



Carmichael Coal Mine and Rail Project Supplementary Environmental Impact Statement

Volume 4, Appendix C4b – Mine Workers Accommodation Village Approval Application

Containing

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Planning Assessment Report: MWAV

17th July 2013



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1.0 Executive Summary

Gassman Development Perspectives have been commissioned to complete and compile the necessary application material for inclusion within the Supplementary Environmental Impact Statement ('SEIS') for the Carmichael Coal Mine and Rail Project (the 'Project') for a number of offsite infrastructure items. The SEIS submission that is being prepared is to expand the original Environmental Impact Statement ('EIS') previously submitted for the Project. The aim of this approach is to minimise overall assessment timeframes following determination of the EIS.

This application material relates to a development permit for a material change of use for a mine workers accommodation village ('MWAV') and associated environmentally relevant activities and operational works aspects. The location planned for the MWAV is located within the Moray Downs property, which is formally known as Lot 662 on PH1491. This form of development on the subject site has been defined as 'Impact Assessable Development' by the Isaac Regional Council Planning Scheme (the Planning Scheme for Belyando) and this application material has been prepared to reflect this impact assessable nature.

The MWAV has been designed such that it comprises a number of separate phases to ensure that appropriate facilities are in place to meet the changing demands on the MWAV. The MWAV has been strategically located such that it integrates with the associated off site infrastructure being proposed on the Moray Downs whilst also ensuring sufficient distances are incorporated to ensure that non complimentary land use conflicts are minimised.

This report demonstrates how the proposal is considered generally consistent with the planning context for the State, region and the local area and ensures that no unreasonable environmental or cultural features are adversely impacted upon as a result. Accordingly, the proposed development is considered a suitable and appropriate form of development ideally located within close proximity to the airport, industrial area and mine whilst still being off-set to minimise potential adverse amenity impacts.

This application also forms part of a broader planning and approvals strategy in the sense that an overarching s242 Preliminary Approval application has also been prepared independently to this application and is to be included within the SEIS submission. This s242 Preliminary Approval application has been drafted such that it authorises the current intent for the MWAV whilst also enabling sufficient flexibility and growth of the MWAV over time.

2.0 Site and Application Summary

Table 1: Site Characteristics Summary

Site Details	
Site Address:	5509 Elgin Road, Clermont QLD 4721
Real Property Description:	Part Lot 662 on PH1491
Real Property Area:	117,000 ha
Subject Site Area	102.9 ha
Local Authority:	Isaac Regional Council

Table 2: Application Characteristics Summary

Application Details	
Approval Type	Development Permits for: Material Change of Use: • Accommodation Building; • Hotel (Private Tavern) and • ERA 63 - Sewage Treatment Operational Works: • Vegetation Clearing; and • Bulk Earthworks
Level of Assessment	Impact Assessable
Application Form(s)	IDAS Forms 1, 5, 6, 8 & 11
Public Notification	To be advertised in conjunction with SEIS/EIS notification. No additional IDAS public notification is required.
Applicant:	Adani Mining Pty Ltd c/o Gassman Development Perspectives GPO Box 999 Brisbane. Q. 4001
Contact Person(s):	Gary Savins
Application Reference:	5370

Table 3: Planning Assessment Characteristics Summary

Planning Details	
Regional Plan:	Mackay, Isaac and Whitsunday Regional Plan 2012-2031
Regional Plan Land Use Designation:	Regional Landscape and Rural Production Area
Planning Scheme:	Belyando Planning Scheme 2008
Planning Scheme Zone:	Rural Zone
Assessment Level:	Impact Assessable

Table 4: Proposal Summary

Proposal Details	
Purpose / Description of Proposal:	The proposed development seeks to establish a 3,500 bed accommodation village with associated services and facilities to service the workforce associated with the Carmichael Coal Mine.
Development Stages Proposed	The proposed development has been designed such that it can be constructed over a number of different stages.
Assessment Process	The relevant reporting relating to this proposal will be incorporated within the SEIS which will be lodged with the Coordinator General as part of the broader consideration of the Project. Subject to the determination of the EIS, an accelerated form of SPA IDAS assessment is available.

3.0 Site Information

3.1 Site Location

The location identified for the MWAV has an area of approximately 102.9 ha, and is located adjacent to the formed Moray Carmichael Road. The location is also approximately 70km west of the Gregory Developmental Road. The proposed village is located approximately 900 metres south of the formed Moray Carmichael Road and will be accessed via a new road connection from Moray Carmichael Road.

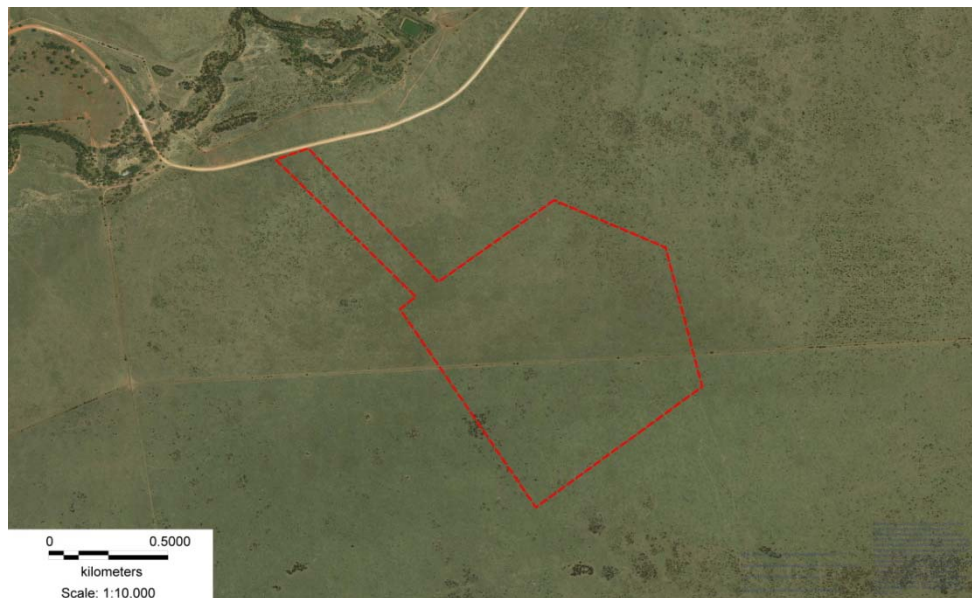


Figure 1: Aerial imagery, Source: Adani Mining Pty Ltd

The site is located approximately (all distances and times generated from Google):

- 70 km from the Gregory Developmental Road;
- 214 km (5 hrs 19 mins) to Clermont;
- 317 km (6 hrs 22 mins) to Emerald; and
- 335 km (6 hrs 39 mins) to Charters Towers;
- 916 km (12 hrs) to Cairns (international airport)

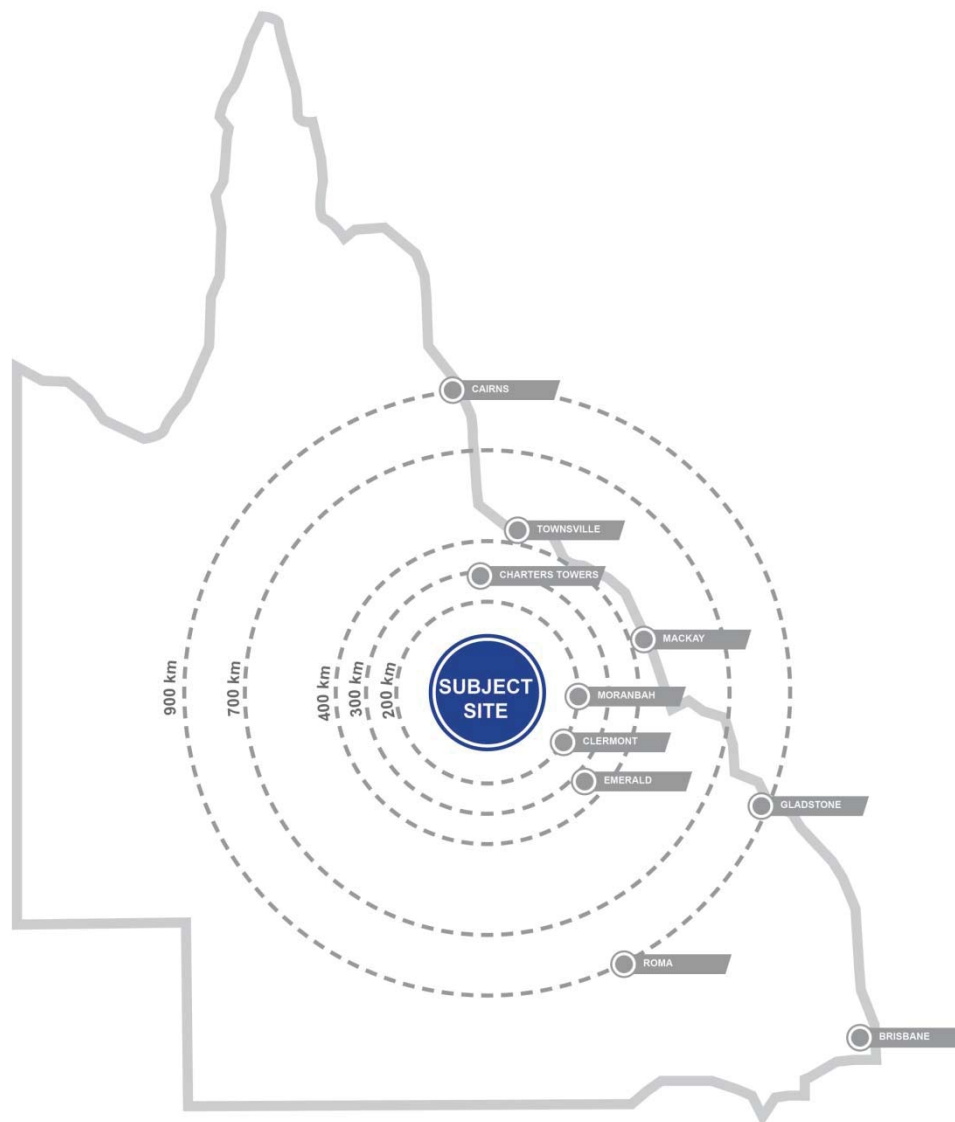


Figure 2: Site Context, Source: GDP

3.2 Site Characteristics

Table 5: Site Characteristics of Chosen MWAV Location

Site Characteristic	Description
Land Use	The location is currently vacant reflective of its traditional use associated with agriculture.
Frontage & Access	The village will be accessed directly from the Moray Carmichael Road via an approximate 1 km long new access road.
Topography & Views	The majority of the location is relatively flat, with levels ranging between RL 217.50 m AHD and 221 m AHD.
Existing Vegetation	The location is predominately clear of significant vegetation; however there are some sporadic patches of existing vegetation around the fringes.
Contaminated Land	The location is not known to be contaminated.
Wetlands	The location is not in close proximity to an identified wetland.
Heritage Areas	The location has not been identified as containing any significant heritage assets or is adjacent to any identified heritage areas.
Conservation Areas	The location has not been identified as subject to any known conservation status.

3.3 Site Photos



Figure 3: Aerial View of approximate MWAV Location, Source: GDP, 2012



Figure 4: Ground View 1 of approximate MWAV Location, Source: GDP, 2012



Figure 5: Ground View 2 of approximate MWAV Location, Source: GDP, 2012

4.0 The Proposal

This application material has been prepared and relates to a development approval for the following aspects:

- Material Change of Use – Accommodation Building, Hotel (Private Tavern) and ERA 63 Sewage Treatment; and
- Operational Works – Vegetation Clearing and Bulk Earthworks.

4.1 Overview

The MWAV by virtue of its very nature is a crucial element of the off-site infrastructure items planned to support the Carmichael Coal Mine. Specifically, the MWAV will provide accommodation for all employees and visitors to the Carmichael Coal Mine and due to the remoteness of the area will be key in providing necessary support and communal facilities. Whilst the proposal has been ultimately designed to accommodate 3,500 people, it is envisaged that it will be developed sequentially to meet needs and requirements of the Project over time.

There are five (5) application components based on two (2) aspects of development included within the application material that has been prepared. Details of each of these aspects are outlined below:

4.1 1 MCU Accommodation Building

The MWAV design is based on the utilisation of a 'module unit' that provides 72 bedrooms in a three (3) sided two storey low-set format. There are to be in total 49 modules wrapped around a central spine of communal facilities for the exclusive use of future residents. The central spine communal facilities are to be of more traditional construction materials, whereas the modules are to be lightweight. The MWAV has also been designed such that it can be constructed in a number of stages, whilst ensuring key services and facilities are appropriately provided in sequence and in accordance with the scale and anticipated demand of future residents.

The design philosophy and key aspects of the planned MWAV can be characterised as follows:

- Reception / site management offices;
- Medical clinic/ Emergency Service Facility;

- Kitchen / dining room;
- 3,500 accommodation rooms;
- Laundries associated with each accommodation cluster;
- Informal recreation facilities such as barbeques / shelters associated with each accommodation cluster;
- Tavern / wet mess facility (subject to separate MCU aspect as detailed below);
- Bulk linen stores;
- Amenities rooms;
- Ice rooms;
- Recreation rooms;
- Gymnasiums;
- Commercial laundry;
- Maintenance shed;
- Hazardous materials & chemical storage;
- Large outdoor dining / recreation areas;
- 25m Swimming Pool;
- Multi purpose courts;
- Soccer fields;
- Multi purpose fields;
- Cricket nets;
- Drop off / pick up / bus parking;
- Car parking;
- Running track / fitness station;
- Hardstand / deliveries area;
- Green space / lawn;
- Walkways providing access through MWAV;
- A ring road around site;
- An entry statement / signage;
- Water tanks;
- Sewerage infrastructure; and
- Power infrastructure.

4.1 2 MCU Hotel (Private Tavern)

Within the central spine of facilities, a private tavern is also proposed to be operated. On similar mine workers accommodation villages, this tavern would generally be referred to as a 'wet mess'. As with all the central spine communal facilities, this tavern is to be of a more traditional

construction. Sufficient space has also been allocated to the tavern such that it can itself grow and expand over time in-line with the sequential growth of the village and namely, the residential capacity.

The tavern has also been strategically located such that it adjoins an outdoor dining area with a broader outlook to the multi-purpose field located at the entrance to the MWAV.

4.1.3 ERA On-Site Effluent Disposal

The proposed sewer strategy for the MWAV will involve collection of waste effluent via Low Pressure sewer reticulation and conveyance to a package sewage treatment plant on site. The location of the sewage treatment plant is to be to the west of the private entrance road to the MWAV and within the 'services hub' intended to accommodate all support infrastructure directly related to the MWAV. As on-site effluent disposal is proposed, an ERA component for such an activity has been included within the application material.

Due to site characteristics, it is proposed that a low pressure sewage system be implemented to convey the effluent to the package treatment system. This will eliminate the need to construct deep sewer systems to convey the effluent as is the case with gravity systems and only requires shallow trenching. This approach therefore results in minimal earthworks fill quantities and has a positive effect on the overall bulk earthworks strategy. Current modelling indicates that the size of the system will be required to handle a demand of 4,485 EP's (Equivalent Person).

4.1.4 OPW Bulk Earthworks

The design of preparatory earthworks to support the MWAV has also been undertaken and included within this application material. This material relates to the Bulk Earthworks component of the proposed OPW permits. As the MWAV is located on a ridgeline and falls towards the south-west and north-east, it is to be constructed in fill. In order to incorporate the proposed stormwater catchment strategy the earthworks will be split up such that a portion of the site falls towards the south-west and the remaining towards the south-east.

4.1.5 OPW Vegetation Clearing

The required vegetation clearing to facilitate the siting and construction of the MWAV has also been included within this application material. This material relates to the Vegetation Clearing component of the proposed OPW permits. The basis for this clearance has drawn from the

extensive work prepared as part of the SEIS submission in relation to the identification and discussion of existing regional ecosystems.

In terms of the chosen location for the MWAV, current vegetation within and around this area did not identify any mapped regional ecosystems. Importantly, as part of the broader SEIS submission for the Project detailed re-categorisation and revised mapping has been undertaken that addresses, amongst other elements, clearing associated with the proposed MWAV. This revised mapping was in the form of a Property Map of Assessable Vegetation and in the case of the MWAV, it confirmed that there were no regional ecosystems within close proximity to the MWAV.

This vegetation clearing application also includes the applicable information that should facilitate appropriate permits for clearing under the VMA to be granted as well as that under the SPA.

4.2 Summary of Supporting Specialist Reports / Documentation

In support of this application material, the following specialist reports have been commissioned and accompany this planning assessment report:

Table 6: Relevant reporting

Category	Consultant	Title of Documents	Location
Plans and Drawings	Gassman Development Perspectives & Adani Mining Pty Ltd	Site Analysis Plan Staging Plan Proposal Plan	Appendix A
Code Assessment	Gassman Development Perspectives	Code Assessment	Appendix B
OPW Vegetation Clearing	Gassman Development Perspectives	Vegetation Management Plan	Appendix C
OPW Bulk Earthworks	Hyder Consulting	Bulk Earthworks Drawings	Appendix D
MCU Sewage Treatment	Gassman Development Perspectives	Site Based Management Plan	Appendix E
Preliminary Servicing	Hyder Consulting	Preliminary Servicing Reporting	Appendix F
Stormwater Management	Hyder Consulting	Site Based Stormwater Management Plan	Appendix G
Statutory Forms	Gassman Development Perspectives	Statutory Application Forms	Appendix H
SARA Code	Gassman Development Perspectives	SARA Code Responses	Appendix I

5.0 State Government Planning

Assessment



Figure 6: Hierarchy of Assessment – State, Source: GDP, 2013

State planning policy sits effectively at the top of the assessment hierarchy in relation to development proposals in Queensland, providing broad overarching policy that informs each of the subsequent lower levels of assessment. The following sections of this report provide discussion and comment on how the proposed development aligns with relevant state planning policies and provisions.

The application material prepared requests development permits for:

- Material Change of Use Permit: Accommodation Building; Hotel (Private Tavern) and ERA – Sewage Treatment; and
- Operation Works: Vegetation Clearing and Bulk Earthworks.

As this application material is to form part of the broader SEIS submission for the project, discussion in relation to both the State Development and Public Works Act 1971 (SDPWO Act), the Sustainable Planning Act 2009 (SPA), the Environmental Protection Act 1993 (EPA) and the

Vegetation Management Act 1999 (VMA) are required. In essence the content and form of the application material is guided by the SPA, EPA and VMA requirements, with the SDPWO Act enabling early consideration of the applications. This early consideration then flows onto an accelerated SPA assessment process once a SPA development application is lodged with the assessing authority (post EIS determination under the SDPWO Act).

5.1 State Development and Public Works Act 1971

The broader mine and rail project (the Project) has been declared a 'significant project' under the SDPWO Act and is currently undergoing the EIS assessment process by the Coordinator General. As this process is currently underway, alternative SPA assessment processes are applied in relation to aspects of development requiring a SPA development permit.

Part 4 Section 37 of the SDPWO Act specifically deals with these forms of development where the application material is provided to the Coordinator General as part of the EIS/SEIS material. Importantly, accelerated forms of SPA processing and accessing stages are available due to the removal of the Information and Referral Stage, the Notification Stage and referral to any SPA referral agencies.

This application material has been prepared and submitted as part of the SEIS material in compliance with this ability for accelerated SPA assessment processes to be obtained.

5.2 Sustainable Planning Act 2009

SPA provides guidance in relation to the types of approvals required and the applicable assessment considerations. Specifically, a Material Change of Use (MCU) is defined as a number of different aspects, including that of:

- the start of a new use of the premises; or

Operational Work (OPW) includes a number of various activities, including those in relation to:

- excavating or filling that materially affects premises or their use; and
- clearing vegetation, including vegetation to which the Vegetation Management Act applies.

The MWAV use complies with this MCU aspect definition. The vegetation clearing and bulk earthworks proposed comply with the OPW aspect definition.

Part 5 Division 2 Section 314 of the SPA specifies those matters that must be addressed by the assessment manager as part of any **Impact Assessable** development application. Reference items raised within this section are summarised as follows:

- Relevant State planning regulatory provisions;
- Relevant regional plans;
- Applicable codes under IDAS or the SPA 2009;
- Relevant State planning policies;
- Any codes within relevant structure plans, master plans, temporary local planning instruments, preliminary approvals or planning schemes;
- Any development approval for, or lawful use of, premises the subject of the application or adjacent premises; and
- Any referral agency's response.

5.3 Environmental Protection Act 1994

The EPA outlines a number of operations that require an MCU permit as defined by the SPA. These operations are referred to as an Environmentally Relevant Activity (ERA) and include:

- an activity prescribed under section 19 as an environmentally relevant activity.

Part 3 Subdivision 4 Section 19 activities include those in relation to on-site effluent disposal. The on-site effluent disposal proposed as part of the MWAV use complies with this MCU-ERA aspect definition.

Part 2 Division 3 Section 125 of the EPA specifies those matters that must be addressed as part of and Environmentally Relevant Activity application. These include that of accurate descriptions of site activities and details of site management plan and likely impacts.

5.4 Vegetation Management Act 1999

The VMA regulates the clearing of native vegetation within Queensland and provides guidance as to what clearing can occur and the manner in which it can be cleared. It regulates primarily mapped remnant vegetation; regrowth vegetation and some areas of native woody regrowth. Any clearing under the VMA linked with a development application is generally undertaken in accordance with the SPA application and processes and the granting of relevant development permits.

Whilst there are some exemptions from requiring the appropriate permits to be obtained, all other clearing can only be performed under relevant permits. Any such applications are assessed against regional vegetation management codes, with there currently being four (4) codes for assessing applications throughout different areas within Queensland. These codes include performance requirements for each application type/relevant purpose and for any permit to be given, the performance requirements for the purpose applied for must be met.

5.5 Public Advertising

This application for the MWAV and supporting ERA and OPW aspects, if currently lodged with Isaac Regional Council under the requirements of the Belyando Planning Scheme, would be Impact Assessable. Notwithstanding, as this application material forms part of the SEIS submission for the Project (which is to be publicly advertised), if an application is lodged post EIS determination, no additional public advertising measures are required.

5.6 State Planning Policies

The table below lists each State Planning Policy (SPP) with comments on their respective relevance to this application.

Table 7: Relevant SPPs

State Planning Policies	Relevance
SPP 1/92: Development and the Conservation of Agricultural Land	Applicable –the subject site has traditionally been associated with grazing related agricultural operations and as such, any departure from this historical use requires careful consideration. On a project wide (macro scale), the land to be utilised for the mine and off-site infrastructure items is being considered as a whole and is to be dealt with on a project wide scale. This consideration includes aspects of varied land uses and applicable offsets/integration policies. It is also noted that as part of lease discussions with the State Government, similar considerations are also relevant. On a more proposed use (micro scale), the use of the identified location for an MWAV use represents less than 0.1% of the existing land mass of the Moray Downs property. In this regard, it is not considered that this MWAV use will compromise or degrade the remaining agricultural use of the site and surrounds.
SPP 1/02: Development in the Vicinity of Certain Airports and Aviation Facilities	Not Applicable – the proposal relates to the development of a MWAV and it is not within close proximity to any of the identified airports or aviation facilities. Notwithstanding, as the MWAV is within moderate proximity to the planned airport, appropriate design and siting measures are to be incorporated to ensure the operational safety of the airport is not compromised by the MWAV.
SPP 2/02: Planning and Managing Development Involving Acid Sulfate Soils	Not Applicable – the identified location of the MWAV is not highlighted as having the potential to contain acid sulfate soils.

SPP 1/03: Mitigating the Adverse Impacts of Flood, Bushfire and Landslide	Applicable –The chosen location is not highlighted within a natural hazard management area, the MWAV as it contains accommodation and emergency facilities, is a development defined within Annex of the policy. This identification requires assessment against outcome 3 of the SPP and is relevant to the consideration and determination of this application. Outcome 3 states 'Wherever practicable, community infrastructure to which this SPP applies is located and designed to function effectively during and immediately after natural hazard events commensurate with a specified level of risk'. Sufficient design measures have been incorporated into the MWAV design such that sufficient flood immunity will be achieved.
SPP 1/07 Housing and Residential Development	Not Applicable – the applicant is not a local government.
SPP 2/07: Protection of Extractive Resources	Not Applicable – the identified location for the MWAV has not been identified as being subject to a Key Resource Area designation. Notwithstanding this point, the proposed development is directly related to a mining operation and therefore complements the intent of this policy provision.
SPP 2/10: South East Queensland Koala Conservation	Not Applicable – the identified location for the MWAV has not been identified as being subject to koala conservation policies for south-east Queensland.
SPP 3/10: Acceleration of Compliance Assessment	Not Applicable – accelerated compliance assessment is not sought as part of this application.
SPP 4/10 Healthy Waters	Applicable – Development is to be constructed so that it complies with the provisions of this policy. Please refer to the Stormwater Management Plan submitted in support of this application for further detail in this regard. Detailed supporting engineering reporting has been prepared to support the proposed MWAV use. This reporting includes outlining the intended measures to be incorporated on-site to ensure that stormwater is appropriately conveyed, captured and treated on-site.

SPP 5/10 Air, Noise and Hazardous Materials	Not Applicable – the site is not located within a designated management area under the SPP and in a statutory sense this SPP does not apply. Notwithstanding, as the proposed MWAV comprises a sensitive land use within close proximity to a planned mine further consideration and discussion on this SPP is considered warranted. Importantly, as part of the broader EIS/SEIS submission comprehensive amenity (namely dust and acoustic) reporting has been undertaken. The chosen location for the MWAV falls outside the boundary of the areas identified as likely being subject to increased amenity impacts.
SPP 4/11: Protecting Wetlands of High Ecological Significance in Great Barrier Reef Catchments	Not Applicable – the chosen location for the MWAV is not identified as a wetland protection area as contained within the Great Barrier Reef Catchments.
SPP 1/12: Protection of Queensland's Strategic Cropping Land	Not Applicable – the chosen location for the MWAV is not identified as being strategic cropping land or as potential strategic cropping land.

Temporary SPP 2/12 Planning for Prosperity	Applicable – this temporary Policy was introduced to assist in supporting economic growth within QLD and reducing red tape. It enables policy and decision makers to utilise additional ‘tools’ to overcome conflicting issues based on the State’s economic growth. In terms of development assessment, there are a number of competing outcomes that can be considered to balance the appropriateness of development. One such outcome is <i>“mineral and extractive resources development which can be shown to be complementary to an area’s primary intended land use”</i>. This application relates to key off-site infrastructure items required to support extractive mining activities. Whilst the current intent of the area is generally that of rural, the broader EIS assessment seeks to facilitate a variation to this use to include extractive mining activities. It is also noted that the location and operation of similar extractive mining operations generally occurs within rural areas. In this regard, it is considered that this proposal will advance the purpose of this SPP through its’ direct relationship to the planned extractive mining operations.
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Draft State Planning Policy April 2013

Applicable – This draft Policy was released for consultation in April this year and is aimed at expressing state interests in a complete and comprehensive manner. It is hoped that this SPP will lead to greater certainty, streamlined assessment and improved planning outcomes for the wider community. This SPP applies in a number of circumstances, including those in relation to making or amending planning schemes and assessment of development applications.

Five (5) themes are identified within this SPP which are the basis for the formulation of 18 state interests. Of particular relevance to this application is the state interest related to 'mining and extractive resources'. Whilst this state interest acknowledges that SPA does not regulate mining activities, it does note that it is *"important to maximise opportunities for coexistence between resource extraction and other development types where possible"*. This current application relates to core off-site infrastructure items that are intended to be appropriately located and operated 'side by side' with the planned extractive mining operation.

In this regard, it is considered that this proposal will advance the purpose of this SPP through its' direct relationship to the planned extractive mining operations.

5.7 State Planning Regulatory Provisions

The table below lists each State Planning Regulatory Provisions (SPRP) with comments on their respective relevance to this application.

Table 8: Relevant SPRPs

State Regulatory Provisions	Relevance
State Planning Regulatory Provisions	
South East Queensland Regional Plan 2009-2031 (SEQRP)	Not Applicable – the subject site is not located within the SEQRP 2009-2031.
South East Queensland Koala Conservation State Planning Regulatory Provisions	Not Applicable – analysis of koala habitat mapping found that the application did not impact on any designated area the south-east Queensland.
SPRP (Adult Stores)	Not Applicable – the proposal does not involve an adult store.
Off Road Motorcycling Facility on State Owned Land at Wyaralong	Not Applicable – the subject site is not located at Wyaralong.
State Planning Regulatory Provision (adopted charges)	Applicable: Due to the unique nature of this application and land tenure, matters in relation to infrastructure charges are considered likely to be subject to detailed and separate agreements outside the scope of any development approval.
Yeerongpilly transit Oriented Development State Planning Regulatory Provision	Not Applicable – the subject site is not located in the Yeerongpilly Area.
Coastal Protection State Planning Regulatory Provision	Not Applicable – the proposed development is not located in the coastal zone or coastal management district.
Mackay Isaac & Whitsunday State Planning Regulatory Provision	Not Applicable – these provisions were repealed on the 11 th July 2012.

5.8 State Referral Triggers

The State Assessment and Referral Agency (SARA) was established on the 1st July 2013 and is the single assessment manager or referral agency for all development applications where the state has a jurisdiction. Prior to SARA being established, individual referrals had to be provided to any applicable state agency on a case by case basis.

Schedule 7 of the Sustainable Planning Regulation 2009 prescribes the applicable state agency referral triggers, with there being different triggers in relation to different 'types' of development. Due to the nature of this application and the proposed MWAV, tables two (2) and three (3) of the regulation apply as they relate to 'other development made assessable' and 'development made assessable under a planning scheme'. If any of the triggers within these tables are triggered, then referral to SARA of the application material would generally be required. The following sections provide an outline of the assessment undertaken against both these tables.

5.8.1 Other Development Referral Triggers

The below table provides a summary of the assessment of the application material against the triggers outlined in 'Table 2 – Other development made assessable under schedule 3' of the Sustainable Planning Regulation 2009:

Table 9: Other Development Referral Triggers

Part	Area	Test	Trigger Applies	Referral Type
1	Environmentally relevant activity	MCU for an ERA	Yes	DEHP as a Concurrence Agency
2	State-controlled road	ROL within proximity to State-controlled road	No	N/A
3	State-controlled road	OPW within proximity to State-controlled road	No	N/A
4	Clearing vegetation	ROL with associated native vegetation clearing	No	N/A
5	Clearing vegetation	OPW with associated native vegetation clearing	No	N/A
6	Strategic port land	MCU on strategic port land	No	N/A
7	Airports	MCU on certain airport land	No	N/A
7A	Airports	ROL on certain airport land	No	N/A
8	Major hazard facilities	MCU for major hazard facility	No	N/A
9	Taking or interfering with	OPW for taking or interfering with water	No	N/A

	water			
10	Interfering with water and embankment areas	OPW for taking or interfering with water	No	N/A
11	Particular dams	OPA for construction of a dam	No	N/A
12	Removal of quarry material	Development for removal of quarry material	No	N/A
13	Tidal works	OPW for certain tidal or related works	No	N/A
14	Tidal works	ROL within CMD or for canal construction	No	N/A
15	Tidal works	OPW for certain tidal or related works	No	N/A
15A	Tidal works	OPW for certain tidal work	No	N/A
15B	Tidal works	OPW for certain tidal works within Gold Coast	No	N/A
16	Tidal works	Certain development within the limits of a port	No	N/A
17	Tidal works	Other development within limits of a port	No	N/A
18	Tidal works	OPW for marina works	No	N/A
19	Queensland heritage place	Development on a heritage place	No	N/A
20	Declared catchment areas	ROL in a declared catchment area	No	N/A
21	Electricity infrastructure	ROL subject to electricity easement or substation	No	N/A
22	Contaminated land	ROL on contaminated land	No	N/A
23	Contaminated land	MCU on contaminated land	No	N/A
25	Adjoining a fish habitat area	Building work in a declared fish habitat area	No	N/A

26	Adjoining a fish habitat area	OPW in a declared fish habitat area	No	N/A
27	Adjoining a fish habitat area	Development adjoining a declared fish habitat area	No	N/A
28	Certain aquaculture	MCU for aquaculture	No	N/A
29	Waterway barrier works	OPW for waterway barrier works	No	N/A
30	Marine plants	OPW for removal, destruction or damage of marine plants	No	N/A
31	Marine plants	ROL that involves removal, destruction or damage of marine plants	No	N/A
32	Marine plants	MCU that involves removal, destruction or damage of marine plants	No	N/A
33	Public passenger transport	Certain ROL close to a public passenger corridor	No	N/A
33A	Public passenger transport	Other ROL close to a public passenger corridor	No	N/A
34	Railways	ROL close to railway land	No	N/A
34A	State-controlled transport tunnels	ROL close to State-controlled transport tunnel	No	N/A
35	Oil and gas infrastructure	ROL subject to oil/gas easement	No	N/A
39	Regional plans	Certain ROL with the SEQ Region	No	N/A
41	Wild river areas	MCU for certain activities within a wild river area	No	N/A
42	Wild river areas	OPW for certain activities within a wild river areas	No	N/A
43A	Wetland	ROL in a wetland protection area	No	N/A

43B	Wetland	OPW in a wetland protection area	No	N/A
47	Distributor-retailers area	ROL within a distributor-general's geographic area	No	N/A

5.8.2 Assessable Development under Planning Scheme Referral Triggers

The below table provides a summary of the assessment of the application material against the triggers outlined in 'Table 3 – Development made assessable under a planning scheme' of the Sustainable Planning Regulation 2009:

Table 10: Assessable Development under a Planning Scheme Referral Triggers

Part	Area	Test	Trigger Applies	Referral Type
1	State-controlled road	MCU within proximity to State-controlled road	No	N/A
1A	State-controlled road	OPW within proximity to State-controlled road	No	N/A
2	State transport infrastructure	Development of a certain type and scale	Yes	TMR as a concurrence agency
4	Declared catchment areas	Certain development within a declared catchment are	No	N/A
5	Coastal management district	MCU within a coastal management district	No	N/A
6	Community infrastructure	Development on land designated for community infrastructure	No	N/A
7	Electricity infrastructure	MCU on a lot subject to electricity easement or substation	No	N/A
8	Electricity infrastructure	MCU within proximity to a substation site	No	N/A

9	Electricity infrastructure	OPW on a lot subject to an electricity easement or substation	No	N/A
10	Clearing vegetation	MCU for 242 on a lot containing native vegetation or involves clearing native vegetation	No	N/A
11	Contaminated land	MCU within a management area for unexploded ordinance	No	N/A
12	Regional plans	Certain MCU with the SEQ Region	No	N/A
14	Public passenger transport	Certain MCU close to public passenger transport corridor	No	N/A
14A	Public passenger transport	Other MCU close to public passenger transport facility	No	N/A
15	Airports	MCU on certain airport land	No	N/A
15A	Railways	MCU close to a railway or future railway land	No	N/A
15B	Railways	OPW close to a railway or future railway land	No	N/A
15C	State-controlled transport tunnels	MCU close to a state-controlled transport tunnel	No	N/A
16	Oil and gas infrastructure	MCU subject to oil/gas easement	No	N/A
17	Oil and gas infrastructure	OPW subject to oil/gas easement	No	N/A
21A	Land in or near a wetland	MCU including OPW in a wetland protection area	No	N/A
25	Marine plants	MCU that involves removal, destruction or damage of marine plants	No	N/A

26	Distributor-retailers area	Development within a distributor-general's geographic area	No	N/A
27	Strategic cropping land	MCU wholly or partly on SCL	No	N/A
28	Strategic cropping land	ROL of a lot containing SCL	No	N/A
29	Strategic cropping land	MCU in a protection area for SCL	No	N/A

5.9 Consolidated List of State Referrals

This application for the MWAV and supporting ERA and OPW aspects, if currently lodged with Isaac Regional Council would require referral to SARA based on the above triggers that require referral to DEHP and TMR as concurrence agencies. Notwithstanding, as this application material forms part of the SEIS submission for the Project, if an application is lodged post EIS determination, no subsequent referral of the application material to State agencies is required.

6.0 Regional Planning Assessment

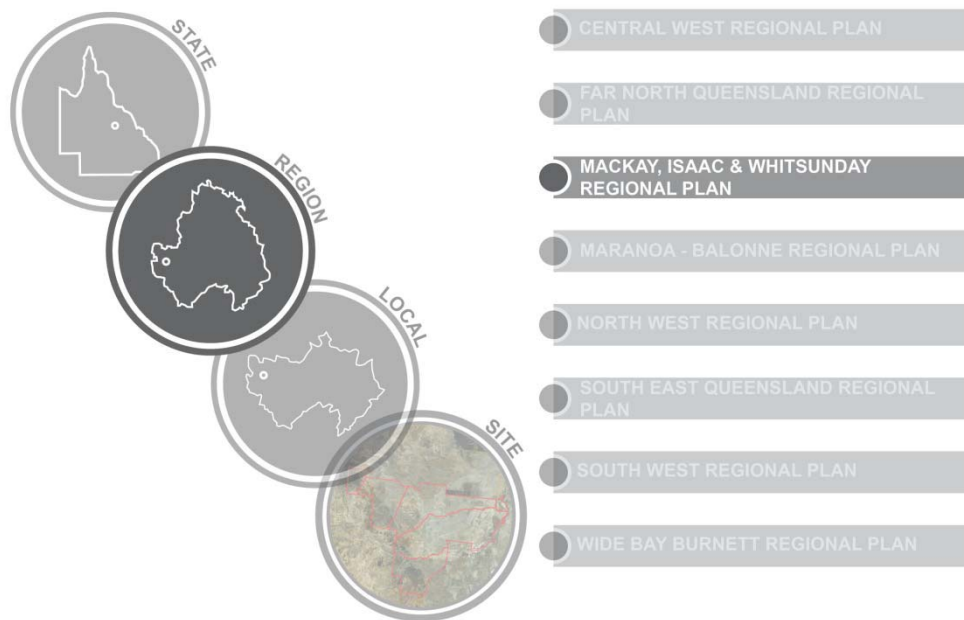


Figure 7: Hierarchy of assessment – Region, Source: GDP, 2013

Regional planning policy is positioned below state planning policy as effectively the second tier on the hierarchy of planning policy in relation to development proposals in Queensland. Regional planning policy provides region specific guidance in relation to the themes and issues that effect the region as a whole, it also provides an opportunity for the region and its constituent local authorities to work together to achieve common goals.

In this particular instance, the Mackay, Isaac and Whitsunday Regional Plan (MIW Regional Plan) applies to the subject site. Generally speaking, for applications to be favourably considered they need to be consistent and complimentary to the intent and purpose of any applicable regional plans.

6.1 Mackay, Isaac and Whitsunday Regional Plan

The MIW Regional Plan seeks to establish a vision and framework for the sustainable future of the Mackay, Isaac and Whitsunday Region from present day up until the year 2031. Given the

timeframes and size of the region, the document effectively provides strategic objectives to address future challenges and capitalise on opportunities.

The basic structure of the plan includes a 'Regional Framework' that provides location specific guidance; 'Regional Narratives' to provide more detail within specific areas; and 'Desired Regional Outcomes' that provides region wide policy objectives, finally a description of the core land use designations within the plan is provided to inform future development. The following sections assess the proposed development against the relevant sections.

6.1.1 Regional Framework

The Regional Vision for the MIW Regional Plan states:

"The Mackay, Isaac and Whitsunday region (the region) is a vibrant, progressive region where the values of the community and industry are respected and in balance with the natural environment. The region's natural assets and abundant resources will be responsibly managed for the benefit of residents, visitors and future generations. It achieves its potential with a range of industries, employment and learning opportunities for everyone. The region has a resilient and inclusive community that respects and offers diversity and choice, and where residents and visitors enjoy a healthy, active and safe lifestyle".

Significantly the vision identifies the importance of resource management within the region and encourages its sustainable exploitation to the benefit of the region.

Natural resource management is defined as a core strategic direction within the plan, as its presence underpins the regions economy at present and represents a major element of potential future growth. Further, the plan states that future planning will also need to ensure opportunities for exploration and development of new resources are located appropriately in order to reinforce the sector within the region. Significantly the trend of drive in / drive out (DIDO) and fly in / fly out (FIFO) employees associated with the resource economy entering the region has been acknowledged, in response the plan states that existing communities have a preference for 'towns to promote social and economic opportunities and choice' a position consistent with the intent of this proposal.

In this regard, the proposal is considered to promote the Regional Framework as it is for a core and crucial component of infrastructure relating to a resource extraction operation.

6.1.2 Regional Narratives

Specific Regional Narratives have been prepared for the Isaac Regional Council area. These narratives acknowledge the presence of the coal reserves within the region and its contribution to the national economy. The narratives also reference the emerging proposals for future mine operations within the region and the preference for integrated infrastructure to encourage optimal outcomes. Significantly the exploration and exploitation of reserves within the Galilee Basin is identified as providing more growth opportunities within the region.

This proposal is considered to be generally consistent with these Regional Narratives as the MWAV use is to support exploration and exploitation activities within the Galilee Basin.

6.1.3 Desired Regional Outcomes

The MIW Regional Plan lists a number of Desired Regional Outcomes (DROs) underpinned by principle, policy and program statements all of which are categorised by themes. There are 10 identified DROs, covering matters from sustainability; regional landscapes; urban form and transport. Some of the core DEOs it is considered this proposal will assist in promoting include those in relation to natural resource management, strong economy and transport. An outline on some of the DEO policy provisions and discussion in relation to the proposed MWAV use is as follows:

'4.1.3 Natural resource management, planning, investment, monitoring and reporting is coordinated to improve the quality and contribution of the resource to the region'.

Comment: The proposed development relates to an MWAV that will service the needs and requirements of an extractive resource. In this regard, the proposed development is a demonstration of how appropriate planning and investment is being brought forward as part of the natural resource management strategy for the operation.

4.3.3 The operation of extraction and processing activities does not compromise human health, current and future resource use opportunities, regional landscape values or ecosystem function and services, and must minimise its impact on primary production.

Comment: Whilst the proposed development does not directly relate to the operation of the mine, the development will service the needs and requirements of the mine operation. The MWAV has been appropriately sited so as to be outside the expected mapped 'amenity' impacts that may result from the mine. The containment of all

accommodation within a discrete precinct will also limit unnecessary sprawl and further utilisation of surrounding rural land.

5.1.2 Land-use and community infrastructure planning decisions incorporate social and community needs assessments.

Comment: The proposed development has been designed to cater for the needs of the population required to efficiently operate the mine. Meeting the needs and desires of the subject population will be a key determinant in attracting employees and therefore service provision in terms of social infrastructure has been a core element of the proposal.

5.3.2 Consider the changing needs of the community to improve and sustain the standard of living and health and wellbeing of all members of the community.

Comment: Whilst the proposed development has been designed to cater for today's requirements associated with a population of 3,500 people, it also acknowledges the potential for changing needs in the future, in this regard a level of flexibility has been integrated within the proposal so that the community can adapt to future needs in terms of lifestyle.

5.3.3 Physical activity and healthy lifestyles are supported through appropriate location and design, including facilitating the provision of active transport infrastructure such as pedestrian and bicycle paths, and appropriate sport and recreation facilities.

Comment: The proposed design response has sought to incorporate active and healthy lifestyle initiatives that will encourage future residents to remain fit and healthy. Facilities such as a swimming pool, football pitches, multi purpose courts, cricket nets and a gymnasium have all been incorporated to further this approach.

5.3.4 Crime prevention through environmental design principles is applied to enhance community safety in public areas.

Comment: The proposed masterplan has sought to incorporate design features that will seek to reduce the potential for crime and anti social behaviour within the proposed MWAV area.

5.3.8 Implement best practice urban design principles to create built environments and supporting infrastructure that facilitate universal access and active transport, and that increase community safety.

Comment: The proposed masterplan has been informed by the over arching sustainability and urban design principles that provide the framework for off site infrastructure on the 'Moray Downs'.

5.5.6 Support sustainable, balanced resource communities through integrated planning and delivery of land uses, infrastructure, economic development, environmental protection and housing provision.

Comment: The proposed development has been brought forward as part of a strategy to establish appropriate of site infrastructure on the Moray Downs. A concurrent application for an s242 Preliminary Approval will provide a clear demonstration of how integrated planning processes have brought forward the necessary development proposals on the subject site.

10.1.4 Coordinate the planning, sequencing and location of infrastructure, industry and urban development.

Comment: The proposed development has been brought forward at this time to service the needs of the proposed mine operation, in this regard the planning, sequencing and location of the proposed development have been carefully considered and justified.

In this regard, the proposal is considered to promote a large number of the DEOs and DEO policies contained within the Regional Plan.

6.1.4 Implementation

Within the implementation provision of the Regional Plan, areas are divided into a number of land use categories. Whilst these categories are considered more generally related and linked to the repealed Regulatory Provisions, discussion against such themes is still considered warranted and necessary. Due to the sites remote location, it is located within the Regional Production and Rural Landscape Area as indicated below:

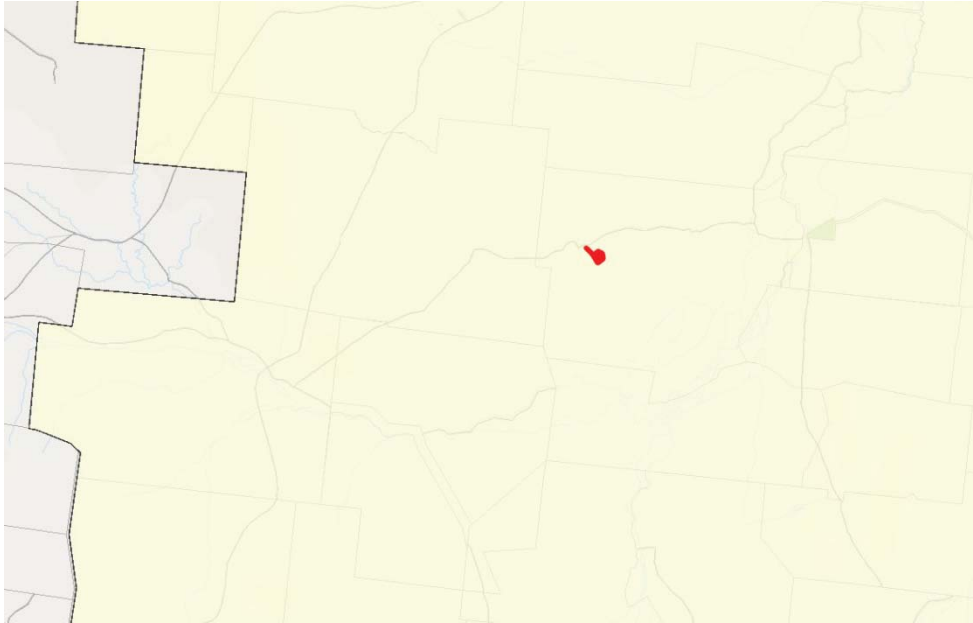


Figure 8: MIWRP Mapping, Source: Information Atlas 2013

Whilst the intent of this area is to generally identify and protect “*land with regional, rural production or other non-urban values*”, it is also noted that its purpose is not to impede significant activities including that of ‘mineral exploration’. In this regard, as this proposed MWAV is to support and compliment planned mineral exploration activities, it is considered to be compatible with the intent and purpose of the Regional Production and Rural Landscape Area.

7.0 Local Government Planning

Assessment



Figure 9: Hierarchy of assessment – Local, Source: GDP, 2013

As outlined earlier, the subject site is located within the jurisdictional boundaries of Isaac Regional Council. Currently there are three (3) separate planning schemes applicable within the Isaac Region, with these being that of the Belyando Scheme; Broadsound Planning Scheme and the Nebo Planning Scheme. The relevant planning scheme for the subject site is that of the Planning Scheme for Belyando Shire (the Planning Scheme).

7.1 Definition of Development

The core use proposed as part of this application is defined as “Accommodation Building” with an associated “Hotel” (Private Tavern) within the Planning Scheme. In this regard, Accommodation Building is defined as follows:

“Accommodation building” – means “premises” comprising primarily of “accommodation units” such as motels, boarding-houses, guest-houses, accommodation centres or villages, hostels, unlicensed hotels, nursing homes, serviced

rooms, or residential clubs. The term includes dining, laundry and recreation facilities which cater exclusively for the residents of the accommodation building and a manager's office and residence. The term does not include a "shop" or "hotel" as herein defined.

And, Hotel is defined as follows:

"Hotel" – means "premises" used for the sale of liquor for consumption on the "premises", or on and off the "premises", and may include the provision of meals and accommodation.

The definitions in relation to the ERA and OPW aspects of the application are specified in alternate legislation as discussed in greater detail previously in this report.

7.2 Zoning

The subject site is located within the 'Rural' Zone of the Planning Scheme. The zoning designation is illustrated in the following figure:

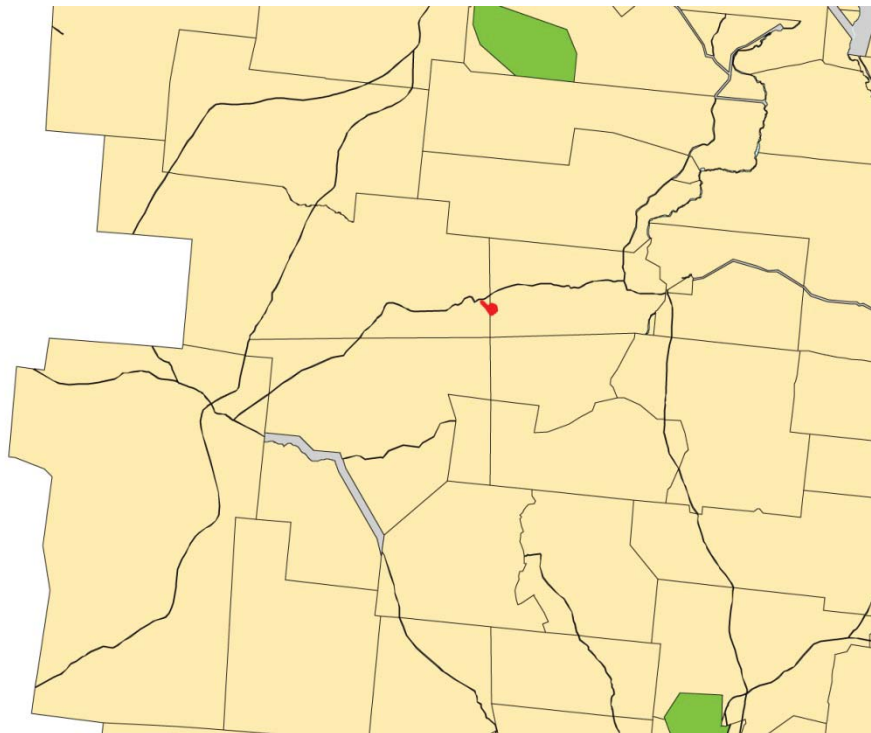


Figure 10: Planning Scheme Zone, Source: IRC Website

7.3 Level of Assessment

Within the Rural Zone, the MWAV is defined as Impact Assessable by the Planning Scheme. Both Accommodation Building and Hotel fall within the 'All other "uses"' category as outlined in the below table:

	Impact assessment otherwise	
All other "uses"	Impact assessment	

Figure 11: Planning Scheme Table of Assessment, Source: IRC Website

7.4 Desired Environmental Outcomes

The Planning Scheme provides a number of Desired Environmental Outcomes (DEOs) to guide development in a strategic manner. They are communicated in a DEO statement followed by a number of strategies for achieving the outcome. Due to the impact assessable nature of the proposed MWAV use, a detailed assessment against these DEOs and their strategies has been undertaken. Consistency with these DEOs will assist in determining the appropriateness of the proposed development and chosen location. The outcome of this detailed assessment is discussed in greater detail below.

7.4.1 The Natural Environment and Cultural Heritage

Desired Environmental Outcome

In Belyando Shire, ecological systems, the natural environment (including natural features and unique habitats such as Peak Range National Park, Mazeppa National Park, Narrien Range National Park, Epping Forest National Park, Wilandspey Conservation Park, Doongmabulla Springs Important Wetland and the declared catchment), and items and places of cultural and heritage significance are protected such that biodiversity, cultural heritage values and existing or intended landscape character are maintained.

Strategies

- Development is regulated to minimise any adverse impacts on air and water quality, to prevent land degradation, loss of unique habitat and biodiversity and to maintain the integrity of riparian areas, ridgelines and escarpments.*
- Development is regulated to be compatible with the environmental, habitat, biodiversity and landscape values and historic significance of protected areas (including Peak Range National Park, Mazeppa National Park, Narrien Range National Park, Epping Forest National Park, Wilandspey Conservation Park,*

Doongmabulla Springs Important Wetland and the declared catchment) and areas, local items and places of cultural significance (including areas along water courses).

