CHAPTER 4 – PROJECT DESCRIPTION

STANMORE ID EXTENSION PTY LTD
ISAAC DOWNS EXTENSION PROJECT

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4. PROJECT DESCRIPTION

4.1 Background

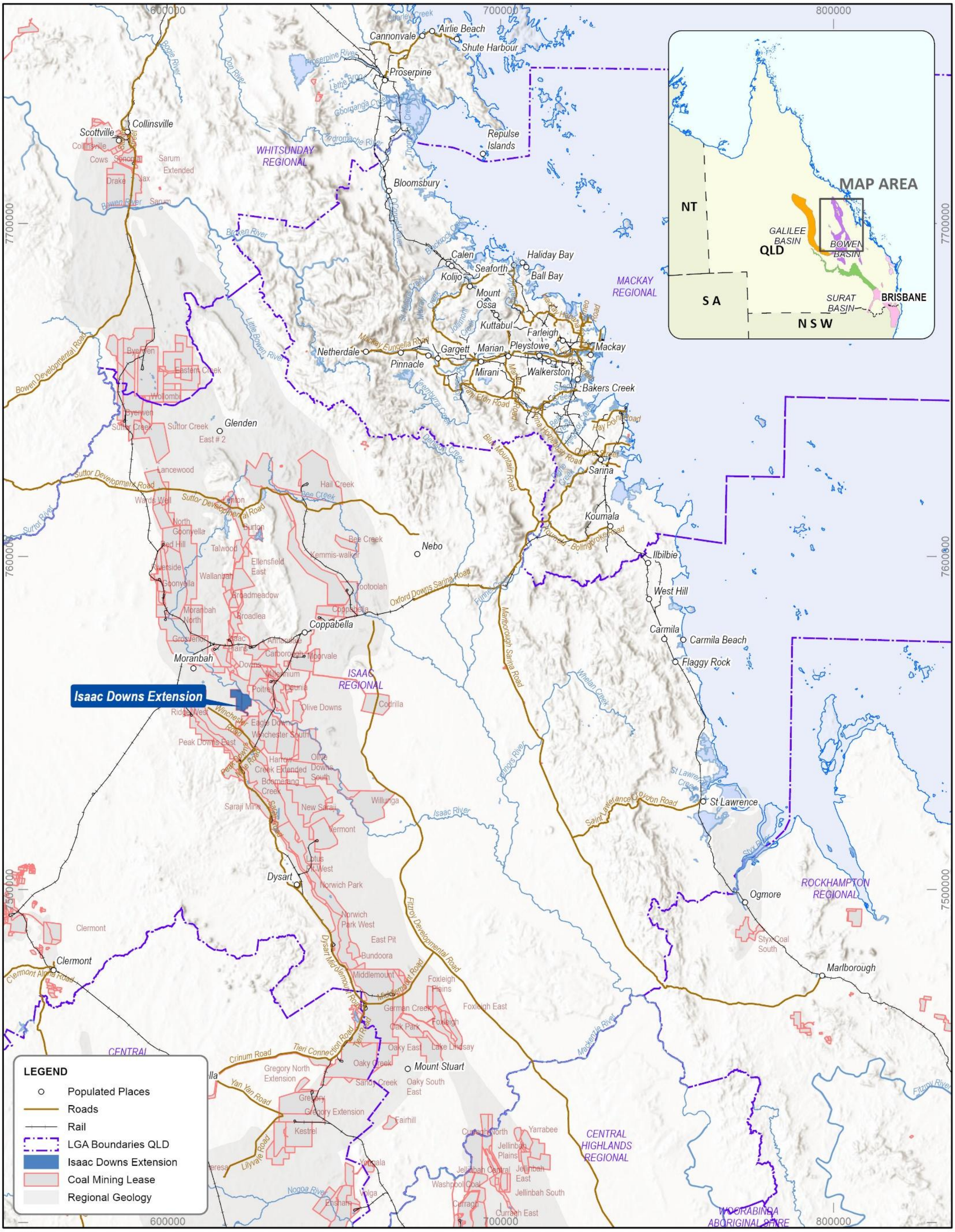
Stanmore ID Extension Pty Ltd (ID Extension), a wholly owned subsidiary of Stanmore Resources Ltd (Stanmore), proposes to develop the Isaac Downs Extension (IDE) Project (the Project). The Project will extend the life of mining operations at Isaac Plains Complex (IPC) through the development of an open cut coal mine pit and associated infrastructure, primarily mining metallurgical (steel making) coal. Approximately 46 million tonnes (Mt) of run of mine (ROM) coal will be mined over 15 years, at a rate of approximately 2 – 4.5 million tonnes per annum (Mtpa).

IPC comprises Isaac Downs Mine (IDM) and Isaac Plains Mine (IPM), operated by wholly owned subsidiaries of Stanmore, Stanmore IP South Pty Ltd (IP South) and Stanmore IP Coal Pty Ltd (IP Coal), respectively (refer to Figure 4-2).

The Project adjoins IDM and will be integrated into IPC (refer to Figure 4-2) with ROM coal washed at the IPM coal handling and preparation plant (CHPP), shared mine infrastructure area (MIA) at IDM, and connecting infrastructure such as water management infrastructure and power supply.

The Project is located in the Bowen Basin of central Queensland approximately 15 km southeast of Moranbah and 150 km southwest of Mackay (Figure 4-1), with the Project's mining lease (ML) application areas shown in Figure 4-2.

Mining of ROM coal at IDM is expected to ramp down between 2026 and 2028, with Project construction commencing late 2027 / early 2028 and ROM coal extraction in 2029. The IPC workforce will transition to IDE as mining ramps down at IDM and IPM, and ramps up at IDE. The Project, being an extension of mining activities at IPC, is therefore important to ensure a near steady state workforce across IPC beyond 2027 and 2028.



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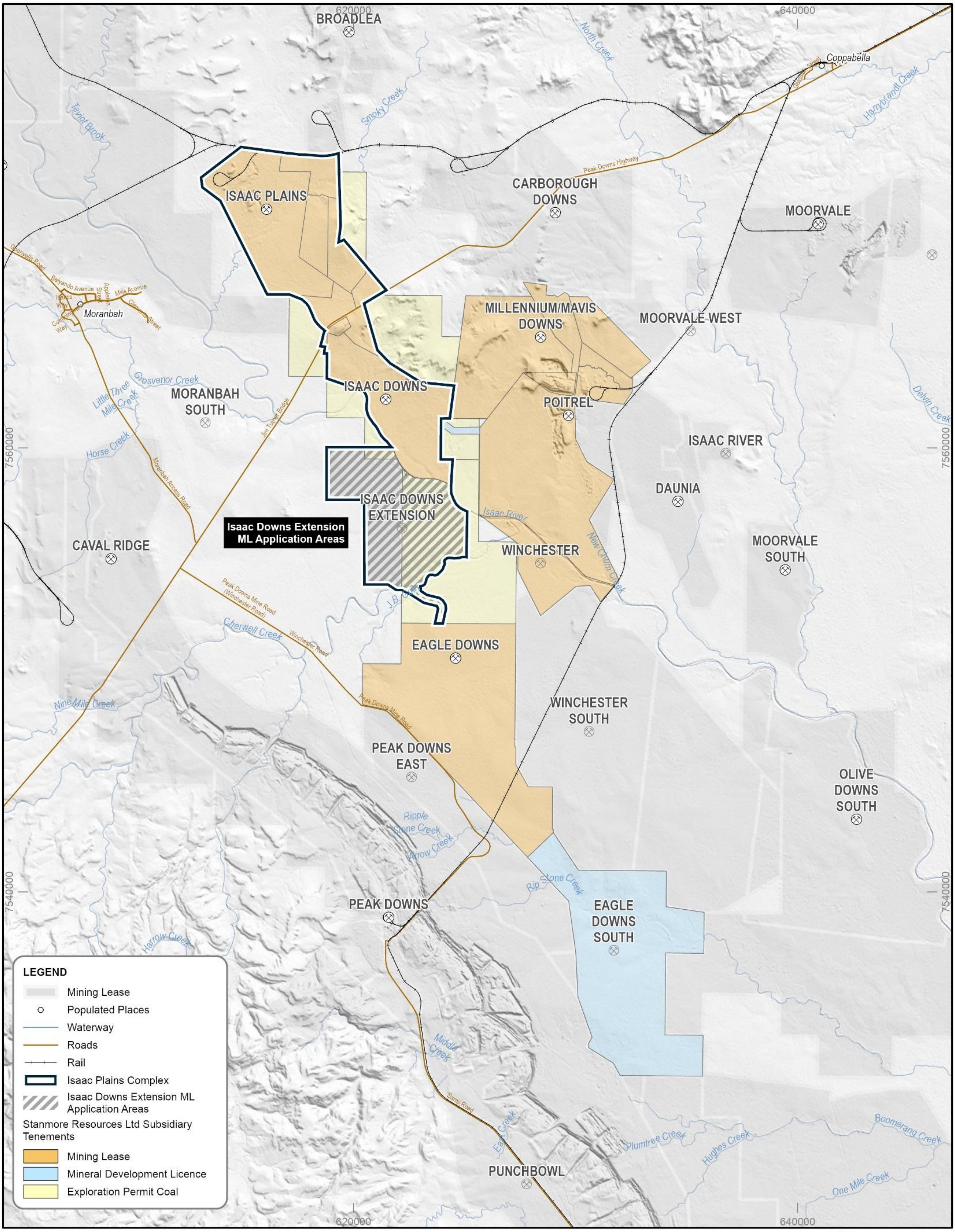
Project Regional Location

Figure | 4-1



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Project Location

Figure | 4-2

4.2 Project Proponent

The proponent for the Project is Stanmore ID Extension Pty Ltd, a wholly owned subsidiary of Stanmore. The proponent's details are provided in Table 4-1.

Stanmore is an Australian Stock Exchange (ASX) listed Australian company which, through various subsidiary entities, owns metallurgical (steel making) coal mines and coal mining projects in Queensland's Bowen Basin including IDM, IPM, South Walker Creek (SWC) Mine, Poitrel Mine, Millennium Mine, Eagle Downs project and Lancewood project.

Table 4-1 Proponent Details

Name	Address	Contact Information
Stanmore ID Extension Pty Ltd, ACN 685 301 231	Level 32, 12 Creek Street Brisbane, QLD, 4001 GPO Box 2602, Brisbane QLD 4001	office@stanmore.net.au

4.3 Project Overview

The open cut mining methods for the Project will be similar to those at IDM, including:

- clearing of vegetation, stripping and stockpiling of topsoil
- drilling and blasting of pre-strip overburden[1]
- removing the pre-strip overburden using mining equipment at IDM being a dragline and / or truck and shovel fleets and / or dozers
- drilling and blasting of overburden
- drilling and blasting of pit floor for geotechnical stability to allow for in-pit dumping
- overburden removal using the existing dragline at IDM and / or truck and shovel fleets
- coal mining using excavators
- formation of out of pit and in-pit overburden dumps as mining progresses
- progressive rehabilitation of overburden dump areas.

ROM coal will be transported from the Project's ROM coal pad to the CHPP at IPM for washing, utilising existing haul roads at IPC and new haul roads, including a bridge across the Isaac River, constructed in the Project area. The dragline will be walked from IDM to the Project via a temporary crossing of the Isaac River.

A satellite go line and crib area will be constructed at the Project, with the existing MIA at IDM continuing to service Project activities.

The primary access to the Project for workers and deliveries will be via IDM's existing access road and new internal roads connecting with the Project, utilising the bridge to be constructed across the Isaac River. There is potential for a secondary access route to the Project between the Project and Stanmore's Eagle Downs project, utilising new and existing roads to connect with the Peak Downs Mine Road.

During operations, levees will be constructed to protect the open cut pit area from flooding of the Isaac River, Cherwell Creek and Conrock Gully up to a 0.1% annual exceedance probability (AEP) (1:1,000 year) flood event. Conrock Gully will be diverted around the active mining areas into the Isaac River, with the diversion remaining post mining. Any residual void remaining post mine life will not be located within the extent of 0.1% AEP flood event.

[1] The terms 'overburden', 'spoil' and 'mine waste rock' are used synonymously in this EIS, and include interburden.

A mine affected water dam will store water from the pit, ROM pads, go line and crib area, with the ability to transfer mine affected water to and from IDM and IPM within IPC's integrated water management system, thereby enabling the balancing of water supply and demand. Sediment water drains and dams will be constructed to capture runoff from overburden dumps. Clean water drains and dams will be constructed to separate clean water from mine affected water and sediment water.

IPC has access to external raw water supplied from Sunwater and has excess storage capacity for water within existing mined voids and dams. As the Project's water management systems will be integrated into the rest of IPC, it is anticipated that water supply will be available during dry periods, and storage capacity will be able to receive any excess water during wet periods. Therefore no new sources of water supply will be required.

Topsoil stockpile areas will be used for storage of topsoil that has been stripped from mining and infrastructure areas, for future use in rehabilitation.

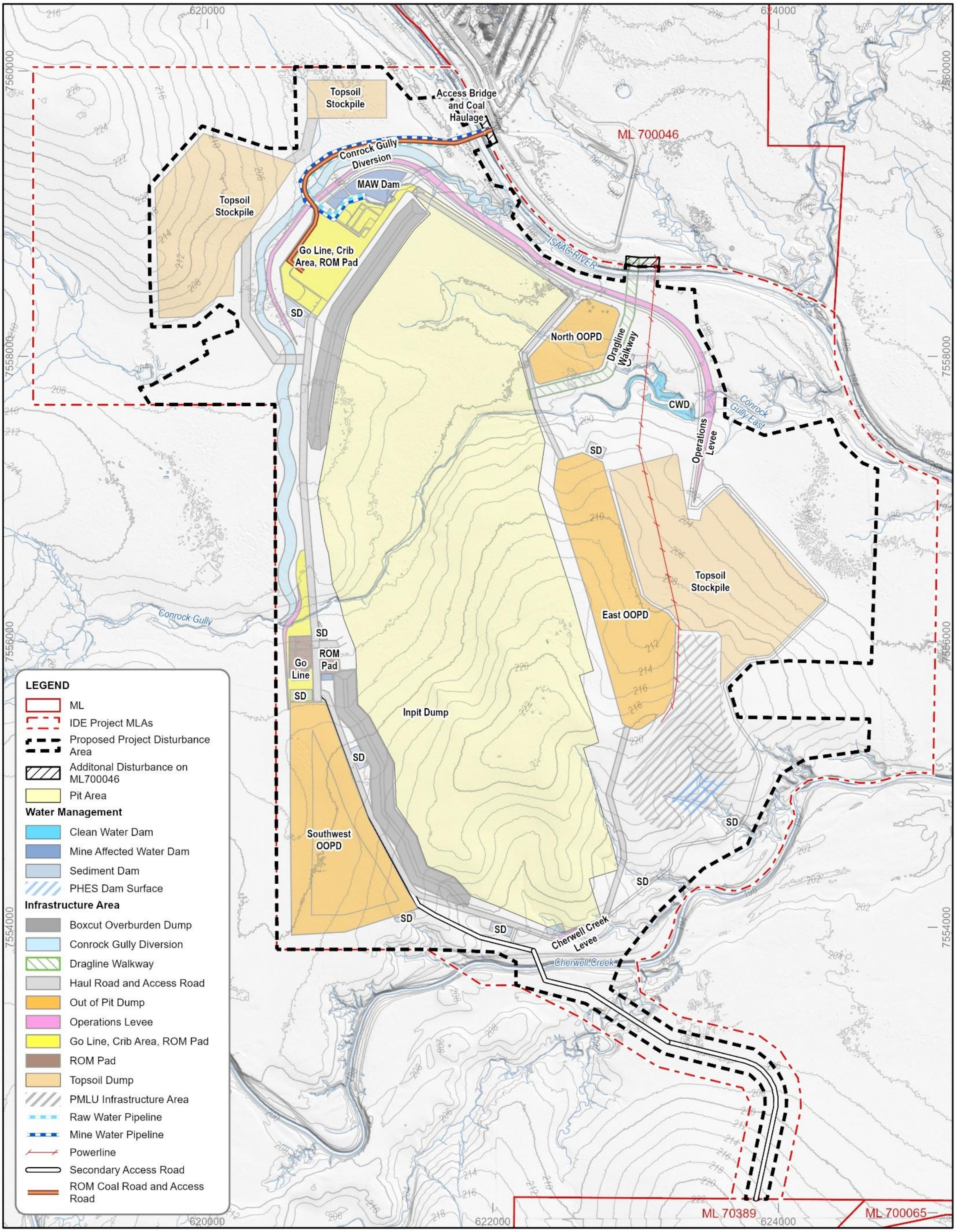
Power for the dragline will be supplied to the Project via powerline connections with existing power supply at IDM. The Project may require additional linear infrastructure at IDM to facilitate the extension of IDM mining activities to the Project, however this will be within areas authorised for disturbance.

The proposed Project layout, four mining lease application (MLA) areas and proposed disturbance area are shown in Figure 4-3. The proposed disturbance allows for working and construction areas within and around proposed Project activities and infrastructure. The area of the four MLAs is 2,707 ha and the proposed disturbance area is 2,080 ha. The disturbance area has been refined to minimise and / or avoid sensitive ecological features (e.g. habitat for listed threatened species and riparian areas). There are an additional 2.5 ha of disturbance on IDM ML 700046 (see Figure 4-3) for Project linear infrastructure in areas not already authorised for mining activities.

The Project operational workforce will be similar to, but lower than that for current operations at IPC, with around 300 - 400 workers, compared to around 400 - 450 workers. Approximately 100 – 150 workers will be engaged at the Project for infrastructure construction. The Project, being an extension of mining activities at IPC, is therefore important to ensure a near steady state workforce across IPC beyond 2027 and 2028.

Workforce accommodation arrangements will continue in a similar manner to those for the current IPC workforce, being a mix of residences in Moranbah and other local or regional towns, and mine accommodation villages in the region. Through the Project, Stanmore will continue to support local and regional suppliers and contractors, providing additional economic benefits and employment in the region.

The Project is not proposing any novel or unproven resource extraction process, technology or activity.



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Project Layout and Disturbance Area

Figure | 4-3

4.4 Project Location

4.4.1 Regional Project Location

The Project's regional location is described in Section 4.1 and shown in Figure 4-1 and Figure 4-2.

4.4.2 Local Project Location and Mining Lease Application Areas

The Project's MLA areas are shown in Figure 4-4. The 'Project area' is defined as the MLA boundary areas; however the Project's disturbance area will ultimately be less than the MLA boundary areas. Figure 4-4 shows:

- IPC, inclusive of the Project's MLAs being integrated into IPC
- the granted MLs for nearby mines, including Stanmore's Poitrel Mine and Eagle Downs project
- Isaac River and Cherwell Creek which are located at or near the Project's MLA boundaries
- Conrock Gully, a defined drainage feature under the *Water Act 2000* (Water Act) upstream of Project mining activities, bisecting the MLA boundaries.

The Project is located immediately south of IDM with the MLA boundaries abutting the IDM ML 700046 boundary. IDM's environmental approvals and MLs were granted in mid-2021 with mining commencing shortly thereafter. ROM coal from IDM is transported to the IPM CHPP for washing.

The Project's MLAs are located on underlying exploration permit for coal (EPC) 755 owned by IP Coal, and on mineral development licence (MDL) 277 and EPC 548 owned by Anglo Coal (Grosvenor) Pty Ltd (Anglo Coal) and Exxaro Australia Pty Ltd (Exxaro). A subsidiary of Stanmore, and Anglo Coal and Exxaro, executed an agreement in September 2024 giving Stanmore the right to conduct exploration activities (including environmental studies) and apply for MLs over part of MDL 277 and EPC 548.

The Project has the potential for cumulative impacts with other mines and projects shown on Figure 4-2 and Figure 4-4:

- IPM, IDM and Poitrel Mine, active open cut coal mines operated by Stanmore subsidiaries
- Millennium Mine, inactive open cut coal mine operated by a Stanmore subsidiary
- Eagle Downs mine – an underground coal mining project proposed by a Stanmore subsidiary that has not commenced mining
- Winchester South mine – an open cut coal mining project proposed by Whitehaven Coal that has not commenced mining
- Caval Ridge / Peak Downs / Peak Downs East mine – active open cut mines operated by BHP, its subsidiaries and partners
- Moranbah South project – an underground coal mine proposed by Anglo Coal and Exxaro that has not commenced mining.

4.4.3 Overlapping Tenements

Figure 4-5 shows non-mineral tenements overlapping the Project's MLA boundary areas. These comprise exploration tenements only (i.e. no production tenements):

- Authority to prospect (ATP 1103) – CH4 Pty Ltd (a subsidiary of Arrow Energy)
- Exploration permit geothermal (EPG) application 2047 - Australis Energy Pty Ltd.

There are no petroleum leases or other resource production tenures that overlap with the Project's MLA boundary areas. The proponent has engaged with the overlapping tenement holders in accordance with requirements of relevant resource legislation.

4.4.4 Properties and Sensitive Receptors

Table 4-2 and Figure 4-6 describe and show property boundaries within and adjoining the MLA boundaries. The Project area is largely located on Winchester Downs station (Lot 8 SP277834), but also has overlaps with a State Reserve (Lot 9 GV33) which has grazing rights for the owners of Winchester Downs, a local road used to access parts of Winchester Downs, the Isaac River and Cherwell Creek. Winchester Downs station is a pastoral operation with the land within the MLA areas primarily used for grazing. The State Reserve is a nominated stock route, although this is disconnected from other stock routes in the region. A water supply pipeline, associated with supply of water to Olive Downs Mine, is located within the State Reserve and local roads on the south side of Cherwell Creek (i.e. the only intersection with Project infrastructure is the secondary access road on MLA 700083).

The nominated access to the Project's MLAs from the Peak Downs Highway intersects Lot 5 GV132 (Wotonga), a freehold property. Stanmore has existing relationship and agreements in place the owners of Wotonga, as IDM is located on Wotonga.

The potential for any previous land use (i.e. past land uses unrelated to the Project) to have affected or contaminated the land is assessed in **Chapter 7**.

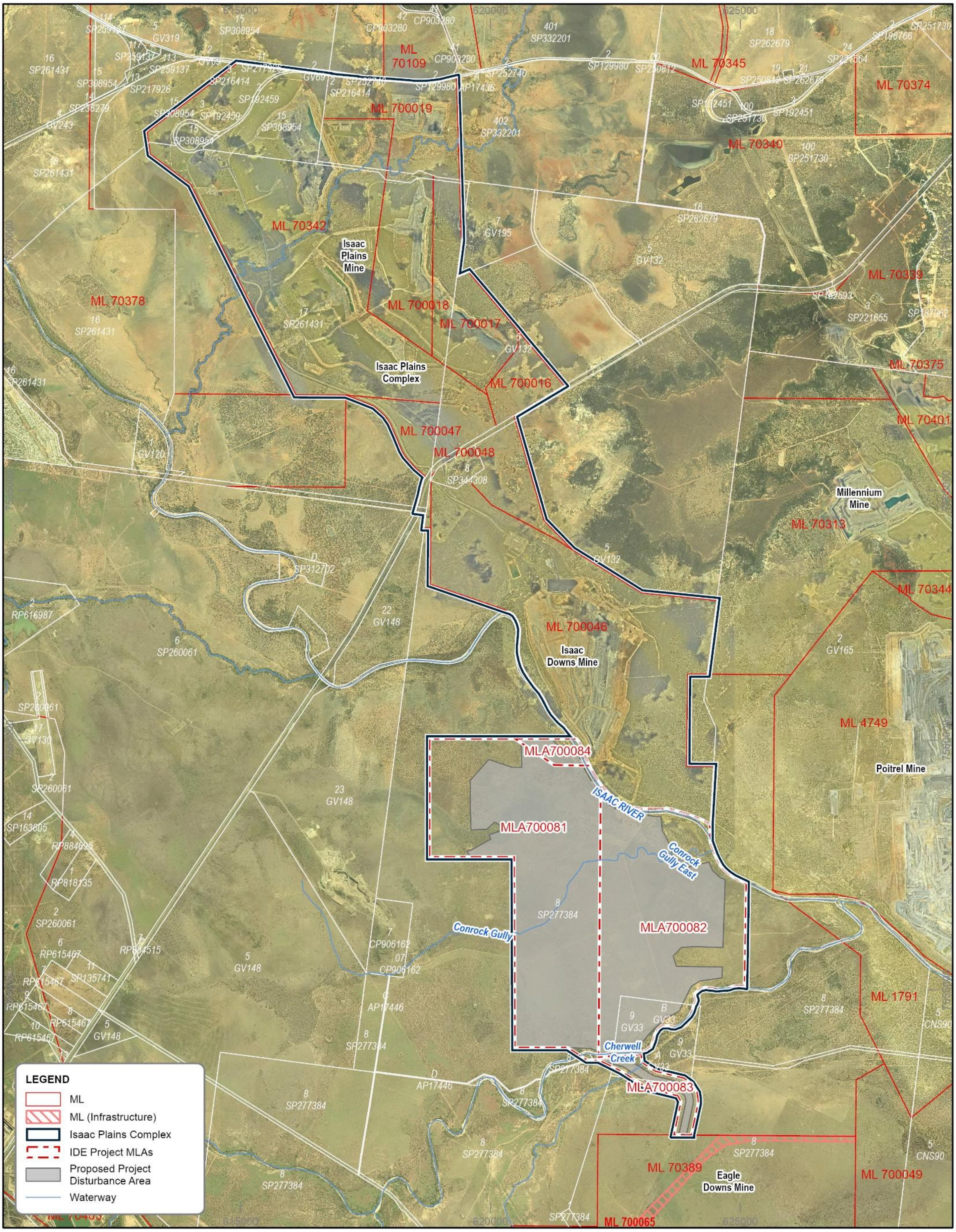
There is a single sensitive receptor (Winchester Downs homestead) within approximately 5 km of proposed mining activities, as shown on Figure 4-6. Other sensitive receptors, within approximately 10 km of the Project area are shown in Figure 4-7.

