14. Public utilities

14.1 Existing utilities

There is significant number of existing services on the proposed upgrade alignment. The services infrastructure within the study area includes: communications, electricity, water and sewer infrastructure.

The public utilities provided within the study area are summarised in Table 14-1.

Table 14-1 Major utilities within the study area

Utility class	Authority	Location	Service description
Communications	Telstra	Throughout	Trunk optic fibre and co-axial and copper networks, distribution copper networks.
	Optus	Section B	GSM mobile (radio relay station) tower on Kangaroo Trail Road.
Electricity	Country Energy	Throughout	66kV, 11kV and low voltage
Water	Coffs Harbour City Council	Section A and B	150 mm-300 mm diameter potable water mains
Sewerage	Coffs harbour City Council	Tasman Street, Corindi Sewerage Treatment Plant	150 mm diameter rising sewer main

14.2 Utilities impacted by the project

14.2.1 Communications

Telstra

Telstra has an extensive infrastructure network throughout the study area with key Sydney to Brisbane Optic Fibre cables, co-axial cable and copper distribution networks impacted by the proposed alignment. Due to the rural environment, some portions of the co-axial and copper network are included in the “Main Cable” network. The Main Cable network distributes information between local network exchanges and services isolated properties. Table 14-2 summarises the impacts to the Telstra Network from the proposed alignment.

Table 14-2 Telstra utilities impacted by the proposed alignment

Section	Telstra asset	Impacts	Adjustment / protection measure
Section A	Optic Fibre (OF)	The Telstra OF Sydney to Brisbane cable currently impacted where the proposed	Protection of the OF line will be required prior to commencement of

Section	Telstra asset	Impacts	Adjustment / protection measure
		alignment deviates from the existing highway at Ch 3750.	construction.
Section B	Main Cable	Three copper main cable lines cross the proposed alignment.	Relocation of the copper main cable lines required in the arterial upgrade scenario.
Section C	Optic Fibre (OF)	Duplication of the highway through Dirty Creek Range (Ch 11,800) impacts on dual OF crossing.	Construction of new optical fibre link required near Ch 11,800.
	Main Cable	Copper main cable located adjacent to the alignment from Ch 11,000 to 13,500.	Relocation of the copper main cable lines required in the arterial upgrade scenario.
Section D	Optic Fibre (OF)	Of potentially impacted by the Motorway standard service road in the existing Halfway Creek duplication.	No adjustment for Arterial upgrade.
	Local copper	Local copper network potentially impacted by proposed service road in existing Halfway Creek Duplication.	No adjustment for Arterial upgrade.
Section E	Optic Fibre (OF)	OF runs adjacent to proposed service roads in the motorway standard upgrade.	No adjustment for Arterial upgrade.
	Local Copper	Local copper network impacted by arterial and motorway standard upgrade.	No adjustment for Arterial upgrade.

Optus

An Optus GSM radio transmission tower near Kangaroo Trail Road is not impacted by the proposed alignment.

14.2.2 Electricity

Country Energy

Country Energy provides electricity to the rural properties along the existing route. The Country Energy network consists of eleven kilovolt overhead transmission lines and low voltage overhead and underground transmission lines servicing rural properties and lighting adjacent to the existing highway. Table 14-3 summarises the impacts to the Country Energy Network from the proposed alignment.

Table 14-3 Country Energy utilities impacted by the proposed alignment

Section	Country Energy asset	Impacts	Adjustment / protection measure
Section A	11 kilovolt (kV)	Country Energy transmission line will cross the proposed alignment where the proposed alignment deviates from the existing highway at Ch 3750.	Relocation of power poles and overhead line required at Ch 3750
Section B	11 kilovolt (kV)	Two 11kV overhead transmission lines cross the proposed route in Section B.	Minor adjustments to the location of power poles and overhead line required
Section C	11 kilovolt (kV)	Existing 11kV overhead transmission lines cross the highway at Range Road East and Ch 12,300. The 11kV follows the proposed alignment for approximately 1 km. This will be impacted by the proposed motorway standard service road.	Minor adjustments to the location of power poles and overhead line required at Ch 12,300 No other impacts in the arterial upgrade scenario.
Section D	11 kilovolt (kV)	Existing 11kV overhead transmission line crosses the highway at Dunmar Lane. The proposed motorway standard service road will impact the transmission line in the vicinity Grays Road. 11kV line in the vicinity of Lemon Tree Road will be impacted in the motorway standard upgrade.	No impacts in the arterial upgrade scenario.
	Low Voltage	Low voltage underground transmission lines servicing lights at the intersection of Lemon Tree Road will be impacted in the motorway standard upgrade.	No impacts in the arterial upgrade scenario.
Section E	11 kilovolt (kV)	11kV overhead transmission line will be impacted in vicinity of Kungala Road and Luthers Road will be impacted in the motorway standard upgrade.	No impacts in the arterial upgrade scenario.

Section	Country Energy asset	Impacts	Adjustment / protection measure
	Low Voltage	Low voltage transmission lines in the vicinity of Kungala Road will be impacted in the motorway standard upgrade.	No impacts in the arterial upgrade scenario.

14.2.3 Water

The existing Coffs Harbour City Council 150 to 300 mm water main on the eastern side of the existing highway from Tasman Street to Arrawarra Beach Road will not be impacted by the proposed highway upgrade. No adjustment or protection is required.

14.2.4 Sewerage

A Coffs Harbour City Council Sewer Rising Main crosses the existing highway in Section A at Tasman Street and continues to the Corindi Sewerage Treatment Plant. The proposed alignment will cross this sewer rising main at approximately Chainage 4000. Protection of the existing sewer rising main is required.