Comment: The proposed development has been designed in a respectful manner to the key characteristics of the chosen location. Every effort has been made to ensure that no unreasonable adverse impacts are generated as a result of the development and mitigation techniques are employed where adverse impacts have been identified. Importantly, the general appropriateness of the Project (which includes core off-site infrastructure items such as the airport) is dealt with in greater detail within the complex array of vast material submitted as part of the EIS/SEIS process. This higher level consideration and justification includes reporting on environmental and cultural heritage matters and outlines any required ameliorative measures.

With this being said however, it is not considered that the proposed development will have any unreasonable impact on the air and water quality, will not result in land degradation and extensive analysis has been undertaken to ensure that habitats and the existing biodiversity characteristics are not unreasonably impacted upon. Further the chosen location is not in close proximity to any identified riparian area, ridgeline or escarpment. There are also no known identified protected areas or places of cultural significance nearby to the intended MWAV site.

Accordingly, the proposed development is considered to be consistent with the intent of 'Natural Environment and Local Heritage DEO', as it is generally compliant with the identified outcome and derived strategy statements.

7.4.2 Economic Development

Desired Environmental Outcome

The viability of the mining industry is protected, while the economy of Belyando Shire is diversified in a manner that supports the intended land use structure and character of the urban centres of Clermont and Moranbah and the rural parts of the Shire.

Activities that do not require a rural location are consolidated within the towns of Clermont and Moranbah, so that investment in the towns is maximised.

Moranbah's role as the primary service centre for the northern Bowen Basin mining industry is enhanced.

Town centres in each of the Shire's urban communities form vibrant and compact commercial and community cores. Industrial nodes in Clermont and Moranbah are consolidated.

Natural resources (including land, water and mineral resources) are used sustainably.

Strategies

- a) *The planning scheme reinforces the roles of Clermont and Moranbah as the principal places for administrative services, business, industry, retail, education and community services and transport services within the Shire.*
- b) *Sufficient and suitable areas are identified for urban development, and key transport infrastructure are identified and protected.*
- c) *Residential activities (with minor exceptions) are required to be located within the towns of Moranbah and Clermont.*
- d) *Commercial activities are limited (with minor exceptions) to identified centres in the towns of Clermont and Moranbah.*
- e) *Confidence in investment in the Shire's towns and in its major industries is maintained by identifying clear development intentions.*
- f) *Urban and other sensitive forms of development are regulated to avoid or minimise potential conflicts with existing or future mining operations.*
- g) *Productive rural land, rural industries and unique natural features (including mineral and extractive resources and tourist resources such as national parks, conservation parks and wetlands) are protected to preserve their continued economic potential and viability.*
- h) *Industrial activities are directed to identifiable industrial nodes in the towns of Moranbah and Clermont.*

Comment: The proposed development is consistent with the Economic Development DEO as it seeks to provide a core facility associated with a significant mine operation that will provide a significant contribution to the regional and state economy.

The proposed development seeks to reduce the isolation of the subject site by providing appropriate accommodation and associated social facilities on site. In this regard, the role of Clermont or Moranbah will not be challenged as the principal locations for commerce. It is envisaged the centre of Clermont will retain its role as the service centre for the region.

The proposed development will provide improved access conditions for what is currently a relatively isolated location and in this regard complies with providing sufficient and suitable areas for key transport infrastructure.

The proposed development incorporates residential development and as such will be classified as a minor exception to this DEO. As previously noted previously, it is considered crucial to the development and efficient operation of the Carmichael Coal Mine that on site accommodation is

provided in order to address the locations isolation from existing centres. Accordingly the proposed development is proposed as a minor and justified exception to the defined DEO as it will contribute to the operation of a regionally significant Mine operation.

The proposed development does not relate to commercial activities as it is for a MWAV that merely seeks to service the projected internal population.

The proposed MWAV has been respectfully located in terms of surrounding land uses and the proposed mining operation to ensure that in the first instance adverse impacts are minimised and secondly the resource extraction can proceed efficiently and sustainably.

The proposed development does not relate to industrial activities.

Accordingly, the proposed development is considered to be consistent with the intent of 'Economic Development DEO', as it is generally complies with the identified outcome and derived strategy statements.

7.4.3 Community Wellbeing

Desired Environmental Outcome

Moranbah and Clermont provide a wide range of government and community services and employment opportunities. Moranbah continues to have a significant role as the primary service centre for the northern Bowen Basin mining industry. The towns of Moranbah and Clermont accommodate strong, connected and vibrant communities, well supported by recreational and other community facilities, highly accessible by walking and cycling. Town centres provide a clear community focal point. Moranbah and Clermont are characterised by a strong and growing permanent resident population. A wide range of affordable housing types is available and all housing is designed to contribute to the quality of the urban environment. Dwelling units providing for permanent accommodation are predominant, with a significantly smaller proportion of other forms of accommodation intended for temporary residents.

The rural amenity and productive capacity of other parts of the Shire is maintained.

Strategies

- a) *The planning scheme seeks to ensure that people are connected to public spaces (including recreational areas) and community services through an appropriate land use structure and the provision of infrastructure within the towns of Clermont and Moranbah.*

- b) *Increased opportunities are created for a larger proportion of the mining (and related) workforce and their families to permanently reside in the Shire's towns through:*
- *the designation of sufficient urban land to accommodate expected population growth;*
 - *the encouragement of medium density, small lot and other forms of permanent housing to increase housing choices available within the Shire's towns; and*
 - *limitations on the size of accommodation facilities for non resident workers.*
- c) *The planning scheme seeks to ensure all residential activities (with minor exceptions) are located within the towns of Clermont and Moranbah.*
- d) *All forms of "residential activities" (including accommodation intended for visitors and temporary residents) are required to be designed to integrate with the surrounding urban environment and be of a high quality urban design.*
- e) *Development is regulated to protect the health and safety of people.*
- f) *(f) Infrastructure reflects community expectations and needs, meets appropriate engineering and environmental standards and is provided in an orderly and logical sequence to ensure cost effectiveness.*
- g) *Rural communities are protected from incompatible forms of development, and rural residential development is not supported by the planning scheme.*

Comment: The proposed development is consistent with the Community Wellbeing DEO as it seeks to provide crucial infrastructure for a rural community related to a significant Mine Operation.

The proposed development assessed against this DEO will be defined as a minor exception as it seeks to provide residential accommodation outside the primary centres of Moranbah and Clermont. As noted previously the proposed MWAV is considered crucial to the development and efficient operation of the Carmichael Coal Mine in order to address the locations isolation from existing centres. Accordingly the proposed development is proposed as a minor and justified exception to the defined DEO as it facilitates the operation of a regionally significant Mine operation.

7.4.4 DEO Summary

The DEOs contained within the Planning Scheme seek to provide a strategic framework to guide the implementation of planning policies and subsequently development. Given the strategic level of assessment associated with the proposed development an assessment against both the DEOs and relevant policy statements was undertaken. This assessment demonstrated how the proposed MWAV is generally consistent with the intent of the DEOs and in many ways promotes the achievement of several strategy statements.

7.5 Planning Scheme Overlays

The following section captures the overlays contained within the Planning Scheme and their relevance to the proposed application.

7.5.1 Land Characteristics Map – Features Map

The subject site is not identified specifically on the 'Land Characteristics Map', the only relevant features identified in relatively close proximity to the chosen location would be watercourses. Consideration and mitigation/management from any watercourses has been dealt with specifically in the engineering reporting that has been submitted as part of this proposal.

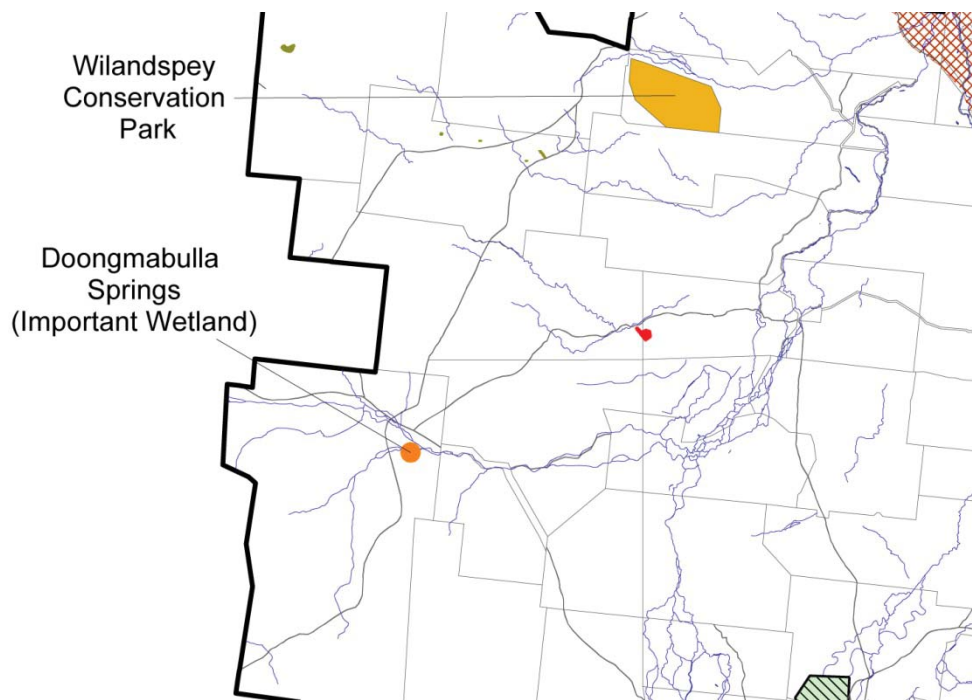


Figure 12: Land Characteristics Map - Key Features. Source: IRC Website

7.5.2 Land Characteristics Map – Good Quality Agricultural Land

The entire subject site has been identified as containing portions of Class B and Class A Agricultural Land. It is also acknowledged that the subject site has traditionally been utilised for land extensive broad hectare grazing practices.

Importantly, the chosen location represents less than a 0.1% area of the current property (Moray Downs) and in this regard is not considered likely to have any meaningful impact on the agricultural (or other) use of the property as a whole.

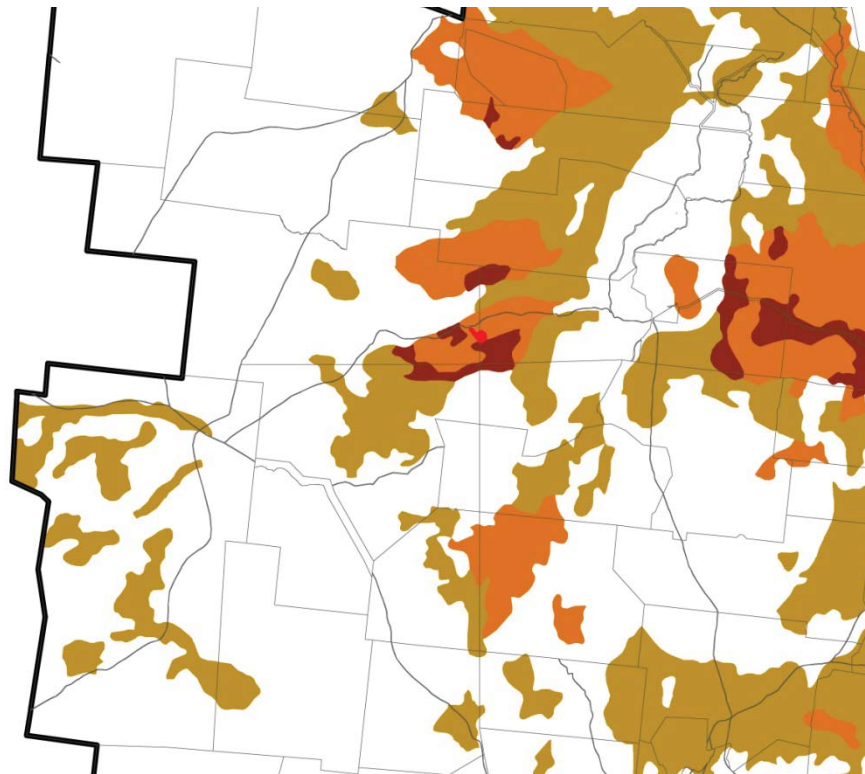


Figure 13: Land Characteristics Map - Good Quality Agricultural Land. Source: IRC Website

7.6 Rural Zone: Code Purpose

The 'Rural Zone' of the Planning Scheme seeks to provide the framework for development assessment in the former Belyando Shire. The purpose of the code is defined under four key objectives; each one is detailed below in addition to an assessment of how this proposal will impact on the objective.

- 1) *The Rural "Zone" retains its viability as an area of primary production and natural resource use, including mining.*

Comment: The proposed MWAV is being constructed as part of a larger strategy for the operation of a large scale mining operation and in this regard is consistent with the intent of this provision.

- 2) *"Rural activities" and mining are appropriately located within the Rural "Zone" and are not prejudiced by inappropriate development.*

Comment: The proposed MWAV has been sited on the basis of detailed studies seeking the appropriate location for such infrastructure. In this regard, it is considered that the proposed location is the optimal location in terms of the existing context and proposed future operations for such infrastructure and will efficiently and sustainably contribute to the operation of the mine. Further it is considered that the proposed location will not adversely impact upon existing rural activities.

- 3) *Within the Rural "Zone", "development":*
 - a. *maintains the environment, including soil, air and water, compatible with healthy natural systems and ensures public health and safety;*
 - b. *protects good quality agricultural land (GQAL) from fragmentation, alienation or encroachment of incompatible land "uses" in accordance with State Planning Policy 1/92 – Development and Conservation of Agricultural Land;*
 - c. *is located, designed and operated in a manner that protects and enhances the predominant rural scale, intensity, form and character;*
 - d. *maintains the rural amenity;*
 - e. *does not prejudice or impact adversely on other "uses", particularly "sensitive land uses", including those within other "zones";*
 - f. *does not prejudice or unduly impact on mineral resources or their extraction;*
 - g. *has an appropriately designed access to the road network, and traffic generated by the development does not impact adversely on the local road network;*

- h. does not adversely impact on areas and sites of conservation importance, including cultural and high landscape values;*
- i. is located and designed in ways that minimise the need for flood and landslide mitigation, and to protect people and premises from such natural events;*
- j. has water supply, stormwater disposal, sustainable effluent and waste disposal and power, to appropriate standards, adequate for the “use”; and*
- k. does not impact adversely on infrastructure.*

Comment: The proposed development has been designed to integrate and respect the existing context of the receiving environment.

The proposed design has been informed by the environmental features of the subject site in order to ensure no unreasonable impacts are experienced. Due to the nature of the proposed development, being residential, public health and safety has been a crucial element of the proposed design ensuring the necessary standards are incorporated within the final design iteration.

Whilst the application acknowledges the designation of the subject lands within the ‘Good Quality Agricultural Land’ of the Planning Scheme, the chosen location represents less than a 0.1% area of the current property (Moray Downs) and in this regard is not considered likely to have any meaningful impact on the agricultural (or other) use of the property as a whole.

The proposed MWAV has been designed in a manner that respects the rural character of the local area. In this respect every effort has been made to ensure that development is clustered in a dense manner therefore minimising the impact on the surrounding character.

The proposed development is part of a wider strategy to develop a mining operation of significant size and scope, in this regard the proposal is helping to facilitate sustainable resource extraction.

The proposed development will be accessed by a road linking the development to the Moray Carmichael Road on a north south alignment. It is envisaged that the Moray Carmichael Road will provide the necessary capacity to cater for the proposed traffic generated as result of the proposed development.

The subject site is not located on or adjacent to a site of cultural or high landscape value.

The proposed development has been designed to be above any flood level in the local area.

The proposed development has been designed in appropriate manner in terms of stormwater and servicing as demonstrated by the reports submitted in support of this proposal.

4) *Within the Rural “Zone”, the following are appropriate “uses”:*

- a. *“agriculture” and “grazing”;*
- b. *“intensive animal industries” and “extractive industries”, where they are located and operated so as to ensure no unacceptable detrimental impact on surrounding “uses” or on the environment;*
- c. *limited industrial “uses”, where it can be demonstrated those “uses” are associated with rural production or natural resource use and cannot reasonably be established in the Industrial “Zone”;*
- d. *“bed and breakfast premises” and “home business” where they are of a small scale and are compatible with surrounding “uses”;*
- e. *“caravan or relocatable home park” for the purposes of tourist accommodation where it is: of a small scale; compatible with the amenity and character of surrounding uses; and directly and primarily associated with rural production, the natural environment or cultural resources in the surrounding area; and*
- f. *“caravan or relocatable home park” or “accommodation building” for the purposes of accommodating workers, where the use is: directly and primarily associated with rural production or a natural resource related industry on the same site or on an immediately adjoining site; compatible with the amenity and character of the surrounding uses; intended to be established only for a defined period; and cannot reasonably be located in the Urban “Zone”.*

Comment: The proposed use is considered to be appropriate within the ‘Rural Zone’ as it will contribute to the viability of a significant resource extraction project. As points 4c and 4f cater for the needs of natural resource related industry, this proposed development is considered an extension of this intent in that it will effectively reduce the isolation of the natural resource and therefore improve the feasibility of extracting the resource in a sustainable manner.

7.7 Applicable Assessment Provisions

As the proposed development is defined as Impact Assessable under the Planning Scheme, it is also required to demonstrate compliance (where applicable) with the relevant codes contained within the Planning Scheme. In relation to this specific proposal the ‘Rural Zone’ Code is the only code that has been triggered. The outcomes of the assessment against this Code is discussed in detail below.

7.7.1 Rural Zone Code

As outlined above, the subject site is located within the 'Rural Zone' and therefore the 'Rural Zone' code has been triggered for assessment. Accordingly an assessment has been undertaken of the proposed development against the 'Rural Zone' Code.

Whilst the proposal is considered to be generally in accord with the outcomes and purpose of the relevant code, the following key responses are considered significant to the assessment of this proposal:

Table 11: Rural Zone Code Relevant Considerations

Performance Criteria	Acceptable Solution	Performance Based Solution
PC1 Non-“Rural Activities” - Locational Criteria Non-“rural activities” are located in the Rural “Zone” only where those activities: (a) do not unduly impact on the character and amenity of the locality; (b) are directly and primarily associated with rural activities, a natural resource related industry or natural or cultural resources; (c) cannot reasonably be located in another more appropriate zone; (d) do not prejudice the existing or future productive capacity of rural land or other natural resources; and (e) do not adversely affect the landscape values and scenic qualities of the locality.	No acceptable solution is prescribed.	PC1 – Complies The proposed development is for a mine workers accommodation village (‘MWAV’) to support a planned natural resource related industry (mine). The MWAV has been strategically located within close proximity to the mine and the airport that is to service the mine. The immediate area surrounding the proposed MWAV is currently used for a mix of cattle grazing activities. The MWAV is seen as a supporting form of supplementary infrastructure to support the expanded mining activities. Importantly, the remoteness of the area should assist in minimising any potential adverse amenity and/or character impacts associated with the MWAV use. Due to the direct relationship between the MWAV, airport and mine, the location for the MWAV is considered ideal. It has been chosen to sit outside the planned mining area such that the productive capacity of natural resources is not compromised. Where required, appropriate landscaping could be implemented to assist in reducing any potential loss of

		landscape values, and has been indicatively shown as part of the proposed design. Accordingly, it is considered that the proposed MWAV is appropriately located within the rural zone to support a natural resource related industry.
PC2 Non-“Rural Activities” - Scale Non-“rural activities” are of a scale that is consistent with the amenity and character of the locality and do not prejudice the operation and viability of other “uses” or activities in the Rural “Zone” or other “zones”.	AS2 The “total use area” is less than 150m².	PC2 – Performance Solution The scale of the proposed MWAV is a direct relation to the scale and form of mining operations proposed on the site, in that it is intended to house the maximum required workforce across 3500 beds. Once operational, the mine will shape the character of the immediate area and this MWAV will complement such character. The areas included within the EIS/SEIS for the mine and mine support aspects (off-site infrastructure) are clearly identified and outlined. The proposed MWAV is located in one such area and as such it is not considered that it will prejudice the operation and/or viability of other uses within the Rural zone.
PC5 “Residential Activities” Land within the Rural “Zone” is maintained for rural activities.	For “caretaker’s residences”: AS5 No more than 1 (one) “caretaker’s residence” per lot. For all other “residential activities”: No acceptable solution is prescribed.¹⁴	PC5 – Performance Solution As this proposal is impact assessable and a form of residential use, it is required to demonstrate compliance with relevant sections of the planning scheme (amongst other aspects). Where any conflict occurs, there must be sufficient grounds to overcome any areas of non-compliance for it to be favourably considered. Notwithstanding, a more strategic level of assessment has been undertaken to demonstrate the suitability of the proposed MWAV. Specifically, detailed assessment has been undertaken against the prescribed outcomes for the Rural zone as s4.1.2.2 of the Planning Scheme states that these are the “purpose of the code”. This strategic level assessment is considered consistent with the impact assessable nature of the

		application and consistency between the proposed development and the outcomes of the Rural zone is considered to represent 'sufficient grounds'. Outcome (1) of the code includes that the rural zone <i>"retains its viability as an area of primary production and natural resource use, including mining"</i>. This proposed MWAV is a critical piece of supplementary infrastructure to support the planned mining activity. Outcome (2) of the code deals with the appropriate location of rural and mining activities. This proposed MWAV is to support expanded mine exploration activities that are occurring on the site and in this regard is appropriately located. Outcome (3) includes obligations of development including appropriate access; environmental maintenance; flood immunity and infrastructure servicing. Broader strategies and studies have been included within the EIS/SEIS that deal with matters such as access and environmental management. Supporting information has been included within this application in relation to bulk earthworks/flooding and infrastructure servicing to demonstrate the suitability of the site. Outcome (4) prescribes a range of "appropriate uses" within the rural zone. A number of these uses include those reasonably associated with a natural resource use and/or natural resource industry. As the MWAV is planned to support the mine, it is considered to represent one such compatible use. In this regard, it is considered that the proposed MWAV is appropriate and there are sufficient grounds to justify the identified location.
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PC19 Vehicle Parking and Service Vehicle Provision Vehicle parking and service vehicle provision is adequate for the “use” and ensures safe and functional operation for motorists and pedestrians.	AS19.1 All “uses” provide vehicle parking in accordance with Schedule 1, Division 2: Standards for Roads, Carparking, Maneuvering Areas and Access, Section 2.2(1) (a). AS19.2 Car parking, service vehicle parking and maneuvering areas are designed and constructed in accordance with Schedule 1, Division 2: Standards for Roads, Carparking, Maneuvering Areas and Access, Section 2.2(1) (b).	PC19 – Performance Solution The Concept Plan contained in Appendix A of this report illustrates the location of proposed vehicle parking and maneuvering areas within the MWAV facility The use of private vehicles by mine workers will be limited, primarily as a result of the fact that most, if not all, will access the site by way of the proposed airport and bus transfers to the site. Hence, the number and arrangement of proposed car parking spaces on the site represents a functional response to the amount of parking that the Applicant considers will be needed, as opposed to having reference to the Planning Scheme requirements. This approach is considered valid as the MWAV will serve a very specific and tailored purpose.
PC33 Good Quality Agricultural Land Areas Good quality agricultural land areas as identified on the Land Characteristics Map – Good Quality Agricultural Land are conserved and managed for the longer term and protected from development that may lead to its alienation or diminished productivity.	No acceptable solution is prescribed.	PC33 – Performance Solution The subject site has traditionally been associated with grazing related agricultural operations and as such, any departure from this historical use requires careful consideration. On a project wide (macro scale), the land to be used for the mine and off-site infrastructure items is being considered as a whole and is to be dealt with on a project wide scale. This consideration includes aspects of varied land uses and applicable offsets/integration policies. At the level of the proposed use (micro scale), the use of the identified location for an MWAV use represents a negligible portion of the existing land mass of the Moray Downs property.

		In this regard, it is not considered that this MWAV use will compromise or fragment the remaining agricultural use of the site and surrounds.
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As can be seen from the above table, this proposal is considered to be compliant with the relevant Locality Code. Notwithstanding, any performance solutions proposed are clearly outlined and discussed in the detailed assessment of this proposal against the relevant codes submitted in support of this application.

7.8 Summary of Code Assessment

Based on the detailed assessment of the proposed application against the relevant code it has been determined that the proposal is generally compliant with the provisions and criteria of the 'Rural Zone' code. The Table above demonstrates the provisions / criteria that were deemed significant to the assessment of this proposal. For further information in relation to this assessment, please refer to the complete analysis contained within **Appendix B – Code Assessment**.

8.0 Key Site Based Considerations

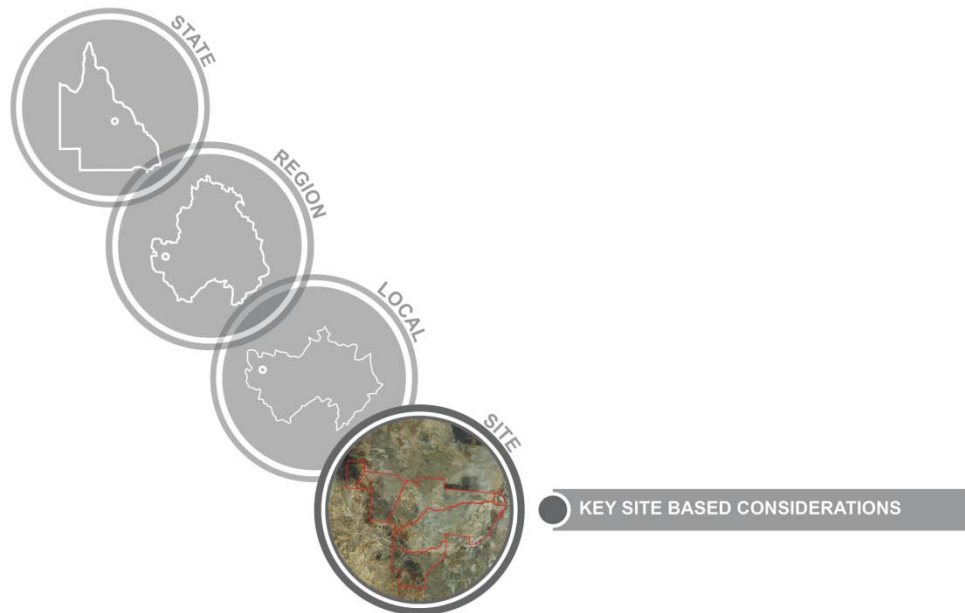


Figure 14: Hierarchy of assessment – Key Site Based Considerations, Source: GDP, 2013

The following key matters are considered relevant to the consideration and determination of this development application.

8.1 Application Context

The MWAV proposed is one of the critical off-site infrastructure items identified as being required to support the broader Carmichael Coal Mine and Rail project proposed. Through the inclusion of the application material as part of the SEIS submission, it will not only enable a greater understanding of the wider project to be understood by decision makers it also has the potential to lead to decreased SPA IDAS assessment processes when a subsequent application is lodged. This MWAV forms one (1) element of the core off-site infrastructure items currently identified as being required to support the broader project, with other aspects including that of an industrial area and an airport.

The key function of the MWAV will be to provide accommodation, administration, recreational and kitchen facilities for workers at the mine. The MWAV has been designed similar to that of other workers accommodation camps where the residential pods are to be modular and

lightweight in nature, with the core communal infrastructure buildings comprising more traditional construction measures.

It is considered appropriate and beneficial that this core off-site infrastructure item is brought forward and included within the current coordinator general's consideration and determination of the project.

8.2 Site Suitability

The location for the MWAV has been strategically chosen following an earlier detailed land use assessment that was undertaken on the subject site to determine appropriate locations for off-site infrastructure items. Key matters that were taken into account in determining the chosen location include that of:

- Proximity and direct linkages to the planned mine;
- Appropriate contextual relationship with the airport, rail and industrial area to limit potential future land use conflicts;
- Location outside of the identified dust plume/air quality modelling predictions;
- Sufficient land budget to enable potential staged growth to occur;
- Appropriate setbacks from existing creeks and waterways to increase inherent flood immunity and decrease potential water quality impacts;
- Minimise impact on known remnant ecosystems and ecological values; and
- Good existing linkages into public access roads.

It is considered that the chosen location positively responds to each of the identified aspects. In this regard, it is considered that the chosen location for the MWAV represents a convenient, flexible and optimum location given existing site attributes and the array of future activities proposed.

8.3 Staging and Delivery Strategy

As the maximum capacity of the MWAV is to be that of 3,500 beds, an overarching masterplan was prepared to inform the associated reporting and also enable a general understanding of the full extent of development proposed. Due to the large maximum capacity of the MWAV and the varying stages of the construction and operation of the mine, it is intended that the MWAV will be constructed in a maximum of up to six (6) stages.

Closely related to the proposed staging is the delivery strategy which focussed provision of a central core of communal support facilities adjoined by residential accommodation modules. The aim of this delivery strategy was to ensure that the bulk of the communal facilities are established within the MWAV from the outset. As can be seen from the proposed staging, stage one (1) encompasses a moderately modest amount of accommodation modules with a larger percentage and area of core communal facilities.

For further information on the proposed staging of the MWAV, please refer to **Appendix A – Plans and Drawings**.

8.4 Vegetation Clearing

To enable 'early works' to occur within the MWAV area as well as enabling a more detailed understanding of the extent of works required to support the use, the full extent of vegetation clearing has been proposed. As the basis for this clearing has been drawn from the extensive PVMP report undertaken as part of the EIS/SEIS submission, the extent of vegetation requested to be cleared is considered justified.

Review of the relevant vegetation mapping within this area indicated that there were no known regional ecosystems, with revised field mapping recently verifying that no regional ecosystem exists.

For further information in relation to the extent of vegetation clearing proposed, please refer to **Appendix C – OPW Vegetation Clearing**.

8.5 Preparatory Earthworks

Detailed engineering design works have been undertaken as part of the preparation of this application material for the MWAV to inform the extent of earthworks proposed and also enable their early consideration. These design works have also been undertaken with the stormwater management strategy proposed and to ensure that appropriate finished ground conditions are established.

The design strategy that underpinned the earthworks design was also heavily reliant on the flood immunity levels and limiting any unnecessary extent of changes to existing ground level.

For further information in relation to the preparatory earthworks proposed, please refer to **Appendix D** – OPW Bulk Earthworks.

8.6 Environmentally Relevant Activities

Due to the need for on-site effluent to be provided to service the planned MWAV use, an ERA permit is required to be obtained and the appropriate documentation has been included within this application material. An appropriate site based management plan has been prepared to support this ERA aspect and includes detailed analysis of the nature and type of application proposed as well as any necessary precautionary and emergency measures to be implemented on site.

Importantly, the location for the on-site effluent system has been chosen within the services hub located to the west of the entrance to the MWAV. This location will enable co-location with all other service infrastructure items planned to be installed for the successful operation of the MWAV. Grouping of such services will enable the items to be more readily screened and appropriately setback from residential areas.

For further information in relation to the on-site effluent system proposed, please refer to **Appendix E** – ERA Sewage Treatment. .

8.7 Site Servicing

In order to ensure that the chosen location for the MWAV was appropriate in terms of the ability for future essential services to be provided, a preliminary engineering services report was prepared and accompanies this application material. This report provides preliminary discussion on a site servicing strategy with respect to the future provision of civil services for the MWAV.

This report demonstrates that the MWAV will be able to be adequately serviced by potable water, sewerage, electrical services and vehicle access infrastructure. Where relevant, it also provides discussion on both interim and likely permanent servicing solutions. For further information in relation to the ability for civil services to be provided, please refer to **Appendix F** – Preliminary Servicing.

8.8 Stormwater

In conjunction with the detailed work that was undertaken for the MWAV in relation to bulk earthworks and vegetation clearing, a site based stormwater management plan was also prepared and accompanies this application material. This report provides a strategy in relation to the incorporation of stormwater quality and quantity techniques for the MWAV.

The strategy that has been proposed includes the construction of two consolidated bio-retention and detention basin zones to the north and south of the greater MWAV area. These basins will service the three (3) separate catchments identified within the MWAV area. This report confirms that subject to the implementation of the recommended quality and quantity techniques, stormwater runoff will be able to be treated in accordance and compliance with the following key criteria:

- Water Sensitive Urban Design principles and will not affect any peak flows downstream;
- Compliance with QUDM;
- Compliance with the State Planning Policy 4/10 Healthy Waterways; and
- Ecological sustainability in terms of the development's impact upon receiving waters; and the viability of the proposed development.

For further information in relation to the recommended conveyance, capture and treatment of stormwater within the industrial area, please refer to **Appendix G – Stormwater Management**.

9.0 Conclusion

The Applicant has demonstrated that the proposal is considered consistent with the intent and relevant development provisions at both state and local level and specifically contained within the Planning Scheme for Belyando Shire.

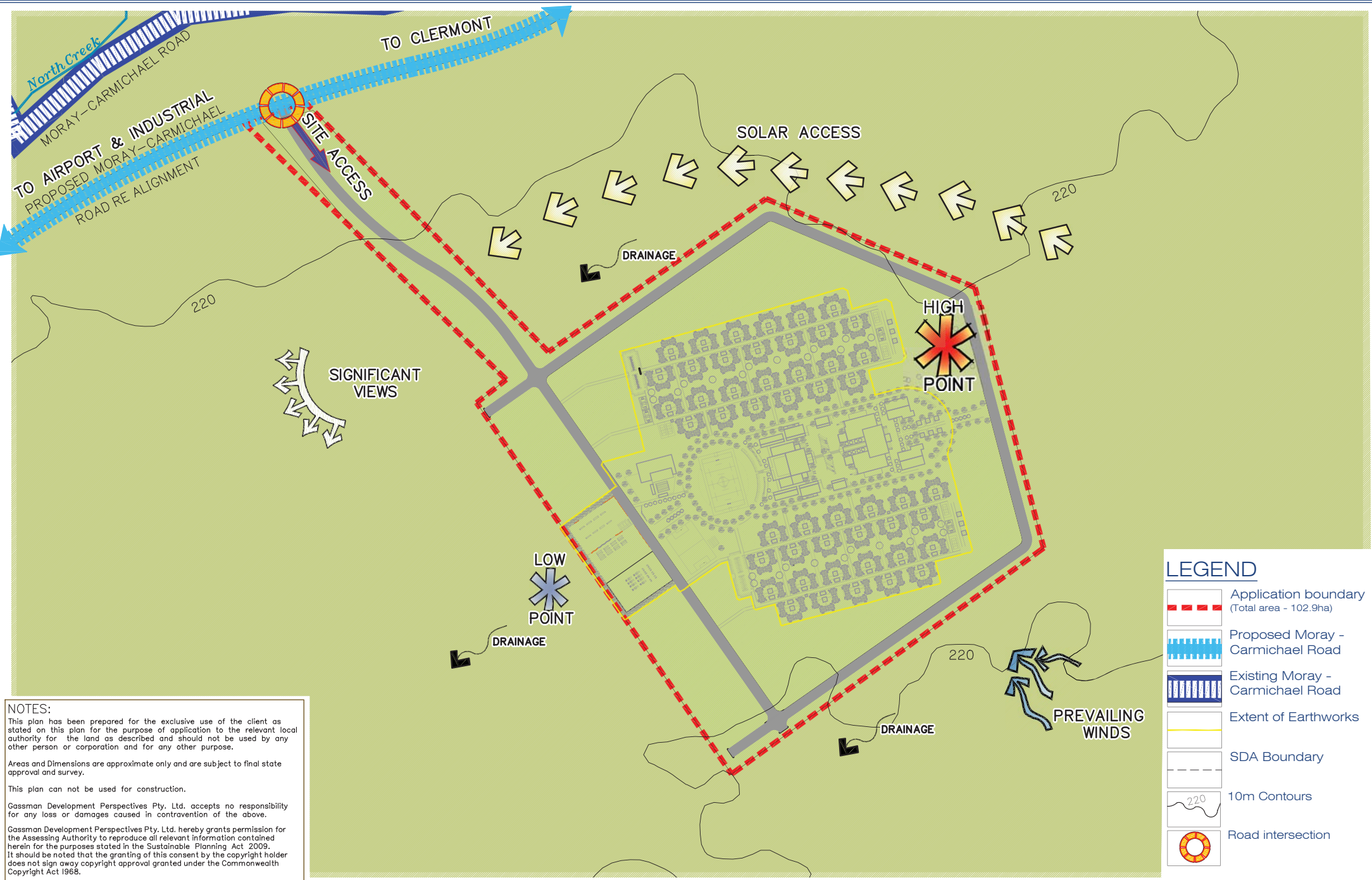
The proposed development represents a crucial element of a wider strategy to develop a Mine Operation on the 'Moray Downs' significantly reducing the locations isolation.

Further the proposed development is:

- Consistent with the State and regional planning provisions applicable to the subject site;
- Consistent with the general planning principles in the Planning Scheme;
- Consistent with the intent and content of the 'Rural Zone';
- Generally in accordance with the performance criteria of the applicable development code, with alternative solutions provided where necessary; and
- Appropriately designed so that the development integrates within the context of the site and its surrounds without adversely impacting on neighbouring uses.

The proposed development is reasonable and appropriate within the context of the site and the planning framework for the area. Accordingly, it is requested that this application be favourably considered.

Appendix A: Plans and Drawing



LEGEND

- Application boundary (Total area - 102.9ha)
- Proposed Moray - Carmichael Road
- Existing Moray - Carmichael Road
- Extent of Earthworks
- SDA Boundary
- 10m Contours
- Road intersection

NOTES:

This plan has been prepared for the exclusive use of the client as stated on this plan for the purpose of application to the relevant local authority for the land as described and should not be used by any other person or corporation and for any other purpose.

Areas and Dimensions are approximate only and are subject to final state approval and survey.

This plan can not be used for construction.

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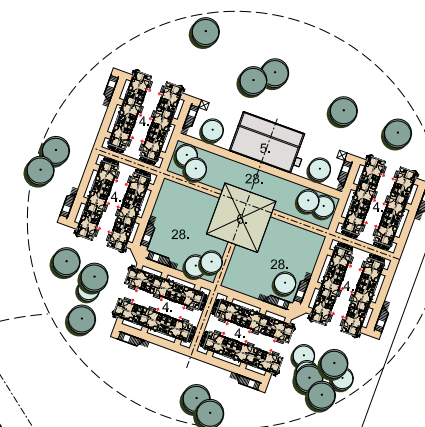
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LEGEND

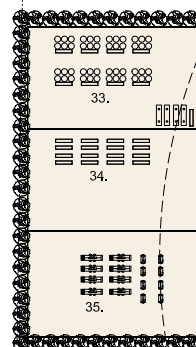
- Application boundary (Total area - 102.9ha)
- Proposed Moray - Carmichael Road
- Existing Moray - Carmichael Road
- Extent of Earthworks
- SDA Boundary

KEY

1. RECEPTION / SITE MANAGEMENT OFFICES
2. MEDICAL CLINIC
3. KITCHEN / DINING ROOM
4. ACCOMMODATION
5. LAUNDRIES
6. BBQ AREA / SHELTER
7. TAVERN
8. BULK LINEN STORE
9. LOCKERS
10. BIN STORE
11. AMENITIES ROOM
12. ICE ROOM
13. RECREATION ROOM
14. GYMNASIUM
15. COMMERCIAL LAUNDRY
16. MAINTENANCE SHED
17. HAZARDOUS MATERIALS & CHEMICAL STORE
18. LARGE OUTDOOR DINING / RECREATION AREA
19. 25m SWIMMING POOL
20. MULTI-PURPOSE COURTS
21. SOCCER FIELD
22. MULTI-PURPOSE FIELD - AFL, RUGBY, CRICKET
23. CRICKET NETS
24. DROP-OFF / PICK-UP / BUS PARKING
25. CAR PARKING
26. RUNNING TRACK / FITNESS STATIONS
27. HARDSTAND / DELIVERIES AREA
28. GREEN SPACE / LAWN
29. CENTRAL SPINE WALKWAY
30. RING ROAD
31. ENTRY STATEMENT / SIGNAGE
32. ENTRY / EXIT
33. WATER TANKS
34. SEWERAGE
35. POWER PLANT
36. KITCHEN



REFER TO A-A03 FOR BLOW-UP
DETAIL DRAWING



REFER TO A-A02 FOR BLOW-UP
DETAIL DRAWING

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design
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surveying
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CLIENT
ADANI

PROJECT
ACCOMMODATION VILLAGE
CONCEPT DESIGN
CARMICHAEL, QLD

PROJECT NUMBER
13 - 059

PROJECT STATUS
SD
SCHEMATIC / CONCEPT STAGE

SCALE
1:2000 @ A1 size

DRAWING NAME
MASTERPLAN

DRAWING NUMBER
A-A01

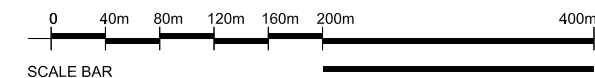
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PROPOSED SITE PLAN

KEY

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2. MEDICAL CLINIC
3. KITCHEN / DINING ROOM
4. ACCOMMODATION
5. LAUNDRIES
6. BBQ AREA / SHELTER
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32. ENTRY / EXIT
33. WATER TANKS
34. SEWERAGE
35. POWER PLANT
36. KITCHEN

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CLIENT

ADANI

PROJECT

ACCOMMODATION VILLAGE
CONCEPT DESIGN
CARMICHAEL, QLD

PROJECT NUMBER

13 - 059

PROJECT STATUS

SD
SCHEMATIC / CONCEPT STAGE

SCALE

1:500 @ A1 size

DRAWING NAME

CENTRAL FACILITIES

DRAWING NUMBER

A-A02

ISSUE

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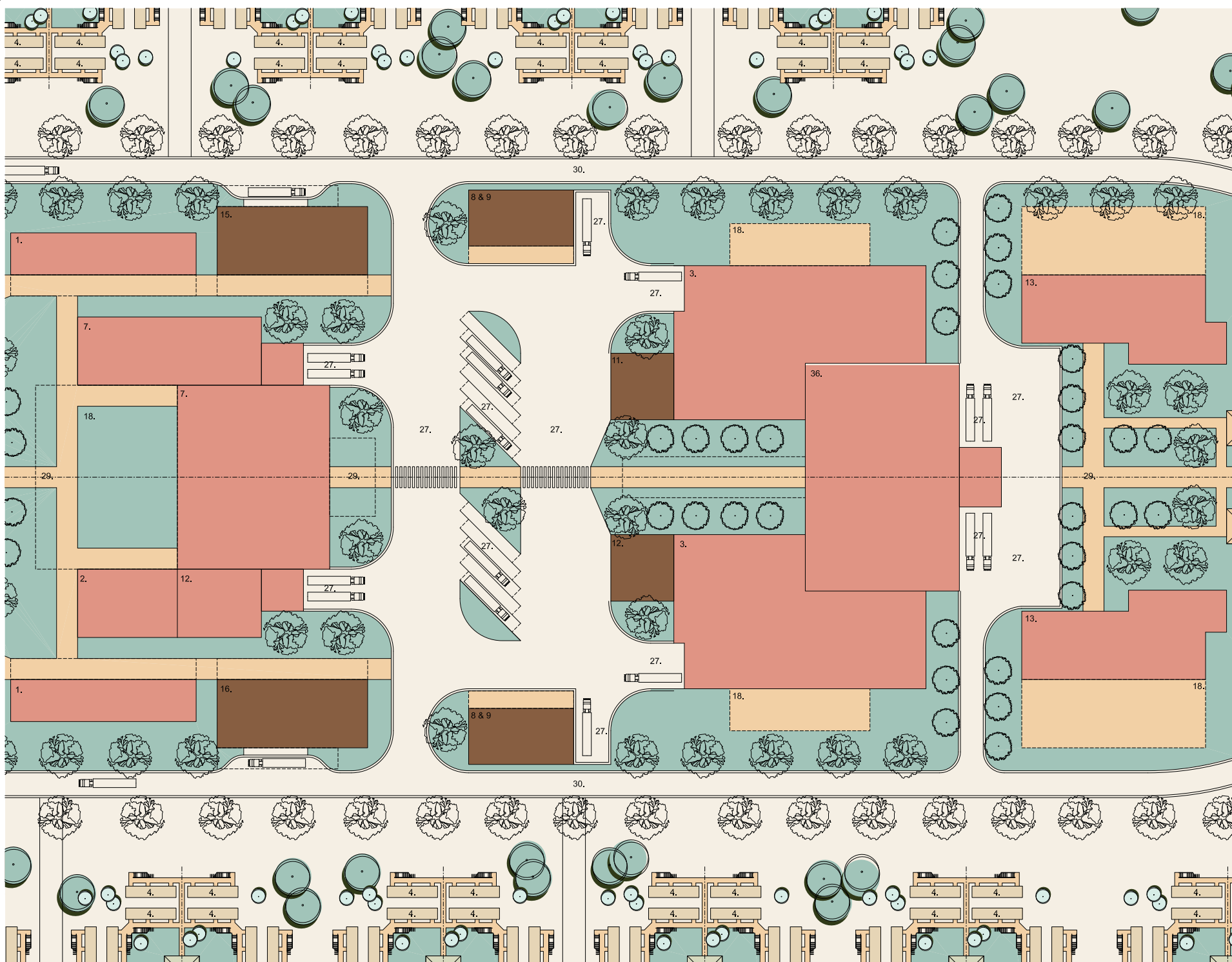
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0 10m 20m 30m 40m

SCALE BAR



KEY

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4. ACCOMMODATION
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6. BBQ AREA / SHELTER
7. TAVERN
8. BULK LINEN STORE
9. LOCKERS
10. BIN STORE
11. AMENITIES ROOM
12. ICE ROOM
13. RECREATION ROOM
14. GYMNASIUM
15. COMMERCIAL LAUNDRY
16. MAINTENANCE SHED
17. HAZARDOUS MATERIALS & CHEMICAL STORE
18. LARGE OUTDOOR DINING / RECREATION AREA
19. 25m SWIMMING POOL
20. MULTI-PURPOSE COURTS
21. SOCCER FIELD
22. MULTI-PURPOSE FIELD - AFL, RUGBY, CRICKET
23. CRICKET NETS
24. DROP-OFF / PICK-UP / BUS PARKING
25. CAR PARKING
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29. CENTRAL SPINE WALKWAY
30. RING ROAD
31. ENTRY STATEMENT / SIGNAGE
32. ENTRY / EXIT
33. WATER TANKS
34. SEWERAGE
35. POWER PLANT
36. KITCHEN

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07 3807 3333

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PROJECT

ACCOMMODATION VILLAGE
CONCEPT DESIGN
CARMICHAEL, QLD

PROJECT NUMBER

13 - 059

PROJECT STATUS

SD
SCHEMATIC / CONCEPT STAGE

SCALE

1:100 @ A1 size

DRAWING NAME

ACCOM. TYPICAL GROUND
FLOOR PLAN

DRAWING NUMBER

A-A03

ISSUE

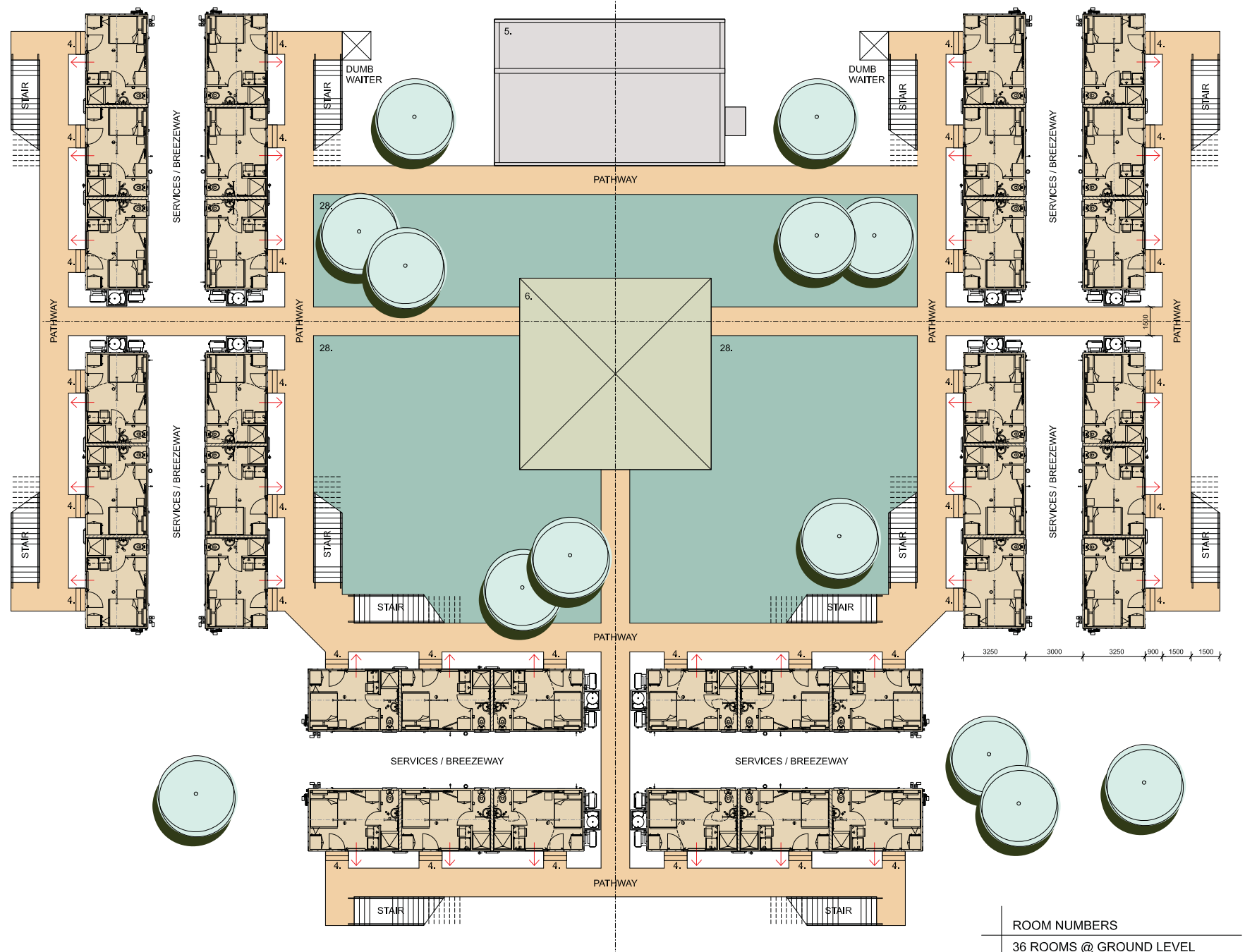
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ROOM NUMBERS

36 ROOMS @ GROUND LEVEL

36 ROOMS @ UPPER LEVEL

TOTAL - 72 ROOMS PER GROUPING

KEY

1. RECEPTION / SITE MANAGEMENT OFFICES
2. MEDICAL CLINIC
3. KITCHEN / DINING ROOM
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DRAWING NAME