Table 4-2 Properties within the Project Area

Lot and Plan	Tenure	Owner
8 SP277384 (Winchester Downs)	Freehold	Private landowner
9 GV33	Reserve, with purpose of 'camping, water and road' as a stock route	State Owned
B GV33 (on Lot 9 GV33)	Lands Lease	Lease held by owner of Lot 8 SP277384 (Winchester Downs) for grazing purposes
A GV33 (on Lot 9 GV33)	Permit to occupy	Permit to occupy held by trustees of estate for former owner of Lot 8 SP277384 (Winchester Downs) for grazing purposes
Isaac River	Boundary watercourse	State Owned
Cherwell Creek	Boundary watercourse	State Owned
Road	Local road (segment 37555066), for access to parts of Winchester Downs	Isaac Regional Council

4.4.5 Native Title

The Barada Barna Aboriginal Corporation (BBAC) is the registered native title holder recognised for the land. Figure 4-8 shows properties where the Department of Natural Resources and Mines, Manufacturing, and Regional and Rural Development (DNRMMRRD) mapping indicates native title is not extinguished. Native title exists over areas of the Isaac River, Cherwell Creek and within a stock reserve located to the southwest of the Project. A native title agreement will be required with the BBAC prior to the grant of MLs.



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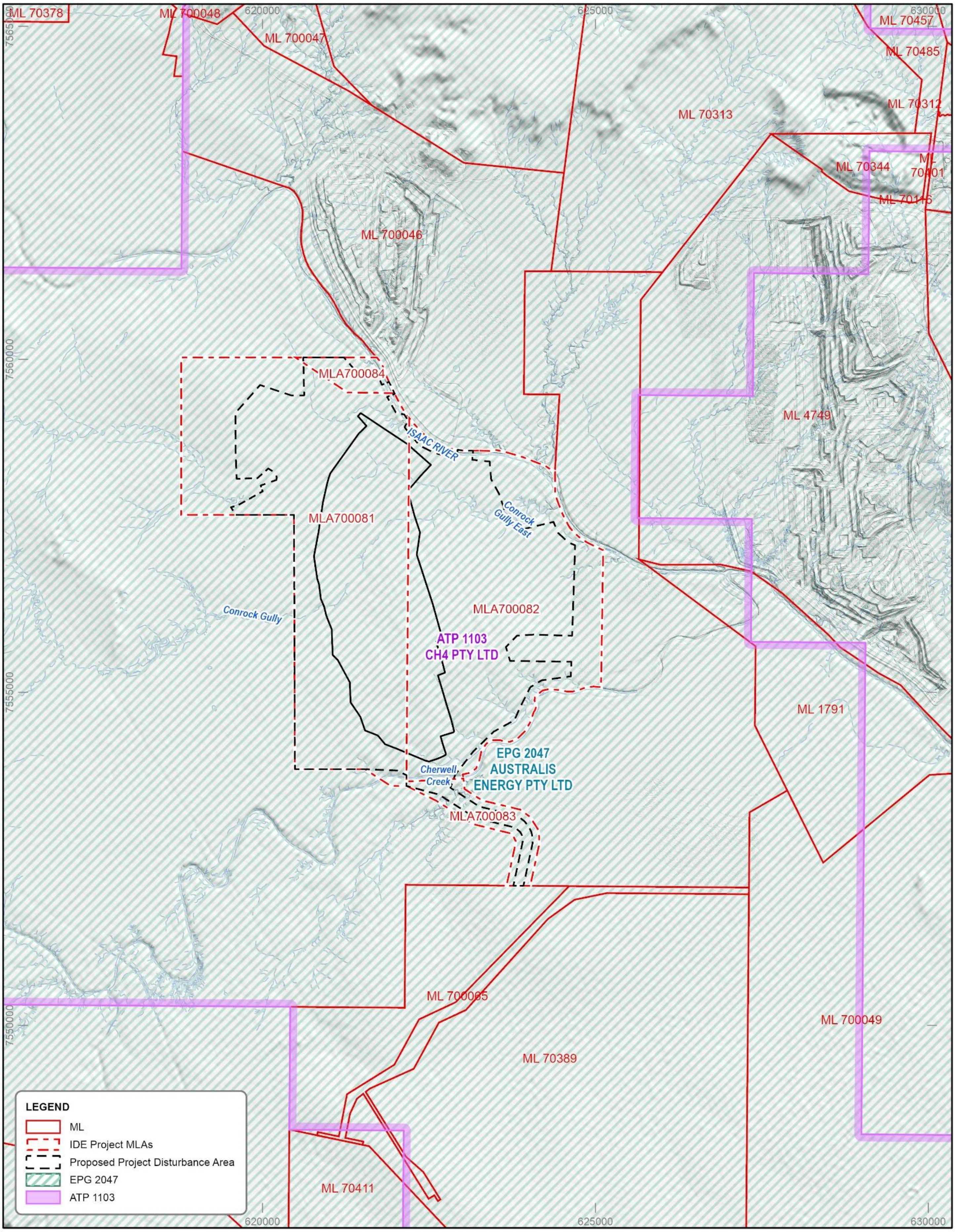
Local Project Location

Figure | 4-4



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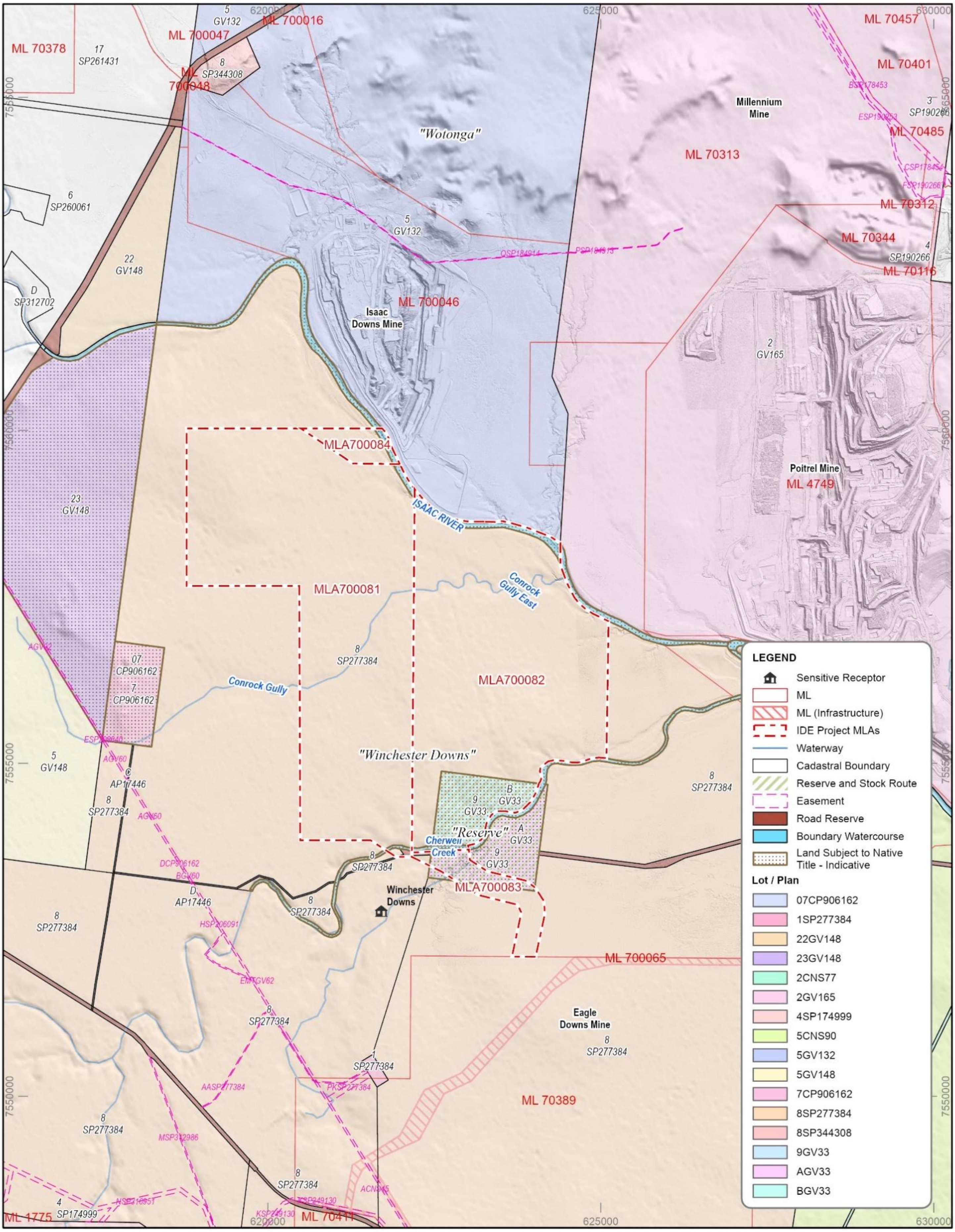
Overlapping Tenements

Figure | 4-5



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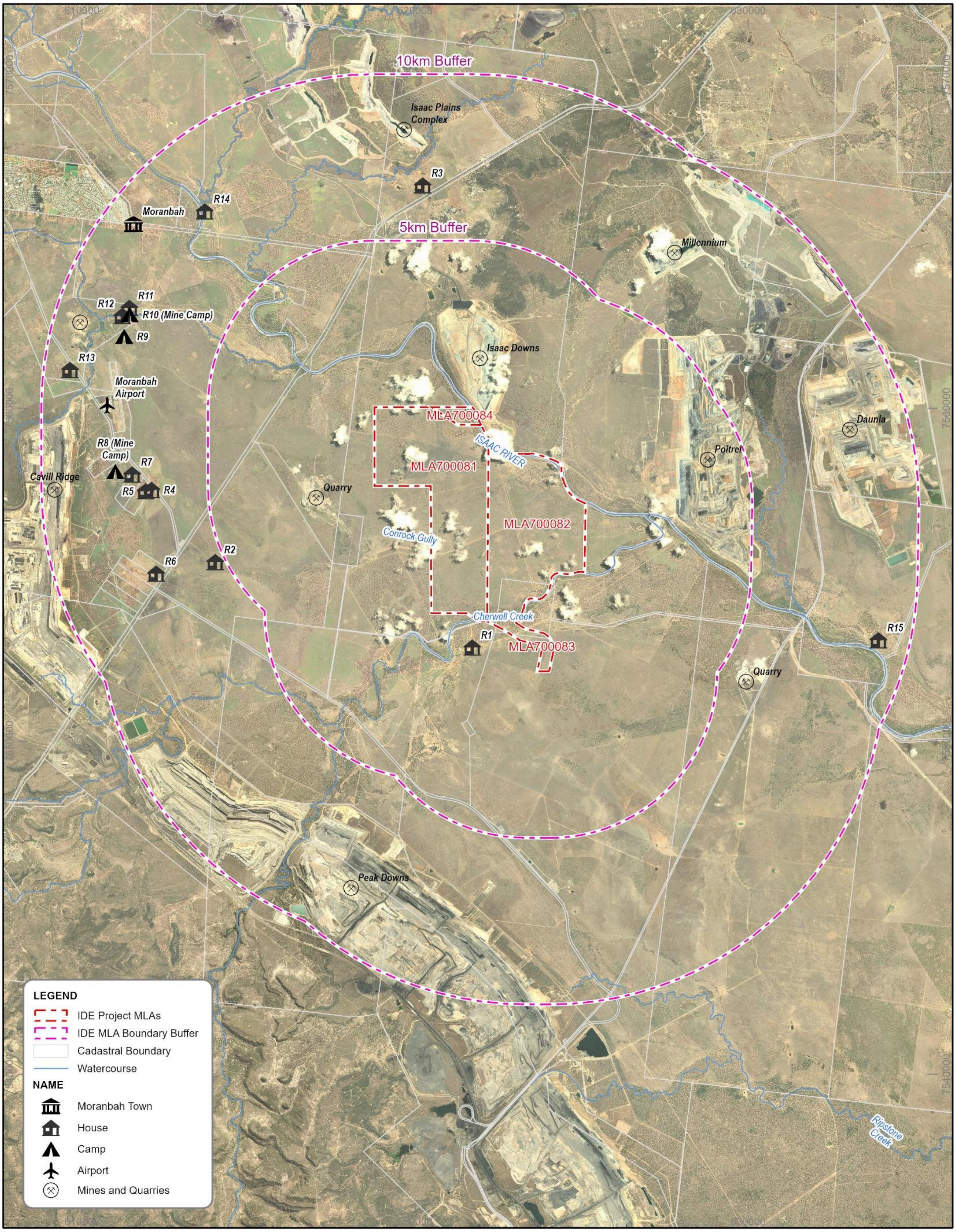
Properties and Sensitive Receptors

Figure | 4-6



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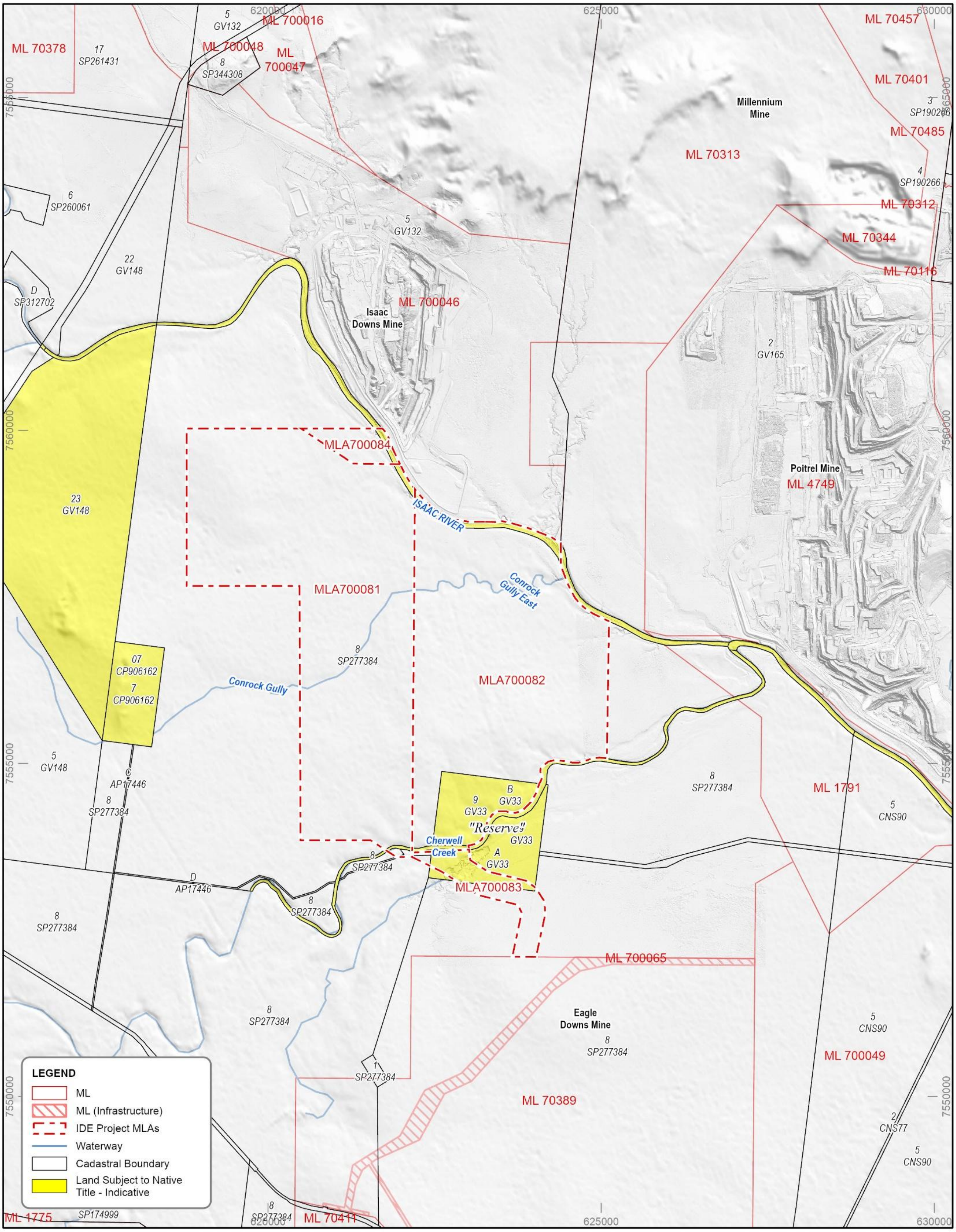
Sensitive Receptors

Figure | 4-7



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Native Title

Figure | 4-8

4.5 Land and Environmental Features

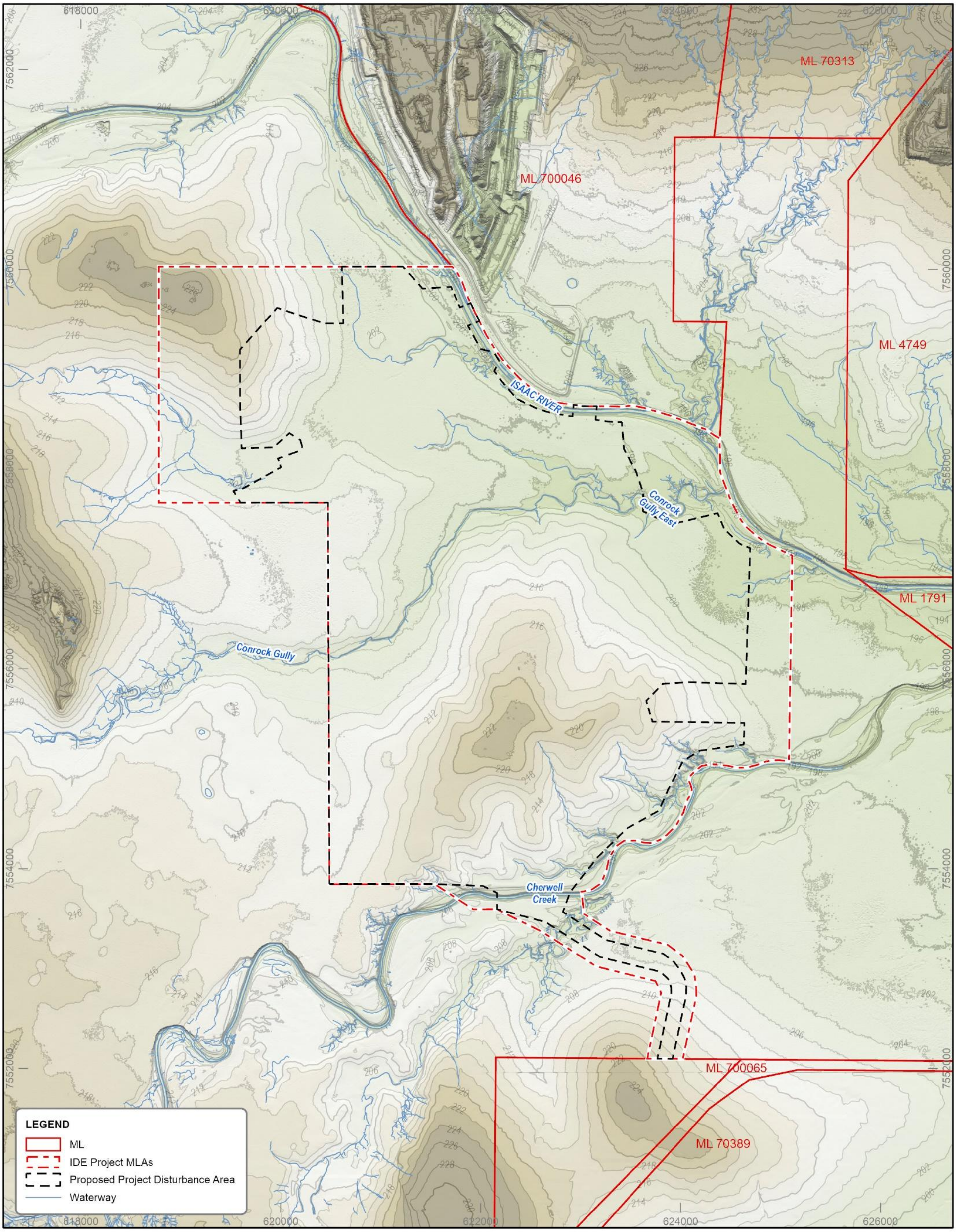
Central Queensland has a sub-tropical, continental climate characterised by high variability in rainfall, temperature and evaporation. The region can experience droughts, floods, heatwaves and frosts. In general, winter days are warm and nights are cool, while summer days are hot and nights are warm. Rainfall is summer dominant with almost half of the average annual rainfall occurring from December to February due to storms and tropical lows associated with cyclones.

Land and environmental features of the Project area and surrounds are described and shown in this section, including topography (Section 4.5.1), local and regional catchments and watercourses (Section 4.5.2), soils (Section 4.5.3), resources and geology (Section 4.5.4). There are no protected areas within or surrounding the Project area. The closest protected area is Dipperu National Park, which is approximately 45 km northeast of the Project area.

4.5.1 Topography

Figure 4-9 shows the topography within and surrounding the Project area. Generally, the topography is relatively flat and falls towards the Isaac River and Cherwell Creek from the centre of the Project area. Elevation ranges between approximately 230 m Australian height datum (AHD) on a rise to the north of Cherwell Creek and 190 m AHD along the Isaac River.

Two dominant rises overlying residual Tertiary deposits are locate within the Project area, which comprise the rise to the north of Cherwell Creek and a rise towards the northwest. Quaternary alluvial deposits form a flat plain along the eastern boundary of the Project area. The Isaac River forms the eastern boundary, and Cherwell Creek forms the majority of the southern boundary. South of Cherwell Creek the topography consists of a flat plain and a gentle rise of basalt colluvium.



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Topography

Figure | 4-9

4.5.2 Watercourses and Catchments

The Project is located within the Isaac River sub-catchment of the greater Fitzroy Basin. The Isaac River is the main watercourse in the vicinity of the Project area, and flows in a north-west to south-east direction to the east of the Project. The catchment commences at the Denham Range located about 98 km to the north of the Project. The Connors River, which has a catchment area similar to the upstream Isaac River, flows into the Isaac River approximately 120 km downstream of the Project area. The Isaac River converges with the Mackenzie River a further 53 km downstream.

The greater Isaac-Connors sub-catchment area is approximately 22,364 km^2 (to the Mackenzie River confluence), out of a total Fitzroy River catchment of 142,665 km^2. That is, it represents around 15% of the overall Fitzroy River catchment. Ultimately, the Mackenzie River joins the Fitzroy River, which flows towards the east coast of Queensland and discharges into the Coral Sea southeast of Rockhampton.

Figure 4-10 shows the location of the Project area, regional catchments and Isaac River catchment upstream of the Connors River confluence. Figure 4-11 shows the drainage characteristics of the upper Isaac River to the Deverill flow gauge.

The Isaac River is an ephemeral, seasonally flowing watercourse, typically with surface flows in the wetter months from November to April, reducing to shallow subsurface flows from about May to October. All other waterways of the Project area are ephemeral and experience flow only after sustained or intense rainfall in the catchment. Stream flows are highly variable, with most channels drying out during winter to early spring when rainfall and runoff is historically low.

