

Scoping Report

Water Supply Pipeline

for the

Bowdens Silver Project

State Significant Development No. 5765

Prepared by:



R.W. CORKERY & CO. PTY. LIMITED

April 2019

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Bowdens Silver Project

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EXECUTIVE SUMMARY

Bowdens Silver Pty Ltd (Bowdens Silver) proposes to construct and operate an open cut mine to extract and process ore containing silver and small percentages of zinc and lead. The proposed Mine Site is located approximately 2.5km northeast of Lue village in the Mid-Western Regional Local Government Area. Bowdens Silver proposes to undertake ancillary works as part of the Project involving the construction of a water supply pipeline between the proposed Mine Site and two mines in the Ulan area, approximately 40km to the north-northwest, i.e. Ulan Coal Mine and Moolarben Coal Mine.

The need for the proposed water supply pipeline was established as a result of detailed surface water and groundwater investigations commissioned by Bowdens Silver. An average of 5.5ML/day of water is required for the Project of which approximately 2.6ML of water would be recovered daily from the thickeners and tailings storage facility (TSF). Other sources of make-up water for processing would include surface water (0.7ML/day) and groundwater (1.45ML/day). These volumes are averages and actual volumes would vary on a daily basis. The surface water and groundwater investigations established that these sources could not provide a reliable source of make-up water required for the Project.

Bowdens Silver investigated other possible reliable water sources which were discounted largely because of the reliance placed upon that water for agricultural uses, town water supplies and environmental flows.

The water supply pipeline would remove any uncertainties related to on-site water sources and would be designed to carry flows of up to 64L/sec or 5.5ML/day. The maximum pressures expected to be experienced along the pipeline would be 20 bar reflecting the approximately 220m elevation difference between Ulan (420m AHD) and the proposed processing plant (640m AHD).

The proposed water supply pipeline corridor would be approximately 56.4km in length (to the off-take point to both mines) and typically 12m to 15m wide with a wider area required for the proposed intermediate pumping station between the coal mines and the Mine Site. It is proposed that the pipeline would be laid in a trench approximately 0.9m wide and 1.7m deep for the bulk of its length. Approximately 33.8km (or 60%) of the pipeline would be constructed on privately-owned, freehold land with the remaining 22.6km (or 40%) constructed within public formed or unformed road reserves and Crown land.

It is estimated that the water supply pipeline would be constructed in a period of approximately 6 months. It is planned that the contractor would achieve the excavation, placement and backfilling of approximately 500m of the pipeline each operational day.

Crossing of substantial watercourses would involve either the use of existing structures such as culverts or causeways or directional boring methods. Some smaller watercourses/depressions may be traversed by a trench although an appropriate concrete/rock cover would be placed above the completed section(s) to prevent any future erosion. Roads traversed by the pipeline would preferably be under bored, however, it may be more practical to excavate a trench and backfill above the pipe in some circumstances, particularly for local unsealed roads.

Once the pipeline has been fully tested, pumping of water would commence at the required rate. Bowdens Silver proposes to operate the pipeline at a relatively constant flow rate 24 hours per day, 7 days per week with all water pumped to the raw water dam within the processing area.

Regular maintenance would be undertaken along the full length of the pipeline to ensure it is operating fully in accordance with the required specifications.

In the event that Council or another third party does not require the pipeline and associated infrastructure upon cessation of mining operations the pipeline will be decommissioned.

A review of the preliminary risks associated with a range of environmental attributes has established that:

- a low to moderate risk applies to ecology, surface water and traffic;
- a low risk applies to Aboriginal heritage, noise, soils, land uses, visual amenity, bush fires, social issues (relating to environmental amenity) and economic issues; and
- a very low risk applies to historic heritage and groundwater.

It is noted that a moderate beneficial risk would apply to social issues (relating to beneficial use of water).

It is concluded that the construction of the pipeline would result in a range of minor environmental impacts which would be achieved through the implementation of a range of design and operational safeguards and mitigation measures. Once operational, the pipeline would cause negligible adverse impacts and, apart from providing a reliable source of water for the mine, would offer the opportunity for water to be made available for fire fighting and potentially for agricultural use during drought periods.

1. INTRODUCTION

1.1 SCOPE

This Scoping Report has been prepared to introduce the proposed water supply pipeline between the proposed Bowdens Mine Site and two coal mines in the Ulan Area (the Ulan Mines) namely the Ulan Coal Mine and Moolarben Coal Mine. The report accompanies a request from Bowdens Silver Pty Ltd (Bowdens Silver) to the Department of Planning and Environment (DPE) for modified Secretary's Environmental Assessment Requirements (SEARs) for the Bowdens Silver Project (the Project). The need to request modified SEARs has arisen for two main reasons.

- i) Bowdens Silver has established that the most reliable long-term water source for the Project would be surplus water produced at two coal mines in the Ulan Area. The need for this water source was not anticipated when Bowdens Silver sought SEARs for the Project in November 2016.
- ii) The Project has recently been determined to be a 'controlled action' under the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999*, and as such, the DPE has requested that modified SEARs are sought to enable the Department to reflect the bilateral agreement between the NSW Government and Federal Government as it relates to the Project.

This document focusses upon the proposed water supply pipeline in order for relevant NSW State and local Government agencies to provide their specific requirements for inclusion in the modified SEARs for the water supply pipeline to be addressed in the EIS for the Project.

1.2 THE APPLICANT

The Applicant, Bowdens Silver, is a 100% owned subsidiary of Silver Mines Limited (Silver Mines). Silver Mines is a publicly listed mining company trading on the Australian Stock Exchange (ASX:SVL). The Applicant is committed to the development of the Bowdens Silver Project. The Feasibility Study for development was completed in mid-2018 determining a production profile of approximately 53 million ounces of silver over a 16 year mine life. Production of approximately 108 000 tonnes of zinc and approximately 79 000 tonnes of lead is also planned.

The Applicant is controlled by a Board of Directors and management team with a comprehensive range of skills and experience in exploration, mine development, finance and administration. Further information in relation to the Applicant is available at www.silvermines.com.au and www.bowdenssilver.com.au.

1.3 BACKGROUND

Bowdens Silver proposes to construct and operate an open cut mine to extract and process ore containing silver and small percentages of zinc and lead. The proposed Mine Site is located approximately 2.5km northeast of Lue village in the Mid-Western Region Local Government Area. The Project would comprise an open cut pit, processing plant, waste rock emplacement,

tailings storage facility, as well as ancillary components and associated infrastructure that would extract and process approximately 2 million tonnes of ore per year over an anticipated operational life of 16 years.

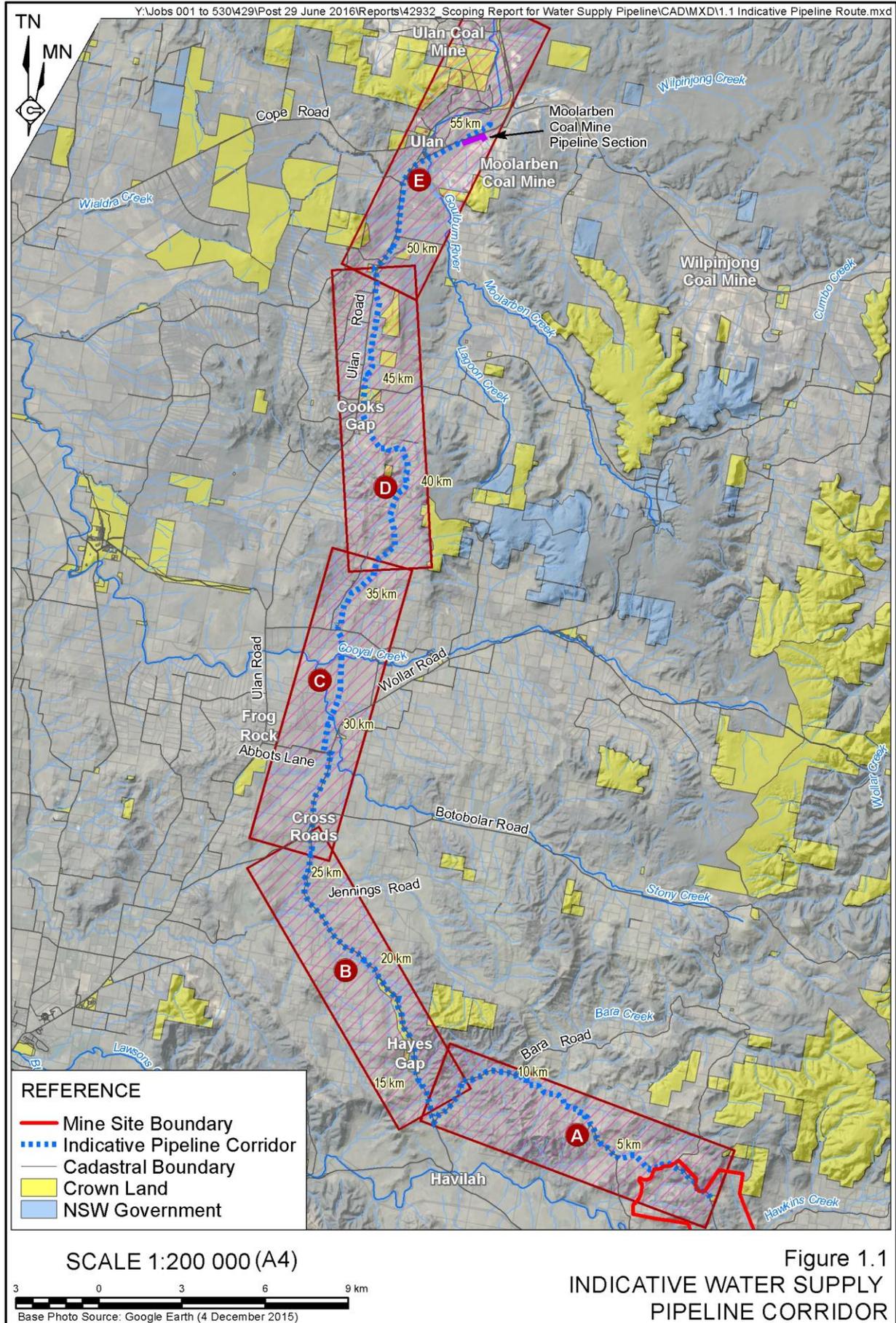
In 2016, when Bowdens Silver sought SEARs for the Project, the Preliminary Environmental Assessment noted that the Company intended “to source the water requirements for the Project from surface water and groundwater sources within and surrounding the indicative Mine Site, subject to the acquisition of the required licences”.

Detailed surface water and groundwater studies have since established that neither source by itself, or collectively, could provide a reliable source of make-up water required for the Project. Bowdens Silver investigated a range of options for a reliable water source for the Mine Site. Those discounted included the following.

