy and quality and should be checked on-site to ensure that all utility services have been identified and that features shown on the plans correspond to what is on the ground; eg if a Telstra pit is shown on their plans then it needs to be located on-site. If a digital ground survey of the site is available this should also be checked on-site to ensure that all utility services have been identified and surveyed.
In some instances, the markers identifying a utility service may include information about
the exact location of the facility; e.g., fibre optic cable markers may indicate that the cable
is offset X m to the north of the marker. The Designer can use this information to create
a string indicating the approximate location of the utility service if the digital ground
survey contains this level of detail. This information should be stored in the Utility
Services Model described in Section 8.2.3 below and be accompanied with appropriate
documentation and metadata.

In addition to the Contact list provided in Appendix 1 of these Guidelines, the following
organisations also have utility services that may be encountered:

- Uecomm Limited: owns fibre optic telecommunications cable:
  contact Ph 9288 4500;

- Water and Rivers Commission have groundwater bores throughout the
  Metropolitan area;

- Western Mining have a number of services within rail reserves in particular slurry
  pipelines;

- Fremantle Port Authority have a number of private utility services around the Port
  area;

- Local Governments; and

- There are a number of mining companies (e.g., BHP, Rio Tinto, etc) that have
  services including power lines, sewerage, water mains, etc, associated with
  mining operations and mining towns.

In addition to utility services, it is brought to the Designer's attention that features such
as Main Roads and DOLA survey marks may also need to be relocated or protected.
Guidance and contact details can be obtained from the Main Roads' document 'Survey
Control - Protection of Survey Control and Pegs'. Refer to Main Roads WA Website:
Standards > Survey and Mapping > Geodetic > Survey Control.

It is the Designer's responsibility to ensure all affected Utility services are identified
(including survey marks) and appropriate action is taken to either relocate or protect
them.

8.2.2 Detailed Investigations

After all utility services within the project site are known, conflicts with the works can be
determined. The accuracy of supplied information for utility services will vary depending
on the type of service and its age. In the case of situations where the clearance between
the utility service and the proposed work is critical, it may be necessary to have the utility
service located and accurately surveyed to confirm its position.

After the conflicts have been identified, investigation can be undertaken to confirm if the
existing utility services have to be relocated or protected. It is desirable to protect
utility services rather than relocate which can be very costly.

Generally Utility Providers no longer provide plant location services and require the
proponent of the project works to accurately locate and confirm details such as existing
and proposed cover to utility services if this information is not already known.

The plans provided by the relevant Utility Providers are normally accompanied by a list
of accredited plant locators. The locators must be used to locate the utility service and if
necessary excavation undertaken to expose the service to obtain levels and check actual location. When undertaking location of utility services using electronic means, it is the Designer's responsibility to be aware of the accuracy limitations of the device used and any other constraints that may affect the accuracy of the information obtained. Sufficient potholing of the utility service should be undertaken to confirm alignment and depth of the service over the anticipated length to be affected by the works. After the utility service has been potholed, a surveyor should pick-up the location and level to the top of the service in accordance with Main Roads' Survey and Mapping Standard 'Digital Ground Survey' obtained from Main Roads WA Website: Standards > Survey and Mapping > Standards > Engineering Surveying Standard.

This information should be included in the Utility Services Model described in Section 8.2.3 below.

### 8.2.3 Utilities Services Model

In projects where utility services have been identified as being numerous and critical to the design and construction outcomes, a separate 'Utility Services' survey model should be created for all underground and overhead services. Typically this would be required on projects that have numerous utility services, both underground and overhead, which will require modification or protection. This digital model will enable Designers to accurately determine the impact of the project on utility services.

The information required for the digital model shall be obtained from the relevant Utility Providers and the project site as described above.

The 'Utility Services Model' shall be supplied in MX (formally MOSS) genio format in accordance with Main Roads' Survey and Mapping Standard 'Digital Ground Survey' (refer to Section 8.2.2 above).