ACCOM. TYPICAL UPPER
FLOOR PLAN

DRAWING NUMBER

A-A04

ISSUE

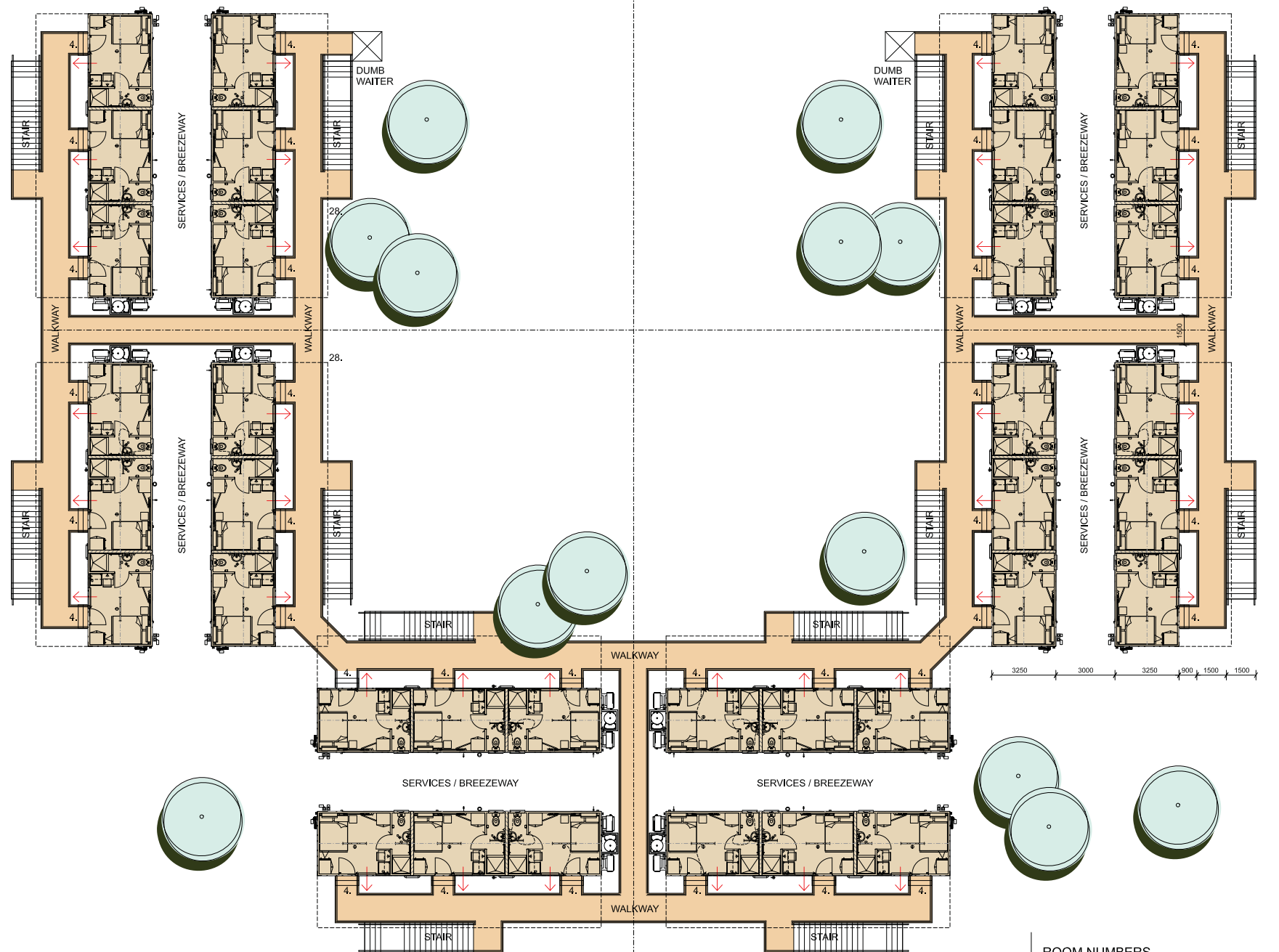
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ROOM NUMBERS

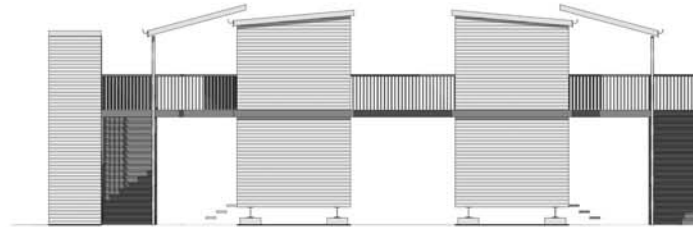
36 ROOMS @ GROUND LEVEL

36 ROOMS @ UPPER LEVEL

TOTAL - 72 ROOMS PER GROUPING



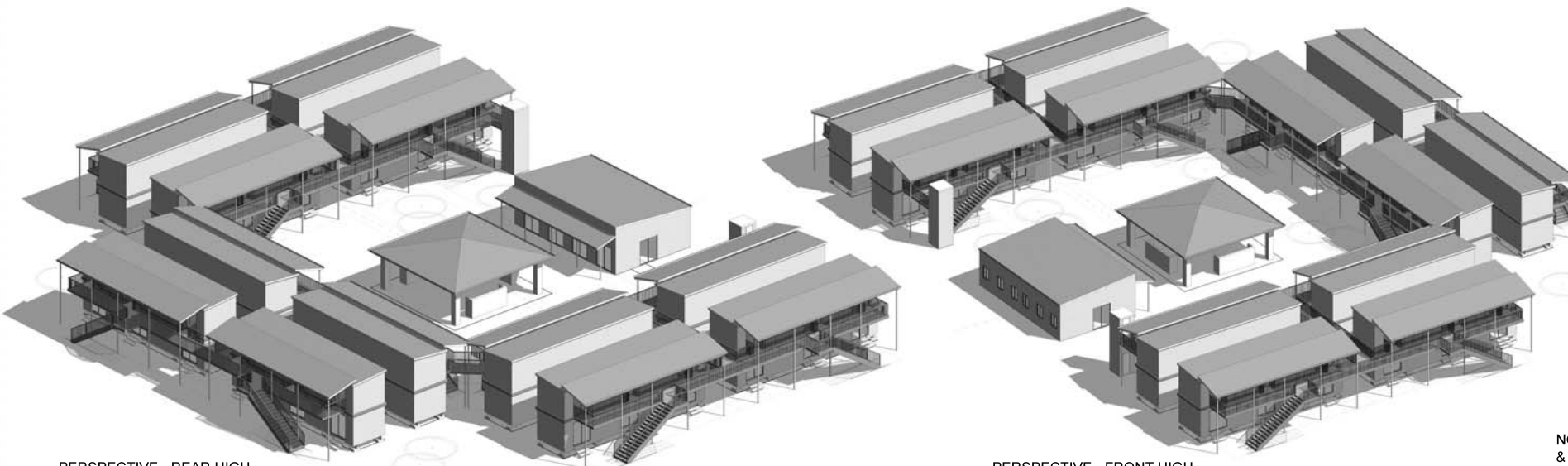
EXTERNAL ELEVATION



TYPICAL END ELEVATION



INTERNAL ELEVATION



PERSPECTIVE - REAR HIGH

PERSPECTIVE - FRONT HIGH

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CONCEPT DESIGN
CARMICHAEL, QLD

PROJECT NUMBER

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PROJECT STATUS

SD

SCHEMATIC / CONCEPT STAGE

SCALE

1:2000 @ A1 size

DRAWING NAME

IMAGES

DRAWING NUMBER

A-A06

ISSUE

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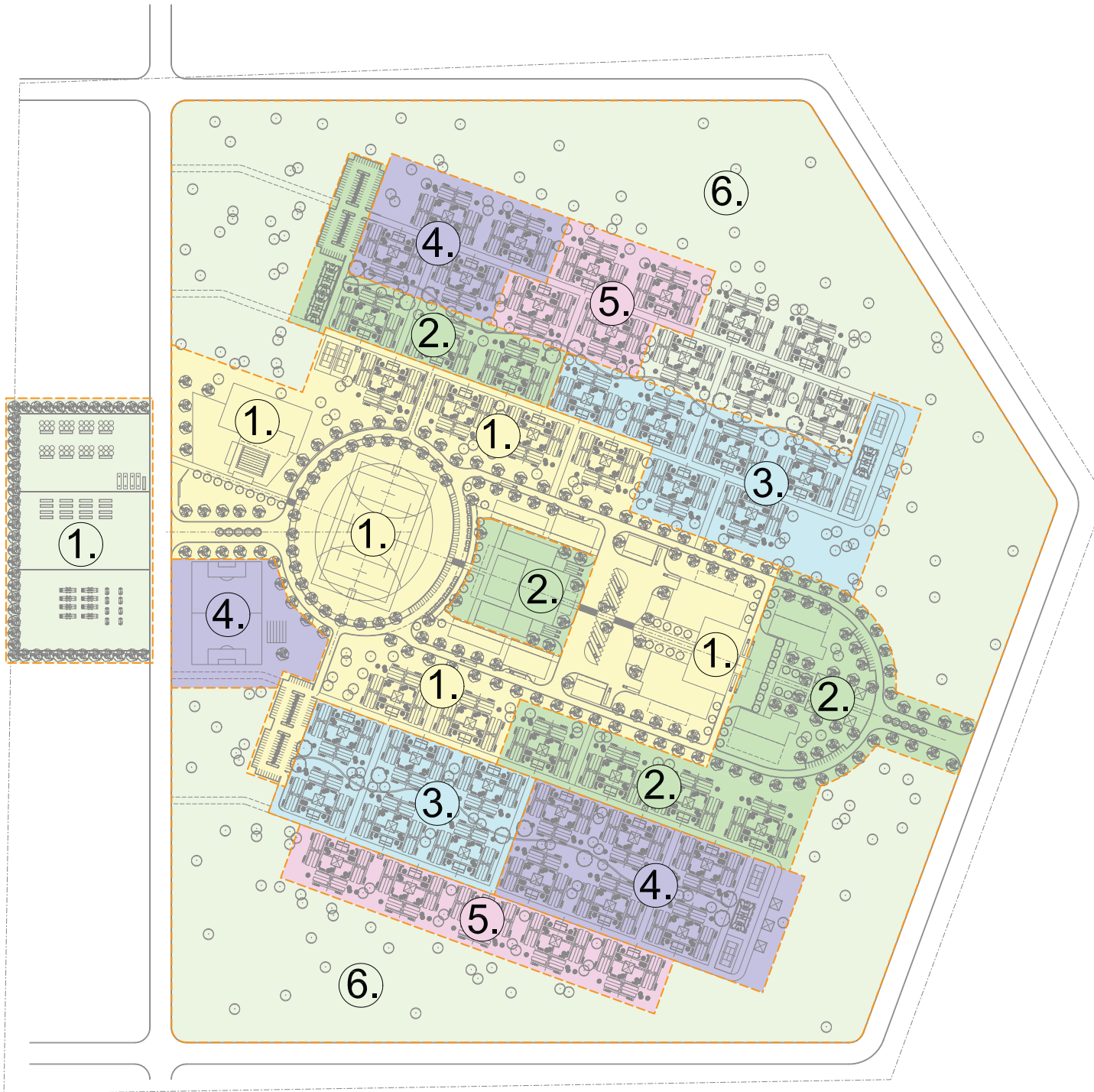
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STAGING KEY

- 1.** STAGE 1.
- 2.** STAGE 2.
- 3.** STAGE 3.
- 4.** STAGE 4.
- 5.** STAGE 5.
- 6.** STAGE 6.



KEY

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Annotations Located on Drawing Titled Masterplan
Drawing Number A-A01 Issue B

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**ACCOMMODATION VILLAGE
CONCEPT DESIGN
CARMICHAEL, QLD**

PROJECT NUMBER
13 - 059

PROJECT STATUS
**SD
SCHEMATIC / CONCEPT STAGE**

SCALE
1:2000 @ A1 size

DRAWING NAME
STAGING PLAN

DRAWING NUMBER
A-A05

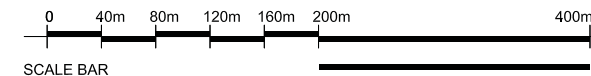
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Appendix B: Code Assessment

4.1.2.3 Performance Criteria and Acceptable Solutions – “Material change of Use”

“Material change of Use”		
Performance Criteria	Acceptable Solution	Proposal Compliance
Location		
PC1 Non-“Rural Activities” - Locational Criteria Non-“rural activities” are located in the Rural “Zone” only where those activities: do not unduly impact on the character and amenity of the locality; are directly and primarily associated with rural activities, a natural resource related industry or natural or cultural resources; cannot reasonably be located in another more appropriate zone; do not prejudice the existing or future productive capacity of rural land or other natural resources; and do not adversely affect the landscape values and scenic qualities of the locality.	No acceptable solution is prescribed.	PC1 – Complies The proposed development is for a mine workers accommodation village (‘MWAV’) to support a planned natural resource related industry (mine). The MWAV has been strategically located within close proximity to the mine and the airport that is to service the mine. The immediate area surrounding the proposed MWAV is currently used for a mix of cattle grazing activities. The MWAV is seen as a supporting form of supplementary infrastructure to support the expanded mining activities. Importantly, the remoteness of the area should assist in minimising any potential adverse amenity and/or character impacts for the MWAV use. Due to the direct relationship between the MWAV, airport and mine, the location for the MWAV is considered ideal. It has been chosen to sit outside the planned mining area such that the productive capacity of natural resources is maintained. Where required, appropriate landscaping could be implemented to assist in reducing any potential loss of landscape values, and has been indicatively shown as part of the proposed design. Accordingly, it is considered that the proposed MWAV is appropriately located within the rural zone to support a natural resource related industry.
Amenity		
PC2 Non-“Rural Activities” - Scale Non-“rural activities” are of a scale that is consistent with the amenity and character of the locality and do not prejudice the operation and viability of other “uses” or activities in the Rural “Zone” or other “zones”.	AS2 The “total use area” is less than 150m².	PC2 – Performance Solution The scale of the proposed MWAV is a direct relation to the scale and form of mining operations proposed on the site, in that it is intended to house the maximum required workforce across 3500 beds. Once operational, the mine will set the character of the immediate area and this MWAV will complement such character. The areas included within the EIS/SEIS for the mine and mine support aspects (off-site infrastructure) are clearly identified and outlined. The proposed MWAV is located in one such area and as such it is not considered that it will prejudice the operation and/or viability of other uses within the Rural zone.
PC3 Non-“Rural Activities” - Operating Hours Non-“rural activities” are	AS3 Non-“rural activities” are operated only between the hours	PC3 – Performance Solution The MWAV will provide the dormitory base for workers associated with the Carmichael coal mine, and will need to ‘operate’ in accordance with the needs

operated so as to ensure that the activities and the operation of equipment occur at appropriate times to protect the amenity of the locality.	of 7:00am and 6:00pm.	of workers. In that regard, and given that workers will work in shifts that could extend outside of the hours nominated in AS3, the MWAV will need to be accessible and operational, at least in a reduced capacity, between the hours of 6pm and 7am. Given, however, that the functions of the MWAV are largely internalised, it is to be located as close as practical to the mine itself, and there are no sensitive receivers located between the MWAV and the mine, any potential impacts on the amenity of others will be entirely mitigated.
PC4 Non-“Rural Activities” - Delivery of Goods The loading and unloading of goods in connection with non-“rural activities” occurs at appropriate times to protect the amenity of the locality.	AS4.1 Loading and unloading occurs only between the hours of: (a) 7:00am and 6:00pm, Monday to Friday; and (b) 7:00am and 12:00 (noon) on Saturdays. AS4.2 No loading and unloading occurs on Sundays and public holidays.	PC4 – Performance Solution Due to the rural and remote setting of the MWAV, typical considerations in relation to loading and unloading hours are not considered relevant in this particular instance. The proposed MWAV is to support a 24 hour mining operation and as such it is considered likely that a similar 24 hour loading/unloading schedule may also occur. As there are no nearby sensitive land uses, any loading/unloading that occurs is not considered likely to result in adverse amenity impacts on the surrounding locale.

PC5 “Residential Activities” Land within the Rural “Zone” is maintained for rural activities.	For “caretaker’s residences”: AS5 No more than 1 (one) “caretaker’s residence” per lot. For all other “residential activities”: No acceptable solution is prescribed.¹⁴	PC5 – Performance Solution As this proposal is impact assessable and a form of residential use, it is required to demonstrate compliance with relevant sections of the planning scheme (amongst other aspects). Where any conflict occurs, there must be sufficient grounds to overcome any areas of non-compliance for it to be favorably considered. Notwithstanding, a more strategic level of assessment has been undertaken to demonstrate the suitability of the proposed MWAV. Specifically, detailed assessment has been undertaken against the prescribed outcomes for the Rural zone as s4.1.2.2 of the Planning Scheme states that these are the “<i>purpose of the code</i>”. This strategic level assessment is considered consistent with the impact assessable nature of the application and consistency between the proposed development and the outcomes of the Rural zone is considered to represent ‘sufficient grounds’. Outcome (1) of the code includes that the rural zone “<i>retains its viability as an area of primary production and natural resource use, including mining</i>”. This proposed MWAV is a critical piece of supplementary infrastructure to support the planned mining activity. Outcome (2) of the code deals with the appropriate location of rural and mining activities. This proposed MWAV is to support expanded mine exploration activities that are occurring on the site and in this regard is appropriately located. Outcome (3) includes obligations of development including appropriate access; environmental maintenance; flood immunity and infrastructure servicing. Broader strategies and studies have been included within the EIS/SEIS that deal with matters such as access and environmental management. Supporting information has been included within this application in relation to bulk earthworks/flooding and infrastructure servicing to demonstrate the suitability of the site. Outcome (4) prescribes a range of “appropriate uses” within the rural zone. A number of these uses include those reasonably associated with a natural resource use and/or natural resource industry. As the MWAV is planned to support the mine, it is considered to represent one such compatible use. In this regard, it is considered that the proposed MWAV is appropriate and there are sufficient grounds to justify the identified location.
PC6 Height The height of “buildings” and	AS6 “Buildings” and “structures” other	AS6 - Complies All buildings proposed within the MWAV will be no greater than 8.5 metres, or

“structures” does not impact adversely on the amenity of the locality and is consistent with the predominant rural form.	than those within 100 metres of the boundary of an “airport”¹⁵ are not more than: (a) 8.5 metres; and (b) 2 (two) storeys, at any point above natural ground level. (Except where establishing in an existing “building” and no “building works” are being undertaken for that existing “building”, and excluding windmills, silos and other rural operational equipment).	two storeys, in height.
PC7 Setbacks and Boundary Clearances “Buildings” and “structures” are located to ensure the rural amenity is maintained.	AS7.1 “Buildings” and “structures” have a setback of not less than 20 metres from any road frontage other than a State Controlled Road as identified on Land Characteristics Map – Features Map. AS7.2 “Buildings” and “structures” have side and rear boundary clearances of not less than 15 metres from property boundaries (except where establishing in an existing “building” and no “building works” are being undertaken for that existing “building”).	AS7.1 - Complies Building setbacks in excess of 20m are provided to public road frontages. AS7.2 – Complies All side and rear boundary setbacks are in excess of 15 metres from property boundaries.
PC8 Transport Movements Transport movements associated with the use protect the amenity of the locality.	For “rural activities” and “industrial activities”: AS8 Transport movements do not occur through residential areas. For all other “uses”: No acceptable solution is prescribed.	AS8 – Complies The MWAV has been designed so that broader traffic movements do not link through it, or pass immediately adjacent to it. Instead, it is located some distance off Moray-Carmichael Road via a private access road.

PC9 “Building” and “Structure” Design “Buildings” and “structures” are designed such that the amenity of the locality is protected and maintained.	No acceptable solution is prescribed.	PC9 – Complies All buildings/structures proposed in association with the MWAV will be no greater than 8.5 metres in height, and set back substantially from the nearest public road (Moray Carmichael Road) to maintain the immediate rural character along the public road network.
PC10 Ridgelines and Escarpments Ridgelines and escarpments are maintained in a natural state to protect rural character, landscape values, and visual amenity.	No acceptable solution is prescribed.	PC10 - Complies The MWAV location could not be considered to constitute a ‘ridgeline’ or ‘escarpment’ for the purpose of this Performance Criteria, and is instead better described as sitting on a broad undulation which is only moderately elevated above the level of Moray Carmichael Road. The position of the MWAV will not have a detrimental impact on regional landscape values.
PC11 Landscaping and External Activity Areas Landscaping and external activity areas are provided on-site to: (a) contribute to a pleasant and functional rural built form; (b) provide positive sun and breeze control; (c) make provision for recreation areas; and contribute to the positive visual qualities of the locality.	No acceptable solution is prescribed.	PC11 – Complies The concept plans included in Appendix A of this report illustrate the areas which will be made available for landscaping within the MWAV.
PC12 Lighting The design of lighting does not prejudice the amenity of the locality through poorly directed lighting, lighting overspill or lighting glare.	AS12 Direct lighting or lighting does not exceed 8.0 lux at 1.5 metres beyond the boundary of the site.	AS12 – Complies The current application is to authorise the design, siting and operation of the MWAV use on the identified location. Specific matters in relation to detailed lighting design and provision are to be subject to separate detailed design exercises. The Applicant would be willing to accept a condition of approval that a lighting plan be submitted prior to issue of a Building Work application, in order that lighting intensity, light spill and glare be addressed.

C13 Separation of Incompatible Land Uses Separation distances are provided to ensure: (a) the future viability of surrounding “uses”; (b) infrastructure items are protected from incompatible “development”; an appropriate standard of amenity and public safety; and conflict arising from incompatible “uses” is minimised.	For “sensitive land uses” and “rural activities” other than “intensive animal industries”: AS13.1 Minimum separation between “sensitive land uses” and “rural activities” are as stated in Schedule 2, Division 1: Separation Distances – Agricultural and Residential Uses For “sensitive land uses” and “intensive animal industries”: AS13.2 Minimum separation distances between “sensitive land uses” and “intensive animal industries” are as stated in Schedule 2, Division 2: Separation Distances – Intensive Animal Industries, Section 2.1. For “grazing”: AS13.3 Pens and yards maintain a minimum separation distance of 300 metres to “sensitive land uses” not associated with the “grazing”. For “uses” other than “sensitive land uses”¹⁶ and “extractive industries”: AS13.4 “Buildings”, “structures” and “outdoor activity areas” maintain a minimum separation distance to “extractive industries” as stated in Schedule 2, Division 3: Separation Distances –	AS13 – Complies As the proposed MWAV is intended to service and support the broader mining activity, it is located within close proximity to mining operations and the proposed airport. Importantly, the MWAV location has been strategically selected such that it is clear and does not impact on the extractive industry operations. In this regard, the location and intent of the MWAV is not considered likely to unreasonably impact on the viability and operation of surrounding areas.
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	Extractive Industries, Section 3.1. For all “uses”: AS13.5 “Buildings”, “structures” and “outdoor activity areas” maintain a minimum separation distance to petroleum and gas pipelines and refuse tips as stated in Schedule 2, Division 5: Separation Distances – Infrastructure Items, Section 5.1.	
Infrastructure		
PC14 Water Supply All “premises” have an adequate volume and supply of water for the “use”.	AS14.1 “Premises” are connected to Council’s reticulated water supply system. or AS14.2 “Premises” are connected to an approved water allocation as provided by the relevant agency. or For “detached houses” or “caretakers residences”: AS14.3 “Premises” are connected to a rain water tank with a minimum capacity of: 45, 000 litres where not in a reticulated water supply area; (b) 22, 000 litres where in a reticulated water supply area.	AS14 – Complies The proposed MWAV is to be provided with appropriate levels of water servicing. Provisions in relation to the permanent supply of water to the project (including the airport) are generally outlined within the broader EIS/SEIS under consideration. In support of this current application, infrastructure and servicing information has been provided in Appendix F (Preliminary Servicing report) to outline possible interim servicing solutions until such time that the permanent solution is provided. Importantly, there is the intent for appropriate services of water supply to be provided to the MWAV at all times. Appropriate conditions can be set as part of the consideration of this application within the EIS/SEIS process such that all future water supply complies with the relevant requirements.
PC15 Effluent Disposal All “premises” provide for the	AS15.1 “Premises” are connected to	AS15 – Complies The proposed MWAV is to be provided with appropriate levels of servicing.

treatment and disposal of effluent and other waste water to ensure the protection of public health and environmental values.	Council's reticulated sewerage system. or AS15.2 "Premises" not in a sewerred area have an on-site effluent disposal system in accordance with Schedule 1, Division 4: Standards for Sewerage Supply, Section 4.2.	In support of this current application, infrastructure and servicing information has been provided to outline the preferred effluent disposal strategy. Specifically, a site based management plan (see Appendix E) and Environmentally Relevant Activity application has been prepared and accompanies the development application material in relation to the provision of an on-site effluent disposal system to the MWAV.
PC16 Stormwater Stormwater is collected and discharged so as to: (a) protect the stability of buildings or the use of adjacent land; and (b) protect and maintain environmental values.	AS16 Stormwater is collected and discharged in accordance with Schedule 1, Division 5: Standards for Stormwater Drainage, Section 5.1.	AS16 – Complies Detailed stormwater reporting has been prepared and accompanies this current application (see Appendix G).
PC17 Electricity "Premises" are provided with an adequate supply of electricity for the "use".	AS17 All "premises" have a supply of electricity.	AS17 – Complies Electricity will be supplied to the MWAV site under the terms described within the EIS for the broader mine and offsite infrastructure components, hence the Applicant would accept a condition requiring that such an electricity connection be made.
PC18 Vehicle Access Vehicle access is provided to ensure the safe and functional operation for motorists and pedestrians.	For all self-assessable uses: AS18.1 All "premises" have vehicle access to a formed road. Access is designed and constructed in accordance with Schedule 1, Division 2: Standards for Roads, Carparking, Manoeuvring Areas and Access, Section 2.3(2). For all other "uses": AS18.2 All "premises" have vehicle access to a formed road. Access is designed and constructed in accordance with	AS18 – Complies Vehicular access will be provided into the MWAV via a proposed new private driveway which connects to Moray Carmichael Road in the location described on the Concept Plan contained in Appendix A of this report. Moray-Carmichael Road will be 'formed' as a result of road upgrade works to be completed as a consequence of the Carmichael Mine EIS approval.

	Schedule 1, Division 2: Standards for Roads, Carparking, Manoeuvring Areas and Access, Section 2.3(1).	
PC19 Vehicle Parking and Service Vehicle Provision Vehicle parking and service vehicle provision is adequate for the “use” and ensures safe and functional operation for motorists and pedestrians.	AS19.1 All “uses” provide vehicle parking in accordance with Schedule 1, Division 2: Standards for Roads, Carparking, Manoeuvring Areas and Access, Section 2.2(1) (a). AS19.2 Car parking, service vehicle parking and manoeuvring areas are designed and constructed in accordance with Schedule 1, Division 2: Standards for Roads, Carparking, Manoeuvring Areas and Access, Section 2.2(1) (b).	PC19 – Performance Solution The Concept Plan contained in Appendix A of this report illustrates the location of proposed vehicle parking and maneuvering areas within the MWAV facility The use of private vehicles by mine workers will be limited, primarily as a result of the fact that most, if not all, will access the site by way of the proposed airport and bus transfers to the site. Hence, the number and arrangement of proposed car parking spaces on the site represent a functional response to the amount of parking that the Applicant considers will be needed, as opposed to having reference to the Planning Scheme requirements. This approach is considered valid as the MWAV will serve a very specific and tailored purpose.
PC20 Roads Adequate all-weather road access is provided between the “premises” and the existing road network.	AS20 Roads are designed and constructed in accordance with Schedule 1, Division 2: Standards for Roads, Carparking, Manoeuvring Areas and Access, Section 2.1(1).	AS20 – Complies Vehicular access will be provided into the MWAV via a proposed new private driveway which connects to Moray-Carmichael Road in the location described on the Concept Plan contained in Appendix A of this report. Whilst this ‘road’ will in fact be a private driveway in order to reinforce the private nature of the MWAV facility itself, it forms an important part of the broader project resilience strategy and will therefore enjoy all-weather access.
PC21 “Electricity transmission line easement” - Vegetation Transmission lines within an “electricity transmission line easement” are protected from vegetation.	AS21.1 Planted vegetation within an “electricity transmission line easement” has a mature height not exceeding 2.5 metres as shown in Schedule 2, Division 4: Powerline / Electricity Easements, Section 4.2 Diagram 3.	AS21 – Complies Vegetation within any proposed future electricity easement will be conditioned to be managed in accordance with the acceptable solutions stated.

	AS21.2 No part of planted vegetation, at its mature size, is located closer than 2.5 metres to an electricity transmission line as shown in Schedule 2, Division 4: Powerline / Electricity Easements, Section 4.2 Diagram 3.	
PC22 “Electricity transmission line easement” – Vegetated Buffers Vegetated buffers adjoining an “electricity transmission line easement” are maintained to provide: (a) a visual buffer to the easement; and (b) a separation distance from the easement.	AS22 Existing vegetation, comprising trees and/or shrubs, shall be retained within 20 metres of an “electricity transmission line easement” as shown in Schedule 2, Division 4: Powerline / Electricity Easements, Section 4.2 Diagram 4.	AS22 – Complies Vegetation buffers located adjacent to any proposed future electricity easement can be conditioned to be managed in accordance with the acceptable solutions stated.
PC23 “Electricity transmission line easement” - Separation Distance “Habitable buildings” and “child oriented uses” are located to ensure community safety.	AS23 “Habitable buildings” and “child oriented uses” maintain a minimum separation distance from the most proximate boundary of an “electricity transmission line easement” in accordance with Schedule 2, Division 4: Powerline / Electricity Easements, Section 4.1 (1) and Section 3.1 Diagram 1.	AS23 – Complies The ‘Habitable buildings’ proposed as part of the MWAV facility will be established outside of the nominated separation distances from any proposed future electricity easements, and such separation distance can be conditioned in accordance with the acceptable solutions stated.
Environmental		
PC24 “Watercourses” and “Lakes” “Development” ensures the maintenance of riparian areas and water quality including protection from off- site transfer of sediment.	AS24 A minimum 50 metre wide buffer area is provided extending out from the “defining bank” of any “watercourse” or “lake”. <i>Note: See diagrammatic representation of a “defining</i>	AS24 – Complies The extent of the MWAV facility and associated earthworks and vegetation clearing far exceeds the 50 metre separation distance to a “defining bank” of any “watercourse” or “lake”.

	<i>bank” in Schedule 3.</i>	
PC25 Vegetation Retention “Development” retains vegetation for the: (a) protection of scenic quality; (b) protection of general habitat; (c) protection of soil quality; and establishment of open space corridors and networks.	AS25 Vegetation comprising 20% of each regional ecosystem type is retained within each lot with retained vegetation made up of woody remnant, regrowth or replanted natural species, excluding deep-rooted crops and clear fell plantation forestry. The shade lines are a minimum of 10 metres in width; clumps have an area greater than 2 hectares.	AS25 – Complies No regional ecosystem vegetation is proposed to be cleared to facilitate either the MWAV facility or associated private access road which links it to Moray-Carmichael Road. Refer to the Operational Works (Vegetation Clearing) documentation contained in Appendix C of this report for further details.
PC26 Cultural Heritage “Development” ensures the protection and maintenance of places and items of cultural heritage.	AS26.1 A minimum separation distance of 50 metres is provided to the “defining bank” of “watercourses” and “lakes”. <i>Note: See diagrammatic representation of a “defining bank” in Schedule 3.</i> AS26.2 A minimum separation distance of 50 metres is provided to cemeteries and burial sites as identified in Schedule 2, Division 7: Places and Items of Cultural Heritage, Section 7.1.	AS26 – Complies A distance far exceeding the minimum 50 metres required will be maintained between the proposed MWAV and the “defining bank” of “watercourses” and “lakes”, as well as to any cemeteries and burial sites as identified in Schedule 2, Division 7: Places and Items of Cultural Heritage, Section 7.1

PC27 Air Emissions Air emissions from “premises” do not cause environmental harm or nuisance to adjoining properties or “sensitive land uses”.¹⁷	No acceptable solution is prescribed.	PC27 - Complies The MWAV facility will be used for dormitory purposes, along with ancillary recreational, dining and support activities, and does not pose any air emissions risk to the nearest sensitive places or adjoin properties which are located a significant distance away.
PC28 Noise Emissions Noise emissions from “premises” do not cause environmental harm or nuisance to adjoining properties or “sensitive land uses”.¹⁸	No acceptable solution is prescribed.	PC28 - Complies The MWAV facility will be used for dormitory purposes, along with ancillary recreational, dining and support activities, and does not pose any noise risk to the nearest sensitive places or adjoin properties which are located a significant distance away.
PC29 Water Quality The standard of effluent and / or stormwater run-off from “premises” ensures the quality of surface and underground water is suitable for: (a) the biological integrity of aquatic ecosystems; (b) recreational use; (c) supply as drinking water after minimal treatment; (d) agricultural use; or (e) industrial use.¹⁹	No acceptable solution is prescribed.	PC29 - Complies A site based management plan addressing the proposed system of effluent disposal is included in Appendix E of this report. Furthermore, a Stormwater Management Plan addressing water quality objectives is included in Appendix G of this report. These reports demonstrate that compliance with the relevant water quality objectives can be met and subsequently conditions.
PC30 Excavation or Filling Excavating or filling of land: (a) ensures safety and amenity for the users of the “premises” and nearby land; minimises soil erosion and instability of surrounding areas; and	AS30.1 Batters have a maximum slope of 25%, are terraced at every rise of 1.5 metres and each terrace has a minimum depth of 750mm. AS30.2	AS30 - Complies Detailed engineering design works have been undertaken as part of the preparation of this application material for the MWAV to inform the extent of earthworks proposed and also enable their early consideration. These design works have also been undertaken with the stormwater management strategy proposed and to ensure that appropriate finished ground conditions are established.

does not degrade the environmental values of receiving waters.	Excavation or filling within 1.5 metres of any site boundary is battered or retained by a wall that does not exceed 1 metre in height. AS30.3 The extent of filling or excavation does not exceed 40% of the site area or 500m² whichever is lesser. AS30.4 Filling and excavation is not greater than 1 metre in height or depth. AS30.5 Only clean uncontaminated fill is used (i.e. no building waste, concrete, green waste or contaminated material etc. is used as fill). AS30.6 The site is not on the contaminated land register AS30.7 Any excavation or filling occurs more than 25 metres from the “defining bank” of any “watercourse” or “lake”. <i>Note: See diagrammatic representation of a “defining bank” in Schedule 3.</i> AS30.8 Excavation or filling is undertaken in accordance with	The design strategy that underpinned the earthworks design was also heavily reliant on the flood immunity levels, and the intended measures to convey, capture and treat stormwater. For further information in relation to the preparatory earthworks proposed, please refer to Appendix D (OPW Bulk Earthworks).
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	Schedule 1, Division 1: Standards for Construction Activities, Section 1.1.	
PC31 Construction Activities Erosion control measures and silt collection measures ensure that environmental values are protected during construction activities.	AS31 During construction soil erosion and sediment is controlled in accordance with standards contained in Schedule 1, Division 1: Standards for Construction Activities, Section 1.1.	AS31 - Complies Erosion control and silt collection measures are proposed to be implemented during construction, as stated in the Operational Works (Bulk Earthworks) documentation contained in Appendix D of this report.
Constraint		
PC32 "Development" in the vicinity of "Airports" "Development" in the vicinity of "airports": (a) protects the operation of the "airport"; is designed and located to achieve a suitable standard of amenity for the proposed activity; and does not restrict the future operational requirements of the "airport". ²⁰	AS32 "Buildings" and "structures" within 100 metres of the boundary of an "airport" are less than 7.5 metres in height at any point above natural ground level. (Except where establishing in an existing "building" and no "building works" are being undertaken for that existing "building".)	AS32 - Complies The proposed MWAV will be located in excess of 100 metres from the proposed Carmichael private airport.
PC33 Good Quality Agricultural Land Areas Good quality agricultural land areas as identified on the Land Characteristics Map – Good Quality Agricultural Land are conserved and managed for the longer term and protected from development that may lead to its alienation or diminished productivity. ²¹	No acceptable solution is prescribed.	PC33 – Performance Solution The subject site has traditionally been associated with grazing related agricultural operations and as such, any departure from this historical use requires careful consideration. On a project wide (macro scale), the land to be used for the mine and off-site infrastructure items is being considered as a whole and is to be dealt with on a project wide scale. This consideration includes aspects of varied land uses and applicable offsets/integration policies. At the level of the proposed use (micro scale), the use of the identified location for an MWAV use represents a negligible portion of the existing land mass of the Moray Downs property. In this regard, it is not considered that this MWAV use will compromise or fragment the remaining agricultural use of the site and surrounds.
PC34 Flooding "Premises" are designed and	No acceptable solution is prescribed.	AS34 - Complies The proposed MWAV facility has been located clear of known historic floodways.

located so as: (a) not to be adversely impacted upon by flooding; (b) to protect life and property; and not to have an undesirable impact on the extent or magnitude of flooding. ²²		
PC35 Protected Areas “Development” is undertaken to ensure areas of significant biodiversity and habitat value and high scenic quality are protected.	AS35 A minimum separation distance of 100 metres is provided to protected areas as identified on Land Characteristics Map – Features Map.	AS35 - Complies The proposed MWAV is located greater than 100 metres from the nearest protected area’ shown on the ‘Land Characteristics Map – Features Map’, being Doongmabulla Springs to the west.
PC36 Sloping Land “Development” is undertaken to ensure: vulnerability to landslip, erosion and land degradation is minimised; and safety of persons and property is not compromised.	AS36 “Development” is not undertaken on slopes greater than 15%.	AS36 - Complies The site of the proposed MWAV is essentially flat, and therefore well below the nominated maximum 15% slope.
PC37 Transport Infrastructure Separation distances are provided to ensure: transport infrastructure items are protected from incompatible “development”; and an appropriate standard of amenity and public safety is provided to adjoining “uses”.	AS37 “Buildings” and “structures” maintain a minimum separation distance to rail lines and State controlled roads (as identified on Land Characteristics Map – Features Map) as stated in Schedule 2, Division 5: Separation Distances – Infrastructure Items, Section 5.1).	AS37 - Complies All proposed “buildings” and “structures” related to the MWAV will be located far in excess of the separation distances from rail and State controlled road infrastructure nominated on the Land Characteristics Map – Features Map.
PC38 Aviation Facilities Aviation facilities are protected from physical obstructions and electromagnetic emissions that may adversely affect their function.	AS38.1 “Development” is not undertaken within 150 metres of the NDB as identified on Land Characteristics Map – Aviation Facilities and in accordance with Schedule 2, Division 8: Sensitive Areas for Aviation Facilities, Diagram 1.	AS38 - Complies The proposed development is not located in Clermont, therefore is outside of the specified distances from the NDB.

	For “development” between 150 metres and 500 metres of the NDB: AS38.2 “Buildings” and “structures” do not intersect the 3° plane extending from the NDB as identified on Land Characteristics Map – Aviation Facilities and in accordance with Schedule 2, Division 8: Sensitive Areas for Aviation Facilities, Diagram 1.	
“Use”		
PC39 “Airport” “Airport” activities: do not adversely impact on the amenity of surrounding residents; (b) ensure the safe operation of aeronautical and support activities; and (c) ensure the safety of surrounding “Premises”. 23	No acceptable solution is prescribed.	Not Applicable No airport premises use is proposed in conjunction with the MWAV use.
PC40 “Bed and Breakfast Premises” “Premises” used for a “bed and breakfast premises” are of a scale and are operated in a manner so as not to impact adversely on the amenity of the locality.	AS40.1 Provision is made for no more than 6 (six) paying guests to be accommodated at any one time. AS40.2 “Premises” contains not more than 3 (three) “accommodation units” for guest accommodation purposes.	Not Applicable No bed and breakfast premises use is proposed in conjunction with the MWAV use.
PC41 “Extractive Industry” “Premises” used for “extractive industries”: (a) do not impact adversely on the amenity of other “uses” in the Rural “Zone” or other “zones”; (b) are designed and operated to ensure the	No acceptable solution is prescribed.	Not Applicable No Extractive Industry use is proposed in conjunction with the MWAV use.

protection and maintenance of environmental values; are rehabilitated to provide for future re-use of the land and to prevent ongoing risk of adverse impacts on the local environment and amenity; and are designed and operated so that the safety of persons and property is not compromised.		
PC42 "Home Business" "Premises" used for a "home business" are of a scale and are operated in a manner so as not to impact adversely on the amenity of the locality.	AS42.1 No more than 1 (one) person other than the residents of the "premises" is employed in the "home business". AS42.2 No more than 150m ² of "total use area" is used for the purposes of a "home business". AS42.3 No more than 2 (two) clients normally attend the "premises" at any one time. AS42.4 No goods or products produced by other businesses are displayed for sale in any window or outdoor area. AS42.5 Operate only between the hours of 7:00am and 6:00pm.	Not Applicable No home business use is proposed in conjunction with the MWAV use.
C43 "Intensive Animal Industries" "Intensive animal industries": (a) do not impact adversely on the amenity of the Rural "Zone", and surrounding	No acceptable solutions prescribed.	Not Applicable No intensive animal industry use is proposed in conjunction with the MWAV use.

areas; are designed and operated to ensure the protection and maintenance of environmental values; and are rehabilitated to provide for future re-use of the land and to prevent ongoing risk of adverse impacts on the local environment and amenity.		
PC44 “Caravan and Relocatable Home Park” or “Accommodation Building”) Development for the purposes of accommodating workers is: on the same site as, or is immediately adjoining, the rural production or natural resource related industry with which it is associated; and is established only for a defined period; and) Development for the purposes of accommodating tourists is of a small scale.	No acceptable solution is prescribed.	PC44 - Complies The proposed MWAV is to be established purely to house the workforce associated with the Applicant's Carmichael Coal Mine, located immediately to the West of the MWAV site. This mine is indeed located on the same land holding as the proposed MWAV, and conditions would be accepted which link the life of the MWAV to the continued operation of the mine.

Appendix C: OPW Vegetation Clearing



Vegetation Management Plan: M WAV

17th July 2013

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In preparing this report we have made certain assumptions. We have assumed that all information and documents provided to us by the Client or as a result of a specific request or enquiry were complete, accurate and up-to-date. Where we have obtained information from a government register or database, we have assumed that the information is accurate. Where an assumption has been made, we have not made any independent investigations with respect to the matters the subject of that assumption. We are not aware of any reason why any of the assumptions are incorrect.

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Adani Mining Pty Ltd	1 electronic copy
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Executive Summary

Gassman Development Perspectives have been commissioned to complete and compile the necessary application material for inclusion within the Supplementary Environmental Impact Statement (SEIS) for the Carmichael Coal Mine and Rail Project (the Project) for a number of offsite infrastructure items. The aim of this approach is to ideally minimise overall assessment timeframes following determination of the project wide Environmental Impact Statement (EIS).

This application provides the necessary details and measures proposed to facilitate the required vegetation removal for the proposed mine workers accommodation village (MWAV).

This report builds upon the detailed and location-specific environmental reporting that has been completed for the project, including the chosen location for the MWAV.

The information contained within this report will ensure that all vegetation clearing occurs in compliance with the relevant Australian Standards and best practice methodologies.

1.0 Introduction

1.1 Background

This Vegetation Management Plan (VMP) has been prepared in support of an operational works application for vegetation removal. This proposal is for the construction of a Mine Workers Accommodation Village (MWAV) and associated infrastructure including an access road. The proposed development is shown in the proposal plan overleaf.

The principle intention of this VMP to appropriately reflect the current status of vegetation on the site, its location, management and treatment in relation to removal, retention, protection, relocation, propagation, treatment and enhancement.

Mapping provided by the Department of Natural Resources and Mines (DNRM) indicates that no remnant or regulated regrowth vegetation occurs within the footprint of the proposed development. Ground truthing exercises conducted by ecologists from GHD confirmed this assertion. Consequently, there will be no specific requirements for applications to be made under the *Vegetation Management Act 1999*. This report supports an application to remove non-remnant vegetation only.



NOTES:

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2.0 VMP Provisions

This VMP has been prepared to cover the following aspects of vegetation management:

- The location of the vegetation subject to this application, indicating which vegetation is proposed to be retained, relocated, removed or damaged;
- Remnant or non-remnant status of the vegetation to be removed;
- Vegetation management strategies including:
 - o Vegetation protection
 - o Reuse of felled Vegetation
 - o Disposal methods for remaining debris
 - o The vegetation proposed to remain on site is in locations that will not hinder works or pose safety issues.

It is intended that all retained vegetation outside of the proposed development footprint will remain to provide landscape features, ecological functions, habitat corridors, visual significance and buffers, as well as to maintain the character of the area and assist in the conservation of biodiversity in the region.

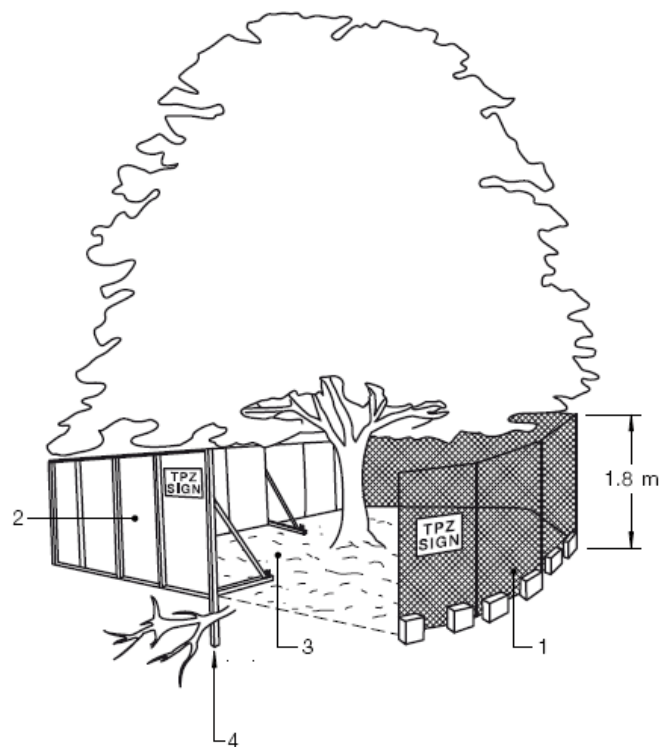
3.0 VMP Objectives

- To identify type and location of the site's existing vegetation;
- Identify existing vegetation to be retained and protected;
- To identify and locate existing vegetation required for removal;
- To provide a specific method of tree clearance that will minimise impact on the surrounding ecology;
- To provide information for the protection of existing vegetation to be retained;
- To provide sustainable reuse methods for the felled vegetation; and
- To limit any possible erosion from vegetation clearing practices.

3.1 Vegetation Protection

Vegetation outside of the allocated clearance areas will be protected from on site clearing and construction activities by incorporating the following procedures:

- 1) The trees that fall outside of the allocated tree clearance area will be protected by the provision of a hard standing steel fence (**Figure 2**) as per Australian Standard AS 4970-2009 (Protection of Trees on Development Sites) where appropriate. Groups of trees can be protected in the same way with a continuous hard steel fence. In situations where the extent of clearing is such that hard standing steel fence is not feasible or appropriate to install, orange mesh fencing supported by steel pickets will instead be utilised



LEGEND:

- 1 Chain wire mesh panels with shade cloth (if required) attached, held in place with concrete feet.
- 2 Alternative plywood or wooden paling fence panels. This fencing material also prevents building materials or soil entering the TPZ.
- 3 Mulch installation across surface of TPZ (at the discretion of the project arborist). No excavation, construction activity, grade changes, surface treatment or storage of materials of any kind is permitted within the TPZ.
- 4 Bracing is permissible within the TPZ. Installation of supports should avoid damaging roots.

Figure 1: Tree Protection (source – AS4970 – Protection of Trees on Development Sites)

- 2) All machine operators conducting the tree clearing process are to be provided with a copy of the approved Tree Clearing Plan.
- 3) No site sheds, parking areas or buildings are located outside the clearing area.
- 4) The area surrounding the tree for removal is clear of any hazards and maintains adequate room to safely conduct the removal.
- 5) The vegetation removal process has focused on providing environmentally sensitive and sustainable practices. These include:

- Possible fauna removal if required;
 - Reuse of felled material for on the site use.
- 6) The following activities are prohibited to occur within the vegetation protection zones or drip-lines of trees marked for retention:
- Machinery or vehicle parking;
 - Disposal of liquids of any type;
 - Repairs or refuelling;
 - Earthworks;
 - Temporary sheds;
 - Stockpiling (Refer to section 3.7).

3.2 Vegetation to be Removed

102.9 hectares of non-remnant vegetation located in the areas required to accommodate the bulk earthworks will require removal as identified by field exercises conducted by GHD ecologists (**Appendix A**). No remnant vegetation was identified as occurring within the development footprint of the MWAV.

3.2.1 Reasons for Vegetation Removal

- To facilitate the approved Bulk Earthworks.
- Site access/Roads/Driveways.
- Safety for future property uses.
- Area for ancillary use of the site and landscaping.

3.2.2 Tree Clearing Process:

1. Locate and ensure the trees that have been protected in accordance with the procedures outlined in **Section 3.1** of this report.
2. Woodchip the felled vegetation on site.

3. Stockpile the wood-chipped vegetation in areas deemed appropriate by contractors and in agreement with project manager.
4. Stump grind remains or remove from ground with excavator.

3.3 Corrective Actions

If vegetation not identified for removal is disturbed during the bulk earthworks process, then discussions with Council environmental officers will be required to identify any needs for additional rehabilitation to compensate for the tree damage or removal.

If a retained tree shows signs of ill health, then the causes are to be identified and amelioration methods are to be discussed with council.

3.4 Reuse of Felled Vegetation

Any wood chipped vegetation should be reused on the site for future landscape and site stabilisation purposes. To achieve satisfactory mulch, material pasteurization is the minimum process required to achieve weed and pathogen free mulch from the chipping process.

The vegetation proposed for wood chipping should be weed free and will therefore pose little threat from contaminants. Stockpiles of mulch will need to be maintained at 55°C for three weeks to produce conditions to kill possible pathogens. Longer periods will not damage the material, however occasional turning of the stockpile will limit decomposition of the mulch.

3.5 Stockpiles

- Stockpiles are not to be located within 30 meters from the surrounding adjacent vegetation.
- Stockpiles are not to be located in areas allocated for road constructions.
- Stockpiles are not to be located in any areas with difficult access or on steep slopes.
- Stockpiles are not to exceed 3000mm in height.

3.6 Fauna Provisions

It is recommended that a suitably qualified fauna spotter/catcher be engaged to identify any habitat features encountered throughout the clearing works. When identified, the spotter/catcher will direct the clearing operator to pause operations to enable to rescue of injured or displaced wildlife. The fauna spotter/catcher should be present on site during all vegetation clearing works. Any injured wildlife should be captured and transported to the nearest veterinary clinic if practical, but due to the remoteness of the clearing area, it may be more feasible to perform humane euthanasia on site using methods outlined in the ANZCCART publication entitled “Euthanasia of Animals Used for Scientific Purposes.”

4.0 Landscaping Requirements

Landscaping on the site after the construction works are complete will focus on the existing and desired species for the area, utilising existing seed stock and plants endemic to the region where available.

Also incorporated into the landscaping should be suitable native species that are suited to specialised landscape requirements. The design focused on creating potential for ecological links with local systems and sustainable vegetation.

5.0 Invasive Weed Management

5.1 Objectives

- To reduce the extent of weed species that are currently threatening or pose future threats to diversity levels and ecological processes within the region; and
- To remove present weed species from the subject site.

Table 1: General Guidelines for Weed Removal

Vegetation Type	Removal and control methods
Vines	The vine should be cut at the base and physically remove root system, if this is not possible paste cut stem with herbicide. The upper parts of the vine should be left insitu to decay and not pulled from host tree as it will cause leaf loss and branch damage
Soft Weeds	The soft weeds should be removed by hand and disposed from site where possible or sprayed with a targeted herbicide application.
Woody Weeds	To be removed by hand and or machine where possible and disposed from site or sprayed with a targeted herbicide application, strong or developed species may required cut and paste of the stem.
Trees	Where machine access is available trees should be lopped and stumped grinded in accordance with the vegetation management procedures ensuring safety and clear access, smaller trees under 20mm can be lopped at base and treated immediately with a 1:1 mixture of Glyphosate or recommended herbicide for that specific tree. Larger trees should be drilled at a downward angle into xylem / phloem of the tree and left standing in situ.

5.2 Performance Criteria

- All targeted tree weed species have been removed from the subject site
- No erosion or re-growth of the weed species is evident

5.3 Corrective Actions

Re-apply procedures and actions to eradicate weed re-establishment within the area.

6.0 Erosion and Sediment Control

Erosion and sediment control measures will be installed onsite prior to the commencement of clearing operation. This should include sediment fencing around the clearance area to reduce sediment loading into nearby waterways and erosion once clearing of the site commences until completion and the site is re-stabilised.

A Sediment and Erosion Control Management Plan will be prepared and submitted by a suitably qualified engineering consultant.

7.0 Summary of Performance Indicators

1. Vegetation removal was restricted to footprint of MWAV precinct.
2. Vegetation that remains outside this area is not disturbed.
3. A suitably qualified fauna spotter catcher was present for all clearing operations.
4. Fauna was dispersed or relocated to suitable locations.
5. Abundance of weed species within the area was reduced.
6. No increased erosion or sediment loss occurred from site as a result of the vegetation clearing.
7. Felled vegetation has been wood-chipped and stockpiled.

8.0 Conclusion

This Vegetation Management Plan (VMP) has been prepared to guide contractors in best practice methodology for the removal of vegetation to facilitate the future construction of a Mine Workers Accommodation Village and associated infrastructure including an access road.

The plan has identified the vegetation that will require protection during the construction process to ensure no damage occurs. It also has identified vegetation which is required to be removed and has described methods to carry out these works.