- i) Water sourced from Windemere Dam, either directly or from releases into the Cudgegong River – this source was discounted as the water is relied upon principally for agricultural pursuits and town water supplies.
- ii) Surface water recovered from dams constructed on the watercourses that traverse land owned by Bowdens Silver – discounted as the Company recognised the importance of maximising the quality of clean water flowing into Hawkins Creek and Lawsons Creek to maintain environmental flows and provide for stock watering and irrigation for landowners with water access licences within the Lawsons Creek catchment downstream from the Mine Site.

The most reliable source of water identified would be surplus water generated by one or two of the coal mines in the Ulan area approximately 40km north-northwest of the Mine Site. It is proposed this surplus water is pumped to the Mine Site via a buried pipeline through a number of private properties and road reserves.

The corridor for the proposed water supply pipeline would be approximately 56.4km in length and typically 12m to 15m wide with a wider area required for the proposed intermediate pumping station between the coal mines and the Mine Site. **Figure 1.1** displays the indicative route of the water supply pipeline corridor.



2. OVERVIEW OF THE PIPELINE PROJECT

2.1 NEED FOR THE PROJECT

Water is required principally for the processing of ore extracted from the open cut pit with lesser quantities required for dust suppression. In total, approximately 5.5ML of water is required daily for processing, of which approximately 2.6ML water would be recovered daily from the thickeners and TSF. Other sources of make-up water for processing would include surface water (0.7ML/day) and groundwater (1.45ML/day). It is noted that each of these daily estimates represent average values and will fluctuate on a daily basis. A quantity of leachate originating from the active waste rock emplacement (WRE) would be used in processing, however, no specific reliance would be placed on this water until later in the mine life.

An average of 0.4ML of water would be required daily for dust suppression throughout the Mine Site. Potential sources of water suitable for use in dust suppression would be surface water and groundwater recovered from on-site dams and the open cut pit. In order to ensure sufficient water is available for processing and dust suppression, Bowdens Silver proposes to construct a buried pipeline from the Ulan Mines to the Mine Site that could convey up to 5.5ML of water per day, thereby removing any uncertainties related to the other water sources on site.

2.2 THE WATER SUPPLY PIPELINE CORRIDOR

2.2.1 Corridor Location

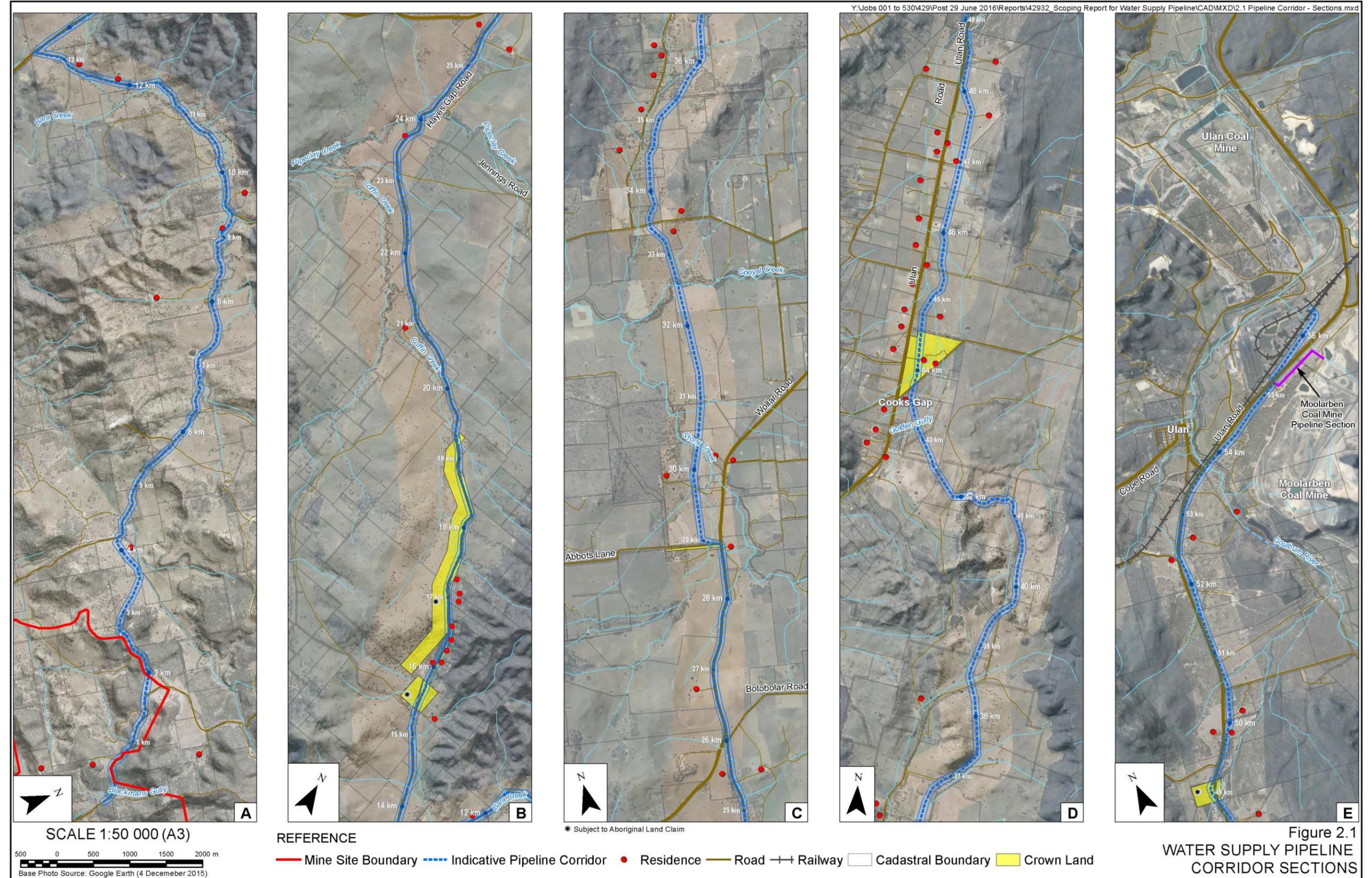
Figure 2.1 displays the water supply pipeline corridor in five sections with chainages commencing at 0km at the proposed processing plant within the Mine Site. Each section traverses approximately 12km with the displayed corridor width of approximately 100m.

The corridor traverses approximately 55.2km from the Mine Site to a point where it would divide and continue from the off-take point to the two separate coal mines. The corridor length from the dividing point to the water source within the Ulan Coal Mine would be approximately 4.5km whereas the corridor length to the water source within the Moolarben Coal Mine would be approximately 1.0km.

Approximately 33.8km (or 60%) of the pipeline to the off-take point would be constructed on privately-owned, freehold land with the remaining 22.6km (or 40%) constructed within public formed or unformed road reserves or Crown land.

2.2.2 Pipeline Design

The pipeline would be designed to carry flow of up to 64L/sec or 5.5ML/day. The maximum pressures expected to be experienced along the pipeline would be 20 bar reflecting the approximately 220m elevation difference between Ulan (420m AHD) and the proposed processing plant (640m AHD).



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The pipeline would be a 450mm internal diameter HDPE pipe that would incorporate the following range of other equipment and components.

- Pumping stations would be positioned at the start of the pipeline and at an intermediate location as a booster to pump the water the remaining distance to the Mine Site. The intermediate location of the booster pump would include two pumps which would be operated in a duty / standby arrangement. These would be rotated on a regular basis to achieve equal rates of wear and thus delay the need for maintenance and bearing replacement.
- Each pumping station would be located within a security-fenced compound that would include a covered steel water storage tank and enclosed structure (container or shed which would house the duty and standby pumps – see **Plate 2.1**.



Plate 2.1 Typical Pumping Station Facilities

- Isolation valves would be installed along the pipeline to enable access to any particular section for maintenance / repair works. These valves would be located inside concrete pits at regular intervals of approximately 2km to 4km. An off-take fire hydrant would be installed at a number of the isolation valves along the pipeline for fire fighting purposes, if required. **Plate 2.2** displays a typical valve pit.

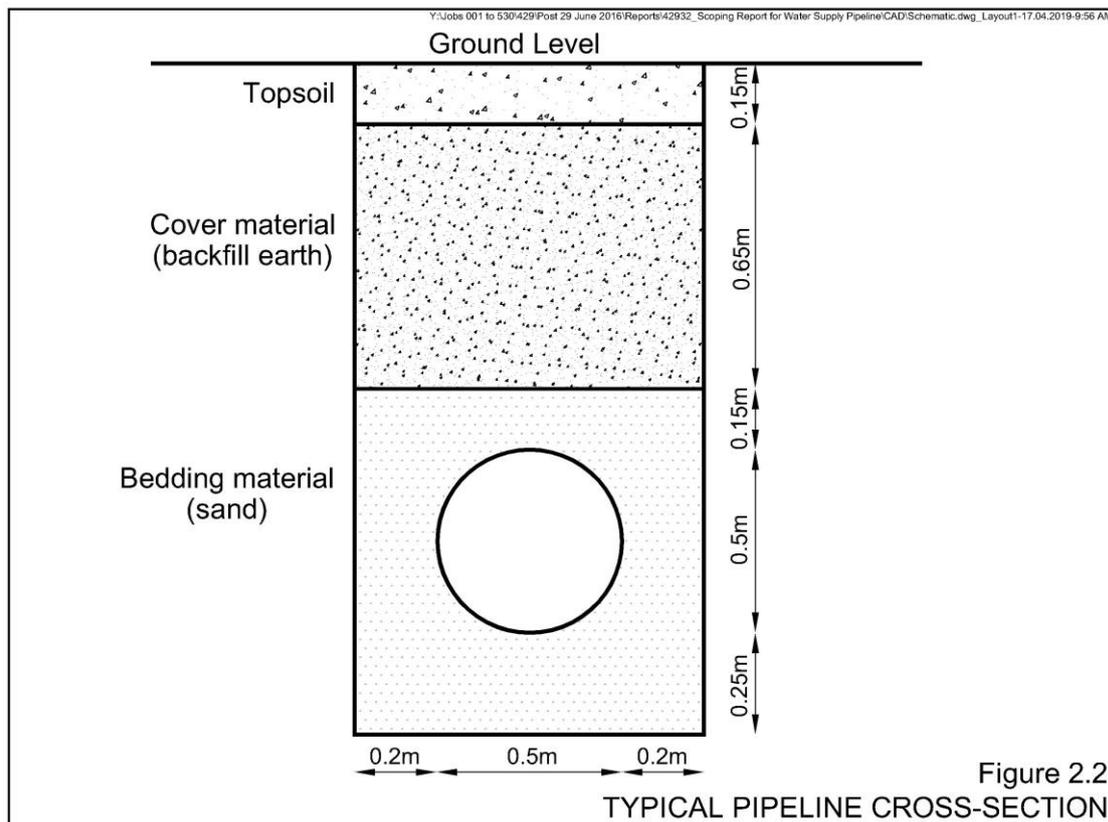


Plate 2.2 Typical Valve Pit

- Air release valves would be located in concrete pits at the highest points along the pipeline route to prevent the accumulation of air in those reaches.
- Scour valves would be located in concrete pits at the lowest points along the pipeline route to allow collection of water, if necessary from particular reaches of the pipeline.