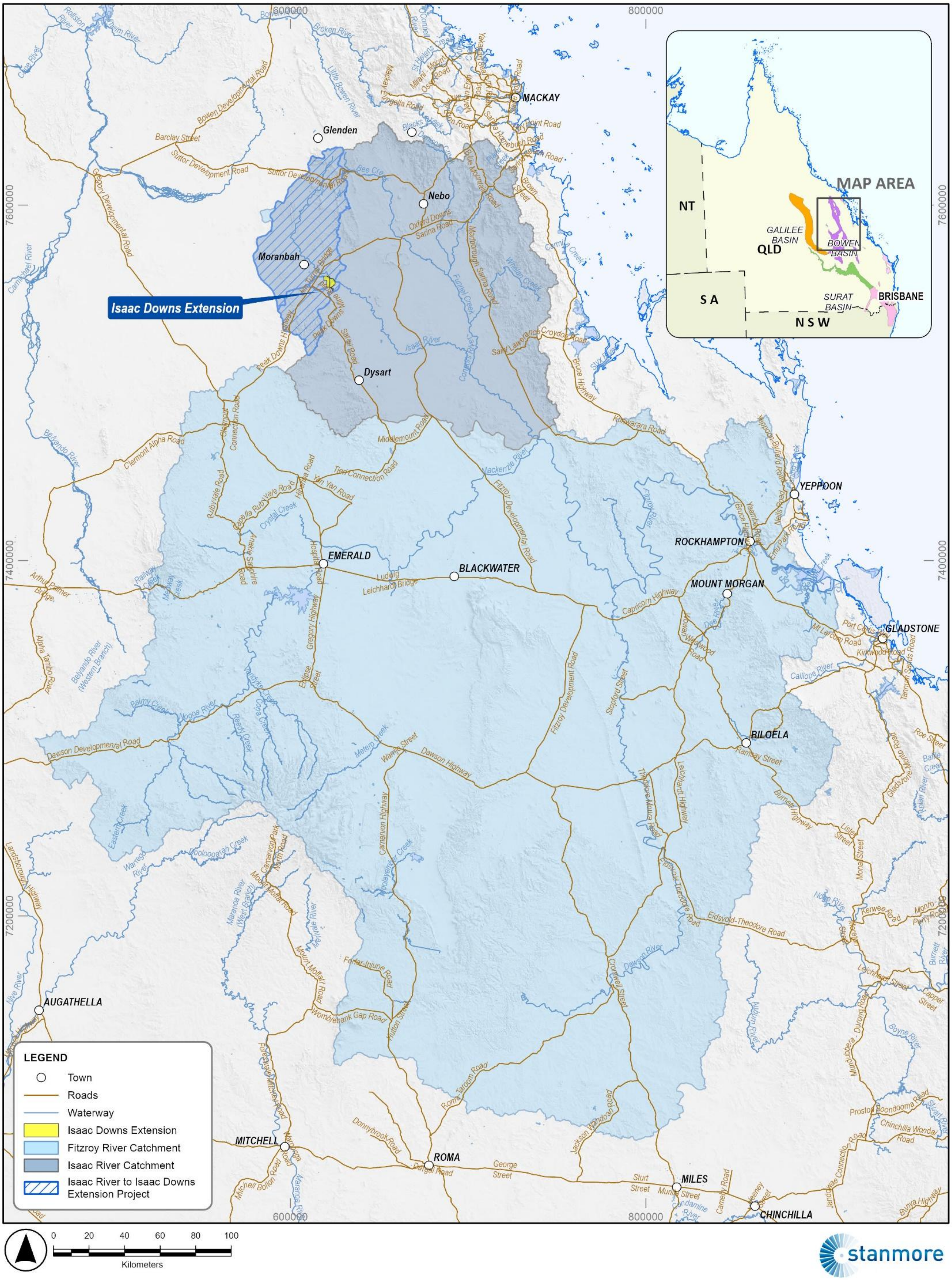
The Isaac River catchment upstream of the Project comprises mainly scattered to medium dense bushland, grazing land and the township of Moranbah. There are several existing coal mines in the Isaac River catchment including Burton, North Goonyella, Grosvenor, Goonyella-Riverside, Broadmeadow, Broadlea, Isaac Plains, Carborough Downs, Caval Ridge, Poitrel, Daunia, Millennium and Moranbah North.

The southern extent of the Project area is bordered by Cherwell Creek which is a major tributary of the Isaac River. Cherwell Creek features a well-defined active flow channel accompanied by a densely vegetated riparian zone, extending approximately 20 m wide along each bank. The catchment for Cherwell creek is approximately 698 km^2.

The catchment of the Isaac River to downstream of the confluence with Cherwell Creek, including the Cherwell Creek catchment, is 3,528 km^2, representing approximately 16% of the Isaac-Connors sub-catchment area.

A tributary, locally known as Conrock Gully, flows west to east through the centre of the Project area before joining the Isaac River. Under the Water Act, Conrock Gully is not a defined watercourse (it is a defined drainage feature) upstream of Project activities. Conrock Gully flows into the Isaac River approximately 2.5 km upstream of Cherwell Creek. Conrock Gully has a small catchment area of approximately 71 km^2, with highly ephemeral flows.

Local watercourses and catchments are shown in Figure 4-12, which also shows the waterway barrier works designations for watercourses and drainage features under the *Fisheries Act 1994*.



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Regional Catchments and Watercourses

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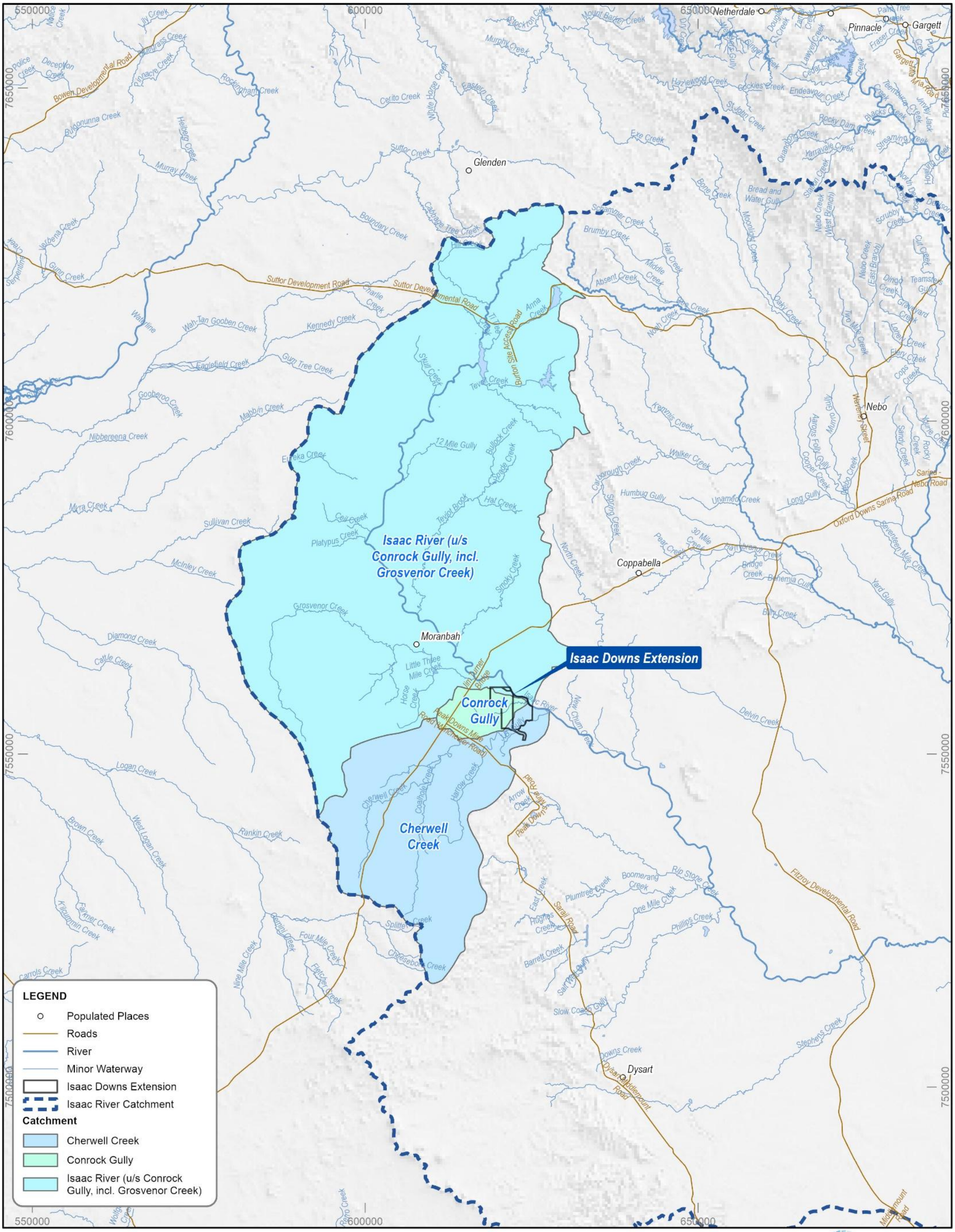

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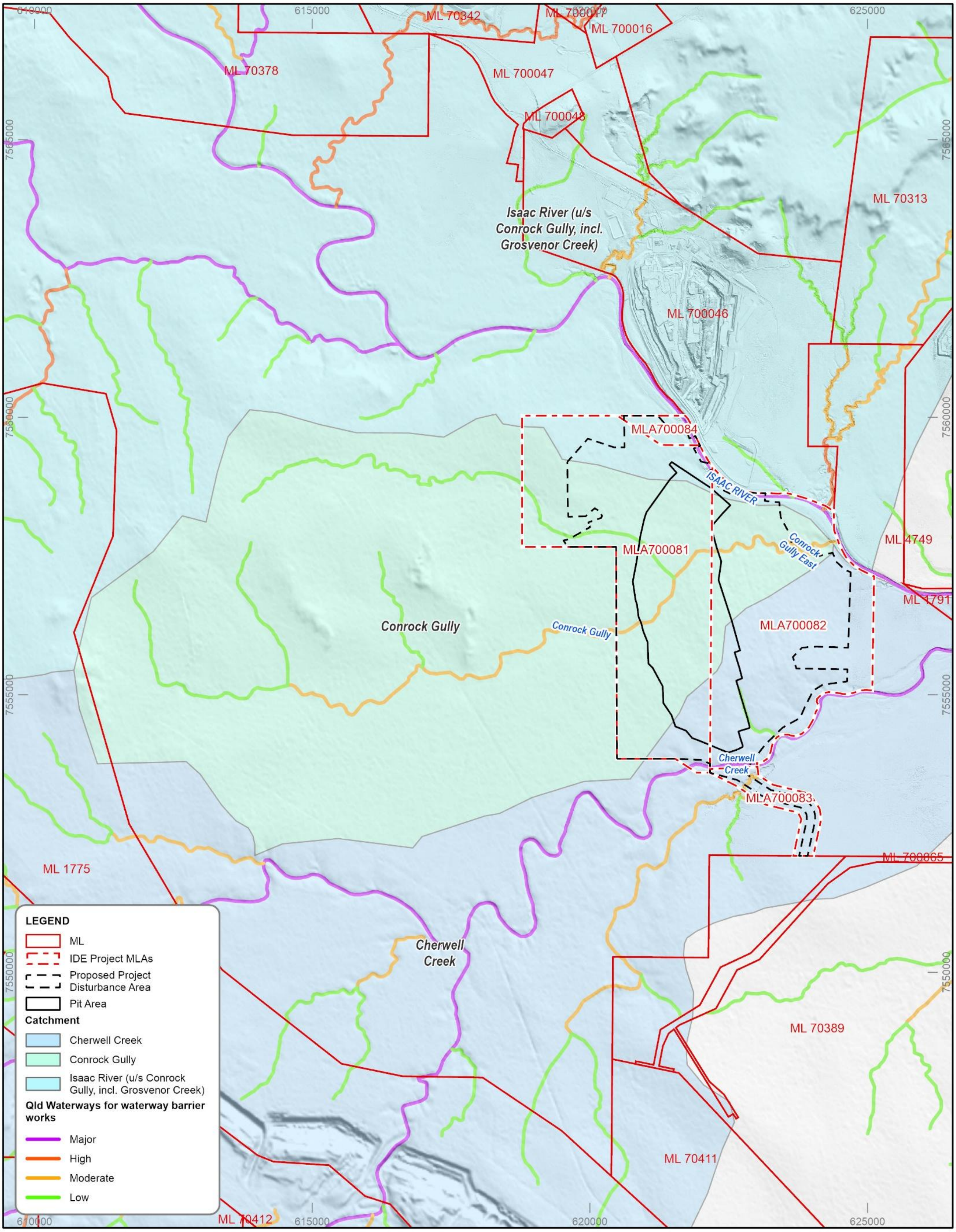
Upper Isaac River Drainage

Figure | 4-11



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Local Catchments and Watercourses

Figure | 4-12

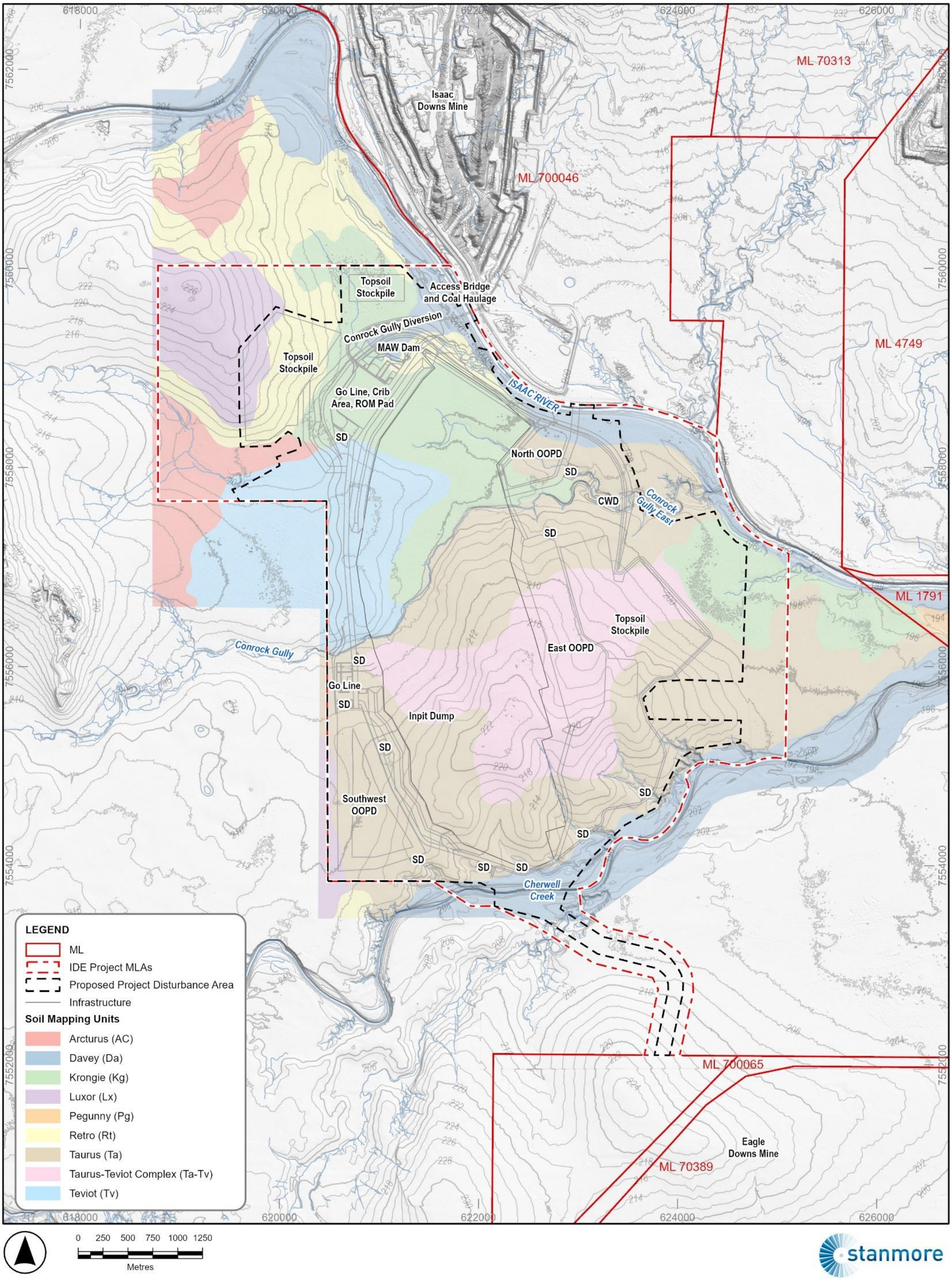
4.5.3 Soils

Nine soil mapping units (SMUs) were identified within the Project's soil study area based on similar geomorphological and chemical properties (Figure 4-13). The nine SMUs comprise:

- Taurus: sodic texture contrast soils with moderately thick sandy surfaces. Neutral to alkaline trend with sodic and saline subsoil. Occurs on gently undulating rises within the southern half of the Project's soil study area.
- Davey: deep alluvial sands occurring on the levees along the Isaac River and Cherwell creek. Neutral to acidic trend, non-sodic and non-saline.
- Krongie: cracking clay soils with normal gilgai microrelief. Alkaline trend with sodic and saline subsoil. Occurs on alluvial floodplains along the Isaac River.
- Taurus-Teviot Complex: complex soil unit consisting of sodic texture contrast soils with cracking clay soils sporadically occurring in gilgai depressions. Occurs on a gently undulating rise within the southern half of the Project's soil study area.
- Retro: sodic texture contrast soils with moderately thick loamy surfaces. Neutral to strong alkalinity with sodic and saline subsoil. Occurs on gently undulating rises on the northern half of the Project's soil study area.
- Teviot: cracking clay soils with normal gilgai microrelief. Alkaline trend with sodic and saline subsoils. Occurs on gently undulating rises, within the central portion of the Project's soil study area.
- Arcturus: cracking clay soils derived from basalt with crabhole gilgai microrelief. Alkaline with sodic and slightly saline subsoil. Occurs on gently undulating rises and colluvial depositions on the western and southern most boundary of the Project's soil study area.
- Luxor: texture contrast soils with thick sandy surfaces and clay subsoils. Neutral to alkaline trend and sodic subsoil. Occurs on a prominent rise on the northern half of the Project's soil study area.

The Project area does not contain acid sulfate soils. **Appendix E** provides a detailed soil resources assessment completed for the Project.

Information on the properties of soils and the management of soils for use in rehabilitation is provided in **Chapter 5**, **Chapter 7** and **Appendix E**.



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Soil Mapping Units

Figure | 4-13

4.5.4 Coal Resource and Geology

The coal resource has been defined through multiple exploration programs involving drilling and seismic over prior decades. The Leichhardt and the Vermont seams form the principal economic coal resources in the Project area for ID Extension.

The Project's coal deposit area is located in the northern part of the Permo-Triassic Bowen Basin. Structurally, the deposit lies on the western boundary of the deformed Nebo Synclinorium immediately west of the regional Isaac Thrust fault system. To the east and north of the thrust, seams are repeated.

The economic seams are contained in the Late Permian Rangal Coal Measures which are approximately 100 m thick. The Rangal Coal Measures are underlain by the Fort Cooper Coal Measures and overlain by the Late Permian to Early Triassic Rewan Group. The regional stratigraphy of the North Bowen Basin is shown in Figure 4-14.

The Rangal Coal Measures comprise light grey, cross-bedded, fine to medium grained labile sandstones, grey siltstones, mudstones and coal seams. Cemented sections are common in the sandstones. The transition from the Rangal Coal Measures to the Rewan Formation is generally difficult to define and is often based on the change from the green-grey colour of the Rewan sandstones to the blue-grey colour of the Rangal sandstones. The transition between the formations is 15 to 60 m above the first major seam in the Rangal Coal Measures, being the Leichhardt Seam.

The Fort Cooper Coal Measures comprise typically tuffaceous sandstones, siltstones, mudstones and coal seams. The transition between the Rangal Coal Measures and the Fort Cooper Coal Measures is generally clearly marked by the Yarrabee Tuff - a basin-wide marker bed comprised of weak, brown tuffaceous claystone.

The deposit area contains Quaternary sediments range in thickness from 2 to 20 m (average 7.8 m). Some thicker Quaternary sediments are present along the banks of the Isaac River in the north and a minor amount along Cherwell Creek to the south. Figure 4-15 shows the typical local stratigraphy of the area. In the north of the Project area the Leichhardt and the Vermont seams coalesce to form a thickened pod of coal. The Vermont coalesces with the Girrah seam in the south of the Project area. The Rangal Coal Measures dip to the east at 2 to 6 degrees. The coal seams will be mined to a depth of less than 100 m.

Depth of weathering over the whole deposit ranges from 11 to 36 m averaging 20 m. Non-coal Permian sediments consist of moderately weak to strong sandstones, siltstones and minor mudstones. Sandstone and siltstone appear to be co-dominant. There are no significant Tertiary basalt flows in the Project area.

Additional geological information, including geological cross sections of the Project area, and figures showing aquifers and faults, are provided in **Chapter 7** and **Chapter 10**.