Other sustainable planning allocations have been made which include having a suitably qualified fauna spotter catcher present during all stages of clearing, protective fencing, felling and the reuse of felled material onsite.

The above specifications and management plans have been included with the graphic plans to provide the necessary information for council officers to enable them to make a reasonable assessment of the proposed actions and the procedures in relation to the vegetation management and clearing procedures to be undertaken for the removal of vegetation from the subject site.

Appendix A: Vegetation Removal Plan



LEGEND

Field verified Regional Ecosystems

- Endangered - Sub-dominant
- Of Concern - Dominant
- Least Concern
- High Value Region with Containing Of Concern regional ecosystems
- Application Boundary
- Total area - 102.9ha
- Extent of Clearing

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adaniTM OPW Vegetation Clearing
Extent of Clearing

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Extent of Clearing

MWAV

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16-07-2013

date: 16-07-13
scale: 1:7 500 @ A3
design: MS/AS
plan: 5370 EM VC 01 A

Appendix D: OPW Bulk Earthworks



OPW Bulk Earthworks: MWAV

17th July 2013

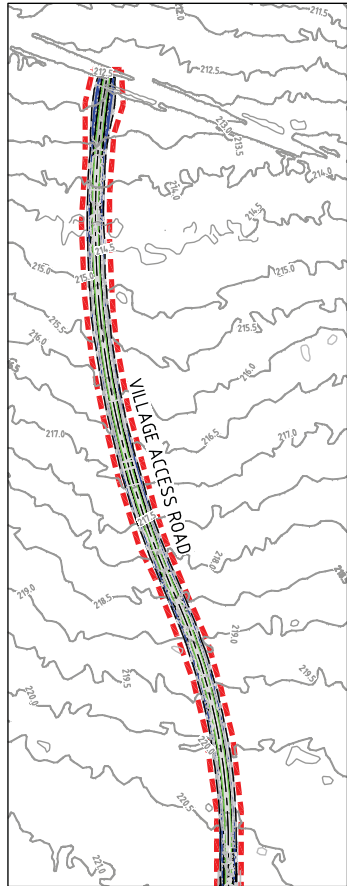


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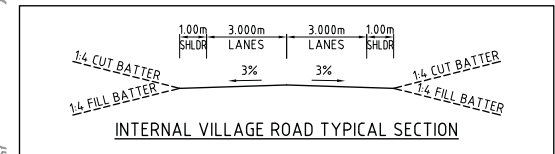
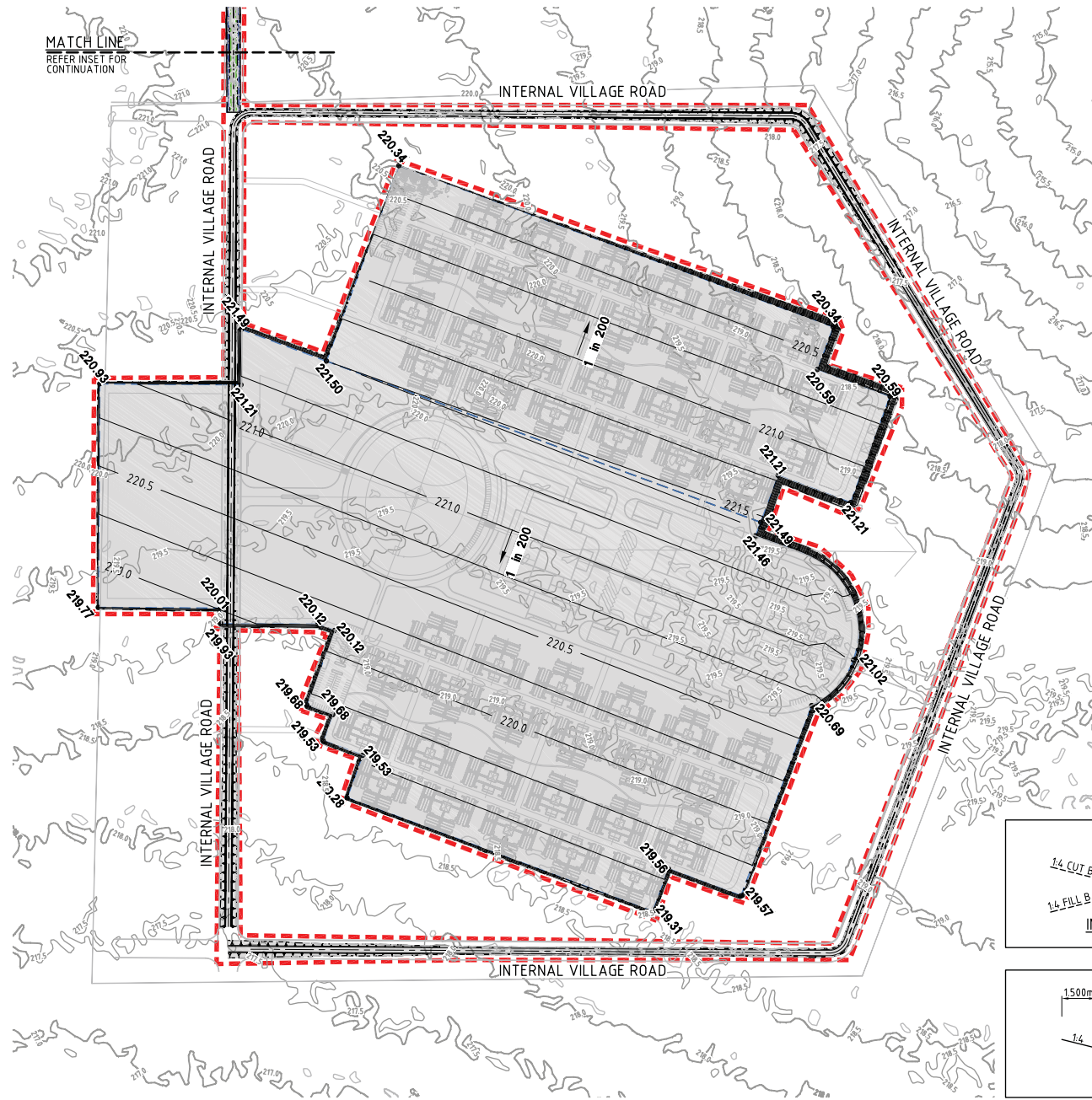
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	EARTHWORKS PAD AND LEVEL
	FILL
	CUT
	EARTHWORKS BOUNDARY

BULK EARTHWORKS VOLUMES	
CUT	60m ³
FILL	516,062m ³
BALANCE	516,001m ³ IMPORT

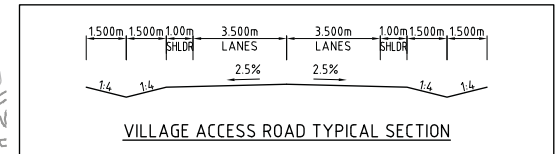
ROAD EARTHWORKS VOLUMES	
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FILL	15,744m ³
BALANCE	15,041m ³ IMPORT



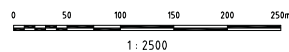
INSET



INTERNAL VILLAGE ROAD TYPICAL SECTION



VILLAGE ACCESS ROAD TYPICAL SECTION



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Surveyor

Client

Status

PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

Approved

R.P.E.O. No. : - - - -

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Current Issue Signatures

Original

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Height

AHD

Grid

GDA94

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G. MOLLOY

Reviewer
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Project

CARMICHAEL MINE
DEVELOPMENT

Title

PRELIMINARY VILLAGE
BULK EARTHWORKS
LAYOUT PLAN



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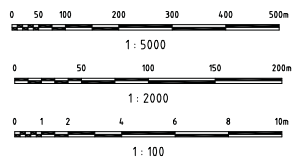
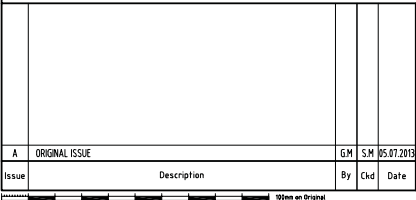
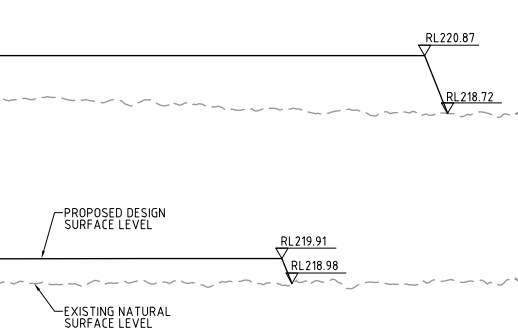
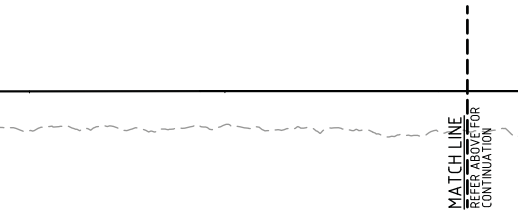
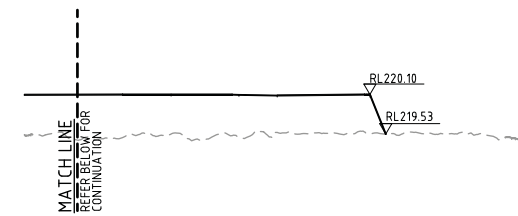
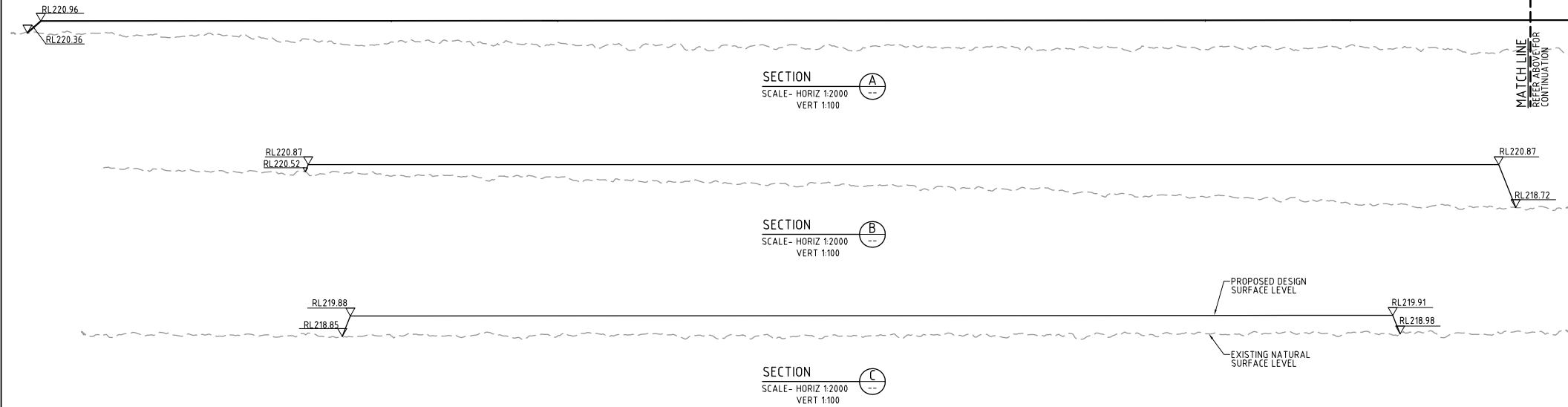
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B	EARTHWORKS EXTENTS AMENDED	GM	SM	09.07.2013
A	ORIGINAL ISSUE	GM	SM	05.07.2013



Surveyor

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Status		PRELIMINARY NOT TO BE USED FOR CONSTRUCTION	
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Height Datum	AHD	Reviewer S. MILEY	
Grid	GDA94	© Copyright reserved	

Project	CARMICHAEL MINE DEVELOPMENT
Title	<u>PRELIMINARY VILLAGE</u> BULK EARTHWORKS SITE CROSS SECTIONS

Appendix E: ERA Sewage Treatment



Site Based Management Plan (Sewage): MWAV

17th July 2013



project coordination
urban + regional planning
landscape + urban design
environmental management
visualisation + spatial services
surveying services
advisory services



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V1.0 (internal DRAFT)	Mark Spears	Gary Savins
V2.0	Mark Spears	David Hansen

Approval for Issue

Version	Name	Position	Signature	Date
V2.0	David Hansen	Director		17 th July, 2013

Final Distribution

Adani Mining Pty Ltd	1 electronic copy
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1.0 Introduction

1.1 Goal and Purpose

This Site Based Management Plan (SBMP) has been prepared to accompany a development application to be lodged with Isaac Regional Council for an Industrial Material Change of Use (MCU). This SBMP describes methods of operation for a sewage treatment plant.

Given the nature of site operations, a Material Change of Use (MCU) application lodged with Isaac Regional Council will need to be accompanied by another MCU component for Environmentally Relevant Activity 63 (1d) – Sewage treatment: more than more than 4000 but not more than 10000EP (equivalent persons). The total village EP has been calculated at 4485.

The location of the activity is shown on the figure overleaf, with the proposed site layout plan and its associated ancillary works in relation to the greater development proposal, included in **Attachment 1**.

Key objectives of this Operational SBMP report are to:

- Address all relevant **environmental management issues** attached to the site;
- Develop **'life-of-proposal' control strategies** incorporating performance criteria to quantify acceptable levels of environmental harm;
- Provide evidence of **environmental responsibility** and **sustainable management** during the operation of the sewage treatment plant;
- Establish **performance criteria** and **objectives** relating to environmental and social impacts which will include measurable indicators and standards;
- Outline **monitoring techniques** to be undertaken against the performance criteria;
- Detail **prevention, minimisation and mitigation** strategies for controlling anticipated environmental impacts from a range of sources;
- Define roles of onsite **responsibility** for environmental management;
- Detail the **timing** of environmental management initiatives proposed;
- Outline **reporting and auditing** responsibilities for meeting objectives;
- Outline proposed **corrective actions** to remedy environmental issues that may arise;



NOTES:

This plan has been prepared for the exclusive use of the client as stated on this plan for the purpose of application to the relevant local authority for the land as described and should not be used by any other person or corporation and for any other purpose.

Areas and Dimensions are approximate only and are subject to final state approval and survey.

This plan can not be used for construction.

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- Provide Isaac Regional Council with a framework to assess **compliance** with the relevant statutory regulations; and
- Provide a platform for a **consistent approach** to environmental management at the site for the duration of the plant's operation.

1.2 SBMP Overview

Adani Mining Pty Ltd is seeking approval to operate a sewage treatment plant for the treatment and processing of wastewater resulting from the proposed Mine Workers Accommodation Village.

This SBMP has been prepared to provide the framework necessary to ensure that the recommended environmental control strategies identified are effectively implemented to minimise any actual or potential adverse environmental impacts during the plant's operation. Each of the site specific environmental issues are identified in **Section 2.3** and individually addressed in **Chapter 3** in accordance with the following structure:

Element/issue:

The aspect of the operation to be managed as it affects environmental values.

Performance Objectives:

The criteria against which the level of achievement of the stated objective shall be measured.

Operational Policy:

The management objective that applies to the potential source of environmental harm.

Performance criteria:

Measureable outcomes for each element of the operation as per available guidelines.

Implementation strategy:

Strategies that will be implemented in order to achieve the performance criteria.

Monitoring:

The monitoring requirements to measure performance and success of environmental protection measures.

Reporting/ Responsibility

Required reporting and review arrangements for each task and action (when and by whom).
Assign responsibility for carrying out each task or action to relevant person or organisation.

Corrective Actions:

Actions in the event of non-compliance with stated objectives/ targets including responsibility for remediation.

1.3 Responsibility and Training

The sewage treatment plant operations manager is responsible for ensuring all personnel associated with the plant's operation are aware of the contents of this SBMP and act in accordance with the plan.

All staff employed at the sewage treatment plant will be educated (as part of induction or ongoing staff training initiatives) on the environmental obligations of the SBMP and their general environmental duty of care. The organisational structure of the facility is yet to be determined but can be provided in response to conditions of approval.

This SBMP will be made available to all staff employed (directly or indirectly) within the sewage treatment plant.

The operations manager of the sewage treatment plant shall take responsibility for the effective implementation of this SBMP during the plant's ongoing operation.

The senior management of the site are committed to achieve the specified and relevant goals of this SBMP and are committed to continual environmental improvement.

At agreed nominated periods, senior management of the site will meet to review the environmental performance of the site and investigate and implement measures to achieve continual environmental improvement.

1.4 Incident Register

There will be particular adherence to prompt resolution of any environmental or safety incidents recorded in relation to the operation of the plant. Subsequently, emphasis will be placed on the development and implementation of corrective actions in response to non-compliance with the SBMP (as identified as part of the monitoring process).

The performance objective/ indicator regarding the resolution of these incidents is for the issue to be resolved in such a manner that there will be a reduction in the risks of the incident re-occurring.

The operations manager is to maintain an *Incidents and Complaints Register* which lists the date of the incident or complaint. In each instance, an incident/ complaint log is to be completed. This log will contain information such as:

- Date of incident
- Nature of incident and subsequent information;
- Location;
- Name of person who reported the incident;
- Staff member who received notice of incident;
- Manager's review and comment;
- Recommended action to resolve the incident;
- List of organisations to be engaged if incident is warranted;
- Outcome of actions undertaken subsequent to incident being recorded; and
- Date of incident resolution.

In addition to the above log, each incident is to be registered on the Incidents and Complaints Register. Further, Isaac Regional Council is to be notified and directions sought with regard to corrective actions for incidents which have the potential for environmental harm.

2.0 Process Details

2.1 Process

The process description below is a general outline of the process according to information available at the time of preparation. It is anticipated that more detailed information regarding the sewage treatment process including exclusion of hazardous waste, capacity information equipment-specific methods of treatment, expected water quality characteristics for treated effluent, and emergency contingency plans may be provided in response to development approval conditions at a later time. At such a time that a suitably qualified contractor is engaged to construct the sewage treatment plant, a list of persons and companies including qualifications can be provided. It is anticipated that appropriately worded approval conditions could require this information. A flow diagram depicting the process has been included in **Attachment 1**.

Process Description

1. As this method of sewage reticulation will be in the form of a pressure style system, smaller individual grinder pumps will be located at each lot it services. These individual grinder pumps will grind effluent into a fine slurry and pump it under pressure through a network of polyethylene pipes to the sewer treatment plant.
2. The initial step of the sewage treatment process is that the wastewater is screened through a mechanical fine screen with a 5mm diameter. This allows for a rate of 80L/s to be screened. During wet weather, influent flows in excess of this capacity will flow over a weir to a 20mm diameter screen.
3. Screened wastewater flows via a gravity system to a biological nutrient removal plant. Excess flows experienced during wet weather overflows to polishing lagoons in the case where the flow balancing tank has reached capacity after which it is pumped back through the treatment process.
4. The biological nutrient removal plan is comprised of the following components:

- An anaerobic and flow balancing tank which facilitates phosphorous removal
 - Two anaerobic/anoxic basins with surface aerators and internal recycling rotate between aerobic and anoxic conditions to reach complete biological oxidation of organic matter, complete nitrification and significant denitrification of the wastewater. Wastewater is then pumped to the polishing ponds, and then subsequently through a filtration facility through a UV disinfection device via the secondary sedimentation tank.
 - Waste activated sludge is pumped to clay lined sludge drying pans which facilitate natural air drying of surplus biological sludge. Excess water is controlled from the pans via a drainage system which then flows to a pump which moves it to the anaerobic tank at the top of the sewage treatment plant. Sludge is allowed to air dry before it is excavated and stockpiled for future reuse as soil conditioner.
5. Excess water still present after the material has naturally dried is pumped to the aerobic polishing lagoons prior to its reuse in irrigation and dust suppressants in other areas of the mine and living areas. Following the treatment process, it will be processed to an A+ standard prior to its use.

2.2 Environmental Issues

Chapter 3 of this SBMP contains descriptions of issues and management strategies for the ongoing operation of the sewage treatment plant within the following environmental management areas:

- Air quality
- Noise management
- Water management
- Waste management

The closest residential sensitive receiver is the Mine Workers Accommodation Village which is located approximately 271m to the east from the sewage treatment plant associated with the MWAV. The closest ecologically sensitive receiver is Eight Mile Creek and is located approximately 1420m to the north west from the sewage treatment plant. These distances are

considered sufficient to ensure that no detrimental effects are caused by the sewage treatment plant on these sensitive receivers.

2.3 Summary and Conclusion

The above sections have outlined the goal and purpose of this Site Based Management Plan (SBMP). The format and structure of the subsequent specific environmental management plans for individual sources of environmental risk have been delineated in addition to an overview of procedures involved with the implementation of this Plan including training requirements and areas of accountability and responsibility. The formal process of recording and managing incidents and complaints has also been detailed.

A general overview description of the process involved in sewage treatment has been included. Finally, a list of the potential environmental issues likely to affect the subject site and its surrounding environment has been discussed.

The following sections specifically address individual environmental risks identified on the subject site and outline methods of management and monitoring to ensure that the processes undertaken at the sewage treatment plant site do not negatively affect the surrounding environment.

3.0 Environmental Management Plans

3.1 Air Quality Management Plan

The environmental hazards relating to air quality arise from dust and odour emissions associated with the operation.

To ensure this SBMP is aligned with a Best Practice approach to environmental management, the following management plan will address actual and potential environmental issues.

The objectives associated with air emissions for the storage plant are as follows:

Potential Impacts

The main potential source of emission to air is from odour emanating from the processed materials on the site and dust issues associated with the site's operations.

The following Plan details specific measures and processes to manage potential issues associated with air emissions from the site.

Table 1 - Air Quality Management Plan

Policies:	
• Ensure that air emissions do not adversely affect the environment, health, welfare and amenity of adjacent land uses; and • All emissions must comply with the performance criteria contained in the <i>Environmental Protection (Air) Policy 2008</i>, or those by Council in the Planning Scheme.	
Performance	• The activity will be operated in a way that protects the

Objective	environmental values of air.
Operational Policy	The management objective of air quality is to ensure that there are no dust or odour issues attributable to the operation which may affect the surrounding environment.
Actions/ Controls	- All areas within the plant that will be traversed by vehicles will be sealed. - All sealed areas will be kept clean and regularly monitored for dust build up. - Contents of sludge pans will be kept saturated in the winter to minimise odours. - Anaerobic/flow attenuation will be covered and ventilated with extracted air treated in a wet packed bio-scrubber followed by a biofilter. - A two stage odour scrubber/filter odour attenuation facility will be installed. Ventilated air will be continuously drawn from the covered anaerobic/flow attenuation tank under a negative pressure of up to 20 Pa and blown through a wet packed scrubber in order to remove present hydrogen sulphide. Water will be sprayed over the packed media, in the opposite direction to the air used for ventilation, to be regularly recirculated. Ventilated air will subsequently be directed through biofilters to remove remaining hydrogen sulphide and any other present odours. An automatic top water sprinkling/drip irrigation system with moisture sensors will ensure the bed remains moist at all times.
Maintenance	All machinery on the subject site will be kept in good working order as per the manufacturer's specifications. Faulty machinery will be immediately repaired by appropriately qualified staff.
Performance Indicators	There is no discharge to air of odour or dust that may cause an adverse effect on the health of humans or the surrounding environment resulting from the operation of the activity.
Monitoring	Regular auditing of odour and dust levels present on the subject site by staff and operations manager.
Reporting / Responsibility	All air quality related incidents and complaints are to be recorded in a Complaints Register (by the operations manager), which is to be held on site.

	• All incidents and complaints will be reported to the operations manager as they occur. Responsible person • All Staff • Operations Manager
Corrective Action	• If odour issues are detected on site, the source of the odour must be isolated and treated in accordance with appropriate measures depending on its source. • If dust issues are detected on site, the areas from where the dust is emanating must be immediately watered down or cleaned up to prevent further dust entrainment.

3.2 Noise Management Plan

The objectives of noise management at the site are to minimise actual and potential noise disturbance to the surrounding environment and comply with the required noise standards in the *Environmental Protection (Noise) Policy 2008* and the Isaac Planning Scheme.

Due to the remote setting of the activity, it is considered that there are no significant noise issues likely to occur as a result of the activity. The day to day operation of the site is not considered to be particularly noisy and is predominantly limited to vehicle noise and equipment noise, primarily pumps and aerators operating at below 40DB. All equipment on site will be maintained as per factory standards to ensure excessive noise generation is avoided.

No sensitive receivers are considered to occur within the vicinity of the operation as it is located in a remote area within a surrounding industrial setting.

Notwithstanding the above, the following management plan has been prepared to comply with the best practice approach to environmental management.

Potential Impacts

Trucks and sewage treatment plant equipment have the potential to generate noise, particularly if they are not properly maintained.

The following Plan details specific measures and processes to manage potential issues associated with noise emitted from the site

Table 2 - Noise Management Plan

Policies: • To limit as much as possible noise related impacts on the surrounding environment. • To comply with the noise performance criteria contained in the Isaac Planning Scheme and the <i>Environmental Protection (Noise) Policy 2008</i>.	
Performance Objective	• No noise related incidents directly attributable to the sewage treatment plant operation.

Operational Policy	The management objective for noise control is to ensure that no noise incidents or complaints are recorded as a result of the operations.
Actions/ Controls	- All equipment will be checked and maintained to ensure that it is not excessively or unnecessarily noisy - Reduce non-essential noise sources whenever possible.
Maintenance	Ensure machinery is regularly maintained and service to ensure minimal unnecessary noise production.
Performance Indicators	- Sound from the operation is not excessive outside the boundaries of the site. - The release of sound to the environment from the activity is managed so that adverse effects on environmental values including health and wellbeing and environmental impacts are prevented or minimised.
Monitoring	Regular assessment of noise by staff and management.
Reporting / Responsibility	- All excessive noise issues observed by staff and management are to be recorded in an Incidents Register (by the Operations Manager), which is to be maintained on site. - All complaints and incidents will be reported to the Operations Manager as they occur. Responsible person - All Staff - Operations Manager
Corrective Action	- Corrective actions to be developed in consultation with Council and state agencies if required; and - In the event that nuisance noise becomes the basis of consistent environmental or health issues, further strategies will be considered and implemented where practical.

3.3 Water Management Plan

The objectives of water management at the site are to minimise actual and potential disturbance to the surrounding environment resulting from water discharges emanating from the site and to comply with the required water quality standards in the *Environmental Protection (Water) Policy 2009* and Isaac Planning Scheme.

No discharges to existing water courses are planned for this sewage treatment plant. Excess treated water will be used as dust attenuation and irrigation in other areas of the mine and workers accommodation and recreation areas. Due to the relatively flat grades of the subject site, erosion risks to the receiving environment in times of discharge are not considered likely to occur. A Stormwater Management Plan has been prepared and submitted in conjunction with this application. This Plan contains additional detail on capture and treatment of stormwater on the subject site.

The sewage treatment plant will be constructed to produce A+ standard effluent. A more detailed sustainability study demonstrating the suitability of various post-treatment releases to the environment and various methods and locations of discharge may be conditioned in approval conditions including soil testing.

Potential Impacts

Detrimental impacts to the surrounding receiving environment attributable to water discharges from the site.

The following Plan details specific measures and processes to manage potential issues associated with water quality.

Table 3 - Water Quality Management Plan

Policy: To responsibly manage all water used on the site to ensure that offsite discharge does not result in detrimental impacts to surface or groundwaters.	
Performance Objective	The activity will be operated in a way that protects environmental values of any receiving waters.
Actions/	Water treated in the sewage treatment plant will be monitored for

Controls	a range of water quality parameters prior to its transportation off site for use in dust attenuation and irrigation purposes. No wastewater will be discharged to surface or groundwater on or near the subject site.
Maintenance	All wastewater storage basins, tanks and lagoons to be regularly checked for breaches and integrity to ensure that no leakages occur.
Performance Indicators	No uncontrolled discharges of any water from the subject site.
Monitoring	Periodic monitoring of wastewater storage basins, tanks and lagoons to ensure no leakages or breaches.
Reporting / Responsibility	- All instances of actual or potential water quality discharge issues are reported and recorded. Responsible person - All Staff - Operations Manager
Corrective Action	Review and if necessary modify response procedures, equipment or facilities.

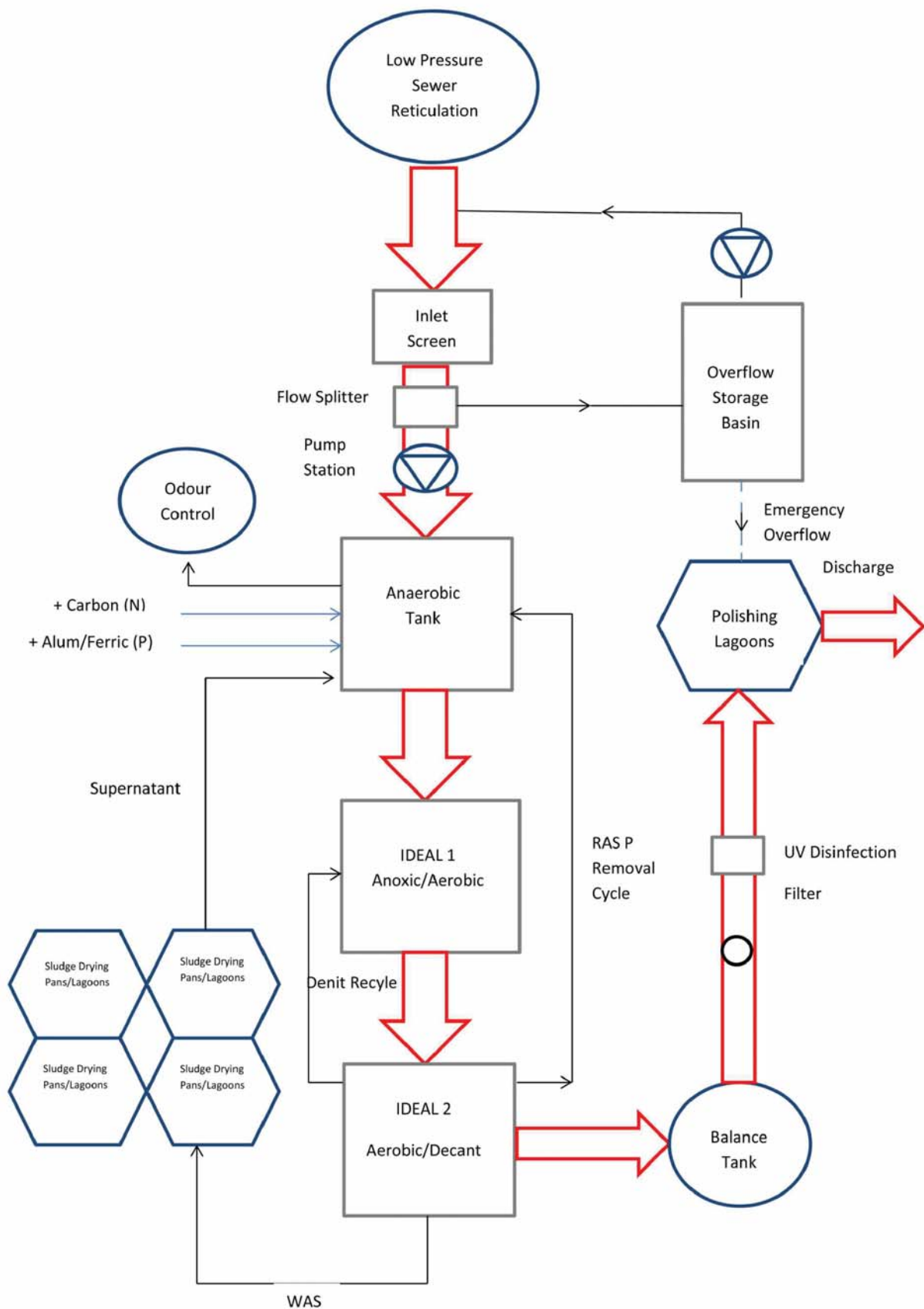
3.4 Waste Management

The primary waste generated from this operation will be sludge. The wastewater will be entirely used on the mine and living and recreation areas of the site and will not require management in terms of discharge.

Sludge is proposed to be used as a soil conditioner where its physical and chemical parameters allow. However, in situations where the sludge is not suitable for this use, it will be stockpiled and appropriately disposed of in landfill or removed from site by a competent and approved carrier.

Appropriate refuse receptacles will be provided for incidental wastes that are generated via other means in conjunction with the use of the site. However, it is not anticipated that significant amounts of other wastes will be generated as part of this operation.

Attachment 1 – Site Plan and Process Diagram



		AMENDMENT DETAILS	DATE
REVISION	F		
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	A	FINAL RELEASE	16-07-2013

Appendix F: Preliminary Servicing



Adani Carmichael Mine - Mine Workers Accommodation Village

Preliminary Services Report

Adani Carmichael Mine - Mine Workers Accommodation Village

Preliminary Services Report

Mine Workers Accommodation Village

Author Sunny Seshadri

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Checker Shane Miley

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Approver Chris Howard

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Report No F0001-AA006158-AAR-01

Date July 2013

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Appendices

Appendix A
Engineering Drawings

1 EXECUTIVE SUMMARY

Gassman Development Perspectives have appointed Hyder consulting on behalf of Adani Mining Pty Ltd (Adani) to undertake an assessment of the preliminary services and key infrastructure required to service the proposed Mine Workers Accommodation Village associated with the planned Carmichael Coal Mine. The site is located approximately 160kms west of Moranbah, Central Queensland on land described as Lot 662 on Crown Plan PH1491

This Preliminary Engineering Services Report details the civil services component of the development and the engineering planning considerations associated with a Development Approval. The proposed development is located within the Isaac Regional Council (IRC). The site is currently being used as cattle grazing property colloquially known as 'Moray Downs'.

This report demonstrates that the proposed development can be adequately serviced by potable water, sewerage, electrical services and vehicle access infrastructure. A Site Based Stormwater Management Plan (Refer document A0004-AA006158-AAR-01-SMP Accommodation village) has been prepared by Hyder Consulting to specifically address the stormwater quantity and quality measures associated with the development.

2 INTRODUCTION

The proposed Mine Workers Accommodation Village ('MWAV') is located approximately 160kms west of Moranbah and is situated approximately 3.4 kms to the north east of the proposed airport. The MWAV is situated 0.9kms from the proposed realigned Moray Carmichael Road which is the major road connecting the MWAV to the mine, industrial areas and the airport.

3 SITE CHARACTERISTICS

3.1 EXISTING SITE

The site of the Carmichael Coal Mine Mine Workers Accommodation Village is located approximately 160kms west of Moranbah, Queensland in the Isaac Regional Council. The proposed development area is approximately 102.9 Ha and is situated within Lot 662 on PH1491, close to the Moray Carmichael Road.

Contours obtained from Lidar survey reveals that the site is situated at levels between RL 217.50 m AHD and 221 m AHD. The existing site topography naturally forms into three separate catchments with one catchment grading to the north and the other catchments grading to the south of the lot.

3.2 PROPOSED DEVELOPMENT

It is proposed to establish the Mine Workers Accommodation Village to support the mine workers working at the Carmichael Coal Mine. The developed site is to contain accommodation units to house a total of 3500 staff with all associated services including sewerage, electricity and potable water.

The proposed development will be constructed in fill in order to incorporate the proposed stormwater catchment strategy. Refer to Engineering Drawings K0032-AA006158 in Appendix A for details of proposed Bulk Earthworks Layout.

The proposed development has incorporated water sensitive urban design measures throughout the early planning phase to ensure that all necessary stormwater quality and quantity objectives are met.

4 SEWER

4.1 SEWER STRATEGY

The proposed sewer strategy for the Mine Workers Accommodation Village will involve collection of waste effluent via Low Pressure sewer reticulation and conveyance to a package sewage treatment plant on site. Drawing K034-AA006158 in Appendix A shows the preliminary concept design of the Mine Workers Accommodation Village sewer system and the location of the sewage treatment plant at the south-western end of the site.

Due to the location and nature of the site, it is proposed that a low pressure sewage system be implemented to convey the effluent to the package treatment system. This eliminates the need to construct deep sewer systems to convey the effluent as is the case with gravity systems and only requires shallow trenching. This approach therefore results in minimal earthworks fill quantities and has a positive effect on the overall bulk earthworks strategy.

4.2 LOADING

The MWAV is made up of mixed use buildings, accommodation units, a tavern, commercial areas, etc. With regards to the accommodation areas, there are a total of 49 distinct modules on site, with each comprising 24 units (across 2 storeys). and each unit can accommodate 3 individuals. Table 4.1 below lists the contribution estimates in EP's (Equivalent Person).

Table 4.1 – EP contributions per building use on site

Building Use Type	EP	Demand calculator based upon type of use
Total Camps on Site	3528	330L/day/person
Reception/Site office	31	0.6 ET/100 m ² GFA
Medical Centre	24	0.3 ET/consultation room & 0.5 ET/bed
Kitchen/Dining room	491	0.05 ET/seat, for 3600 seats
Laundry	7	0.4 ET/washing machine, for 6 per camp
Tavern	60	1.1 ET/water closet, urinal, etc. for 20 units per tavern
Ice room	1	0.05 ET/seat, for 5 seats
Recreation room	121	1.6 ET/100 m ² and 2.0 ET/100 m ² GFA
Gym	152	2.0 ET/100 m ²
Commercial Laundry	22	0.4 ET/washing machine, for 20
25m Swimming Pool	48	2.0 ET/100 m ²
Total	4485	

The water consumption demand was calculated using the demand estimates as shown in Table 4.1 and based on SEQ design and construct guidelines. The equivalent ET's were converted to EP by applying a multiplier of 2.7EP to 1 ET as is generally applied by Queensland Urban Utilities in their assessments of flow sewer demands.

For the accommodation units, a conservative approach was applied assuming each individual would generate a maximum of 330 L/day. In contrast to this, the Development Application report

prepared by Cardno dating 30th October 2012 estimated a lower value of 200L/day consumption per EP.

4.3 RETICULATION

Use of a low pressure sewer system is recommended for the MWAV given the flat nature of the existing site and in order to achieve minimal earthworks fill quantities. A pressure sewer system consists of a series of positive displacement grinder pumps moving finely ground effluent material along a network of small diameter polyethylene pipes. At each building cluster (72 individual units in total) there will be two sewer collection pits that will be gravity fed from the buildings. The effluent is then ground into fine slurry and pumped under pressure through a network of polyethylene pipes to the sewer treatment plant (STP). Operation of the system is fully automatic, much like a traditional gravity system.

Use of a 'MONO'-type (or similar approved) low pressure system is recommended.

4.3.1 Accommodation Modules

The collection tank sizes are based upon the morning and evening peak usage and storage values. An allowance of 6 hours storage per tank has been designed with each peak usage producing approximately 11,880 L/day of effluent. Therefore, it is proposed that a total of 2 tanks of approximately 6m³ (6000L) capacity be constructed for each accommodation module.

It is proposed that each dry well be connected to 2 EMS-160 MONO pumps that can operate individually or one on standby or in tandem. Each pump has a flow rate capacity of 1 L/s and will pump the effluent under pressure to the treatment plant on site. This is estimated to take approximately 100 minutes to pump the entire effluent from each dry well based upon a single pump's capacity. Table 4.2 summarises the above:

Table 4.2 – Accommodation Camp sewer storage and conveyance quantities

Type	Total Effluent (L/day)	Effluent per Peak demand (L)	Number of tanks per Peak demand	Tank capacity (L)	Total tanks per camp	Capacity per pump (L/s)	Time to drain each tank with 2 pumps (minutes)	Time to drain each tank with 1 pump (minutes)
Accommodation Module	23,760	11,880	2	6000	2	1	50	100

For all other building use types, the loading flow rates shall be addressed and confirmed as part of the detailed design process

4.3.2 Reticulation Network

The sewer reticulation network shall be comprised of the following pipes:

1. Gravity drainage (within Lots) – uPVC Class 9 pipes; and
2. MONO Low pressure system – HDPE lines compliant to AS/NZ 4130, or a similar product.

4.4 SEWER TREATMENT PLANT

The sewer treatment plant (STP) shall be a proprietary package provided by an external supplier. The supplier shall be provided with loadings and treatment effluent quality targets they will need to meet.

4.4.1 Location

Drawing K034-AA006158 in Appendix A shows the preliminary concept design of the Mine Workers Accommodation Village and the location of the sewage treatment plant (STP) to the south-west of the site. The STP will be co-located in a services hub likely to house future service infrastructure including a water treatment plant and power substation.

This report recommends the STP, WTP and power substation to be located at the western end of the village site due to its elevation. This will efficiently use the low pressure system to pump effluent uphill to the STP and then feed the recycled water and drinking from the WTP to the village via downhill gravity.

4.4.2 Treatment Quality

It is proposed that treated effluent shall be recycled and used for irrigation and non-potable re-use within the Mine Workers Accommodation Village. The target of Class A+ as requested by Adani Mining Pty Ltd will need to be achieved from the STP. This is the second highest quality of recycled water and is for non-drinking purposes. Table 4.2 summarises the various uses for Class A+ recycled water.

Table 4.3 – Some uses for treated Class A+ effluent

Suitable uses	Class A+
Irrigation of residential gardens and lawns – below ground	Y
Irrigation of public open spaces – above ground uncontrolled access	Y
Dust suppression, compaction	Y
Watering parks, playing fields, footpaths and roadside plants	Y
Filling fenced ponds, lagoons and dams (not used for recreational purposes)	Y
Road works	Y
Hydraulic testing of sewer infrastructure	Y
Irrigation of landscaping on construction sites	Y
Toilet flushing	Y

Fire sprinkler/prevention systems	Y
-----------------------------------	---

5 WATER

It is anticipated that water for consumption purposes could be sourced from a range of various means, which may include local bore water wells, rain water capture, and external bulk water delivery. Where necessary, water shall be treated onsite and conveyed to the various buildings within the MWAV.

It is also considered likely that temporary interim solutions may need to be implemented on site until more permanent and sustainable water supply strategies are activated in accordance with the wider project. Either way, potable water will be required at each stage of the MWAV's evolution, and conditions to that effect will be accepted by the Applicant.

Treated effluent from the sewerage treatment plant (STP) shall be recycled to Class A+ grade and used for onsite irrigation and non-potable re-use purposes. Recycled water shall be stored in wet storage tanks onsite as per Cardno's report titled 'Part 7 – Environmental, Open Space and Landscaping – Information in Support of Application for Multiple Environmentally Relevant Activities'.

6 ELECTRICAL SERVICES

The proposed MWAV will consist of air conditioned accommodation units (single bed), central facilities, dining, recreation and administration buildings across the site. It is anticipated that the occupancy across the accommodation village will vary throughout the day/week dependant on the split between shifts, etc.

It is acknowledged that the MWAV will require a continuous power supply at all times from the commencement of accommodation, and the source of supply will likely reflect the strategies in place for the broader project supply.

The long term power supply is likely to be sourced from the electrical substation to be located within the nearby industrial area, however until such time as this permanent supply is available a range of interim measures, including diesel gensets, will be used. The facilities are currently proposed to be located on the western perimeter of the MWAV with a buffer of approximately 200m to the nearest accommodation. Refer to drawing K034-AA006158 in Appendix A for details.

7 ROADS AND ACCESS

Vehicle access to the MWAV shall be via a proposed private link road to the realigned Moray Carmichael Road. An internal road network is proposed on site to provide access to each accommodation unit and other buildings within the MWAV.

Access to the Airport and Industrial Area Stage 1 shall also be via the new Moray Carmichael Road alignment. Refer to drawing K034-AA006158 in Appendix A for details.

8 EARTHWORKS

The existing site is located on a ridgeline and falls towards the south-west and north-east. The proposed development will be constructed in fill. In order to incorporate the proposed stormwater catchment strategy the earthworks will be split up such that a portion of the site falls towards the south-west and the remaining towards the north-east. It is envisaged that detailed bulk earthworks modelling will be undertaken as part of the detailed design stage. Refer to Hyder drawing K030-AA006158 for details of Preliminary Bulk Earthworks Layout.

It is envisaged that earthworks fill import material will be sourced locally from existing and planned quarry sites in the region.

9 CONCLUSION

This report has demonstrated that the proposed Mine Workers Accommodation Village has undergone responsible planning with regards to the provision of all necessary engineering services, including sewer, water and electrical infrastructure.

Additional engineering issues such as road access and earthworks have also been discussed within the report. The Moray Carmichael Road will be the main access road to the Mine Workers Accommodation Village. Bulk earthworks have been identified to occur on site as a result of the proposed development.

It is anticipated that there will not be any detrimental effects of the proposed development to the existing site and that it is possible for all engineering services to be catered for.

Appendix A

Engineering Drawings

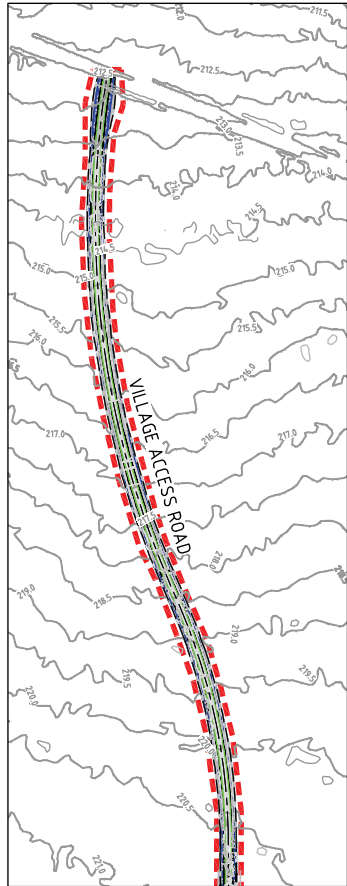


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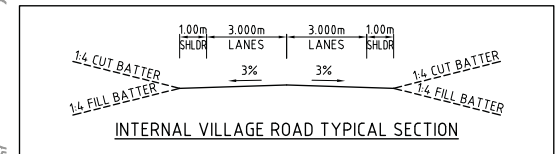
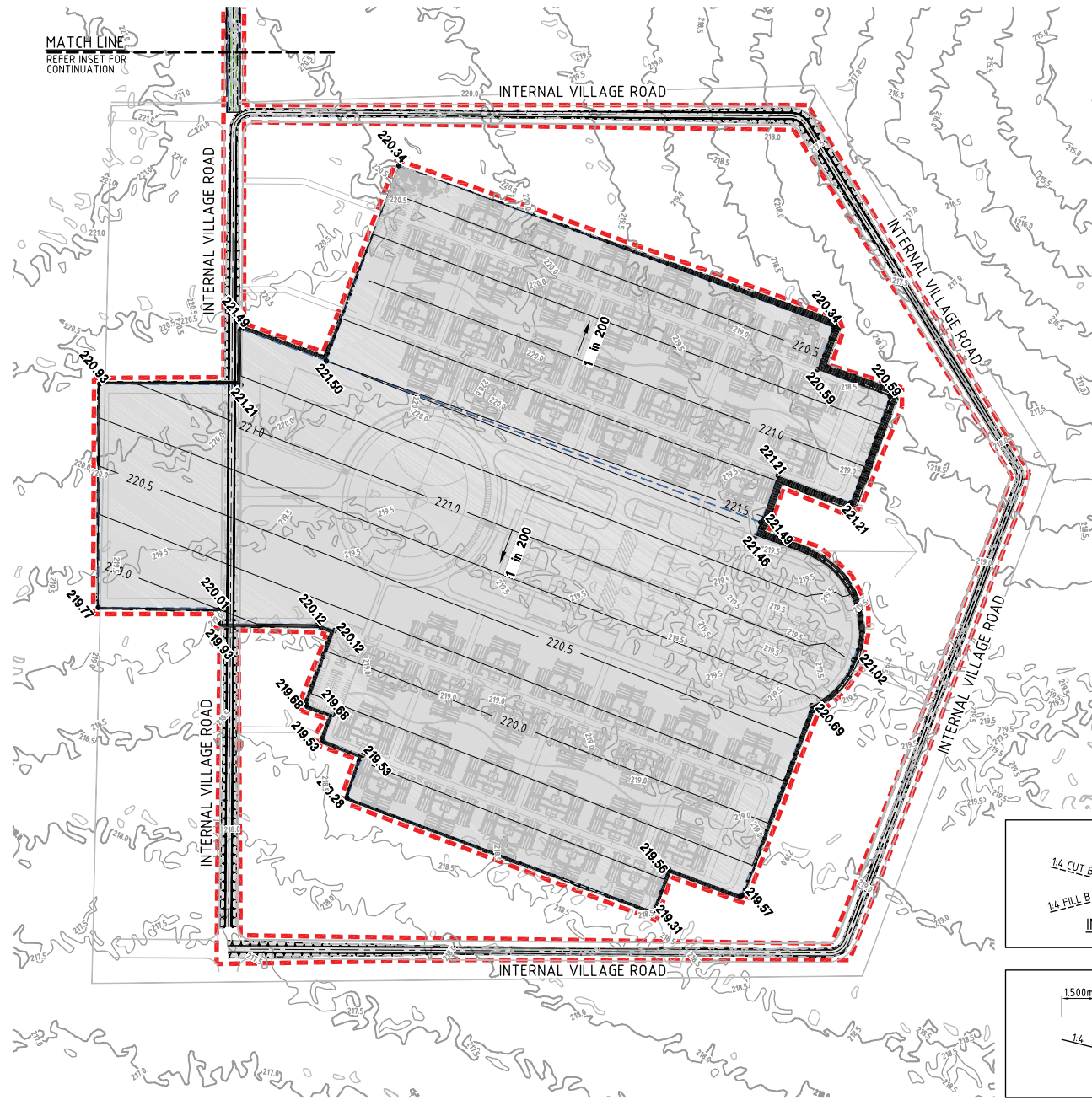
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	EARTHWORKS PAD AND LEVEL
	FILL
	CUT
	EARTHWORKS BOUNDARY

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FILL	516,062m ³
BALANCE	516,001m ³ IMPORT

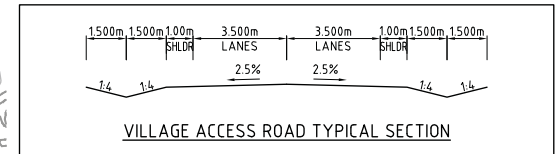
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BALANCE	15,041m ³ IMPORT



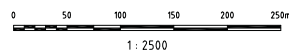
INSET



INTERNAL VILLAGE ROAD TYPICAL SECTION



VILLAGE ACCESS ROAD TYPICAL SECTION



1 : 2500

Surveyor

Client

Status

PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

Approved

R.P.E.O No : - - - -

Scales

1 : 2500

Current Issue Signatures

Original

A1

Height

AHD

Grid

GDA94

Author
G. MOLLOY

Designer
G. MOLLOY

Reviewer
S. RILEY

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Project

**CARMICHAEL MINE
DEVELOPMENT**

Title

**PRELIMINARY VILLAGE
BULK EARTHWORKS
LAYOUT PLAN**



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Drawing No. Project No. Issue
K032 — AA006158 — B

Filename: K032-AA006158-AAD-00-VILLAGE EARTHWORKS.DWG

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Issue	Description	By	Chd	Date
B	EARTHWORKS EXTENTS AMENDED	GM	SM	09.07.2013
A	ORIGINAL ISSUE	GM	SM	05.07.2013



ON SITE WATER
STORAGE AND WATER
TREATMENT PLANT

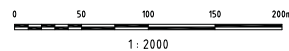
ON SITE SEWERAGE
TREATMENT PLANT

ON SITE POWER PLANT

LOW PRESSURE
SEWER RETICULATION

PROPOSED MINE WORKERS
ACCOMMODATION VILLAGE
SCALE - 1:1000

NOTE: ORIGINAL LAYOUT PREPARED BY PAUL/ZIUKELIS
ARCHITECTS-DRAWING A-A01 ISSUE B - ACCOMMODATION
VILLAGE CONCEPT DESIGN, CARMICHAEL QLD



A ORIGINAL ISSUE		T.P.	S.S.	09.07.2013
Issue	Description	By	Ckd	Date

Surveyor
Client
Filename: K034-AA006158-AAAD-00-VILLAGE ENG SERVICES.DWG

adani™

Status PRELIMINARY NOT TO BE USED FOR CONSTRUCTION	
Approved R.P.E.Q. No. : - - - -	
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	Author T. PHAN
Original Size	A1
Height	AHD
Datum	Reviewer C. HOWARD
Grid	GDA94
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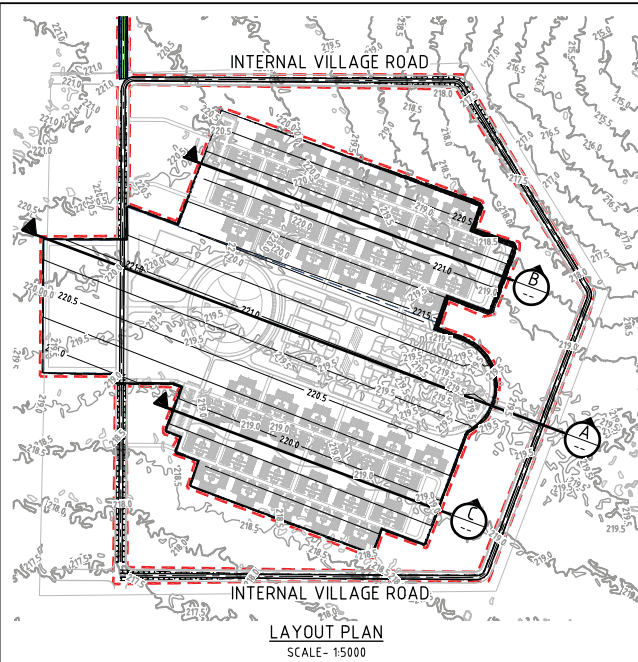
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		HYDER CONSULTING Pty Ltd ABN 76 104 485 289 Level 7, 199 Grey Street Locked Bag 2017 South Brisbane, QLD 4101 Australia Tel: +61 7 3337 0000 Fax: +61 7 3337 0050 Web: www.hyderconsulting.com	
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Issue	A	Issue	A

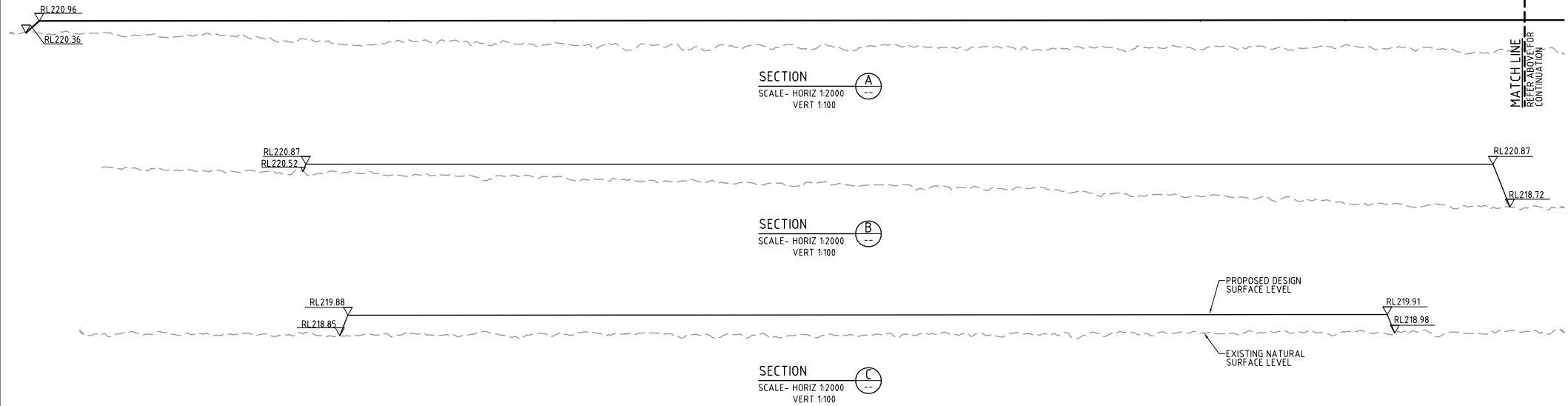
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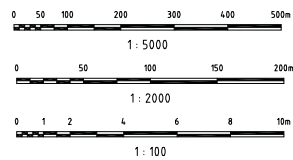
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LAYOUT PLAN
SCALE - 1:5000



A ORIGINAL ISSUE		GM	SM	05.07.2013
Issue	Description	By	Chd	Date



Surveyor
Client
Filename: K040-AA006158-AAD-00-VILLAGE BULK SECTIONS.DWG



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Approved	R.P.E.O No : - - - -	
Scales	PLAN- 1:5000 HORIZ- 1:2000 VERT- 1:100	Current Issue Signatures Author: S. GORMAN Designer: G. MOLLOY Reviewer: S. MILEY
Original Size	A1	
Height Datum	AHD	
Grid	GDA94	© Copyright reserved

Project	CARMICHAEL MINE DEVELOPMENT	
Title	PRELIMINARY VILLAGE BULK EARTHWORKS SITE CROSS SECTIONS	

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Drawing No.	Project No.	Issue
K040	AA006158	A

Appendix G: Stormwater Management



Adani Carmichael Mine - Mine Workers Accommodation Village

Site Based Stormwater Management Plan

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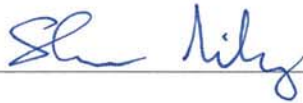


ADANI MINING PTY LTD

CARMICHAEL MINE - MINE WORKERS ACCOMMODATION VILLAGE

Site Based Stormwater Management Plan

Mine Workers Accommodation Village

Author	Sunny Seshadri	
Checker	Shane Miley	
Approver	Chris Howard	
Report No	F0004-AA006158-AAR-01	
Date	July 2013	

This report has been prepared for Adani Mining Pty Ltd in accordance with the terms and conditions of appointment for engineering services dated 13th June 2013. Hyder Consulting Pty Ltd (ABN 76 104 485 289) cannot accept any responsibility for any use of or reliance on the contents of this report by any third party.