In addition, Metadata shall be supplied for each utility service set of information, providing the following minimum details:

- **Source** (name of supplying Organisation and a Contact Position/Person);

- **Description** (a brief description of the data supplied);

- **Data Quality including the following:**
  
  Positional Accuracy - A statement of the expected absolute or relative accuracy of the data (including dependency on other datasets);
  
  Currency - Date of currency of the data or data elements;
  
  Completeness - Statement as to the level of completeness of the utility service included; and

- **Conditions** (any special conditions applied by the Utility Providers for works in the vicinity of utility services).
8.3 DESIGN OF UTILITY SERVICES RELOCATION OR PROTECTION WORKS

8.3.1 General

The relocation or protection of utility services include:

- Relocation of existing utility services to be clear of the works;
- Modification to existing utility services;
- Provision of appropriate permanent protection to existing utility services;
- Treatment of redundant or decommissioned (abandoned) utility services (refer to Section 6. above); and
- Any upgrade of an existing utility service is to comply with current or amended Legislation or meet the relevant Utility Provider’s or asset owner’s current minimum standards.

The Designer must ensure that the requirements of each Utility Provider are met and must obtain written approval and acceptance of all works to and around services from the affected Utility Providers.

Some Utility Providers will only allow their services to be relocated or modified during a particular time of the year. It is important that such restrictions be identified as early as possible.

It is desirable to have all utility services relocation or protection works completed prior to the commencement of the road construction works. There are some circumstances where this is not practical and co-ordination of road and utility services works needs to be considered and planned.

Utility Providers may also require access to the utility services for maintenance or repair purposes. Access requirements must be considered as part of the relocation or protection of these services. These requirements may include access tracks constructed at the top of cuts to access services such as powerlines, brick paving around the base of street lighting poles instead of in-situ concrete, etc.

Wherever possible the alignment of any new or relocated facility crossing the road must be perpendicular to the alignment of the carriageway.

Ideally all Utility Provider manholes should be placed clear of the pavement (including future widening or extension) unless in the case of existing services, the cost is prohibitive.

The ‘pavement’ as defined under AS 1348 ‘Road and Traffic Engineering’ - Glossary of Terms is ‘that portion of the carriageway placed above the sub-grade for the support of, and to form a running service for, vehicular traffic’.

Where practical:

- Utility services should be placed on the alignments detailed in Appendix B of the UPCoP.
• Above ground utility services should be placed outside of the 'clear zone'.

Indicative requirements for each of the Utility Providers is given in Section 8.5 below.

8.3.2 Enhancement of Existing Utility Services

In designing utility service relocations or protection, consideration shall be given to any future enhancement of the services, which is likely to impact on the proposed design within the next five years. This information shall be obtained from the affected Utility Providers.

These enhancements shall be documented by the Designer and solutions proposed to minimise the impacts. Enhancements to existing services that are requested by the Utility Provider must be documented and forwarded to the Project Manager.

Costs associated with the enhancement of utility services are the responsibility of the Utility Provider.

8.3.3 Redundant or Abandoned Utility Services

Where existing utility services become redundant or abandoned and associated conduits and structures are located under road formations or bridge foundations, such services, conduits and structures must be removed or alternatively be entirely filled in-situ with concrete slurry.

The open ends of any remaining conduits, and apertures left in remaining structures must be permanently sealed off to exclude water, sand or other material following completion of the relocation works.

Also refer to Section 6. above.

8.3.4 Ducts

Any existing general purpose ducts and draw wires must be extended under new embankments or pavements unless conflict with other utility services makes the extension impossible. Duct ends must be capped, permanently marked on the surface and the position in project co-ordinates and level recorded on the 'as constructed' drawings. Existing general purpose ducts may be used for electrical services only.

8.4 UTILITY SERVICES ON BRIDGES

8.4.1 New Bridges

If the project contains bridge(s) the Designer must consult with all relevant Utility Providers to determine whether they require allowance for the provision of future utility services on any of the bridge structures. If a Utility Provider requires provision on a bridge, the Designer shall obtain a 'Service Management Agreement' with the Utility Provider that details all obligations of the Utility Provider regarding costs, installation, relocation, maintenance and removal of the service. Refer to the 'Utility Services Application and Approval Guidelines', Section 3.4.3. For project specific requirements, the Senior Engineer Structures (SES) must be consulted.