A fibre optic communications cable would be laid in the same trench as the pipeline to provide efficient communications from the instrumentation located at each of the valves and pre-determined locations, particularly with respect to leak detection procedures to be incorporated along the pipeline.

It is proposed that the pipeline would be laid in a trench approximately 0.9m wide and 1.7m deep for the bulk of its length. **Figure 2.2** displays a typical section through a trench with the pipe positioned within a bedding material (typically sand) and covered by approximately 0.8m of backfilled material, including approximately 0.15m of topsoil.

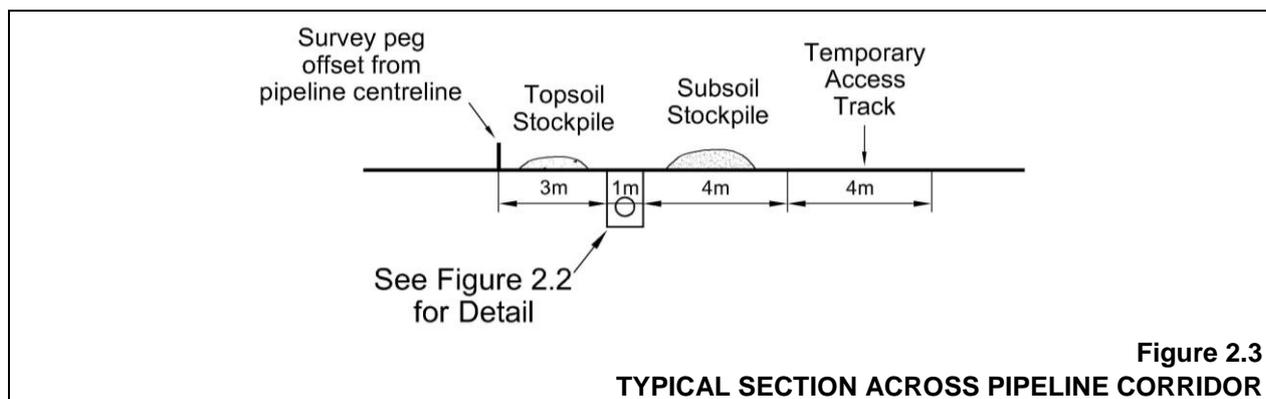


Crossing of substantial watercourses would involve either the use of existing structures such as culverts or causeways or directional boring methods. Some smaller watercourses/depressions may be traversed by a trench although an appropriate concrete/rock cover would be placed above the completed section(s) to prevent any future erosion.

Roads traversed by the pipeline would preferably be under bored, however, it may be more practical to excavate a trench and backfill above the pipe, particularly for unsealed roads. The approach to crossing beneath or through roads would be undertaken in consultation with the Mid-Western Regional Council (MWRC). In the event of the pipeline crossing beneath sealed roads,

steel-encased pipes would be used. All construction work undertaken within any road reserves would be undertaken in accordance with the conditions imposed by MWRC on the Section 138 Consent for the works.

It is proposed that the pipeline construction would involve the disturbance of approximately 12m of land within the corridor. **Figure 2.3** displays a typical section across the pipeline corridor and the range of components.



It is noted that some localised conditions may require this typical section to be modified, i.e. in conjunction with the landowner or MWRC.

2.3 CONSTRUCTION ACTIVITIES AND PROGRAM

2.3.1 Construction Activities

The construction of the pipeline would involve the following component tasks.

1. A comprehensive search of Dial-Before-You-Dig (DBYD) records would be undertaken prior to the construction of pipeline to confirm the results referred to in the EIS. The results of the DBYD search would be discussed with the respective landowners to establish verification of the search results and to identify if there are any other buried services that they are aware of.
2. The alignment of the pipeline would be marked out by a surveyor with the required survey pegs offset from the centreline of the proposed trench. The location of the centreline of the pipeline trench would be marked at regular intervals on the ground to allow the excavator operator to identify the area to be trenched.
3. The proposed 12m width of the disturbance would be cleared of any substantial vegetation to enable the storage of excavated materials, pipeline sections, placement of topsoil, subsoil and any other excavated materials. This vegetation would be mulched with the mulched material transported to the Mine Site.
4. Topsoil would be excavated from above the trench with the material placed to one side. The remainder of the trench would be excavated to remove the materials to the proposed base of the trench. These materials would be placed on the alternate side of the trench. If necessary, a hydraulic rock-hammer bit would be fitted to the excavator in the event hard materials are encountered.

5. As each 200m section of the trench is excavated to its required depth, that section of the trench would be backfilled with approximately 0.25m of sand.
6. The pipeline sections would be placed adjacent to the completed trench and joined (and tested). Once testing confirms the joined sections of the pipeline are suitable for placement, the pipeline would be lowered into the trench and laid onto the bedding sand.
7. Once the placed pipeline is inspected and checked, sand would be placed around and above the pipeline and lightly compacted. The remainder of the trench would be backfilled with a proportion of the stockpiled subsoil and lightly compacted. All stockpiled topsoil would be replaced onto the top section of the trench without compaction.
8. All excess subsoil and any other materials not used would be loaded onto trucks and transported to the Mine Site for use and/or stockpiling on the Mine Site.
9. The full width of disturbance would be rehabilitated to ensure no soil or other materials remain on the surface and that the temporary access track has not caused any furrows or indentations.
10. As each 200m section is inspected and authorised as completed by the Contractor's Quality Controller, the disturbed area would either be seeded with a pasture mix agreed with the respective landowner or MWRC or rehabilitated to the pre-disturbance condition. The approach to rehabilitation along the pipeline corridor would reflect to topography, soils and vegetation within and adjacent to the corridor. In those areas to be seeded, placement of seed would be concentrated upon the surface of the trench and any other disturbed areas where vegetation had been removed. An appropriate quantity of an agreed fertiliser would be applied to the seeded area. A water truck with a side spray would be used to irrigate the planted area, if appropriate.
11. The status of revegetation within the pipeline corridor would be monitored regularly throughout the pipeline construction program to ensure that there are no unacceptable areas of subsidence/collapse or substantial revegetation. Any areas requiring follow up attention would be maintained, as required.

The above component tasks would be varied, where necessary to reflect the specific locations along the pipeline corridor. These areas would include sections where the pipeline is placed adjacent to a road shoulder of an active public road or approaching public roads or watercourses to be under bored.

2.3.2 Construction Program

It is estimated that the water supply pipeline would be constructed in a period of approximately 6 months. It is likely that the under boring program and placement of the pipeline adjacent to the existing structures across watercourses would proceed independently of the trenching program so that the trenching program can essentially connect the previously completed under bored watercourses or road crossing.

It is planned that the contractor would achieve the excavation, placement and backfilling of approximately 500m of the pipeline each operational day.

The construction program would be undertaken between 7:00am and 6:00pm, Monday to Friday, public holidays excluded.

2.4 PIPELINE OPERATIONS

Once the pipeline has been fully tested, pumping of water would commence at the required rate. Bowdens Silver proposes to operate the pipeline at a relatively constant flow rate 24 hours per day, 7 days per week with all water pumped to the raw water dam within the processing area.

Regular maintenance would be undertaken along the full length of the pipeline to ensure it is operating fully in accordance with the required specifications.

2.5 PIPELINE DECOMMISSIONING

In the event that Council or another third party does not require the pipeline and associated infrastructure upon cessation of mining operations, the pipeline will be decommissioned.

2.6 APPROVALS REQUIRED

Given the above description of the proposed water supply pipeline, the following Project approvals relevant to the pipeline would be required.

- Development Consent under the *Environmental Planning and Assessment Act 1979* (EP&A Act)
- Section 138 Consent under the *Roads Act 1993*
- Crown Land Licence under the *Crown Land Management Act 2016*.
- Approval under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

It is noted that the application for development consent for the pipeline would form part of the overall development application for the Bowdens Silver Project. Similarly, the application for the approval required under the EPBC Act would form part of the application for the Bowdens Silver Project.

As noted in Section 4 of this Scoping Report, neither a water use approval nor a water management work approval is required for the Project by virtue of section 4.41 of the EP&A Act. All take of water would need to be licensed in accordance with the *Water Management Act 2000*).

In addition, whilst the development will involve the construction of a pipeline, Bowdens Silver is not required to obtain a pipeline licence under the provisions of the *Pipelines Act 1967* as a pipeline licence is not a mandatory requirement for this type of pipeline.

3. THE ENVIRONMENTAL SETTING

3.1 TOPOGRAPHY

The water supply pipeline corridor would be largely located within the gently sloping valleys typical of the area, although portions of the pipeline would traverse some hilly terrain, particularly in the areas near Cooks Gap and Hayes Gap. At Chainage 0.0km (i.e. at the Mine Site), the corridor would commence at an elevation of approximately 640m AHD and decrease in elevation to approximately 420m AHD within the Ulan area. **Figure 3.1** displays the topography traversed by the water supply pipeline corridor and provides a longitudinal profile for the length of the corridor.

3.2 DRAINAGE

The water supply pipeline corridor traverses the catchment divide (at Chainage 39.4km) between the Macquarie-Bogan Catchment (approximately 74 000km²) and the Hunter River Catchment (approximately 37 000km²). Major drainage features within the Macquarie-Bogan Catchment include the Macquarie River, Cudgegong River and the Bogan Rivers. Surface water flows within the Hunter River Catchment generally flow east towards Newcastle with major drainage features comprising the Goulburn River and the Hunter River. It is noted that approximately 4km of the Goulburn River was diverted in the 1980s to allow for the development of the Ulan Coal Mine.

The water supply pipeline corridor traverses four named watercourses and numerous unnamed minor watercourses. **Figure 3.1** displays the following named watercourses traversed by the pipeline and their distance(s) from the Mine Site.

- Bara Creek (Chainage 8.9km, 9.9km and 11.0km)
- Cooyal Creek (Chainage 32.6km)
- Stony Creek (Chainage 30.3km)
- Goulburn River (Chainage 53.9km)

It is noted that named watercourses would be under bored and would not be directly impacted by the development of the water supply pipeline.