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APPENDICES

- Appendix A** **Engineering Drawings**
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- Appendix C** **MUSIC Modelling Layout**
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1 EXECUTIVE SUMMARY

Gassman Development Perspectives have appointed Hyder consulting on behalf of Adani Mining Pty Ltd (Adani) to undertake an assessment of the stormwater management strategy required to service the Mine Workers Accommodation Village ('MWAV') associated with the planned Carmichael Coal Mine. The site is located approximately 160kms west of Moranbah, Central Queensland on land described as Lot 662 on Crown Plan PH1491

This Site Based Stormwater Management Plan details the stormwater quality and quantity measures with respect to the engineering planning considerations associated with a Development Approval. The proposed development is located within the Isaac Regional Council (IRC). The site is currently being used as cattle grazing property colloquially known as 'Moray Downs'.

A Preliminary Engineering Services Report (Refer document A0001-AA006158-AAR-01-ESR Accommodation village) has also been prepared by Hyder Consulting to specifically address the engineering services and infrastructure requirements associated with the development.

2 SITE CHARACTERISTICS

2.1 EXISTING TOPOGRAPHY AND SITE DRAINAGE

The site of the MWAV is located approximately 160kms west of Moranbah, Queensland in the Isaac Regional Council. The development area is approximately 102.9Ha and is situated within Lot 662 on PH1491, close to the Moray Carmichael Road.

Contours obtained from Lidar survey reveals that the the proposed site is situated at levels between RL 217.50 m AHD and 221 m AHD. The existing site topography naturally forms into three separate catchments with one catchment grading to the north-east and the other catchments grading to the south-eastern corner of the lot.

2.2 PROPOSED DEVELOPMENT

It is proposed to establish the MWAV to support the mine workers working at the Carmichael Coal Mine. The developed site is to contain accommodation units to house a total of 3500 staff with all associated services including sewerage, electricity and potable water.

The proposed development will be constructed in fill in order to incorporate the proposed stormwater catchment strategy. Refer to Engineering Drawings K032 & K037-AA006158 in Appendix A for details of proposed Bulk Earthworks & Stormwater Drainage Layout.

The proposed development has incorporated water sensitive urban design measures throughout the early planning phase to ensure that all necessary stormwater quality and quantity objectives are met.

3 STORMWATER QUANTITY

3.1 OBJECTIVES

The main objective of this assessment is to demonstrate that the proposed development will not exceed pre-development peak discharge rates for a range of storm frequencies.

Appropriate stormwater detention measures are required for the developed catchment to ensure that there is no increase in peak discharge flow rates downstream. On-site detention will be designed for all storm events up to and including Q100 year ARI for the catchment. This will be done via the sizing of detention volumes and assessment using methods outlined in the Queensland Urban Drainage Manual 2008 (QUDM) and detailed below.

As mentioned previously, the existing site and proposed development will be split into 3 separate catchments 1, 2 and 3 (refer to drawing K037-AA006158 in Appendix A for catchment details). It is proposed to convey stormwater flows above ground in open channel drainage reserves.

3.2 EXISTING CONDITION

In the existing case analysis the time of concentration for the above sub-catchment areas has been derived in accordance with QUDM (Section 4.06.6). The method used requires parameters including the length of the flow path, the catchment area and the slope of surface.

The Coefficient of Discharge for each of the sub-catchments was determined by assessing the fraction impervious of each catchment (Table 4.05.3(a) of QUDM). Using the above parameters, a combination of Friends equation and Argue (1986) (QUDM figure 4.09) was adopted to determine the time of concentration for the determination of flow rates for the catchment.

The rational method, as prescribed by QUDM Section 4.03 was then used to determine discharging flow rates for each sub-catchment for standard Average Return Intervals (ARI's) of 1, 2, 5, 10, 20, 50 and 100 years. Table 3.1 below shows a summary of results for discharge flow rates for catchment 1, 2 and 3. Detailed Rational Method calculations are also included in Appendix D.

Table 3.1 – Existing condition Discharge Flow rates

Catchment	Area (m ²)	Q1 (m ³ /s)	Q2 (m ³ /s)	Q5 (m ³ /s)	Q10 (m ³ /s)	Q20 (m ³ /s)	Q50 (m ³ /s)	Q100 (m ³ /s)
1	29.2	1.39	1.91	2.79	3.35	4.09	5.31	6.21
2	19.52	0.69	0.95	1.38	1.65	2.01	2.61	3.05
3	22.48	0.85	1.17	1.70	2.04	2.49	3.23	3.78

3.3 DEVELOPED CONDITION

Similar to the existing condition, the Rational Method was used to estimate the peak flow rates discharging from the developed condition sub catchment areas of MWAV. As discussed above, the Coefficient of Discharge value for the developed site conditions was determined from Table 4.05.3(a) of QUDM.

In the developed case analysis a combined application of standard inlet times for rural residential and flow time through piped reticulation has been employed to determine the time of concentration (QUDM Sections 4.06.5 and 4.06.7).

Due to the flat grades expected across the development area of MWAV, pipe drainage is expected to be limited to cross culverts utilised under roadways and footpaths to maintain trafficability during lower ARI events.

A summary of the results of the 1, 2, 5, 10, 20, 50 and 100 year ARI developed peak flow rates (with no detention) from the contributing sub catchment areas 1, 2 and 3 of the MWAV are provided in Table 3.2 below.

Table 3.2 – Developed condition Discharge Flow rates

Catchment	Area (m ²)	Q1 (m ³ /s)	Q2 (m ³ /s)	Q5 (m ³ /s)	Q10 (m ³ /s)	Q20 (m ³ /s)	Q50 (m ³ /s)	Q100 (m ³ /s)
1	29.2	2.08	2.87	4.21	5.07	6.19	8.05	9.43
2	19.52	1.96	2.70	3.96	4.76	5.81	7.47	8.39
3	22.48	1.64	2.26	3.31	3.99	4.87	6.34	7.43

3.4 PRELIMINARY ONSITE DETENTION

A preliminary assessment of the on-site detention storage requirements for the proposed MWAV development area has been carried out using the initial sizing techniques outlined in Section 5.05.1 of QUDM. Based on the comparison of results outlined in Section 3.2 and 3.3 above, it will be necessary to incorporate on-site detention storage in order to maintain peak outflows equivalent to the existing conditions.

The on-site detention storage proposed for the site will be sized to maintain the equivalent pre-developed condition peak flows for local catchment rainfall events up to and including the 100 year ARI rainfall event. To control the peak rates of discharge from the nominated storage volume it will be necessary for the outlet arrangements to be designed to maintain the existing peak flows.

A comparison of the existing and developed condition peak flows for the mine camp site indicated that the 100 year ARI storm event resulted in the greatest increase in peak discharge. The results of the preliminary on-site detention analysis indicate that a minimum detention storage volume of approximately 4000m³ for catchment 1 and 11,600 m³ catchment 2 and 3 will be required to detain the increase in the 100 year ARI discharge and maintain the equivalent pre-developed 100 year ARI peak flow discharging off site.

It should be noted that the volume outlined may be subject to change if the final catchment areas differ from those adopted for this assessment. The stage storage characteristics and outlet configuration of the detention basin will also be verified as part of the detailed design of the civil works for Mine Workers Accommodation Village.

In accordance with Section 5.11 of QUDM it is recommended that any ponding within the basin should be limited to 1.2 metres at the deepest point above the basin invert. For deeper basins, suitable safety provisions (such as refuge mounds within large basins, fences and warning signs) should be provided.

Detailed stormwater detention calculations area included in Appendix D.

3.5 FLOOD IMMUNITY

As discussed in section 2.1 above, the MWAV site is located on a natural ridge with levels across the site ranging from 217.5m AHD to 221m AHD.

The nearest likely source of flooding to the development is Eight Mile Creek which runs approximately 1km to the north of the subject site. Given that the invert level of Eight Mile Creek in this area is below 210m AHD (over 7m below the lowest existing level at the MWAV site), it is not envisaged that flood inundation will occur over the development as a result of waterway flooding.

It is recommended that further investigations into flood levels from Eight Mile Creek are carried out at detailed design stage and that minimum habitable floor levels are set based on these findings.

4 STORMWATER QUALITY

4.1 ENVIRONMENTAL VALUES AND WATER QUALITY OBJECTIVES (WQO)

Water quality parameters and the proposed limits applicable for this site have been selected in accordance with the State Planning Policy Healthy Waterways (4/10). The Water Quality Indicator Values stipulated by Council are as follows:

Table 4.1: Construction Phase Performance Criteria

Pollutant	Criteria
Total Suspended Solids	90 th %ile <50mg/L
pH	6.5 – 8.5
Dissolved Oxygen	90 th %ile > 6mg/L
Hydrocarbons	No visible sheen on receiving waters
Litter	No visible litter washed from site

Table 4.2 Water Quality Operational Phase Performance Criteria

The Queensland State Planning Policy for Healthy Waters (SPP 4/10) (2011) is the statutory instrument that expresses the State's interest in protecting water quality environmental values and provides guidelines for planning, assessment and approval of proposed development.

The SPP 4/10 identifies the procedures provided in Chapter 2 of the Urban Stormwater Quality Planning Guidelines (2010) as the required approach to stormwater planning.

Therefore, in accordance with Table 2.2 of the Urban Stormwater Quality Planning Guidelines(2010), the design objectives for the management of Stormwater quality for the operational phase of development have been identified as per Table 12.2 below:

- 85% reduction in Total Suspended Sediment (TSS);
- 45% reduction in Total Nitrogen (TN);
- 70% reduction in Total Phosphorus (TP); and
- 90% reduction in litter or Gross Pollutants sized 5 mm or greater (GP).

Water quality parameters which are to be protected during the construction and operational phase of this development have been adopted to match the Water Quality Objectives listed above.

During the construction phase, the most significant water quality objective will be that of suspended solids. To eliminate any environmental harm that may occur it is proposed that runoff from the disturbed areas will be directed to the proposed detention basins which will act as temporary sediment basins. These temporary works will be installed at the start of construction to contain most of the treatment within the site.

During the operational phase, the most significant pollutant for a development will be litter, oils and nutrients namely phosphorous and nitrogen. A combined treatment train of rainwater tanks and bio-retention systems is proposed to appropriately control the quality of the stormwater runoff from the site.

4.2 PROPOSED STORMWATER IMPROVEMENT DEVICES (OPERATIONAL PHASE)

Water Sensitive Urban Design (WSUD) aims to minimise the impact of a development on the natural water cycle by reducing the export of pollutants, sediments and nutrients from the site into the natural watercourse. The following section provides general details of the stormwater treatment concepts of devices proposed to be employed within the development. Details of the specific modelling inputs and required dimensions and specifications of the devices are provided in Section 4.3

4.2.1 TURF BUFFER STRIPS / VERGES

Buffers are usually fully turfed areas that are constructed between the road pavement, allotment, swales or bio-retention systems. These areas provide treatment of the stormwater runoff by primarily removing suspended solids, litter and gross pollutants. These devices also have ability to remove some oils and greases.

Figure 4.1 – Turfed Buffer Strips



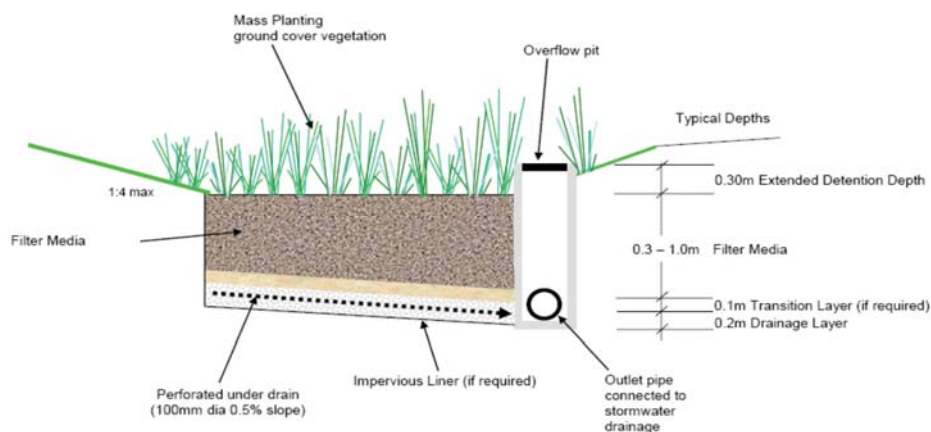
Where possible, buffer strips are to be included in landscaping areas to receive lateral sheet flow from impervious areas prior to collection by the stormwater reticulation. Buffer strips have not been included in the stormwater quality modelling of the subject site, as the exact locations and efficiency are subject to detailed landscape design.

4.2.2 BIO-RETENTION AREAS

A bio-retention basin is a vegetated area where runoff is filtered through a filter media layer (e.g. sandy loam) as it percolates downwards. It is then collected via perforated under-drains and flows to downstream waterways or to storages for re-use. Bio-retention basins operate by filtering stormwater runoff through densely planted surface vegetation and then percolating runoff through a prescribed filter media.

The type of filter media determines the effectiveness of the pollutant removal, with material of lower hydraulic conductivity providing the most efficient pollutant removal. Bio-retention systems aid in the removal of suspended solids, total Phosphorus and total Nitrogen.

Figure 4.2 – Bio-Retention Typical Cross Section (courtesy of Healthy Waterways)



The stormwater treatment efficiency of the proposed bio-retention areas has been modelled as part of the overall treatment train. Details of the modelling inputs and specifications of the bio-retention areas are presented in Section 4.3.

4.2.3 RAINWATER TANKS

Rainwater tanks behave as stormwater quality improvement devices by removing stormwater from the treatment train which is used for irrigation, toilet flushing and various other non-potable uses. It is therefore considered appropriate to assume and model a volume of rainwater capture and re-use in the assessment of stormwater quality and treatment train effectiveness.

4.2.4 STORMWATER QUALITY IMPROVEMENT DEVICES (SQID)

Proprietary stormwater quality improvement devices are predominantly used to remove gross pollutants and most suspended solids. They are most useful in circumstances where usable space is restricted for the treatment of stormwater on site. SQID devices have not been included in the stormwater quality modelling of the proposed development.

4.3 STORMWATER QUALITY MODELLING (MUSIC)

Modelling of the site was undertaken using the 'Model for Urban Stormwater Improvement Conceptualisation (MUSIC)' as promoted by the South East Queensland Healthy Waterways Partnership. An appropriate type of land use was applied to the developed catchment and a treatment system was assigned within the relevant modelling treatment parameters.

Meteorological data for input to MUSIC was obtained from the Bureau of Meteorology. Six-minute time step rainfall data was obtained from the year 1997 to 2006.

The catchment parameters of the MUSIC modelling were amended in accordance with the South East Queensland Healthy Waterways Partnerships' Water by Design MUSIC Modelling Guidelines for South East Queensland Version 1 (2010).

4.3.1 POLLUTANT SOURCE NODE DETAILS

Table 4.3 and 4.4 below show the pollutant source node parameters which were input in the MUSIC model.

Table 4.3 Rainfall – Runoff Parameters

	Commercial	Rural Residential
Rainfall Threshold (mm)	1	1
Soil Storage Capacity (mm/day)	18	98
Initial Storage (%)	10	10
Field Capacity (mm)	80	80

Infiltration Capacity Coefficient - a	243	84
Infiltration Capacity Coefficient - b	0.6	3.3
Initial Depth (mm)	50	50
Daily Recharge Rate (%)	0	100
Daily Baseflow Rate (%)	31	22
Daily Seepage rate (%)	0	0

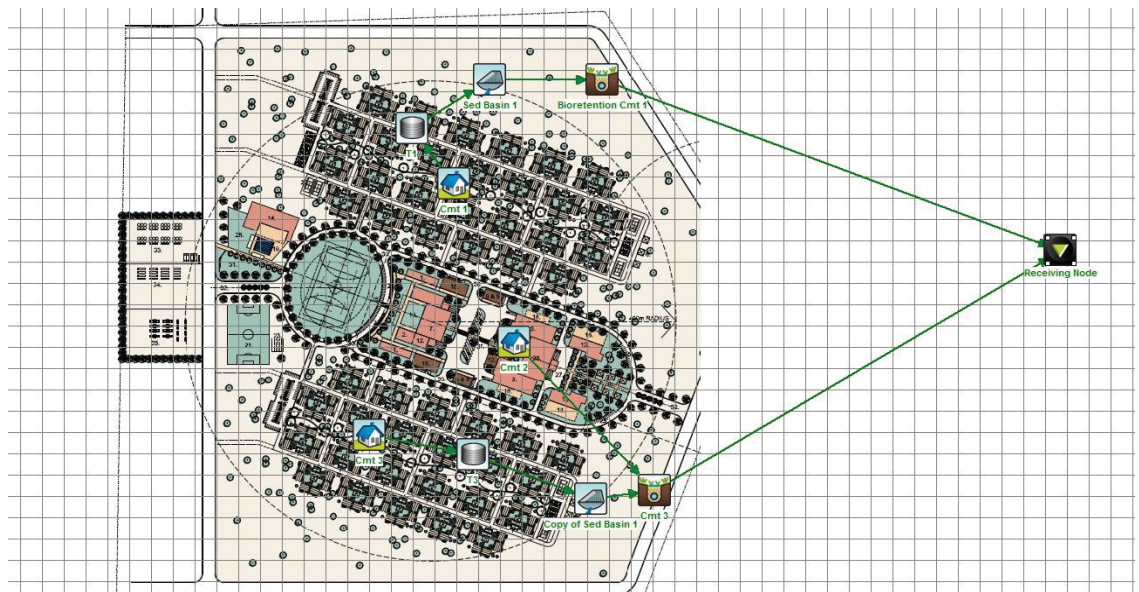
Table 4.4 Rainfall – Lumped Runoff Parameters

		Commercial	Rural Residential
TSS Base Flow	Mean (log mg/L)	0.78	0.53
	Std Dev (log mg/L)	0.39	0.24
TSS Storm Flow	Mean (log mg/L)	2.16	2.26
	Std Dev (log mg/L)	0.38	0.51
TP Base Flow	Mean (log mg/L)	-0.60	-1.54
	Std Dev (log mg/L)	0.50	0.38
TP Storm Flow	Mean (log mg/L)	-0.39	-0.56
	Std Dev (log mg/L)	0.34	0.28
TN Base Flow	Mean (log mg/L)	0.32	-0.52
	Std Dev (log mg/L)	0.30	0.39
TN Storm Flow	Mean (log mg/L)	0.37	0.32
	Std Dev (log mg/L)	0.30	0.30

4.3.2 TREATMENT TRAIN DETAILS

Once the site is fully developed, the stormwater run-off from the developed site will be collected via a series of drainage systems and overland flow paths, eventually discharging into the bio-retention area. The layout of the site and the proposed drainage pattern were considered in the creation of the MUSIC model. Figure 4.3 below presents the layout of source, treatment and receiving nodes used in the modelling.

Figure 4.3 – MUSIC Model Layout



4.3.2.1 Rainwater Tank Details

Rainwater tanks are proposed to collect all stormwater runoff from roof areas within the development for re-use in toilet flushing and irrigation.

At the conceptual stage of planning, a simple re-use strategy for harvested rainwater has been modelled in MUSIC. A base approach of one 5,000L tank per module has been implemented to accommodate for rainwater reuse, with a total of 245KL for the entire MWAV. It has been assumed that a daily demand reuse of 0.108KL/day/ET would apply. This results in a daily demand reuse of 7.82KL/day per module, or 383.18KL/day for the entire MWAV.

4.3.2.2 Bio-Retention Basin Details

A bio-retention basin is proposed within each catchment of the development. It is proposed that each basin treat the stormwater runoff from the car parking areas, hardstand areas and roofs within the MWAV. The modelled parameters of the bio basin for MUSIC are as follows:

Table 4.5 Bio-Retention Basin Details

	Surface Area (m ²)	Ext Detention Depth (m)	Filter Area (m ²)	Filter Media Depth (m)
Bio Basin 1	6000	0.2	6000	0.6
Bio Basin 2	7000	0.2	7000	0.6

The basins sides shall be battered at max. 1:4 (V:H). Landscaping of the basin areas shall be in accordance with a suitably approved Landscape Design.

The bio-retention basin is made up of the following layers (from the bottom of the basin to the top of the batters):

1. 200mm drainage layer with 100mm slotted drainage pipes;
2. 100mm transition layer;
3. 600mm filter media layer (100 mm/hour saturate hydraulic conductivity);
4. 200mm extended detention layer;
5. 300mm freeboard to the top of batters; and
6. All batters are to be at 1:4.
7. Total Nitrogen content in filter media – 800 mg/kg
8. Total orthophosphate content in filter media – 45 mg/kg

4.3.2.3 Coarse Sediment Forebays

Due to the location and nature of dispersive soils in the area, coarse sediment forebays have been implemented to assist in achieving the water quality objectives. Table 4.6 below summarises the parameters of the sediment forebays:

Table 4.6 – Coarse Sediment Forebays Details

Catchment	Area (m ²)	Depth (mm)	Extended detention (mm)	Permanent Pool volume (m ³)	Exfiltration rate (mm/hour)	Evaporative Loss	Outlet pipe diameter (mm)	Weir width (m)
1	400	300	500	120	0	125	375	2
2	400	300	500	120	0	125	375	2

4.3.3 MUSIC MODELLING RESULTS

The proposed stormwater treatment train has been modelled in MUSIC to assess the load reduction achievements and to ensure that the operational phase performance criteria is met in accordance with Table 4.2. The results of the of the MUSIC modelling exercise are presented below:

Figure 4.4 – MUSIC Model Results

Treatment Train Effectiveness - Receiving Node			
	Sources	Residual Load	% Reduction
Flow (ML/yr)	197	169	14.6
Peak Flow (m3/s)	17.9	16.6	7.4
Total Suspended Solids (kg/yr)	57.1E3	5.43E3	90.5
Total Phosphorus (kg/yr)	86.0	22.6	73.7
Total Nitrogen (kg/yr)	560	238	57.5
Gross Pollutants (kg/yr)	4.70E3	0.00	100.0

The above table shows that the load-reduction targets shown for the development have been achieved. Therefore, sufficient consideration of stormwater controls has been made at this conceptual stage of the development to demonstrate:

- Compliance with QUDM;
- Compliance with the State Planning Policy 4/10 Healthy Waterways; and
- Ecological sustainability in terms of the development's impact upon receiving waters; and the viability of the proposed site development.

4.4 CONSTRUCTION PHASE

During the construction phase of the development, an Erosion and Sediment Control Program will be implemented to minimise water quality impacts. A detailed Erosion and Sediment Control Program will be employed throughout the site. The sediment control measures shall include a temporary sediment basin, silt fences and diversion channels for clean stormwater run-off.

The following sections details the construction phase requirements to ensure the protection of stormwater quality.

4.4.1 PRE-CONSTRUCTION

- Designating and delineating buffer strips adjacent to the existing vegetation to be retained and Protected Vegetation Zones. No plant operations will occur within the buffer strips.
- Sediment fences are to be constructed on the upstream edges of the designated buffer strips and at the base of fill embankments.
- Areas for plant and construction material storage are to be designated along with associated diversion drains and spillage holding ponds.
- Diversion banks are to be created at the upstream boundary of construction activities to ensure upstream runoff is diverted around any exposed areas. Catch drains are to be created at the downstream boundary of construction activities.

- Silt fences and/or sand bags are to be placed along the catch drains to slow runoff, reduce scour and capture some sediment from runoff.
- Construction of a temporary sediment basin at the location of the prescribed bio-retention and detention basins.
- Site personnel are to be educated on the sediment and erosion control measures implemented on site.

4.4.2 DURING CONSTRUCTION

- Progressive re-vegetation of filled areas and batters.
- Construction activities are to be confined to the necessary construction areas.
- The provision of a 'vehicle shakedown' to prevent the tracking of debris from tyres of vehicles onto public roads. Only one construction exit will be nominated to limit the movement of construction equipment.
- The topsoil stockpile location will be nominated to coincide with areas previously disturbed. A sediment fence is to be constructed around the bottom of the stockpile to trap sediment. A diversion drain is to be installed upstream of the stockpile if required.
- Regular inspection and maintenance of silt fences, sediment basins and other erosion control measures. Following rainfall events greater than 50mm inspection of erosion control measures and removal of collected material should be undertaken. Replacement of any damaged equipment should be performed immediately.

It is important to note that the proposed bio-retention and detention basins can serve as a temporary sediment basin during the construction stage of the development.

4.4.3 POST CONSTRUCTION

The Contractor/Developer will be responsible for the maintenance of erosion and sediment control devices from the possession of the site until stabilisation has occurred to the satisfaction of the superintendent and Council. Key stormwater quality improvement devices requiring maintenance during the operational phase of the project following construction are the grassed buffer areas and the bio-retention areas.

Maintenance requirements for these devices consist of:

- Regular inspections;
- Ensure sufficient vegetation within verges, swales and bio-retention areas;
- No erosion has occurred;
- Regular mowing/harvesting to ensure vegetation is maintained at acceptable levels; and
- Removal of litter within verges, swales and bio-retention areas;

4.5 WATER QUALITY MONITORING PROGRAM

This development does propose the use of water sensitive practices and the associated stormwater quality management practices at the outlet areas.

In compliance with the State Planning Policy 4/10 Healthy Waters the proposed development must achieve the objectives outlined above during the construction phase of development.

By adopting the recommended actions and responses to specific activities, the monitoring and reporting, and the construction of the control measures as outlined in this report, these objectives should be suitably achieved by the Contractor.

Records of release of sediment-laden stormwater from the site and inspection records will be developed. It is intended that each release resulting from a storm event generating more than 100mm in a twenty-four hour period shall be recorded to ensure ongoing monitoring, management and reporting of releases from the site.

5 CONCLUSION

The Site Based Stormwater Management Plan has been prepared to provide a design proposal and guide to the stormwater quantity and quality management techniques for the proposed Mine Workers Accommodation Village. This report includes details for the stormwater modelling that predicts the peak runoff within the site. Sufficient consideration for stormwater controls has been made at this preliminary design stage of the development to demonstrate the main objectives of this SMP, being:

1. The existing stormwater runoff from catchments 1, 2 and 3 are maintained and where necessary, suitable measures are incorporated in the development to ensure that there is no environmental impacts resulting from an increase to peak discharging stormwater flow rates as a result of the development.
2. Details of the proposed stormwater quality treatment are provided to ensure the discharge of stormwater from the site is of adequate quality to comply with the requirements of State Planning Policy Urban Development pollutant reduction targets.

The hydrological assessment determined that there would be an increase in stormwater runoff as a result of the development. The resultant increase will be negated by the use of a detention basin as specified within this report. As such, the developed site will not affect the peak flows on the downstream infrastructure.

This document illustrates that sufficient treatment of stormwater runoff for quality requirements in accordance with Water Sensitive Urban Design principles will be achieved through the use of various treatment devices at different phases of the development.

APPENDIX A

ENGINEERING DRAWINGS

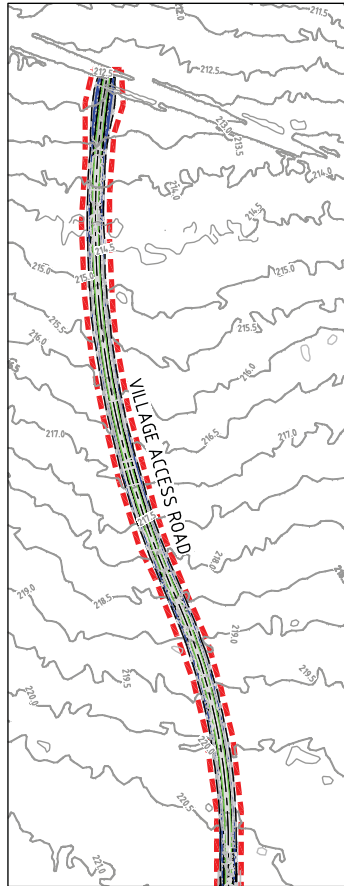


MATCH LINE
REFER INSET FOR
CONTINUATION

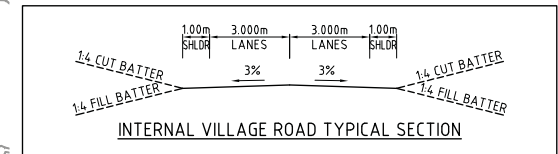
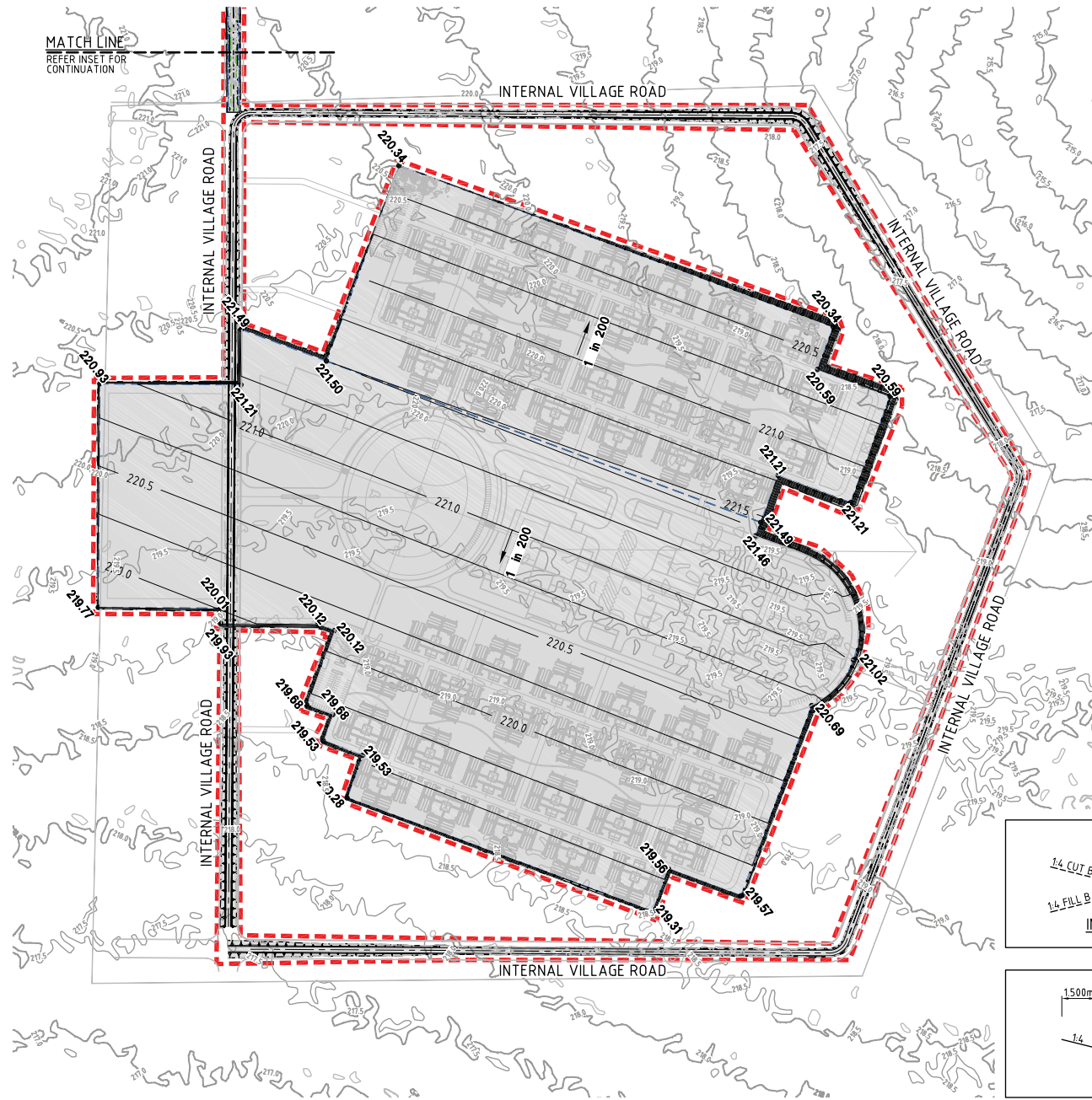
LEGEND	
	EARTHWORKS PAD AND LEVEL
	FILL
	CUT
	EARTHWORKS BOUNDARY

BULK EARTHWORKS VOLUMES	
CUT	60m ³
FILL	516,062m ³
BALANCE	516,001m ³ IMPORT

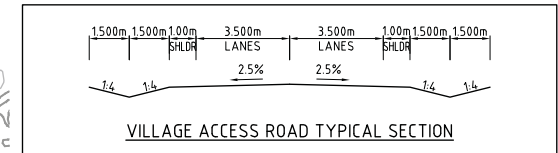
ROAD EARTHWORKS VOLUMES	
CUT	703m ³
FILL	15,744m ³
BALANCE	15,041m ³ IMPORT



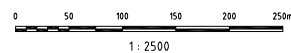
INSET



INTERNAL VILLAGE ROAD TYPICAL SECTION



VILLAGE ACCESS ROAD TYPICAL SECTION



1 : 2500

Surveyor

Client

Status

PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

Project

CARMICHAEL MINE
DEVELOPMENT

Approved

R.P.E.O No : - - - -

Scales

1 : 2500

Current Issue Signatures

Original

A1

Height

AHD

Grid

GDA94

Reviewer
S. MILEY

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Title

**PRELIMINARY VILLAGE
BULK EARTHWORKS
LAYOUT PLAN**



HYDER CONSULTING Pty Ltd
ABN 76 104 485 289
Level 7, 199 Grey Street
Locked Bag 2017
South Brisbane, QLD 4101
Australia

Tel: +61 7 3337 0000
Fax: +61 7 3337 0050
Web: www.hyderconsulting.com

Drawing No. K032 Project No. AA006158 Issue B

Filename: K032-AA006158-AAD-00-VILLAGE EARTHWORKS.DWG

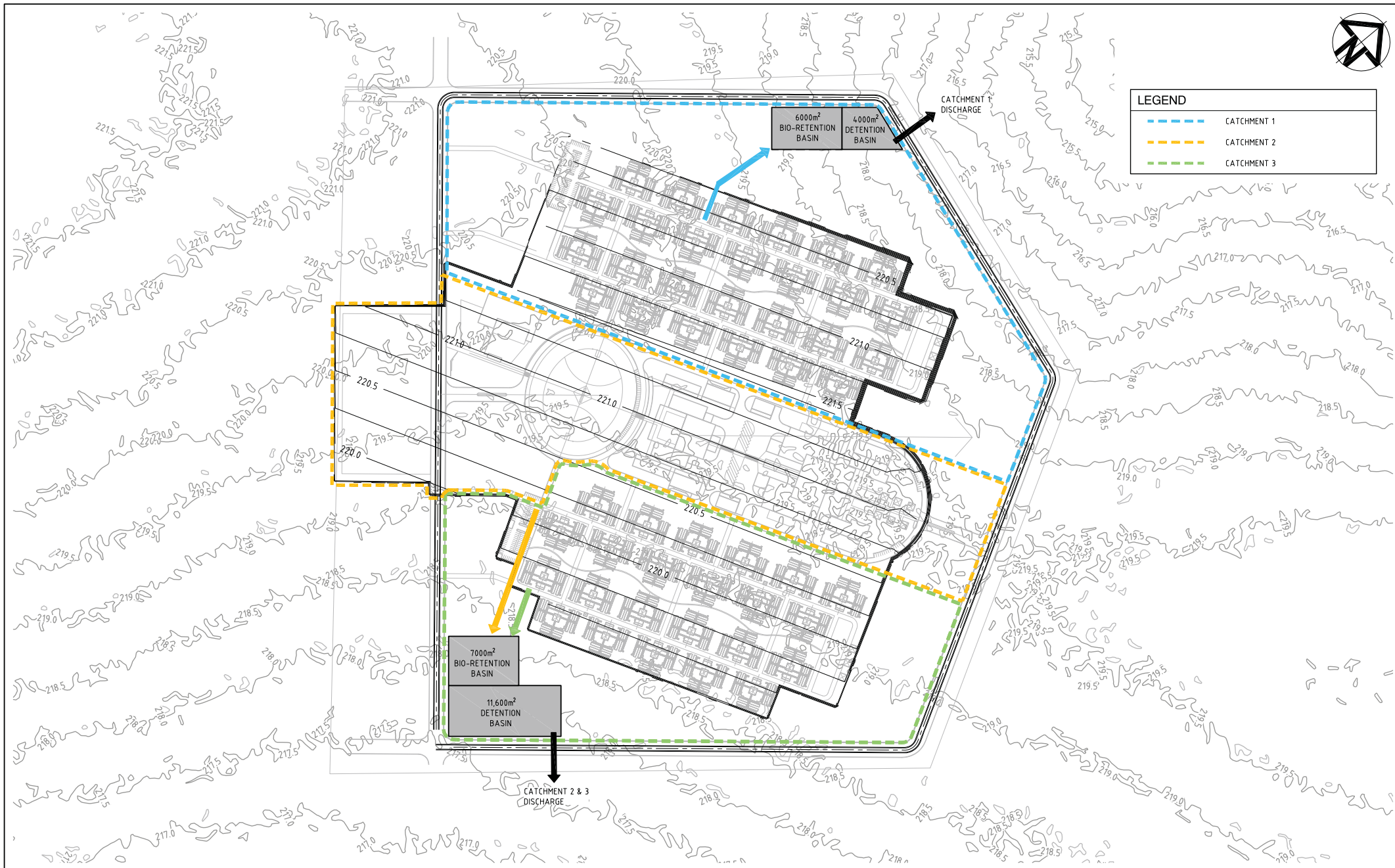
Issue	Description	By	Chd	Date
B	EARTHWORKS EXTENTS AMENDED	GM	SM	09.07.2013
A	ORIGINAL ISSUE	GM	SM	05.07.2013

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			Surveyor		Client		Status PRELIMINARY NOT TO BE USED FOR CONSTRUCTION		Project CARMICHAEL MINE DEVELOPMENT	
A ORIGINAL ISSUE			Approved		R.P.E.O No. : - - - -		Scales 1: 2500		Title MINE WORKERS ACCOMMODATION VILLAGE STORMWATER MANAGEMENT LAYOUT PLAN	
Issue			Original Size		Height		Original Date		Hyder Consulting Pty Ltd ABN 76 104 485 289 Level 7, 199 Grey Street Locked Bag 2017 South Brisbane, QLD 4101 Australia Tel: +61 7 3337 0000 Fax: +61 7 3337 0050 Web: www.hyderconsulting.com	
By			Grid		Current Issue Signatures		Author G. MOLLOY		Drawing No. K037	
Date			File name		Designer G. MOLLOY		Reviewer S. MILEY		Project No. AA006158	
10mm on original			Copyright reserved		10/Jul/2013 4:12 PM		\\hc-aus-bn-fs-01\jobs\AA006158\B-CAD\IC-Civil\B-Sketches\K037-AA006158-AA0-00-CATCHMENT.DWG		Issue A	

APPENDIX B

SITE SPECIFIC IFD CHARTS

Intensity-Frequency-Duration Table

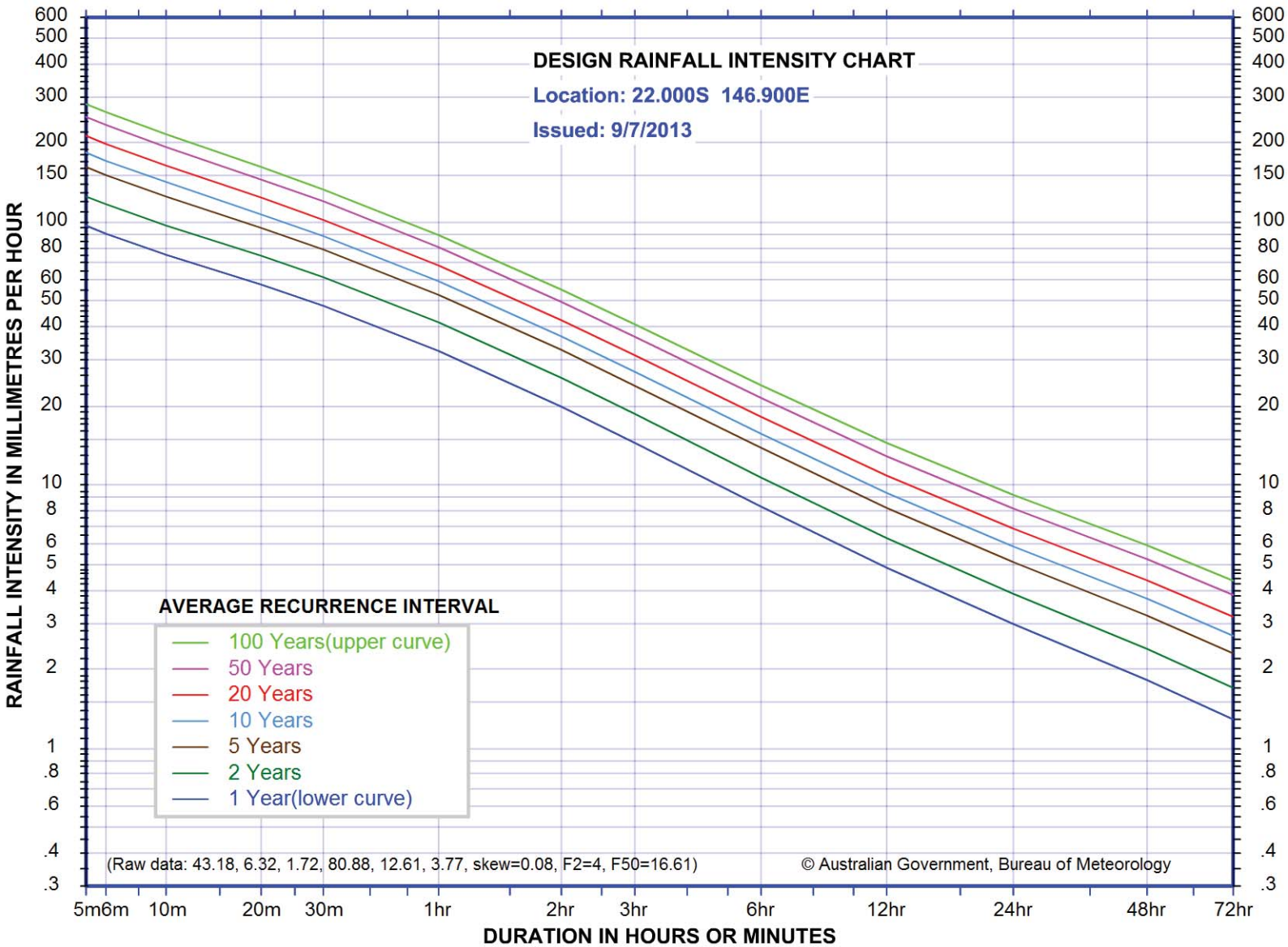
Location: 22.000S 146.900E Issued: 9/7/2013

Rainfall intensity in mm/h for various durations and Average Recurrence Interval

Average Recurrence Interval

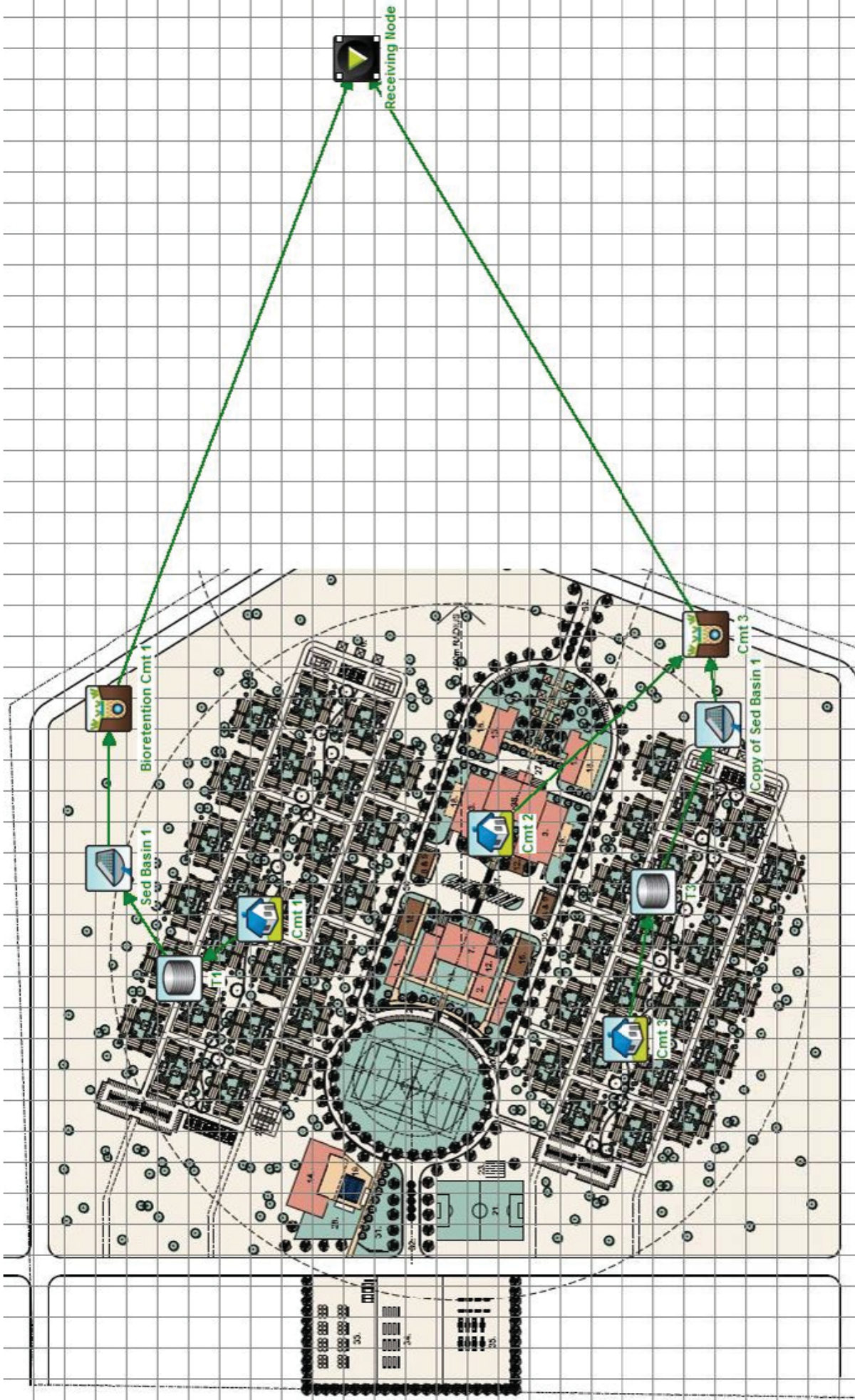
Duration	1 YEAR	2 YEARS	5 YEARS	10 YEARS	20 YEARS	50 YEARS	100 YEARS
5Mins	97.0	125	162	184	213	251	281
6Mins	90.3	117	151	171	198	234	262
10Mins	75.2	97.1	125	142	164	193	216
20Mins	57.9	74.5	95.1	107	124	145	162
30Mins	48.1	61.8	78.7	88.6	102	120	133
1Hr	32.4	41.6	52.9	59.6	68.5	80.3	89.3
2Hrs	19.9	25.6	32.7	36.8	42.4	49.8	55.4
3Hrs	14.5	18.7	23.9	27.0	31.2	36.7	40.9
6Hrs	8.31	10.7	13.9	15.7	18.2	21.5	24.0
12Hrs	4.86	6.30	8.21	9.36	10.9	12.9	14.5
24Hrs	2.97	3.87	5.11	5.86	6.85	8.17	9.20
48Hrs	1.82	2.39	3.20	3.71	4.35	5.24	5.92
72Hrs	1.29	1.70	2.30	2.68	3.17	3.83	4.34

(Raw data: 43.18, 6.32, 1.72, 80.88, 12.61, 3.77, skew=0.08, F2=4, F50=16.61) © Australian Government, Bureau of Meteorology



APPENDIX C

MUSIC MODELLING LAYOUT



APPENDIX D

CALCULATIONS



Project: Adani Carmichael
Project No.: AA006158
Designer: SM
Date: 3/07/2013

Rational Method Calculations

Project

Description

Time of Concentration minutes

Area of Catchment Hectares

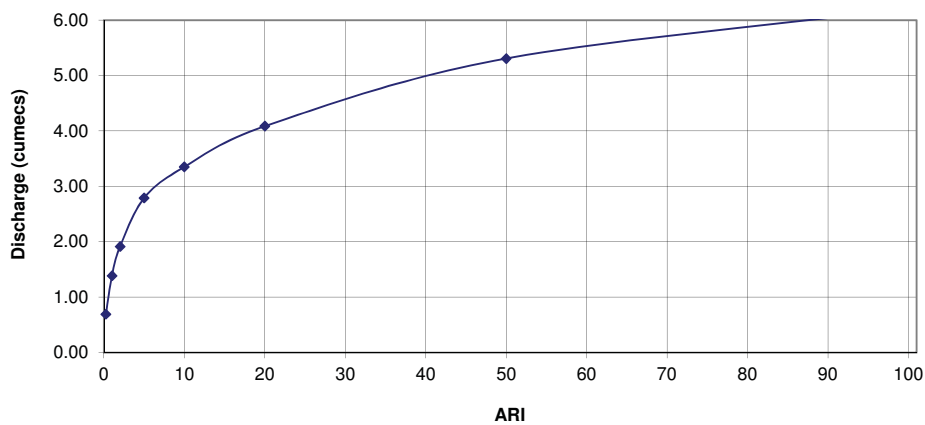
Fraction Impervious

Council Chart No.