When utility services are located on bridges, where feasible, they should be concealed from public view within the bridge superstructure. Adequate provision must be made for future inspection, maintenance and possible replacement.
8.4.2 Existing Bridges

When utility services are proposed to be installed on existing bridges, the Engineer Bridge Loading (EBL) is responsible for assessing the additional load applied to the bridge, inconvenience or danger to the public and/or maintenance crews, overall aesthetics, impact on access to the structure for future maintenance and effects on the long term durability.

Approval for the attachment of utility services to these bridges, based on a recommendation by the EBL, is provided by the SES.

As with new bridges, the Utility Provider is required to obtain a 'Service Management Agreement' prior to installation (refer to 8.4.1 above).

8.5 UTILITY PROVIDER REQUIREMENTS

8.5.1 General

The following sections outline indicative requirements of the Utility Providers. Specific requirements are to be confirmed by the Designer on a project by project basis. It is important that this occurs at an early stage in the project development in order to identify any issues that may affect the design or completion of the proposed works.

Where the relocation or protection works are to be included as either part of a roadworks or bridgeworks contract or as a separate pre-construction contract, the requirements of the Utility Providers will need to be incorporated into the technical specification for the works.

8.5.2 Water Corporation

The Water Corporation no longer undertakes design work associated with service relocations, protection, extensions and improvements. Therefore, any of its services affected by a road project need to be designed for the appropriate action.

Water Corporation services that could be affected by a project include:

- Water trunk, distribution, reticulation and bore mains;
- Main sewers, reticulation sewers, property connections and sewerage pressure mains;
- Main drains (piped and open) and compensating basins; and
- Water services.

Road projects could affect the Water Corporation's planning assumptions for its main drainage services. This may result in upgrading requirements outside of the project site that the Water Corporation could require to be included within a project.

Water Corporation pipeline services that are required for future growth in demand or in order to replace aging assets, might need to be incorporated into a project because restriction of future access could prevent construction along optimum routes and/or an increase in construction costs.

Service relocations must be in accordance with the Water Corporation's long term asset planning.
The Water Corporation's pipeline services must be protected during the road project to enable its operation, maintenance and repair to be undertaken without major effects or inconvenience to its customers.

Access to land owned and managed by the Water Corporation, including water supply catchment areas, must be approved by the appropriate Asset Manager in the Water Corporation, who will initiate land transfer action where appropriate.

Service designs must be approved by the Water Corporation before the work is commenced. All design work will need to be in accordance with current Water Corporation design manuals and standards. Design submissions, inspection and 'as constructed' information requirements, procedures and contacts are available in the Developers Manual, which is available on the Water Corporation's Website: www.watercorporation.com.au/_files/PublicationsRegister/1/dm.pdf. Specific requirements for each project can be obtained by contacting Water Corporation on 13 13 95.

For water trunk and distribution mains, at least six months notice of intent to shut down must be provided to the Water Corporation to allow the integration of the proposed work with water supply operating strategy. It should also be noted that there are long lead times (approximately twelve weeks) in the supply of some of the materials (pipes and valves) associated with the larger water mains.

In addition to meeting the design requirements of the Water Corporation, all construction requirements, including reconnection to live mains, are to be included in the relevant contract documentation. The Water Corporation will inspect constructed, protected, relocated or modified services prior to connection to operational infrastructure to assess its compliance with relevant standards and manuals.

Generally the Water Corporation will require that its contractors be engaged to make final connections to existing operational infrastructure. This could be relaxed to enable project contractors to carry out final connection work in certain situations where operational risks and safety risks can be adequately controlled. Any such relaxation of this requirement shall be approved by the Water Corporation.

Where temporary diversions are required the diversion must receive endorsement of the Water Corporation prior to any works commencing. All diversions will need to be in accordance with current Water Corporation design manuals and standards unless otherwise agreed by the relevant Regional Asset Manager.

The Water Corporation’s technical advice can be obtained on 13 13 95 and provide information regarding specialist sub-contractors to construct, relocate or otherwise modify Water Corporation’s pipeline infrastructure.

8.5.3 Alinta

For steel gas mains that are to be subjected to future construction above the service, Alinta may require a DCVG (Direct Current Voltage Gradient) survey to be undertaken to determine the adequacy of the coating on the gas main.