3.3 GEOLOGY AND SOIL TYPES

The water supply pipeline corridor traverses a number of geological units as identified on **Figure 3.2** that comprise a variety of sedimentary and igneous lithologies including sandstone, shale, conglomerate, tuffs and monzonite.

Soil landscapes within the corridor are highly varied and reflective of the topography and geology of the region. A range of localised variations of soil landscapes are present which are identified and described in Murphy and Lawrie (1998) and displayed on **Figure 3.3**. The water supply pipeline corridor traverses numerous soil landscapes including Barigan Creek, Lees Pinch, Lawsons Creek, Rylstone, Botobolar, Home Rule, Rouse, Dexter and Ulan. The erosion hazard has been identified as high to very high in many of these soil landscapes, especially in areas with low surface cover.

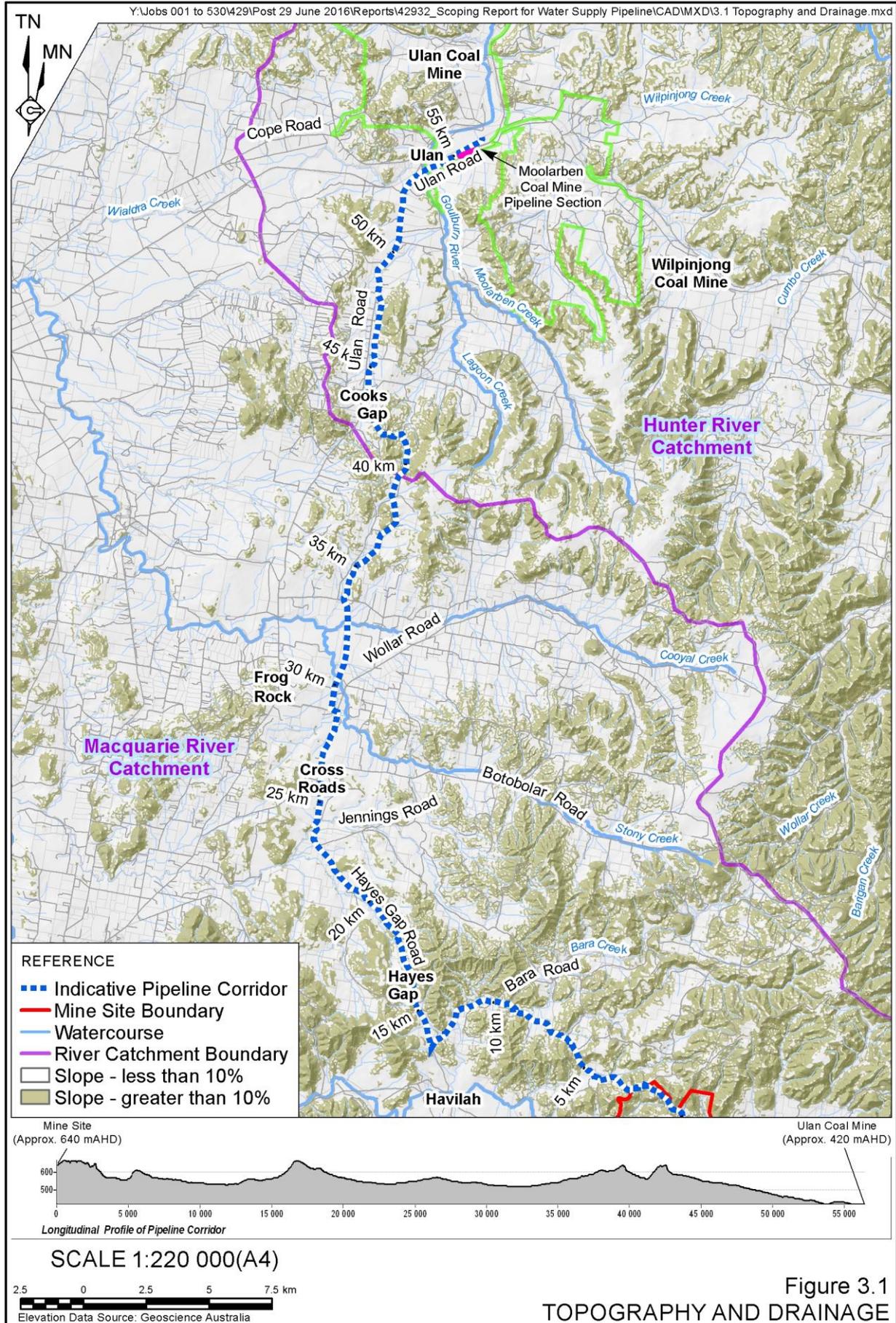
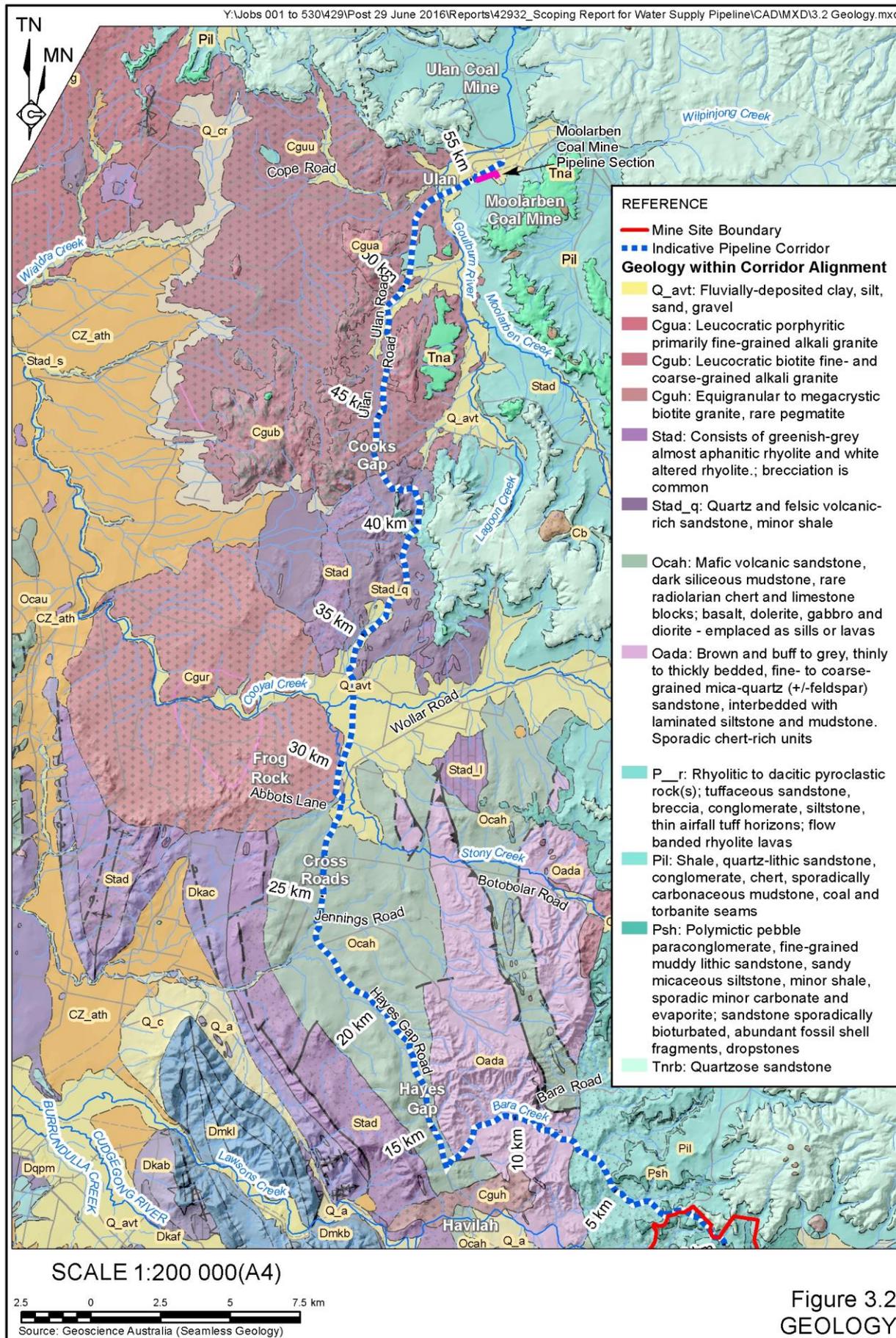
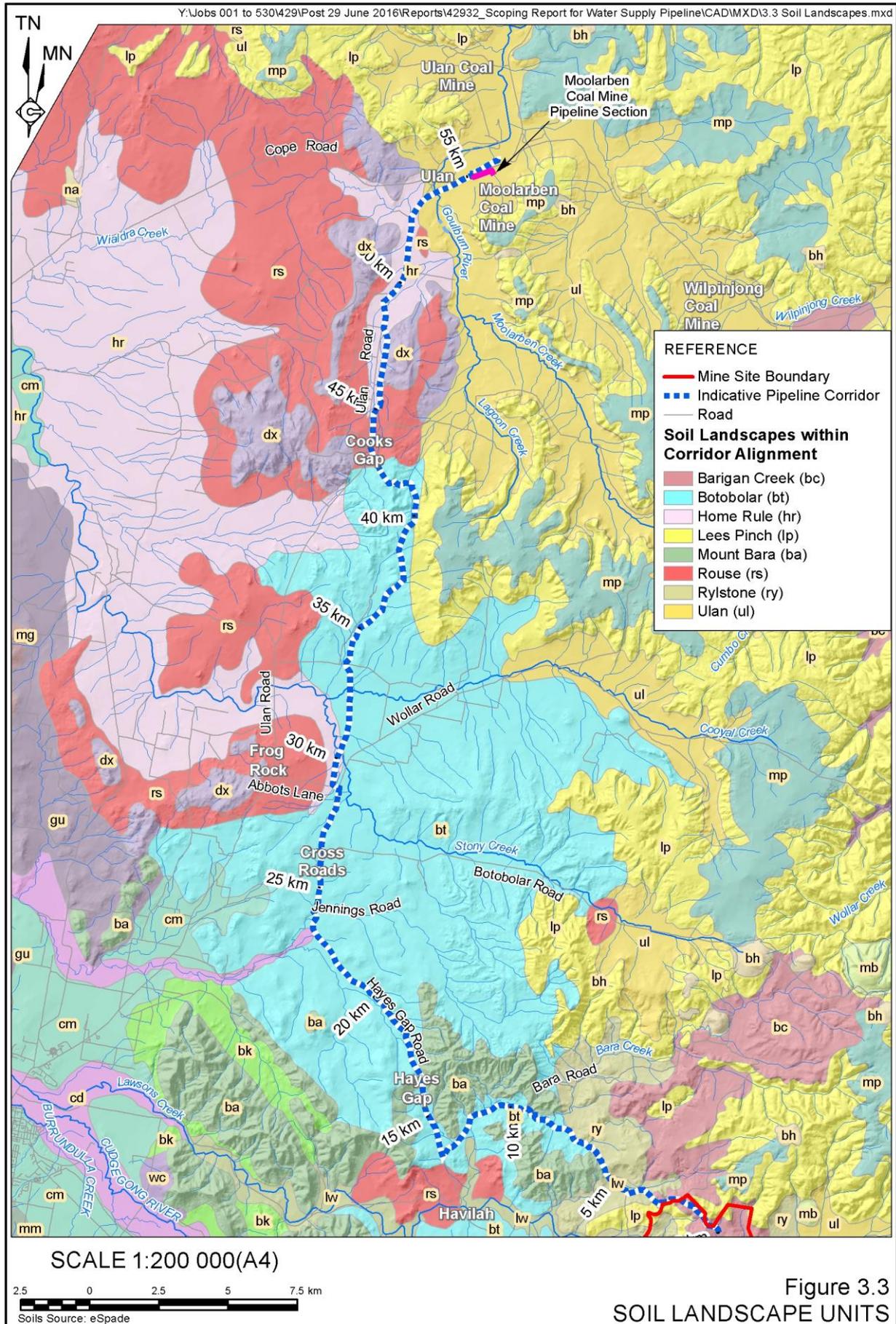