Council Name

ARI	C value	Rainfall Intensity (mm/hr)	Discharge (m ³ /s)	Comments
3 _{month}			0.69	Write anything here that is applicable to the analysis
1 _{year}	0.48	35.64	1.39	
2 _{year}	0.51	46.23	1.91	
5 _{year}	0.57	60.33	2.79	
10 _{year}	0.60	68.83	3.35	
20 _{year}	0.63	79.92	4.09	
50 _{year}	0.69	94.77	5.31	
100 _{year}	0.72	106.22	6.21	

ARI vs Discharge





Project: Adani Carmichael
Project No.: AA006158
Designer: SM
Date: 2/07/2013

Rational Method Calculations

Project

Description

Time of Concentration minutes

Area of Catchment Hectares

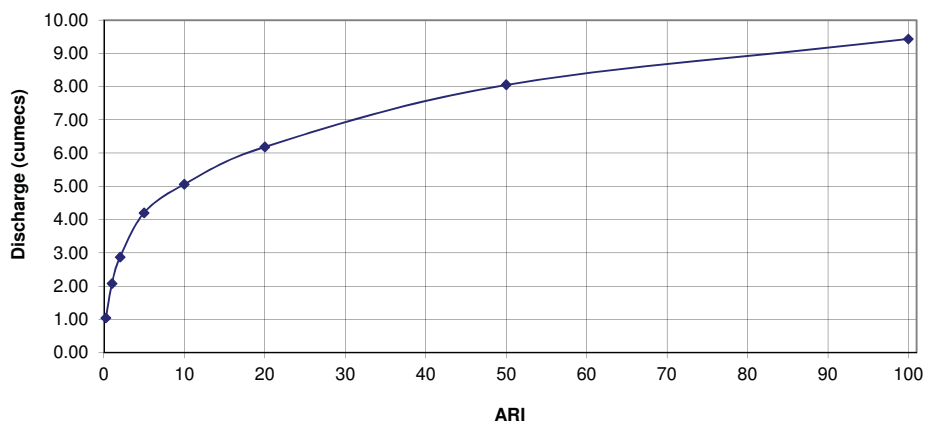
Fraction Impervious (Rural Residential - QUDM)

Council Chart No.

Council Name

ARI	C value	Rainfall Intensity (mm/hr)	Discharge (m ³ /s)	Comments
3 _{month}			1.04	Write anything here that is applicable to the analysis
1 _{year}	0.48	53.44	2.08	
2 _{year}	0.51	69.41	2.87	
5 _{year}	0.57	90.95	4.21	
10 _{year}	0.60	104.00	5.07	
20 _{year}	0.63	121.03	6.19	
50 _{year}	0.69	143.80	8.05	
100 _{year}	0.72	161.42	9.43	

ARI vs Discharge





CATCHMENT 1
PRELIMINARY SIZING OF DETENTION BASIN

PRELIMINARY SIZING

Time of Concentration=	20
Q2	1121
Q5	1660
Q10	2013
Q20	2458
Q50	3209
Q100	3774

Project: Adani Carmichael Mine
Project No.: AA006158
Designer: SM
Date: 4/07/2013

Q2 Estimation of Detention Basin Size

		Qi=peak inflow rate "Post-dev" =	2.87
		Qo=desired peak outflow rate "Pre-dev"=	1.91
		tc=time of peak "Post-dev" (min)=	20
r=(Qi-Qo)/Qi		r =	0.33449477
Vi = 4tcQi/3		Vi =	4592
Culp 1948			
$V_s/V_i = r(1+2r)/3 =$	0.1860894	$V_s=$	855 m ³
Boyd 1989			
$V_s/V_i = r =$	0.3344948	$V_s=$	1536 m ³
Carroll 1990			
$V_s/V_i = r(3+5r)/8 =$	0.1953648	$V_s=$	897 m ³
Basha 1994			
$V_s/V_i = r(2+r)/3 =$	0.2602921	$V_s=$	1195 m ³
		Average Vs =	1121 m³

Q5 Estimation of Detention Basin Size

		Qi=peak inflow rate "Post-dev" =	4.21
		Qo=desired peak outflow rate "Pre-dev"=	2.79
		tc=time of peak "Post-dev" (min)=	20
r=(Qi-Qo)/Qi		r =	0.33729216
Vi = 4tcQi/3		Vi =	6736
Culp 1948			
$V_s/V_i = r(1+2r)/3 =$	0.1882747	$V_s=$	1268 m ³
Boyd 1989			
$V_s/V_i = r =$	0.3372922	$V_s=$	2272 m ³
Carroll 1990			
$V_s/V_i = r(3+5r)/8 =$	0.1975883	$V_s=$	1331 m ³
Basha 1994			
$V_s/V_i = r(2+r)/3 =$	0.2627834	$V_s=$	1770 m ³
		Average Vs =	1660 m³

Q10 Estimation of Detention Basin Size

		Qi=peak inflow rate "Post-dev" =	5.07
		Qo=desired peak outflow rate "Pre-dev"=	3.35
		tc=time of peak "Post-dev" (min)=	20
r=(Qi-Qo)/Qi		r =	0.33925049
Vi = 4tcQi/3		Vi =	8112
Culp 1948			
$V_s/V_i = r(1+2r)/3 =$	0.189811	$V_s=$	1540 m ³
Boyd 1989			
$V_s/V_i = r =$	0.33925	$V_s=$	2752 m ³
Carroll 1990			
$V_s/V_i = r(3+5r)/8 =$	0.199151	$V_s=$	1616 m ³
Basha 1994			
$V_s/V_i = r(2+r)/3 =$	0.264531	$V_s=$	2146 m ³
		Average Vs =	2013 m³

Q20 Estimation of Detention Basin Size

		Qi=peak inflow rate "Post-dev" =	6.19
		Qo=desired peak outflow rate "Pre-dev"=	4.09
		tc=time of peak "Post-dev" (min)=	20
r=(Qi-Qo)/Qi		r =	0.33925687
Vi = 4tcQi/3		Vi =	9904
Culp 1948			
$V_s/V_i = r(1+2r)/3 =$	0.189816	$V_s=$	1880 m ³
Boyd 1989			
$V_s/V_i = r =$	0.339257	$V_s=$	3360 m ³
Carroll 1990			
$V_s/V_i = r(3+5r)/8 =$	0.199156	$V_s=$	1972 m ³
Basha 1994			
$V_s/V_i = r(2+r)/3 =$	0.264536	$V_s=$	2620 m ³
		Average Vs =	2458 m³

Q50 Estimation of Detention Basin Size

		Qi=peak inflow rate "Post-dev" =	8.05
		Qo=desired peak outflow rate "Pre-dev"=	5.31
		tc=time of peak "Post-dev" (min)=	20
$r=(Q_i-Q_o)/Q_i$		r =	0.340372671
$V_i = 4tcQ_i/3$		Vi =	12880
Culp 1948			
$V_s/V_i = r(1+2r)/3 =$	0.190693	Vs=	2456 m ³
Boyd 1989			
$V_s/V_i = r =$	0.340373	Vs=	4384 m ³
Carroll 1990			
$V_s/V_i = r(3+5r)/8 =$	0.200048	Vs=	2577 m ³
Basha 1994			
$V_s/V_i = r(2+r)/3 =$	0.265533	Vs=	3420 m ³
		Average Vs =	3209 m³

Q100 Estimation of Detention Basin Size

		Qi=peak inflow rate "Post-dev" =	9.43
		Qo=desired peak outflow rate "Pre-dev"=	6.21
		tc=time of peak "Post-dev" (min)=	20
$r=(Q_i-Q_o)/Q_i$		r =	0.341463415
$V_i = 4tcQ_i/3$		Vi =	15088
Culp 1948			
$V_s/V_i = r(1+2r)/3 =$	0.191553	Vs=	2890 m ³
Boyd 1989			
$V_s/V_i = r =$	0.341463	Vs=	5152 m ³
Carroll 1990			
$V_s/V_i = r(3+5r)/8 =$	0.200922	Vs=	3032 m ³
Basha 1994			
$V_s/V_i = r(2+r)/3 =$	0.266508	Vs=	4021 m ³
		Average Vs =	3774 m³



Project: Adani Carmichael
Project No.: AA006158
Designer: SM
Date: 3/07/2013

Rational Method Calculations

Project

Description

Time of Concentration minutes

Area of Catchment Hectares

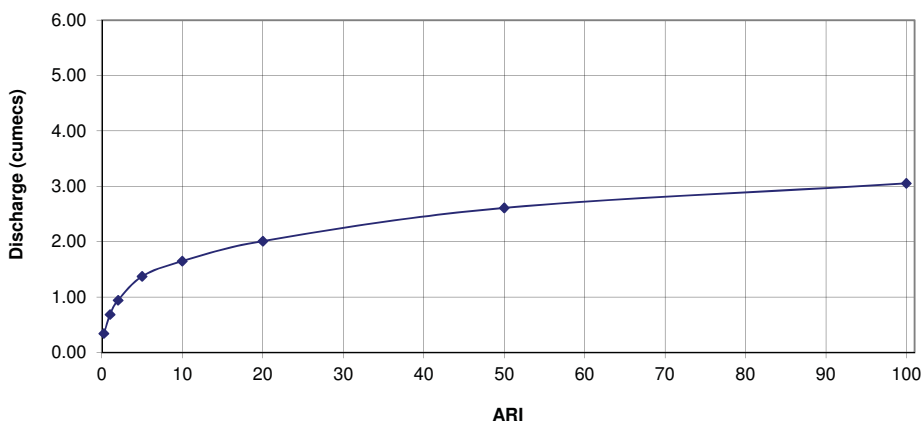
Fraction Impervious

Council Chart No.

Council Name

ARI	C value	Rainfall Intensity (mm/hr)	Discharge (m ³ /s)	Comments
3 _{month}			0.34	Write anything here that is applicable to the analysis
1 _{year}	0.48	26.35	0.69	
2 _{year}	0.51	34.16	0.95	
5 _{year}	0.57	44.53	1.38	
10 _{year}	0.60	50.76	1.65	
20 _{year}	0.63	58.90	2.01	
50 _{year}	0.69	69.79	2.61	
100 _{year}	0.72	78.18	3.05	

ARI vs Discharge





Project: Adani Carmichael
Project No.: AA006158
Designer: SM
Date: 2/07/2013

Rational Method Calculations

Project

Description

Time of Concentration minutes

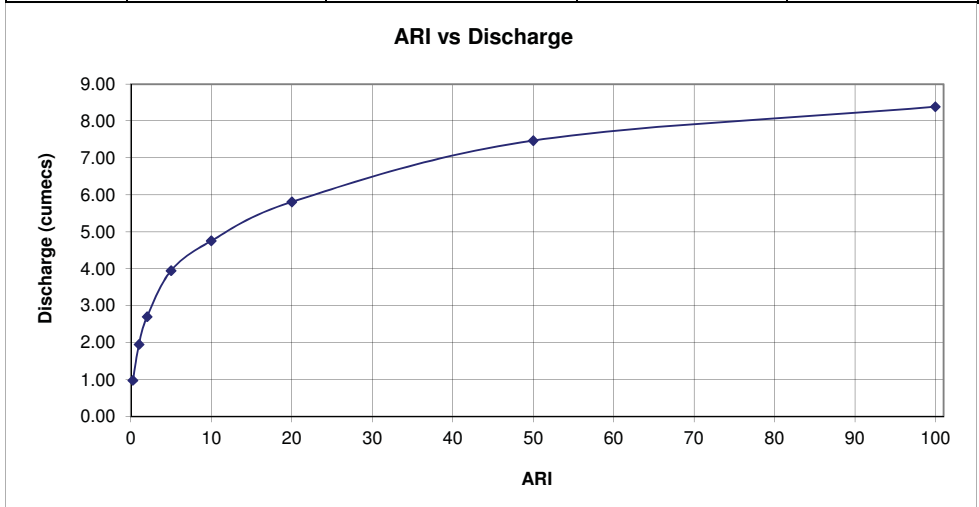
Area of Catchment Hectares

Fraction Impervious (Commercial/Facilities - QUDM)

Council Chart No.

Council Name

ARI	C value	Rainfall Intensity (mm/hr)	Discharge (m ³ /s)	Comments
3 _{month}			0.98	Write anything here that is applicable to the analysis
1 _{year}	0.70	51.28	1.96	
2 _{year}	0.75	66.59	2.70	
5 _{year}	0.84	87.20	3.96	
10 _{year}	0.88	99.68	4.76	
20 _{year}	0.92	115.96	5.81	
50 _{year}	1.00	137.74	7.47	
100 _{year}	1.00	154.58	8.39	





CATCHMENT 2
PRELIMINARY SIZING OF DETENTION BASIN

PRELIMINARY SIZING

Time of Concentration=	22
Q2	2640
Q5	3898
Q10	4703
Q20	5748
Q50	7339
Q100	8010

Project: Adani Carmichael Mine
Project No.: AA006158
Designer: SM
Date: 4/07/2013

Q2 Estimation of Detention Basin Size

		Qi=peak inflow rate "Post-dev" =	2.7
		Qo=desired peak outflow rate "Pre-dev"=	0.95
		tc=time of peak "Post-dev" (min)=	22
r=(Qi-Qo)/Qi		r =	0.64814815
Vi = 4tcQi/3		Vi =	4752
Culp 1948			
$V_s/V_i = r(1+2r)/3 =$	0.4961134	$V_s =$	2358 m ³
Boyd 1989			
$V_s/V_i = r =$	0.64814815	$V_s =$	3080 m ³
Carroll 1990			
$V_s/V_i = r(3+5r)/8 =$	0.50561557	$V_s =$	2403 m ³
Basha 1994			
$V_s/V_i = r(2+r)/3 =$	0.57213077	$V_s =$	2719 m ³
Average Vs =			2640 m³

Q5 Estimation of Detention Basin Size

		Qi=peak inflow rate "Post-dev" =	3.96
		Qo=desired peak outflow rate "Pre-dev"=	1.38
		tc=time of peak "Post-dev" (min)=	22
r=(Qi-Qo)/Qi		r =	0.65151515
Vi = 4tcQi/3		Vi =	6969.6
Culp 1948			
$V_s/V_i = r(1+2r)/3 =$	0.50015305	$V_s =$	3486 m ³
Boyd 1989			
$V_s/V_i = r =$	0.65151515	$V_s =$	4541 m ³
Carroll 1990			
$V_s/V_i = r(3+5r)/8 =$	0.50961318	$V_s =$	3552 m ³
Basha 1994			
$V_s/V_i = r(2+r)/3 =$	0.5758341	$V_s =$	4013 m ³
Average Vs =			3898 m³

Q10 Estimation of Detention Basin Size

		Qi=peak inflow rate "Post-dev" =	4.76
		Qo=desired peak outflow rate "Pre-dev"=	1.65
		tc=time of peak "Post-dev" (min)=	22
r=(Qi-Qo)/Qi		r =	0.65336134
Vi = 4tcQi/3		Vi =	8377.6
Culp 1948			
$V_s/V_i = r(1+2r)/3 =$	0.502374	$V_s=$	4209 m ³
Boyd 1989			
$V_s/V_i = r =$	0.653361	$V_s=$	5474 m ³
Carroll 1990			
$V_s/V_i = r(3+5r)/8 =$	0.511811	$V_s=$	4288 m ³
Basha 1994			
$V_s/V_i = r(2+r)/3 =$	0.577868	$V_s=$	4841 m ³
		Average Vs =	4703 m³

Q20 Estimation of Detention Basin Size

		Qi=peak inflow rate "Post-dev" =	5.81
		Qo=desired peak outflow rate "Pre-dev"=	2.01
		tc=time of peak "Post-dev" (min)=	22
r=(Qi-Qo)/Qi		r =	0.65404475
Vi = 4tcQi/3		Vi =	10225.6
Culp 1948			
$V_s/V_i = r(1+2r)/3 =$	0.503198	$V_s=$	5146 m ³
Boyd 1989			
$V_s/V_i = r =$	0.654045	$V_s=$	6688 m ³
Carroll 1990			
$V_s/V_i = r(3+5r)/8 =$	0.512626	$V_s=$	5242 m ³
Basha 1994			
$V_s/V_i = r(2+r)/3 =$	0.578621	$V_s=$	5917 m ³
		Average Vs =	5748 m³

Q50 Estimation of Detention Basin Size

		Qi=peak inflow rate "Post-dev" =	7.47
		Qo=desired peak outflow rate "Pre-dev"=	2.61
		tc=time of peak "Post-dev" (min)=	22
		r =	0.65060241
$r=(Q_i-Q_o)/Q_i$		Vi =	13147.2
$V_i = 4tcQ_i/3$			
Culp 1948			
$V_s/V_i = r(1+2r)/3 =$	0.499056	Vs=	6561 m ³
Boyd 1989			
$V_s/V_i = r =$	0.650602	Vs=	8554 m ³
Carroll 1990			
$V_s/V_i = r(3+5r)/8 =$	0.508528	Vs=	6686 m ³
Basha 1994			
$V_s/V_i = r(2+r)/3 =$	0.574829	Vs=	7557 m ³
		Average Vs =	7339 m³

Q100 Estimation of Detention Basin Size

		Qi=peak inflow rate "Post-dev" =	8.39
		Qo=desired peak outflow rate "Pre-dev"=	3.05
		tc=time of peak "Post-dev" (min)=	22
		r =	0.63647199
$r=(Q_i-Q_o)/Q_i$		Vi =	14766.4
$V_i = 4tcQ_i/3$			
Culp 1948			
$V_s/V_i = r(1+2r)/3 =$	0.482222	Vs=	7121 m ³
Boyd 1989			
$V_s/V_i = r =$	0.636472	Vs=	9398 m ³
Carroll 1990			
$V_s/V_i = r(3+5r)/8 =$	0.491862	Vs=	7263 m ³
Basha 1994			
$V_s/V_i = r(2+r)/3 =$	0.559347	Vs=	8260 m ³
		Average Vs =	8010 m³



Project: Adani Carmichael
Project No.: AA006158
Designer: SM
Date: 3/07/2013

Rational Method Calculations

Project

Description

Time of Concentration minutes

Area of Catchment Hectares

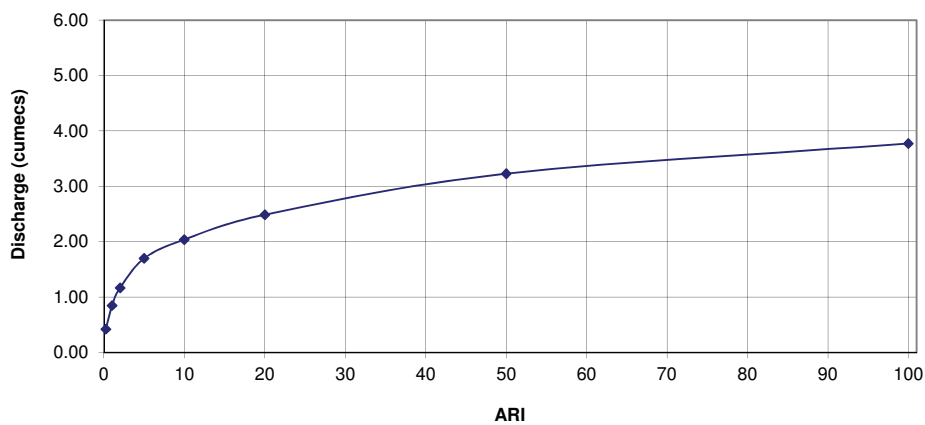
Fraction Impervious

Council Chart No.

Council Name

ARI	C value	Rainfall Intensity (mm/hr)	Discharge (m ³ /s)	Comments
3 _{month}			0.42	Write anything here that is applicable to the analysis
1 _{year}	0.48	28.26	0.85	
2 _{year}	0.51	36.65	1.17	
5 _{year}	0.57	47.78	1.70	
10 _{year}	0.60	54.47	2.04	
20 _{year}	0.63	63.21	2.49	
50 _{year}	0.69	74.91	3.23	
100 _{year}	0.72	83.92	3.78	

ARI vs Discharge





Project: Adani Carmichael
Project No.: AA006158
Designer: SM
Date: 2/07/2013

Rational Method Calculations

Project

Description

Time of Concentration minutes

Area of Catchment Hectares

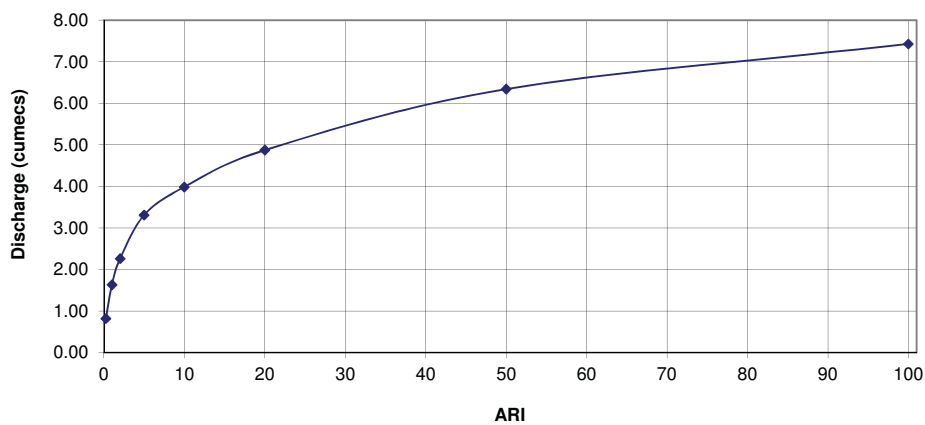
Fraction Impervious (Rural Residential - QUDM)

Council Chart No.

Council Name

ARI	C value	Rainfall Intensity (mm/hr)	Discharge (m ³ /s)	Comments
3 _{month}			0.82	Write anything here that is applicable to the analysis
1 _{year}	0.48	54.61	1.64	
2 _{year}	0.51	70.94	2.26	
5 _{year}	0.57	92.99	3.31	
10 _{year}	0.60	106.35	3.99	
20 _{year}	0.63	123.79	4.87	
50 _{year}	0.69	147.09	6.34	
100 _{year}	0.72	165.14	7.43	

ARI vs Discharge





CATCHMENT 3
PRELIMINARY SIZING OF DETENTION BASIN

PRELIMINARY SIZING

Time of Concentration=	19
Q2	1308
Q5	1937
Q10	2348
Q20	2866
Q50	3749
Q100	4401

Project: Adani Carmichael Mine
Project No.: AA006158
Designer: SM
Date: 4/07/2013

Q2 Estimation of Detention Basin Size

		Qi=peak inflow rate "Post-dev" =	2.26
		Qo=desired peak outflow rate "Pre-dev"=	1.17
		tc=time of peak "Post-dev" (min)=	19
r=(Qi-Qo)/Qi		r =	0.48230088
Vi = 4tcQi/3		Vi =	3435.2
Culp 1948			
$V_s/V_i = r(1+2r)/3 =$	0.3158431	$V_s=$	1085 m ³
Boyd 1989			
$V_s/V_i = r =$	0.4823009	$V_s=$	1657 m ³
Carroll 1990			
$V_s/V_i = r(3+5r)/8 =$	0.3262467	$V_s=$	1121 m ³
Basha 1994			
$V_s/V_i = r(2+r)/3 =$	0.399072	$V_s=$	1371 m ³
Average Vs =			1308 m³

Q5 Estimation of Detention Basin Size

		Qi=peak inflow rate "Post-dev" =	3.31
		Qo=desired peak outflow rate "Pre-dev"=	1.7
		tc=time of peak "Post-dev" (min)=	19
r=(Qi-Qo)/Qi		r =	0.48640483
Vi = 4tcQi/3		Vi =	5031.2
Culp 1948			
$V_s/V_i = r(1+2r)/3 =$	0.3198614	$V_s=$	1609 m ³
Boyd 1989			
$V_s/V_i = r =$	0.4864048	$V_s=$	2447 m ³
Carroll 1990			
$V_s/V_i = r(3+5r)/8 =$	0.3302704	$V_s=$	1662 m ³
Basha 1994			
$V_s/V_i = r(2+r)/3 =$	0.4031331	$V_s=$	2028 m ³
Average Vs =			1937 m³

Q10 Estimation of Detention Basin Size

		Qi=peak inflow rate "Post-dev" =	3.99
		Qo=desired peak outflow rate "Pre-dev"=	2.04
		tc=time of peak "Post-dev" (min)=	19
$r=(Q_i-Q_o)/Q_i$		r =	0.4887218
$V_i = 4tcQ_i/3$		Vi =	6064.8
Culp 1948			
$V_s/V_i = r(1+2r)/3 =$	0.32214	Vs=	1954 m ³
Boyd 1989			
$V_s/V_i = r =$	0.488722	Vs=	2964 m ³
Carroll 1990			
$V_s/V_i = r(3+5r)/8 =$	0.332551	Vs=	2017 m ³
Basha 1994			
$V_s/V_i = r(2+r)/3 =$	0.405431	Vs=	2459 m ³
Average Vs =			2348 m³

Q20 Estimation of Detention Basin Size

		Qi=peak inflow rate "Post-dev" =	4.87
		Qo=desired peak outflow rate "Pre-dev"=	2.49
		tc=time of peak "Post-dev" (min)=	19
$r=(Q_i-Q_o)/Q_i$		r =	0.48870637
$V_i = 4tcQ_i/3$		Vi =	7402.4
Culp 1948			
$V_s/V_i = r(1+2r)/3 =$	0.322125	Vs=	2384 m ³
Boyd 1989			
$V_s/V_i = r =$	0.488706	Vs=	3618 m ³
Carroll 1990			
$V_s/V_i = r(3+5r)/8 =$	0.332536	Vs=	2462 m ³
Basha 1994			
$V_s/V_i = r(2+r)/3 =$	0.405416	Vs=	3001 m ³
Average Vs =			2866 m³

Q50 Estimation of Detention Basin Size

		Qi=peak inflow rate "Post-dev" =	6.34
		Qo=desired peak outflow rate "Pre-dev"=	3.23
		tc=time of peak "Post-dev" (min)=	19
$r=(Q_i-Q_o)/Q_i$		r =	0.490536278
$V_i = 4tcQ_i/3$		Vi =	9636.8
Culp 1948			
$V_s/V_i = r(1+2r)/3 =$	0.323929	Vs=	3122 m ³
Boyd 1989			
$V_s/V_i = r =$	0.490536	Vs=	4727 m ³
Carroll 1990			
$V_s/V_i = r(3+5r)/8 =$	0.334342	Vs=	3222 m ³
Basha 1994			
$V_s/V_i = r(2+r)/3 =$	0.407233	Vs=	3924 m ³
		Average Vs =	3749 m³

Q100 Estimation of Detention Basin Size

		Qi=peak inflow rate "Post-dev" =	7.43
		Qo=desired peak outflow rate "Pre-dev"=	3.78
		tc=time of peak "Post-dev" (min)=	19
$r=(Q_i-Q_o)/Q_i$		r =	0.491251682
$V_i = 4tcQ_i/3$		Vi =	11293.6
Culp 1948			
$V_s/V_i = r(1+2r)/3 =$	0.324636	Vs=	3666 m ³
Boyd 1989			
$V_s/V_i = r =$	0.491252	Vs=	5548 m ³
Carroll 1990			
$V_s/V_i = r(3+5r)/8 =$	0.33505	Vs=	3784 m ³
Basha 1994			
$V_s/V_i = r(2+r)/3 =$	0.407944	Vs=	4607 m ³
		Average Vs =	4401 m³

Appendix H: Statutory Forms

IDAS form 1—Application details

(Sustainable Planning Act 2009 version 3.0 effective 1 July 2013)

This form must be used for **ALL** development applications.

You **MUST** complete **ALL** questions that are stated to be a mandatory requirement unless otherwise identified on this form.

For all development applications, you must:

- complete this form (*IDAS form 1—Application details*)
- complete any other forms relevant to your application
- provide any mandatory supporting information identified on the forms as being required to accompany your application.

Attach extra pages if there is insufficient space on this form.

All terms used on this form have the meaning given in the *Sustainable Planning Act 2009* (SPA) or the Sustainable Planning Regulation 2009.

This form and any other IDAS form relevant to your application must be used for development applications relating to strategic port land and Brisbane core port land under the *Transport Infrastructure Act 1994* and airport land under the *Airport Assets (Restructuring and Disposal) Act 2008*. Whenever a planning scheme is mentioned, take it to mean land use plan for the strategic port land, Brisbane core port land or airport land.

PLEASE NOTE: This form is not required to accompany requests for compliance assessment.

This form can also be completed online using MyDAS at www.dsdip.qld.gov.au/MyDAS

Mandatory requirements

Applicant details (Note: the applicant is the person responsible for making the application and need not be the owner of the land. The applicant is responsible for ensuring the information provided on all IDAS application forms is correct. Any development permit or preliminary approval that may be issued as a consequence of this application will be issued to the applicant.)

Name/s (individual or company name in full)	Adani Mining Pty Ltd			
For companies, contact name	Melinda Bergmann - Manager, Approvals			
Postal address	GPO Box 2569			
	Suburb	Brisbane		
	State	Queensland	Postcode	4001
	Country	Australia		
Contact phone number	07 3037 5510			
Mobile number (non-mandatory requirement)	-			
Fax number (non-mandatory requirement)	-			

Email address (non-mandatory requirement)

melinda.bergmann

@adani.com

Applicant's reference number (non-mandatory requirement)

-

1. What is the nature of the development proposed and what type of approval is being sought?

Table A—Aspect 1 of the application (If there are additional aspects to the application please list in Table B—Aspect 2.)

- a) What is the nature of the development? (Please only tick one box.)
- ☒ Material change of use ☐ Reconfiguring a lot ☐ Building work ☐ Operational work
- b) What is the approval type? (Please only tick one box.)
- ☐ Preliminary approval under s241 of SPA ☐ Preliminary approval under s241 and s242 of SPA ☒ Development permit
- c) Provide a brief description of the proposal, including use definition and number of buildings or structures where applicable (e.g. six unit apartment building defined as a *multi-unit dwelling*, 30 lot residential subdivision etc.)
- MCU Accommodation Buildings, Hotel (Private Tavern) & ERA (#63 - Sewage Treatment)
- d) What is the level of assessment? (Please only tick one box.)
- ☒ Impact assessment ☐ Code assessment

Table B—Aspect 2 of the application (If there are additional aspects to the application please list in Table C—Additional aspects of the application.)

- a) What is the nature of development? (Please only tick one box.)
- ☐ Material change of use ☐ Reconfiguring a lot ☐ Building work ☒ Operational work
- b) What is the approval type? (Please only tick one box.)
- ☐ Preliminary approval under s241 of SPA ☐ Preliminary approval under s241 and s242 of SPA ☒ Development permit
- c) Provide a brief description of the proposal, including use definition and number of buildings or structures where applicable (e.g. six unit apartment building defined as a *multi-unit dwelling*, 30 lot residential subdivision etc.)
- Bulk Earthworks & Vegetation Clearing related to proposed Mine Workers Accommodation Village
- d) What is the level of assessment?
- ☐ Impact assessment ☒ Code assessment

Table C—Additional aspects of the application (If there are additional aspects to the application please list in a separate table on an extra page and attach to this form.)

- ☐ Refer attached schedule ☒ Not required

2. Location of the premises (Complete Table D and/or Table E as applicable. Identify each lot in a separate row.)

Table D—Street address and lot on plan for the premises or street address and lot on plan for the land adjoining or adjacent to the premises (Note: this table is to be used for applications involving taking or interfering with water). (Attach a separate schedule if there is insufficient space in this table.)

- ☒ Street address **and** lot on plan (All lots must be listed.)
- ☐ Street address **and** lot on plan for the land adjoining or adjacent to the premises (Appropriate for development in water but adjoining or adjacent to land, e.g. jetty, pontoon. All lots must be listed.)

Street address					Lot on plan description		Local government area (e.g. Logan, Cairns)
Lot	Unit no.	Street no.	Street name and official suburb/ locality name	Post-code	Lot no.	Plan type and plan no.	
i)		5509	Elgin Road, Clermont	4721	Part 662	PH1491	Isaac
ii)							
iii)							

Planning scheme details (If the premises involves multiple zones, clearly identify the relevant zone/s for each lot in a separate row in the below table. Non-mandatory)

Lot	Applicable zone / precinct	Applicable local plan / precinct	Applicable overlay/s
i)	Rural	--	Land Char. - Features / GQAL
ii)			
iii)			

Table E—Premises coordinates (Appropriate for development in remote areas, over part of a lot or in water not adjoining or adjacent to land e.g. channel dredging in Moreton Bay.) (Attach a separate schedule if there is insufficient space in this table.)

Coordinates (Note: place each set of coordinates in a separate row)				Zone reference	Datum	Local government area (if applicable)
Easting	Northing	Latitude	Longitude			
		-21.973069	146.502369		☒ GDA94 ☐ WGS84 ☐ other	

3. Total area of the premises on which the development is proposed (indicate square metres)

102.9 hectares

4. Current use/s of the premises (e.g. vacant land, house, apartment building, cane farm etc.)

Vacant pastoral land

5. Are there any current approvals (e.g. a preliminary approval) associated with this application? (Non-mandatory requirement)

☒ No ☐ Yes—provide details below

List of approval reference/s	Date approved (dd/mm/yy)	Date approval lapses (dd/mm/yy)
-	-	-

6. Is owner's consent required for this application? (Refer to notes at the end of this form for more information.)

☐ No
☒ Yes—complete either Table F, Table G or Table H as applicable

Table F

Name of owner/s of the land	
I/We, the above-mentioned owner/s of the land, consent to the making of this application.	
Signature of owner/s of the land	
Date	

Table G

Name of owner/s of the land	The State of Queensland (consent to be provided post EIS approval)
☒ The owner's written consent is attached or will be provided separately to the assessment manager.	

Table H

Name of owner/s of the land	
☐ By making this application, I, the applicant, declare that the owner has given written consent to the making of the application.	

7. Identify if any of the following apply to the premises (Tick applicable box/es.)

- ☒ Adjacent to a water body, watercourse or aquifer (e.g. creek, river, lake, canal)—complete Table I
- ☐ On strategic port land under the *Transport Infrastructure Act 1994*—complete Table J
- ☐ In a tidal water area—complete Table K
- ☐ On Brisbane core port land under the *Transport Infrastructure Act 1994* (No table requires completion.)
- ☐ On airport land under the *Airport Assets (Restructuring and Disposal) Act 2008* (no table requires completion)

Table I

Name of water body, watercourse or aquifer
Belyando River, Carmichael River, Dyllingo Creek, Mistake Creek

Table J

Lot on plan description for strategic port land	Port authority for the lot

Table K	
Name of local government for the tidal area (if applicable)	Port authority for the tidal area (if applicable)

8. Are there any existing easements on the premises? (e.g. for vehicular access, electricity, overland flow, water etc)

☒ No ☐ Yes—ensure the type, location and dimension of each easement is included in the plans submitted

9. Does the proposal include new building work or operational work on the premises? (Including any services)

☐ No ☒ Yes—ensure the nature, location and dimension of proposed works are included in plans submitted

10. Is the payment of a portable long service leave levy applicable to this application? (Refer to notes at the end of this form for more information.)

☐ No—go to question 12 ☒ Yes

11. Has the portable long service leave levy been paid? (Refer to notes at the end of this form for more information.)

☒ No

☐ Yes—complete Table L and submit with this application the yellow local government/private certifier's copy of the receipted QLeave form

Table L		
Amount paid	Date paid (dd/mm/yy)	QLeave project number (6 digit number starting with A, B, E, L or P)

12. Has the local government agreed to apply a superseded planning scheme to this application under section 96 of the *Sustainable Planning Act 2009*?

☒ No

☐ Yes—please provide details below

Name of local government	Date of written notice given by local government (dd/mm/yy)	Reference number of written notice given by local government (if applicable)
-	-	-

13. List below all of the forms and supporting information that accompany this application (Include all IDAS forms, checklists, mandatory supporting information etc. that will be submitted as part of this application. Note: this question does not apply for applications made online using MyDAS)

Description of attachment or title of attachment	Method of lodgement to assessment manager
IDAS Forms 5,6,8,11	Electronic
Planning - Gassman Development Perspectives' 'Planning Assessment Report'	Electronic
Ecology - Vegetation Management Plan	Electronic
Engineering - Bulk Earthworks Design, Stormwater Managenet Plan, Service Strategy	Electronic
Environmental Management - Site Based Management Plans for proposed ERA	Electronic

14. Applicant's declaration

☒ By making this application, I declare that all information in this application is true and correct (Note: it is unlawful to provide false or misleading information)

Notes for completing this form

- Section 261 of the *Sustainable Planning Act 2009* prescribes when an application is a properly-made application. Note, the assessment manager has discretion to accept an application as properly made despite any non-compliance with the requirement to provide mandatory supporting information under section 260(1)(c) of the *Sustainable Planning Act 2009*

Applicant details

- Where the applicant is not a natural person, ensure the applicant entity is a real legal entity.

Question 1

- Schedule 3 of the Sustainable Planning Regulation 2009 identifies assessable development and the type of assessment. Where schedule 3 identifies assessable development as "various aspects of development" the applicant must identify each aspect of the development on Tables A, B and C respectively and as required.

Question 6

- Section 263 of the *Sustainable Planning Act 2009* sets out when the consent of the owner of the land is required for an application. Section 260(1)(e) of the *Sustainable Planning Act 2009* provides that if the owner's consent is required under section 263, then an application must contain, or be accompanied by, the written consent of the owner, or include a declaration by the applicant that the owner has given written consent to the making of the application. If a development application relates to a state resource, the application is not required to be supported by evidence of an allocation or entitlement to a state resource. However, where the state is the owner of the subject land, the written consent of the state, as landowner, may be required. Allocation or entitlement to the state resource is a separate process and will need to be obtained before development commences.

Question 11

- The *Building and Construction Industry (Portable Long Service Leave) Act 1991* prescribes when the portable long service leave levy is payable.
- The portable long service leave levy amount and other prescribed percentages and rates for calculating the levy are prescribed in the Building and Construction Industry (Portable Long Service Leave) Regulation 2002.

Question 12

- The portable long service leave levy need not be paid when the application is made, but the *Building and Construction Industry (Portable Long Service Leave) Act 1991* requires the levy to be paid before a development permit is issued.
- Building and construction industry notification and payment forms are available from any Queensland post office or agency, on request from QLeave, or can be completed on the QLeave website at www.qleave.qld.gov.au. For further information contact QLeave on 1800 803 481 or visit www.qleave.qld.gov.au.

Privacy—The information collected in this form will be used by the Department of State Development, Infrastructure and Planning (DSDIP), assessment manager, referral agency and/or building certifier in accordance with the processing and assessment of your application. Your personal details should not be disclosed for a purpose outside of the IDAS process or the provisions about public access to planning and development information in the *Sustainable Planning Act 2009*, except where required by legislation (including the *Right to Information Act 2009*) or as required by Parliament. This information may be stored in relevant databases. The information collected will be retained as required by the *Public Records Act 2002*.

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Date received

Reference numbers

NOTIFICATION OF ENGAGEMENT OF A PRIVATE CERTIFIER

To

Council. I have been engaged as the private certifier for the building work referred to in this application

Date of engagement	Name	BSA Certification license number	Building classification/s

QLEAVE NOTIFICATION AND PAYMENT (For completion by assessment manager or private certifier if applicable.)

Description of the work	QLeave project number	Amount paid (\$)	Date paid	Date receipted form sighted by assessment manager	Name of officer who sighted the form

The *Sustainable Planning Act 2009* is administered by the Department of State Development, Infrastructure and Planning. This form and all other required application materials should be sent to your assessment manager and any referral agency.

IDAS form 5—Material change of use assessable against a planning scheme

(Sustainable Planning Act 2009 version 3.0 effective 1 July 2013)

This form must be used for development applications for a material change of use assessable against a planning scheme.

You **MUST** complete **ALL** questions that are stated to be a mandatory requirement unless otherwise identified on this form.

For all development applications, you must:

- complete *IDAS form 1—Application details*
- complete any other forms relevant to your application
- provide any mandatory supporting information identified on the forms as being required to accompany your application.

Attach extra pages if there is insufficient space on this form.

All terms used on this form have the meaning given in the Sustainable Planning Act 2009 (SPA) or the Sustainable Planning Regulation 2009.

This form must also be used for material change of use on strategic port land and Brisbane core port land under the *Transport Infrastructure Act 1994* and airport land under the *Airport Assets (Restructuring and Disposal) Act 2008* that requires assessment against the land use plan for that land. Whenever a planning scheme is mentioned, take it to mean land use plan for the strategic port land, Brisbane core port land or airport land.

This form can also be completed online using MyDAS at www.dsdip.qld.gov.au/MyDAS

Mandatory requirements

- 1. Describe the proposed use.** (Note: this is to provide additional detail to the information provided in question 1 of *IDAS form 1—Application details*. Attach a separate schedule if there is insufficient space in this table.)

General explanation of the proposed use	Planning scheme definition (include each definition in a new row) (non-mandatory)	No. of dwelling units (if applicable) or gross floor area (if applicable)	Days and hours of operation (if applicable)	No. of employees (if applicable)
Mine Workers Accommodation	- Accommodation Building	see report	see report	see report
Village for a maximum of 3500 beds, including a private tavern	- Hotel (Private Tavern)			

- 2. Are there any current approvals associated with the proposed material change of use?** (e.g. a preliminary approval.)

☐ No ☒ Yes—provide details below

List of approval reference/s	Date approved (dd/mm/yy)	Date approval lapses (dd/mm/yy)
-	-	-

3. Does the proposed use involve the following? (Tick all applicable boxes.)

The reuse of existing buildings on the premises	☐ No	☐ Yes
New building work on the premises	☐ No	☒ Yes
The reuse of existing operational work on the premises	☒ No	☐ Yes
New operational work on the premises	☐ No	☒ Yes

Mandatory supporting information

4. Confirm that the following mandatory supporting information accompanies this application

Mandatory supporting information	Confirmation of lodgement	Method of lodgement
All applications		
A site plan drawn to an appropriate scale (1:100, 1:200 or 1:500 are recommended scales) which shows the following: - the location and site area of the land to which the application relates (<i>relevant land</i>) - the north point - the boundaries of the relevant land - any road frontages of the relevant land, including the name of the road - the location and use of any existing or proposed buildings or structures on the relevant land (note: where extensive demolition or new buildings are proposed, two separate plans [an existing site plan and proposed site plan] may be appropriate) - any existing or proposed easements on the relevant land and their function - the location and use of buildings on land adjoining the relevant land - all vehicle access points and any existing or proposed car parking areas on the relevant land. Car parking spaces for persons with disabilities and any service vehicle access and parking should be clearly marked - for any new building on the relevant land, the location of refuse storage - the location of any proposed retaining walls on the relevant land and their height - the location of any proposed landscaping on the relevant land - the location of any stormwater detention on the relevant land.	☒ Confirmed	Electronic
A statement about how the proposed development addresses the local government's planning scheme and any other planning instruments or documents relevant to the application.	☒ Confirmed	Electronic
A statement about the intensity and scale of the proposed use (e.g. number of visitors, number of seats, capacity of storage area etc.).	☒ Confirmed	Electronic
Information that states: - the existing or proposed floor area, site cover, maximum number of storeys and maximum height above natural ground level for existing or new buildings (e.g. information regarding existing buildings but not being reused) - the existing or proposed number of on-site car parking bays, type of vehicle cross-over (for non-residential uses) and vehicular servicing arrangement (for non-residential uses).	☒ Confirmed ☐ Not applicable	Electronic

A statement addressing the relevant part(s) of the State Development Assessment Provisions (SDAP).	☒ Confirmed ☐ Not applicable	Electronic
When the application involves the reuse of existing buildings		
Plans showing the size, location, existing floor area, existing site cover, existing maximum number of storeys and existing maximum height above natural ground level of the buildings to be reused.	☐ Confirmed ☒ Not applicable	
When the application involves new building work (including extensions)		
Floor plans drawn to an appropriate scale (1:50, 1:100 or 1:200 are recommended scales) which show the following: - the north point - the intended use of each area on the floor plan (for commercial, industrial or mixed use developments only) - the room layout (for residential development only) with all rooms clearly labelled - the existing and the proposed built form (for extensions only) - the gross floor area of each proposed floor area.	☒ Confirmed	Electronic
Elevations drawn to an appropriate scale (1:100, 1:200 or 1:500 are recommended scales) which show plans of all building elevations and facades, clearly labelled to identify orientation (e.g. north elevation)	☒ Confirmed	Electronic
Plans showing the size, location, proposed site cover, proposed maximum number of storeys, and proposed maximum height above natural ground level of the proposed new building work.	☒ Confirmed ☐ Not applicable	Electronic
When the application involves reuse of other existing work		
Plans showing the nature, location, number of on-site car parking bays, existing area of landscaping, existing type of vehicular cross-over (non-residential uses), and existing type of vehicular servicing arrangement (non-residential uses) of the work to be reused.	☐ Confirmed ☒ Not applicable	
When the application involves new operational work		
Plans showing the nature, location, number of new on-site car parking bays, proposed area of new landscaping, proposed type of new vehicle cross-over (non-residential uses), proposed maximum new vehicular servicing arrangement (non-residential uses) of the proposed new operational work.	☒ Confirmed ☐ Not applicable	Electronic

Privacy—Please refer to your assessment manager, referral agency and/or building certifier for further details on the use of information recorded in this form.

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Reference numbers

The *Sustainable Planning Act 2009* is administered by the Department of State Development, Infrastructure and Planning. This form and all other required application materials should be sent to your assessment manager and any referral agency.

Department of State Development, Infrastructure and Planning

PO Box 15009 City East Qld 4002

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info@dsdip.qld.gov.au

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IDAS form 5—Material change of use assessable
against a planning scheme
Version 3.0—1 July 2013

IDAS form 6—Building or operational work assessable against a planning scheme

(Sustainable Planning Act 2009 version 3.0 effective 1 July 2013)

This form must be used for development applications for building work or operational work assessable against a planning scheme.

You **MUST** complete **ALL** questions that are stated to be a mandatory requirement unless otherwise identified on this form.

For all development applications, you must:

- complete *IDAS form 1—Application details*
- complete any other forms relevant to your application
- provide any mandatory supporting information identified on the forms as being required to accompany your application.

Attach extra pages if there is insufficient space on this form.

All terms used on this form have the meaning given in the *Sustainable Planning Act 2009* (SPA) or the Sustainable Planning Regulation 2009.

This form must be used for building work or operational work relating on strategic port land and Brisbane core port land under the *Transport Infrastructure Act 1994* and airport land under the *Airport Assets (Restructuring and Disposal) Act 2008* that requires assessment against the land use plan for that land. Whenever a planning scheme is mentioned, take it to mean land use plan for the strategic port land, Brisbane core port land or airport land.

This form can also be completed online using MyDAS at www.dsdipl.gld.gov.au/MyDAS

Mandatory requirements

1. What is the nature of the work that requires assessment against a planning scheme? (Tick all applicable boxes.)

- ☐ Building work—complete Table A ☒ Operational work—complete Table B

Table A

a) What is the nature of the building work (e.g. building, repairing, altering, underpinning, moving or demolishing a building)?

Melinda Bergmann - Manager, Approvals

b) Are there any current approvals associated with this application? (e.g. material change of use.)

- ☐ No ☐ Yes— provide details below

List of approval reference/s	Date approved (dd/mm/yy)	Date approval lapses (dd/mm/yy)
-	-	-

Table B

a) What is the nature of the operational work? (Tick all applicable boxes.)

- ☐ Road works
 ☐ Stormwater
 ☐ Water infrastructure
☐ Drainage works
 ☒ Earthworks
 ☐ Sewerage infrastructure
☐ Landscaping
 ☐ Signage
 ☐ Clearing vegetation under the planning scheme
☐ Other—provide details

b) Is the operational work necessary to facilitate the creation of new lots? (E.g. subdivision.)

- ☒ No
 ☐ Yes—specify the number of lots being created

c) Are there any current approvals associated with this application? (E.g. material change of use.)

- ☐ No
 ☐ Yes—provide details below

List of approval reference/s	Date approved (dd/mm/yy)	Date approval lapses (dd/mm/yy)

2. What is the dollar value of the proposed building work?

(Inc GST, materials and labour.)

\$

3. What is the dollar value of the proposed operational work?

(Inc GST, materials and labour.)