Depth of cover should be in accordance with Section 5 of the UPCoP but this should be confirmed on a project by project basis with Alinta.

8.5.4 Western Power and Horizon Power

For areas of responsibility, refer to Website www.horizonpower.com.au/business/your_account/get_connected/licence_areas for a map (Horizon Power) showing the areas of responsibility of Western Power (indicated as
SWIS – South West Interconnected System) and Horizon Power.

Power services that could be affected by a project include:

- Street lighting;
- Underground power;
- Low voltage power or High voltage power above ground; and
- Telecommunications - Bright Telecommunications.

Contacts for these areas are normally provided on the information sheet from the Dial Before You Dig system. Refer also to Appendix 1 of these Guidelines and Appendix A of the UPCoP.

For overhead powerlines, clearance may be critical. To confirm that the clearance is adequate, a survey of the actual powerline may be required. If a survey is required, it should be undertaken to the accuracy of survey classification D in Appendix C of the Main Roads’ Survey and Mapping Standard ‘Digital Ground Survey’ (refer to 8.2.2 for Website reference).

Powerlines must be treated with extreme care and all necessary precautions shall be taken when surveying these lines. When undertaking this work duty of care is critical.

It is brought to the Designer’s attention that low voltage (< 66kV) and high voltage (> 66kV) power are dealt with by different sections within Western Power and Horizon Power.

Information regarding the Western Power 66 kV - 132 kV requirements can be obtained from the Network Support Manager on Ph 9326 4897. Currently the clearances from the road to the powerlines is normally 6.7 m. This is the minimum clearance and in special situations (eg agricultural routes) a clearance of 7.5 m is required. Clearance requirements shall be confirmed on a project by project basis with Western Power.

Information regarding the Horizon Power network can be obtained by contacting the organisation on Ph 1800 267 926.

Low voltage requirements (< 66 kV) can be obtained from Western Power on Ph 131 354, including details of the actual clearance required plus any special working requirements. Typically the clearance required is 5.6 m. For relocation issues the contact number is Ph 9411 7339.

In situations where traffic is diverted onto a side track or detour, adequate overhead clearance should also be maintained. If the traffic diversion is to be used for some time, it may be necessary to provide the clearances specified above.

The Designer should also check with Main Roads Heavy Vehicle Operations Branch (Ph 9311 8450) to determine the impact of the project on heavy vehicle routes which may require clearances greater than Western Power’s or Horizon Power’s minimum standard. Designers should also refer to the ‘Guide to the Operation of High Wide Loads Corridors’ for those routes where a 10m x 10m clearance envelope plus the electrical clearance are required.

8.5.5 Natural Gas Pipelines

There are a number of gas transmission pipelines and gas production flowlines constructed in Western Australia including:
- Dampier - Bunbury;
- Dongara Gas fields to Metropolitan area and Pinjarra;
- Karratha - Port Hedland (Pilbara Energy Pipeline); and
- Pilbara - Goldfields.

Refer to the UPCoP (Section 4.2 and Appendix A) for details of gas pipelines, pipeline operators and contact information.

All these pipelines carry gas at very high pressures (up to 8 480 kPa) and must be treated with extreme caution. Any disturbance of the pipes could lead to serious injury, loss of life and disruption of supply to domestic customers and industry. Serious damage does not only include cutting the pipe but also marking it sufficiently to reduce the wall thickness. The future safety of the pipeline will be impaired even if the damage is restricted to the pipe coating.

Easements and other right-of-way over the transmission pipeline between Dongara and Pinjarra have been acquired by the Pipeline Operators under the provisions of the Land Act. Pipeline warning signs are positioned near the pipeline at frequent intervals (maximum 250 metres). The easements extend about 10 m each side of the pipeline and generally prohibit construction work in the easement except with the prior written consent of the current Pipeline Operator. Similar easements, under the provisions of the Land Act, have been acquired where production flowlines cross roads in the Dongara area.