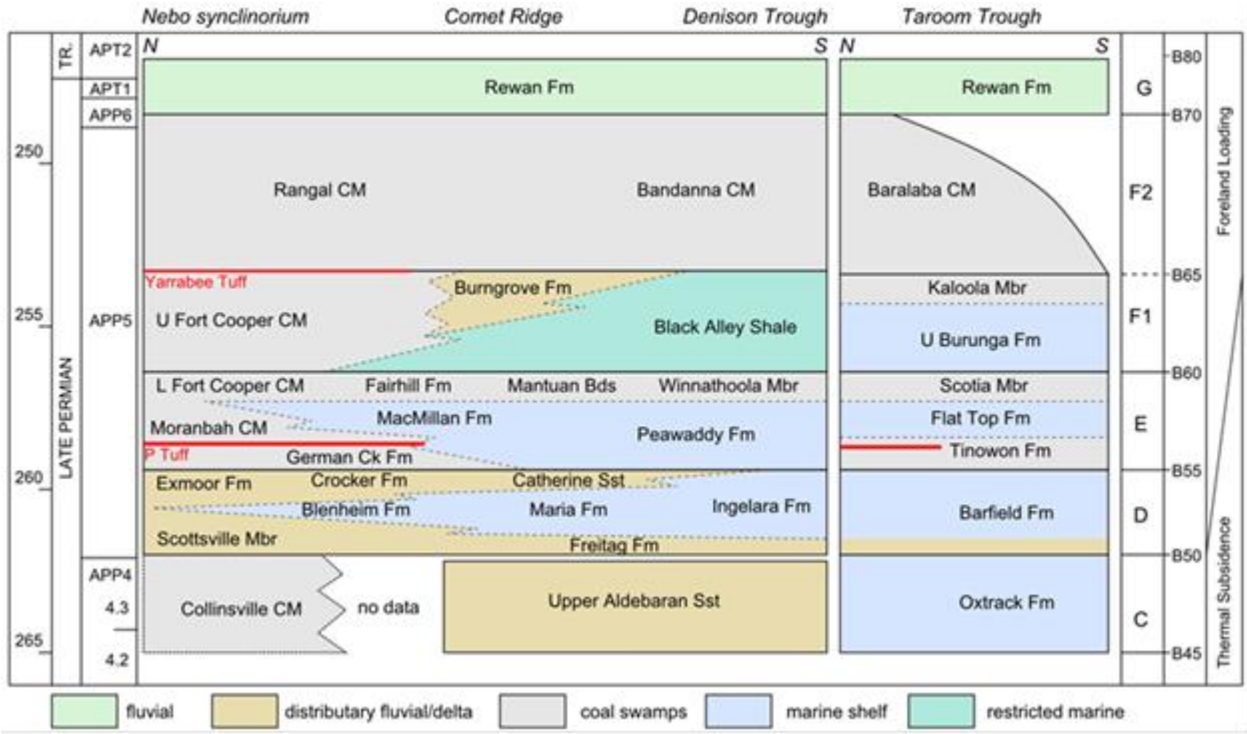


Figure 4-14 Regional Stratigraphy of the North Bowen Basin

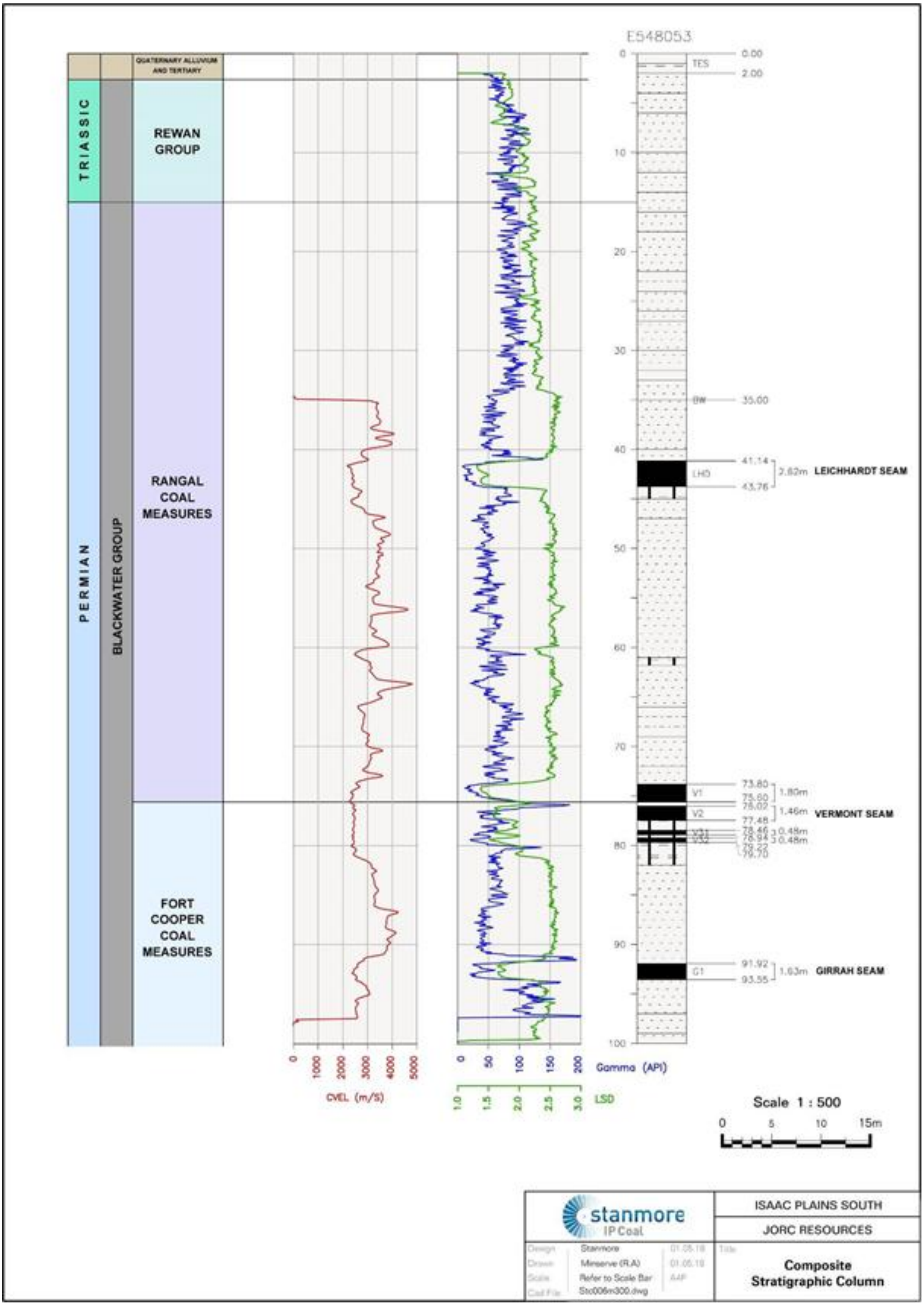


Figure 4-15 Local Stratigraphy

4.6 Integration with IDM and IPM

Mining of ROM coal at IDM is expected to ramp down between 2026 and 2028. ROM coal has been mined at a rate of approximately 3 – 4 Mtpa at IDM since operations commenced mid 2021, with a similar rate forecast until 2027, after which mining ramps down to under 1 Mtpa. The Project will mine ROM coal at a rate of approximately 2 – 4.5 Mtpa, effectively extending the life of ROM coal mined from IDM, allowing for the transition of the workforce from IDM and ongoing utilisation of the dragline and IPM CHPP.

The Project, once approved, will result in an extension of mining operations of IPC. The key aspects of Project integration with IPC are:

- Continued employment of the workforce at IDM and the IPM CHPP.
- Transport of ROM coal from the Project to the IPM CHPP via new and existing haul roads, primarily utilising existing haul roads.
- Washing of ROM coal at the IPM CHPP, with no changes required at the CHPP to allow washing of Project ROM coal.
- Railing of product coal from the IPM CHPP utilising the Goonyella rail line to transport the majority of product coal to Dalrymple Bay Coal Terminal (DBCT), with a small percentage railed via the Newlands rail system to the Port of Abbot Point.
- Disposal of rejects and tailings within existing dumps and mined voids at IPM.
- Access to the Project for light and heavy vehicles from the Peak Downs Highway utilising new and existing roads on IDM to the point of connection with the Project's proposed bridge crossing of the Isaac River.
- Supply of water to the Project from either the Sunwater raw water pipeline to IPC, or from existing water storages (e.g. voids, dams, etc), for which new and existing pipelines will be required.
- Ability to transfer excess mine affected water from the Project to existing voids and storages at IPC, via new and existing pipelines.
- Connecting to a suitable power supply source at IDM with new power lines required for supply of power to the Project.
- Utilisation of the dragline currently operating at IDM, with the dragline walked to the Project via a temporary dragline route, including a crossing of the Isaac River.
- Utilisation of mining equipment (e.g. excavators, haul trucks) currently operating at IDM.
- Utilisation of the explosives magazine reload facility at IDM with transport of explosives along existing and proposed haul roads

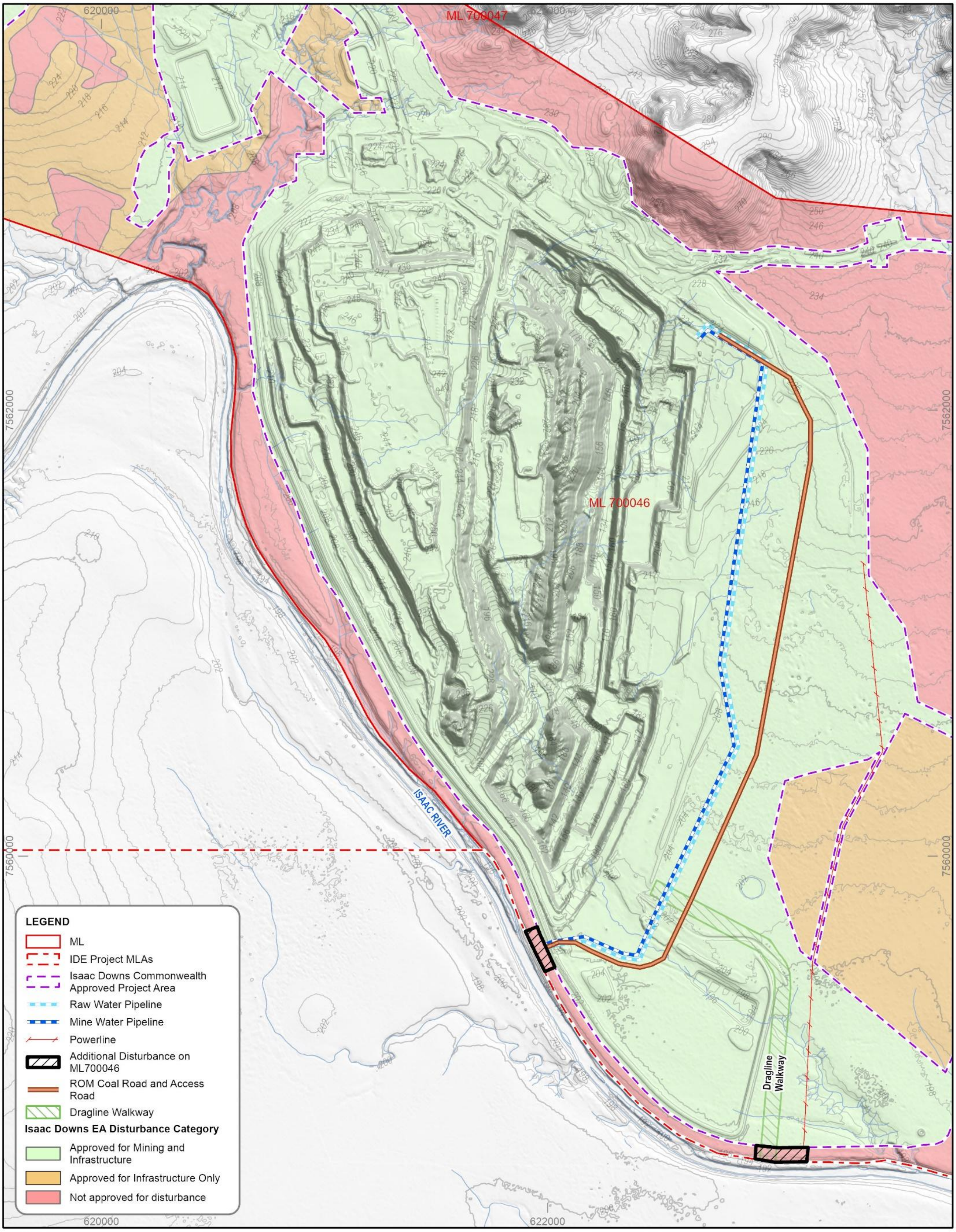
The Project related activities that would result in disturbance at IDM are approved under existing State and Commonwealth approvals, as shown in Figure 4-16; except for two small areas (approximately 2.5 ha in extent) on the north side of the Isaac River at the crossing locations. Approvals for activities in these two areas will be sought as:

- an environmental authority (EA) and progressive rehabilitation and closure plan (PRCP) schedule amendment to the IDM EA and PRCP schedule
- part of the 'action' defined for the Project's referral (EPBC 2025/10183) for Commonwealth approvals under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

The ongoing utilisation of infrastructure at IDM to support the Project (e.g. the MIA and haul roads) may result in a delay to the timing of rehabilitation milestones approved in the IDM PRCP schedule. Therefore it is expected that a future amendment will be required to the IDM PRCP schedule once the Project has secured all approvals and there is a change to the infrastructure decommissioning schedule at IDM.

The southern section of the existing IDM levee, where it does not form part of the IDM final landform, will be decommissioned prior to constructing the Project levee. This would occur in advance of the current scheduled levee decommissioning per the IDM PRCP schedule. In accordance with IDM PRCP schedule condition PRCP 3, where land becomes available for rehabilitation earlier than the nominated date then the PRCP schedule holder must commence rehabilitation and decommissioning as soon as practicable, with the timing of all rehabilitation milestones adjusted accordingly. Hence the earlier decommissioning of the IDM levee can occur in accordance with the current IDM PRCP schedule conditions. Alternatively the IDM PRCP schedule can be amended such that the timing of levee decommissioning and rehabilitation is updated in the IDM PRCP schedule.

Rejects and tailings management at IPM is expected to occur in accordance with the Mine Waste Management Plan authorised by the IPM EA, and the methodologies described in the IPM PRCP (see Section 4.7.3 for additional information). However, the timing of completion of proposed PRCP schedule rehabilitation and improvement milestones will be extended beyond that currently anticipated to allow for disposal of rejects and tailings the Project. Therefore, it is expected that a future amendment will be required to the IPM PRCP schedule, once the Project has secured all approvals and there is a change to the reject and tailings management schedule at IPM.



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ISAAC DOWNS EXTENSION

Isaac Downs Mine
Proposed Disturbance Areas and Approvals Boundaries

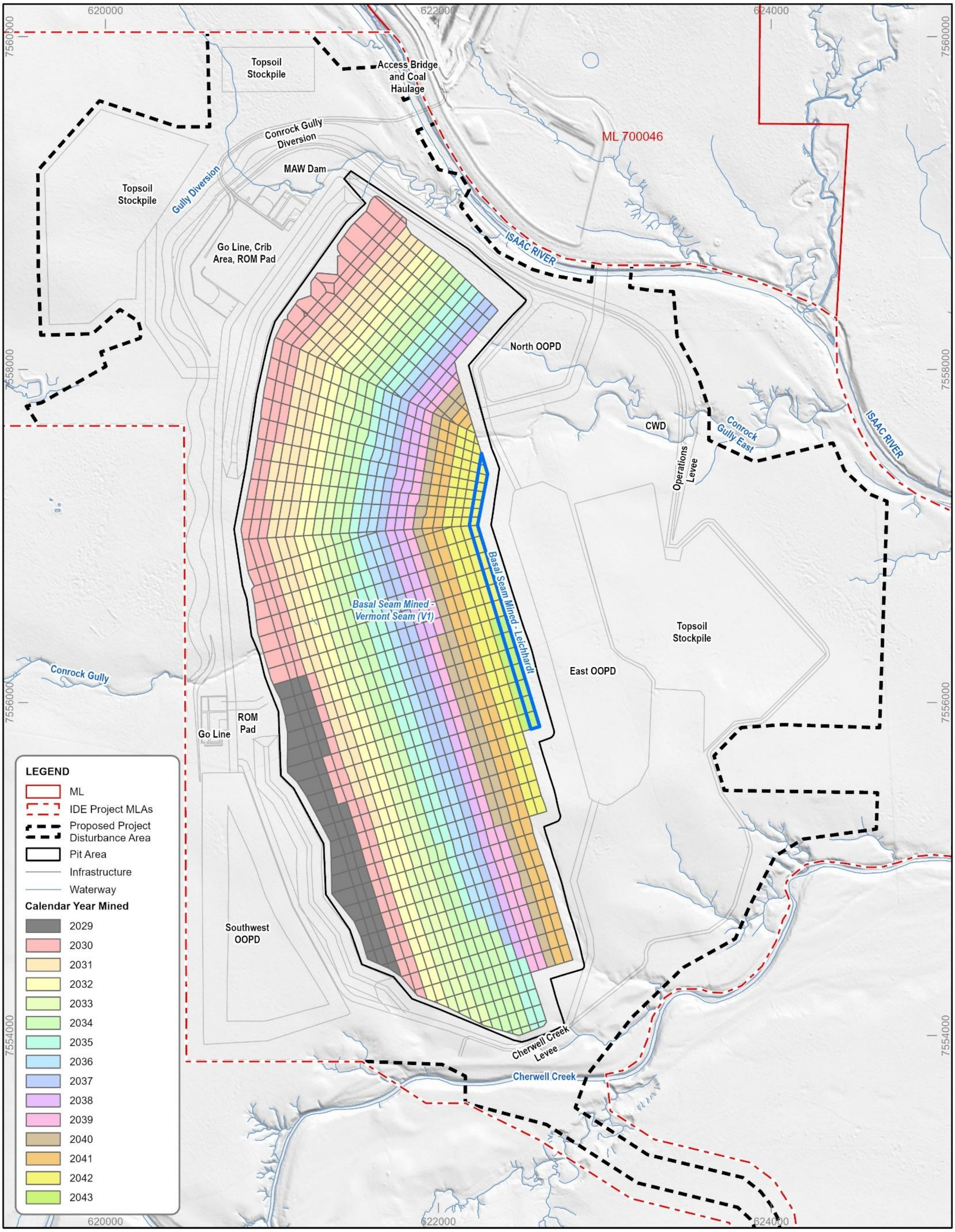
Figure | 4-16

4.7 Mine Schedule

Project construction is scheduled to commence in late 2027 / early 2028 with ROM coal extraction commencing in in 2029. For the purposes of the describing the Project in various impact assessments in this EIS, Year 1 refers to the initial construction year and Year 2 is the first year of ROM coal extraction. Year 16 is the final year of ROM coal extraction.

Whilst the Project comprises a single open cut pit, the pit development will commence in the south and expand to the north. Mining will generally be in an easterly direction following the dip of the coal seams. A period progress plot, based on the anticipated commencement of operations in 2029 (Year 2), is provided in Figure 4-17.

It is proposed to construct the Isaac River levee and Conrock Gully diversion at the commencement of the Project (Year 1). Mining activities (e.g. topsoil stripping, overburden removal) may commence in the southern areas where a levee and diversion is not required to protect the pit from flooding. Once the levee and diversion are constructed mining can occur in the central and northern areas. The proponent may stage the construction of the levee and diversion as and when required for protection of mining activities.



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ISAAC DOWNS EXTENSION

Period Progress Plot - Basal Seam Mined

Figure | 4-17

4.7.1 ROM Coal Extraction

The forecast annual ROM coal extraction rate (tonnes) for the Project is shown in Figure 4-18. ROM coal extraction varies between around 2 and 4.5 Mtpa, with higher ROM coal extraction in the initial years, before declining to around 2 Mtpa in later years. Approximately 46 Mt of ROM coal will be extracted over the life of the Project.

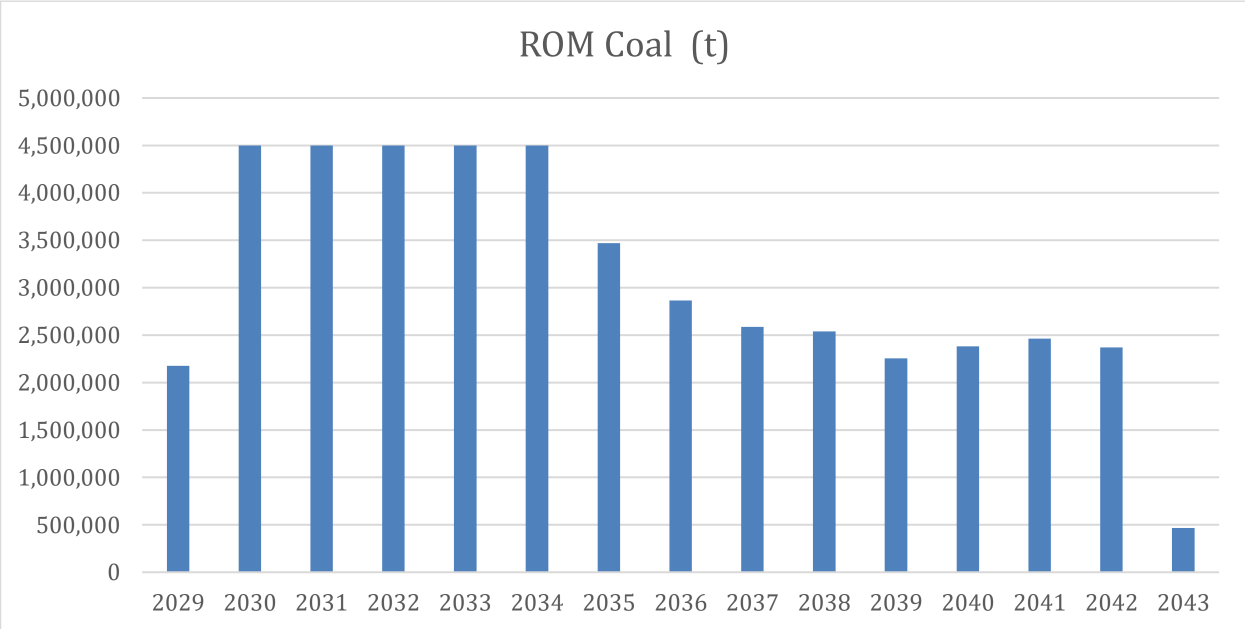


Figure 4-18 Annual ROM Coal (Tonnes)

4.7.2 Product Coal

ROM coal will be washed at the IPM CHPP. The forecast annual product coal production rate (tonnes) for the Project is shown in Figure 4-19. Product coal production varies between around 1.5 and 3 Mtpa, with higher production in the initial years, before declining to around 1.5 Mtpa in later years. Approximately 30 Mt of product coal will be produced over the life of the Project. The majority of product coal, around 60%, will be a metallurgical coal. As a by-product from the CHPP, a mid to high energy thermal coal will also be produced for use in cement making or power generation.

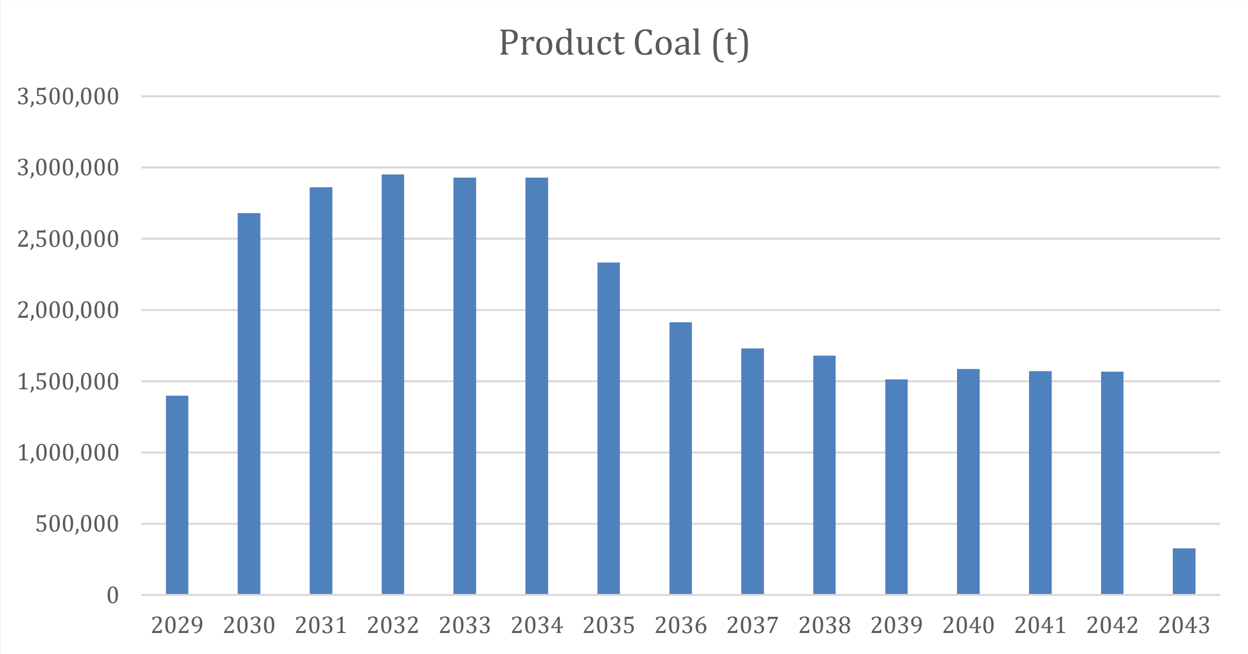


Figure 4-19 Annual Product Coal (Tonnes)

4.7.3 Rejects

Coarse rejects and fine tailings (together 'rejects') will be produced from washing of coal at the IPM CHPP. The forecast annual rejects production rate (bank cubic metres (bcm)) for the Project is shown in Figure 4-20. Rejects production varies between around 0.4 and 0.9 million bank cubic metres (Mbcm) per annum. Approximately 7.5 Mbcm of coarse rejects and 2 Mbcm of tailings will be produced over the life of the Project. Table 4-3 provides the life of IPC rejects and tailings volumes for disposal at IPM, inclusive of volumes from washing of coal from IPM, IDM and the Project. In accordance with currently authorised rejects and tailings management measures at IPM, coarse reject will be disposed of within cells in the overburden dumps, and tailings will be disposed of within a residual void. Rehabilitation of in-pit tailings disposal areas and coarse rejects areas within the dumps will be in accordance with methodology described in the IPM PRCP and Mine Waste Management Plan, summarised as:

- Coarse reject cells will be landformed (e.g. to a slope percentage required by the PRCP schedule), capped with a cover system, growth medium will be applied, vegetation will be established, and a stable, grazing post mining land use will be established.
- Tailings will be disposed of within an approved, safe and geotechnically stable void (non-use management area), covered by an in-pit cover system or void water, with void water levels remaining below the groundwater source / sink level, such that voids continue to be groundwater sinks.

IPC has sufficient available dump and void capacity for the storage of 11.6 Mbcm of rejects and 3.2 Mbcm of tailings (i.e. the volumes estimated per Table 4-3). The dump in the N1 pit area has available capacity for 11.6 Mbcm of rejects, with the dump height remaining below the current height of the rehabilitated dump landforms. The residual void at N1 pit has available capacity of 15 Mbcm before reaching the groundwater source / sink level, as identified in studies for the IPM PRCP. Therefore, with 3.2 Mbcm required for life of mine tailings disposal, this represents around 20% of the available volume. Utilising existing overburden and void areas at IPM for storage of rejects and tailings removes the requirement for above ground storage tailings storage facilities.