Figure 3.1
 TOPOGRAPHY AND DRAINAGE





A search of the NSW OEH Contaminated Land: Record of Notices and the NSW OEH contaminated sites notified to the EPA registers did not identify any contaminated sites within 1km of the water supply pipeline corridor.

3.4 VEGETATION

A desktop analysis of the water supply pipeline corridor undertaken by EnviroKey Pty Ltd during the preparation of the EPBC Act referral for the Project identified that the corridor would traverse a range of Plant Community Type Formations (see **Figure 3.4**). Approximately 49% of the corridor would be located within areas comprising non-native or cleared land. **Table 3.1** lists the Plant Community Type Formations traversed by the corridor and the approximate percentage of each vegetation type traversed.

Table 3.1
Plant Community Type Formations

Plant Community Type Formation	Length (%)
Dry Sclerophyll Forests (Shrub/grass sub-formation)	4.6
Dry Sclerophyll Forests (Shrubby sub-formation)	4.7
Forested Wetlands	1.2
Grassy Woodlands	7.4
Grasslands	33.4
Non-Native / Cleared	48.7

A detailed site survey of approximately 85% of the corridor was conducted in February and April 2019, the results of which will be presented in the EIS. It is understood that three of the Plant Community Types meeting the definitions of endangered ecological communities are located within sections of the pipeline corridor, namely:

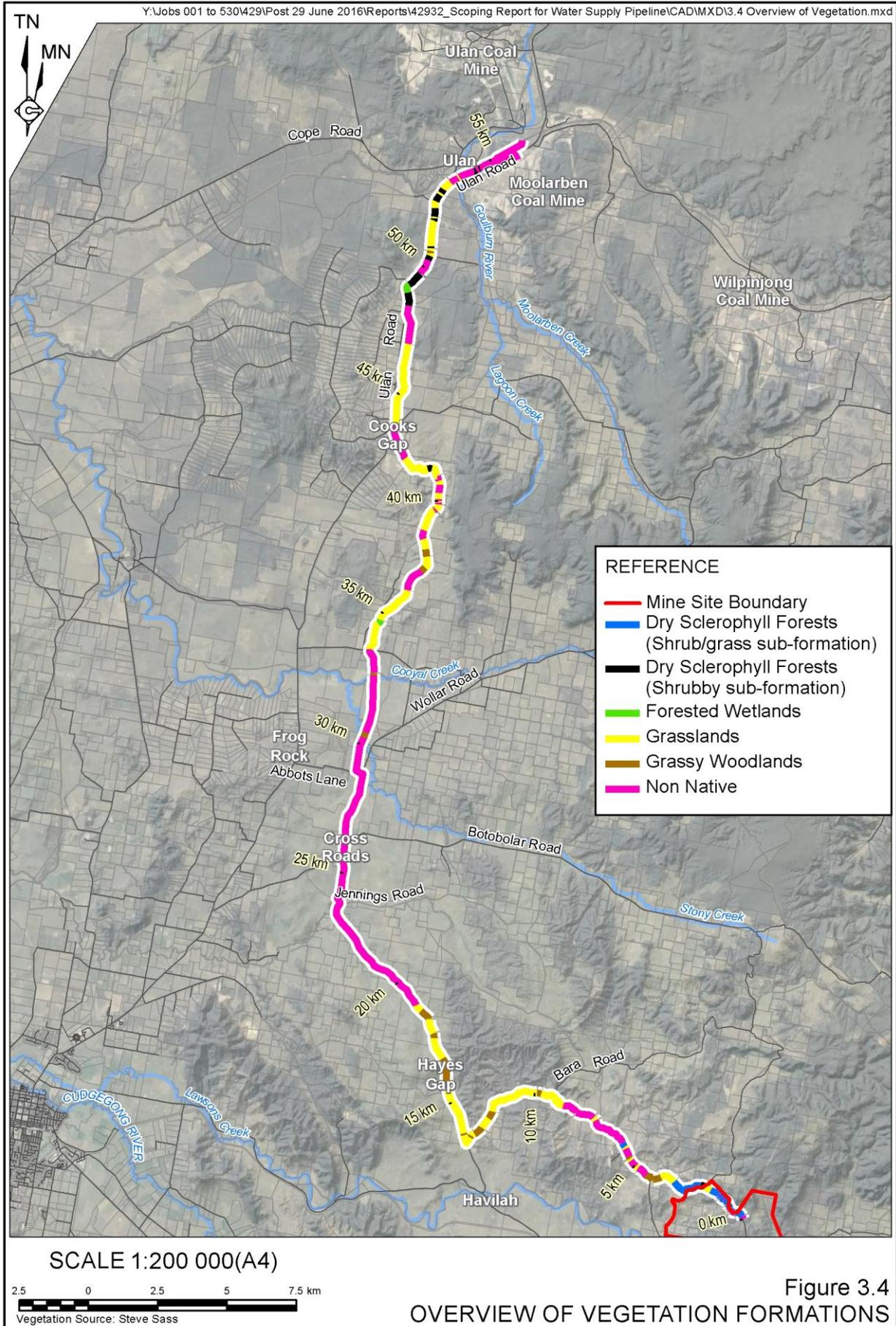
- PCT 266: White Box grassy woodland in the upper slopes sub-region;
- PCT 274: White Box – rough-barked apple alluvial woodland; and
- PCT 281: Rough-barked apple-redgum-Yellow Box woodland on alluvial clay to loam soils on valley flats.

One threatened flora species is also known to be present within sections of the pipeline corridor, namely *Acacia ausfeldii*.

3.5 ABORIGINAL CULTURAL AND HISTORIC HERITAGE

3.5.1 Aboriginal Heritage

A search of the Aboriginal Heritage Information Management System (AHIMS) Site register maintained by the Heritage Division of the Office of Environment and Heritage was undertaken within 1km of the water supply pipeline corridor. The search identified a total of 37 sites that have previously been recorded within the search area (**Figure 3.5**). The 37 sites comprised 32 sites with artefacts, four sites with modified trees (carved or scarred) and one art site. **Table 3.2** provides the site name and type identified in the search. Approximately 85% of the corridor was surveyed by an archaeologist and a number of registered Aboriginal parties in April 2019, the results of which will be presented in the EIS.