Alinta have a 30 m wide easement over the transmission pipeline between Dampier and Bunbury with the pipe being located about 6 m from the east boundary. Signs are normally placed about 1.5 m east of the pipeline. Laterals, however, have a 5 m wide easement with the pipeline position varying depending on property lines and obstacles. Signs are normally placed directly over the pipeline. Construction work within these easements is also prohibited except with the prior written consent of the Pipeline Operator.

If roadworks are constructed over the pipelines, the provision of adequate cover as well as the installation of a concrete slab is a typical requirement.

In 1992 Main Roads entered into an Agreement with WAPET and WANG (refer to Main Roads WA Files 73-42V2 or 72-32-25) to set out procedures to be followed when Main Roads works are to be carried out in their respective easements. In 1992 WAPET and WANG were the operators of gas transmission pipelines and production flowlines, particularly Dongara - Perth - Pinjarra. This pipeline is currently managed by APT Parmelia. The same Agreement has been in operation between Main Roads and subsequent Pipeline Operators. Similar arrangements apply in respect to the other Pipelines (including associated laterals), ie Dampier to Bunbury managed by Alinta, Karratha to Port Hedland managed by Epic Energy and Pilbara - Goldfields managed by Agility Management Pty Ltd.

The operational procedures required during construction or site inspection works are detailed in Operational Guideline No 85 (Note: internal use only), which is based on the original WAPET and WANG Agreement, or can be obtained by direct contact with the current Pipeline Operator.
Requests for approval to undertake work within the Pipeline or Flowline easements can be obtained from the relevant current Pipeline Operator. Refer to contact information in Appendix A of the UPCoP. Additional information regarding pipeline corridors, easements or reserves can be obtained from the Manager Infrastructure Corridors, Department for Planning and Infrastructure (Land Issues) Ph 9347 5130.

8.5.6 Telecommunication Carriers

Each telecommunication carrier may have specific requirements regarding the protection or relocation of their services located in road reserves.

The document ‘Telecommunications in Road Reserves - Operational Guidelines for Installations (2002 and subsequent amendments)’ - published by Austroads (reference AP-G72/02) provides guidance for the installation, use and maintenance of these services within the road reserve. Also refer to the companion document ‘Telecommunications in Road Reserves - Administrative Guidelines for Road Authorities (2002 and subsequent amendments)’ - published by Austroads (reference AP-R178/02) which provides guidance on the legal interpretation of the Telecommunications legislation to facilitate consistent and effective procedures in dealing with application proposals and agreements for the benefit of carriers and road authorities.

Main Roads has a Memorandum of Understanding (MOU) with Telstra. This document outlines obligations and procedures when Telstra undertakes works within road reserves under Main Roads’ control. This MOU was implemented in 1998 and is to be reviewed.

8.6 OTHER REQUIREMENTS

8.6.1 Notification to Undertake Works Within the Road Reserve

It is brought to the Designer’s attention that as part of relocating or protecting utility services, the Utility Providers or their contractors will be required to submit an Application for undertaking works within Main Roads’ road reserves on the prescribed Main Roads Application Form for Utility Service Providers, including those Utility Providers who have current MOU’s or Agreements with Main Roads (unless Application Form requirements have been included in the MOU or Agreement). Refer to the ‘Utility Services Application and Approval Guidelines’ Section 4.1.2 regarding accessing the Application Form. Depending on the site investigation works being undertaken by the Designer (eg locating and potholing of services, etc), the Director Metropolitan Operations, relevant Regional Manager or Project Manager shall be advised of these investigations and proposed service works.

This application form contains the minimum requirements, including environment and traffic management, for Utility Providers to advise Main Roads of proposed service works within the road reserve.

8.6.2 Meetings with Utility Providers

In consulting and liaising with Utility Providers, the Designer should invite the Main Roads’ Project Manager to attend these meetings whenever possible, to provide positive input and to be informed of Utility services issues.

8.6.3 Cost Estimates for the Relocation or Protection of Utility Services

Cost estimates should be prepared for the relocation or protection of the utility services. Some indicative costs may be obtained from Utility Providers, whilst others may need to be determined by the Designer.
It is important that the Designer or Project Manager check the status of utility service relocation responsibility regarding cost with the Manager Legal and Commercial Services, as Main Roads’ Policy, particularly road reserves with Control of Access and Structures, may require the Utility Provider to be responsible for relocation costs. Refer to the ‘Utility Services in Road Reserves Policy Statement’.