\$ approx. \$15M

Mandatory supporting information

4. Confirm that the following mandatory supporting information accompanies this application

Mandatory supporting information	Confirmation of lodgement	Method of lodgement
All applications involving building work or operational work		
A site plan drawn to an appropriate scale (1:100, 1:200 or 1:500 are recommended scales) which shows the following: - the location and site area of the land to which the application relates (<i>relevant land</i>) - the north point - the boundaries of the relevant land - the allotment layout showing existing lots, any proposed lots (including the dimensions of those lots), existing or proposed road reserves, building envelopes and existing or proposed open space (note: numbering is required for all lots) - any existing or proposed easements on the relevant land and their function - any access limitation strips - all existing and proposed roads and access points on the relevant land.	☒ Confirmed	Electronic

A statement about how the proposed development addresses the local government's planning schemes and any other planning documents relevant to the application.	☒ Confirmed	Electronic
A statement addressing the relevant part(s) of the State Development Assessment Provisions (SDAP).	☒ Confirmed ☐ Not applicable	Electronic
Applications for building work (including extensions and demolition that is assessable development)		
Floor plans drawn to an appropriate scale (1:50, 1:100 or 1:200 are recommended scales) which show the following: - the north point - the intended use of each area on the floor plan (for commercial, industrial or mixed use developments only) - the room layout (for residential development only) with all rooms clearly labelled - the existing and the proposed built form (for extensions only) - the gross floor area of each proposed floor area.	☐ Confirmed ☐ Not applicable	Electronic
Elevations drawn to an appropriate scale (1:100, 1:200 or 1:500 are recommended scales) which show plans of all building elevations and facades, clearly labelled to identify orientation (e.g. north elevation).	☒ Confirmed ☒ Not applicable	
Plans showing the size, location, proposed site cover, proposed maximum number of storeys, and proposed maximum height above natural ground level of the proposed new building work.	☒ Confirmed ☐ Not applicable	Electronic
Plans showing the extent of any demolition that is assessable development.	☐ Confirmed ☒ Not applicable	
Applications for operational work involving earthworks (filling and excavating)		
Drawings showing: - existing and proposed contours - areas to be cut and filled - the location and level of any permanent survey marks or reference stations used as datum for the works - the location of any proposed retaining walls on the relevant land and their height - the defined flood level (if applicable) - the fill level (if applicable).	☒ Confirmed ☐ Not applicable	Electronic
Applications for operational work involving roadworks		
Drawings showing: - existing and proposed contours - the centreline or construction line showing chainages, bearings, offsets if the construction line is not the centreline of the road and all intersection points - information for each curve including tangent point chainages and offsets, curve radii, arc length, tangent length, superelevation (if applicable) and curve widening (if applicable) - kerb lines including kerb radii (where not parallel to centreline) and tangent point changes (where not parallel to centreline) - edge of pavement where kerb is not constructed - position and extent of channelisation - location and details of all traffic signs, guideposts, guardrail and other street furniture - pavement markings including details on raised pavement markers	☐ Confirmed ☒ Not applicable	

• catchpit, manhole and pipeline locations • drainage details (if applicable) • cross road drainage culverts (if applicable) • concrete footpaths and cycle paths • location and details for access points, ramps and invert crossings • changes in surfacing material.		MCU Accommodation Buildings, Hotel (Private Tavern) & ERA (#63 - Sewage Treatment)
Applications for operational work involving stormwater drainage		
Drawings showing: • existing and proposed contours • drainage locations, diameters and class of pipe, open drains and easements • manhole location, chainage and offset or coordinates and inlet and outlet invert levels • inlet pit locations, chainage and offset or coordinates and invert and kerb levels.	☒ Confirmed ☒ Not applicable	
Applications for operational work involving water reticulation		
Drawings showing: • kerb lines or edge of pavement where kerb is not constructed • location and levels of other utility services where affected by water reticulation works • pipe diameter, type of pipe and pipe alignment • water main alignments • water supply pump station details (if applicable) • minor reservoir details (if applicable) • conduits • location of valves and fire hydrants • location of house connections (if applicable) • location of bench marks and reference pegs.	☐ Confirmed ☒ Not applicable	
Applications for operational work involving sewerage reticulation		
Drawings showing: • location of all existing and proposed services • location of all existing and proposed sewer lines and manhole locations • location of all house connection branches • kerb lines or edge of pavement where kerb is not constructed • chainages • design sewer invert levels • design top of manhole levels • type of manhole and manhole cover • pipe diameter, type of pipe and pipe alignment • location of house connections (if applicable) • sewer pump station details (if applicable).	☒ Confirmed ☒ Not applicable	
Applications for operational work involving street lighting		
Drawings showing: • location of all light poles and service conduits • location of all other cross road conduits • type of wattage and lighting • any traffic calming devices • additional plans for roundabouts and major roads (if applicable) • details of any variations to normal alignment	☐ Confirmed ☒ Not applicable	

• details of lighting levels.		
Applications for operational work involving public utility services		
Drawings showing: • any existing light poles and power poles • any existing underground services • details of proposed services • alteration to existing services.	☒ Confirmed ☒ Not applicable	
Applications for operational work involving landscaping works		
Drawings showing: • the location of proposed plant species • a plant schedule indicating common and botanical names, pot sizes and numbers of plants • planting bed preparation details including topsoil depth, subgrade preparation, mulch type and depth, type of turf, pebble, paving and garden edge • the location and type of any existing trees to be retained • construction details of planter boxes, retaining walls and fences • the proposed maintenance period • irrigation system details.	☐ Confirmed ☒ Not applicable	

Privacy—Please refer to your assessment manager, referral agency and/or building certifier for further details on the use of information recorded in this form.

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Reference numbers

The *Sustainable Planning Act 2009* is administered by the Department of State Development, Infrastructure and Planning. This form and all other required application materials should be sent to your assessment manager and any referral agency.

IDAS form 8—Environmentally relevant activity

(Sustainable Planning Act 2009 version 3.0 effective 1 July 2013)

This form must be used for development applications for an environmentally relevant activity.

You **MUST** complete **ALL** questions that are stated to be a mandatory requirement unless otherwise identified on this form.

For all development applications, you must:

- complete *IDAS form 1—Application details*
- complete any other forms relevant to your application
- provide any mandatory supporting information identified on the forms as being required to accompany your application.

Attach extra pages if there is insufficient space on this form.

All terms used on this form have the meaning given in either the *Sustainable Planning Act 2009* (SPA), the Sustainable Planning Regulation 2009, the *Environmental Protection Act 1994* or the Environmental Protection Regulation 2008.

This form can also be completed online using MyDAS at www.dsdip.qld.gov.au/MyDAS

Mandatory requirements

1. **What is the nature of the proposed environmentally relevant activity (ERA)?** (complete a new Table A for each proposed ERA—including ERAs that are not concurrence ERAs)

Table A

ERA number and name	63 (1a [ii]) Sewage treatment: 21-100EP with treated effluent discharge
ERA threshold	4000 - 10000 EP
Applicable fees	\$ 19,651.20
Proposed scale/capacity	4485 EP
Type of approval sought	☒ Development permit and environmental authority (see notes) ☐ Preliminary approval
Is the proposed ERA a concurrence ERA?	☐ No ☐ Yes

2. **Are there any existing ERAs on or associated with the premises?**

- ☒ No
☐ Yes—complete a new Table B for each existing ERA

Table B

ERA number and name	
ERA threshold	
Existing scale/capacity	
Is the ERA proposed to continue on site?	☐ No ☐ Yes

3. Does the proposed activity involve any of the following? (Tick all applicable boxes.)

- ☐ Release of water or waste to a wetland for treatment
- ☐ Release of waste directly to groundwater

Mandatory supporting information

4. Confirm that the following mandatory supporting information accompanies this application

About the subject land	Confirmation of lodgement	Method of lodgement
Description of the site, including site maps showing vegetation, topography and any areas of cultural or heritage significance.	☒ Confirmed	Electronic
Details of any known acid sulphate soils within or adjoining the premises.	☐ Confirmed ☐ Not applicable	
Details about how the choice of the site, at which the activity is to be carried out, minimises serious environmental harm on areas of high conservation value and special significance and sensitive land uses at adjacent places.	☒ Confirmed	Electronic
Details about how the location for the activity on a site protects all environmental values relevant to adjacent sensitive uses.	☐ Confirmed	Electronic
Details about how the design of the facility permits the operation of the site, at which the activity is to be carried out, in accordance with best practice environmental management.	☒ Confirmed	Electronic
About the proposed ERA		
Attachment to IDAS form 8—application for an environmental authority (EM941) completed and required information provided.	☐ Confirmed	Electronic
A statement addressing the relevant part(s) of the State Development Assessment Provisions (SDAP).	☒ Confirmed ☐ Not applicable	

Notes for completing this form:

- An environmental authority is required to operate an ERA.
- A development approval is only required if at least one of the ERAs to be operated is a concurrence ERA.
- Schedule 2 of the *Environmental Protection Regulation 2008* states the aggregate environmental scores, the thresholds that apply to ERAs, and which ERAs are concurrence ERAs (denoted by a 'C' in schedule 2, column 3).
- This development application is taken to be an application for an environmental authority. This application is not properly made unless it includes the [Attachment to IDAS form 8—application for an environmental authority \(EM941\)](#).
- There are annual fees associated with the operation of an ERA. These fees are initially payable 20 business days after the environmental authority takes effect. After this initial payment, annual fees will be payable on the anniversary of the take effect day. Chapter 8 and Schedule 10 of the *Environmental Protection Regulation 2008* contain all information about the applicable fees and how they are calculated.

Privacy—Please refer to your assessment manager, referral agency and/or building certifier for further details on the use of information recorded in this form.

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Date received

Reference numbers

The *Sustainable Planning Act 2009* is administered by the Department of State Development, Infrastructure and Planning. This form and all other required application materials should be sent to your assessment manager and any referral agencies.

IDAS form 11—Clearing native vegetation

(Sustainable Planning Act 2009 version 3.0 effective 1 July 2013)

This form must be used for development applications that involve the clearing of native vegetation.

You **MUST** complete **ALL** questions that are stated to be a mandatory requirement unless otherwise identified on this form.

For all development applications, you must:

- complete *IDAS form 1—Application details*
- complete any other forms relevant to your application
- provide any mandatory supporting information identified on the forms as being required to accompany your application
- include the relevant application fee, noting that referral agency fees (where applicable) are to be paid to the referral agency

Attach extra pages if there is insufficient space on this form.

All terms used on this form have the meaning given in the *Sustainable Planning Act 2009* (SPA) or the Sustainable Planning Regulation 2009.

This form can also be completed online using MyDAS at www.dsdip.qld.gov.au/MyDAS

Mandatory requirements

1. What type of development is proposed?

- ☒ Operational work for clearing vegetation made assessable under Schedule 3 of the Sustainable Planning Regulation 2009
- ☐ Material change of use of the premises
- ☐ Reconfiguring a lot

2. What type of approval is being sought?

- ☒ Development permit
- ☐ Preliminary approval
- ☐ Both—provide details below

Mandatory supporting information

3. Confirm that the following mandatory supporting information accompanies this application

For ALL applications	Confirmation of lodgement	Method of lodgement
A property vegetation management plan including as defined under the Vegetation Management Act 1999 schedule. Note: A property vegetation management plan must show the matters prescribed in s.11 of the Vegetation Management Regulation 2012.	☒ Confirmed	Electronic
A statement addressing the relevant part(s) of the State Development Assessment Provisions (SDAP).	☐ Confirmed ☐ Not applicable	

For ALL applications	Confirmation of lodgement	Method of lodgement
For an operational work application for which the assessment manager is the local government		
Written confirmation that the chief executive of the Department of Natural Resources and Mines is satisfied the proposed clearing is for a relevant purpose under the <i>Vegetation Management Act 1999</i> , section 22A.	☒ Confirmed ☐ Not applicable	Electronic
For an operational work application where the assessment manager is the Department of Natural Resources and Mines		
Either of the following: - written confirmation that the chief executive of the Department of Natural Resources and Mines is satisfied the proposed clearing is for a relevant purpose under the <i>Vegetation Management Act 1999</i>, section 22A; or - information identifying the relevant purpose under the <i>Vegetation Management Act 1999</i>, section 22A and demonstrating how the proposed clearing is for that purpose.	☐ Confirmed ☒ Not applicable	Electronic
For applications for a material change of use or reconfiguring a lot		
The following additional detail to be included in the property vegetation management plan: - details of the location and extent of: - infrastructure, including buildings, fences, roads and electrical, telecommunication or sewerage services; and - firebreaks and fire management lines; and - details of the way the proposed clearing complies with the applicable concurrence agency policy under the <i>Vegetation Management Act 1999</i>.	☒ Confirmed ☐ Not applicable	

Notes for completing this form

- The Department of Natural Resource and Mines (DNRM) website contains a comprehensive range of information about the *Vegetation Management Act 1999*, including assessment codes and policies, as well as the *Landholder's guide to vegetation clearing applications*.
- Question 3 for operational work applications —Under the *Vegetation Management Act 1999*, the proposed vegetation clearing is only for a relevant purpose if the applicant satisfies the chief executive of the Department of Natural Resources and Mines (DNRM) that the development applied for is one of the purposes listed in section 22A of that Act. If the assessment manager is the local government, the applicant must obtain confirmation from the chief executive of DNRM that the proposed clearing is for a relevant purpose and provide this with the application. However, if DNRM is the assessment manager, the applicant has the choice of either obtaining this confirmation before making the application, or providing adequate information for DNRM to make the decision on whether the proposed clearing is for a relevant purpose at the time the application is received.

Privacy—Please refer to your assessment manager, referral agency and/or building certifier for further details on the use of information recorded in this form.

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Reference numbers

The *Sustainable Planning Act 2009* is administered by the Department of State Development, Infrastructure and Planning. This form and all other required application materials should be sent to your assessment manager and any referral agency.

Schedule 3 Assessable Development

Checklist 1—Various aspects of development

(Sustainable Planning Act 2009 version 3.0 effective 1 July 2013)

This checklist applies to the carrying out of various aspects of development, as specified in the Sustainable Planning Regulation 2009, Schedule 3, Part 1, Table 5.

You may complete this checklist as part of your development application. The checklist will:

- help you identify whether you need to make a development application for the proposed development
- help you identify the relevant Integrated Development Assessment System (IDAS) form you need to complete as part of your application
- assist in identifying the assessment manager or referral agency for development that is assessable development under schedule 3 of the Sustainable Planning Regulation 2009.

If your development involves a material change of use, reconfiguring a lot, operational work or building work, it is recommended you complete the relevant checklists: *Checklist 2—Material change of use*, *Checklist 3—Reconfiguring a lot*, *Checklist 4—Operational work*, or *Checklist 5—Building work*.

If you are unsure how to answer any questions on this checklist, phone or visit your local government, or go to the Department of State Development, Infrastructure and Planning's (DSDIP) website at www.dsdiip.qld.gov.au.

All terms used in this checklist have the meaning given in the *Sustainable Planning Act 2009* or the Sustainable Planning Regulation 2009.

Part 1—General questions

1.1 Does the proposal involve removing quarry material from a watercourse or lake for which an allocation notice is required under the *Water Act 2000*, other than within a priority development area or on a premises to which structure plan arrangements apply?

- | | |
|---|-------------------------------------|
| ☒ No | • Continue to question 1.2 |
| ☒ Yes | • Complete part 2 of this checklist |

1.2 Is any part of the proposed development intended to be carried out on a Queensland heritage place under the *Queensland Heritage Act 1992*?

- | | |
|------------------------------|-------------------------------------|
| ☐ No | • Continue to question 1.3 |
| ☐ Yes | • Complete part 3 of this checklist |

1.3 Does the proposal involve development on a local heritage place?

- | | |
|--|-------------------------------------|
| ☒ No | • Continue to question 1.4 |
| ☐ Yes | • Complete part 4 of this checklist |

1.4 Is any part of the development on strategic port land or airport land (other than development for a material change of use that is inconsistent with the land use plan for the strategic port land or airport land mentioned in the Sustainable Planning Regulation 2009, Schedule 3, Part 1, Table 2, item 3 or 4)?

- | | |
|-----------------------------|--|
| ☐ No | • End of checklist – A development permit is not required for this aspect of development under Sustainable Planning Regulation 2009, Schedule 3, Part 1, Table 5 |
|-----------------------------|--|

☐ Yes	Complete part 5 of this checklist
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Part 2—Removing quarry material

2.1 Is any part of the quarry material which is intended to be removed, located within a wild river area under the *Wild Rivers Act 2005*?

☒ No	- A development permit is required and this application requires assessment by the chief executive of DSDIP as assessment manager or concurrence agency against the <i>Sustainable Management of Water Resources State Code</i> in the State Development Assessment Provisions (SDAP). - Your application must include <i>IDAS form 18—Removal of quarry material from a watercourse or lake</i>.
☐ Yes	Continue to question 2.2

2.2 Will the development be carried out on land to which a property development plan under the *Wild Rivers Act 2005* applies?

☐ No	A development permit is required and this application requires assessment by the chief executive of DSDIP as assessment manager or concurrence agency against the <i>Sustainable Management of Water Resources State Code</i> in the SDAP. Your application must include <i>IDAS form 18—Removal of quarry material from a watercourse or lake</i>.
☐ Yes	Continue to question 2.3

2.3 Is the development consistent with the property development plan?

☐ Yes	A development permit is required and this application requires assessment by the chief executive of DSDIP as assessment manager or concurrence agency against the <i>Sustainable Management of Water Resources State Code</i> in the SDAP. Your application must include <i>IDAS form 18—Removal of quarry material from a watercourse or lake</i>.
☐ No	This aspect of development is prohibited development. A development application for this development cannot be made.

Section reference:

- Sustainable Planning Regulation 2009, schedule 3, part 1, table 5, item 1
- Sustainable Planning Regulation 2009, schedule 7, table 2, item 12
- Sustainable Planning Act 2009*, schedule 1, item 2

Part 3—Queensland heritage place

3.1 Do any of the following apply to the proposal?

The proposed development is only ongoing maintenance or minor work permitted by a general exemption certificate issued under section 75 of the <i>Queensland Heritage Act 1992</i> .	☐ Yes	☐ No
An exemption certificate has been issued under the <i>Queensland Heritage Act 1992</i> .	☐ Yes	☐ No
The proposed development is liturgical development under section 78 of the <i>Queensland Heritage Act 1992</i> .	☐ Yes	☐ No
The work is being carried out by the state.	☐ Yes	☐ No
The work is being carried out in a priority development area.	☐ Yes	☐ No
The development is mentioned in schedule 4 of the Sustainable Planning Regulation 2009.	☐ Yes	☐ No

- If you answered **no** to all of the above, a development permit is required and this application requires assessment by the chief executive of DSDIP as assessment manager or concurrence agency against the *Queensland Heritage Place State Code* in the SDAP.
- Your application must include *IDAS form 3—Queensland heritage place*.
- If you answered **yes** to any of the above, a development permit is not required. End of part 3 of this checklist.

Section reference:

- Sustainable Planning Regulation 2009, schedule 3, part 1, table 5, item 2
- Sustainable Planning Regulation 2009, schedule 7, table 2, item 19

Part 4—Local heritage place

4.1 Do any of the following apply to the proposal?

The development is building works to be carried out by or on behalf of the state, a public sector entity or a local government	☐ Yes ☐ No
The development is for public housing	☐ Yes ☐ No
The development is to be carried out by the state on land designated for community infrastructure under the <i>Sustainable Planning Act 2009</i> .	☐ Yes ☐ No
The development is mentioned in schedule 4 of the Sustainable Planning Regulation 2009.	☐ Yes ☐ No
The local heritage place is on an airport lessee's airport land under the <i>Airport Assets (Restructuring and Disposal) Act 2008</i> .	☐ Yes ☐ No

- If you answered **no** to all of the above, a development permit is required and your application to the local government, as assessment manager, must include *IDAS form 4—Local heritage place*.
- If you answered **yes** to any of the above, a development permit is not required.

Section reference:

- Sustainable Planning Regulation 2009, schedule 3, part 1, table 5, item 3
- Sustainable Planning Regulation 2009, schedule 3, part 2, table 1, item 1
- *Airports Assets (Restructuring and Disposal) Act 2008*, section 54

Part 5—Strategic port land or airport land

5.1 Does the land use plan for the strategic port land or airport land state that the development is assessable development?

☐ No	• A development permit is not required for this aspect of development; end of this checklist.
☐ Yes	• A development permit is required and your application may include, where applicable: • for a material change of use—<i>IDAS form 5—Material change of use assessable against a planning scheme</i> • for building or operational work—<i>IDAS form 6—Building or operational work assessable against a planning scheme</i> • for reconfiguring a lot—<i>IDAS form 7—Reconfiguring a lot</i> • The assessment manager will either be the local government or the port authority or DSDIP.

Section reference:

- Sustainable Planning Regulation 2009, schedule 3, 1part , table 5, items 6 and 7

Privacy—Please refer to your assessment manager for further details on the use of information recorded in this checklist.

Disclaimer:

While the DSDIP believes that the information contained on this checklist and provided as part of this process will be of assistance to you, it is provided on the basis that you will not rely on the information. It is your responsibility to make your own enquiries regarding the interpretation and application of the applicable legislation to your circumstances.

To the full extent permitted by law, DSDIP expressly disclaims all liability (including but not limited to liability for negligence) for errors or omissions of any kind or for any loss (including direct and indirect losses), damage or other consequence which may arise from your reliance on this process and the information contained on this checklist.

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Date received

Reference numbers

The Sustainable Planning Act 2009 is administered by DSDIP. This checklist and all other required application materials should be sent to your assessment manager and any referral agency.

Schedule 3 Assessable Development

Checklist 2—Material change of use

(Sustainable Planning Act 2009 version 3.0 effective 1 July 2013)

This checklist only applies when the development application seeks approval for a material change of use of premises. Before completing this checklist, please complete *Checklist 1—Various aspects of development*.

You may complete this checklist as part of your development application. The checklist will:

- help you identify whether you need to make a development application for the proposed development
- help you identify the relevant Integrated Development Assessment System (IDAS) forms you need to complete as part of your application
- assist in identifying the assessment manager or referral agency for development that is assessable development under schedule 3 of the Sustainable Planning Regulation 2009.

If your development involves reconfiguring a lot, building work or operational work, it is recommended you complete the relevant checklists: *Checklist 3—Reconfiguring a lot*, *Checklist 4—Operational* or *Checklist 5—Building work*, where relevant.

If you are unsure how to answer any questions on this checklist, phone or visit your local government, or go to the Department of State Development, Infrastructure and Planning's (DSDIP) website at www.dsdip.qld.gov.au

All terms used in this checklist have the meaning given in the *Sustainable Planning Act 2009* or the Sustainable Planning Regulation 2009.

Part 1—General questions

1.1 Is the proposed material change of use of premises for a brothel?

- | | |
|---|-------------------------------------|
| ☒ No | • Continue to question 1.2 |
| ☒ Yes | • Complete part 2 of this checklist |

1.2 Is the proposed material change of use of premises on strategic port land?

- | | |
|------------------------------|-------------------------------------|
| ☐ No | • Continue to question 1.3 |
| ☐ Yes | • Complete part 3 of this checklist |

1.3 Is the proposed material change of use of premises on airport land?

- | | |
|--|-------------------------------------|
| ☒ No | • Continue to question 1.4 |
| ☐ Yes | • Complete part 4 of this checklist |

1.4 Is the proposed material change of use of premises for a major hazard facility or proposed major hazard facility?

- | | |
|-----------------------------|----------------------------|
| ☐ No | • Continue to question 1.5 |
|-----------------------------|----------------------------|

☐ Yes	- A development permit is required. - The chief executive of DSDIP will be assessment manager or concurrence agency for the development application. - You must complete <i>IDAS form 22—Major hazard facility</i>.
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Section reference:

- Sustainable Planning Regulation 2009, schedule 3, part 1, table 2, item 5
- Sustainable Planning Regulation 2009, schedule 6, table 3, item 4
- Sustainable Planning Regulation 2009, schedule 7, table 2, item 8

1.5 Is the proposed material change of use of a potentially affected premises?

☒ No	Continue to question 1.6
☐ Yes	Complete part 5 of this checklist

1.6 Is the proposed development a potentially sensitive material change of use of premises?

☒ No	Continue to question 1.7
☒ Yes	Complete part 6 of this checklist

1.7 Is the proposed material change of use of premises for aquaculture?

☒ No	Continue to question 1.8
☐ Yes	Complete part 7 of this checklist

1.8 Is the proposed material change of use of premises in a wild river area and is the proposed use for agricultural activities or animal husbandry activities (as defined under the *Wild Rivers Act 2005*)?

☐ No	Continue to question 1.9
☐ Yes	Complete part 8 of this checklist

1.9 Is the proposed material change of use of premises for an environmentally relevant activity that, under the Environmental Protection Regulation 2008, section 16, is identified as a concurrence ERA (the relevant ERA)?

☐ No	End of part 1 of checklist
☒ Yes	Complete part 9 of this checklist

Part 2—Brothel

2.1 Do any of the following apply?

More than five rooms in the proposed brothel are proposed to be used for providing prostitution.	☐ Yes ☐ No
Any land, the subject of the development, is in, or within 200 metres of the closest point on any boundary of, a primarily residential area, or an area approved for residential development or intended to be residential in character (measured according to the shortest route a person may reasonably and lawfully take, by vehicle or on foot, between the land the subject of the development and the other land).	☐ Yes ☐ No

Any land, the subject of the development, is within 200 metres of the closest point on any boundary of land on which there is a residential building, place of worship, hospital, school, kindergarten or any other facility or place regularly frequented by children for recreational or cultural activities (measured according to the shortest route a person may reasonably and lawfully take, by vehicle or on foot, between the land the subject of the development and the other land).	☐ Yes ☐ No
Any land, the subject of the development, is within 100 metres of the closest point on any boundary of land on which there is a residential building, place of worship, hospital, school, kindergarten or any other facility or place regularly frequented by children for recreational or cultural activities, measured in a straight line.	☐ Yes ☐ No
The land, the subject of the development, is in a town with a population of less than 25 000, the local government for the local government area has required that all material changes of use for such development within the area be prohibited, and the Minister has agreed that the development should be prohibited.	☐ Yes ☐ No

- If **yes** to any of the above, this aspect of the development is prohibited development and a development application cannot be made.
- If **no** to all of the above, a development permit is required. You must complete *IDAS form 9—Brothel*, and submit your application to the local government if the development is completely in a single local government area.

Section reference:

- Sustainable Planning Regulation 2009, schedule 3, part 1, table 2, item 2
- Sustainable Planning Regulation 2009, schedule 6, table 1, item 1(a)(iv)
- *Sustainable Planning Act 2009*, schedule 1, item 5

Part 3—Strategic port land

3.1 Do any of the following apply?

The proposed material change of use of premises is inconsistent with the land use plan approved under the <i>Transport Infrastructure Act 1994</i> .	☐ Yes ☐ No
The proposed material change of use of premises is assessable development under the land use plan approved under the <i>Transport Infrastructure Act 1994</i> , but is not inconsistent with it.	☐ Yes ☒ No

- If **yes** to either of the above, a development permit is required. The port authority may be the assessment manager for the development application (see schedule 6 of the Sustainable Planning Regulation 2009).
- If the proposed material change of use of premises is inconsistent with the land use plan, you are also required to refer the application to the Minister under the *Transport Infrastructure Act 1994* as concurrence agency.
- You must complete *IDAS Form 10—Inconsistent development on strategic port land or Brisbane core port land*.

Section reference:

- Sustainable Planning Regulation 2009, schedule 3, part 1, table 2, item 3
- Sustainable Planning Regulation 2009, schedule 3, part 1, table 5, item 6
- Sustainable Planning Regulation 2009, schedule 6
- Sustainable Planning Regulation 2009, schedule 7, table 2, item 6

Part 4—Airport land

4.1 Do any of the following apply?

The proposed material change of use of premises is inconsistent with the land use plan approved under the <i>Airport Assets (Restructuring and Disposal) Act 2008</i> .	☒ Yes ☐ No
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The proposed material change of use of premises is assessable development under the land use plan approved under the <i>Airport Assets (Restructuring and Disposal) Act 2008</i> for the airport land, but is not inconsistent with it.	☐ Yes ☐ No
---	--

- If **yes** to either of the above, a development permit is required for this aspect of development. The chief executive of DSDIP may be the assessment manager (see schedule 6 of the Sustainable Planning Regulation 2009).
- If the proposed material change of use of premises is inconsistent with the land use plan approved under the *Airport Assets (Restructuring and Disposal) Act 2008*, you are also required to refer the application to the chief executive of DSDIP as concurrence agency, if the chief executive of DSDIP is not the assessment manager.
- You must complete *IDAS Form 5—Material change of use assessable against a planning scheme*.

Section reference:

- Sustainable Planning Regulation 2009, schedule 3, part 1, table 2, item 4
- Sustainable Planning Regulation 2009, schedule 3, part 2, table 5, item 7
- Sustainable Planning Regulation 2009, schedule 6
- Sustainable Planning Regulation 2009, schedule 7, table 2, item 7

Part 5—Potentially affected premises

5.1 Do any of the following apply?

A suitability statement has been given for the premises, a site management plan has been approved in relation to the proposed use and the material change of use only involves: • the fit-out of a building, or • minor site excavation (e.g. post holes for open-sided non-habitable structures).	☐ Yes ☐ No
The proposed use is industrial and only involves minor site excavation (e.g. post holes for open-sided non-habitable structures).	☐ Yes ☐ No

- If **no** to both of the above:
 - A development permit is required for this aspect of development
 - The development application will require assessment by the chief executive of DSDIP, as assessment manager or concurrence agency
 - You must complete *IDAS form 24—Contaminated land*
- If **yes** to either of the above, this aspect of development is not assessable development but it is recommended that you provide a copy of any suitability statement or approved site management plan to the assessment manager to support your claim for exemption if any other aspects of your proposed use are assessable development.

Section reference:

- Sustainable Planning Regulation 2009, schedule 3, part 1, table 2, item 6
- Sustainable Planning Regulation 2009, schedule 6
- Sustainable Planning Regulation 2009, schedule 7, table 2, item 23

Part 6—Potentially sensitive material change of use

6.1 Do either of the following apply?

All or part of the premises is used for, or if there is no existing use, was last used for, an industrial activity (other than a mining activity or chapter 5A activity).	☐ Yes ☐ No
All or part of the premises is in an area for which an area management advice has been given for natural mineralisation or industrial activity (other than for a mining activity or a chapter 5A activity).	☐ Yes ☒ No

- If **yes** to either of the above:
 - A development permit is required
 - The development application requires assessment by the chief executive of DSDIP as assessment manager or concurrence agency
 - You must complete *IDAS form 24—Contaminated land*
- If **no** to all of the above, this aspect of development does not require a development permit.

Section reference:

- Sustainable Planning Regulation 2009, schedule 3, part 1, table 2, item 7
- Sustainable Planning Regulation 2009, schedule 6
- Sustainable Planning Regulation 2009, schedule 7, table 2, item 23

Part 7—Aquaculture

7.1 Will the proposed material change of use of premises for aquaculture cause discharge of waste into Queensland waters (as defined in section 36 of the *Acts Interpretation Act 1954*)?

- | | |
|------------------------------|--|
| ☐ No | <ul style="list-style-type: none"> • Continue to question 7.2 |
| ☐ Yes | <ul style="list-style-type: none"> • Go to question 7.3 |

7.2 Do any of the following apply?

The aquaculture is: • of indigenous freshwater fish species mentioned in the Fisheries Regulation 2008, schedule 10C • in a catchment listed in that schedule for that species for aquarium display or human consumption only • carried out in ponds, or using above-ground tanks, that have a total water surface area of no more than five hectares.	☐ Yes ☐ No
The aquaculture is of indigenous freshwater fish for aquarium display or human consumption only, or non-indigenous freshwater fish for aquarium display only, and is carried out using only above-ground tanks that have: • a floor area, excluding water storage area, of no more than 50m² • a roof impervious to rainwater.	☐ Yes ☐ No
The aquaculture is of indigenous marine fish for aquarium display only and is carried out using only above-ground tanks that have a total floor area, excluding water storage areas, of no more than 50m ² .	☐ Yes ☐ No

- If **no** to all of the above, continue to question 7.3
- If **yes** to any of the above, a development permit is not required for this aspect of development, but the proposed material change of use will be self assessable development and must comply with applicable codes

7.3 Is any part of the proposed material change of use of premises for aquaculture intended to be located in a wild river area?

- | | |
|-----------------------------|--|
| ☐ No | <ul style="list-style-type: none"> • A development permit is required for this aspect of development and this aspect of development requires assessment by the chief executive of DSDIP as assessment manager or concurrence agency • You must complete <i>IDAS form 25—Aquaculture</i> • End of part 7 of this checklist |
|-----------------------------|--|

☐ Yes	Continue to question 7.4
------------------------------	--

7.4 Is the proposed material change of use of premises for aquaculture in a wild river high preservation area or wild river special floodplain management area?

☐ No	Continue to question 7.5
☐ Yes	To the extent the development is in a wild river high preservation area or wild river special floodplain management area, this aspect of development is prohibited development and a development application cannot be made. If this is the only aspect of development, then that is the end of part 7 of this checklist, otherwise continue to question 7.5

7.5 Is any part of the proposed material change of use of premises on land to which a property development plan under the *Wild Rivers Act 2005* applies?

☐ No	- A development permit is required for this aspect of development and this aspect of development requires assessment by the chief executive of DSDIP as assessment manager or concurrence agency - You must complete <i>IDAS form 25—Aquaculture</i> - End of part 7 of this checklist
☐ Yes	Continue to question 7.6

7.6 Is the proposed material change of use inconsistent with the property development plan under the *Wild Rivers Act 2005*?

☐ No	- A development permit is required for this aspect of development and this aspect of development requires assessment by the chief executive of DSDIP as assessment manager or concurrence agency - You must complete <i>IDAS form 25—Aquaculture</i> - End of part 7 of this checklist
☐ Yes	- This aspect of development is prohibited development and a development application can not be made for this aspect of development - End of part 7 of this checklist

Section reference:

- Sustainable Planning Regulation 2009, schedule 3, part 1, table 2, item 10
- Sustainable Planning Regulation 2009, schedule 3, part 2, table 2, item 1
- Sustainable Planning Regulation 2009, schedule 6
- Sustainable Planning Regulation 2009, schedule 7, table 2, item 28
- Sustainable Planning Act 2009*, schedule 1, items 2 and 6

Part 8—Agriculture and animal husbandry activities

8.1 Is the proposed material change of use of premises for animal husbandry activities in a wild river high preservation area or wild river special floodplain management area?

☐ No	Continue to question 8.2
☐ Yes	To the extent the development is in a wild river high preservation area or wild river special floodplain management area, it is prohibited development and a development application cannot be made. If this is the only aspect of development, end of part 8 of this checklist, otherwise continue to question 8.2

8.2 Is the proposed material change of use of premises for agricultural activities in any of the following?

• A wild river high preservation area	☐ Yes ☐ No
• A wild river preservation area or wild river special floodplain management area and the development involves the production of a high risk species	☐ Yes ☐ No
• A wild river special floodplain management area and the development is for agricultural activities that involve irrigation	☐ Yes ☐ No

- If **yes** to any of the above, this aspect of development is prohibited development and a development application cannot be made. If this is the only aspect of development, end of part 8 of checklist, otherwise continue to question 8.3
- If **no** to all of the above, continue to question 8.3

8.3 Will the development be carried out on land to which a property development plan under the *Wild Rivers Act 2005* applies?

☐ No	• A development permit is required and this application requires assessment by the chief executive of DSDIP as assessment manager or concurrence agency • Your application must include <i>IDAS form 29—Agricultural activities in a wild river area</i> or <i>IDAS form 30—Animal husbandry activities in a wild river area</i>
☐ Yes	• Continue to question 8.4

8.4 Is the development inconsistent with any property development plan that applies to the land?

☐ Yes	• This aspect of the development is prohibited development and a development application cannot be made. End of part 8 of checklist
☐ No	• A development permit is required and this application requires assessment by the chief executive of DSDIP as assessment manager or referral agency • Your application must include <i>IDAS form 29—Agricultural activities in a wild river area</i> or <i>IDAS form 30—Animal husbandry activities in a wild river area</i>

Section reference:

- Sustainable Planning Regulation 2009, schedule 3, part 1, table 2, item 11
- Sustainable Planning Regulation 2009, schedule 6
- Sustainable Planning Regulation 2009, schedule 7, table 2, item 41
- *Sustainable Planning Act 2009*, schedule 1, items 1 and 2

Part 9—Environmentally relevant activities (ERA)**9.1 Has an environmental authority to carry out a concurrence ERA been approved for the premises?**

☒ No	• Continue to question 9.4
☐ Yes	• Continue to question 9.2

9.2 Is the relevant ERA and the concurrence ERA approved under the environmental authority to be carried out under the environmental authority?

☐ No	• Continue to question 9.4
☐ Yes	• Continue to question 9.3

9.3 Does the relevant ERA have a lower aggregate environmental score than the concurrence ERA approved under the environmental authority, under the Environmental Protection Regulation 2008, section 14(1)?

☐ No	• Continue to question 9.4
☐ Yes	• This aspect of development does not require a development permit. End of checklist

9.4 Do all of the following apply?

The environmentally relevant activity is to be carried out in the North Stradbroke Island Region.	☐ Yes ☒ No
The environmentally relevant activity is mentioned in the Environmental Protection Regulation 2008, schedule 2, part 4, section 16.	☐ Yes ☐ No
The environmentally relevant activity involves dredging or extracting more than 10 000 tonnes of material a year.	☐ Yes ☐ No

- If **yes** to all of the above, this aspect of development is prohibited development (to the extent it involves dredging or extracting more than 10000 tonnes of material a year) and a development application cannot be made. If this is the only aspect of development, end of checklist, otherwise continue to question 9.5
- If **no** to any of the above, continue to question 9.5

9.5 Is any part of the proposed material change of use of premises for an environmentally relevant activity intended to be located in a wild river area?

☒ No	• Go to question 9.14
☐ Yes	• Continue to question 9.6

9.6 Does the proposed development involve development in waters in a wild river area that is for an extraction ERA?

☒ No	• Go to question 9.8
☐ Yes	• Continue to question 9.7

9.7 Will the development application for the proposed development be accompanied by an allocation notice?

☐ No	• This aspect of development is prohibited development and a development application cannot be made. If this is the only aspect of development, end of checklist, otherwise continue to question 9.8
☐ Yes	• Continue to question 9.8

9.8 Does the proposed development involve development in a wild river high preservation area or a wild river special floodplain management area?

☒ No	• Go to question 9.10
☐ Yes	• Continue to question 9.9

9.9 Is the proposed development any of the following?

A sewage ERA under the <i>Environmental Protection Act 1994</i> , section 174(4)	☐ Yes ☐ No
A water treatment ERA under the <i>Environmental Protection Act 1994</i> , section 174(4)	☐ Yes ☐ No

A dredging ERA	☐ Yes ☐ No
An extraction ERA, if the activity is a low impact activity carried out outside waters and is for specified works, residential complexes, or another commercial, industrial or residential purpose in a designated urban area, in the wild river high preservation area or a wild river special floodplain management area	☐ Yes ☐ No
A screening ERA, if the activity is carried out outside waters and is for specified works, or residential complexes, in the wild river high preservation area or a wild river special floodplain management area	☐ Yes ☐ No
A crude oil or petroleum product storage ERA, if the activity is for residential complexes in the wild river high preservation area or a wild river special floodplain management area, and is carried out outside a designated urban area	☐ Yes ☐ No
An exempt prescribed ERA under the <i>Environmental Protection Act 1994</i> , section 174(4), in a designated urban area	☐ Yes ☐ No

- If **yes** to any of the above, continue to question 9.10
- If **no** to all of the above, this aspect of development is prohibited development and a development application cannot be made. If this is the only aspect of development, end of checklist, otherwise continue to question 9.10

9.10 Does the proposed development involve an extraction ERA in a wild river floodplain management area?

☒ No	• Go to question 9.12
☐ Yes	• Continue to question 9.11

9.11 Is the proposed development either of the following?

A low impact activity carried out outside waters	☐ Yes ☐ No
For specified works, residential complexes, or another commercial, industrial or residential purpose in a designated urban area, in the wild river floodplain management area	☐ Yes ☐ No

- If **yes** to either of the above, continue to question 9.12
- If **no** to all of the above, this aspect of development is prohibited development and a development application cannot be made. If this is the only aspect of development, end of checklist, otherwise continue to question 9.12

9.12 Will the development be carried out on land to which a property development plan under the *Wild Rivers Act 2005* applies?

☒ No	• Go to question 9.14
☐ Yes	• Continue to question 9.13

9.13 Is the development inconsistent with any property development plan that applies to the land?

☐ Yes	• This aspect of the development is prohibited development and a development application cannot be made. End of checklist
☐ No	• Continue to question 9.14

9.14 Is the concurrence ERA devolved to local government under the Environmental Protection Regulation 2008?

☒ No	- A development permit is required and this application requires assessment by the chief executive of DSDIP as assessment manager or concurrence agency - Your application must include <i>IDAS form 8—Environmentally relevant activity</i> - End of checklist
☐ Yes	- A development permit is required and this application requires assessment by the local government as assessment manager or concurrence agency - End of checklist

Section reference:

- Sustainable Planning Regulation 2009, schedule 3, part 1, table 2, item 1
- Sustainable Planning Regulation 2009, schedule 6
- Sustainable Planning Regulation 2009, schedule 7, table 2, item 1
- Sustainable Planning Act 2009*, schedule 1, items 2, 9, 10, 11 and 13

Privacy—Please refer to your assessment manager, referral agency and/or building certifier for further details on the use of information recorded in this form.

Disclaimer:

While DSDIP believes that the information contained on this checklist and provided as part of this process will be of assistance to you, it is provided on the basis that you will not rely on the information. It is your responsibility to make your own enquiries regarding the interpretation and application of the applicable legislation to your circumstances.

To the full extent permitted by law, DSDIP expressly disclaims all liability (including but not limited to liability for negligence) for errors or omissions of any kind or for any loss (including direct and indirect losses), damage or other consequence which may arise from your reliance on this process and the information contained on this checklist.

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Date received		Reference numbers	
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Schedule 3 Assessable Development

Checklist 4—Operational work

(Sustainable Planning Act 2009 version 3.0 effective 1 July 2013)

This checklist only applies when the development application seeks approval for operational work. Before completing this checklist, please complete *Checklist 1—Various aspects of development*.

You may complete this checklist as part of your development application. The checklist will:

- help you identify whether you need to make a development application for the proposed development
- help you identify the relevant Integrated Development Assessment System (IDAS) form you need to complete as part of your application
- assist in identifying the assessment manager or referral agency for development that is assessable development under schedule 3 of the Sustainable Planning Regulation 2009.

If your development involves reconfiguring a lot, building work or material change of use, it is recommended you complete *Checklist 2—Material change of use*, *Checklist 3—Reconfiguring a lot*, or *checklist 5—Building work*, where relevant.

If you are unsure of any answers to questions, phone or visit your local government, or go to the Department of State Development, Infrastructure and Planning's website at www.dsdip.qld.gov.au.

All terms used in this checklist have the meaning given in the *Sustainable Planning Act 2009* or the Sustainable Planning Regulation 2009.

Part 1—General questions

1.1 Is the operational work clearing native vegetation on:

- freehold land
- indigenous land
- any of the following under the Land Act 1994:
 - land subject to a lease
 - a road
 - trust land, other than indigenous land
 - land subject to a licence or permit?

- | | |
|---|-------------------------------------|
| ☒ No | • Continue to question 1.2 |
| ☒ Yes | • Complete part 2 of this checklist |

1.2 Is any of the proposed operational work associated with reconfiguring a lot and the reconfiguration is also assessable development?

- | | |
|------------------------------|-------------------------------------|
| ☐ No | • Continue to question 1.3 |
| ☐ Yes | • Complete part 3 of this checklist |

1.3 Does any of the proposed operational work involve taking or interfering with:	
• water from a watercourse, lake or spring, or from a dam constructed on a watercourse or lake • artesian water as defined under the <i>Water Act 2000</i>, schedule 4 • overland flow water • subartesian water	
☒ No	• Continue to question 1.4
☐ Yes	• Complete part 4 of this checklist
1.4 Is the operational work the construction of a dam, or carried out in relation to a dam, and, because of the works, the dam must be failure impact assessed?	
☐ No	• Continue to question 1.5
☐ Yes	• Complete part 5 of this checklist
1.5 Is any of the proposed operational work for agricultural activities or animal husbandry activities (as defined in the <i>Wild Rivers Act 2005</i>) in a wild river area?	
☒ No	• Continue to question 1.6
☐ Yes	• Complete part 6 of this checklist
1.6 Is any of the proposed operational work tidal works?	
☒ No	• Continue to question 1.7
☐ Yes	• Complete part 7 of this checklist
1.7 Is any of the operational work proposed to be carried out completely or partly within a coastal management district?	
☒ No	• Continue to question 1.8
☒ Yes	• Complete part 8 of this checklist
1.8 Is any of the proposed operational work for constructing or raising waterway barrier works as defined under the <i>Fisheries Act 1994</i>?	
☐ No	• Continue to question 1.9
☐ Yes	• Complete part 9 of this checklist
1.9 Is any of the proposed operational work to be carried out completely or partly within a declared fish habitat area as defined under the <i>Fisheries Act 1994</i>?	
☐ No	• Continue to question 1.10
☐ Yes	• Complete part 10 of this checklist
1.10 Is any of the proposed operational work removing, destroying or damaging marine plants as defined under the <i>Fisheries Act 1994</i>?	
☒ No	• Continue to question 1.11

☒ Yes	Complete part 11 of this checklist
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1.11 Does the proposal involve operational works that are high impact earthworks in the Great Barrier Reef Wetland Protection Area?

☐ No	End of checklist
☐ Yes	Complete part 12 of this checklist

Part 2—Clearing native vegetation

2.1 Do any of the following apply?

The clearing is on premises to which structure plan arrangements apply.	☐ Yes ☐ No
The clearing is clearing, or for another activity or matter, mentioned in schedule 24, part 1 of the Sustainable Planning Regulation 2009.	☐ Yes ☐ No
The clearing is mentioned in schedule 24, part 2 of the Sustainable Planning Regulation 2009, as clearing for the particular land.	☐ Yes ☐ No

- If you answered **yes** to any of the above, this aspect of your operational work is not assessable development
- If you answered **no** to ALL of the above, continue to question 2.2

2.2 Is the proposed vegetation clearing for a relevant purpose under the *Vegetation Management Act 1999*, section 22A for one or more of the following?

A project declared to be a coordinated project under the <i>State Development and Public Works Organisation Act 1971</i> , section 26 outside of a wild river high preservation area under the <i>Wild Rivers Act 2005</i>	☐ Yes ☒ No
Necessary to control non-native plants or declared pests	☐ Yes ☐ No
To ensure public safety	☐ Yes ☐ No
For establishing a necessary fence, firebreak, road or vehicular track, or for constructing necessary built infrastructure, (each 'relevant infrastructure') and the clearing for the relevant infrastructure can not reasonably be avoided or minimised	☐ Yes ☐ No
A natural and ordinary consequence of other assessable development for which a development approval was given under the repealed <i>Integrated Planning Act 1997</i> , or a development application was made under that Act, before 16 May 2003 and is outside an area declared to be a declared area part 2, division 4, subdivision 2 of the <i>Vegetation Management Act 1999</i> .	☐ Yes ☐ No
For fodder harvesting outside an area declared to be a declared area part 2, division 4, subdivision 2 of the <i>Vegetation Management Act 1999</i> :	☐ Yes ☐ No
For thinning	☐ Yes ☐ No
For clearing of encroachment	☐ Yes ☐ No
For an extractive industry outside: - a wild river high preservation area under the <i>Wild Rivers Act 2005</i>, or - an area declared to be a declared area part 2, division 4, subdivision 2 of the <i>Vegetation Management Act 1999</i>	☐ Yes ☐ No
For clearing regrowth vegetation on freehold land, indigenous land or leases issued under the <i>Land Act 1994</i> for agriculture or grazing purposes, in an area shown as a registered area of agriculture on a registered area of agriculture map in a wild river high preservation area under the <i>Wild River Act 2000</i>	☐ Yes ☐ No

The Minister responsible for administering the <i>Vegetation Management Act 1999</i> is satisfied the development applied for is a for special indigenous purpose under the <i>Cape York Peninsula Heritage Act 2007</i> outside: - a wild river high preservation area under the <i>Wild Rivers Act 2000</i>, or - an area declared to be a declared area part 2, division 4, subdivision 2 of the <i>Vegetation Management Act 1999</i>	☐ Yes ☐ No
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- If you answered **no** to ALL of the above, then the clearing is not for a relevant purpose and this aspect of the development is prohibited development. If this is the only aspect of vegetation clearing then that is the end of part 2 of this checklist, otherwise continue to question 2.3
- If **yes** to any of the above, continue to question 2.3

2.3 Is any part of the vegetation clearing on land to which a property development plan under the *Wild Rivers Act 2005* applies?

☐ No	Go to question 2.5
☐ Yes	Continue to question 2.4

2.4 Is the proposed vegetation clearing consistent with the property development plan under the *Wild Rivers Act 2005*?

☐ No	- This aspect of development is prohibited development and a development application can not be made for this aspect of development. - If this is the only aspect of vegetation clearing then that is the end of part 2 of this checklist, otherwise continue to question 2.5.
☐ Yes	Continue to question 2.5

2.5 Is the proposed vegetation clearing associated with a material change of use or reconfiguring a lot for which referral is required in relation to clearing vegetation under schedule 7, table 3, item 10 and table 2, item 4 of the Sustainable Planning Regulation 2009?

☐ No	- The proposed operational work for clearing native vegetation is assessable development and a development permit is required. - This application requires assessment by the chief executive of DSDIP as assessment manager or concurrence agency against the <i>Clearing native vegetation state code</i> in the State Development Assessment Provisions (SDAP). - You must complete <i>IDAS Form 11—Clearing native vegetation</i> - End of part 2 of this checklist
☐ Yes	- This aspect of development is assessable development. DSDIP may be a concurrence agency for the application (see schedule 7, table 2, item 4 and table 3, item 10 of the Sustainable Planning Regulation 2009) and will assess the application against the <i>Clearing native vegetation state code</i> in the SDAP. - If DSDIP is a concurrence agency for the application, you must refer a copy of your application to DSDIP. - End of part 2 of this checklist

Section reference:

- Sustainable Planning Regulation 2009, schedule 3, part 1, table 4, item 1
- Sustainable Planning Regulation 2009, schedule 7, table 2, item 5 and schedule 7, table 3, item 10
- Vegetation Management Act 1999*, section 22A

Part 3—Operational work for reconfiguring a lot

3.1 Is any part of the operational work for reconfiguring a lot in a priority development area?

☐ No	Continue to question 3.2
☐ Yes	- This aspect of the development is not assessable development. - End of part 3 of this checklist

3.2 Do all of the following apply:

- the land is in the area of a local government that, under the *South East Queensland Water (Distribution and Retail Restructuring) Act 2009*, is a participating local government for a distributor-retailer
- the participating local government is the assessment manager
- the development application is made before 1 March 2014

☐ No	- This aspect of the development is assessable development and you will need a development permit. - The local government will be the assessment manager for the application. - End of part 3 of this checklist
☐ Yes	- This aspect of the development is assessable development and you will need a development permit - The local government will be the assessment manager for the application and the distributor-retailer (or SARA) will be a concurrence agency for the application. - End of part 3 of this checklist

Section reference:

- Sustainable Planning Regulation 2009, schedule 3, part 1, table 4, item 2
- Sustainable Planning Regulation 2009, schedule 7, table 2, item 47

Part 4—Taking or interfering with water

4.1 Is the proposed operational work to be carried out in a priority development area or on premises to which structure plan arrangements apply?

☐ No	Continue to question 4.2
☐ Yes	- This aspect of development is not assessable development and does not require a development permit. - End of part 4 of this checklist.

4.2 Does any of the proposed operational work involve taking or interfering with water from a watercourse, lake or spring or from a dam constructed on a watercourse or lake?

☐ No	Go to question 4.17
☐ Yes	Continue to question 4.3

4.3 Are the proposed works for any of the following purposes?

Taking water from a watercourse, lake or spring in an emergency situation for a public purpose or fighting a fire destroying, or threatening to destroy, a dwelling house	☐ Yes ☐ No
Taking water from a watercourse, lake or spring if: - the water is taken by the owner of land adjoining the watercourse, lake or spring - the water is taken for domestic purposes or stock purposes	☐ Yes ☐ No

Taking water from a watercourse, lake or spring for camping purposes or for watering travelling stock	☐ Yes ☐ No
Using a water truck to pump water	☐ Yes ☐ No

- If **no** to all of the above, continue to question 4.4
- If **yes** to any of the above, this aspect of development does not require a development permit.
 - If this is the only aspect of taking or interfering with water proposed then that is the end of part 4 of this checklist
 - If there are other aspects of taking or interfering with water proposed, continue to question 4.4

4.4 Are the proposed works self-assessable development under schedule 3, part 2, table 4, item 1 of the Sustainable Planning Regulation 2009?

☐ No	• Go to question 4.5
☐ Yes	• This aspect of development is self-assessable development and must comply with any relevant self assessable code • If the proposal involves more than one aspect of operational work for taking or interfering with water, and the other aspect is not self-assessable development, then continue to question 4.5

4.5 Is any of the proposed operational work to be carried out in a wild river area under the *Wild Rivers Act 2005*?

☒ No	• Go to question 4.12
☐ Yes	• Continue to question 4.6

4.6 Do both of the following apply:

- The proposed operational work is to be carried out in a wild river high preservation area or a wild river special floodplain management area
- the work interferes with the flow of water in a watercourse, lake or spring in the area

☐ No	• Go to question 4.8
☐ Yes	• Continue to question 4.7

4.7 Do any of the following apply?

The works are for the maintenance of works as defined under the <i>Water Act 2000</i>	☐ Yes ☐ No
The works increase the interference with water in Lake Eyre Basin to the extent necessary for taking water for town water supply demands	☐ Yes ☐ No
The work is authorised wild river operational work for the area	☐ Yes ☐ No

- If **no** to all of the above, then this aspect of the development is prohibited development
 - If this is the only aspect of taking and interfering with water proposed, then that is the end of part 4 of this checklist
 - If other aspects of taking and interfering with water are proposed, continue to question 4.8
- If **yes** to any of the above, continue to question 4.8

4.8 Does the proposed operational work involve interfering with the flow of water in a nominated waterway, as defined under the *Wild Rivers Act 2005*, in a wild river preservation area?