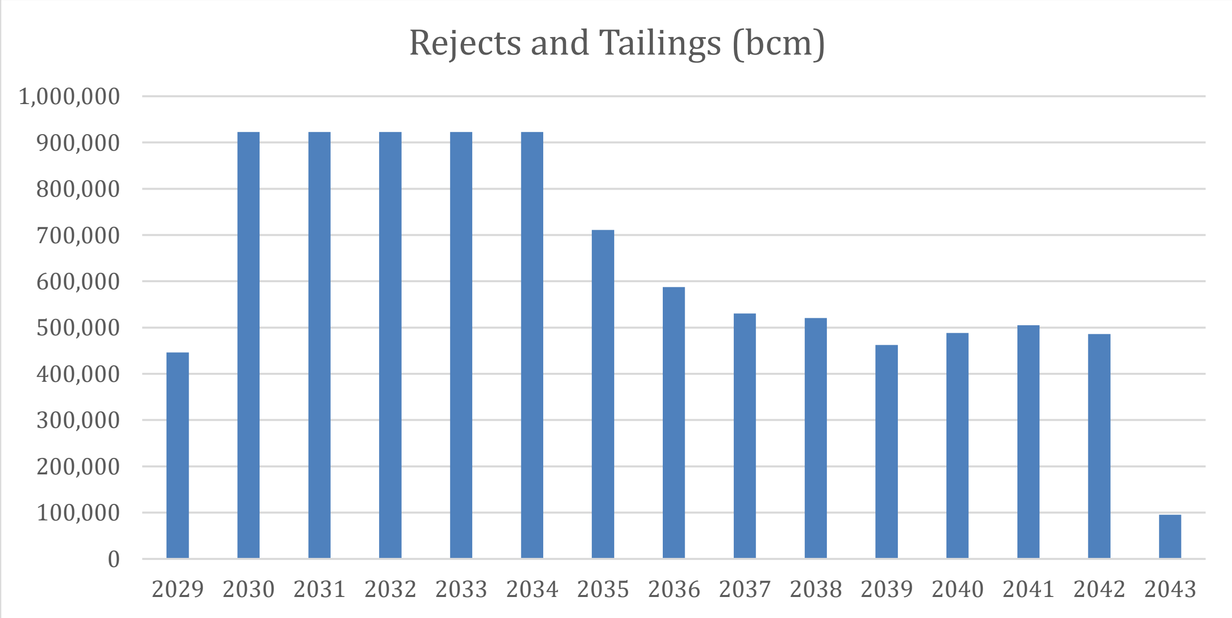


Figure 4-20 Annual Rejects and Tailings (bcm)

Table 4-3 IPC Life of Mine Rejects and Tailings

Source / Volume	Coarse rejects (Mbcm)	Tailings (Mbcm)	Total (Mbcm)
IPM and IDM	4.1	1.3	5.4
IDE (the Project)	7.5	2.0	9.5
Total (Mbcm)	**11.6**	**3.2**	**14.8**

4.7.4 Overburden

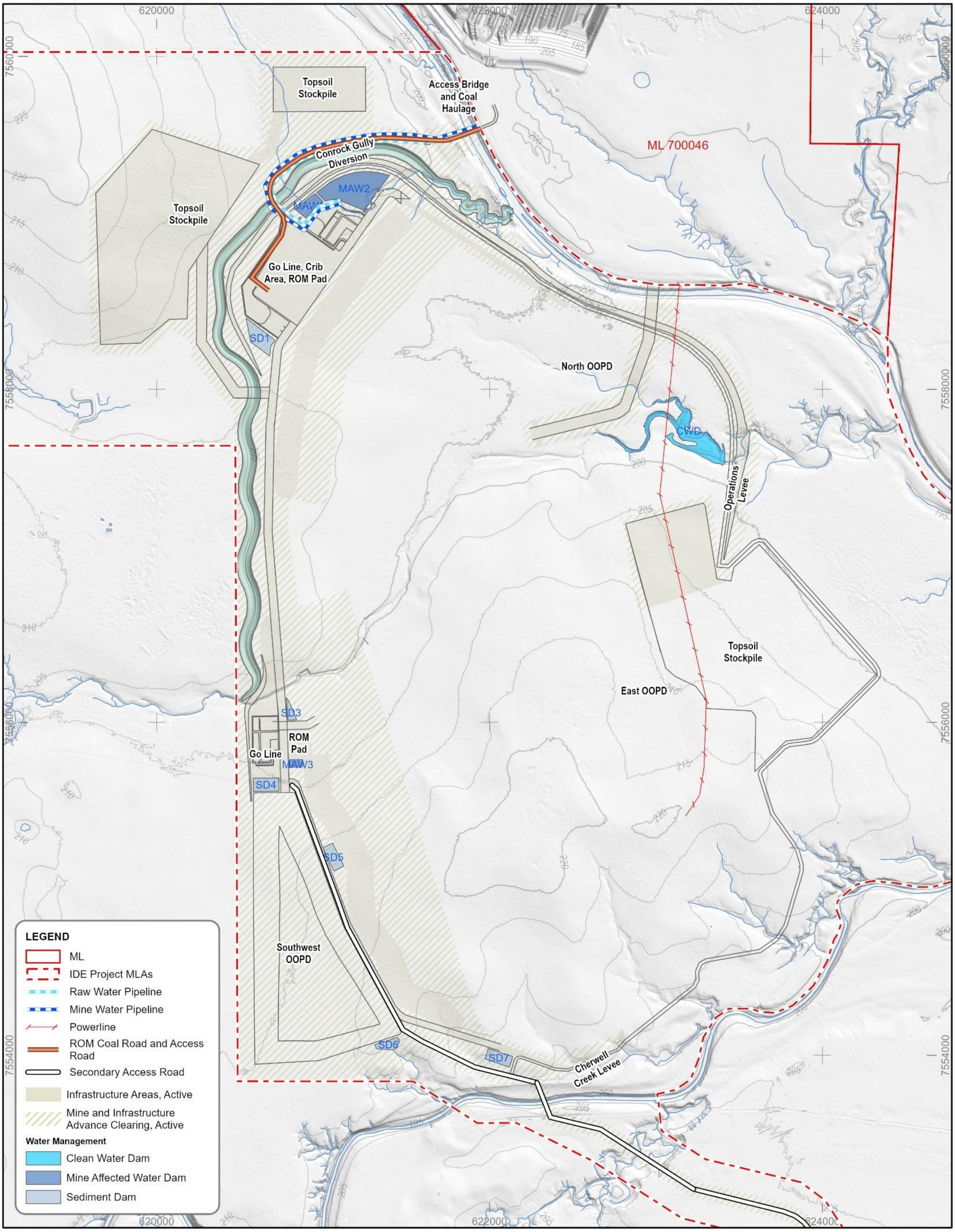
Approximately 20 to 30 Mbcm per annum of overburden will be removed from the Project pit area, with the majority of overburden (around 90%) placed in-pit in previously mined areas.

4.7.5 Stage Plans

A series of mine stage plans has been developed for the Project, showing the progression of mining activities at each stage. These stage plans have underpinned the assessment and management of Project impacts during and post operations. The following stage plans have been developed:

- Year 1 (Figure 4-21) showing the period of infrastructure construction
- Year 2 (Figure 4-22) showing the initial year of mining operations, including the initial box cut, with infrastructure constructed to support operations.
- Year 4 (Figure 4-23) showing mining progression, with out of pit dumping in progress.
- Year 6 (Figure 4-24) showing mining progression, with the south west out of pit dump substantially land formed, high wall out of pit dumps in progress, in-pit dumping ongoing, and progressive rehabilitation occurring.
- Year 11 (Figure 4-25) showing mining well advanced, the south west out of pit dump substantially rehabilitated, in-pit dumping ongoing, and progressive rehabilitation occurring.

- Year 16 (Figure 4-26) showing the final year of mining operations, with in-pit dumping complete, backfill of the northern pit area with the waste from the northern out of pit dump, and progressive rehabilitation occurring.



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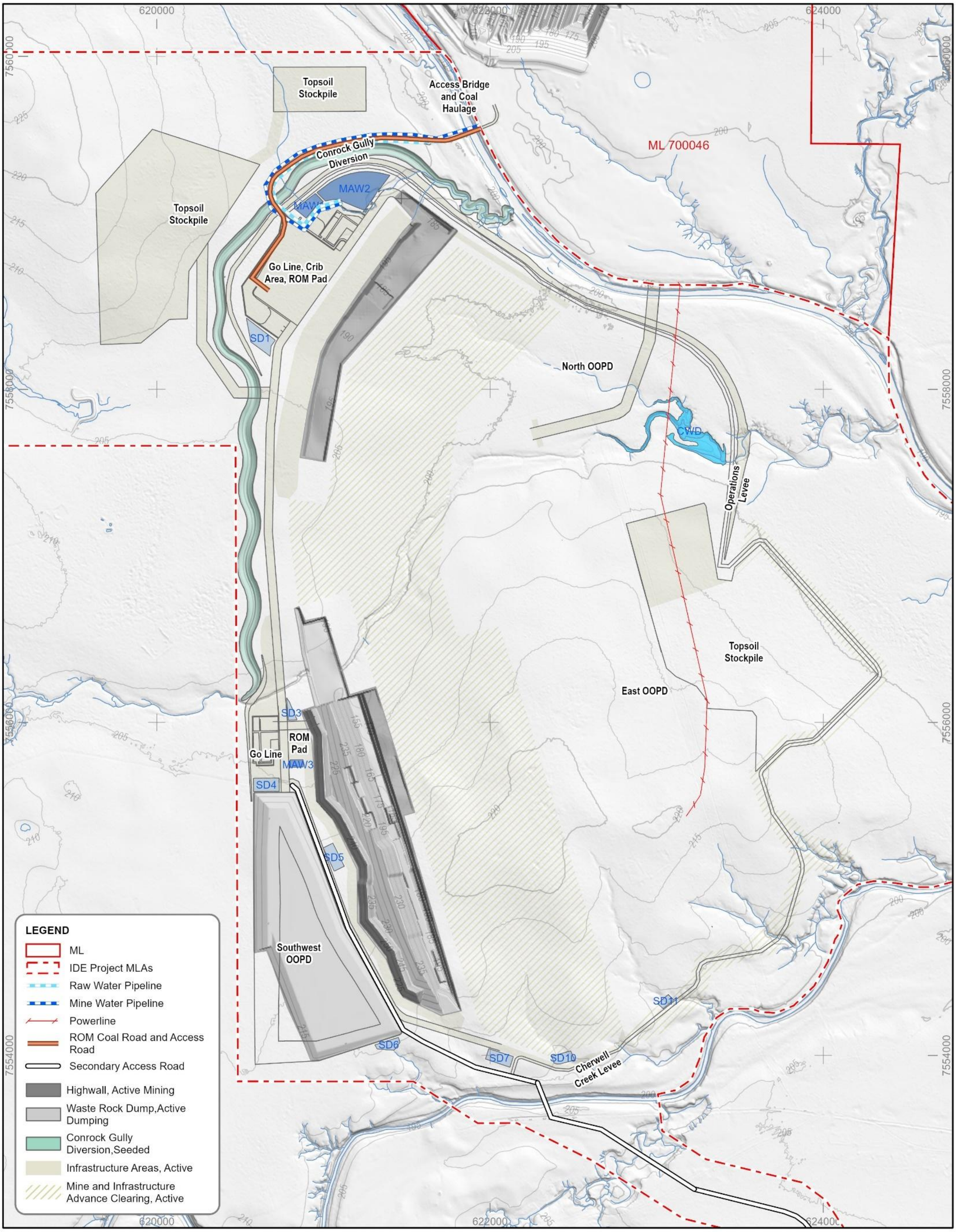
ISAAC DOWNS EXTENSION

Mine Stage Plan
Year 1 - Construction

Figure | 4-21



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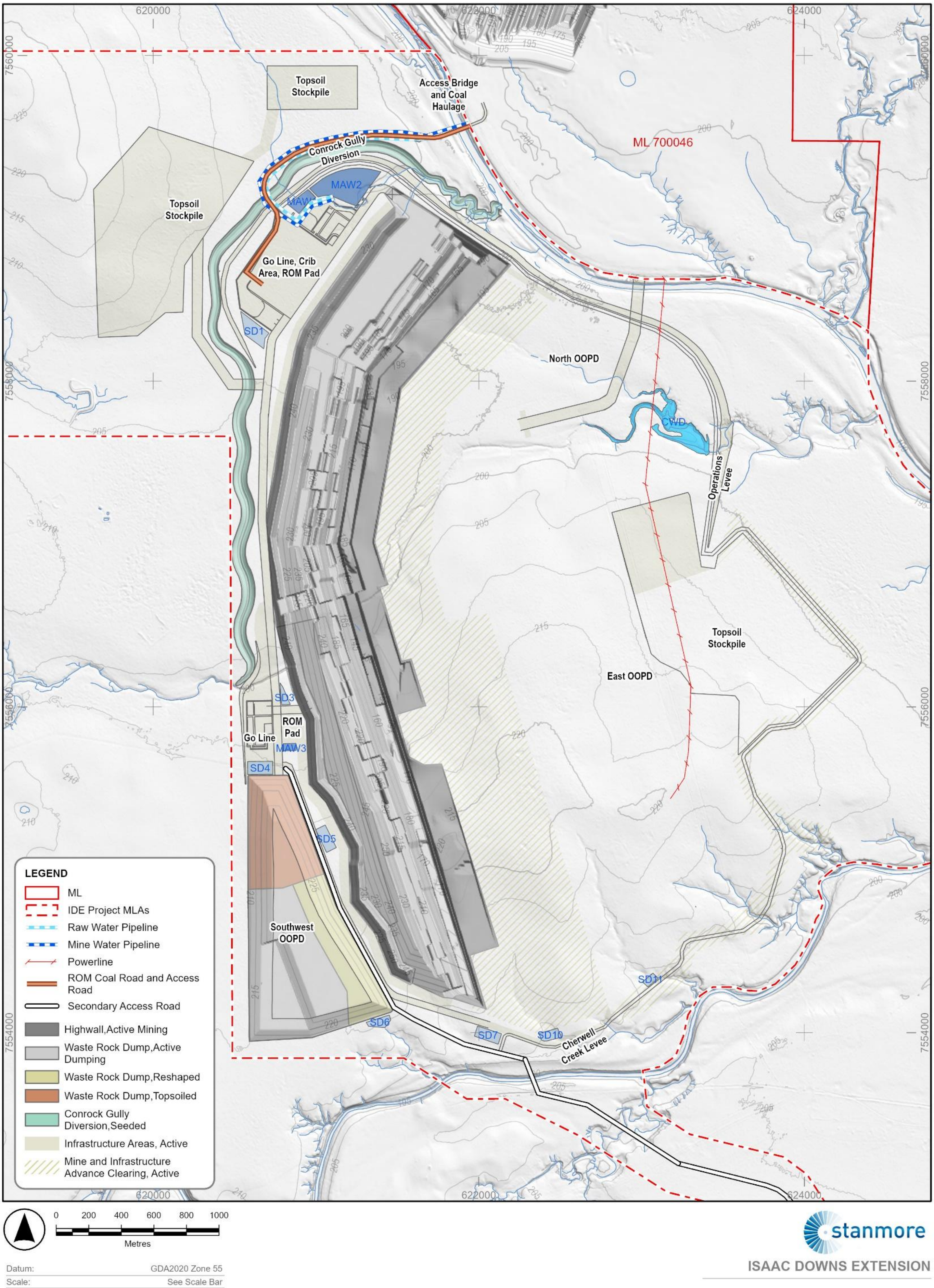
ISAAC DOWNS EXTENSION

Mine Stage Plan
Year 2

Figure | 4-22



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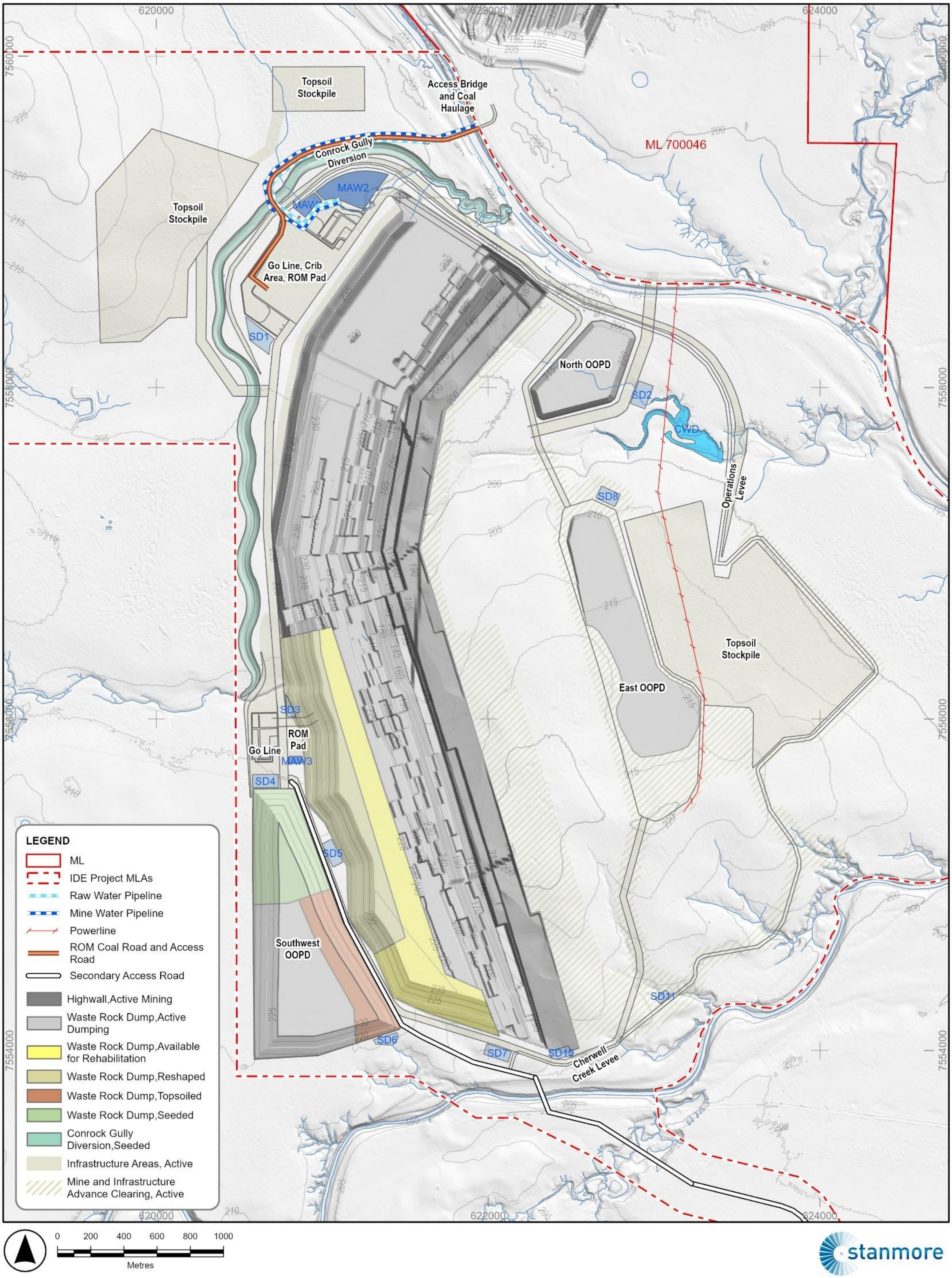
ISAAC DOWNS EXTENSION

Mine Stage Plan
Year 4

Figure | 4-23



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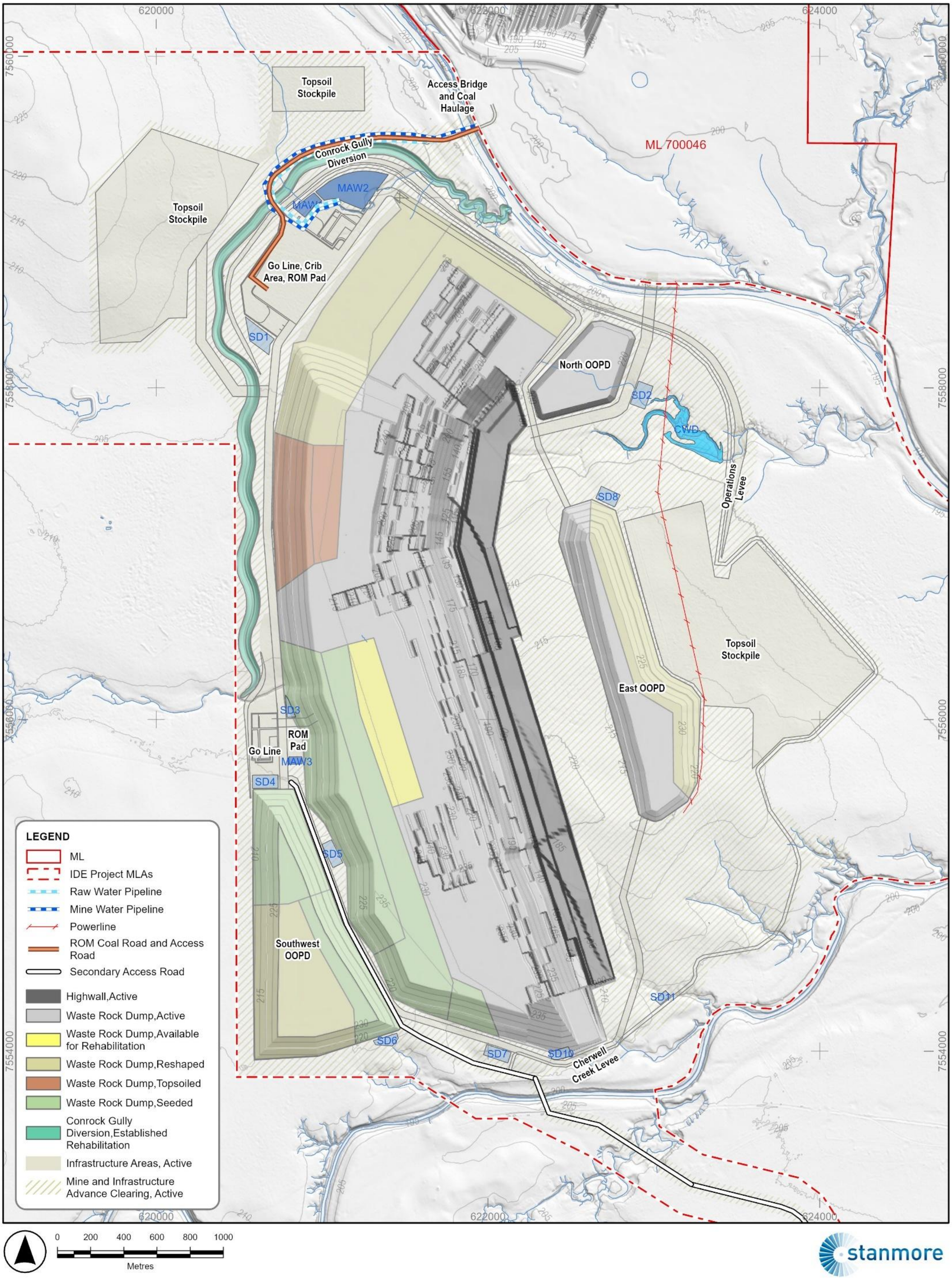
ISAAC DOWNS EXTENSION

Mine Stage Plan
Year 6

Figure | 4-24



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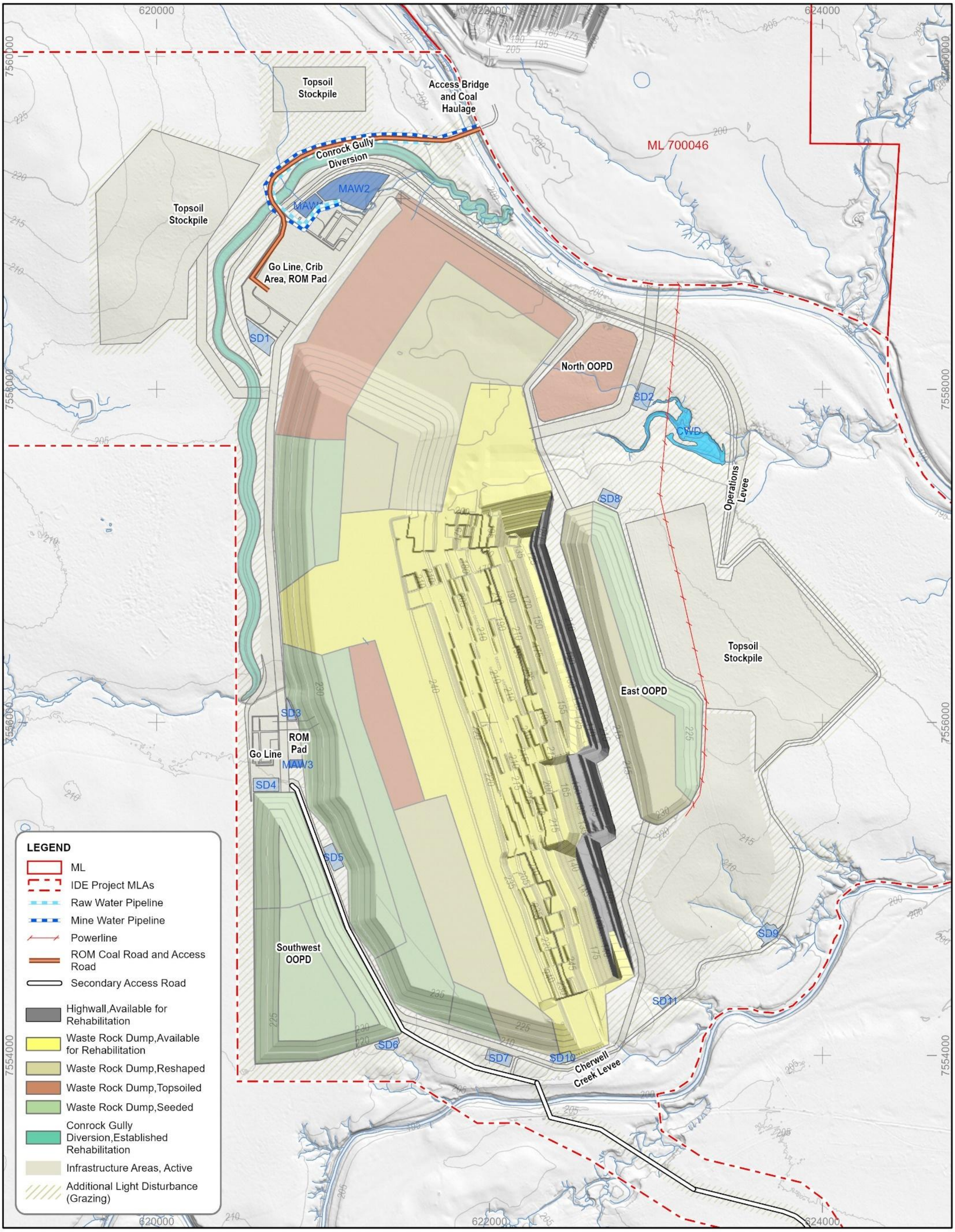
ISAAC DOWNS EXTENSION

Mine Stage Plan
Year 11

Figure | 4-25



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ISAAC DOWNS EXTENSION

Mine Stage Plan
Year 16

Figure | 4-26

4.8 Construction Activities

Construction will occur over approximately 12 months. The majority of construction activities involve civil works, including for the levees, diversion, haul roads, access road, water management infrastructure and sites for the go line, crib area and ROM pads. Bridge construction will require civil and structural construction works. The Project will utilise infrastructure at IPM and IDM such as the CHPP, rail loop and MIA, and hence the Project does not involve construction of these significant infrastructure features. Construction activities will generally occur 7 days per week during the day, with some potential for night works. The sections below describe the design, construction and operation of all proposed infrastructure.