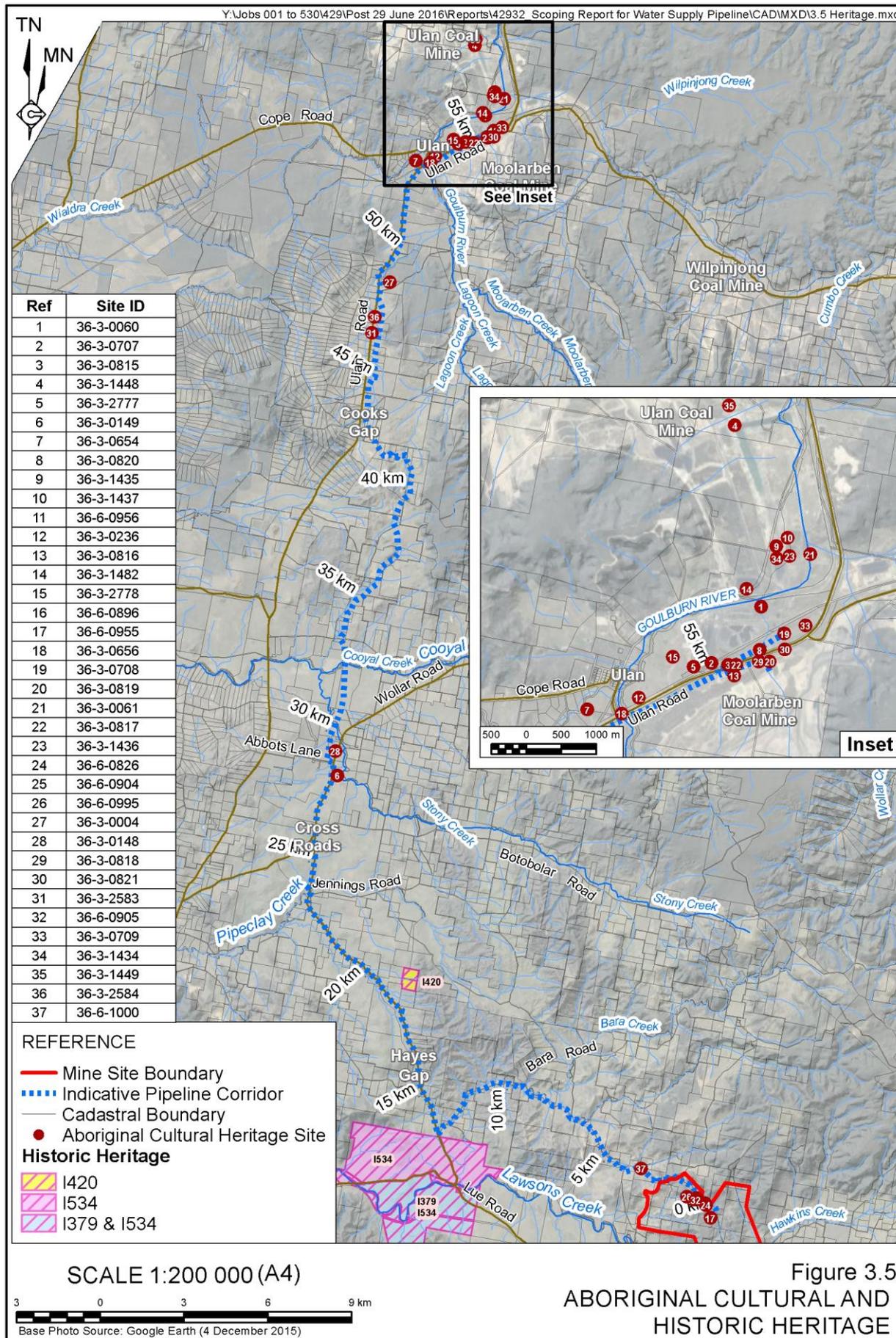


Table 3.2
AHIMS Sites located within 1km of the Water Supply Pipeline Corridor

Ref No.	Site ID	Site Name	Site Type
1	36-3-0060	Ulan Creek Site 18	Artefact
2	36-3-0707	CE-31-IF	Artefact
3	36-3-0815	S1MC18	Artefact
4	36-3-1448	Identifier 18	Artefact
5	36-3-2777	Ulan ID #1525	Artefact
6	36-3-0149	Stoney Creek;	Modified Tree (Carved or Scarred)
7	36-3-0654	SHC IF 6	Artefact
8	36-3-0820	S1MC23	Artefact
9	36-3-1435	Identifier 4	Artefact
10	36-3-1437	Identifier 6	Artefact
11	36-6-0956	BL3.	Artefact
12	36-3-0236	MC3	Artefact
13	36-3-0816	S1MC19	Artefact
14	36-3-1482	Identifier 91, T10 to 11	Modified Tree (Carved or Scarred)
15	36-3-2778	Ulan ID #1526	Artefact
16	36-6-0896	Bowdens Lue 51	Artefact
17	36-6-0955	BL1.	Artefact
18	36-3-0656	MC OS 19	Artefact
19	36-3-0708	CE-32-IF	Artefact
20	36-3-0819	S1MC22	Artefact
21	36-3-0061	Ulan Creek Site 19	Artefact
22	36-3-0817	S1MC20	Artefact
23	36-3-1436	Identifier 5	Artefact
24	36-6-0826	BOWDEN LUE 2	Artefact
25	36-6-0904	Bowdens Lue 53	Artefact
26	36-6-0995	BL62	Artefact
27	36-3-0004	Ulan Dexter Mountain	Art (Pigment or Engraved)
28	36-3-0148	Stoney Creek	Modified Tree (Carved or Scarred)
29	36-3-0818	S1MC21	Artefact
30	36-3-0821	S1MC24	Artefact
31	36-3-2583	Ulan Mudgee Road (UMR1)	Artefact
32	36-6-0905	Bowdens Lue 52	Artefact
33	36-3-0709	CE-33-IF	Artefact
34	36-3-1434	Identifier 3	Artefact
35	36-3-1449	Identifier 19	Artefact
36	36-3-2584	Scarred Tree UMR2	Modified Tree (Carved or Scarred)
37	36-6-1000	Bowdens Lue 63	Artefact

3.5.2 Historic Heritage

The following databases were searched to identify heritage-listed items traversed or in close proximity to the water supply pipeline corridor.

- National Heritage List
- NSW State Heritage Inventory
- *Mid-Western Regional Local Environmental Plan (LEP) 2012*

No heritage-listed items were identified within the corridor. A total of three heritage items listed in the Mid-Western LEP were identified within approximately 2km of the water supply pipeline corridor, as follows.

- Home Rule School (I420) - Portions 140 and 141, DP 755415
- Havilah Cemetery (I534) – Lot 2, DP 556656
- Havilah Homestead, Chapel and Shearing Sheds (I379) – Portion 65, DP 755427

3.6 LAND OWNERSHIP AND RESIDENCES

Approximately 60% of the pipeline corridor traverses freehold land with the remaining sections of the corridor traversing either formed or unformed road reserves or Crown land. Bowdens Silver proposes to initiate discussions with both the Department of Industry – Crown Lands and the Warrabinga Wiradjuri People regarding an Indigenous Land Use Agreement for those five parcels of Crown land within the pipeline corridor (see **Figure 2.1**).

Figure 2.1 displays the locations of approximately 26 residences located within 200m of the pipeline corridor. Many of these residences are located on the properties traversed by the pipeline corridor.

3.7 OTHER FACTORS

Services

Dial-Before-You-Dig (DBYD) searches undertaken for the water supply pipeline corridor have identified numerous assets owned by Endeavour Energy, Essential Energy and Telstra which would require consideration prior to construction of the pipeline. An overview of these assets would be included in the EIS.

4. STRATEGIC AND STATUTORY CONTEXT

4.1 COMMONWEALTH LEGISLATIVE CONTEXT

Environment Protection and Biodiversity Conservation Act 1999

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) provides a framework to protect and manage ‘matters of national environmental significance’. Potentially relevant matters of national environmental significance to the Project include:

- National heritage places;
- nationally threatened species and ecological communities; and
- listed migratory species protected under international agreements.

Under the EPBC Act, if a project has the potential to have a significant impact on a matter of national environmental significance, it is required to be referred to the Commonwealth Department of Environment and Energy for assessment as to whether it represents a ‘controlled action’ and therefore requires approval from the Minister for the Environment and Energy.

The Project, including the construction of the water supply pipeline, was referred to the Department of Environment and Energy in accordance with the provisions of the EPBC Act. Bowdens Silver received notification on 5 April 2019 that the Project has been determined to be a controlled action.

Native Title Act 1993

The *Native Title Act 1993* (NT Act) provides for the recognition and protection of native title rights and interests of Aboriginal and Torres Strait Islander peoples to land and waters according to their traditional laws and customs. It also establishes a mechanism to determine claims to native title. Native title rights and interests can only exist if they have not been extinguished by a prior valid grant of a right (such as the grant of freehold title) as such a right is inconsistent with the continuation of native title rights and interests.

A native title determination application (or native title claim) may be made pursuant to the NT Act. Upon lodgement of a native title claim, the National Native Title Tribunal (NNTT) is required to apply a registration test and either accept the native title claim for registration or reject it. The NNTT maintains a register of native title claims.

Proposed activities that may affect native title are called ‘future acts’. A future act will only be valid to the extent that it affects native title if the procedural requirements set out in the NT Act are followed. If a native title claim is accepted for registration, the native title claimant is entitled to negotiate about future acts over the land that is subject to the native title claim.

A regional native title claim NC2017/001 (Warrabinga-Wiradjuri #7) was accepted for registration on the Register of Native Title Claims on 1 September 2017. This claim covers the entire water supply pipeline corridor and, if accepted, would entitle the claimant to enter negotiations regarding the future use of any Crown land within and surrounding those sections of the corridor. A review of the land ownership along the corridor (see Section 3.6) identified five Crown land lots along the corridor three of which are the subject of Aboriginal land claims.

4.2 STATE LEGISLATIVE CONTEXT

Environmental Planning and Assessment Act 1979

The *Environmental Planning and Assessment Act 1979* (EP&A Act) provides the framework for the assessment and approval of development in NSW and is administered by the DPE.

Development consent is required under the EP&A Act for the purposes of mining in NSW. The Project has been submitted for approval under Part 4, Division 4.1 of the EP&A Act as a State Significant Development (SSD) as the capital investment value for the Project would exceed the \$30 million threshold for State Significant Developments.

State Environmental Planning Policy (State and Regional Development) 2011 asserts that any development for the purpose of mining-related works that is ancillary to or an extension of a SSD is considered SSD. The proposed water supply pipeline satisfies the criteria for assessment as SSD.

The EP&A Act sets out the process for assessment of SSD applications. An EIS is required for all SSD development applications and must address all Secretary's Environmental Assessment Requirements (SEARs). The consent authority for the Project will be the Minister for Planning and Environment or the Independent Planning Commission under delegation from the Minister.

Section 4.41 of the EP&A Act identifies that if development consent is granted for a SSD, the following potentially relevant authorisations for the proposed pipeline are not required.

- A permit under section 201, 205 or 219 of the *Fisheries Management Act 1994*;
- An approval under Part 4, or an excavation permit under section 139, of the *Heritage Act 1977*;
- An Aboriginal heritage impact permit under section 90 of the *National Parks and Wildlife Act 1974*;
- A bush fire safety authority under section 100B of the *Rural Fires Act 1997*;
- A water use approval under section 89, a water management work approval under section 90 or an activity approval (other than an aquifer interference approval) under section 91 of the *Water Management Act 2000*.

Clause 1(g1) in Schedule 1 of the *EP&A Regulation 2000* requires that the development application relating to the proposed water supply pipeline must contain a list of any authorisations that must be provided under Section 4.42 of the EP&A Act. The authorisations nominated in Section 4.42 relevant to the water supply pipeline are as follows. A Section 138 Consent would be obtained from Mid-Western Regional Council under the *Roads Act 1993* in respect of Council roads and Department of Industry (Lands) in respect of Crown roads prior to carrying out any construction of the pipeline or associated works on these roads.

Department of Industry (Lands) may require a Crown licence to be obtained under the *Crown Land Management Act 2016* in order to provide tenure for the occupation of Crown roads by easement.

Biodiversity Conservation Act 2016

The purpose of the *Biodiversity Conservation Act 2016* (BC Act) is to maintain a healthy, productive and resilient environment for the greatest well-being of the community, now and into the future, consistent with the principles of ecologically sustainable development.

As substantial assessment of biodiversity was undertaken prior to the gazetting of the BC Act, the DPE confirmed, in correspondence dated 17 January 2019, that it would be appropriate to assess and offset any biodiversity impacts related to the water supply pipeline in accordance with the transitional provisions of the *Biodiversity Conservation (Savings and Transitional) Regulation 2017*.

Biosecurity Act 2015

The primary objective of the *Biosecurity Act 2015* (Biosecurity Act) is to provide a framework for the prevention, elimination and minimisation of biosecurity risks posed by biosecurity matter, dealing with biosecurity matter, carriers and potential carriers, and other activities that involve biosecurity matter, carriers or potential carriers.

The MWRC would be the regulating authority of the Biosecurity Act in relation to weed management as it relates to the proposed water supply pipeline.

Crown Land Management Act 2016

The *Crown Land Management Act 2016* (CLM Act), administered by the Department of Industry – Crown Lands and Water, applies to any Crown lands, Crown roads or Crown road reserves.

The water supply pipeline would traverse up to seven lots owned and managed by Crown Lands with part of its length to be constructed within Crown road reserves. Bowdens Silver will consult with the Department of Industry – Crown Lands regarding the steps required to address the *Native Title Act 1993 (Cth)* in order to progress the grant of an easement over the five Crown land lots.