☒ No	• Go to question 4.10
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☐ Yes	Continue to question 4.9
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4.9 Does the proposed work involve any of the following?

The waterway being interfered with is a dam or weir as defined under the <i>Water Act 2000</i> .	☐ Yes ☐ No
The proposed work is authorised wild river operational work for the area	☐ Yes ☐ No

- If **no** to all of the above, then this aspect of the development is prohibited development
 - If this is the only aspect of taking and interfering with water proposed, then that is the end of part 4 of this checklist
 - If other aspects of taking and interfering with water are proposed, continue to question 4.12
- If **yes** to any of the above, continue to question 4.10

4.10 Is any part of the proposed works on land to which a property development plan under the *Wild Rivers Act 2005* applies?

☒ No	Go to question 4.12
☐ Yes	Continue to question 4.11

4.11 Is the proposed works consistent with the property development plan under the *Wild Rivers Act 2005*?

☐ No	- This aspect of development is prohibited development and a development application can not be made for this aspect of development. - If this is the only aspect of taking or interfering with water then that is the end of part 4 of this checklist, otherwise Continue to question 4.12.
☐ Yes	Continue to question 4.12

4.12 Is the work for a water pump?

☐ No	Continue to question 4.13
☐ Yes	- A development permit is required and this application will be assessed by DSDIP's SARA as assessment manager or concurrence agency against the <i>Sustainable management of water resources state code</i> in the SDAP. - You must complete <i>IDAS form 13—Watercourse pump</i> - If this is the only aspect of taking or interfering with water proposed, then that is the end of part 4 of this checklist - If there are other aspects of taking or interfering with water proposed, then continue to question 4.13

4.13 Is the work for water storage (other than for a dam requiring failure impact assessment)?

☐ No	Continue to question 4.14
☐ Yes	- A development permit is required and this application will be assessed by DSDIP's SARA as assessment manager or concurrence agency against the <i>Sustainable management of water resources state code</i> in the SDAP. - You must complete <i>IDAS form 14—Water storage</i> - If this is the only aspect of taking or interfering with water proposed, then that is the end of part 4 of this checklist - If there are other aspects of taking or interfering with water proposed, then continue to question 4.14

4.14 Is the work for gravity diversion from a watercourse?

☒ No	Continue to question 4.15
☐ Yes	- A development permit is required and this application will be assessed by DSDIP's SARA as assessment manager or concurrence agency against the <i>Sustainable management of water resources state code</i> in the SDAP. - You must complete <i>IDAS form 15—Gravity diversion from a watercourse</i> - If this is the only aspect of taking or interfering with water proposed, then that is the end of part 4 of this checklist - If there are other aspects of taking or interfering with water proposed, then continue to question 4.15

4.15 Is the work for a watercourse diversion?

☐ No	Continue to question 4.16
☐ Yes	- A development permit is required and this application will be assessed by DSDIP's SARA as assessment manager or concurrence agency against the <i>Sustainable management of water resources state code</i> in the SDAP. - You must complete <i>IDAS form 17—Watercourse diversion</i> - If this is the only aspect of taking or interfering with water proposed, then that is the end of part 4 of this checklist - If there are other aspects of taking or interfering with water proposed, then continue to question 4.16

4.16 Is the work for other work for taking or interfering with water?

☒ No	Continue to question 4.17
☐ Yes	- A development permit is required and this application will be assessed by DSDIP's SARA as assessment manager or concurrence agency against the <i>Sustainable management of water resources state code</i> in the SDAP. - You must complete <i>IDAS form 21—Other work in a watercourse</i> - If this is the only aspect of taking or interfering with water proposed, then that is the end of part 4 of this checklist - If there are other aspects of taking or interfering with water proposed, then continue to question 4.17

4.17 Does any of the proposed operational work involve taking or interfering with artesian water as defined under the *Water Act 2000*, schedule 4 (other than using a water truck to pump water)?

☐ No	Go to question 4.20
☐ Yes	Continue to question 4.18

4.18 Is any part of the proposed works on land to which a property development plan under the *Wild Rivers Act 2005* applies?

☒ No	- A development permit is required and this application will be assessed by DSDIP's SARA as assessment manager or concurrence agency against the <i>Sustainable management of water resources state code</i> in the SDAP. - You must complete <i>IDAS form 12—Taking or interfering with artesian or sub-artesian water</i> - If this is the only aspect of taking or interfering with water proposed, then that is the end of part 4 of this checklist - If there are other aspects of taking or interfering with water proposed, then continue to question 4.20
☐ Yes	Continue to question 4.19

4.19 Is the proposed works consistent with the property development plan under the *Wild Rivers Act 2005*?

☐ No	• This aspect of development is prohibited development and a development application can not be made for this aspect of development. • If this is the only aspect of taking or interfering with water then that is the end of part 4 of this checklist, otherwise continue to question 4.20.
☐ Yes	• A development permit is required and this application will be assessed by DSDIP's SARA as assessment manager or concurrence agency against the <i>Sustainable management of water resources state code</i> in the SDAP. • You must complete <i>IDAS form 12—Taking or interfering with artesian or sub-artesian water</i> • If this is the only aspect of taking or interfering with water proposed, then that is the end of part 4 of this checklist • If there are other aspects of taking or interfering with water proposed, then continue to question 4.20

4.20 Does the proposed operational work involve taking or interfering with overland flow water (other than using a water truck to pump water)?

☐ No	• Go to question 4.29
☐ Yes	• Continue to question 4.21

4.21 Is the proposed taking or interfering :

Mentioned as assessable development in a wild river declaration under the <i>Wild Rivers Act 2005</i>	☐ Yes ☐ No
In an area declared under the <i>Water Act 2000</i> to be a drainage and embankment area and the operations are declared under that Act to be assessable development	☐ Yes ☐ No
In a wild river floodplain management area and the operations are: • specified works; or • stated in the wild river declaration for the area to be assessable development	☐ Yes ☐ No
Mentioned as assessable development in a water resource plan, or prescribed as assessable development under a regulation under the <i>Water Act 2000</i>	☐ Yes ☐ No

- If **yes** to any of the above, continue to question 4.22.
- If **no** to all of the above and there are no other aspects of taking or interfering with water proposed, then that is the end of part 4 of this checklist. If other aspects of taking or interfering with water are proposed, go to question 4.29

4.22 Is any of the proposed operational work to be carried out in a wild river area under the *Wild Rivers Act 2005*?

☐ No	• A development permit is required and this application will be assessed by DSDIP's SARA as assessment manager or concurrence agency against the <i>Sustainable management of water resources state code</i> in the SDAP. - You must complete <i>IDAS form 19—Taking overland flow</i> • If this is the only aspect of taking or interfering with water proposed, then that is the end of part 4 of this checklist • If there are other aspects of taking or interfering with water proposed, then continue to question 4.29
☐ Yes	• Continue to question 4.23

4.23 Is any part of the proposed works on land to which a property development plan under the *Wild Rivers Act 2005* applies?

☐ No	Go to question 4.25
☐ Yes	Continue to question 4.24

4.24 Is the proposed works consistent with the property development plan under the *Wild Rivers Act 2005*?

☐ No	- This aspect of development is prohibited development and a development application can not be made for this aspect of development. - If this is the only aspect of taking or interfering with water then that is the end of part 4 of this checklist, otherwise go to question 4.25.
☐ Yes	Go to question 4.25

4.25 For operational work that is the taking of overland flow water, is any of the proposed works to be carried out in a wild river high preservation area or a wild river special floodplain management area?

☐ No	Go to question 4.27
☐ Yes	Continue to question 4.26
☐ N/A	Go to question 4.27

4.26 Is the proposed taking of overland flow water stated in a wild river declaration for the area to be assessable development for which a development application can be made?

☐ No	- This aspect of the development is prohibited development - If this is the only aspect of taking and interfering with water proposed, then that is the end of part 4 of this checklist - If other aspects of taking and interfering with water are proposed, continue to question 4.27
☐ Yes	- A development permit is required and this application will be assessed by DSDIP's SARA as assessment manager or concurrence agency against the <i>Sustainable management of water resources state code</i> in the SDAP. - If there are no other aspects of taking or interfering proposed, then this is the end of part 4 of this checklist - If there are other aspects of taking or interfering with water proposed, continue to question 4.27

4.27 For operational work that is interfering with overland flow water, is any of the proposed works to be carried out in a wild river floodplain management area or a wild river special floodplain management area?

☐ No	- A development permit is required and this application will be assessed by DSDIP's SARA as assessment manager or concurrence agency against the <i>Sustainable management of water resources state code</i> in the SDAP. - If there are no other aspects of taking or interfering proposed, then this is the end of part 4 of this checklist - If there are other aspects of taking or interfering with water proposed, Go to question 4.29
☐ Yes	Continue to question 4.28
☐ N/A	Go to question 4.29

4.28 Do both of the following apply:

The operations are declared under the <i>Water Act 2000</i> or the wild river declaration for the area to be assessable development	☐ Yes ☐ No
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The operational work is not for specified works in the area and is not stated in the wild river declaration for the area to be assessable development for which a development application may be made	☐ Yes ☐ No
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- If **yes** to all of the above, the development is prohibited development and a development application cannot be made.
- If **no** to all of the above, a development permit is required and this application will be assessed by DSDIP's SARA as assessment manager or concurrence agency against the *Sustainable management of water resources state code* in the SDAP.
- If there are no other aspects of taking or interfering with water proposed, then that is the end of part 4 of this checklist.
- If other aspects of taking or interfering with water are proposed, continue to question 4.29

4.29 Does the proposed operational work involve taking or interfering with subartesian water (other than using a water truck to pump water)?

☐ No	• End of part 4 of this checklist.
☐ Yes	• Continue to question 4.30

4.30 Is the proposed taking or interfering with subartesian water mentioned or prescribed as assessable development in any of the following?

A water resource plan under the <i>Water Act 2000</i>	☐ Yes ☐ No
A wild river declaration under the <i>Wild Rivers Act 2005</i>	☐ Yes ☐ No
A regulation under the <i>Water Act 2000</i>	☐ Yes ☐ No

- If **yes** to any of the above, continue to question 4.31
- If **no** to all of the above, end of part 4 of this checklist.

4.31 Is any part of the proposed works on land to which a property development plan under the *Wild Rivers Act 2005* applies?

☐ No	• A development permit is required and this application will be assessed by DSDIP's SARA as assessment manager or concurrence agency against the <i>Sustainable management of water resources state code</i> in the SDAP. • You must complete <i>IDAS form 12—Taking or interfering with artesian or sub-artesian water</i> • End of part 4 of this checklist
☐ Yes	• Continue to question 4.32

4.32 Is the proposed works consistent with the property development plan under the *Wild Rivers Act 2005*?

☐ No	• This aspect of development is prohibited development and a development application can not be made for this aspect of development. • End of part 4 of this checklist
☐ Yes	• A development permit is required and this application will be assessed by DSDIP's SARA as assessment manager or concurrence agency against the <i>Sustainable management of water resources state code</i> in the SDAP. • You must complete <i>IDAS form 12—Taking or interfering with artesian or sub-artesian water</i> • End of part 4 of this checklist

Part 5—For particular dams

5.1 Is the proposed operational work for the following?

The construction of a dam more than ten metres in height and having a storage capacity of more than 1 500 megalitres	☐ Yes ☐ No
The construction of a dam more than ten metres in height and having a storage capacity of more than 750 megalitres and a catchment area that is more than three times its maximum surface area at full supply level	☐ Yes ☐ No
Work carried out in relation to an existing non-referable dam that will result in the dam being more than ten metres in height and having a storage capacity of more than 1 500 megalitres	☐ Yes ☐ No
Work to an existing non-referable dam that will result in the dam being more than ten metres in height and having a storage capacity of more than 750 megalitres and a catchment area that is more than three times its maximum surface area at full supply level	☐ Yes ☐ No
Works that involve the increase of capacity of a non-referable dam by more than 10 per cent if the dam is: - more than ten metres in height and having a storage capacity of more than 1 500 megalitres, or - more than ten metres in height and having a storage capacity of more than 750 megalitres and a catchment area that is more than three times its maximum surface area at full supply level	☐ Yes ☐ No
Works carried out in relation to a referable dam if, because of the works, the storage capacity of the dam will increase by more than 10% after the works are carried out.	☐ Yes ☐ No
Constructing a dam for which the chief executive under the <i>Water Supply (Safety and Reliability) Act 2008</i> has given a notice to have the dam failure impact assessed.	☐ Yes ☐ No

- If **no** to all of the above, the proposed operational work is not required to be failure impact assessed and is therefore not assessable development. This is the end of part 5 of this checklist
- If **yes** to any of the above, this application requires assessment by the chief executive of DSDIP as assessment manager or concurrence agency against the *Referrable dams state code* in the SDAP.
 - You must complete *IDAS form 16—Particular dams*
 - End of part 5 of this checklist

Part 6—For a wild river area

6.1 Is the proposed operational work declared to be assessable development under the wild river declaration for the area?

☐ No	This aspect of development is not assessable development and no development permit is required End of part 6 of this checklist
☐ Yes	Continue to question 6.2

6.2 Does the proposed work involve any of the following?

Any part of the operational work is located in a wild river high preservation area	☐ Yes ☐ No
The work is for agricultural activities in a wild river preservation area or a wild river special floodplain management area in relation to the production of a high risk species as defined under the <i>Wild Rivers Act 2005</i>	☐ Yes ☐ No
The work is for animal husbandry activities in a wild river special floodplain management area	☐ Yes ☐ No

- If **yes** to any of the above, this aspect of development is prohibited development and a development application can not be made. This is the end of part 6 of this checklist
- If **no** to all of the above, continue to question 6.3

6.3 Will the proposed operational work be carried out on land to which a property development plan applies?

☐ No	• This application requires assessment by the chief executive of DSDIP as assessment manager or concurrence agency against the <i>Agricultural or animal husbandry activities in a wild river area state code</i> in the SDAP. • You must complete <i>IDAS form 29—Agricultural activities in a wild river area</i> if the operational work is for agricultural activities • You must complete <i>IDAS form 30—Animal husbandry activities in a wild river area</i> if the operational work is for animal husbandry activities • End of part 6 of this checklist
☐ Yes	• Continue to question 6.4

6.4 Is the proposed development consistent with the property development plan?

☐ No	• This aspect of development is prohibited development and a development application cannot be made • End of part 6 of this checklist
☐ Yes	• This application requires assessment by the chief executive of DSDIP as assessment manager or concurrence agency against the <i>Agricultural or animal husbandry activities in a wild river area state code</i> in the SDAP. • You must complete <i>IDAS form 29—Agricultural activities in a wild river area</i> if the operational work is for agricultural activities • You must complete <i>IDAS form 30—Animal husbandry activities in a wild river area</i> if the operational work is for animal husbandry activities • End of part 6 of this checklist

Section reference:

- Sustainable Planning Regulation 2009, schedule 3, part 1, table 4, item 9
- Sustainable Planning Regulation 2009, schedule 7, table 2, item 42
- *Sustainable Planning Act 2009*, schedule 1, items 1 and 2

Part 7—Tidal work

7.1 Is the proposed tidal work any of the following:

Excluded work	☐ Yes ☐ No
Work that is self-assessable development under schedule 3, part 2, table 4, item 8 of the Sustainable Planning Regulation 2009	☐ Yes ☐ No
Work carried out in a priority development area	☐ Yes ☐ No
Work carried out on premises to which structure plan arrangements apply	☐ Yes ☐ No

- If **no** to all of the above, continue to question 7.2.
- If **yes** to any of the above, this aspect of development is not assessable development and a development permit is not required.

7.2 Is any of the proposed tidal work to be carried out in a wild river area under the *Wild Rivers Act 2005*?

- | | |
|------------------------------|--|
| ☐ No | <ul style="list-style-type: none">Go to question 7.6 |
| ☐ Yes | <ul style="list-style-type: none">Continue to question 7.3 |

7.3 Is the proposed tidal work for any of the specified works under the *Wild Rivers Act 2005*?

Infrastructure and works prescribed under a regulation to be necessary for disaster management	☐ Yes ☐ No
De-snagging that is the minimum necessary to allow safe navigation of a marked navigable channel	☐ Yes ☐ No
Infrastructure that is roads, railways, pipelines conveyor belts and cables	☐ Yes ☐ No
Jetties and boat ramps for use by the public	☐ Yes ☐ No
Works for rehabilitation of land (e.g. rehabilitation of abandoned mines)	☐ Yes ☐ No
Infrastructure for the transmission or distribution of electricity	☐ Yes ☐ No
Other infrastructure, prescribed under a regulation that relates to the transportation, movement, transmission or flow of anything through a wild river area including, for example, goods, materials, substances, matter, particles with or without charge, light, energy, information and anything generated or produced	☐ Yes ☐ No

- If **no** to all of the above, this aspect of development is prohibited development and a development application cannot be made. End of part 7 of this checklist
- If **yes** to any of the above, continue to question 7.4

7.4 Will the proposed operational work be carried out on land to which a property development plan applies?

- | | |
|------------------------------|--|
| ☐ No | <ul style="list-style-type: none">Go to question 7.6 |
| ☐ Yes | <ul style="list-style-type: none">Continue to question 7.5 |

7.5 Is the proposed development consistent with the property development plan?

- | | |
|------------------------------|---|
| ☐ No | <ul style="list-style-type: none">This aspect of development is prohibited development and no application can be madeEnd of part 7 of this checklist |
| ☐ Yes | <ul style="list-style-type: none">Continue to question 7.6 |

7.6 Is any of the proposed tidal work prescribed tidal work?

☐ No	- This application requires assessment by the chief executive of DSDIP as assessment manager or concurrence against the <i>Tidal works, or development in a coastal management district state code</i> in the SDAP. - You must complete <i>IDAS form 23—Tidal works and development within coastal management districts</i> - End of part 7 of this checklist
☐ Yes	- You must complete <i>IDAS form 23—Tidal works and development within coastal management districts</i> - This application requires assessment by the local government as assessment manager and the chief executive of DSDIP will be a concurrence agency for the application; you must refer a copy of the application to DSDIP - End of part 7 of this checklist

Section reference:

- Sustainable Planning Regulation 2009, schedule 3, part 1, table 4, item 5
- Sustainable Planning Regulation 2009, schedule 7, table 2, items 13 to 18
- *Sustainable Planning Act 2009*, schedule 1, items 2 and 4

Part 8—Coastal management

8.1 Is the proposed operational work any of the following:

Excluded works	☐ Yes ☐ No
Work that is self-assessable development under schedule 3, part 2, table 4, item 8 of the Sustainable Planning Regulation 2009	☐ Yes ☐ No
Work carried out in a priority development area	☐ Yes ☐ No
Work carried out on premises to which structure plan arrangements apply	☐ Yes ☐ No

- If **no** to all of the above, continue to question 8.2.
- If **yes** to any of the above, this aspect of development is not assessable development and a development permit is not required. End of part 8 of this checklist.

8.2 Is the proposed operational work for any of the following?

Interfering with quarry material as defined under the <i>Coastal Protection and Management Act 1995</i> on state coastal land above high-water mark	☐ Yes ☐ No
Disposing of dredge spoil or other solid waste material in tidal water	☐ Yes ☐ No
Constructing an artificial waterway	☐ Yes ☐ No
Removing or interfering with coastal dunes on land, other than State coastal land, that is in an erosion prone area as defined in the <i>Coastal Protection and Management Act 1995</i> and above high-water mark	☐ Yes ☐ No

- If you answered **no** to all of the above, a development permit is not required for this aspect of development and that is the end of part 8 of this checklist
- If you answered **yes** to any of the above, continue to question 8.3

8.3 Is any of the proposed work to be carried out in a wild river area under the *Wild Rivers Act 2005*?

☐ No	• This application may require assessment by DSDIP's SARA as assessment manager or concurrence agency against the <i>Tidal works, or development in a coastal management district state code</i> in the SDAP. • You must complete <i>IDAS form 23—Tidal works and development within coastal management districts</i> • End of part 8 of this checklist
☐ Yes	• Continue to question 8.4

8.4 Is all of the proposed operational work for specified works under the *Wild Rivers Act 2005*?

☐ No	• This aspect of the development is prohibited development and a development application cannot be made • End of part 8 of this checklist
☐ Yes	• Continue to question 8.5

8.5 Will the proposed operational work be carried out on land to which a property development plan applies?

☐ No	- This application may require assessment by DSDIP's SARA as assessment manager or concurrence agency against the <i>Tidal works, or development in a coastal management district state code</i> in the SDAP. - You must complete <i>IDAS form 23—Tidal works and development within coastal management districts</i> - End of part 8 of this checklist
☐ Yes	Continue to question 8.6

8.6 Is the proposed development consistent with the property development plan?

☐ No	- This aspect of development is prohibited development and a development application cannot be made - End of part 8 of this checklist
☐ Yes	- This application may require assessment by DSDIP's SARA as assessment manager or concurrence agency against the <i>Tidal works, or development in a coastal management district state code</i> in the SDAP. - You must complete <i>IDAS form 23—Tidal works and development within coastal management districts</i> - This aspect of development will be subject to the relevant wild river declaration for the area and assessment may be required for the purpose of the <i>Wild Rivers Act 2005</i> - End of part 8 of this checklist

Section reference:

- Sustainable Planning Regulation 2009, schedule 3, part 1, table 4, item 5
- Sustainable Planning Regulation 2009, schedule 7, table 2, items 13 to 18
- Sustainable Planning Act 2009*, schedule 1, items 2 and 4

Part 9—Waterway barrier works

9.1 Is the proposed operational work any of the following:

Work that is self-assessable development under schedule 3, part 2 of the Sustainable Planning Regulation 2009	☐ Yes ☐ No
Work carried out on premises to which structure plan arrangements apply	☐ Yes ☐ No

- If **no** to all of the above, continue to question 9.2.
- If **yes** to any of the above, this aspect of development is not assessable development and a development permit is not required. End of part 9 of this checklist.

9.2 Is any of the proposed operational work to be carried out in a wild river area under the *Wild Rivers Act 2005*?

☐ Yes	- A development permit is required for this aspect of development. This application requires assessment by the chief executive of DSDIP as assessment manager or concurrence agency against the <i>Constructing or raising waterway barrier works in fish habitats state code</i> in the SDAP. - You must complete <i>IDAS form 27—Waterway barrier works</i>
☐ Yes	Continue to question 9.3

9.3 Is any of the proposed operational work to be carried out in a wild river high preservation area or a wild river special floodplain management area?

☐ No	Go to question 9.5
☐ Yes	Continue to question 9.4

9.4 Is the works for any of the following?

Specified works in the area	☐ Yes ☐ No
Maintenance of existing waterway barrier works	☐ Yes ☐ No
Constructing or raising temporary waterway barrier works associated with the carrying out of specified works or the maintenance of existing waterway barrier works	☐ Yes ☐ No
Constructing new waterway barrier works, or raising of an existing waterway barrier works, within the Lake Eyre Basin for storing water for town water supply demands	☐ Yes ☐ No
Authorised wild river operational work for the area	☐ Yes ☐ No

- If **no** to all of the above, this aspect of development is prohibited development and a development application cannot be made. That is the end of part 9 of this checklist
- If **yes** to any of the above, continue to question 9.5

9.5 Will the proposed operational work be carried out on land to which a property development plan applies?

☐ No	- A development permit is required for this aspect of development. This application requires assessment by the chief executive of DSDIP as assessment manager or concurrence agency against the <i>Constructing or raising waterway barrier works in fish habitats state code</i> in the SDAP. - You must complete <i>IDAS form 27—Waterway barrier works</i>
☐ Yes	Continue to question 9.6

9.6 Is the proposed development consistent with the property development plan?

☐ No	- This aspect of development is prohibited development and a development application cannot be made - End of part 9 of this checklist
☐ Yes	- A development permit is required for this aspect of development. This application requires assessment by the chief executive of DSDIP as assessment manager or concurrence agency against the <i>Constructing or raising waterway barrier works in fish habitats state code</i> in the SDAP. - You must complete <i>IDAS form 27—Waterway barrier works</i>

Section reference:

- Sustainable Planning Regulation 2009, schedule 3, part 1, table 4, item 6
- Sustainable Planning Regulation 2009, schedule 3, part 2
- Sustainable Planning Regulation 2009, schedule 7, table 2, item 29
- Sustainable Planning Act 2009*, schedule 1, items 2 and 6

Part 10—Declared fish habitat area

10.1 Is the operational work reasonably necessary for any of the following?

The maintenance of existing structures, including for example the following structures, if the structures were constructed in compliance with all the requirements under any Act relating to a structure of that type: • boat ramps, boardwalks, drains, fences, jetties, roads, safety signs, swimming enclosures and weirs • powerlines or associated powerline infrastructure.	☐ Yes ☐ No
Educational or research purposes relating to the declared fish habitat area	☐ Yes ☐ No
Monitoring the impact of development on the declared fish habitat area	☐ Yes ☐ No
The construction or placement of structures, including for example, safety signs, swimming enclosures and aids to navigation, if: • the impact on the area is minor • the structures are constructed in compliance with all the requirements, under any Act relating to a structure of that type.	☐ Yes ☐ No
Public benefit works, including, for example, the construction of runnels for mosquito control, the removal of Lyngbya and seed collection for site rehabilitation, if the impact on the area is minor	☐ Yes ☐ No

- If **yes** to any of the above, a permit is not required for this aspect of development but the proposed work must comply with any applicable self assessable codes
- If **no** to all of the above, continue to question 10.2

10.2 Is the proposed operational work to be carried out in a wild river area under the *Wild Rivers Act 2005*?

☐ No	• A development permit is required and this application requires assessment by the chief executive of DSDIP as assessment manager or concurrence agency against the <i>Development completely or partially in a declared fish habitat area state code</i> in the SDAP. • You must complete <i>IDAS form 27—Waterway barrier works</i> • End of part 10 of this checklist.
☐ Yes	• Continue to question 10.3

10.3 Is the proposed operational work to be carried out in a wild river high preservation area?

☐ No	• Go to question 10.5
☐ Yes	• Continue to question 10.4

- If **no**, this aspect of development is prohibited development and that is the end of part 10 of this checklist
- If **yes**, continue to question 10.5

10.5 Will the proposed operational work be carried out on land to which a property development plan applies?

☐ No	• A development permit is required and this application requires assessment by the chief executive of DSDIP as assessment manager or concurrence agency, against the <i>Development completely or partially in a declared fish habitat area state code</i> in the SDAP. • You must complete <i>IDAS form 27—Waterway barrier works</i> • End of part 10 of this checklist.
☐ Yes	• Continue to question 10.6

10.6 Is the proposed development consistent with the property development plan?

☐ No	- This aspect of development is prohibited development and a development application cannot be made - End of part 10 of this checklist
☐ Yes	- A development permit is required and this application requires assessment by the chief executive of DSDIP as assessment manager or concurrence agency, against the <i>Development completely or partially in a declared fish habitat area state code</i> in the SDAP. - You must complete <i>IDAS form 27—Waterway barrier works</i> - End of part 10 of this checklist

Section reference:

- Sustainable Planning Act 2009, schedule 1, items 2 and 8
- Sustainable Planning Regulation 2009, schedule 3, part 1, table 4, item 7
- Sustainable Planning Regulation 2009, schedule 3, part 2, table 4, item 3
- Sustainable Planning Regulation 2009, schedule 7, table 2, item 26

Part 11—Removal, destruction or damage of a marine plant

11.1 Is the proposed operational work any of the following?

For reconfiguring a lot that is assessable development under table 3, item 1, if there is a development permit in effect for the reconfiguration	☐ Yes ☐ No
For a material change of use that is assessable development, if there is a development permit in effect for the change of use	☐ Yes ☐ No
Self-assessable development under schedule 3, part 2 of the Sustainable Planning Regulation 2009	☐ Yes ☐ No
Carried out in a priority development area	☐ Yes ☐ No
Carried out on premises to which structure plan arrangements apply	☐ Yes ☐ No

- If **yes** to any of the above, this aspect of development is not assessable development and no development permit is required. End of part 11 of this checklist.
- If **no** to all of the above, continue to question 11.2

11.2 Is the proposed operational work to be carried out in a wild river area under the *Wild Rivers Act 2005*?

☐ No	- A development permit is required and this application requires assessment by the chief executive of DSDIP as assessment manager or concurrence agency against the <i>Removal, destruction or damage of marine plants state code</i> in the SDAP. - You must complete <i>IDAS form 26—Marine plants and declared fish habitat areas</i>
☐ Yes	Continue to question 11.3

11.3 Is the proposed operational work any of the following?

Specified works in the area	☐ Yes ☐ No
Operational work that is a necessary and unavoidable part of installing or maintaining works or infrastructure required to support other development for which a development permit or compliance permit is not required or, if a development application or a request for compliance assessment is required, the permit is held or has been applied for.	☐ Yes ☐ No

- If **no** to all of the above, this aspect of development is prohibited development and a development application cannot be made. End of part 11 of this checklist.
- If **yes** to any of the above, continue to question 11.4

11.4 Will the proposed operational work be carried out on land to which a property development plan applies?

☐ No	• A development permit is required and this application requires assessment by the chief executive of DSDIP as assessment manager or concurrence agency against the <i>Removal, destruction or damage of marine plants state code</i> in the SDAP. • You must complete <i>IDAS form 26—Marine plants and declared fish habitat areas</i> • End of part 11 of this checklist.
☐ Yes	• Continue to question 11.5

11.5 Is the proposed development consistent with the property development plan?

☐ No	• This aspect of development is prohibited development and a development application cannot be made • End of part 11 of this checklist
☐ Yes	• A development permit is required and this application requires assessment by the chief executive of DSDIP as assessment manager or concurrence agency against the <i>Removal, destruction or damage of marine plants state code</i> in the SDAP. • You must complete <i>IDAS form 26—Marine plants and declared fish habitat areas</i> • End of part 11 of this checklist.

Section reference:

- Sustainable Planning Regulation 2009, schedule 3, part 1, table 4, item 8
- Sustainable Planning Regulation 2009, schedule 3, part 2
- Sustainable Planning Regulation 2009, schedule 7, table 2, item 30
- *Sustainable Planning Act 2009*, schedule 1, items 2 and 7

Part 12—Great Barrier Reef Wetland Protection Areas

12.1 Is the proposed operational work for a domestic housing activity only?

☐ No	• Continue to question 12.2
☐ Yes	• A development permit is not required for this aspect of development and this is the end of the checklist

12.2 Is the proposed operational work the natural and ordinary consequence of a material change of use or reconfiguring a lot for which the state was a concurrence agency under schedule 7, table 3, item 21A or table 2, item 43A of the Sustainable Planning Regulation 2009?

☐ No	• Continue to question 12.3
☐ Yes	• A development permit is not required for this aspect of development and this is the end of the checklist

12.3 Is the proposed operational work associated with government supported transport infrastructure or electricity infrastructure?

☐ No	• A development permit is required and this application requires assessment by the chief executive of DSDIP as assessment manager or concurrence agency against the <i>Wetland protection area state code</i> in the SDAP. • You must complete <i>IDAS form 33—Great Barrier Reef Wetland protection area</i> • End of this checklist
☐ Yes	• A permit is not required for this aspect of development but the proposed work must comply with any applicable self assessable code • End of this checklist

Section reference:

- Sustainable Planning Regulation 2009, schedule 3, part 1, table 4, item 10
- Sustainable Planning Regulation 2009, schedule 7, table 2, item 43B

Privacy—please refer to your assessment manager for further details on the use of information recorded in this form

Disclaimer:

While the Department of State Development, Infrastructure and Planning (DSDIP) believes that the information contained on this checklist and provided as part of this process will be of assistance to you, it is provided on the basis that you will not rely on the information. It is your responsibility to make your own enquiries regarding the interpretation and application of the applicable legislation to your circumstances.

To the full extent permitted by law, DSDIP expressly disclaims all liability (including but not limited to liability for negligence) for errors or omissions of any kind or for any loss (including direct and indirect losses), damage or other consequence which may arise from your reliance on this process and the information contained on this checklist.

OFFICE USE ONLY

Date received

Reference numbers

The Sustainable Planning Act 2009 is administered by DSDIP. This checklist and all other required application materials should be sent to your assessment manager and any referral agency.

Appendix I: SARA Code

4.1 Concurrence environmentally relevant activities state code

Response column key:

☒ Achieved
 P/S Performance solution
 N/A Not applicable

Table 4.1.2: All environmentally relevant activities

Performance outcomes	Acceptable outcomes	Response	Comment
Site suitability			
PO1 The choice of the site at which the activity is to be carried out minimises serious environmental harm on areas of high conservation value and special significance, and sensitive land uses at adjacent places.	AO1.1 Areas of high conservation value and special significance likely to be affected by the activity are identified and evaluated, and any adverse effects on these areas are minimised, including edge effects. AND	☒	The activity which is subject to this application does not occur in the vicinity of any high conservation or special significance areas. A Site Based Management Plan has been prepared for this site which accounts for adverse effects which may negatively affect the surrounding environment.
	AO1.2 The activity does not have an adverse effect beyond the site. OR	☒	The Site Based Management Plan prepared for the subject site adequately accounts for potential adverse effects caused by the activity beyond the site.
	AO1.3 Critical design requirements will prevent emissions having an irreversible or widespread impact on adjacent areas.	☒	The Site Based Management Plan prepared for the subject site captures issues surrounding the prevention of emissions which may have an irreversible or widespread impact on adjacent areas.
Location of activity on the site			
PO2 The location for the activity on the site protects all environmental values relevant to adjacent sensitive land uses.	AO2.1 The location of the activity means there will be no adverse effect on any environmental values. OR	☒	The site has been located in an area which is located away from any environmentally sensitive areas. In conjunction with the preparation of a Site Based Management Plan to account for environmental risks associated with the operation, the site's location is considered to ensure that no adverse effects on environmental values will be incurred.
	AO2.2 Both of the following apply: (1) The activity and components of the activity are located on the site in a way that prevents or minimises adverse effects on the use of adjacent land and allows for effective management of the environmental impacts of the activity. (2) Areas used for storing environmentally hazardous materials in bulk are located to take into consideration the likelihood of flooding.	N/A	
Critical design requirements			
PO3 The design of the facility at which the activity is to be carried out permits the activity to be carried out in accordance with best practice	AO3.1 The activity does not involve the storage, production, treatment or release of hazardous contaminants, or involve a regulated structure. OR	N/A	

Performance outcomes	Acceptable outcomes	Response	Comment
environmental management.	AO3.2 Development ensures that– (1) All storage provided for hazardous contaminants includes secondary containment to prevent or minimise releases to the environment from spillage or leaks. (2) Regulated structures must comply with the <i>Manual for assessing hazard categories and hydraulic performance of dams</i> , Department of Environment and Heritage Protection, 2012. (3) Containers are provided for the storage of hazardous contaminants and are secured to prevent the removal of the containers from the site by a flood event. (4) The design of the facility– (a) prevents or minimises the production of hazardous contaminants and waste, or (b) contains and treats hazardous contaminants, rather than releasing them.	☒	Points relevant to the operation are addressed below. Those not addressed are to be assumed to be not applicable to the site operation. The Site Based Management Plan for this operation ensures that: • All storage provided for hazardous contaminants includes secondary containment to prevent or minimise releases to the environment from spillage or leaks. • Containers are provided for the storage of hazardous contaminants and are secured to prevent the removal of the containers from the site by a flood event. • The design of the facility– - prevents or minimises the production of hazardous contaminants and waste, or - contains and treats hazardous contaminants, rather than releasing them.
Standard criteria			
PO4 The design of the activity demonstrates consideration of the standard criteria. Editor's note: It is recommended that the development application should address how it has considered the standard criteria.	No acceptable outcome is prescribed.	☒	Prior to the preparation of the Site Based Management Plan for this activity, the standard criteria were considered and incorporated into the design of the activity. More information is available in the Site Based Management Plan.
PO5 The activity avoids adverse impacts on matters of national environmental significance and matters of state environmental significance or, where this is not reasonably possible, impacts are minimised and residual impacts are offset.	AO5.1 Matters of national environmental significance and matters of state environmental significance likely to be affected by the activity are identified and evaluated, and any adverse effects on the matters of national environmental significance of matters of state environmental significance are avoided or, where this cannot be reasonably achieved, impacts are minimised and any residual impacts are offset.	☒	No matters of national environmental significant or matters of state environmental significance were identified as occurring on or near the subject area proposed for the activity. As a result, impacts to these are not anticipated and therefore not required to be ameliorated or offset.

8.2 Brigalow Belt and New England Tablelands bioregion state code

Response column key:

- ☒ Achieved
- P/S Performance solution
- N/A Not applicable

Table 8.2.3: General

Performance outcomes	Acceptable outcomes	Response	Comment
Clearing to avoid and minimise impacts			
PO1 To regulate the clearing of vegetation in a way that ensures the conservation of regional ecosystems, clearing only occurs where the applicant has demonstrated that the development has first avoided and minimised the impacts of development.	No acceptable outcome is prescribed.	☒	A careful site selection and design process was undertaken for the Project. The location of this offsite infrastructure was selected because it entirely avoided field verified mapped regional ecosystems and only involved works in areas of non-remnant vegetation. The development footprint has been restricted to its smallest practical size to minimise the extent of clearing required to facilitate its creation.
Biodiversity and conservation outcomes			
PO2 Clearing may occur only where the material change of use or reconfiguring a lot can demonstrate that the level of conservation and biodiversity outcomes ensured by the development significantly exceeds the extent and value of the area proposed to be cleared. This can only be achieved by meeting the requirements of Appendix A: Vegetation offset policy.	No acceptable outcome is prescribed.	☒	The current ecological value of the area proposed to be cleared is low. Whilst some 'of concern' remnant vegetation is mapped as occurring within the footprint of the subject site, ground truthing exercises have indicated that this mapping is incorrect. As a result, all clearing which needs to occur to facilitate construction of this facility occurs in non-remnant vegetation. Consequently, weed management and removal associated with the clearing is considered to exceed and improve upon the current ecological state of the site as a result of the clearing works.

Table 8.2.7: Coordinated projects

Performance outcomes	Acceptable outcomes	Response	Comment
Limits to clearing			
PO1 To regulate the clearing of vegetation in a way that conserves remnant vegetation that are regional ecosystems, does not cause land degradation, prevents the loss of biodiversity and maintains ecological processes, subject to the limitations required to meet PO2–PO10, clearing is limited to the extent that is necessary for the project, any associated ancillary works, and the operation of works that	No acceptable outcome is prescribed.	☒	A careful site selection and design process was undertaken for the Project. The selection process identified the preferred location and alignment of the infrastructure proposed for the Project. The selection process considered economic, social and environmental impacts while aiming to deliver the desired infrastructure outcomes. The proposed route selected avoids vegetation verified in the field as remnant vegetation (particularly of concern and endangered REs), although current incorrect mapping indicates that of concern remnant vegetation occurs within the footprint. This mapping is subject to a PMAV application. The development also

Performance outcomes	Acceptable outcomes	Response	Comment
comprise a project declared to be a coordinated project under the <i>State Development and Public Works Organisation Act 1971</i> , section 26.			avoids areas of high ecological value where possible and the width of linear corridors has been reduced to the absolute minimum width necessary for construction.
Wetlands			
PO2 To regulate the clearing of vegetation in a way that prevents the loss of biodiversity and maintains ecological processes, maintain the current extent of assessable vegetation associated with any natural significant wetland or natural wetland to provide: (1) water quality by filtering sediments, nutrients and other pollutants (2) aquatic habitat (3) terrestrial habitat.	AO2.1 Clearing does not occur: (1) in any natural wetland (2) within 100 metres from any natural wetland (3) in any natural significant wetland (4) within 200 metres from any natural significant wetland.	☒	Clearing is not proposed to occur within, or in any vicinity closer to 200 metres to a natural significant wetland. Nonetheless, erosion and sediment control devices will be installed prior to clearing.
Watercourses			
PO3 To regulate the clearing of vegetation in a way that does not cause land degradation, prevents the loss of biodiversity and maintains ecological processes, maintain the current extent of assessable vegetation associated with any watercourse to provide: (1) bank stability by protecting against bank erosion (2) water quality by filtering sediments, nutrients and other pollutants (3) aquatic habitat (4) terrestrial habitat.	AO3.1 Clearing does not occur: (1) in any watercourse (2) within the relevant distance stipulated in Table 2 of each high bank of each watercourse.	☒	Clearing is not proposed to occur within, or in any vicinity to a watercourse.
Connectivity			
PO4 To regulate the clearing of vegetation in a way that prevents the loss of biodiversity and maintains ecological processes, areas of mapped remnant vegetation are: (1) of sufficient size and configured in a way to maintain ecosystem functioning (2) of sufficient size and configured in a	AO4.1 Where clearing is less than: (1) 10 metres wide in the coastal subregions of the Brigalow Belt bioregion (2) 2 hectares in the coastal subregions of the Brigalow Belt bioregion (3) 25 metres wide in the non-coastal subregions of the Brigalow Belt and New England Tableland bioregion, or (4) 5 hectares in the non-coastal subregions of the	☒	Clearing is not proposed to occur within any field verified areas of mapped remnant vegetation. All clearing will occur within areas mapped as non-remnant vegetation.

Performance outcomes	Acceptable outcomes	Response	Comment
way to remain in the landscape in spite of any threatening processes (3) located on the lot(s) that are the subject of the application to maintain connectivity to mapped remnant vegetation on adjacent properties.	Brigalow Belt and the New England Tableland bioregion clearing does not: (a) reduce the width of mapped remnant vegetation to less than 200 metres (b) occur where the width of mapped remnant vegetation is less than 200 metres. AND		
	AO4.2 Clearing does not: (1) reduce areas of contiguous mapped remnant vegetation to less than 10 hectares in the coastal subregions of the Brigalow Belt bioregion (2) occur in areas of contiguous mapped remnant vegetation that are less than 10 hectares in the coastal subregions of the Brigalow Belt Bioregion (3) reduce areas of contiguous mapped remnant vegetation to less than 50 hectares in the non-coastal subregions of the Brigalow Belt and New England Tableland bioregion (4) occur in areas of contiguous mapped remnant vegetation that are less than 50 hectares in the non-coastal subregions of the Brigalow Belt and New England Tableland bioregion (5) reduce the width of mapped remnant vegetation to less than 200 metres (6) occur where the width of mapped remnant vegetation is less than 200 metres (7) reduce the total extent of mapped remnant vegetation to less than 30 per cent of the area of the lot(s) that are the subject of the application (8) occur where the total extent of mapped remnant vegetation is less than 30 per cent of the area of the lot(s) that are the subject of the application. AND	☒	Clearing is not proposed to occur within any field verified areas of mapped remnant vegetation. All clearing will occur within areas mapped as non-remnant vegetation.
	AO4.3 Where clearing is for a significant community project, maintain the current extent of mapped remnant vegetation where the vegetation is: (1) of sufficient size and configured in a way to maintain ecosystem functioning (2) of sufficient size and configured in a way to remain in the landscape in spite of any threatening processes	☒	Clearing is not proposed to occur within any field verified areas of mapped remnant vegetation. All clearing will occur within areas mapped as non-remnant vegetation.

Performance outcomes	Acceptable outcomes	Response	Comment
	(3) located on the lot(s) that are the subject of the application to maintain connectivity to mapped remnant vegetation on adjacent properties.		
Soil erosion			
PO5 To regulate the clearing of vegetation in a way that does not cause land degradation and maintains ecological processes, the effect of clearing does not result in: (1) mass movement, gully erosion, rill erosion, sheet erosion, tunnel erosion, stream bank erosion, wind erosion or scalding (2) any associated loss of chemical, physical or biological fertility, including, but not limited to water holding capacity, soil structure, organic matter, soil biology and nutrients within or outside the lot(s) that are the subject of the application.	AO5.1 Mechanical clearing only occurs on: (1) very stable soils on a slope less than 15 per cent (2) stable soils on a slope less than 12 per cent (3) unstable soils on a slope less than 8 per cent (4) very unstable soils on a slope less than 5 per cent.	☒	The entire site on which the development is proposed is very flat. All clearing will occur on slopes which are less than 5 per cent.
Salinity			
PO6 To regulate the clearing of vegetation in a way that does not cause land degradation and maintains ecological processes, clearing does not contribute to: (1) waterlogging, or (2) the salinisation of groundwater, surface water or soil.	AO6.1 Where clearing is less than: (1) 2 hectares, or (2) 10 metres wide clearing does not occur in any discharge area. AND	☒	The clearing is not proposed in any discharge area.
	AO6.2 Where clearing is less than: (1) 5 hectares, or (2) 50 metres wide clearing does not occur: (a) in any discharge area, or (b) within 200 metres of any discharge area. AND	☒	The clearing is not proposed in any discharge area or within 200 metres of a discharge area.
	AO6.3 Clearing does not occur in areas greater than 5 hectares	☒	Clearing will occur in areas of greater than 5 hectares but no remnant vegetation will be affected by the proposed development.

Performance outcomes	Acceptable outcomes	Response	Comment
Conserving remnant vegetation that are endangered regional ecosystems and of concern regional ecosystems			
PO7 To regulate the clearing of vegetation in a way that conserves remnant vegetation that are endangered regional ecosystems and of concern regional ecosystems, maintain the current extent of endangered regional ecosystems and of concern regional ecosystems.	AO7.1 Clearing: (1) does not occur in an endangered regional ecosystem or an of concern regional ecosystem that is listed in Table 4 (2) in an endangered regional ecosystem or an of concern regional ecosystem that is not listed in Table 4, only occurs where the clearing is less than 10 metres wide or 0.5 hectares.	☒	Clearing will not occur in an endangered or of concern regional ecosystem.
Essential habitat			
PO8 To regulate the clearing of vegetation in a way that prevents the loss of biodiversity, maintain the current extent of essential habitat.	AO8.1 Clearing does not occur in an area shown as essential habitat on the essential habitat map.	☒	Clearing will not occur in an area shown as essential habitat on the essential habitat map.
Conservation status thresholds			
PO9 To regulate the clearing of vegetation in a way that conserves remnant vegetation that are regional ecosystems and prevents the loss of biodiversity, maintain the current extent of regional ecosystems listed in Table 5.	AO9.1 Clearing in a regional ecosystem listed in Table 5 does not occur unless the clearing is less than: (1) 10 metres wide, or (2) 2 hectares.	☒	Clearing will not occur in a regional ecosystem listed in Table 5.
Acid sulfate soils			
PO10 To regulate the clearing of vegetation in a way that does not cause land degradation and maintains ecological processes in the coastal subregions of the Brigalow Belt bioregion, and the Marlborough Plains subregion, clearing activities do not result in disturbance of acid sulfate soils or changes to the hydrology of the location that will either: (1) aerate horizons containing iron sulfides, or (2) mobilise acid or metals.	AO10.1 In the coastal subregions of the Brigalow Belt bioregion, and the Marlborough Plains subregion, clearing in land zone 1, land zone 2 or land zone 3 in areas below 5 metre Australian height datum follows management principles in accordance with the <i>Queensland acid sulfate soil technical manual: Soil management guidelines</i> , Department of Natural Resources and Mines, 2002.	☒	The proposed clearance areas are not located in the coastal subregions of the Brigalow Belt bioregion or Marlborough Plains subregion. Therefore, it is considered that Acid Sulfate Soils will not represent a significant issue for this project.

19.3 Transport infrastructure and network design state code

Response column key:

☑ Achieved

P/S Performance solution

N/A Not applicable

Table 19.3.1: All development

Performance outcomes	Acceptable outcomes	Response	Comment
All state transport infrastructure – except state-controlled roads			
PO1 Development does not compromise the safe and efficient management or operation of state transport infrastructure or transport networks.	AO1.1 Any impact from the development on the safe and efficient management and operation of the state transport corridor or transport network is identified and mitigated. Editor's note: A traffic impact assessment will assist in addressing this acceptable outcome. A traffic impact assessment should identify any upgrade works required to mitigate impacts on the safe and efficient management and operation of the state transport corridor.	☑	The proposed development is located a significant distance away from the state controlled transport infrastructure in the state transport corridor, and will therefore not prejudice any planned upgrades of same..
PO2 Development does not compromise planned upgrades to state transport infrastructure or the development of future state transport infrastructure in future state transport corridors.	AO2.1 Written advice has been provided by DTMR that there are no planned upgrades of state transport infrastructure or future state transport corridors which will be compromised by the development. OR both of the following acceptable outcomes apply	N/A	
	AO2.2 The layout and design of the proposed development accommodates planned upgrades to adjacent state transport infrastructure in the state transport corridor. AND	☑	The proposed development is located a significant distance away from the state controlled transport infrastructure in the state transport corridor, and will therefore not prejudice any planned upgrades of same.
	AO2.3 The layout and design of the development does not compromise the delivery of state transport infrastructure in future state transport corridors. Editor's note: A traffic impact assessment will assist in addressing this acceptable outcome.	☑	The proposed development is located a significant distance away from the state controlled transport infrastructure and any future state transport corridor, and will therefore not prejudice any planned upgrades of same.
State-controlled roads			
PO3 Development does not compromise the safe and efficient management or operation of state-controlled roads. Editor's note: A traffic impact assessment will assist in addressing this performance outcome.	A03.1 Any impact from the development on the safe and efficient management and operation of the state-controlled road is identified and mitigated. Editor's note: A traffic impact assessment will assist in addressing this acceptable outcome.	☑	The potential impacts from the proposed development have been assessed as both a stand-alone development, and also in the context of the broader Carmichael Coal Mine and Rail Project. None of the identified potential impacts are of a scale which would compromise planned state road upgrades or delivery.

Performance outcomes	Acceptable outcomes	Response	Comment
			Brown Consulting have completed the ' <i>Carmichael Coal Mine add Rail Project – Traffic Impact Assessment</i> ' which addresses the impact of the Project on State Controlled Roads. This report is included in the SEIS documentation
PO4 Development does not compromise planned upgrades of the state-controlled road network or delivery of future state-controlled roads.	AO4.1 Written advice has been provided by DTMR that there are no planned upgrades of state-controlled roads or future state-controlled roads which will be compromised by the development. OR	N/A	
	AO4.2 Any impact from the development does not compromise planned upgrades of the state-controlled road network or the delivery of future state-controlled roads. Editor's note: A traffic impact assessment will assist in addressing this acceptable outcome.	☒	The potential impacts from the proposed development have been assessed as both a stand-alone development, and also in the context of the broader Carmichael Coal Mine and Rail Project. None of the identified potential impacts are of a scale which would compromise planned state road upgrades or delivery. Brown Consulting have completed the ' <i>Carmichael Coal Mine add Rail Project – Traffic Impact Assessment</i> ' which addresses the impact of the Project on State Controlled Roads. This report is included in the SEIS documentation
PO5 Upgrade works on or associated with the state-controlled road network are undertaken in accordance with applicable standards.	AO5.1 Upgrade works for the development are consistent with the requirements of the <i>Road planning and design manual – interim guide to road planning and design practice</i> , Department of Transport and Main Roads, 2010. AND	☒	Brown Consulting have completed the ' <i>Carmichael Coal Mine add Rail Project – Traffic Impact Assessment</i> ' which addresses the impact of the Project on State Controlled Roads. This report is included in the SEIS documentation
	AO5.2 The design and staging of upgrade works on or associated with the state-controlled road network are consistent with planned upgrades.	☒	Brown Consulting have completed the ' <i>Carmichael Coal Mine add Rail Project – Traffic Impact Assessment</i> ' which addresses the impact of the Project on State Controlled Roads. This report is included in the SEIS documentation
PO6 Development does not impose traffic loadings on the state-controlled road network which could be accommodated on the local road network.	AO6.1 New roads proposed as part of the development are consistent with the road hierarchy adopted by the relevant local government, and new lower order roads do not connect directly to a state-controlled road. AND	N/A	No new public roads are proposed as part of this development application.

Performance outcomes	Acceptable outcomes	Response	Comment
	AO6.2 Where the opportunity is available, development provides for road access locations to lower order roads. AND	☒	Proposed new private access roads will intersect with Moray-Carmichael Road, a local government controlled road. Brown Consulting have completed the '<i>Carmichael Coal Mine add Rail Project – Traffic Impact Assessment</i>' which addresses the impact of the Project on State Controlled Roads. This report is included in the SEIS documentation
	AO6.3 Where possible, the layout and design of the development encourages traffic generated by the development to use lower order roads.	☒	Proposed new private access roads will intersect with Moray-Carmichael Road, a local government controlled road. Brown Consulting have completed the '<i>Carmichael Coal Mine add Rail Project – Traffic Impact Assessment</i>' which addresses the impact of the Project on State Controlled Roads. This report is included in the SEIS documentation