The Project does not require the construction, upgrade or relocation of infrastructure that is not a part of IPC (i.e. no upgrades are required to public or third party roads, rail lines, level crossings, dams, power lines, telecommunications or pipelines).

4.9 Coal Mining

4.9.1 Overview

The open cut mining methods for the Project will be similar to those at IDM. Project mining will involve the following activities:

- clearing of vegetation
- stripping and stockpiling of topsoil
- drilling and blasting of pre-strip overburden
- removing the pre-strip overburden using dragline and / or truck and shovel fleets and/or dozers
- drilling and blasting of overburden
- drilling and blasting of pit floor for geotechnical stability, allowing for in-pit dumping
- overburden removal using dragline and / or truck and shovel fleets
- coal mining using excavators
- progressive rehabilitation of overburden dump areas.

4.9.2 Permits to Disturb

All ground disturbance will be subject to a disturbance permitting system which considers a number of factors, including:

- State and Commonwealth approvals
- need for the disturbance
- method of disturbance
- spotter catcher requirements to protect fauna
- drainage and sediment control requirements
- vegetation status
- cultural heritage matters
- vegetation and topsoil recovery
- rehabilitation.

4.9.3 Vegetation Clearing

Progressive clearing of pasture grasses, tree and shrub regrowth, and remnant vegetation will be required ahead of topsoil stripping for the proposed activities. Clearing will be undertaken progressively, as areas are required for mining, and to minimise exposed areas. Fauna spotter catchers will be engaged to conduct pre-clearance surveys prior to vegetation clearing.

4.9.4 Topsoil Stripping

Following vegetation clearing, topsoil will be recovered using dozers, and relocated using front end loaders, trucks and/or scraper fleet. Topsoil will either be used directly on areas of progressive rehabilitation or stockpiled for later use if no areas for rehabilitation are available at the time of stripping. Topsoil stockpiles will be appropriately located and sized to minimise loss of biological and physiochemical integrity. An inventory of topsoil will be maintained on site which records details such as stripping and stockpiling date, quantity, amelioration, analysis results and usage location.

4.9.5 Overburden Removal

Mining will utilise an open cut mining technique where strips and blocks are mined in succession, thus allowing overburden from one strip or block to be dumped into a previously mined out area. Overburden from an initial strip or box cut will be taken to an out of pit dump. Overburden will also be taken to an out of pit high wall dump. Overburden may be utilised in the construction of associated infrastructure such as roads and water management structures.

After topsoil has been removed from a strip, the overburden waste material will be drilled and blasted and subsequently removed by a combination of dragline, truck/shovel, truck/excavator or dozer push methods in order to expose the top coal seam.

A schematic, representative of this type of open cut mining operations, is shown in Figure 4-27.

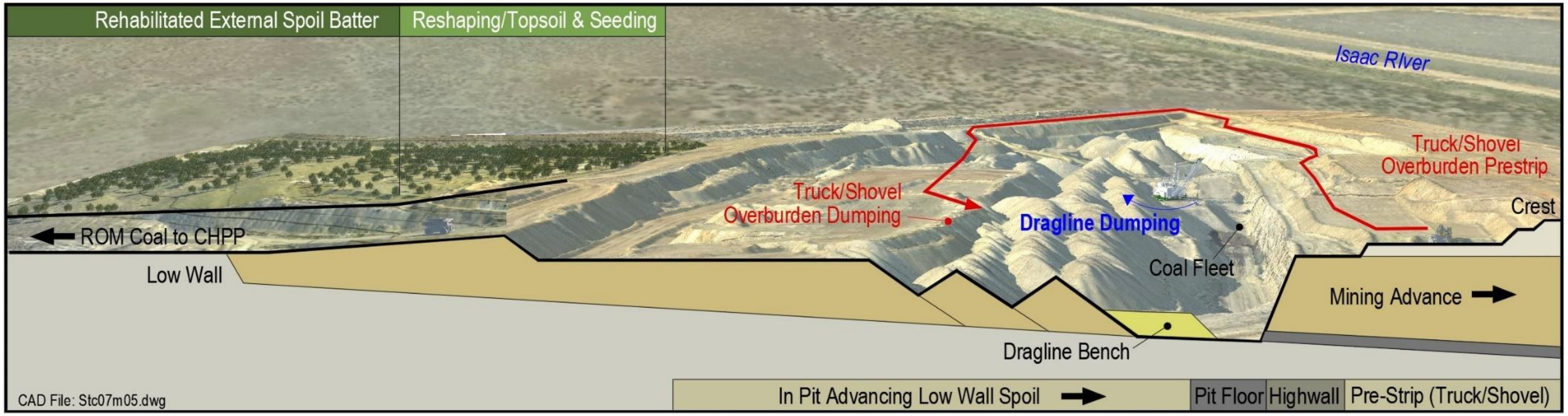

Figure 4-27 Open Cut Mining Schematic

4.9.6 Overburden Characterisation and Management

Chapter 7 describes the characterisation of overburden materials. This information has been used to inform the dump design. Overburden material is non-acid forming, with very low total metal and metalloid concentrations, low salinity, and is erosive and dispersive to varying degrees. Runoff from overburden dumps will be managed through a sediment water management system (see Section 4.10).

4.9.7 Coal Recovery

Mining the coal seam will continue along the length of a strip or terrace until the end of the strip or terrace is reached. Once the coal seam has been mined out the strip will become available as a dumping destination.

The coal will be mined using front end loaders or excavators and placed into rear dump trucks for haulage. The haul trucks will transport the coal along the strip or terrace, up a ramp out of the pit, then along internal haul roads to the ROM coal pads in the north alongside the go line and crib area, and one in the central area (see Figure 4-3). ROM coal will be transported to the IPM CHPP for washing; likely utilising off-road road trains (e.g. C triples), or similar.

4.9.8 Mining Equipment

The Project will utilise a similar mining fleet to that utilised at IDM. The existing fleet operating at IDM will most likely be deployed to the Project area in stages, and will comprise the following approximate equipment:

- 1 dragline
- 2 large excavators (400 – 450t) for overburden removal
- 2 smaller (approximately 120 - 350 t) excavators for overburden, coal and general site works
- 10 large dump trucks (190 – 220 t) for overburden
- 5 smaller dump trucks (85 – 190 t) for coal, rejects and topsoil
- 14 dozers (D10 and D11 sizes)
- 4 graders
- 4 water trucks
- 2 loaders
- 3 overburden drills.

In general, the dragline or large excavators mine the overburden and thick partings, which are then dumped directly in dragline overburden piles or hauled by rear dump trucks to their planned dump site. The thinner partings and coal are likely to be mined by smaller excavators or loaders. A range of auxiliary fleet is utilised to maintain roads and dumps, and complete rehabilitation, which includes graders and dozers. Water carts are employed on-site to minimise dust levels. A drill is also used for drilling out blast patterns on the overburden and thick partings.

4.10 Water Management

A water management plan has been developed for the Project. The mine site water management system will be integrated with the rest of IPC and is described in detail in **Chapter 8**. The water management strategy is for separation of mine affected water, sediment affected water and clean water, with appropriate management of each of these water types.

Mine affected water will be collected in the pit before transfer to the primary turkey's nest mine water dam (see Figure 4-3). Two smaller mine water dams will collect runoff from the ROM pads which will then pump mine water to the primary mine water dam. Mine water can then be used for dust suppression, piped to IDM or IPM if there is excess water or, alternatively, be released in a controlled manner to the

Isaac River (i.e. dependent on flows and water quality in the receiving environment) to protect downstream water quality. If mine water is required at the Project (e.g. for dust suppression) then water can be transferred from existing storages at IDM and IPM. A detailed mine water balance, that integrates the Project, IDM and IPM is provided in **Chapter 8**.

Design and sizing of the mine water dams has been undertaken as part of the detailed water balance for the Project (see **Chapter 8**). The mine water dams were subject to a regulated structure (i.e. consequence category) assessment (see **Chapter 8**) which determined that the dams will not be regulated structures.

The mine water transfer pipeline will be installed in a linear infrastructure corridor adjacent to the haul road, and will be fitted with systems to detect leaks and control or cease flows. Where the water pipeline crosses the Isaac River the pipe will either be located with the bridge or will be trenched and buried below predicted scour depth with the pipe encased through a larger diameter pipe (enveloper) to protect it from damage.

The mine water pipeline will be approximately 350 – 500 mm diameter polyethylene pipe. Pumps will used to transfer water along the pipelines. Mine water transfer pipelines will include engineered controls such as isolation valves, pressure release valves and flow meters which can be remotely monitored, to prevent or minimise any accidental releases of water during transfer between IPM / IDM and the Project.

Sediment affected water, primarily from runoff from overburden dumps prior to and during rehabilitation stages, will be captured in sediment dams (as shown in Figure 4-3), designed in accordance with relevant engineering standards, to allow settlement of sediments before release of water. **Chapter 8** describes the design of sediment dams. Sediment dams will be constructed in stages in accordance with mine progression. An erosion and sediment control plan has been developed for the Project. Water from sediment water storages will be preferentially used for dust suppression. The sediment dams were subject to a regulated structure (i.e. consequence category) assessment (see **Chapter 8**) which determined that the dams will not be regulated structures.

Clean water from upgradient of the mining activities will be diverted around the mining activities into the Isaac River or Cherwell Creek, including the diversion of Conrock Gully (see Section 4.12.3). During operations, some small clean water catchments will be within the Isaac River levee and report to a clean water dam, from where clean water will be pumped to the Isaac River.

4.11 Water Supply

Water demand for the Project will primarily be for dust suppression, with demand ranging between 500 and 1550 megalitres per annum (ML/a) depending on the stage of mining. Water for dust suppression will be obtained from mine affected and sediment affected water stored at the Project, in accordance with the water management plan. If water required for dust suppression is not available in Project water storages it will be pumped from existing water storages at IDM or IPM. Water storages at IPM and IDM, which supply water for various purposes at IPC, have contained between 700 and 3,200 ML at various times during the past 3 years, demonstrating that there is sufficient water within the system to meet forecast demands. Water balance modelling (see **Chapter 8**) indicates that during periods with median to lower than average rainfall, the Project will be a net importer of water from IDM and IPM; but during periods with higher than average rainfall the Project will be a net exporter of water to IDM and IPM.

Raw water is currently supplied to IPC via the Eungella Burdekin water supply pipeline under contracts with Sunwater, with approximately 1,300 ML/a available. Raw water allocation is primarily used the IPM CHPP, with raw water supply during the Project life for washing of Project coal at the IPM CHPP. Water demand at the CHPP during Project operations is estimated to be between 150 and 340 ML/a. Raw water used in the CHPP enters the mine water management system and is included in the whole of IPC integrated mine water system assessed for the Project (see **Chapter 8**). The requirement for raw water at the Project (other than raw water associated with the CHPP) will be limited to vehicle washdowns and fire fighting water storage (estimated at less than 50 ML/a). Raw water requirements for IPC, including the Project are predicted to be less than the existing capacity available under contract with Sunwater, and therefore additional raw water supply is not expected to be required. Raw water could also be made available to meet demands for dust suppression if required. A raw water pipeline will be constructed between IDM and the Project, likely in a similar corridor to the mine water transfer pipeline. The raw water pipeline will be approximately 300 mm diameter polyethylene pipe.

Potable water for the crib area will be trucked to site, in accordance with similar arrangements currently place for the rest of IPC.

There is no requirement to source additional water for the Project from surface water or groundwater sources.

4.12 Levees and Gully Diversion

4.12.1 Isaac River Levee

A levee, approximately 5.9 km in length, will be constructed adjacent to the Isaac River to protect mine pits from the 0.1% AEP (1:1,000 year) flood event (see Figure 4-3). The Isaac River levee will be located outside the high bank of the Isaac River to minimise impacts on the zone of riparian vegetation. A buffer distance is proposed between the levee and high bank of the Isaac River, which will reduce impacts to the riparian zone. The high bank was determined using light detection and ranging (LiDAR) surfaces as the level at which bank slope changes from steep (i.e. 21-32%) to shallow (i.e. 1-4%). Along the length of the levee the buffer zone is:

- > 50 m in all locations
- 50 – 100 m wide for 15% (870 m) of its length
- 100 – 200 m wide for 6% (340 m) of its length
- > 200 m wide for 79% (4,680 m) of its length.

An allowance has been made for a 15 m construction width area adjacent the levee toe, which is contained within the proposed disturbance area shown in Figure 4-3.

Figure 4-28 and Figure 4-29 show two cross sections of the Isaac River levee in locations within 50 – 100m of the high bank of the Isaac River. These demonstrate that the levee, inclusive of construction working areas remains outside of riparian vegetation.

Levee construction will occur prior to mining in the 1:1,000 year flood zone.

The levee will be designed in accordance with The Manual for assessing consequence categories and hydraulic performance of structures (Queensland Government, 2016) (the Manual) with a flood immunity level for the 1:1,000 year flood event. Levees will be regulated structures and will be designed and certified by a suitably qualified person (i.e. registered professional engineer Queensland (RPEQ)).

Typical cross section designs for the Isaac River levee, looking south (i.e. the 'upstream' side is adjacent the River), are provided in Figure 4-30 and Figure 4-31. Levees will be constructed from adjacent borrow material within the disturbance area and / or from suitable overburden material, conditioned with water, placed and compacted. The conceptual Isaac River levee design has:

- height ranging between less than 1 m and 10 m
- embankment crest width of 5 m
- upstream 1:4 batter slopes
- downstream 1:3 batter slopes.

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ISAAC DOWNS EXTENSION

Isaac River Levee Cross Sections

Figure | 4-28

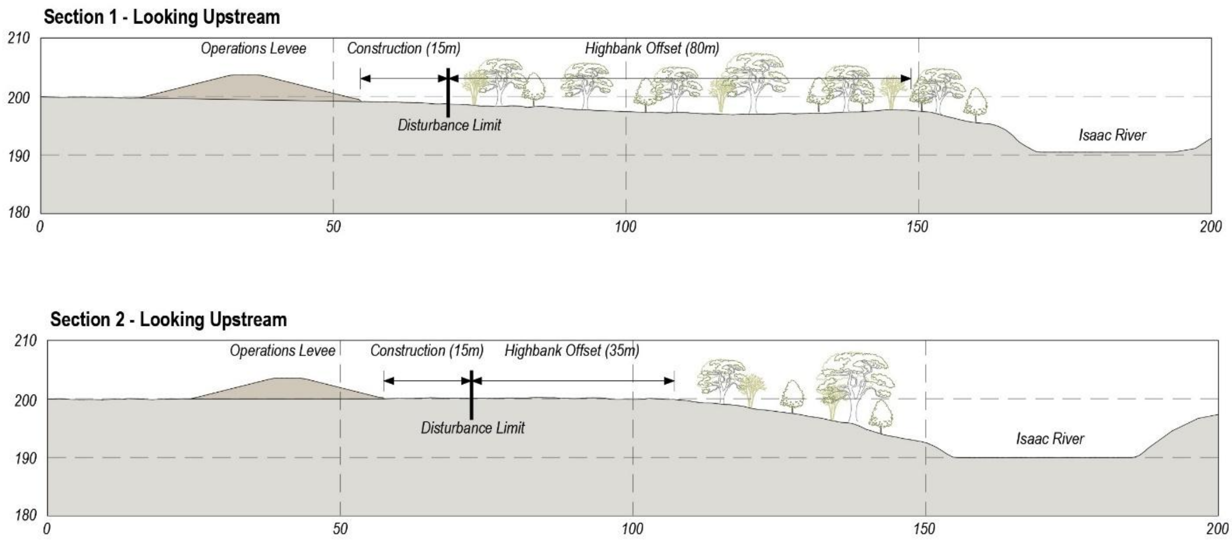


Figure 4-29 Isaac River Levee Cross Section Diagrams

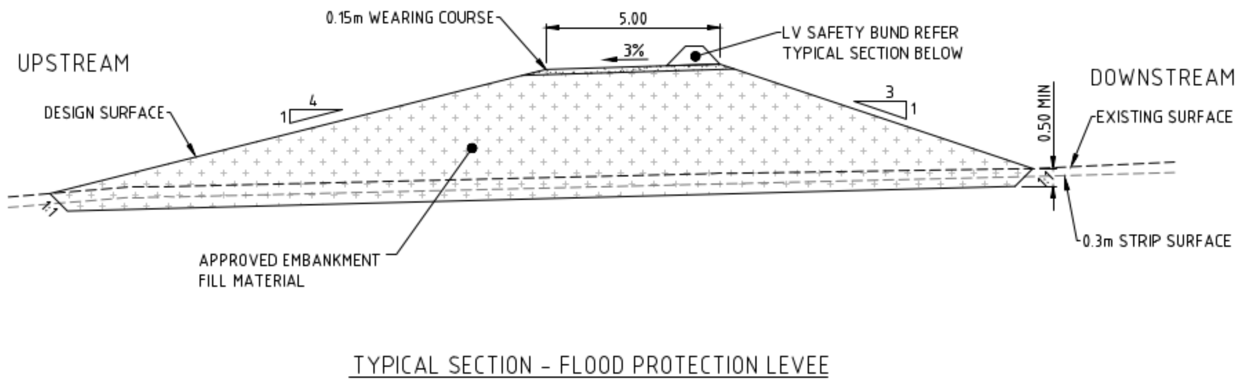


Figure 4-30 Typical Section of Isaac River Levee

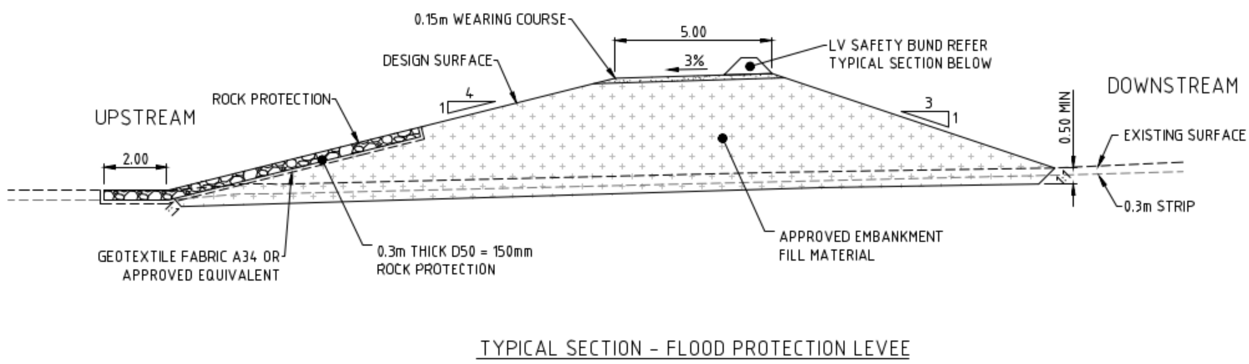


Figure 4-31 Typical Section of Isaac River Levee with Rock Protection

The northern and southern sections of the levee are unlikely to require rock protection due to lower velocities of flood water. However, rock protection is proposed on approximately 2.5 km of the central section of the levee between chainages 1700 m and 4200 m to prevent scour during the 0.1% AEP flood conditions. This is by definition, highly infrequent and scour is not expected to occur for a vegetated levee for flood events more frequent than the 0.1% AEP. The levee will be decommissioned and rehabilitated following operations.

Detailed levee design will be undertaken and could include cut-off trenches beneath the levee, erosion protection such as rock armouring, clay cut-off and capping of the levee crest.

4.12.2 Cherwell Creek Levee Plug

A levee plug, approximately 500 m in length (see Figure 4-3), will be constructed adjacent to Cherwell Creek to protect the southern pit area during a short duration (i.e. 1 – 2 years) window of operations when backwaters along a landform gully, during a 0.1% AEP (1:1,000 year) flood event, approach the pit end wall. This levee plug will be rehabilitated and vegetated following construction. Modelled velocities are consistently low for all flood events up to the 0.1% AEP, and hence are unlikely to cause scour along the vegetated levee plug.

This levee plug will not be required once in-pit backfill with overburden occurs following coal extraction in this pit area. The levee plug may be integrated into the haul road around the south of the pit area. The levee plug will be a regulated structure and requires design in accordance with the Manual.

4.12.3 Conrock Gully Diversion and Levee Plug

Conrock Gully comprises portions that are a defined drainage feature and a defined watercourse under the Water Act, with the drainage feature portion commencing from upstream of the Project area through the mining area, and the watercourse portion mostly downstream of mining activities. Conrock Gully enters the Isaac River approximately 3 km upstream of the confluence with Cherwell Creek. The proposed diversion is located within the portion of Conrock Gully defined as a drainage feature. Conrock Gully's catchment area is approximately 2% of the catchment size of the Isaac River upstream of the Project.

Conrock Gully flows will be diverted to the Isaac River, approximately 3 km upstream of the existing confluence with the Isaac River. The diversion is approximately 5.2 km long (compared to 5.8 km diverted section of Gully) with a typical diversion cross section comprising:

- 1.7 m deep main channel, which will convey 50% AEP local creek flows
- 0.5 m deep overbank channel, which will convey 2% AEP local creek flows
- variable batter back to natural topography, which may contain local creek events rarer than the 50% AEP local creek flows.