National Parks and Wildlife Act 1974

The *National Parks and Wildlife Act 1974* (NP&W Act) aims to manage and conserve nature, objects, places and features that have ecological and/or cultural value. The NP&W Act is administered by the OEH.

Aboriginal places and objects are protected under the NP&W Act. The OEH holds a database of information and records regarding Aboriginal objects whose existence and location have been reported, known as the Aboriginal Heritage Information Management System (AHIMS).

An Aboriginal Heritage Impact Permit (AHIP) is generally required for consent to destroy, deface or damage Aboriginal object or Aboriginal place. According to Section 4.41 of the EP&A Act, the requirement to obtain an AHIP under the NP&W Act does not apply to SSD once development consent is granted. Rather, the management of any sites would be undertaken in accordance with an Aboriginal Cultural Heritage Management Plan prepared in consultation with the OEH and Aboriginal community representatives.

Roads Act 1993

The *Roads Act 1993* (Roads Act) applies to public roads in NSW, and depending upon the type of road, is administered by the Roads & Maritime Service or local council.



Consent is required under Section 138 of the Roads Act for works or structures that disturb the surface of a public road or connect a road to a classified road. It is noted that Section 4.42 of the EP&A Act applies to SSD projects and requires that consent must not be refused, if the works are necessary for carrying out an approved project.

It is not envisaged that it would be necessary to disturb the surface of any formed public roads or connect to classified roads as the water supply pipeline would be under bored beneath most formed public roads. Should there be a need to disturb the surface of any formed public road, Bowdens Silver would consult with MWRC.

Water Management Act 2000

The *Water Management Act 2000* (WM Act) which is administered by Division of Crown Lands and Water within the Department of Industry has an objective of sustainable and integrated management of the State's water for the benefit of both present and future generations. The WM Act provides clear arrangements for controlling land-based activities that affect the quality and quantity of the State's water resources.

It is noted that although works would be undertaken within 40m of waterfront land during the construction of the water supply pipeline, Section 4.41 of the EP&A Act specifies that an activity approval (other than an aquifer interference approval) under Section 91 of the WM Act is not required for SSD. As such, no approvals under the WM Act are required for the construction of the water supply pipeline.

Water Sharing Plans

The WM Act requires that all extraction of surface water or groundwater must be properly accounted for under the rules of any relevant water sharing plans. It is proposed that water for processing operations at the Mine Site would be partly sourced from surplus water generated by the Ulan Mines. This surplus water would be obtained under existing Water Access Licence (WAL) groundwater allocations held by both mines to account for groundwater inflow from underground workings and supplied to Bowdens Silver as part of the relevant mine's water management strategy. As such, the following water sharing plans would be fully considered during the preparation of the EIS.

- Water Sharing Plan for the North Coast Fractured and Porous Rock Groundwater Sources 2016
- Water Sharing Plan for the NSW Murray Darling Basin Porous Rock Groundwater Sources 2011

4.3 STATE PLANNING CONTEXT

The only relevant State Environmental Planning Policies ("SEPPs") for the proposed water supply pipeline are:

- *State Environmental Planning Policy (State and Regional Development) 2011*; and
- *State Environmental Planning Policy No 44 Koala Habitat Protection*.

Policies such as *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007* are not relevant to linear infrastructure such as the proposed pipeline.

State Environmental Planning Policy (State and Regional Development) 2011

This SEPP was gazetted on 1 October 2011 and applies to all projects satisfying nominated criteria made following that date. The purpose of this SEPP is to define those projects of State Significance or proposed on State Significant Sites and which therefore require development consent from the Minister or his/her delegate under the relevant provisions of the EP&A Act 1979.

The Project, which includes the development of the water supply pipeline as related works, satisfies the threshold capital investment value for a mining project of greater than \$30 million as nominated in Clause 5(1)(c) within Schedule 1 of the SEPP as a SSD.

Clause 11 of SEPP (State and Regional Development) 2011 specifies that development control plans do not apply to State significant development.

State Environmental Planning Policy No 44 Koala Habitat Protection (SEPP 44)

The former Rylstone LGA, Mudgee LGA and Merriwa LGA (now incorporated into the Mid-Western Regional LGA) remain identified in Schedule 1 of SEPP 44 as an area that could provide habitat for Koalas. SEPP 44 requires an investigation to be carried out to determine if any Koala feed trees are present within the Site. Schedule 2 of SEPP 44 also provides a list of tree species that are favoured feed tree species of Koalas.

“Potential Koala Habitat” is defined as areas of vegetation where the trees listed in Schedule 2 of SEPP 44 constitute at least 15% of the total number of trees in the upper or lower strata of the tree component. The detailed assembly of eucalypt species within the water supply pipeline corridor will be assembled by EnviroKey Pty Ltd and results with respect to the Koala feed trees will be presented in the EIS.

4.4 LOCAL PLANNING CONTEXT

Mid-Western Regional Local Environmental Plan 2012

The water supply pipeline would be located within the Mid-Western Regional LGA which is subject to the *Mid-Western Regional Local Environmental Plan 2012* (Mid-Western LEP). The water supply pipeline traverses land predominantly zoned RU1 – Primary Production with approximately 2.6km of land zoned R5 – Large Lot Residential also traversed (see **Figure 4.1**).

Water supply systems are permissible with consent on land zoned RU1 – Primary Production, however, they are prohibited on land zoned R5 – Large Lot Residential. It is noted that consent may still be granted by the Minister for the development of the water supply pipeline on land zoned R5 – Large Lot Residential as only part of the development is prohibited by the Mid-Western LEP. This is in accordance with Condition 4.38(3) of the EP&A Act which states that “*development consent may be granted despite the development being partly prohibited by an environmental planning instrument*”.

The water supply pipeline would traverse land mapped as groundwater vulnerable (Clause 6.4) and biodiversity sensitive (Clause 6.5) within the Mid-Western LEP.

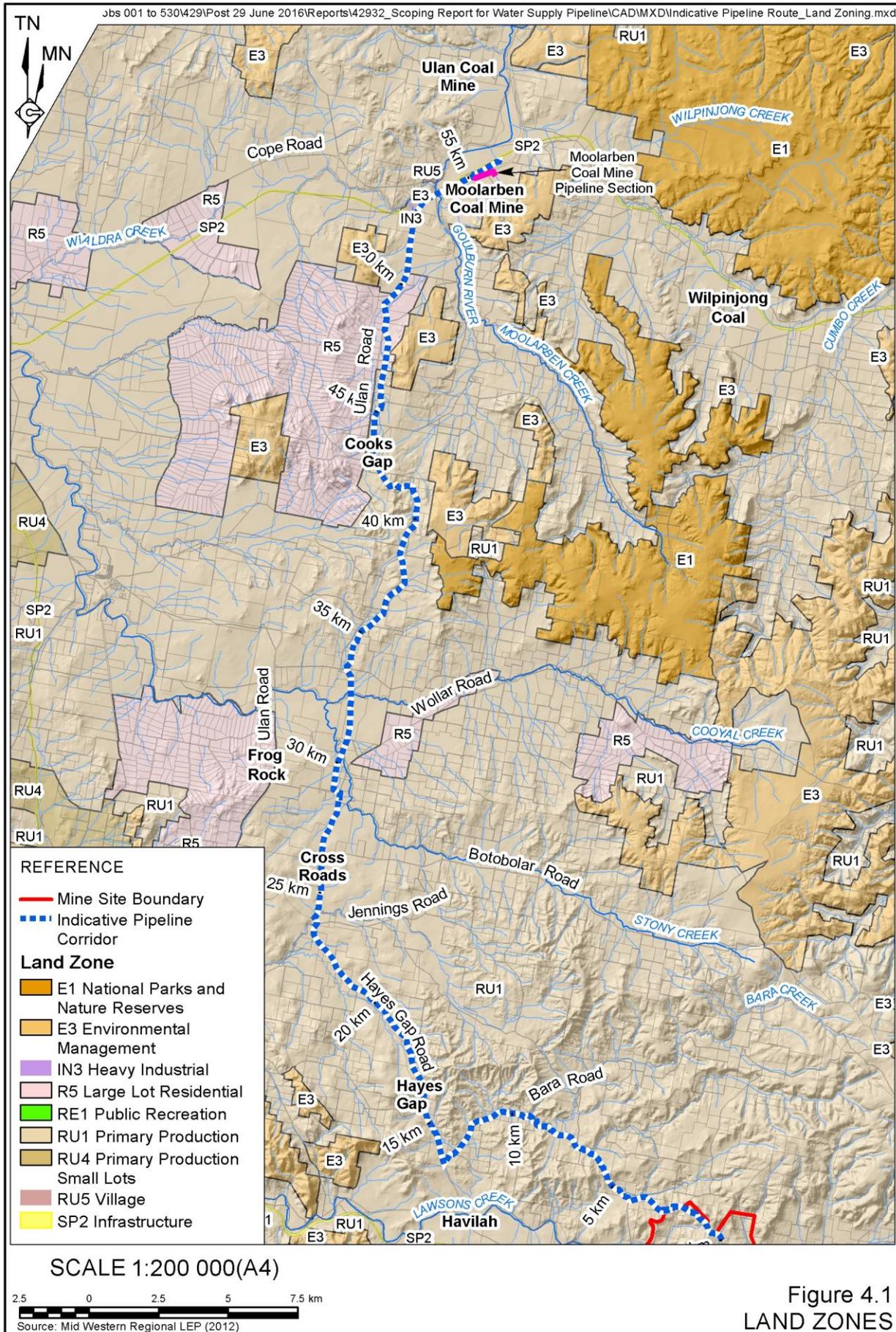


Figure 4.1
LAND ZONES

The objectives of Clause 6.4 of the Mid-Western LEP are:

- a) *to maintain the hydrological functions of key groundwater systems,*
- b) *to protect vulnerable groundwater resources from depletion and contamination as a result of development.*

The construction of the water supply pipeline would not limit the achievement of these objectives as the pipeline would be laid in a trench approximately 1.7m deep and would not intersect any groundwater systems.

The objective of Clause 6.5 of the Mid-Western LEP is to maintain terrestrial biodiversity by:

- a) *protecting native fauna and flora, and*
- b) *protecting the ecological processes necessary for their continued existence, and*
- c) *encouraging the conservation and recovery of native fauna and flora and their habitats.*

Potential impacts to biodiversity would be avoided, minimised and mitigated to the greatest extent practicable in accordance with the transitional provisions of the *Biodiversity Conservation (Savings and Transitional) Regulation 2017*.