If Main Roads is responsible for the cost of relocating utility services, some Utility Providers may require prepayment for relocation or protection of the works prior to programming and budgeting of preconstruction works.

With respect to telecommunication carriers, it should be noted that the 1997 Telecommunication Act provides for compensation to be claimed by a road authority for various situations regarding alteration (including relocation) of services. Refer to the document ‘Telecommunications in Road Reserves - Administrative Guidelines for Road Authorities (2002 and subsequent amendments)’ published by Austroads (reference AP-R178/02).

8.6.4 Documentation

The following documentation, as a minimum, should be prepared to support proposed relocation or protection of Utility Services:

- Cost estimates for the works and responsible Agency for payment of these works.
- Alternatives options to relocation of services eg protection of services or adjusting of road alignment or profile to avoid significant services.
- Access requirements to services if applicable (refer to the ‘Utility Services Application and Approval Guidelines’ Section 3.).
- Timing issues, eg certain services can only be relocated during particular periods of the year due to availability of materials or equipment, etc.
- Any other issues which are applicable to the management of the project.
9. REFERENCES

Utility Services in Road Reserves - Policy Statement - Main Roads Western Australia.

Utility Services - Application and Approval Guidelines - Main Roads Western Australia.

AS 1348 - Road and Traffic Engineering Glossary of Terms - published by Standards Australia.

Utility Providers Code of Practice for Western Australia (2007) and subsequent amendments - produced by the Utility Providers Services Committee (UPCoP).

Survey Control - Main Roads Western Australia.

Digital Ground Survey - Survey and Mapping Standard - Main Roads Western Australia.

Guide to Road Safety Barriers - Main Roads Western Australia.

Operational Guideline No 85 - Natural Gas Pipelines and Flowlines - Main Roads Western Australia. **Note:** For internal use only.

Operational Guideline No 100: Installation of Underground Services within Road Reserves - Main Roads Western Australia. **Note:** For internal use only.

Application Form for Utility Service Providers and Local Governments to Undertake Works within Road Reserves Managed by Main Roads Western Australia.

Telecommunications in Road Reserves - Administrative Guidelines for Road Authorities (2002) and subsequent amendments - published by Austroads (document AP-R178/02).

Telecommunications in Road Reserves - Operational Guidelines for Installations (2002) and subsequent amendments - published by Austroads (document AP-G72/02).
Appendix 1 - Utility Providers Contact Information

For general Utility Service Provider contact information, refer to the Utility Providers Code of Practice for WA - Appendix A.

The following is contact information for Digital Data from Western Power, Water Corporation and Alinta:

**Western Power**
- **Phone**: 9411 7338
- **Fax**: 9411 7652
- **Format**: DXF
- **Grid**: GDA94
- **Data**: Western Power
- **How**: Fax plan showing area of interest for quotation of data to be supplied.

**Water Corporation**
- **Contact**: Reprographics Centre
- **Phone**: 9420 2605
- **Fax**: 9420 2215
- **Format**: AutoCAD 2000 or Microstation
- **Grid**: GDA94
- **Data**: Water, Sewerage, Contours, Cadastral, Drainage (if any)
- **Cost**: Data Cost is priced per Mb
- **How**: Fax plan showing area of interest.

**Alinta**
- **Phone**: 9486 2663
- **Fax**: 9486 2706
- **E-mail**: drawing.office@alinta.net.au
- **Format**: Microstation (preferred supply format) or DXF
- **Grid**: GDA94
- **Data**: Alinta
- **Cost**: $100/hour; typically a project would cost about $150-200
- **How**: Fax Plan showing area of interest for approx cost of data to be supplied.
Appendix 2 - Main Roads Standard Conditions for the Attachment of Utility Services to New and Existing Structures

The Designer shall obtain a ‘Service Management Agreement’ with the Utility Provider. Refer to the ‘Utility Services - Application and Approval Guidelines’, Section 4.3.3 for details.
UTILITY SERVICES in ROAD RESERVES
ADMINISTRATION GUIDELINES