A levee plug, as shown in Figure 4-3, will be required at the upstream end of the diversion to prevent flows continuing to traverse the old Conrock Gully channel. This will be designed in accordance with The Manual (Queensland Government, 2016) with a flood immunity level for the 1:1,000 year flood event. This levee plug will be rehabilitated and vegetated following construction. Modelled velocities are low, with the exception of a small section (around 20 m) at chainage 590 m for the 0.1% AEP event, where velocities may reach up to 2.1 m/s. Rock protection will be applied in this section. Velocities along the remainder of the levee are unlikely to cause scour along the vegetated levee plug. The levee plug will be a regulated structure and requires design in accordance with the Manual.

The ROM coal haul road will cross the diversion, with the design comprising culvert structures to allow low flows, and with sufficient capacity to convey the 1:10 year flood event, providing flood immunity similar to the proposed Isaac River bridge.

The diversion, particularly in its lower reaches, would not contain regional Isaac River flood flows for the majority of design events, which is typical of local creeks joining the Isaac River in the area. The Isaac River levee will provide flood immunity for the 1:1,000 year flood event along the downstream sections of the diversion. Between the levee plug and the Isaac River levee, the diversion and the natural topography provide flood immunity for mine workings for the 1:1,000 year flood event.

Chapter 9 provides an assessment of the design and hydraulic performance of the diversion, which demonstrates that the diversion has been designed to meet the accepted standards to be geomorphically stable. The channel slope of the diversion is 0.147%, which is almost identical to the channel slope of the diverted section of Gully (0.140%).

The diversion design typically provides an improvement in hydraulic conditions compared to the diverted section of Conrock Gully. Design has been undertaken in accordance with the DNRMMRRD (formerly Department of Natural Resources and Mines [DNRM]) Guideline: Works that interfere with water in a watercourse: watercourse diversions (DNRM, 2014).

Following construction, the diversion will be revegetated to maintain bank stability and reduce erosion. The diversion will remain in the post mining landform as a revegetated, rehabilitated, stable landform. The levee plug will be integrated into the final, long term, stable landform.

4.13 Go Line and Crib Area

The Project will utilise the MIA at IDM, resulting in a requirement for minimal support infrastructure at the Project, comprising a go line and crib area.

The go line will have parking for heavy and light vehicles, self bunded storage tanks for fuel (around 250 kilolitres (kL)), oil and lubricants, and laydown / storage yards with sufficient area available for temporary maintenance of mining equipment.

The crib area will comprise demountable or mobile huts to accommodate around 20 people during breaks and site offices for supervisors, with associated potable water storage and supply, sewage storage facilities and communications tower, all powered by a generator with a solar power solution also being considered. A sewage treatment plant is not required, with all sewage trucked off site. Potable water will be trucked to site.

There are limited construction requirements for the go line and crib area with civil works (e.g. landform shaping and installation of a gravel layer) for area establishment and pre-fabricated infrastructure transported to the site.

Runoff from localised areas of potential contamination will be directed through a contaminated water management system (e.g. oily water separator or sediment trap) prior to reporting to the mine water management system.

The MIA at IDM will continue to provide a workshop servicing mining equipment, washdown pad and consumables storage.

4.14 Haul Road, Access Road, Bridges and Dragline Walk Route

4.14.1 Overview

The Project will have a network of internal haul roads for haulage of ROM coal from the pit to the ROM coal pad and for haulage of overburden.

A haul road will be constructed between the ROM coal pad and existing haul roads at IDM, including a bridge crossing of the Isaac River. The haul road will be used for transport of ROM coal by off-road trains (e.g. C triples), or similar. ROM coal haulage on IDM and IPM MLs will be in areas authorised for disturbance, other than small sections on the north side of the Isaac River (see Figure 4-16). ROM coal haul roads on IDM and IPM MLs will utilise existing haul roads, including the Peak Downs Highway underpass.

Access to the Project will be via IDM, utilising the existing access road intersection with the Peak Downs Highway. The extension of the access route to reach the Project is likely to follow the haul road to the Project, including Isaac River bridge crossing.

A secondary access route is proposed via the Eagle Downs project MLs and will be utilised intermittently, for example when access via IDM is constrained. The secondary access route will be approximately 20 m wide with a bridge crossing of Cherwell Creek. The secondary access route crosses JB Gully, a small creek (stream order 2) south of Cherwell Creek, with a bed level crossing proposed.

A temporary crossing of the Isaac River will be constructed to walk the dragline at IDM to the Project.

A culvert crossing is proposed for the haul crossing of Conrock Gully diversion.

4.14.2 Haul Roads

New sections of the haul roads will be constructed as a cut and fill, with any additional road base sourced from overburden material, and a capping material sourced from a local quarry, if quarry materials are unavailable onsite. The road material will be sourced, crushed and screened, conditioned with water prior to placement and compaction. New sections of access road, if different to new haul road sections, will also be constructed using the cut and fill method; however the specifications of this road would be lower than that of the haul road due to the differences in axle loads and will require less material. Mine equipment will primarily be used for road construction, including dozers and excavators.

4.14.3 Bridges

The Isaac River and Cherwell Creek bridges will be approximately 110 m and 70 m long, respectively. The conceptual design of the bridges includes:

- approximate 15 m bridge width
- dual lanes
- between 2 and 4 concrete and / or steel spans supported by concrete piers, piled into the banks and beds, nominally to a depth a 10m
- less than 1:10 year flood event immunity
- rip rap rock scour protection for bank abutments to minimise risk of scour, which will be inspected following major flood events and, if required, reinstated to reduce the risk of future scour
- waterway crossings perpendicular to the waterway direction.

Bridge designs are subject to detailed design which may result in changes to the conceptual design. A draft of the Isaac River bridge design is shown in Figure 4-32, with cross section diagrams presented in Figure 4-35. This bridge is expected to be similar to the existing Peak Downs Highway Isaac River bridge (as shown in Figure 4-33) approximately 8 km upstream of the proposed Project Isaac River bridge. The Cherwell Creek bridge will have a similar design to the Isaac River bridge, but approximately half the length. A draft of the Cherwell Creek bridge design is shown in Figure 4-34, with cross section diagrams presented in Figure 4-35.

Construction of bridges will involve methodologies similar to the following:

- preferentially constructed in the dry season
- geotechnical investigations to determine the stable depth
- temporary (i.e. less than 180 days) sheet piles around each pier location to create a dry work area
- installation of pier piles driven done to a suitable depth
- installation of a reinforced concrete pile cap to tie piles together construction of piers

- construction of abutments adjacent the river banks, with riprap rock protection placed adjacent abutments
- lifting of the of the girders (bridge superstructure) span by span between the abutments and piers
- casting of the bridge deck slab.
- bed scour protection, if required, with any bed scour protection to be at, or below the natural bed level of the waterway, such that it does not alter the profile of the low-flow channel, and no more than 20m upstream or downstream.

A nominal 200 m width has been allowed for the construction of the Isaac River bridge and Cherwell Creek bridge to allow some flexibility in precise location during detailed design. However it is expected that the construction width will be less than this, allowing for buffers of vegetation within the nominated disturbance area. The construction and operation of the bridge will not create a barrier for fish passage.

At the end of the closure period, when the bridges are no longer required, the bridges will be decommissioned, with affected lands rehabilitated in accordance with the PRCP schedule requirements to restore riparian habitat. Bridges would be retained if there is an agreement with a third party for their retention.

4.14.4 Dragline Walk Route

The dragline currently operating at IDM will be walked to the Project. The proposed walk route (see Figure 4-3) is different to the haul road and access road, but will be short duration (e.g. a few weeks to a few months), with a temporary crossing of the Isaac River. The walk route may also be utilised by other heavy vehicles to cross the Isaac River prior to bridge construction, in which case the walk route construction, use and removal of material on the bed of the river would occur for less than 180 days (6 months). The dragline walk route will be preferentially constructed and utilised in the dry season when flows in the Isaac River are unlikely.

At the conclusion of mining operations, and once the dragline is no longer required for use in rehabilitation (i.e. approximately 20 years after operations commenced), the temporary crossing will be reestablished for a short duration (e.g. a few weeks). The temporary crossing will not be required for the movement of other equipment at closure as the Isaac River bridge will be available. All walk route crossing construction, use and removal of material on the bed of the river would occur within weeks to a few months (i.e. less than 180 days).

The proposed location for the dragline walk route crossing of the Isaac River has been selected based on relatively shallow and low river banks and minimising areas of remnant vegetation clearing. The dragline crossing construction will involve:

- gravel, road base or similar overlain on the bed of the river to a height of around 100 – 250 mm above the bed (noting that there will be flexibility in the height of the base as part of detailed design)
- bank cuttings on either side of the river to create a suitable gradient to facilitate the dragline’s movements
- stabilisation of the banks of the river with rock protection.

Following utilisation of the crossing, and within 180 days of construction commencement, the temporary gravel base will be removed, and any sand that has been removed will be replaced to restore the natural bed of the Isaac River. Bank cuttings and the walk route itself will be stabilised and rehabilitated through topsoiling, seeding and vegetation establishment. Rock protection installed during construction will remain in place. This will create a stable landform during the operational period and prior to the dragline being walked from the Project back to IDM at closure.

At closure those parts of the walk route required for the movement of the dragline will be re-opened during the dry season, with gravel, road base or similar overlain on the bed of the river. Once the dragline has returned to IDM, the crossing will be fully rehabilitated with the gravel base removed, sandy bed reestablished, bank cuttings filled to resemble pre-mining topography and landforms rehabilitated through topsoiling, seeding and revegetation in accordance with the PRCP schedule requirements to restore riparian habitat.

A conceptual design of the dragline walk route crossing of the Isaac River is provided in Figure 4-36, showing that bank cuttings will be approximately 150 m long, with rock armouring on the channel bank slopes. Long sections and cross sections of the walk route (as per locations on Figure 4-36) are shown in Figure 4-37 for the period after the initial crossing with bank cutting stabilisation, and the period after closure when the bank cuttings have been filled and rehabilitated.

As the dragline crossing will be temporary for the pre and post operational crossings, it will not result in a permanent waterway barrier that will impede fish passage.

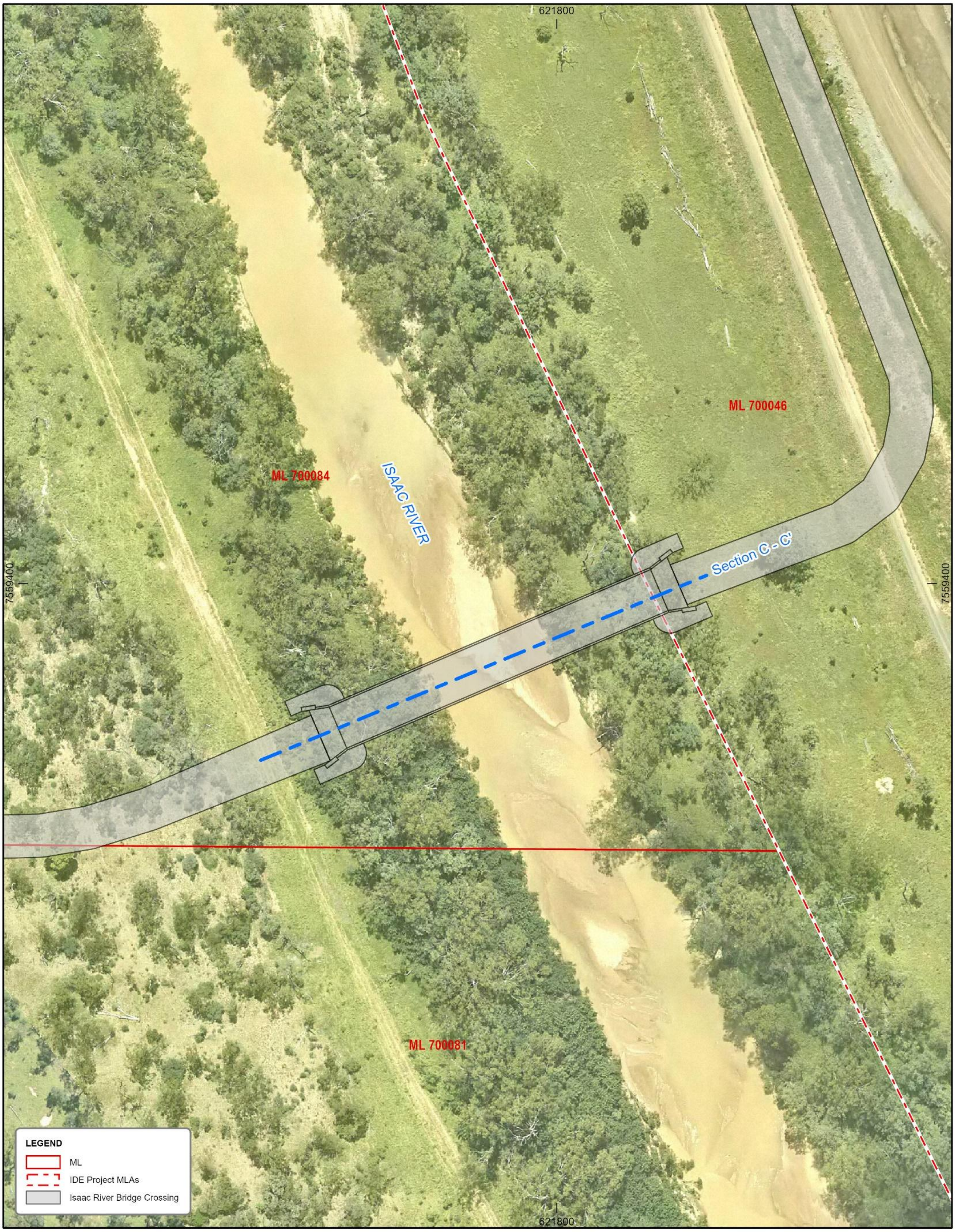
High voltage power lines will be installed prior to the walk, to allow for the connection of the dragline substation and dragline trailing cable to support the walk, with a required separation distance between the power line and the walk route for safety purposes. The powerline would be strung across the river from poles on either side of the bank. A nominal 250 m width has been allowed for the dragline walk route and power line crossing activities. However it is expected that the construction width will be less than this, allowing for buffers of vegetation within the nominated disturbance area.

4.14.5 Other Crossings

The secondary access route crossing of JB Gully will be constructed as a bed level crossing based on the principles described in the Department of Primary Industry's (DPI's) 'Accepted development requirements for operational work that is constructing or raising waterway barrier works: September 2025 (DPI, 2025)' (the Waterway Barrier Works Guideline). At the end of the closure period, when the crossing is no longer required, the crossing will be decommissioned, with affected lands rehabilitated in accordance with the PRCP schedule requirements to restore the pre-mining land use (i.e. grazing).

The crossing of Conrock Gully diversion will be constructed as a culvert crossing based on the principles described in the Waterway Barrier Works Guideline. Following operations this crossing will be decommissioned and rehabilitated, with the diversion continuing to function as a geomorphically stable waterway.

As the crossings of JB Gully and Conrock Gully diversion will be constructed based on the principles in the Waterway Barrier Works Guideline, they will allow for lows flows and will not act as waterway barriers to fish passage.



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ISAAC DOWNS EXTENSION

Isaac River Bridge
Concept Design

Figure | **4 - 32**

Figure 4-33 Existing Peaks Downs Highway Bridge over the Isaac River

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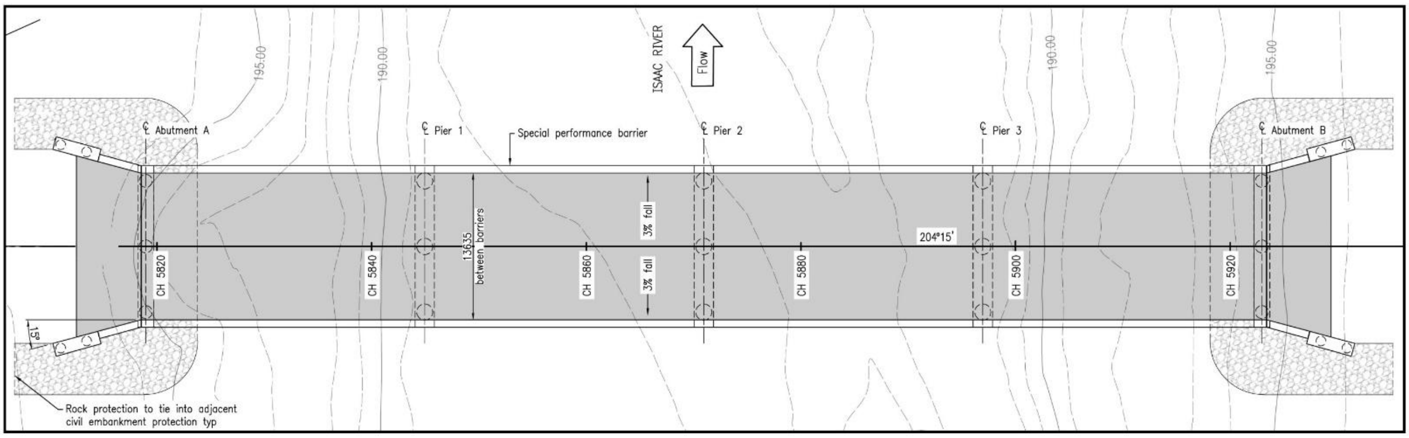
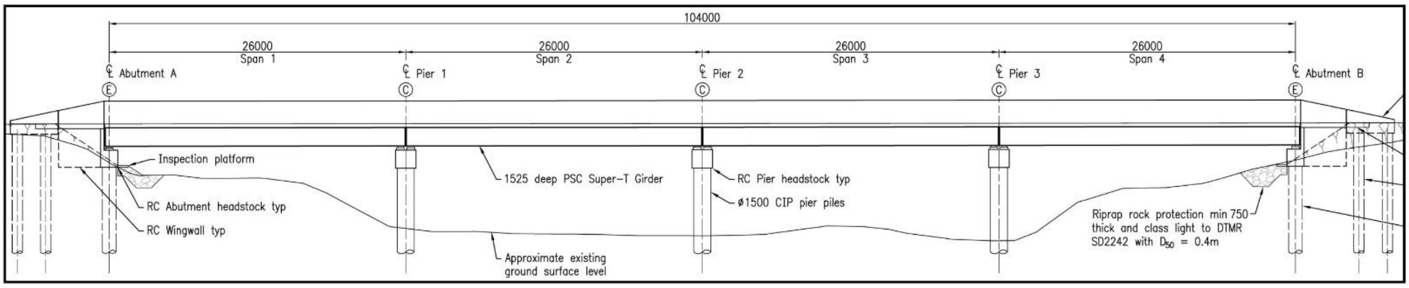
ISAAC DOWNS EXTENSION

Cherwell Creek Bridge
Concept Design

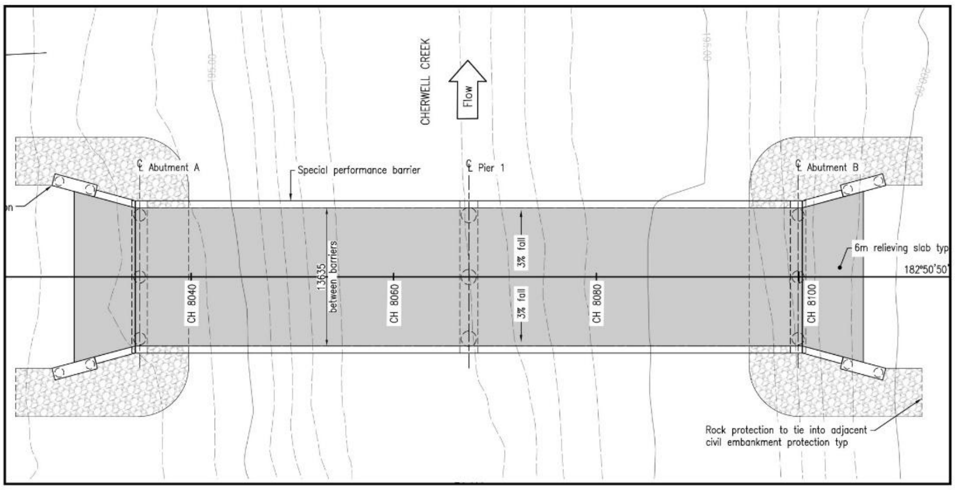
Figure | 4 - 34

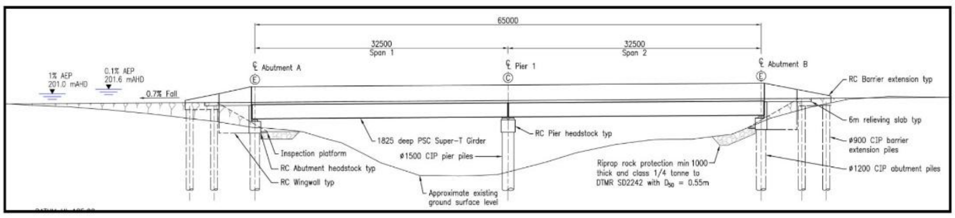
Isaac River Bridge Crossing
Section C - C'





Cherwell Creek Bridge Crossing
Section D - D'





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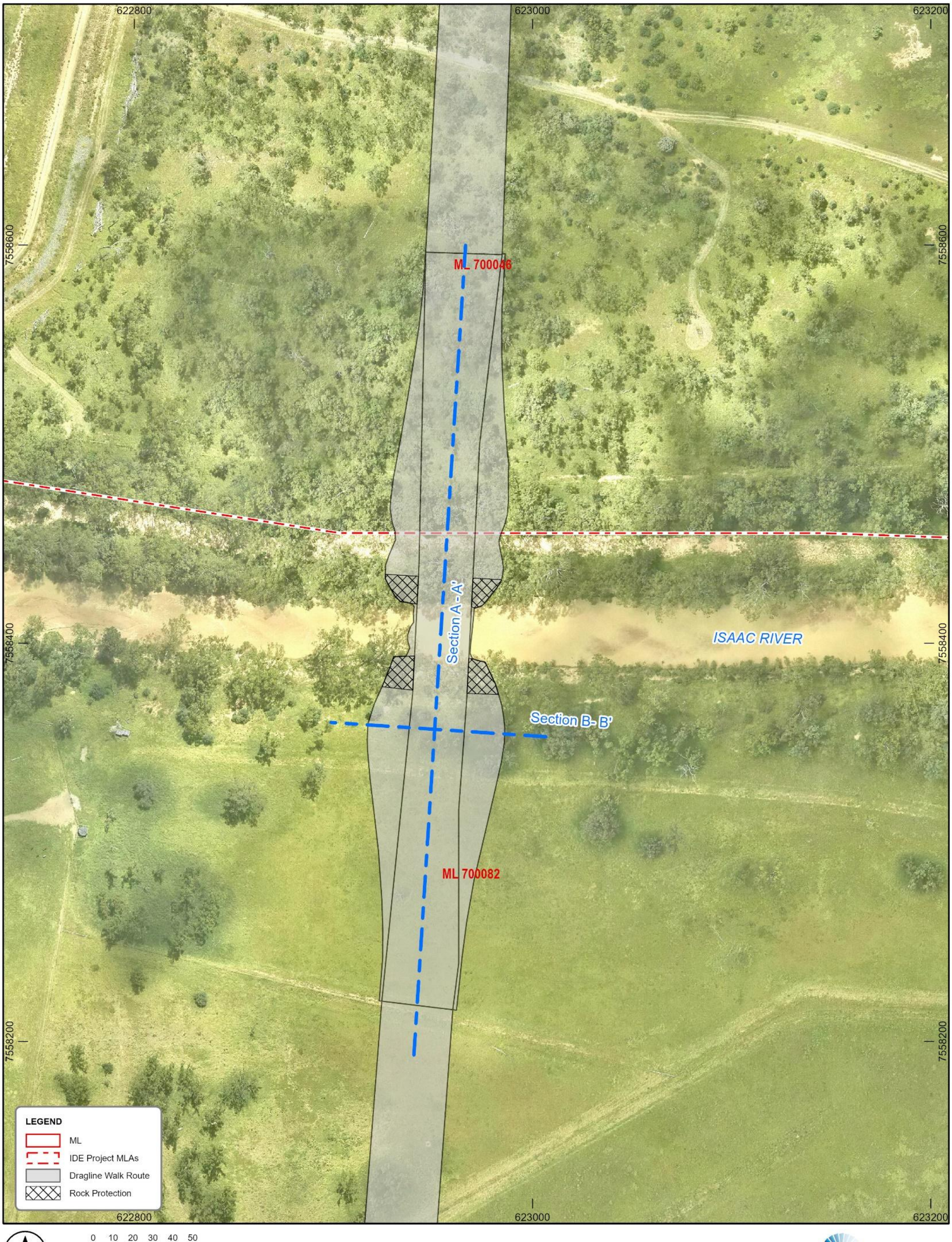
ISAAC DOWNS EXTENSION