5. KEY ISSUES AND POTENTIAL IMPACTS

5.1 IDENTIFICATION OF KEY ISSUES AND POTENTIAL IMPACTS

Bowdens Silver has commenced assembling a range of information and commissioning studies regarding the range of environmental issues that will be considered during the design, construction and operation of the proposed water supply pipeline. Considerable emphasis has been placed to date upon identifying a potential corridor for the pipeline which minimises environmental constraints to the greatest extent possible, and is likely to be acceptable to as many landholders as possible.

Section 3 has summarised the preliminary environmental information assembled to date and outlined what additional studies have been commissioned. **Table 5.1** presents a review of each environmental issue and a preliminary risk assessment based upon information already assembled.

Table 5.1
Key Issues and Potential Impacts

Page 1 of 2

Issue	Preliminary Risk	Potential Impacts
Ecology	Low-Moderate – as the proposed corridor would be located principally in cleared land with all efforts to minimise the removal of remnant native vegetation, endangered ecological communities and threatened species. The unavoidable disturbances to remnant vegetation would be accounted for in the biodiversity offset for the Project.	Removal of some areas of three endangered ecological communities (PCTs 266, 274, 281) and one threatened species (<i>Acacia ausfeldii</i>).
Aboriginal Heritage	Low – as all attempts would be made to avoid any sites identified during the cultural heritage survey.	The construction of the pipeline could disturb Aboriginal cultural heritage sites located within the pipeline corridor.
Noise	Low – as noise would be confined to daytime only and construction work would be undertaken in full consultation with the respective landowners / tenants.	Short term impacts (2 to 3 days) would occur when construction activities are close to individual residences.
Surface Water	Low-Moderate – as emphasis will be placed upon avoidance of named watercourses (through under boring) and implementation of a range of mitigation measures.	Short term impacts on the quality of surface water could occur if: a) substantial rainfall occurs during the period of disturbance and/or period when vegetation within the disturbed area is being established. b) individual watercourses are disturbed by equipment used to construct the pipeline.
Soils	Low – as all topsoil will be carefully stripped and stockpiled to one side of the trench and replaced and seeded and fertilised within 2 to 3 days.	Negligible impacts – potentially minor erosion could occur if substantial rainfall occurs during the period of disturbance and/or period when vegetation within the disturbed area is being established.
Land Uses	Low – as agricultural land uses would be re-established within a few months of pipeline construction and use of road reserves would resume soon after pipeline construction.	Minor impacts arising from the reduction in grazing capability until the disturbed area is revegetated. Minor impacts to motorists during periods when earthmoving equipment is operating adjacent to public roads.

Table 5.1 (Cont'd)
Key Issues and Potential Impacts

Page 2 of 2

Issue	Preliminary Risk	Potential Impacts
Traffic	Low-Moderate – as construction work would be undertaken within public road reserves with efficient traffic controllers.	Minor delays for short periods when the pipeline is being constructed within public road reserves.
Visual Amenity	Low – as the earthmoving equipment would be present for a comparatively short period (2 to 3 days) in any one location – similar to NBN installation and/or Council/RMS road upgrading.	Observations of earthmoving equipment and soil stockpiling activities.
Historic Heritage	Very low – as no recorded historic heritage items are located within or close to the water supply pipeline corridor.	No impacts are likely.
Bush Fires	Low – as the pipeline would be located principally within cleared land and a suite of mitigation measures would be adopted in areas of native vegetation and/or dry grass	Initiation of bush fire from earthmoving equipment or by on-site personnel.
Groundwater	Very low – as groundwater is not anticipated to be intersected by the pipeline trench.	No impacts are likely.
Social Issues	Low – for matters relating to environmental amenity would occur for only 2 to 3 days. Moderate – for matters relating to the beneficial use of the water for bush fire fighting and potentially agriculture adjacent to the pipeline (in times of drought).	Minor changes (for a short duration) to noise levels, traffic, visibility. Positive impacts for the local community arising from the provision of fire fighting water and potentially during times of drought. Positive benefits for the community following mine closure as MWRC take over the pipeline.
Economic Issues	Low – as the economic cost of the impacts would be low and compensation would be payable to the respective landowners.	Minor reductions in farming income. Potential benefits for landholders during drought periods.

5.2 CUMULATIVE IMPACTS

The potential impacts of the proposed water supply pipeline are principally related solely to those impacts generated by the activities proposed by Bowdens Silver. The only cumulative impacts would arise when activities are being undertaken within close proximity of the Ulan Mines. The impacts that would be influenced by activities at these Mine Sites would relate principally to noise and traffic.

6. STAKEHOLDER ENGAGEMENT

6.1 COMMUNITY ENGAGEMENT

Bowdens Silver has undertaken considerable community engagement in order to identify a potential corridor that would be nominated as the preferred alignment for the proposed water supply pipeline corridor.

Communication with landholders who may be affected by the pipeline has focussed on informing them of the Bowdens Silver Project and providing an overview of what would be involved in the construction and operation of the pipeline. Discussions have also covered potential impacts upon each landowner such as the proposed route, future easement creation and compensation as well as proposed timelines for construction of the pipeline. A letter was sent via registered mail to 29 separate landholders explaining the above as well as seeking permission to conduct necessary ecological and heritage surveys within the corridor being considered for the pipeline route. These letters, generated multiple discussions and subsequent emails have been exchanged to organise surveys, access to properties and to answer a range of questions. During this process, some alignments have been modified to reflect landholder feedback. This type of consultation will continue and all relevant landholders have been offered the opportunity to meet and discuss the pipeline proposal.

Bowdens Silver will conduct further discussions and endeavour to reach negotiated agreements with all landholders to acquire further access and easement rights as the project develops.

The pipeline has also been discussed with members of the Bowdens Silver Project Community Consultative Committee that has been created at the request of the Department of Planning and Environment. Bowdens Silver staff recently conducted an information stand at the Rylstone Kandos Agricultural Show and discussed the pipeline with members of the public. There have been no objections to the pipeline via either of these channels and the overall community response has been positive.

6.2 OTHER STAKEHOLDERS

The two key other stakeholders involved with the proposed pipeline include the operators of the two mines in the Ulan area. Bowdens Silver has held discussions with Ulan Coal Mines Limited and Moolarben Coal Operations Pty Ltd mines since 2017 and 2019 respectively regarding the potential supply of excess mine dewatering water to Bowdens Silver. A Draft Term Sheet/Heads of Agreement has been prepared which captures the following heads of agreement.

- Option arrangements and commencement of option on receipt of development consent by Bowdens Silver.
- Supply for the life of Bowdens Silver Mine.
- Bowdens Silver's environmental obligations.
- Water licensing.
- Quantity and quality of water supply.
- Management of variations in water supply and water take.

- Pipeline route and land access.
- Responsibilities for operational supervision and maintenance requirements.
- Supervision responsibilities.
- Risk assessment and risk management.

Bowdens Silver will satisfy itself that the proposed water supply arrangements are compliant with all relevant legislation and the respective mine’s Water Management Plans, development consent conditions and water licences. Both mines would need to amend their respective Water Management Plans.

The proposed pipeline route and connection points for Bowdens Silver’s infrastructure has also been discussed with both companies. A Land Access Agreement has been executed to permit access by Bowdens Silver’s consultants for ecological and heritage surveys on the proposed pipeline route on the MCO land and an access licence agreement is currently being negotiated with UCML.

6.3 GOVERNMENT AGENCIES

Whilst the SEARs have not yet formally been sought for the proposed water supply pipeline, Bowdens Silver and R.W. Corkery & Co. Pty Ltd have initiated discussions and correspondence with a range of Federal and State Government Agencies and MWRC. An overview of the outcomes from the consultation to date is outlined in **Table 6.1**.

Table 6.1
Overview of Government Agency Consultation

Page 1 of 2

Agency	Issues Reviewed	Status
Department of Environment and Energy	Referral for Mine Site and pipeline submitted 20/12/18 – subsequent discussions with DoEE regarding level of detail for the pipeline route.	DoEE advised Bowdens Silver on 05/04/19 that the entire Project including the water supply pipeline is a controlled action.
Department of Planning and Environment	DPE requested a Scoping Report for the Water Supply Pipeline.	This document.
Environment Protection Authority	EPA requested reference to a Construction Management Plan within the EIS with details of erosion and sedimentation controls and details of the pipeline construction and leak detection technologies, inspection schedules and preventative maintenance. No water being pumped can be released into the environment in the event of a pipe failure.	Each requirement nominated will be addressed in the EIS.

Table 6.1 (Cont'd)
Overview of Government Agency Consultation

Page 2 of 2

Agency	Issues Reviewed	Status
Office of Environment and Heritage	OEH advised Bowdens Silver that the ecological assessment for the pipeline can be considered as a “pending or interim” planning application under the <i>Biodiversity Conservation (Savings and Transitional) Regulation 2017</i> .	Documentation for the pipeline will reflect this direction.
Department of Industry- Water (Water NSW)	Proposed water supply from Ulan Coal Mines and confirmation of prima facie compliance with <i>Water Management Act 2000</i>	No issues or concerns raised by Water NSW
Department of Industry – Crown Lands	Land Access to permit ecological and heritage surveys on Crown land on the proposed pipeline route	Land Access Arrangement executed
Mid-Western Regional Council	Provision of information by Bowdens Silver and consultation regarding the water pipeline alignment, planning and construction. Based on feedback from Council, the proposed route has been modified to avoid certain sections of public road, particularly along the recently upgraded sections of Ulan Road.	MWRC has provided comments relating to: <ul style="list-style-type: none"> • pipeline location planning in relation to Crown and Council road reserves, and • defined sections of Council roads to be avoided.
Independent Pricing and Regulatory Tribunal (IPART)	Proposed water supply from Ulan Mines and confirmation of prima facie compliance with <i>Water Industry Competition Act 2006</i>	No issues or concerns raised by IPART

6.4 ONGOING CONSULTATION

Bowdens Silver proposes to maintain a dialogue with all landholders along the pipeline corridor throughout the planning, construction, rehabilitation and operational stages of the pipeline. During the planning stage, Bowdens Silver would ensure the required documentation and agreements are completed to each landholder’s satisfaction. Similarly, Bowdens Silver will liaise with MWRC regarding the sections of the pipeline that are proposed to be constructed within Council-managed road reserves.

Bowdens Silver would provide all landowners appropriate notice and information about the proposed construction activities on their properties and ensure that all agreed requests from landholders are fully implemented by contractors.

Bowdens Silver would discuss the status of the rehabilitation of the corridor following the completion of construction to ensure that each landholder is satisfied with the standard of rehabilitation and that there are no issues that need to be resolved.

7. CONCLUSION

The construction of the pipeline would result in a range of minor environmental impacts which would be achieved through the implementation of a range of design and operational safeguards and mitigation measures. Once operational, the pipeline would cause negligible adverse impacts and would offer the opportunity for water to be made available for fire fighting and potentially for agricultural use during drought periods.

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