CONTENTS
1. FEDERAL TENDERING REQUIREMENTS
2. NATURAL GAS PIPELINES and FLOWLINES
3. INSTALLATION of UNDERGROUND SERVICES
4. MAIN ROADS CAMERA POLES
5. SIGN GANTRIES and VARIABLE MESSAGE SIGNS
6. HIGH MAST ROAD LIGHTING POLES
7. PEDESTIAN BRIDGES
8. ROAD BRIDGES
9. ROAD TRAFFIC INFRASTRUCTURE and HIGH VOLTAGE ELECTRICAL CABLES
1. **FEDERAL TENDERING REQUIREMENTS FOR ALTERATION TO UTILITY SERVICES**

Refer to Main Roads WA Operational Guideline No 77. Note: for internal use only.

2. **NATURAL GAS PIPELINES AND FLOWLINES**

Refer to Main Roads WA Operational Guideline No 85. Note: for internal use only.

3. **INSTALLATION OF UNDERGROUND SERVICES**

Refer to Main Roads WA Operational Guideline No 100. Note: for internal use only.

4. **MAIN ROADS CAMERA POLES**

Attachment of visible telecommunication services (eg microwave dishes, mobile phone antennae, etc) to Main Roads camera poles is not permitted because:

- The attached service may increase the pole surface area, which will result in increased pole movement under wind loading and lower the quality of the camera pictures;
- Maintenance work of the camera requires lowering the top half of pole from mid a point hinge which may disrupt and/or compromise the security of the operation of the telecommunication service;
- The service may restrict the camera’s required 360 degree field of view; and
- The service’s electrical fields may interfere with the camera operation.

5. **MAIN ROADS SIGN GANTRIES AND VARIABLE MESSAGE SIGNS**

Attachment of microwave dishes or antennae to the gantry of Main Roads’ variable message signs is not permitted because:

- They are likely to be considered by the community to cause unacceptable visual pollution;
- They have the potential to cause interference to computerised variable message signs; and
- They would interfere with the safety of Main Roads and Contractor staff who are frequently required to access these gantries for operational and maintenance work.

6. **HIGH MAST ROAD LIGHTING POLES**

Attachment of visible telecommunication services (eg microwave dishes, mobile phone antennae, etc) to Main Roads’ high mast road lighting poles is not permitted because:

- Maintenance of lighting is carried out by lowering the lighting cradle ring which slides down around the pole. The pole uses an internal winch system to lower the lighting cradle ring; and
- They are likely to be considered by the community to cause unacceptable visual pollution.

Examples of these Poles are located at the Causeway East Interchange and the Kwinana Freeway/Mill Point Road Interchange.
7. PEDESTRIAN BRIDGES

Attachment of visible telecommunication services (eg microwave dishes, mobile phone antennae, etc) to Main Roads’ pedestrian bridges is not permitted because:

- They are likely to be considered by the community to cause unacceptable visual pollution.

8. ROAD BRIDGES

Attachment of visible telecommunication services (eg microwave dishes, mobile phone antennae, etc) to Main Roads’ road bridges is not permitted because:

- They are likely to be considered by the community to cause unacceptable visual pollution; and

- They would contribute to driver distraction and interference to traffic flow at the bridge which is unacceptable because:
  - Traffic flow across bridges is generally at or close to capacity, particularly in the Metropolitan area;
  - Space clear of traffic lanes is generally not available for traffic to detour around crash/broken down vehicles blocking traffic lanes; and
  - Incidents resulting from driver distractions can cause traffic congestion, with alternative bypass routes generally having greater travel times and are not an attractive option.

- Facilities on bridges, including road facilities, are limited to those essential for the driving task.

9. ROAD TRAFFIC INFRASTRUCTURE AND HIGH VOLTAGE ELECTRICAL CABLES

The placement of high voltage electrical cables at or near a signalised intersection or associated infrastructure such as traffic loops, CCTV, red light cameras, traffic signal control boxes, variable message signs, Intelligent Transport Systems facilities, permanent traffic counters or other road traffic electronic asset, can cause significant interference to these assets.

All these assets need to be located outside the ‘zone of interference’ from high voltage electrical cables.