Isaac River and Cherwell Creek
Bridge Cross Sections

Figure | **4 - 35**



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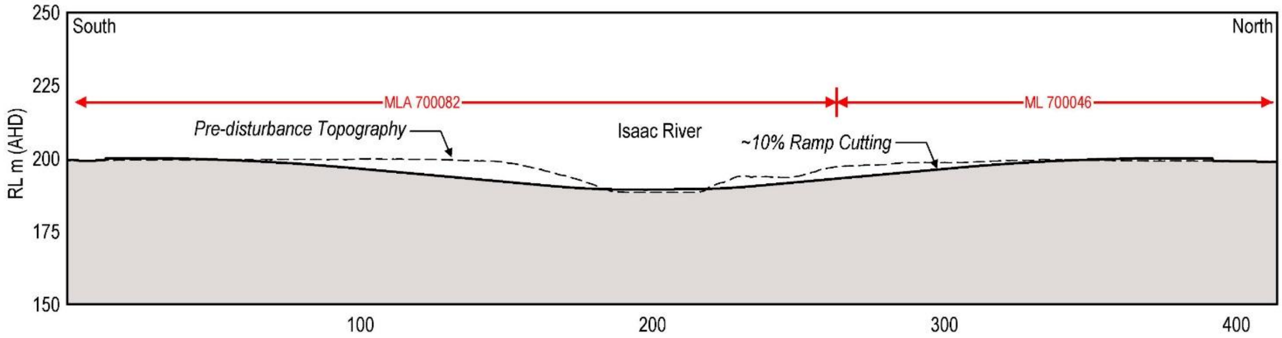
ISAAC DOWNS EXTENSION

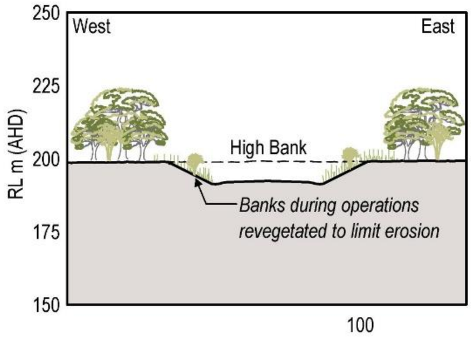
Temporary Dragline Walk Route
Crossing of Isaac River

Figure | **4 - 36**

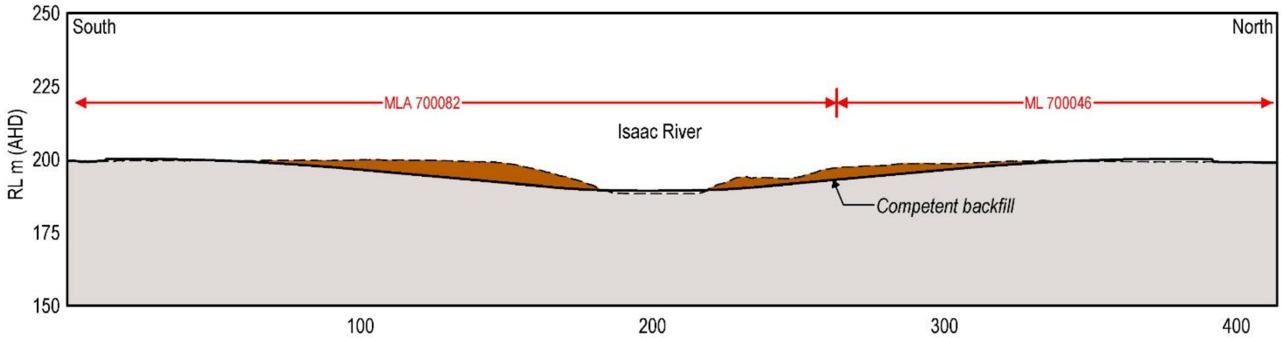
OPERATIONS SECTION A - A' | CROSSING LONG SECTION



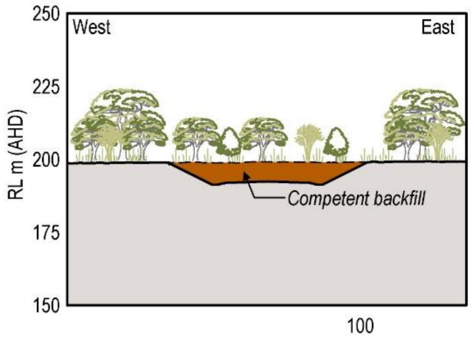
OPERATIONS SECTION B - B' | HIGH BANK CROSS SECTION



CLOSURE SECTION A - A' | CROSSING LONG SECTION



CLOSURE SECTION B - B' | HIGH BANK CROSS SECTION



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ISAAC DOWNS EXTENSION

Dragline Crossing Long Section and Cross Section

Figure | 4 - 37

4.15 Power Supply and Communications

IPC is connected to the electricity supply grid through substations at IPM and IDM. These substations have available capacity to supply power to the Project for the dragline. Overhead 66 kilovolts (kV) powerlines will follow a linear infrastructure route with a crossing of the Isaac River, likely spanning the Isaac River between high banks. Any new powerlines on the IDM MLs will be within areas authorised for disturbance other than small sections on the north side of the Isaac River.

The go line and crib area will be powered by generators and / or solar arrays and battery banks. Power demand for the go-line and crib area is estimated at less than 0.5 megawatts (MW), with allocation between generators and solar power to be determined.

Communications services at IPC will be extended to the Project using a linear infrastructure corridor for fibre optic cable and / or additional repeater stations or communications tower.

4.16 Exploration

The Project resource has been defined through exploration drilling. However, additional exploration drilling within the resource area will be undertaken to refine the geological information, as needed for detailed mine planning as mining progresses. This may involve between 10 and 20 drill holes per annum in advance of mining, and in areas to be mined.

4.17 Non-Mining Waste Management

Non-mining waste generation and management is described in **Chapter 17**. Non-mining waste will include general waste from the crib area. Waste from sewage facilities at the crib area will be removed by a licensed contractor to a suitable waste disposal facility.

Non-mining waste will be managed in accordance with existing methodologies at IPC, including use of licensed waste contractors and disposal of tyres in the dumps. Non-mining waste will be collected onsite and transferred to an appropriately licensed waste disposal facility locally or regionally. Waste will be stored in a dedicated waste storage area, designed to separate waste types and prevent waste from being released to the environment.

4.18 Rehabilitation and Decommissioning

Rehabilitation and decommissioning for the Project is described in **Chapter 5**.

4.19 Workforce and Accommodation

The mining, coal haulage and support staff workforce at IDM will transition to the Project. The CHPP workforce at IPM will continue to support the washing of coal from the Project.

A workforce histogram is shown in Figure 4-38, with the estimated workforce at IPM and IDM in 2026 and 2027 (i.e. prior to the Project), the transitional stage as workers move from IDM to the IDE Project (2028), construction period (2028 and into 2029), subsequent estimates of the workforce required at the IDE Project during operations, and ongoing workforce for rehabilitation at IPM, IDM and the Project.

Excluding the construction workforce, there is expected to be a small decrease in the operational workforce in the transition from mining at IDM to mining at the Project, from around 450 workers to around 400 during the initial years of peak production at the Project. The operational workforce later declines to around 300 - 350 workers as less ROM coal is mined. In the absence of the Project, these workers would need to secure employment elsewhere.

The accommodation strategy for the operational workforce will be similar to the current strategy used by IPC, with the majority of the workforce residing in existing, local mining village accommodation and some workers residing in local towns, such as Moranbah. The proponent will provide incentives for the workforce to live locally, providing workers with genuine choice on their preferred accommodation, with a gradual increase expected in the proportion of workers living locally. The majority of workers staying at the mining village accommodation are likely to drive in drive out (DIDO) from regional centres such as Mackay. The Project is not proposing a fly in fly out (FIFO) workforce, although some workers may fly to regional airports (e.g. Moranbah or Mackay) from their place of residence. Shift rosters will generally be 7 days on, 7 days off, working 12 hours per day during shifts. Some staff may work 5 days on, 2 days off. It is expected that the approximately 10 – 15 % of the operational workforce will live locally, 70 – 75% will be DIDO and 15% will be FIFO. Operations will occur 24 hours per day, 7 days per week.

There will be around 100 – 150 construction workers required for the Project as different infrastructure is constructed during the initial 12 – 18 months. The construction workforce will be short duration and is expected to be accommodated in an existing local mining accommodation village, other than those construction workers who live locally (up to approximately 10% of the construction workforce).

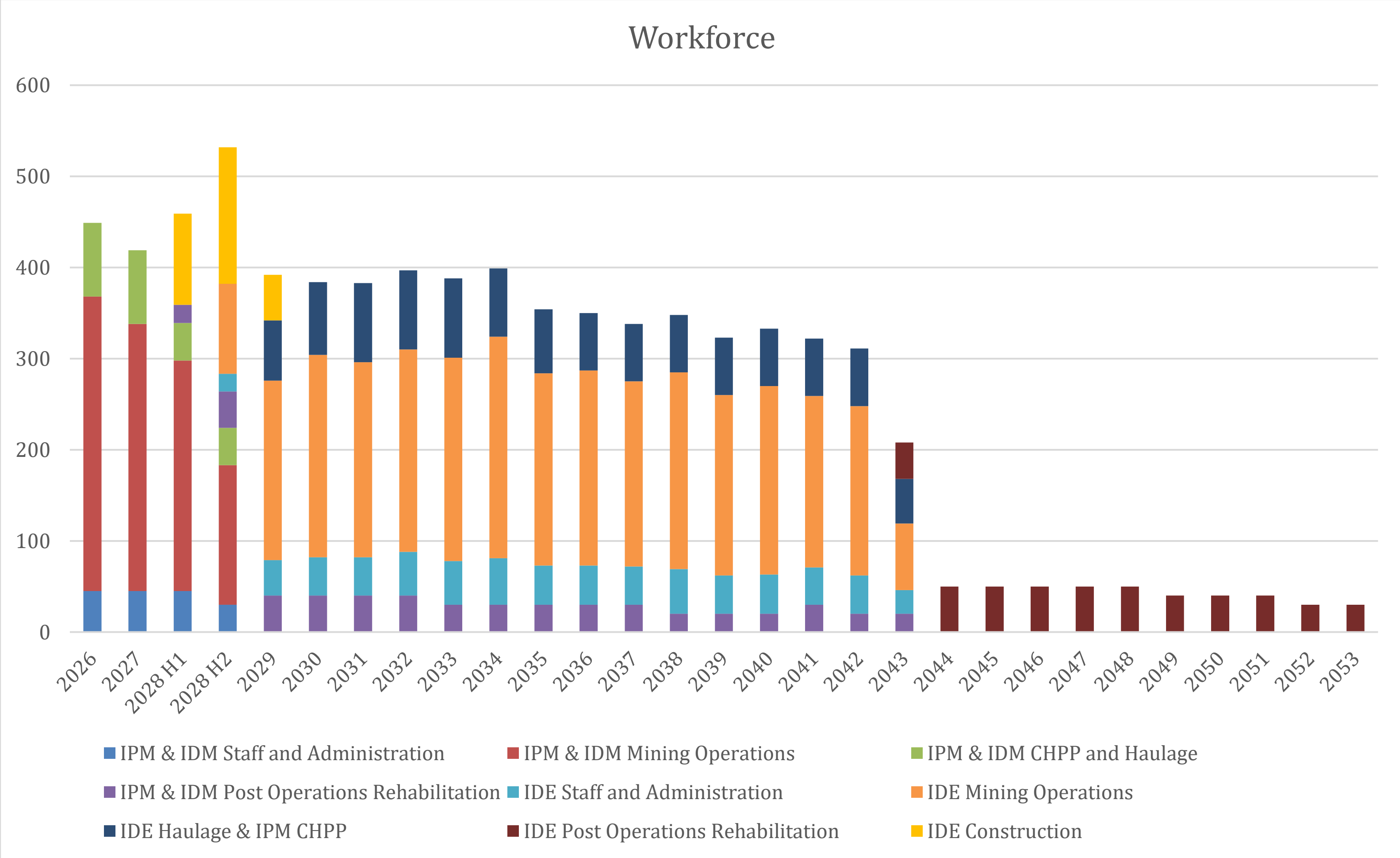

Figure 4-38 Project Workforce

4.20 Traffic and Transport

Chapter 18 provides an assessment of traffic generated by the Project, and other transport requirements for the Project. This includes the movement of people, materials, supplies and equipment. A key aspect of Project related traffic and transport is that it will replace existing traffic and transport associated with IPC, as mining operations at IDM ramp down.

As access to the Project is via the existing intersection with the Peak Downs Highway, the movement of people, materials, supplies and equipment to and from the Project will be along the Peak Downs Highway. With a proportion of the workforce residing in Moranbah or accommodation camps in Moranbah, roads connecting Moranbah with the Peak Downs Highway will also be used for the Project. The majority of the workforce residing in accommodation camps will be transported to site daily by bus.

FIFO workers will either fly into Moranbah or Mackay airports. DIDO and FIFO workers will have the option of bus transport between regional locations (e.g. Mackay) and accommodation camps.

4.21 Activities Not Proposed for the Project

The Project does not involve underground mining, and therefore no subsidence impacts will occur. There are no borrow pits proposed for the Project outside of the proposed disturbance area.

The Project does not propose level crossings, conveyors, jetties or ferries.

The Project does not include any of the following activities:

- dredging and bed levelling
- barging and barge loading
- any activity in a marine environment
- coal seam gas extraction, including drilling and hydraulic stimulation.

4.22 Project Need and Justification

The Project will primarily produce metallurgical coal, which will be supplied to the world market, where the demand for coal in steel making is expected to remain strong. There is general alignment between long term forecasters and peak industry bodies that global steel demand will continue to grow from around 1.8 billion tonnes to around the two billion tonnes level by 2050, this group includes the International Energy Agency (IEA) (2020), CRU (2023) and the World Steel Association (2025). Over time an increasing proportion of steel is predicted to be produced from electric arc furnaces rather than from blast furnaces (requiring metallurgical coal). However, blast furnaces are forecast to remain the predominant source of crude steel over the production life of the Project, with demand for metallurgical coal for blast furnaces expected to remain strong at around 1 billion tonnes per annum through 2040. A smaller proportion of the Project’s product coal will be thermal coal, with the Project supplying thermal coal to the international market for cement production and power generation. Global trade in thermal coal grew again in 2024 to an estimated total of 1,180 Mt (IEA, 2024), with China and India representing approximately 50 percent of this total. Global trade in thermal coal in 2025 has moderated somewhat (estimated at minus 6% compared to 2024) mainly due to increased domestic supply in China and India, rather than an overall reduction in use. China and India continue to build coal fired power stations (China approved 25 GW of new power plants in 1st half of 2025 (S&P Global, 2025)) with a number of plants located close to port cities with coal import capabilities. Growth in renewable power remains strong (IEA, 2024), but reliance on coal and gas remains over the life of the Project to satisfy the growing demand for energy.

The Project will provide the following social and economic benefits:

- Contribute significantly to the State's economy and provide ongoing employment opportunities through the transition the IPC workforce to the Project.
- Contribute, during the construction phase, an estimated to $17.7 million in gross regional product (GRP) for the regional catchment and $32.9 million in gross state product (GSP) for Queensland. The mining phase is estimated to support an average annual contribution of $106.6 million in GRP for the regional catchment and $198.5 million in GSP for Queensland.
- Employ approximately 100 - 150 people during the construction phase and approximately 300 – 400 people during operations. In addition, there will be opportunities for local employment in construction, transport and the supply of goods and services.
- Support for incomes is estimated to be around $180 - 220 million more per annum in Queensland relative to the base case (i.e. without the Project).
- Require approximately $190 million in capital investment to bring it to full production.
- Result in various taxation and royalty payments to the commonwealth and the state. The Project is estimated to provide additional revenues of approximately $965 million over the life of Project operations to the Australian Government, equating to $60.3 million per annum. The Project is estimated to provide additional revenues of approximately $698 million over the life of Project operations to the Queensland Government, equating to $43.6 million per annum.
- Provide a continuous and steady level of economic activity in Moranbah and the region, as the Project's mining activities replace existing mining activities at IPC, with ongoing opportunities for engagement of local and regional suppliers.
- Capitalise on existing infrastructure and activities located at IPC, and reduce the Project's environmental footprint, by utilising existing:
    - coal processing and railing infrastructure
    - open-cut voids for disposal of rejects and storage of mine affected water
    - raw water supply and power supply.
- The social impact assessment (see **Chapter 21**) identified that social benefits, as enhanced though associated social impact management measures, will result from:
    - enhanced and ongoing Project workforce and contributions in community
    - enhanced long-term employment security
    - generation of new, ongoing and replacement employment opportunities
    - opportunities for training and skills development
    - enhanced access to affordable accommodation options for visiting trades and services
    - ongoing economic benefits for worker accommodation village providers
    - increase in supply and procurement opportunities
    - ongoing economic benefits for local and regional businesses
    - population retention influencing community vitality and, cohesion in local communities
    - post-mining land use and land rehabilitation opportunities.

The cost benefit analysis for the Project (see **Chapter 22**) identified, across all discount rates examined, that the Project would be deemed economically desirable, with the benefits outweighing the costs. At a 7% discount rate, the Project's modelling delivers a net present value of $653.5 million over the assessment period.

If the Project does not proceed, these socio-economic benefits will not be realised.

4.23 Project Alternatives

Project alternatives are considered in terms of location of activities, design of infrastructure and types of activities proposed.

4.23.1 Mining Location

The location of mining is dictated by the location, depth and geology of the coal resource. However, where the coal resource encroaches on sensitive areas (e.g. the Isaac River) buffer areas have been proposed that will limit encroachment. The proposed pit shell has been defined by economic and geological constraints to the west and east; and by environmental constraints (the Isaac River and Cherwell Creek) in the north and south. Whilst the coal resource is located beneath the Isaac River the proponent has not sought to divert the Isaac River to access this coal.

4.23.2 Project Disturbance Area

The Project disturbance area was designed to reduce impacts to areas of remnant vegetation. This is evident in the shape of the disturbance area in Figure 4-3, which does not include parts of the ML application areas where remnant vegetation could be avoided through the selection of locations for infrastructure, topsoil stockpiles and out of pit overburden dumps. The avoided vegetation clearance is described in detail in **Chapter 11**, with 435 ha, or 56%, of remnant vegetation avoided.

4.23.3 Mining Methods

The coal resource is suited to open cut mining methods, being shallow depth (approximately 20 m) in the location of the initial box cut. Underground mining at such shallow depths is not practicable for operational and economic reasons. Hence open cut mining is the preferred mining method.

The proponent proposes to use the dragline currently in operation at IDM, supplemented by excavators and dozers, for overburden removal. Use of a dragline is the most efficient and economical, and hence least greenhouse gas intensive method for removing overburden. As a dragline is available for use for the extraction of overburden, and it is the most efficient method for overburden extraction, the dragline is preferred for the majority of overburden extraction.

Mine scheduling was informed by the use of a dragline, the relatively short strike length and proposed down dip mining methodology, which achieves a low strip ratio in early years. Mine scheduling was designed to optimise overburden handling for the backfill of the northern pit area and partial backfill of the southern pit area.

The mining schedule has been designed to maximise the efficient use of mining equipment and coal recovery, with an overburden dumping schedule designed to align with the preferred rehabilitation options for the final landform. The majority of overburden (around 90%) is placed in-pit rather than out-of-pit, thereby reducing the overall Project footprint. The out of pit overburden dumps have largely been located in cleared areas (i.e. an area without remnant vegetation), within the limits of the tenement areas available for mining activities, thereby minimising environmental impacts. There are few other alternatives for the location of out of pit overburden dumps, with other locations requiring longer haulage and greater emissions and disturbance, or located within floodplain areas.

Coal mining is proposed using conventional open cut methods including dragline (for overburden removal), excavators, dump trucks and dozers. There are no practicable alternatives to the method for coal extraction.

The preferred method for coal haulage between the Project ROM pad and IPM CHPP is via road trains, which are more efficient and economical over the haulage distance than dump trucks. The option for a conveyor to transport ROM was considered but found to be uneconomic due to high capital costs, with limited environmental benefit.

The mine sequence was selected so that any remaining residual void would not be located within the 0.1% AEP (1:1,000 year) floodplain.

Options were considered for mining of two separate pit areas without diverting Conrock Gully. However the economic benefit of resource extraction from this area, even after considering the cost of a permanent, stable diversion, was considered to outweigh the environmental values of a defined drainage feature with a very small catchment, limited remnant vegetation and surrounded by active grazing land.

4.23.4 Resource Sterilisation

The proposed mining method and sequence targets all economic coal within the opencut resource area. As the coal seams become deeper they intersect the regional Isaac Thrust fault, and therefore there is limited potential for additional resource extraction. The overburden box cut dump has been located to the west of the 'limit of oxidisation' of the coal seams and therefore no economic resources are located beneath the western overburden dump.

Based on investigations for IDM, which is in the same geological areas as the Project, there is very limited potential for coal seam gas extraction from the coal seams proposed for mining due to their low gas content. Coal seams at deeper depths in the Project area remain available for coal seam gas extraction, although this resource is not currently targeted by the overlapping coal seam gas tenement holder.

The Project will not result in the sterilisation of coal or coal seam gas resources.

4.23.5 Progressive Rehabilitation and Final Landform

As described in **Chapter 5**, options have been developed for post mining land uses (PMLUs) at the Project, including for the residual void area. Within PMLU areas, landforms will be designed so that they are geotechnically stable, safe, non-polluting and able to support the preferred PMLU. Landform design options were assessed in selecting the preferred closure landform. Rehabilitation milestone criteria have been developed to achieve rehabilitation objectives.

4.23.6 Infrastructure

The proponent has taken advantage of existing infrastructure at IPC rather than develop infrastructure specifically for the Project. This provides environmental and economic benefits by reducing the Project footprint and reducing capital expenditure. The existing infrastructure at IPC that will be utilised for the Project includes the CHPP, rejects and tailings disposal in existing mining dumps and voids, train loading facility, rail loop, MIA, access road from the Peak Downs Highway, internal haul roads, explosives magazine, and connections to raw water, power and communication supply. By disposing of rejects and tailings from Project coal in existing mining dumps and voids respectively, the requirement for an above ground tailings storage facility at the Project is avoided, thereby by avoiding the environmental impacts that would result from an above ground tailings storage facility.

The location of mining infrastructure has been selected to minimise vegetation clearance, where possible. All potential Isaac River bridge crossing locations were similar in terms of riparian vegetation, and therefore the preferred alignment is based on engineering considerations and linkages with IDM. The options for the secondary access route crossing of Cherwell Creek were similar in terms of vegetation, with the preferred alignment based on engineering considerations and linkages with Eagle Downs Mine.

A buffer distance of approximately 200 m has been maintained between the levee construction area and the high bank of the Isaac River along the majority of the levee. A buffer distance of approximately 100 m has been maintained between the levee plug and the high bank of Cherwell Creek. This allows for protection of riparian vegetation between the high bank and levee construction areas. Without the Isaac River levee, the area of resource extraction would be significantly reduced.

The water management plan for the Project is for integration with the approved water management system for IDM, rather than being developed as an independent system. This allows for balancing of mine affected water and minimises the potential for uncontrolled releases of mine affected water from the Project. If a standalone mine water management system were proposed for the Project, this would increase the risk of uncontrolled releases of mine water, increase the size and footprint of the mine water dam and increase the risk of stoppages to operations. Therefore the preferred option, being an integrated mine water management system for the Project and IPM, provides environmental and economic benefits.

The location and design of Conrock Gully diversion were selected to achieve a geomorphically stable design with hydraulic characteristics similar to the existing gully, and which flowed into the Isaac River. An alternative was considered to divert Conrock Gully into Cherwell Creek to the south; however this option was not preferred for environmental and economic reasons.

4.23.7 Accommodation

The accommodation strategy is for a combination of accommodation in local centres and use of existing mining accommodation villages. It is not proposed to develop a mining camp at the Project as the workforce is transitioning from IDM (i.e. similar workforce numbers) and there is available accommodation at existing mining accommodation villages in the area. The accommodation strategy has been developed to encourage workers to live locally, without placing increased demand on housing and social services in Moranbah and other local communities. Workers who do not live locally will continue to be accommodated at existing mine village accommodation.

4.24 References

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